

**Marshall University Faculty Senate  
Executive Committee Agenda  
Monday, April 10, 2022, 12:00 Noon  
John Spotts Room/Microsoft Teams**

1. Approval of Proposed Agenda
2. Approval of March 6, 2023, Executive Committee Minutes
3. Announcements – Shawn Schulenberg
4. Recommendations/Resolutions
  - a. **SR 22-23-26 FPC** Recommends amending MU BOG AA-26 Faculty Promotion
  - b. **SR 22-23-27 FPC** Recommends amending MU BOG AA-28 Faculty Tenure
  - c. **SR 22-23-42 BAPC** Recommends adjusting the language in the Marshall University Undergraduate Catalog related to the method of notifying students of a suspension of dismissal.
  - d. **SR 22-23-43 BAPC** Recommends that midterm grades (D, F, or NC) be reported for all undergraduate students.
  - e. **SR 22-23-44 BAPC** Recommends adjusting the language in the Marshall University Undergraduate Catalog to match current practice for meeting with probation students.
  - f. **SR 22-23-45 BAPC** Recommends adjusting the language in the Marshall University Undergraduate Catalog related to Minors by allowing students to earn minors in the same department, but not in the same subject area.
  - g. **SR 22-23-46 SCWC** Recommends that the Faculty Senate support the trauma-informed resilience-infused campus initiative.
  - h. **SR 22-23-47 CC** Recommends approval of the listed **UNDERGRADUATE AREA OF EMPHASIS ADDITIONS, DELETIONS, CHANGES** in the following college and/or schools/programs: **Applied Sociology, Meteorology, Weather Broadcasting, Forensic Chemistry (SC61), Forensic Chemistry (SC81), Computer Forensics, Computer Appl Development, Web Application Development, Game Development, Game/Simulation Development, Web/Mobile Apple Development, Computer/Web App Development.**
  - i. **SR 22-23-48 CC** Recommends approval of the listed **UNDERGRADUATE CERTIFICATE PROGRAM ADDITIONS, DELETIONS, CHANGES** in the following college and/or schools/programs: **Meteorology, Information Assurance.**
  - j. **SR 22-23-49 CC** Recommends approval of the listed **UNDERGRADUATE COURSES ADDITIONS** in the following college and/or schools/programs: **AVSC 280-283, AVSC 311, AVSC 420, AVSC 454, AVSC 480-483, BME 410, BME 420, GEO 223, ENT 200H, BSPPS 444, BSPPS 447.**
  - k. **SR 22-23-50 CC** Recommends approval of the listed **UNDERGRADUATE COURSES CHANGES** in the following college and/or schools/programs: **AVSC 205, AVSC 210, AVSC 220, AVSC 221, AVSC 241, AVSC 305, AVSC 310, AVSC 325, AVSC 330, AVSC 340, AVSC 345, AVSC 375, BME 306, ENGR 217, ME 325, ACC 215, ACC 216, CD 472, ENG 205, ENG 240, ENG 377, ENG 378, ENG 379, ENG 445, Move CIT courses from COS to CECS.**
  - l. **SR 22-23-51 CC** Recommends approval of the listed **UNDERGRADUATE DEGREE PROGRAM ADDITIONS, DELETIONS, CHANGES** in the following college and/or schools/programs: **Fixed Wing (FL10); BA10 BBA, Accounting.**
  - m. **SR 22-23-52 CC** Recommends approval of the listed **UNDERGRADUATE MAJOR ADDITIONS, DELETIONS, CHANGES** in the following college and/or schools/programs: **FL10, TC10, TC20, TE20, TE30, TE40, TE50, TE60, LG10/LG20, SI20, BSPPS.**
  - n. **SR 22-23-53 CC** Recommends approval of the listed **UNDERGRADUATE MINOR ADDITIONS, DELETIONS, CHANGES** in the following college and/or schools/programs: **Meteorology, Computer and Information Technology, Game Development, Web Development.**

5. Set Agenda for the Faculty Senate Meeting, April 20, 2023
  - a. Approval of Proposed Agenda
  - b. Approval of Minutes (pending presidential approval)
  - c. Announcements – Shawn Schulenberg
  - d. Recommendations/Resolutions
  - e. Guest Speaker: Patrick Farrell, Chair, MU Board of Governors
  - f. Reports
    - i. Office of the President – Brad Smith/Ginny Painter
    - ii. Provost – Avinandan Mukherjee
    - iii. Board of Governors – Robin Riner
    - iv. Advisory Council of Faculty – Amine Oudghiri-Otmani
    - v. Graduate Council – Scott Davis
    - vi. Student Government Association – Isabella Griffiths
  - g. Standing Committee Reports
    - i. Faculty Personnel Committee – Timothy Bryan
    - ii. Legislative Affairs Committee – Kyle Palmquist
    - iii. Research Committee – Yousef Fazea Alnadesh
    - iv. Student Conduct and Welfare Committee – Penny Koontz
    - v. University Curriculum Committee – Timothy Melvin
  - h. Other Requests to Speak to the Senate (5 minutes)
6. Agenda Requests for Future Meetings
7. Adjournment

**THE MINUTES OF THE FACULTY SENATE EXECUTIVE COMMITTEE MEETING  
HELD ON MONDAY, 2023-03-06 AT 12:00 NOON.  
MEMORIAL STUDENT CENTER – JOHN SPOTTS ROOM & HYBRID (OVER TEAMS)**

ROLES	MEMBERS PRESENT	MEMBERS ABSENT
EC Officers	Shawn Schulenberg (Chair), Eryn Roles (Vice-Chair), Uyi Lawani, Sujoy Bose, Heather Stark, Mindy Varney, Andrew Burck (V), Ross Salary, Rick Gage	Eva Patton-Tackett. AVI – vacant position.
EX OFFICIO, VOTING MEMBERS	Amine Oudghiri-Otmani, Scott Davis	N/A
EX OFFICIO, NON-VOTING MEMBERS:	Allison Carey, Robin Riner	Isabella Griffiths
GUESTS:	Carl Mummert, Laura McCunn-Jordan, Sonja Cantrell-Johnson (V), Brian Morgan (V), Karen McComas.	N/A
PARLIAMENTARIAN	Zelideth Rivas (V)	
SENATE STAFF	Jeb Dickerson (V)	N/A
LEGENDS -	"V" - Virtual	

There being a quorum, Shawn Schulenberg, Faculty Senate Chair, called the Executive Committee meeting to order at approximately 1202 hours (12:02 Noon.).

1. Approval of agenda – Motion to approve agenda as circulated – **MSAP**<sup>1</sup>
2. Approval of Minutes:

Date	Discussion	Votes
<b>EC 2/13/2023</b>	Amendment suggested – Sujoy Bose - Motion to correct the EC meeting minutes dt. 02/13/23 under 6(b) by striking 09/29/2022. <b>MSAP</b> .	<b>MSAPAA</b> <sup>2</sup>

3. Informational/Procedural Items: – Shawn Schulenberg –

Srl.	Items	Specifics & Discussion
a)	<b>Announcements</b> –	<ol style="list-style-type: none"> <li>1. Signed by President –               <ol style="list-style-type: none"> <li>a. January 9 Executive Committee Meeting Minutes                   <ol style="list-style-type: none"> <li>i. EC Resolutions 29-30</li> </ol> </li> </ol> </li> <li>2. Pending (short calendar, travel)               <ol style="list-style-type: none"> <li>a. January 26 Faculty Senate Meeting Minutes</li> <li>b. Senate Recommendations/Resolutions 31-34</li> </ol> </li> <li>3. The FPC just submitted revised versions of SR 22-23-26 (AA 26) and SR 22-23-27 (AA 28) for us to consider at our April meeting.</li> <li>4. New suggested processes for both honorary degree/commencement speaker and a new calendar process will also be considered next month.</li> <li>5. The Chair of the Board of Governors, Patrick Farrell, will visit our April 20 meeting.</li> </ol>

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6. Faculty Ombuds Search: The search committee finished interviewing all candidates and will submit its formal recommendation to the President today.
7. Legislative Affairs
  - a. SB10 (Campus Carry): will go into effect July 1, 2024. The university will making a plan.
  - b. HB 3049, the American Campuses Act. I sent an email asking
  - c. HB 2024: The budget bill
  - d. House approved SB 268 PEIA
    - i. Premiums increasing 24.7%
    - ii. New spousal penalty: \$147 fee if the spouse has eligible insurance but is still on PEIA
    - iii. Senate bill (approved earlier) put cost share at 70/30, but the House amended it to 80/20, so it is going back to the Senate for review.
    - iv. Best step: Contact your Senators to approve of this change.
  - e. SB 423: State employees will get a \$2,300 pay raise, but we will await word from the President’s office on how this will affect MU employees (we are different)
  - f. Adjournment is Saturday, March 11 at midnight.
8. Upcoming Dates
  - a. Next FS Meeting: March 23, 2023, at 4:00 PM – MSC BE5 (and streaming for viewing only)
  - b. Next EC Meeting: April 10, 2023, at Noon – John Spotts (streaming, with remote participation possible for EC members) for final Meeting on April 20.
    - i. Recommendations for this Academic Year – March 31, 2023.

**4. Recommendations/Resolutions:**

Items	Reports & Discussion	Approval
a. <b>SR 22-23-35 CC</b> Recommends approval of the listed UNDERGRADUATE COURSE DELETIONS in the following college and/or schools/programs: <b>HST 200</b>	Discussion – None	<b>MSAP.</b>
b. <b>SR 22-23-36 CC</b> Recommends approval of the listed UNDERGRADUATE CERTIFICATE PROGRAM ADDITION, DELETION, CHANGE in the following college	Discussion – None	<b>MSAP.</b>

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<p>and/or schools/programs: <b>Certificate in Public Health.</b></p>		
<p>c. <b>SR 22-23-37 CC</b> Recommends approval of the listed <b>UNDERGRADUATE COURSE ADDITIONS</b> in the following college and/or schools/programs: <b>HST 100, HST 300, PSC 201.</b></p>	<ul style="list-style-type: none"> <li>▪ Discussion – None</li> </ul>	<p><b>MSAP.</b></p>
<p>d. <b>SR 22-23-38 CC</b> Recommends approval of the listed <b>UNDERGRADUATE COURSES CHANGES</b> in the following college and/or schools/programs: <b>PSC 104, PSC 209, PSC 233, PSC 235, PSC 301, PSC 333, PSC 376, PSC 382, PSC 410, PSC 429, PSC 433, PSC 436, PSC 452, PSC 453, PSC 461, STA 150, STA 150B</b></p>	<ul style="list-style-type: none"> <li>▪ Discussion - None</li> </ul>	<p><b>MSAP.</b></p>
<p>e. <b>SR 22-23-39 CC</b> Recommends approval of the listed <b>UNDERGRADUATE MAJOR ADDITIONS, DELETIONS, CHANGES</b> in the following college and/or schools/programs: <b>HST BA (LH10), Specialty Agriculture (NRE).</b></p>	<ul style="list-style-type: none"> <li>▪ Discussion - None</li> </ul>	<p><b>MSAP.</b></p>
<p>f. <b>SR 22-23-40 CC</b> Recommends approval of the listed <b>UNDERGRADUATE MINOR ADDITIONS, DELETIONS, CHANGES</b> in the following college and/or schools/programs: <b>Political Psychology, Pop Culture Studies.</b></p>	<ul style="list-style-type: none"> <li>▪ Discussion – None</li> </ul>	<p><b>MSAP.</b></p>
<p>The above recommendations SR 22-23-35 through SR 22-23-40 were combined into a single motion without objection.</p>		
<p>g. <b>SR 22-23-41 BAPC</b> Recommends a <b>2024-28 Academic Calendar</b></p>	<ul style="list-style-type: none"> <li>▪ Laura McCunn-Jordan (Chair, BAPC) – BAPC is recommending 15-instructional weeks in the Fall &amp; Spring Calendars. Multifactorial rationale – COHP – reporting difficulty meeting clinical hours &amp; content</li> </ul>	<p><b>MSAP.</b></p>

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delivery requirements for accreditation. COS reporting difficulty with content delivery for accreditation and for preparation of majors. The Graduate Council is requesting separate course calendar if we elect 14 weeks. In recent years frequent class cancellations for weather which has made the first 2 weeks of the semester very unforgiving. If we were to miss an entire week of class due to an ice-storm, it could put student Pell grants in jeopardy because 15 weeks is required in the semester for full financial aid eligibility. The 15-week calendar also has provisions for student mental health. A mid-semester break has been added by canceling Thursday & Friday in October & February to give students a break. Recommendations in line with peer institutions practice. Committee has surveyed 20 peer institutions. Only 3 institutions have lesser instructional days and all of them have it spread over 15 weeks. 16 of them have an October break; 12 have an extra break beyond spring break and MLK Jr. day in the Spring semester. SGA – has voted 19-11 in favor of 15 weeks semester. The Graduate council did not take a vote but many members spoke in support of 15 weeks, with no one speaking against.

▪ **Discussion –**

- Scott Davis – requested information on the peer institutions and their R-status –  
Ans. Laura – offered to share the list of institutions which are very similar to us. Some are R1, some R2. Includes WVU.
- Q: Uyi Lawani – What was the rationale the past time to move into 14 weeks. Ans: Laura – Likely d/t faculty desire to have a little longer summer vacation, and every 5-6 years when we have a calendar reset year, there is difficulty between semesters due

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to lack of time for the University to process grades. BAPC did consider that and addressed it in this recommendation.

- Allison Carey: Noted that in the past a few academic years had a 14/15 week combination. From a department Chair perspective reported that some anxiety has been expressed that if we move to 15-week calendar, it affects the time before the semester begins & after the semester ends in terms of being able to fit in professional development, assessment day, and some of the other meetings & duties that faculty have. Pulled contract dates from last 6 academic years, including when university was on 15-weeks – Contract dates do not seem to vary much, with almost always starting on August 17 (once on Aug. 16) & always ends May 16. In picking these dates, they seem to pay no attention to start dates of the semester or pay periods, so this has presented some difficulties in the past and could pose difficulties in Fall 2024. – e.g. we will have contract dates of Aug. 16th, or 17<sup>th</sup> ; though Fall 2024 will start on Aug. 19<sup>th</sup>, translating to the first day of the contract being the Friday of the week before classes begin. Poses scenarios which have been previously encountered where faculty & TAs have refused to come in earlier since contract was not effective as of then.
- Laura McCunn-Jordan – Has consulted with Carl Mummert – There is no policy prohibiting us from changing those contract dates. Unclear how it plays out with pay periods. However,

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	<p>contract dates wouldn't need to be moved very far ahead (upto one day before fall semester starting) in the Fall, and to be extended through the day that grades are due after spring. Not an issue in some colleges as no need to come in beforehand but cannot speak for other colleges. Acknowledged that 2024/25 would be a tight squeeze.</p> <ul style="list-style-type: none"> <li>o Ross Salary– Also spoke in support of a 15-week calendar due to college processes &amp; accreditation needs.</li> </ul> <ul style="list-style-type: none"> <li>▪ After motion passed – Chair advised to consult with constituents &amp; members of Senate. Will be reviewed at Senate meeting.</li> </ul>	
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5. Set agenda for the Faculty Senate Meeting on 3/23/2023 - MOTION to set agenda as below – MSAP.

Srl.	Items	Specifics
a.	Approval of Proposed Agenda	
b.	Approval of Minutes (Pending Presidential approval)	
c.	Announcements	Shawn Schulenberg
d.	Recommendations / Resolutions	
<b>e. REPORTS</b>		
i.	Report of the University President	Brad Smith
ii.	Report of the Provost	Avinandan Mukherjee
iii.	Report of the BOG Representative	Robin Riner
iv.	Advisory Council of Faculty Report	Amine Oudghiri-Otmani
v.	Report of the Graduate Council Chair	Scott Davis
vi.	Student Government Association	Isabella Griffiths
<b>f. Standing Committee Reports</b>		
i.	Academic Planning –	Sean McBride
ii.	Athletic -	Tom Hisiro
iii.	Budget & Academic Policy -	Kelli Prejean
iv.	Library -	Megan Marshall
v.	Faculty Development -	Gayle Brazeau
vi.	Physical Facilities & Planning -	Bill Gardner
g. Other Requests to Speak to the Senate (5 minutes)		

6. Agenda Requests for Future Meetings – None.



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7. Adjournment - The meeting was adjourned at approximately 1223 hours (12:23 p.m.).

Respectfully Submitted,



\_\_\_\_\_  
Sujoy Bose, Recording Secretary, Faculty Senate

**MINUTES APPROVED BY EXECUTIVE COMMITTEE:**

\_\_\_\_\_  
Dr. Shawn Schulenberg, Chair  
Faculty Senate

\_\_\_\_\_  
Date Signed

**MINUTES READ:**

\_\_\_\_\_  
Brad Smith, President  
Marshall University

\_\_\_\_\_  
Date Signed

<sup>1</sup> MSAP: Motion seconded & passed.

<sup>2</sup> MSAPAA – Motion Seconded & passed as Amended.

# Faculty Personnel Committee Recommendation

**SR 22-23-26 FPC** Recommendation to amend MU BOG AA-26 Faculty Promotion

The Faculty Personnel Committee recommends updating MU BOG AA-26 Faculty Promotion to allow faculty not on the tenure track to earn promotion in certain cases. The attached files include:

1. The unedited original AA-26
2. The original AA-26 showing revisions
3. The clean final copy of AA-26

**FACULTY SENATE CHAIR:**

APPROVED BY THE  
FACULTY SENATE: \_\_\_\_\_ DATE: \_\_\_\_\_

DISAPPROVED BY THE  
FACULTY SENATE: \_\_\_\_\_ DATE: \_\_\_\_\_

**UNIVERSITY PRESIDENT:**

APPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_

DISAPPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_

COMMENTS: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

# MARSHALL UNIVERSITY BOARD OF GOVERNORS

## Policy No. AA-26

### FACULTY PROMOTION

#### 1 General Information:

- 1.1 Scope: Academic policy regarding the promotion of faculty through the established ranks.
- 1.2 Authority: W. Va. Code §18B-1-6
- 1.3 Passage Date: December 19, 2019
- 1.4 Effective Date: January 28, 2020. Note: Promotion eligible faculty members hired after July 1, 2014 will be governed by the guidelines set forth in this policy. Faculty members hired prior to the adoption of this policy may choose to use either the guidelines dates March 8, 2006, or the guidelines set forth in this policy, according to the guidelines in the transition document entitled “Tenure and Promotion Implementation Timeline” provided by Academic Affairs.
- 1.5 Controlling over: Marshall University
- 1.6 History: Adopted 4/5/54, Revised February 1956, January 1957, Amended 5/20/68, Revised 2/13/69-FPC, Amended 3/19/70-FPC, Revised 8/30/78-FPC, Policy Bulletin 36 Adopted by BOR on 3/12/84, Amended 5/24/88-FPC, Revised SR-92-93-(8)145(FPC), SR-93-94-2(FPC), Revised 3/5/98 Graduate Council, SR-00-01-(3)44(FPC); See SR-04-05-(12)-69 FECAHC for revised dates; See SR 04-05(36) 93 FECAHC for changes to evaluative language. This policy was updated and approved by the Marshall University Board of Governors on December 19, 2019.

#### 2 Policy:

- 2.1 Objectives: To establish equitable and appropriate criteria and procedures for faculty promotion through the ranks, including those related to eligibility, evaluation, and notification, and the formation of promotion policies at the college/school/library and department/division levels.

#### 3 Definitions:

- 3.1 Promotion in rank is a reward for meritorious professional achievement. It is based on the professional qualifications of a faculty member, including performance specific to the candidate’s contractual responsibilities and duties while employed at Marshall

University. Major categories of faculty responsibilities and duties include but are not limited to:

- Teaching and Advising
- Research, Scholarship, and Creative Activities
- Service and Professional Development

- 3.2 Individual colleges/schools/library are responsible for establishing promotion criteria and procedures that determine the relative weight and impact of the various responsibilities and duties. Such criteria and procedures must be in accordance with this policy and with Marshall University Board of Governors (MUBOG) policy AA-21, Faculty Workload Policy.
- 3.3 For the purposes of this policy, the Directors of the School of Art and Design, the School of Journalism and Mass Communications, and the School of Music and Theatre of the College of Arts and Media fulfill the role of Chairs.
- 3.4 For the purposes of this policy Chief Academic Officer (CAO) refers to the Dean of the School of Medicine or to the Senior Vice President for Academic Affairs and Provost for all other academic units.
- 3.5 The specific categories in which faculty are evaluated for promotion include the following:
- 3.5.1 Teaching and Advising responsibilities and duties may include, but are not limited to: command of disciplinary knowledge and methodology; effectiveness of classroom performance; advising load and effectiveness of academic advising; effectiveness in assessing student learning; rapport with students; contributions to curricular development, including development, promotion and delivery of off-campus academic programs, either through electronic means or conventional travel to off-campus course locations; and instructional development of faculty colleagues.
- 3.5.2 Research, Scholarship, and Creative Activities responsibilities and duties may include, but are not limited to: number, quality and importance of publications and creative productions; memberships and contributions to professional societies; professional growth and development; scholarly presentations and creative performances; and contributions to the professional development and achievement of colleagues.
- 3.5.3 Service and Professional Development responsibilities and duties may include, but are not limited to: contributions within the department/division, within the college, or university-wide; contributions to official student organizations or other university-related organizations; other work on behalf of the student body, faculty, staff or administration of the university. Service to the community includes, but is not

limited to: service on a compensated or pro bono basis to governments, to educational, business or civic organizations, or to the public; involvement as an official representative of Marshall University, or units thereof, in activities of governments and of educational, business, or civic organizations.

- 3.6 All faculty responsibilities and duties should be evaluated according to objective criteria for meritorious performance and achievement. Specific evaluative criteria should be established by college/schools/libraries and departments/divisions.

#### **4 Criteria for Faculty Ranks:**

##### 4.1 Requirements for the Rank of Instructor

- 4.1.1 Except as noted below, the entry-level rank of instructor requires that a candidate shall have earned a master's degree at a regionally accredited college or university, or at an appropriately accredited international college or university, in a discipline appropriate to the teaching field, or has been awarded the terminal degree in a discipline appropriate to the teaching field.
- 4.1.2 In certain special areas in which professional achievement is of unusual importance, or in which personnel holding higher degrees are not available, the bachelor's degree or its equivalent may meet the minimum for the rank of instructor. These exceptions must be approved by the CAO.
- 4.1.3 A candidate must show promise as an effective university teacher.

##### 4.2 Requirements for the Rank of Assistant Professor

- 4.2.1 Except as noted below, the rank of assistant professor requires that a candidate shall have earned a doctoral degree at a regionally accredited college or university, or at an appropriately accredited international college or university, in a discipline appropriate to the teaching field or has been awarded the terminal degree in a discipline appropriate to the teaching field.
- 4.2.2 In certain special areas in which professional achievement is of unusual importance, or in which personnel holding higher degrees are not available, the master's degree or its academic equivalent may meet the minimum requirement for the rank of assistant professor. These exceptions must be approved by the CAO.
- 4.2.3 A candidate must have had at least three complete academic years of experience as a full-time faculty member at a regionally accredited college or university, or at an appropriately accredited international college or university, or other experience deemed as equivalent by the Dean of the college/school/library, or the terminal degree from a regionally accredited college or university, or at an appropriately

accredited international college or university, in a discipline appropriate to the teaching field.

- 4.2.4 A candidate with teaching experience must have demonstrated their teaching professionalism and must show promise as a professional faculty member in other major areas of responsibility. Candidates without prior teaching experience must show promise as a professional teacher and as a professional faculty member in other areas of responsibility.

#### 4.3 Requirements for the Rank of Associate Professor

- 4.3.1 A candidate must have earned the doctoral degree at a regionally accredited college or university, or at an appropriately accredited international college or university, in a discipline appropriate to the teaching field, or have been awarded the terminal degree in a discipline appropriate to the teaching field. Exceptions to the degree requirement may be made for exceptional scholarly or creative accomplishments and/or promise only if the appropriate college/school/library committee so recommends. These exceptions must be approved by the CAO.

- 4.3.2 A candidate without an appropriate terminal degree must have had at least seven complete academic years' experience as a full-time faculty member of which at least five complete academic years must be at the assistant professor rank at a regionally accredited college or university, or at an appropriately accredited international college or university, or other experience deemed as equivalent by the Dean of the college/school/library. In other words, during the sixth year as an assistant professor, a candidate may apply for promotion in academic rank.

- 4.3.3 A candidate with an earned terminal degree in a discipline appropriate to the teaching field must have had at least five complete academic years of experience at the rank of assistant professor as a full-time faculty member at a regionally accredited college or university, or at an appropriately accredited international college or university, or other experience deemed as equivalent by the Dean of the college/school/library prior to application for promotion. In other words, during the sixth year as an assistant professor, a candidate may apply for promotion in academic rank.

- 4.3.4 A candidate must have demonstrated exemplary performance in either Teaching and Advising or in Research, Scholarship and Creative Activities, and professional performance and achievement in all other areas of responsibility.

#### 4.4 Requirements for the Rank of Professor

- 4.4.1 A candidate must have earned the doctoral degree in a discipline appropriate to the teaching field from a regionally accredited college or university, or an appropriately accredited international college or university, or have been awarded the terminal degree in a discipline appropriate to the teaching field. Exceptions to the degree

requirement may be made for exceptional scholarly and creative accomplishments and/or promise only if the appropriate college/school/library committee so recommends. These exceptions must be approved by the CAO.

- 4.4.2 A candidate must have had at least five complete academic years of experience in the rank of associate professor at a regionally accredited college or university, or at an appropriately accredited international college or university, or other experience deemed as equivalent by the Dean of the college/school/library at the time of application for promotion. In other words, during the sixth year as an associate professor, a candidate may apply for promotion in academic rank.
- 4.4.3 A candidate must have demonstrated exemplary performance in at least two areas of responsibility and professional performance and achievement in all other areas of responsibility. These areas include but are not limited to: Teaching and Advising; Research, Scholarship and Creative Activities; and Service and Professional Development.
- 4.5 Units with full-time, non-tenure-track clinical faculty or library faculty may develop separate promotion criteria and procedures in consultation with the relevant Chair(s) and Dean, and the CAO.

## **5 Annual Consideration for Promotion:**

- 5.1 All persons with the rank of instructor, assistant professor or associate professor who teach in one academic year at least one class in the university and who are employed full-time are entitled to annual consideration for promotion to a higher rank, provided that they have met the criteria for minimal levels of educational attainment and years of faculty experience outlined in this policy.
- 5.2 Only faculty members who have been granted tenure, under the procedures outlined in MUBOG Policy AA-28, Faculty Tenure, are eligible for consideration of promotion in academic rank. If promotion and tenure are applied for on the same schedule, the final tenure decision will be made before the final promotion decision; failure to be granted tenure will result in a negative promotion decision.
  - 5.2.1 Full-time, non-tenure-track faculty members governed by criteria and procedures established under section 4.5 of this policy are exempt from section 5.2 of this policy.
- 5.3 The year in which a faculty member is eligible for promotion will be an explicit and written part of that faculty member's initial offer of employment. Negotiated time consideration for promotion must be specifically documented in this letter, which must be included in the promotion application. In cases of extraordinary faculty member accomplishments, or the documented promise of extraordinary faculty member accomplishments, or the needs of the college/school/library, that date can be renegotiated, and promotion applied for at the renegotiated time. The faculty member, the Chair of the

faculty members' department/division, or the Dean of the faculty member's college/school/library may initiate the renegotiation. Any renegotiated date must be approved by the CAO.

## **6 Promotion Process:**

- 6.1 Each college/school/library and department/division or equivalent units will develop written guidelines outlining procedures and performance criteria for promotion. All such guidelines must be consistent with relevant Higher Education Policy Commission and MUBOG policies, including but not limited to MUBOG AA-28, Faculty Tenure and MUBOG AA-21, Faculty Workload. College/school/library promotion guidelines must be approved by the Dean in consultation with their faculty. Department/division promotion guidelines must be approved by the Dean. College/school/library and department/division promotion guidelines must be approved by the Faculty Senate's Faculty Personnel Committee and the CAO.
- 6.1.1 College/school/library promotion guidelines may permit department/division promotion guidelines to include provisions for external reviews of a candidate's application, or prohibit such reviews. If external review is mandated for a department/division, it must be used for all applications for promotion from that department/division. The selection of external reviewers must be collaborative: the appropriate department/division committee and the candidate will submit potential reviewers' names and qualifications; the selection of final reviewers must be agreed to by both parties. If agreement is not possible, the college/school/library Dean or Dean's designee will have final authority to choose external reviewers from the names submitted.
- 6.2 Normally, a faculty member is responsible for initiating their application for promotion. However, a department/division Chair or a department promotion committee may initiate a proposal for the promotion of any member of the department or division. Proposals for the promotion of a department/division Chair may be initiated by himself or herself, by a department/division committee or by the Dean of their college/school/library.
- 6.2.1 A candidate for promotion will submit an application by the established deadline to the department/division Chair.
- 6.2.2 If the candidate holds graduate or associate graduate faculty status, the department/division Chair will give the Dean of the Graduate College an opportunity to provide to the departmental committee any information that may have bearing upon the application.
- 6.2.3 No person, including the applicant, may present information verbally to any reviewing person or committee; any such information must be in written form.
- 6.2.4 A faculty member may withdraw their application for promotion at any time during the promotion process.



- 6.2.5 Beginning with departmental committee level and continuing thereafter through each step of the decision-making process, the candidate shall be informed in writing by the committee chair or administrator responsible for that step of any recommendation to deny promotion; this notification must give a rationale for the recommendation.
- 6.2.6 The department/division Chair will forward the promotion application to the appropriate department/division committee. The committee will prepare a written recommendation with respect to the qualifications of the candidate for promotion and submit it with the application to the department/division Chair. No items other than recommendations as outlined below may be added or deleted from the application after this point.
- 6.2.7 The department/division Chair will prepare a written recommendation with respect to the qualifications of the candidate for promotion and submit it with the application to the college/school/library Dean by February 15.
- 6.2.8 The Dean will submit all applications and recommendations to the appropriate college/school/library committee. Such committee must have representation from each department/division of the college/school/library unless a department or division has no tenured faculty members. The committee will evaluate each candidate for promotion and submit a written recommendation for each candidate, along with all materials received, to the Dean.
- 6.2.9 Upon receipt of recommendations by the college/school/library committee, the Dean will prepare a written recommendation for each candidate. The Dean will submit their recommendations and those of the college committee, the department/division Chairs and department/division committees along with all materials received to the CAO by March 25.
- 6.2.10 The CAO will prepare a written recommendation for each candidate and submit it together with all of the recommendations and application materials received from the Deans to the President by April 22.
- 6.2.11 The Promotion decision will result from action by the President at the conclusion of the promotion process. The President will prepare a list of those promoted and send an informational copy to the chairperson of the Faculty Senate Faculty Personnel Committee by April 30.
- 6.2.12 The President will inform by letter all candidates for promotion of their decision by April 30. An applicant denied promotion will be provided a statement of reasons for the action by this date.
- 6.2.13 All application materials, including recommendations, will be returned to each candidate at the end of the promotion process. All application materials and

promotion decisions and deliberations shall be considered confidential except for circumstances in which a legal “need-to-know” basis has been established. External reviews of a candidate’s application will only be returned in the case of a legal “need-to-know” and following a written request from the candidate to the CAO. The CAO may retain one copy of all application materials for archival purposes; no other copies may be made or retained without the written permission of the candidate.

6.2.14 The entire promotion process must adhere to the university’s time guidelines and conclude no later than April 30. Should the due dates fall on a non-business day, documents will be due on the next business day.

6.2.15 An applicant denied promotion by the President may file a grievance.

## **7 Assessment:**

7.1 To ensure that the objectives of this policy are being met, each department/division and college/school/library will conduct reviews of its promotion policies and procedures at least once every three years. Modifications to improve the policy’s accuracy, clarity, usefulness, and other factors found relevant, should be instituted. The Faculty Senate’s Faculty Personnel Committee will conduct a review of this policy at least once each five years, and recommend any changes it deems necessary to ensure that the objectives of this policy are being met. To ensure that these reviews are conducted, the Office of Academic Affairs will establish a review schedule and, according to the schedule, remind each department/division and college/school to review its tenure policies and procedures. The Faculty Senate will establish a review schedule and, according to the schedule, remind the Faculty Personnel Committee to review this policy.

# MARSHALL UNIVERSITY BOARD OF GOVERNORS

## Policy No. AA-26

### FACULTY PROMOTION

#### 1 General Information:

- 1.1 Scope: Academic policy regarding the promotion of faculty through the established ranks.
- 1.2 Authority: W. Va. Code §18B-1-6
- 1.3 Passage Date: December 19, 2019
- 1.4 Effective Date: January 28, 2020. Note: Promotion eligible faculty members hired after July 1, 2014 will be governed by the guidelines set forth in this policy. Faculty members hired prior to July 1, 2014 may choose to use either the guidelines dated March 8, 2006, or the guidelines set forth in this policy, according to the guidelines in the transition document entitled “Tenure and Promotion Implementation Timeline” provided by Academic Affairs.
- 1.5 Controlling over: Marshall University
- 1.6 History: Adopted 4/5/54, Revised February 1956, January 1957, Amended 5/20/68, Revised 2/13/69-FPC, Amended 3/19/70-FPC, Revised 8/30/78-FPC, Policy Bulletin 36 Adopted by BOR on 3/12/84, Amended 5/24/88-FPC, Revised SR-92-93-(8)145(FPC), SR-93-94-2(FPC), Revised 3/5/98 Graduate Council, SR-00-01-(3)44(FPC); See SR-04-05-(12)-69 FECAHC for revised dates; See SR 04-05(36) 93 FECAHC for changes to evaluative language. The current policy was updated and approved by the Marshall University Board of Governors on December 19, 2019.

#### 2 Policy:

- 2.1 Objectives: To establish equitable and appropriate criteria and procedures for faculty classifications, rank, promotion through the ranks, including those related to eligibility, evaluation, and notification, and the formation of promotion policies at the college/school/library and department/division levels.

#### 3 Definitions:

- 3.1 Promotion in rank is a reward for meritorious professional achievement. It is based on the professional qualifications of a faculty member, including performance specific to the candidate’s contractual responsibilities and duties while employed at Marshall

University. Major categories of faculty responsibilities and duties include but are not limited to:

- Teaching and Advising
- Research, Scholarship, and Creative Activities
- Service and Professional Development

- 3.2 Individual colleges/schools/library are responsible for establishing promotion criteria and procedures that determine the relative weight and impact of the various responsibilities and duties. Such criteria and procedures must be in accordance with this policy and with Marshall University Board of Governors (MUBOG) policy AA-21, Faculty Workload Policy.
- 3.3 For the purposes of this policy, the Directors of Schools may serve to fulfill the role of Chairs.
- 3.4 For the purposes of this policy Chief Academic Officer (CAO) refers to the Dean of the School of Medicine or to the Senior Vice President for Academic Affairs and Provost for all other academic units.
- 3.5 The specific categories in which faculty are evaluated for promotion include the following:
- 3.5.1 Teaching and Advising responsibilities and duties may include, but are not limited to: command of disciplinary knowledge, skills, and methodology; effectiveness of classroom performance; advising load and effectiveness of academic advising; effectiveness in assessing student learning; rapport with students and academic colleagues; contributions to curricular development, including development, promotion and delivery of off-campus academic programs, either through electronic means or conventional travel to off-campus course locations; and instructional development of faculty colleagues.
- 3.5.2 Research, Scholarship, and Creative Activities responsibilities and duties may include, but are not limited to: number, quality and importance of publications and creative productions; memberships and contributions to professional societies; professional growth and development; scholarly presentations and creative performances; adherence to the ethical and legal standards of scientific or creative inquiry; and contributions to the professional development and achievement of colleagues.
- 3.5.3 Service and Professional Development responsibilities and duties may include, but are not limited to: contributions within the department/division, within the college, or university-wide; contributions to official student organizations or other university-related organizations; other work on behalf of the student body, faculty, staff or administration of the university. Service to the community includes, but is not

limited to: service on a compensated or pro bono basis to governments, to educational, business or civic organizations, or to the public; involvement as an official representative of Marshall University, or units thereof, in activities of governments and of educational, business, or civic organizations.

- 3.6 All faculty responsibilities and duties should be evaluated according to objective criteria for meritorious performance and achievement according to the appointment duties and responsibilities outlined in the offer letter. Specific evaluative criteria should be established by college/schools/libraries and departments/divisions.

#### **4 Criteria for Faculty Ranks:**

##### 4.1 Requirements for the Rank of Instructor

4.1.1 Except as noted below, the entry-level rank of instructor requires that a candidate shall have earned a master's degree at a college or university accredited by a United States Department of Education recognized accreditor, or at an appropriately accredited international college or university, in a discipline appropriate to the teaching field, or has been awarded the terminal degree in a discipline appropriate to the teaching field.

4.1.2 In certain special areas in which professional achievement is of unusual importance, or in which personnel holding higher degrees are not available, the bachelor's degree or its equivalent may meet the minimum for the rank of instructor. These exceptions must be approved by the CAO and meet the criteria set forth in AA-18: Equivalencies for College Teaching, section 2.2 Recognition of Tested Experience.

4.1.3 A candidate must show promise as an effective university teacher.

##### 4.2 Requirements for the Rank of Assistant Professor

4.2.1 Except as noted below, the rank of assistant professor requires that a candidate shall have earned a doctoral degree at a college or university accredited by a United States Department of Education recognized accreditor, or at an appropriately accredited international college or university, in a discipline appropriate to the teaching field or has been awarded the terminal degree in a discipline appropriate to the teaching field.

4.2.2 In certain special areas in which professional achievement is of unusual importance, or in which personnel holding higher degrees are not available, the master's degree or its academic equivalent may meet the minimum requirement for the rank of assistant professor. These exceptions must be approved by the CAO and meet the criteria set forth in AA-18: Equivalencies for College Teaching, section 2.2 Recognition of Tested Experience.

4.2.3 If applying for promotion from the rank of "instructor" to that of "assistant

professor,” a candidate must have had at least three complete academic years of experience as a full-time faculty member at a college or university accredited by a United States Department of Education recognized accreditor, or at an appropriately accredited international college or university, or other experience deemed as equivalent by the Dean of the college/school/library, or the terminal degree from a college or university accredited by a United States Department of Education recognized accreditor, or at an appropriately accredited international college or university, in a discipline appropriate to the teaching field.

4.2.4 A candidate for promotion to the rank of assistant professor with teaching experience must have demonstrated their teaching professionalism and must show promise as a professional faculty member in other major areas of responsibility. Candidates without prior teaching experience must show promise as a professional teacher and as a professional faculty member in other areas of responsibility.

#### 4.3 Requirements for the Rank of Associate Professor

4.3.1 A candidate must have earned the doctoral degree at a college or university accredited by a United States Department of Education recognized accreditor or at an appropriately accredited international college or university, in a discipline appropriate to the teaching field, or have been awarded the terminal degree in a discipline appropriate to the teaching field. Exceptions to the degree requirement may be made for exceptional scholarly or creative accomplishments and/or promise only if the appropriate college/school/library committee so recommends. These exceptions must be approved by the CAO and meet the criteria set forth in AA-18: Equivalencies for College Teaching, section 2.2 Recognition of Tested Experience.

4.3.2 A candidate without an appropriate terminal degree must have had at least seven complete academic years’ experience as a full-time faculty member of which at least five complete academic years must be at the assistant professor rank at a college or university accredited by a United States Department of Education recognized accreditor, or at an appropriately accredited international college or university, or other experience deemed as equivalent by the Dean of the college/school/library. In other words, during the sixth year as an assistant professor, a candidate may apply for promotion in academic rank.

4.3.3 A candidate with an earned terminal degree in a discipline appropriate to the teaching field must have had at least five complete academic years of experience at the rank of assistant professor as a full-time faculty member at a college or university accredited by a United States Department of Education recognized accreditor, or at an appropriately accredited international college or university, or other experience deemed as equivalent by the Dean of the college/school/library prior to application for promotion. In other words, during the sixth year as an assistant professor, a candidate may apply for promotion in academic rank.

4.3.4 A candidate must have demonstrated exemplary performance in either Teaching and Advising or in Research, Scholarship and Creative Activities, and professional

performance and achievement in all other areas of responsibility. Definitions of exemplary and professional performance will be established by the candidate's college and department.

#### 4.4 Requirements for the Rank of Professor

- 4.4.1 A candidate must have earned the doctoral degree in a discipline appropriate to the teaching field from a college or university accredited by a United States Department of Education recognized accreditor, or an appropriately accredited international college or university, or have been awarded the terminal degree in a discipline appropriate to the teaching field. Exceptions to the degree requirement may be made for exceptional scholarly and creative accomplishments and/or promise only if the appropriate college/school/library committee so recommends. These exceptions must be approved by the CAO and meet the criteria set forth in AA-18: Equivalencies for College Teaching, section 2.2 Recognition of Tested Experience.
- 4.4.2 A candidate must have had at least five complete academic years of experience in the rank of associate professor at a college or university accredited by a United States Department of Education, or at an appropriately accredited international college or university, or other experience deemed as equivalent by the Dean of the college/school/library at the time of application for promotion. In other words, during the sixth year as an associate professor, a candidate may apply for promotion in academic rank.
- 4.4.3 A candidate must have demonstrated exemplary performance in at least two areas of responsibility and professional performance and achievement in all other areas of responsibility. These areas include Teaching and Advising; Research, Scholarship and Creative Activities; and Service and Professional Development.
- 4.5 Units with full-time faculty not on the tenure track, may develop separate promotion criteria and procedures for those faculty, in consultation with the relevant Chair(s), Director, Dean, and the CAO, and must be approved by the Faculty Personnel Committee

### 5 Annual Consideration for Promotion:

- 5.1 All persons with the rank of instructor, assistant professor or associate professor who teach in one academic year at least one class in the university and who are employed full-time are entitled to consideration for promotion to a higher rank, provided that they have met the criteria for minimal levels of educational attainment and years of faculty experience outlined in this policy.
- 5.2 Only faculty members who have been granted tenure, under the procedures outlined in MUBOG Policy AA-28, Faculty Tenure, are eligible for consideration of promotion in academic rank. If promotion and tenure are applied for on the same schedule, the final tenure decision will be made before the final promotion decision; failure to be granted

tenure will result in a negative promotion decision.

- 5.2.1 Full-time faculty not on the tenure track governed by criteria and procedures established under section 4.5 of this policy are exempt from section 5.2 of this policy.
  
- 5.3 The year in which a faculty member is eligible for promotion will be an explicit and written part of that faculty member's initial offer of employment. Negotiated time consideration for promotion must be specifically documented in this letter, which must be included in the promotion application. In cases of extraordinary faculty member accomplishments, or the documented promise of extraordinary faculty member accomplishments, or the needs of the college/school/library, that date can be renegotiated, and promotion applied for at the renegotiated time. The faculty member, the Chair of the faculty members' department/division, or the Dean of the faculty member's college/school/library may initiate the renegotiation. Any renegotiated date must be approved by the CAO.

## **6 Promotion Process:**

- 6.1 Each college/school/library and department/division or equivalent units will develop written guidelines outlining procedures and performance criteria for promotion. All such guidelines must be consistent with relevant MUBOG policies, including but not limited to MUBOG AA-28, Faculty Tenure and MUBOG AA-21, Faculty Workload. College/school/library promotion guidelines must be approved by the Dean in consultation with their faculty. Department/division promotion guidelines must be approved by the Dean. College/school/library and department/division promotion guidelines must be approved by the Faculty Senate's Faculty Personnel Committee and the CAO.
  - 6.1.1 College/school/library promotion guidelines may permit department/division promotion guidelines to include provisions for external reviews of a candidate's application, or prohibit such reviews. If external review is mandated for a department/division, it must be used for all applications for promotion from that department/division. The selection of external reviewers must be collaborative: the appropriate department/division committee and the candidate will submit potential reviewers' names and qualifications; the selection of final reviewers must be agreed to by both parties. If agreement is not possible, the college/school/library Dean or Dean's designee will have final authority to choose external reviewers from the names submitted.
  
- 6.2 Normally, a faculty member is responsible for initiating their application for promotion. However, a department/division Chair or a department promotion committee may initiate a proposal for the promotion of any member of the department or division. Proposals for the promotion of a department/division Chair may be initiated by himself or herself, by a department/division committee or by the Dean of their college/school/library.
  - 6.2.1 A candidate for promotion will submit an application by the established deadline to the department/division Chair.



- 6.2.2 No person, including the applicant, may present information verbally to any reviewing person or committee; any such information must be in written form.
- 6.2.3 A faculty member may withdraw their application for promotion at any time during the promotion process.
- 6.2.4 Beginning with departmental committee level and continuing thereafter through each step of the decision-making process, the candidate shall be informed in writing by the committee chair or administrator responsible for that step of any recommendation to deny promotion; this notification must give a rationale for the recommendation.
- 6.2.5 The department/division Chair will forward the promotion application to the appropriate department/division committee. The committee will prepare a written recommendation with respect to the qualifications of the candidate for promotion and submit it with the application to the department/division Chair. No items other than recommendations as outlined below may be added or deleted from the application after this point.
- 6.2.6 The department/division Chair will prepare a written recommendation with respect to the qualifications of the candidate for promotion and submit it with the application to the college/school/library Dean by February 15. Should the due date fall on a non-business day, documents will be due on the next business day.
- 6.2.7 The Dean will submit all applications and recommendations to the appropriate college/school/library committee. Such committee must have representation from each department/division of the college/school/library unless a department or division has no tenured faculty members. The committee will evaluate each candidate for promotion and submit a written recommendation for each candidate, along with all materials received, to the Dean.

Upon receipt of recommendations by the college/school/library committee, the Dean will prepare a written recommendation for each candidate. The Dean will submit their recommendations and those of the college committee, the department/division Chairs and department/division committees along with all materials received to the CAO by March 25. Should the due date fall on a non-business day, documents will be due on the next business day.

The CAO will prepare a written recommendation for each candidate and submit it together with all of the recommendations and application materials received from the Deans to the President by April 22. Should the due date fall on a non-business day, documents will be due on the next business day.

The Promotion decision will result from action by the President at the conclusion of the promotion process. The President will prepare a list of those promoted and send an informational copy to the chairperson of the Faculty Senate Faculty Personnel Committee by April 30. Should the due date fall on a non-business day, documents will be due on the next business day.

- 6.2.8 The President will inform by letter all candidates for promotion of their decision

by April 30. Should the due date fall on a non-business day, documents will be due on the next business day. An applicant denied promotion will be provided a statement of reasons for the action by this date.

6.2.9 All application materials, including recommendations, will be returned to each candidate at the end of the promotion process. All application materials and promotion decisions and deliberations shall be considered confidential except for circumstances in which a legal “need-to-know” basis has been established. External reviews of a candidate’s application will only be returned in the case of a legal “need-to-know” and following a written request from the candidate to the CAO. The CAO may retain one copy of all application materials for archival purposes; no other copies may be made or retained without the written permission of the candidate.

6.2.10 The entire promotion process must adhere to the university’s time guidelines and conclude no later than April 30. Should the due dates fall on a non-business day, documents will be due on the next business day.

6.2.11 An applicant denied promotion by the President may file a grievance.

## **7 Assessment:**

7.1 To ensure that the objectives of this policy are being met, each department/division and college/school/library will conduct reviews of its promotion policies and procedures at least once every three years. Modifications to improve the policy’s accuracy, clarity, usefulness, and other factors found relevant, should be instituted. The Faculty Senate’s Faculty Personnel Committee will conduct a review of this policy at least once each five years, and recommend any changes it deems necessary to ensure that the objectives of this policy are being met. To ensure that these reviews are conducted, the Office of Academic Affairs will establish a review schedule and, according to the schedule, remind each department/division and college/school to review its tenure policies and procedures. The Faculty Senate will establish a review schedule and, according to the schedule, remind the Faculty Personnel Committee to review this policy.

## **8 Superseding Provisions:**

8.1 This Rule supersedes and replaces Higher Education Policy Commission Series 9 – Academic Freedom, Professional Responsibility, Promotion, and Tenure; and any other Rule of the Higher Education Policy Commission which relates to the subject matter contained within this Rule.

# MARSHALL UNIVERSITY BOARD OF GOVERNORS

## Policy No. AA-26

### FACULTY PROMOTION

#### 1 General Information:

- 1.1 Scope: Academic policy regarding the promotion of faculty through the established ranks.
- 1.2 Authority: W. Va. Code §18B-1-6
- 1.3 Passage Date: December 19, 2019
- 1.4 Effective Date: January 28, 2020. Note: Promotion eligible faculty members hired after July 1, 2014 will be governed by the guidelines set forth in this policy. Faculty members hired prior to July 1, 2014 may choose to use either the guidelines dated March 8, 2006, or the guidelines set forth in this policy, according to the guidelines in the transition document entitled “Tenure and Promotion Implementation Timeline” provided by Academic Affairs.
- 1.5 Controlling over: Marshall University
- 1.6 History: Adopted 4/5/54, Revised February 1956, January 1957, Amended 5/20/68, Revised 2/13/69-FPC, Amended 3/19/70-FPC, Revised 8/30/78-FPC, Policy Bulletin 36 Adopted by BOR on 3/12/84, Amended 5/24/88-FPC, Revised SR-92-93-(8)145(FPC), SR-93-94-2(FPC), Revised 3/5/98 Graduate Council, SR-00-01-(3)44(FPC); See SR-04-05-(12)-69 FECAHC for revised dates; See SR 04-05(36) 93 FECAHC for changes to evaluative language. The current policy was updated and approved by the Marshall University Board of Governors on December 19, 2019.

#### 2 Policy:

- 2.1 Objectives: To establish equitable and appropriate criteria and procedures for faculty classifications, rank, promotion through the ranks, including those related to eligibility, evaluation, and notification, and the formation of promotion policies at the college/school/library and department/division levels.

#### 3 Definitions:

- 3.1 Promotion in rank is a reward for meritorious professional achievement. It is based on the professional qualifications of a faculty member, including performance specific to the candidate’s contractual responsibilities and duties while employed at Marshall

University. Major categories of faculty responsibilities and duties include but are not limited to:

- Teaching and Advising
- Research, Scholarship, and Creative Activities
- Service and Professional Development

- 3.2 Individual colleges/schools/library are responsible for establishing promotion criteria and procedures that determine the relative weight and impact of the various responsibilities and duties. Such criteria and procedures must be in accordance with this policy and with Marshall University Board of Governors (MUBOG) policy AA-21, Faculty Workload Policy.
- 3.3 For the purposes of this policy, the Directors of Schools may serve to fulfill the role of Chairs.
- 3.4 For the purposes of this policy Chief Academic Officer (CAO) refers to the Dean of the School of Medicine or to the Senior Vice President for Academic Affairs and Provost for all other academic units.
- 3.5 The specific categories in which faculty are evaluated for promotion include the following:
- 3.5.1 Teaching and Advising responsibilities and duties may include, but are not limited to: command of disciplinary knowledge, skills, and methodology; effectiveness of classroom performance; advising load and effectiveness of academic advising; effectiveness in assessing student learning; rapport with students and academic colleagues; contributions to curricular development, including development, promotion and delivery of off-campus academic programs, either through electronic means or conventional travel to off-campus course locations; and instructional development of faculty colleagues.
- 3.5.2 Research, Scholarship, and Creative Activities responsibilities and duties may include, but are not limited to: number, quality and importance of publications and creative productions; memberships and contributions to professional societies; professional growth and development; scholarly presentations and creative performances; adherence to the ethical and legal standards of scientific or creative inquiry; and contributions to the professional development and achievement of colleagues.
- 3.5.3 Service and Professional Development responsibilities and duties may include, but are not limited to: contributions within the department/division, within the college, or university-wide; contributions to official student organizations or other university-related organizations; other work on behalf of the student body, faculty, staff or administration of the university. Service to the community includes, but is not

limited to: service on a compensated or pro bono basis to governments, to educational, business or civic organizations, or to the public; involvement as an official representative of Marshall University, or units thereof, in activities of governments and of educational, business, or civic organizations.

- 3.6 All faculty responsibilities and duties should be evaluated according to objective criteria for meritorious performance and achievement according to the appointment duties and responsibilities outlined in the offer letter. Specific evaluative criteria should be established by college/schools/libraries and departments/divisions.

#### **4 Criteria for Faculty Ranks:**

##### 4.1 Requirements for the Rank of Instructor

- 4.1.1 Except as noted below, the entry-level rank of instructor requires that a candidate shall have earned a master's degree at a college or university accredited by a United States Department of Education recognized accreditor, or at an appropriately accredited international college or university, in a discipline appropriate to the teaching field, or has been awarded the terminal degree in a discipline appropriate to the teaching field.
- 4.1.2 In certain special areas in which professional achievement is of unusual importance, or in which personnel holding higher degrees are not available, the bachelor's degree or its equivalent may meet the minimum for the rank of instructor. These exceptions must be approved by the CAO and meet the criteria set forth in AA-18: Equivalencies for College Teaching, section 2.2 Recognition of Tested Experience.
- 4.1.3 A candidate must show promise as an effective university teacher.

##### 4.2 Requirements for the Rank of Assistant Professor

- 4.2.1 Except as noted below, the rank of assistant professor requires that a candidate shall have earned a doctoral degree at a college or university accredited by a United States Department of Education recognized accreditor, or at an appropriately accredited international college or university, in a discipline appropriate to the teaching field or has been awarded the terminal degree in a discipline appropriate to the teaching field.
- 4.2.2 In certain special areas in which professional achievement is of unusual importance, or in which personnel holding higher degrees are not available, the master's degree or its academic equivalent may meet the minimum requirement for the rank of assistant professor. These exceptions must be approved by the CAO and meet the criteria set forth in AA-18: Equivalencies for College Teaching, section 2.2 Recognition of Tested Experience.
- 4.2.3 If applying for promotion from the rank of "instructor" to that of "assistant

professor,” a candidate must have had at least three complete academic years of experience as a full-time faculty member at a college or university accredited by a United States Department of Education recognized accreditor, or at an appropriately accredited international college or university, or other experience deemed as equivalent by the Dean of the college/school/library, or the terminal degree from a college or university accredited by a United States Department of Education recognized accreditor, or at an appropriately accredited international college or university, in a discipline appropriate to the teaching field.

- 4.2.4 A candidate for promotion to the rank of assistant professor with teaching experience must have demonstrated their teaching professionalism and must show promise as a professional faculty member in other major areas of responsibility. Candidates without prior teaching experience must show promise as a professional teacher and as a professional faculty member in other areas of responsibility.
- 4.3 Requirements for the Rank of Associate Professor
- 4.3.1 A candidate must have earned the doctoral degree at a college or university accredited by a United States Department of Education recognized accreditor or at an appropriately accredited international college or university, in a discipline appropriate to the teaching field, or have been awarded the terminal degree in a discipline appropriate to the teaching field. Exceptions to the degree requirement may be made for exceptional scholarly or creative accomplishments and/or promise only if the appropriate college/school/library committee so recommends. These exceptions must be approved by the CAO and meet the criteria set forth in AA-18: Equivalencies for College Teaching, section 2.2 Recognition of Tested Experience.
- 4.3.2 A candidate without an appropriate terminal degree must have had at least seven complete academic years’ experience as a full-time faculty member of which at least five complete academic years must be at the assistant professor rank at a college or university accredited by a United States Department of Education recognized accreditor, or at an appropriately accredited international college or university, or other experience deemed as equivalent by the Dean of the college/school/library. In other words, during the sixth year as an assistant professor, a candidate may apply for promotion in academic rank.
- 4.3.3 A candidate with an earned terminal degree in a discipline appropriate to the teaching field must have had at least five complete academic years of experience at the rank of assistant professor as a full-time faculty member at a college or university accredited by a United States Department of Education recognized accreditor, or at an appropriately accredited international college or university, or other experience deemed as equivalent by the Dean of the college/school/library prior to application for promotion. In other words, during the sixth year as an assistant professor, a candidate may apply for promotion in academic rank.
- 4.3.4 A candidate must have demonstrated exemplary performance in either Teaching and Advising or in Research, Scholarship and Creative Activities, and professional

performance and achievement in all other areas of responsibility. Definitions of exemplary and professional performance will be established by the candidate's college and department.

#### 4.4 Requirements for the Rank of Professor

- 4.4.1 A candidate must have earned the doctoral degree in a discipline appropriate to the teaching field from a college or university accredited by a United States Department of Education recognized accreditor, or an appropriately accredited international college or university, or have been awarded the terminal degree in a discipline appropriate to the teaching field. Exceptions to the degree requirement may be made for exceptional scholarly and creative accomplishments and/or promise only if the appropriate college/school/library committee so recommends. These exceptions must be approved by the CAO and meet the criteria set forth in AA-18: Equivalencies for College Teaching, section 2.2 Recognition of Tested Experience.
- 4.4.2 A candidate must have had at least five complete academic years of experience in the rank of associate professor at a college or university accredited by a United States Department of Education, or at an appropriately accredited international college or university, or other experience deemed as equivalent by the Dean of the college/school/library at the time of application for promotion. In other words, during the sixth year as an associate professor, a candidate may apply for promotion in academic rank.
- 4.4.3 A candidate must have demonstrated exemplary performance in at least two areas of responsibility and professional performance and achievement in all other areas of responsibility. These areas include Teaching and Advising; Research, Scholarship and Creative Activities; and Service and Professional Development.
- 4.5 Units with full-time faculty not on the tenure track, may develop separate promotion criteria and procedures for those faculty, in consultation with the relevant Chair(s), Director, Dean, and the CAO, and must be approved by the Faculty Personnel Committee

#### 5 Annual Consideration for Promotion:

- 5.1 All persons with the rank of instructor, assistant professor or associate professor who teach in one academic year at least one class in the university and who are employed full-time are entitled to consideration for promotion to a higher rank, provided that they have met the criteria for minimal levels of educational attainment and years of faculty experience outlined in this policy.
- 5.2 Only faculty members who have been granted tenure, under the procedures outlined in MUBOG Policy AA-28, Faculty Tenure, are eligible for consideration of promotion in academic rank. If promotion and tenure are applied for on the same schedule, the final tenure decision will be made before the final promotion decision; failure to be granted tenure will result in a negative promotion decision.

- 5.2.1 Full-time faculty not on the tenure track governed by criteria and procedures established under section 4.5 of this policy are exempt from section 5.2 of this policy.
- 5.3 The year in which a faculty member is eligible for promotion will be an explicit and written part of that faculty member's initial offer of employment. Negotiated time consideration for promotion must be specifically documented in this letter, which must be included in the promotion application. In cases of extraordinary faculty member accomplishments, or the documented promise of extraordinary faculty member accomplishments, or the needs of the college/school/library, that date can be renegotiated, and promotion applied for at the renegotiated time. The faculty member, the Chair of the faculty members' department/division, or the Dean of the faculty member's college/school/library may initiate the renegotiation. Any renegotiated date must be approved by the CAO.

## **6 Promotion Process:**

- 6.1 Each college/school/library and department/division or equivalent units will develop written guidelines outlining procedures and performance criteria for promotion. All such guidelines must be consistent with relevant MUBOG policies, including but not limited to MUBOG AA-28, Faculty Tenure and MUBOG AA-21, Faculty Workload. College/school/library promotion guidelines must be approved by the Dean in consultation with their faculty. Department/division promotion guidelines must be approved by the Dean. College/school/library and department/division promotion guidelines must be approved by the Faculty Senate's Faculty Personnel Committee and the CAO.
- 6.1.1 College/school/library promotion guidelines may permit department/division promotion guidelines to include provisions for external reviews of a candidate's application, or prohibit such reviews. If external review is mandated for a department/division, it must be used for all applications for promotion from that department/division. The selection of external reviewers must be collaborative: the appropriate department/division committee and the candidate will submit potential reviewers' names and qualifications; the selection of final reviewers must be agreed to by both parties. If agreement is not possible, the college/school/library Dean or Dean's designee will have final authority to choose external reviewers from the names submitted.
- 6.2 Normally, a faculty member is responsible for initiating their application for promotion. However, a department/division Chair or a department promotion committee may initiate a proposal for the promotion of any member of the department or division. Proposals for the promotion of a department/division Chair may be initiated by himself or herself, by a department/division committee or by the Dean of their college/school/library.
- 6.2.1 A candidate for promotion will submit an application by the established deadline to the department/division Chair.



- 6.2.2 No person, including the applicant, may present information verbally to any reviewing person or committee; any such information must be in written form.
- 6.2.3 A faculty member may withdraw their application for promotion at any time during the promotion process.
- 6.2.4 Beginning with departmental committee level and continuing thereafter through each step of the decision-making process, the candidate shall be informed in writing by the committee chair or administrator responsible for that step of any recommendation to deny promotion; this notification must give a rationale for the recommendation.
- 6.2.5 The department/division Chair will forward the promotion application to the appropriate department/division committee. The committee will prepare a written recommendation with respect to the qualifications of the candidate for promotion and submit it with the application to the department/division Chair. No items other than recommendations as outlined below may be added or deleted from the application after this point.
- 6.2.6 The department/division Chair will prepare a written recommendation with respect to the qualifications of the candidate for promotion and submit it with the application to the college/school/library Dean by February 15. Should the due date fall on a non-business day, documents will be due on the next business day.
- 6.2.7 The Dean will submit all applications and recommendations to the appropriate college/school/library committee. Such committee must have representation from each department/division of the college/school/library unless a department or division has no tenured faculty members. The committee will evaluate each candidate for promotion and submit a written recommendation for each candidate, along with all materials received, to the Dean.
- 6.2.8 Upon receipt of recommendations by the college/school/library committee, the Dean will prepare a written recommendation for each candidate. The Dean will submit their recommendations and those of the college committee, the department/division Chairs and department/division committees along with all materials received to the CAO by March 25. Should the due date fall on a non-business day, documents will be due on the next business day.
- 6.2.9 The CAO will prepare a written recommendation for each candidate and submit it together with all of the recommendations and application materials received from the Deans to the President by April 22. Should the due date fall on a non-business day, documents will be due on the next business day.
- 6.2.10 The Promotion decision will result from action by the President at the conclusion of the promotion process. The President will prepare a list of those promoted and send an informational copy to the chairperson of the Faculty Senate Faculty Personnel Committee by April 30. Should the due date fall on a non-business day,

documents will be due on the next business day

- 6.2.11 The President will inform by letter all candidates for promotion of their decision by April 30. Should the due date fall on a non-business day, documents will be due on the next business day. An applicant denied promotion will be provided a statement of reasons for the action by this date.
- 6.2.12 All application materials, including recommendations, will be returned to each candidate at the end of the promotion process. All application materials and promotion decisions and deliberations shall be considered confidential except for circumstances in which a legal “need-to-know” basis has been established. External reviews of a candidate’s application will only be returned in the case of a legal “need-to-know” and following a written request from the candidate to the CAO. The CAO may retain one copy of all application materials for archival purposes; no other copies may be made or retained without the written permission of the candidate.
- 6.2.13 The entire promotion process must adhere to the university’s time guidelines and conclude no later than April 30. Should the due dates fall on a non-business day, documents will be due on the next business day.
- 6.2.14 An applicant denied promotion by the President may file a grievance.

## **7 Assessment:**

- 7.1 To ensure that the objectives of this policy are being met, each department/division and college/school/library will conduct reviews of its promotion policies and procedures at least once every three years. Modifications to improve the policy’s accuracy, clarity, usefulness, and other factors found relevant, should be instituted. The Faculty Senate’s Faculty Personnel Committee will conduct a review of this policy at least once each five years, and recommend any changes it deems necessary to ensure that the objectives of this policy are being met. To ensure that these reviews are conducted, the Office of Academic Affairs will establish a review schedule and, according to the schedule, remind each department/division and college/school to review its tenure policies and procedures. The Faculty Senate will establish a review schedule and, according to the schedule, remind the Faculty Personnel Committee to review this policy.

## **8 Superseding Provision:**

- 8.1: This Rule supersedes and replaces Higher Education Policy Commission Series 9 – Academic Freedom, Professional Responsibility, Promotion, and Tenure; and any other Rule of the Higher Education Policy Commission which relates to the subject matter contained within this Rule

# Faculty Personnel Committee Recommendation

**SR 22-23-27 FPC** Recommendation to amend MU BOG AA-28 Faculty Tenure

SR 22-23-26 FPC recommends certain changes in AA-26 Faculty Promotion. This recommendation would update similar references in AA-28 Faculty Tenure to ensure the language is consistent between policies.

1. The unedited original AA-28
2. The original AA-28 showing revisions
3. The clean final copy of AA-28

**FACULTY SENATE CHAIR:**

APPROVED BY THE  
FACULTY SENATE: \_\_\_\_\_ DATE: \_\_\_\_\_

DISAPPROVED BY THE  
FACULTY SENATE: \_\_\_\_\_ DATE: \_\_\_\_\_

**UNIVERSITY PRESIDENT:**

APPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_

DISAPPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_

COMMENTS: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

# MARSHALL UNIVERSITY BOARD OF GOVERNORS

## Policy No. AA-28

### FACULTY TENURE

#### 1 General Information:

- 1.1 Scope: Academic policy regarding the application requirements and process of awarding tenure to eligible faculty.
- 1.2 Authority: W. Va. Code §18B-1-6
- 1.3 Passage Date: August 27, 2020
- 1.4 Effective Date: September 28, 2020. Tenure-track faculty members hired after July 1, 2014 will be governed by the guidelines set forth in this policy. Faculty members hired prior to the adoption of this policy may choose to use either the guidelines dated March 8, 2006, or the guidelines set forth in this policy.
- 1.5 Controlling over: Marshall University
- 1.6 History: Passed Faculty Senate on May 24, 1989, Amended: Faculty Senate Recommendation 93-94-2-FPC; See SR -04-05-(12)-69 FECAHC for revised dates; See SR-03-04 (36) 93 FECAHC for evaluative language. This policy was updated and approved by the Marshall University Board of Governors first on December 19, 2019 and subsequently on August 27, 2020.

**2 Policy Objectives:** To establish equitable and appropriate criteria and procedures for tenure, including those related to eligibility, notification, and the formation of tenure policies at the college/school/ and department/division levels.

#### 3 Policy:

##### 3.1 Definitions

- 3.1.1 Tenure at Marshall University provides for a continuing series of appointments which may be terminated by the university only for cause or under extraordinary circumstances or reduction in or discontinuance of a program.
- 3.1.2 Tenure is awarded not only for past achievements but also in anticipation of continued achievement in all areas of responsibility.
- 3.1.3 When a full-time faculty member is appointed on other than a temporary or tenured basis the appointment shall be probationary. The conditions which govern a probationary appointment are in accordance with the West Virginia Higher Education Policy Commission (HEPC) Series 9.
- 3.1.4 For the purposes of this policy, the Directors of the School of Art and Design, the School of Journalism and Mass Communications, and the School of Music and Theatre, of the College of Arts and Media, fulfill the role of Chairs.

3.1.5 For the purposes of this policy Chief Academic Officer (CAO) refers to the Dean of the School of Medicine or to the Senior Vice President for Academic Affairs and Provost for all other academic units.

### 3.2 Requirements

3.2.1 Tenure shall not be granted automatically, or for years of service, but shall result from a process of peer review and culminate in action by the President. The granting of tenure shall be based on the following:

3.2.2 The candidate is professionally qualified.

3.2.3 The university has a continuing need for a faculty member with the particular qualifications and competencies of the candidate. This determination shall be in accordance with the provisions of HEPC Series 9.

3.2.4 The professional qualifications of a candidate for tenure will be evaluated using the guidelines pertaining to promotion as described in Marshall University Board of Governors (MUBOG) policy AA-26, Faculty Promotion, section 4.

3.2.5 The candidate must have demonstrated professional performance and achievement in all of their major areas of responsibility. Major categories of faculty responsibilities and duties are:

- Teaching and Advising
- Research, Scholarship, and Creative Activities
- Service and Professional Development.

The candidate must have demonstrated exemplary performance in either Teaching and Advising or in Research, Scholarship and Creative Activities. Major attention shall be given to the quality and caliber of professional accomplishments and to the future promise as an educator, scholar or artist, and responsible university Citizen.

3.2.6 University Citizenship encompasses contributions that transcend organizational and disciplinary boundaries and meaningfully influence and benefit all parts of the University community, fostering a culture of engagement. Exemplary university citizens commit time and energy working with others to foster cooperation and collaboration between and among elements of the institution and its constituents, thus improving and enhancing Marshall University and its sense of community.

The elements of University Citizenship may include, but are not limited to: Positive leadership of governance bodies, contributions to disciplinary/professional growth and innovation, furthering civil discourse/intercultural understanding, constructive mentoring of both students and faculty colleagues, and contributions toward achieving a progressive future for the institution.

3.2.7 Tenure may be granted only to faculty who hold the rank of assistant professor or above.

3.2.8 Only faculty members who have been granted tenure are eligible for consideration of promotion in academic rank. If promotion and tenure are

applied for on the same schedule, the final tenure decision will be made before the final promotion decision; failure to be granted tenure will result in a negative promotion decision. See AA-26, Faculty Tenure, Section 5.2.

- 3.2.9 The maximum period of probation at Marshall University is seven years. Before completing the sixth year of a probationary appointment, a non-tenured faculty member shall be given written notice of tenure, or shall be offered a one-year terminal contract of employment for the seventh year. In exceptional cases, newly appointed faculty members may negotiate the use of prior service at other appropriately accredited higher education institutions to reduce the length of the probationary period; denial of tenure under such circumstances shall have the same effect as denial of tenure following the standard probationary period. The length of the probationary period must be established at the time of initial employment by the President, after consultation with the CAO and the appropriate Dean(s), Chair(s) and department/division/school faculty, and be included in the initial letter of appointment. See MUBOG Policy AA-43 Modified Duties for Nine-Month Faculty for circumstances leading to an extension of the probationary period.
- 3.2.10 In cases of extraordinary faculty member accomplishments, or the documented promise of extraordinary faculty member accomplishments, or the needs of the college/school, the probationary period can be renegotiated, and tenure applied for at the renegotiated time. The faculty member, the Chair of the faculty member's department/division/school, or the Dean of the faculty member's college/school may initiate the renegotiation. Any renegotiated date must be approved by the CAO. Such renegotiated dates supersede dates determined under the provisions of clause 3.2.8 of this policy.
- 3.2.11 If the status of a faculty member changes from temporary to probationary, the time spent at the institution may, at the discretion of the President, be counted as part of the probationary period. The original hiring agreement must inform the faculty member being employed for a tenure-track position of the option of requesting that their temporary service be counted toward tenure. A probationary faculty member wishing to count years on a temporary appointment as part of the probationary period must make this request at the time of initial appointment to a tenure-track position. If the option is exercised, the faculty member must be cautioned that their years of temporary service will be evaluated by the same criteria as tenure-track service. The request should be initiated through the department/division/school Chair and should flow through appropriate channels. Requests made after this time will be denied. If no request is made, the years of the temporary appointment will not be counted as part of the probationary period.
- 3.2.12 The above provisions for tenure do not apply to persons who have appointments as full-time administrators or staff members. Service in an administrative position by a probationary faculty member shall not be credited as experience toward tenure.

#### **4 Procedure:**

##### 4.1 Notification of Probationary Faculty

- 4.1.1 At the time of initial appointment, the department/division Chair will notify in

writing each probationary faculty member of the requirements and guidelines for tenure, including any which apply specifically within the faculty member's department. The faculty member will acknowledge in writing receipt of this notification. Lack of acknowledgment is not grounds for dismissal, nor is it reason for appealing a denial of tenure.

- 4.1.2 All probationary faculty members must be notified annually in writing by peer committees, Chairs, and/or Deans of their progress toward tenure and/or promotion. Notifications should identify specific areas of improvement needed for tenure or promotion. (SR-04-05-(37) 94 FECAHC)

## 4.2 The Tenure Process

- 4.2.1 Each college/school will develop written procedures and performance criteria for implementing the tenure requirements in HEPC Series 9. College/school tenure procedures and criteria must be approved by the relevant Dean in consultation with the faculty, and approved for consistency with university and HEPC policies by the Faculty Personnel Committee and the CAO.
- 4.2.2 College/School tenure guidelines may permit department/division tenure guidelines to include provisions for external reviews of a candidate's application, or prohibit such reviews. If external review is mandated for a department/division, it must be used for all applications for tenure from that department/division. The selection of external reviewers must be collaborative: the appropriate department/division committee and the candidate will submit potential reviewers' names and qualifications; the selection of final reviewers must be agreed upon by both parties. If agreement is not possible, the college/school Dean or Dean's designee will have final authority to choose external reviewers from the names submitted.
- 4.2.3 All tenure-track faculty members will be evaluated by the criteria used for promotion and tenure in their college/school and department/division as a pre-tenure review. The date of this pre-tenure review must be stated in the initial letter of appointment. A college/school may establish pre-tenure review procedures which vary from those used for a tenure application. This evaluation will be part of any application for tenure. An exceptional evaluation, i.e., the results of which exceed normal expectations as defined by a faculty member's college/school and department/division tenure guidelines, when verified by the relevant Dean and the CAO, will result in a five percent (5%) salary increase as specified in MUBOG policy AA-7, Salary Increases for Tenured and Tenure-Track Faculty.
- 4.2.4 Each faculty member will have the primary responsibility for initiating their application for tenure. However, the department/division Chair or department/division committee may initiate a recommendation for tenure.
- 4.2.5 Unless demonstrated extraordinary circumstances prevent an application during the sixth year of a faculty appointment, the person who chooses not to apply will not be considered for tenure and will be offered a succeeding one-year terminal contract of appointment.
- 4.2.6 A candidate for tenure will submit an application by the established departmental deadline to the department/division Chair, who will forward it to the appropriate department/division committee.

- 4.2.7 If the candidate holds graduate or associate graduate faculty status, the department/division Chair will give the Dean of the Graduate College an opportunity to provide to the departmental committee any information that they may have bearing upon tenure.
- 4.2.8 No person, including the applicant, may present information verbally to any reviewing person or committee; any such information must be in written form.
- 4.2.9 The committee will prepare a written recommendation with respect to the qualifications of the candidate for tenure and submit it with the candidate's application to the department/division Chair. No items other than recommendations as outlined below may be added to or deleted from the application after this point.
- 4.2.10 Beginning with the department/division committee level and continuing thereafter through each step of the decision-making process, the candidate will be informed in writing by the committee chair or administrator responsible for that step of any recommendation to deny tenure; this notification must include a rationale for the recommendation.
- 4.2.11 The department/division Chair will prepare a written recommendation with respect to the qualifications of the candidate for tenure and submit it along with all other materials received from the candidate and from the department/division committee to the college/school Dean by February 15.
- 4.2.12 The Dean will submit all applications and recommendations to the appropriate college/school committee. Such committees must have representation from each department/division/school of the college/school, unless a department/division/school has no tenured faculty members. The committee will evaluate each candidate for tenure and submit a written recommendation for each candidate, along with all material received, to the Dean.
- 4.2.13 Upon receipt of recommendations by the college/school committee, the Dean will prepare a written recommendation for each candidate. The Dean will submit their recommendations and those of the college/school committee, the department/division Chairs, and department committees to the CAO by March 25.
- 4.2.14 The CAO will prepare a written recommendation for each candidate and submit it together with all the recommendations received from the Deans to the President by April 22.
- 4.2.15 The tenure decision will result from action by the President at the conclusion of the tenure process. The President will prepare a list of those granted tenure and send an informational copy to the chair of the Faculty Senate's Faculty Personnel Committee by April 30.
- 4.2.16 The President will inform by letter all candidates for tenure of their decision by April 30. An applicant denied tenure will be notified via certified mail; this notification will include a rationale for the decision.
- 4.2.17 All application materials, including recommendations, will be returned to each candidate at the end of the tenure process. All application materials and tenure decisions and deliberations shall be considered confidential except for circumstances in which a legal "need-to-know" has been established. External



reviews of a candidate's application will only be returned in the case of a legal need-to-know and following a written request from the candidate to the CAO. The CAO may retain one copy of all application materials for archival purposes; no other copies may be made or retained without the written permission of the candidate.

- 4.2.18 The entire tenure process must adhere to university time guidelines and conclude no later than April 30. Should due dates fall on a non-business day, documents will be due on the next business day.
- 4.2.19 An applicant denied tenure by the President may file a grievance.

## **5 Assessment:**

- 5.1 To ensure that the objectives of this policy are being met, each department/division and college/school will conduct reviews of its tenure policies and procedures at least once every three years. Modifications to improve the policy's accuracy, clarity, usefulness, and other factors found relevant, should be instituted. The Faculty Senate's Faculty Personnel Committee will conduct a review of this policy at least once each five years, and recommend any changes it deems necessary to ensure that the objectives of this policy are being met. To ensure that these reviews are conducted, the Office of Academic Affairs will establish a review schedule and, according to the schedule, remind each department/division and college/school to review its tenure policies and procedures. The Faculty Senate will establish a review schedule and, according to the schedule, remind the Faculty Personnel Committee to review this policy.

# MARSHALL UNIVERSITY BOARD OF GOVERNORS

## Policy No. AA-28

### FACULTY TENURE

#### 1 General Information:

- 1.1 Scope: Academic policy regarding the application requirements and process of awarding tenure to eligible faculty.
- 1.2 Authority: W. Va. Code §18B-1-6
- 1.3 Passage Date: August 27, 2020
- 1.4 Effective Date: September 28, 2020. Tenure-track faculty members hired after July 1, 2014 will be governed by the guidelines set forth in this policy. Faculty members hired prior to the adoption of this policy may choose to use either the guidelines dated March 8, 2006, or the guidelines set forth in this policy.
- 1.5 Controlling over: Marshall University
- 1.6 History: Passed Faculty Senate on May 24, 1989, Amended: Faculty Senate Recommendation 93-94-2-FPC; See SR -04-05-(12)-69 FECAHC for revised dates; See SR-03-04 (36) 93 FECAHC for evaluative language. This policy was updated and approved by the Marshall University Board of Governors first on December 19, 2019 and subsequently on August 27, 2020.

**2 Policy Objectives:** To establish equitable and appropriate criteria and procedures for tenure, including those related to eligibility, notification, and the formation of tenure policies at the college/school/ and department/division levels.

#### 3 Policy:

##### 3.1 Definitions

- 3.1.1 Tenure at Marshall University provides for a continuing series of appointments which may be terminated by the university only for cause or under extraordinary circumstances or reduction in or discontinuance of a program.
- 3.1.2 Tenure is awarded not only for past achievements but also in anticipation of continued achievement in all areas of responsibility.
- 3.1.3 Unless a full-time faculty member hired into a tenure-track faculty line is granted tenure upon appointment, the appointment shall be probationary.
- 3.1.4 For the purposes of this policy, the Directors of Schools may serve to fulfill the role of Chairs.

3.1.5 For the purposes of this policy Chief Academic Officer (CAO) refers to the Dean of the School of Medicine or to the Senior Vice President for Academic Affairs and Provost for all other academic units.

### 3.2 Requirements

3.2.1 Tenure shall not be granted automatically, or for years of service, but shall result from a process of peer review and culminate in action by the President. The granting of tenure shall be based on the following:

3.2.2 The candidate is professionally qualified.

3.2.3 The university has a continuing need for a faculty member with the particular qualifications and competencies of the candidate.

3.2.4 The professional qualifications of a candidate for tenure will be evaluated using the guidelines pertaining to promotion as described in Marshall University Board of Governors (MUBOG) policy AA-26, Faculty Promotion, section 4.

3.2.5 The candidate must have demonstrated professional performance and achievement in all of their major areas of responsibility. Major categories of faculty responsibilities and duties are:

- Teaching and Advising
- Research, Scholarship, and Creative Activities
- Service and Professional Development.

The candidate must have demonstrated exemplary performance in either Teaching and Advising or in Research, Scholarship and Creative Activities. Major attention shall be given to the quality and caliber of professional accomplishments and to the future promise as an educator, scholar, and/or artist, and responsible university Citizen.

3.2.6 University Citizenship encompasses contributions that transcend organizational and disciplinary boundaries and meaningfully influence and benefit all parts of the University community, fostering a culture of engagement. Exemplary university citizens commit time and energy working with others to foster cooperation and collaboration between and among elements of the institution and its constituents, thus improving and enhancing Marshall University and its sense of community.

The elements of University Citizenship may include, but are not limited to: Positive leadership of governance bodies, contributions to disciplinary/professional growth and innovation, furthering civil discourse/intercultural understanding, constructive mentoring of both students and faculty colleagues, and contributions toward achieving a progressive future for the institution.

3.2.7 Tenure may be granted only to probationary faculty who hold the rank of assistant professor or above on a tenure-track line.

3.2.8 Probationary faculty members must be granted tenure before they are eligible for consideration of promotion in academic rank. If promotion and tenure are

applied for on the same schedule, the final tenure decision will be made before the final promotion decision; failure to be granted tenure will result in a negative promotion decision. See AA-26, Faculty Tenure, Section 5.2.

- 3.2.9 The maximum period of probation at Marshall University is seven years. Before completing the sixth year of a probationary appointment, a non-tenured faculty member shall be given written notice of tenure, or shall be offered a one-year terminal contract of employment for the seventh year. In exceptional cases, newly appointed faculty members may negotiate the use of prior service at other appropriately accredited higher education institutions to reduce the length of the probationary period; denial of tenure under such circumstances shall have the same effect as denial of tenure following the standard probationary period. The length of the probationary period must be established at the time of initial employment by the President, after consultation with the CAO and the appropriate Dean(s), Chair(s) and department/division/school faculty, and be included in the initial letter of appointment. See MUBOG Policy AA-43 Modified Duties for Nine-Month Faculty for circumstances leading to an extension of the probationary period.
- 3.2.10 In cases of extraordinary faculty member accomplishments, or the documented promise of extraordinary faculty member accomplishments, or the needs of the college/school, the probationary period can be renegotiated, and tenure applied for at the renegotiated time. The faculty member, the Chair of the faculty member's department/division/school, or the Dean of the faculty member's college/school may initiate the renegotiation. Any renegotiated date must be approved by the CAO. Such renegotiated dates supersede dates determined under the provisions of clause 3.2.8 of this policy.
- 3.2.11 If the status of a faculty member changes from temporary to probationary, the time spent at the institution may, at the discretion of the President, be counted as part of the probationary period. The original hiring agreement must inform the faculty member being employed for a tenure-track position of the option of requesting that their temporary service be counted toward tenure. A probationary faculty member wishing to count years on a temporary appointment as part of the probationary period must make this request at the time of initial appointment to a tenure-track position. If the option is exercised, the faculty member must be cautioned that their years of temporary service will be evaluated by the same criteria as tenure-track service. The request should be initiated through the department/division/school Chair and should flow through appropriate channels. Requests made after this time will be denied. If no request is made, the years of the temporary appointment will not be counted as part of the probationary period.
- 3.2.12 The above provisions for tenure do not apply to persons who have appointments as full-time administrators or staff members. Service in an administrative position by a probationary faculty member shall not be credited as experience toward tenure.

#### **4 Procedure:**

##### 4.1 Notification of Probationary Faculty

- 4.1.1 At the time of initial appointment, the department/division Chair will notify in

writing each probationary faculty member of the requirements and guidelines for tenure, including any which apply specifically within the faculty member's department. The faculty member will acknowledge in writing receipt of this notification. Lack of acknowledgment is not grounds for dismissal, nor is it reason for appealing a denial of tenure.

- 4.1.2 All probationary faculty members must be notified annually in writing by peer committees, Chairs, and/or Deans of their progress toward tenure and/or promotion. Notifications should identify specific areas of improvement needed for tenure or promotion. (SR-04-05-(37) 94 FECAHC)

## 4.2 The Tenure Process

- 4.2.1 Each college/school will develop written procedures and performance criteria for implementing the tenure requirements. College/school tenure procedures and criteria must be approved by the relevant Dean in consultation with the faculty, and approved for consistency with university and by the Faculty Personnel Committee and the CAO.
- 4.2.2 College/School tenure guidelines may permit department/division tenure guidelines to include provisions for external reviews of a candidate's application, or prohibit such reviews. If external review is mandated for a department/division, it must be used for all applications for tenure from that department/division. The selection of external reviewers must be collaborative: the appropriate department/division committee and the candidate will submit potential reviewers' names and qualifications; the selection of final reviewers must be agreed upon by both parties. If agreement is not possible, the college/school Dean or Dean's designee will have final authority to choose external reviewers from the names submitted.
- 4.2.3 All tenure-track faculty members will be evaluated by the criteria used for promotion and tenure in their college/school and department/division as a pre-tenure review. The date of this pre-tenure review must be stated in the initial letter of appointment. A college/school may establish pre-tenure review procedures which vary from those used for a tenure application. This evaluation will be part of any application for tenure. An exceptional evaluation, i.e., the results of which exceed normal expectations as defined by a faculty member's college/school and department/division tenure guidelines, when verified by the relevant Dean and the CAO, will result in a five percent (5%) salary increase as specified in MUBOG policy AA-7, Salary Increases for Tenured and Tenure-Track Faculty. There is no limit or preset cap on the number of probationary faculty receiving an exceptional pre-tenure evaluation from any college (i.e., all probationary faculty under pre-tenure review are eligible to receive the exceptional evaluation if warranted).
- 4.2.4 Each faculty member will have the primary responsibility for initiating their application for tenure. However, the department/division Chair or department/division committee may initiate a recommendation for tenure.
- 4.2.5 Unless demonstrated extraordinary circumstances prevent an application during the sixth year of a faculty appointment, the person who chooses not to apply will not be considered for tenure and will be offered a succeeding one-year terminal contract of appointment.

- 4.2.6 A candidate for tenure will submit an application by the established departmental deadline to the department/division Chair, who will forward it to the appropriate department/division committee.
- .
- 4.2.7 No person, including the applicant, may present information verbally to any reviewing person or committee; any such information must be in written form.
- 4.2.8 The committee will prepare a written recommendation with respect to the qualifications of the candidate for tenure and submit it with the candidate's application to the department/division Chair. No items other than recommendations as outlined below may be added to or deleted from the application after this point.
- 4.2.9 Beginning with the department/division committee level and continuing thereafter through each step of the decision-making process, the candidate will be informed in writing by the committee chair or administrator responsible for that step of any recommendation to deny tenure; this notification must include a rationale for the recommendation.
- 4.2.10 The department/division Chair will prepare a written recommendation with respect to the qualifications of the candidate for tenure and submit it along with all other materials received from the candidate and from the department/division committee to the college/school Dean by February 15. Should the due date fall on a non-business day, documents will be due on the next business day.
- 4.2.11 The Dean will submit all applications and recommendations to the appropriate college/school committee. Such committees must have representation from each department/division/school of the college/school, unless a department/division/school has no tenured faculty members. The committee will evaluate each candidate for tenure and submit a written recommendation for each candidate, along with all material received, to the Dean.
- 4.2.12 Upon receipt of recommendations by the college/school committee, the Dean will prepare a written recommendation for each candidate. The Dean will submit their recommendations and those of the college/school committee, the department/division Chairs, and department committees to the CAO by March 25. Should the due date fall on a non-business day, documents will be due on the next business day.
- 4.2.13 The CAO will prepare a written recommendation for each candidate and submit it together with all the recommendations received from the Deans to the President by April 30. Should the due date fall on a non-business day, documents will be due on the next business day.
- 4.2.14 The tenure decision will result from action by the President at the conclusion of the tenure process. The President will prepare a list of those granted tenure and send an informational copy to the chair of the Faculty Senate's Faculty Personnel Committee by April 30. Should the due date fall on a non-business day, documents will be due on the next business day..
- 4.2.15 The President will inform by letter all candidates for tenure of their decision by April 30. Should this date fall on a non-business day, the President will inform, by letter,

all candidates for tenure of their decision on the next business day.

- 4.2.16 An applicant denied tenure will be notified via certified mail; this notification will include a rationale for the decision.
- 4.2.17 All application materials, including recommendations, will be returned to each candidate at the end of the tenure process. All application materials and tenure decisions and deliberations shall be considered confidential except for circumstances in which a legal "need-to-know" has been established. External reviews of a candidate's application will only be returned in the case of a legal need-to-know and following a written request from the candidate to the CAO. The CAO may retain one copy of all application materials for archival purposes; no other copies may be made or retained without the written permission of the candidate.
- 4.2.18 The entire tenure process must adhere to university time guidelines and conclude no later than April 30. Should due dates fall on a non-business day, documents will be due on the next business day.
- 4.2.19 An applicant denied tenure by the President may file a grievance.

## **5 Assessment:**

- 5.1 To ensure that the objectives of this policy are being met, each department/division and college/school will conduct reviews of its tenure policies and procedures at least once every three years. Modifications to improve the policy's accuracy, clarity, usefulness, and other factors found relevant, should be instituted. The Faculty Senate's Faculty Personnel Committee will conduct a review of this policy at least once each five years, and recommend any changes it deems necessary to ensure that the objectives of this policy are being met. To ensure that these reviews are conducted, the Office of Academic Affairs will establish a review schedule and, according to the schedule, remind each department/division and college/school to review its tenure policies and procedures. The Faculty Senate will establish a review schedule and, according to the schedule, remind the Faculty Personnel Committee to review this policy.

## **6 Superseding Provisions**

- 6.1 This Rule supersedes and replaces Higher Education Policy Commission Series 9 – Academic Freedom, Professional Responsibility, Promotion, and Tenure; and any other Rule of the Higher Education Policy Commission which relates to the subject matter contained within this Rule.

# MARSHALL UNIVERSITY BOARD OF GOVERNORS

## Policy No. AA-28

### FACULTY TENURE

#### 1 General Information:

- 1.1 Scope: Academic policy regarding the application requirements and process of awarding tenure to eligible faculty.
- 1.2 Authority: W. Va. Code §18B-1-6
- 1.3 Passage Date: August 27, 2020
- 1.4 Effective Date: September 28, 2020. Tenure-track faculty members hired after July 1, 2014 will be governed by the guidelines set forth in this policy. Faculty members hired prior to the adoption of this policy may choose to use either the guidelines dated March 8, 2006, or the guidelines set forth in this policy.
- 1.5 Controlling over: Marshall University
- 1.6 History: Passed Faculty Senate on May 24, 1989, Amended: Faculty Senate Recommendation 93-94-2-FPC; See SR -04-05-(12)-69 FECAHC for revised dates; See SR-03-04 (36) 93 FECAHC for evaluative language. This policy was updated and approved by the Marshall University Board of Governors first on December 19, 2019 and subsequently on August 27, 2020.

**2 Policy Objectives:** To establish equitable and appropriate criteria and procedures for tenure, including those related to eligibility, notification, and the formation of tenure policies at the college/school/ and department/division levels.

#### 3 Policy:

##### 3.1 Definitions

- 3.1.1 Tenure at Marshall University provides for a continuing series of appointments which may be terminated by the university only for cause or under extraordinary circumstances or reduction in or discontinuance of a program.
- 3.1.2 Tenure is awarded not only for past achievements but also in anticipation of continued achievement in all areas of responsibility.
- 3.1.3 Unless a full-time faculty member hired into a tenure-track faculty line is granted tenure upon appointment, the appointment shall be probationary.
- 3.1.4 For the purposes of this policy, the Directors of Schools may serve to fulfill the role of Chairs.



3.1.5 For the purposes of this policy Chief Academic Officer (CAO) refers to the Dean of the School of Medicine or to the Senior Vice President for Academic Affairs and Provost for all other academic units.

## 3.2 Requirements

3.2.1 Tenure shall not be granted automatically, or for years of service, but shall result from a process of peer review and culminate in action by the President. The granting of tenure shall be based on the following:

3.2.2 The candidate is professionally qualified.

3.2.3 The university has a continuing need for a faculty member with the particular qualifications and competencies of the candidate.

3.2.4 The professional qualifications of a candidate for tenure will be evaluated using the guidelines pertaining to promotion as described in Marshall University Board of Governors (MUBOG) policy AA-26, Faculty Promotion, section 4.

3.2.5 The candidate must have demonstrated professional performance and achievement in all of their major areas of responsibility. Major categories of faculty responsibilities and duties are:

- Teaching and Advising
- Research, Scholarship, and Creative Activities
- Service and Professional Development.

The candidate must have demonstrated exemplary performance in either Teaching and Advising or in Research, Scholarship and Creative Activities. Major attention shall be given to the quality and caliber of professional accomplishments and to the future promise as an educator, scholar, and/or artist, and responsible university Citizen.

3.2.6 University Citizenship encompasses contributions that transcend organizational and disciplinary boundaries and meaningfully influence and benefit all parts of the University community, fostering a culture of engagement. Exemplary university citizens commit time and energy working with others to foster cooperation and collaboration between and among elements of the institution and its constituents, thus improving and enhancing Marshall University and its sense of community.

The elements of University Citizenship may include, but are not limited to: Positive leadership of governance bodies, contributions to disciplinary/professional growth and innovation, furthering civil discourse/intercultural understanding, constructive mentoring of both students and faculty colleagues, and contributions toward achieving a progressive future for the institution.

3.2.7 Tenure may be granted only to probationary faculty who hold the rank of assistant professor or above on a tenure-track line.

3.2.8 Probationary faculty members must be granted tenure before they are eligible for consideration of promotion in academic rank. If promotion and tenure are

applied for on the same schedule, the final tenure decision will be made before the final promotion decision; failure to be granted tenure will result in a negative promotion decision. See AA-26, Faculty Tenure, Section 5.2.

- 3.2.9 The maximum period of probation at Marshall University is seven years. Before completing the sixth year of a probationary appointment, a non-tenured faculty member shall be given written notice of tenure, or shall be offered a one-year terminal contract of employment for the seventh year. In exceptional cases, newly appointed faculty members may negotiate the use of prior service at other appropriately accredited higher education institutions to reduce the length of the probationary period; denial of tenure under such circumstances shall have the same effect as denial of tenure following the standard probationary period. The length of the probationary period must be established at the time of initial employment by the President, after consultation with the CAO and the appropriate Dean(s), Chair(s) and department/division/school faculty, and be included in the initial letter of appointment. See MUBOG Policy AA-43 Modified Duties for Nine-Month Faculty for circumstances leading to an extension of the probationary period.
- 3.2.10 In cases of extraordinary faculty member accomplishments, or the documented promise of extraordinary faculty member accomplishments, or the needs of the college/school, the probationary period can be renegotiated, and tenure applied for at the renegotiated time. The faculty member, the Chair of the faculty member's department/division/school, or the Dean of the faculty member's college/school may initiate the renegotiation. Any renegotiated date must be approved by the CAO. Such renegotiated dates supersede dates determined under the provisions of clause 3.2.8 of this policy.
- 3.2.11 If the status of a faculty member changes from temporary to probationary, the time spent at the institution may, at the discretion of the President, be counted as part of the probationary period. The original hiring agreement must inform the faculty member being employed for a tenure-track position of the option of requesting that their temporary service be counted toward tenure. A probationary faculty member wishing to count years on a temporary appointment as part of the probationary period must make this request at the time of initial appointment to a tenure-track position. If the option is exercised, the faculty member must be cautioned that their years of temporary service will be evaluated by the same criteria as tenure-track service. The request should be initiated through the department/division/school Chair and should flow through appropriate channels. Requests made after this time will be denied. If no request is made, the years of the temporary appointment will not be counted as part of the probationary period.
- 3.2.12 The above provisions for tenure do not apply to persons who have appointments as full-time administrators or staff members. Service in an administrative position by a probationary faculty member shall not be credited as experience toward tenure.

#### **4 Procedure:**

##### 4.1 Notification of Probationary Faculty

- 4.1.1 At the time of initial appointment, the department/division Chair will notify in

writing each probationary faculty member of the requirements and guidelines for tenure, including any which apply specifically within the faculty member's department. The faculty member will acknowledge in writing receipt of this notification. Lack of acknowledgment is not grounds for dismissal, nor is it reason for appealing a denial of tenure.

- 4.1.2 All probationary faculty members must be notified annually in writing by peer committees, Chairs, and/or Deans of their progress toward tenure and/or promotion. Notifications should identify specific areas of improvement needed for tenure or promotion. (SR-04-05-(37) 94 FECAHC)

## 4.2 The Tenure Process

- 4.2.1 Each college/school will develop written procedures and performance criteria for implementing the tenure requirements. College/school tenure procedures and criteria must be approved by the relevant Dean in consultation with the faculty, and approved for consistency with university and by the Faculty Personnel Committee and the CAO.
- 4.2.2 College/School tenure guidelines may permit department/division tenure guidelines to include provisions for external reviews of a candidate's application, or prohibit such reviews. If external review is mandated for a department/division, it must be used for all applications for tenure from that department/division. The selection of external reviewers must be collaborative: the appropriate department/division committee and the candidate will submit potential reviewers' names and qualifications; the selection of final reviewers must be agreed upon by both parties. If agreement is not possible, the college/school Dean or Dean's designee will have final authority to choose external reviewers from the names submitted.
- 4.2.3 All tenure-track faculty members will be evaluated by the criteria used for promotion and tenure in their college/school and department/division as a pre-tenure review. The date of this pre-tenure review must be stated in the initial letter of appointment. A college/school may establish pre-tenure review procedures which vary from those used for a tenure application. This evaluation will be part of any application for tenure. An exceptional evaluation, i.e., the results of which exceed normal expectations as defined by a faculty member's college/school and department/division tenure guidelines, when verified by the relevant Dean and the CAO, will result in a five percent (5%) salary increase as specified in MUBOG policy AA-7, Salary Increases for Tenured and Tenure-Track Faculty. There is no limit or preset cap on the number of probationary faculty receiving an exceptional pre-tenure evaluation from any college (i.e., all probationary faculty under pre-tenure review are eligible to receive the exceptional evaluation if warranted).
- 4.2.4 Each faculty member will have the primary responsibility for initiating their application for tenure. However, the department/division Chair or department/division committee may initiate a recommendation for tenure.
- 4.2.5 Unless demonstrated extraordinary circumstances prevent an application during the sixth year of a faculty appointment, the person who chooses not to apply will not be considered for tenure and will be offered a succeeding one-year terminal contract of appointment.

- 4.2.6 A candidate for tenure will submit an application by the established departmental deadline to the department/division Chair, who will forward it to the appropriate department/division committee.
- .
- 4.2.7 No person, including the applicant, may present information verbally to any reviewing person or committee; any such information must be in written form.
- 4.2.8 The committee will prepare a written recommendation with respect to the qualifications of the candidate for tenure and submit it with the candidate's application to the department/division Chair. No items other than recommendations as outlined below may be added to or deleted from the application after this point.
- 4.2.9 Beginning with the department/division committee level and continuing thereafter through each step of the decision-making process, the candidate will be informed in writing by the committee chair or administrator responsible for that step of any recommendation to deny tenure; this notification must include a rationale for the recommendation.
- 4.2.10 The department/division Chair will prepare a written recommendation with respect to the qualifications of the candidate for tenure and submit it along with all other materials received from the candidate and from the department/division committee to the college/school Dean by February 15. Should the due date fall on a non-business day, documents will be due on the next business day.
- 4.2.11 The Dean will submit all applications and recommendations to the appropriate college/school committee. Such committees must have representation from each department/division/school of the college/school, unless a department/division/school has no tenured faculty members. The committee will evaluate each candidate for tenure and submit a written recommendation for each candidate, along with all material received, to the Dean.
- 4.2.12 Upon receipt of recommendations by the college/school committee, the Dean will prepare a written recommendation for each candidate. The Dean will submit their recommendations and those of the college/school committee, the department/division Chairs, and department committees to the CAO by March 25. Should the due date fall on a non-business day, documents will be due on the next business day.
- 4.2.13 The CAO will prepare a written recommendation for each candidate and submit it together with all the recommendations received from the Deans to the President by April 30. Should the due date fall on a non-business day, documents will be due on the next business day.
- 4.2.14 The tenure decision will result from action by the President at the conclusion of the tenure process. The President will prepare a list of those granted tenure and send an informational copy to the chair of the Faculty Senate's Faculty Personnel Committee by April 30. Should the due date fall on a non-business day, documents will be due on the next business day..
- 4.2.15 The President will inform by letter all candidates for tenure of their decision by April 30. Should this date fall on a non-business day, the President will inform, by letter,

all candidates for tenure of their decision on the next business day.

- 4.2.16 An applicant denied tenure will be notified via certified mail; this notification will include a rationale for the decision.
- 4.2.17 All application materials, including recommendations, will be returned to each candidate at the end of the tenure process. All application materials and tenure decisions and deliberations shall be considered confidential except for circumstances in which a legal "need-to-know" has been established. External reviews of a candidate's application will only be returned in the case of a legal need-to-know and following a written request from the candidate to the CAO. The CAO may retain one copy of all application materials for archival purposes; no other copies may be made or retained without the written permission of the candidate.
- 4.2.18 The entire tenure process must adhere to university time guidelines and conclude no later than April 30. Should due dates fall on a non-business day, documents will be due on the next business day.
- 4.2.19 An applicant denied tenure by the President may file a grievance.

## **5 Assessment:**

- 5.1 To ensure that the objectives of this policy are being met, each department/division and college/school will conduct reviews of its tenure policies and procedures at least once every three years. Modifications to improve the policy's accuracy, clarity, usefulness, and other factors found relevant, should be instituted. The Faculty Senate's Faculty Personnel Committee will conduct a review of this policy at least once each five years, and recommend any changes it deems necessary to ensure that the objectives of this policy are being met. To ensure that these reviews are conducted, the Office of Academic Affairs will establish a review schedule and, according to the schedule, remind each department/division and college/school to review its tenure policies and procedures. The Faculty Senate will establish a review schedule and, according to the schedule, remind the Faculty Personnel Committee to review this policy.

## **6 Superseding Provisions:**

- 6.1 This Rule supersedes and replaces Higher Education Policy Commission Series 9 – Academic Freedom, Professional Responsibility, Promotion, and Tenure; and any other Rule of the Higher Education Policy Commission which relates to the subject matter contained within this Rule.

**BUDGET AND ACADEMIC POLICY COMMITTEE**

**RECOMMENDATION**

**SR-22-23-42 BAPC**

Recommends the adjustment of language in the Marshall University Undergraduate Catalog related to the method of notifying students of a suspension or dismissal.

**RATIONALE:**

The proposed edits to the Marshall University Undergraduate Catalog would allow email notifications to be sent to students as notifications of suspension or dismissal in addition to the current language that allows regular mail. While not specifically noted in the catalog, the expected practice has been to utilize certified mail to document the date the letter was mailed as well as the delivery of the document to the student’s permanent address. As the cost of certified mail has increased, this has become a significant expense for some of the larger colleges. An email with a read-receipt notification can meet this requirement at no cost.

The documentation of notification and receipt is essential in case a student chooses to appeal the suspension or dismissal. This proposal would recommend language that would clarify certified regular mail and add email with a delivery and read receipt as acceptable notification methods for suspension or dismissal. An email recipient can block a read receipt, but a delivery receipt cannot be blocked.

(An additional correction is also needed due to a change in processing in the Office of the Registrar. See the information that has been struck in the proposed text below.)

Note: This policy change request was submitted by Associate Deans Council.

**FACULTY SENATE CHAIR:**

APPROVED BY THE

FACULTY SENATE: \_\_\_\_\_ DATE: \_\_\_\_\_

DISAPPROVED BY THE

FACULTY SENATE: \_\_\_\_\_ DATE: \_\_\_\_\_

**UNIVERSITY PRESIDENT:**

APPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_

DISAPPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_

**COMMENTS:**

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## Current Catalog Language

### Academic Standing

**(for more detailed information, see “Academic Rights and Responsibilities of Students”)**

Students receive official notification of academic standing in their grade report at the end of the regular semester or summer session.

Academic standing is defined by one of three categories:

1. *Good Standing:*

The student is in good standing when the cumulative Marshall and Overall GPA (includes Marshall grades and any grades earned at other institutions), is at least 2.0. For purposes of participation in extracurricular activities, a student is considered to be in good standing if he or she is eligible to enroll in classes that semester and not under specific restriction as described in the Marshall University Code of Student Rights and Responsibilities, Section C (1-3). Individual activities or organizations may have further requirements for participation such as minimum GPA.

2. *Academic Probation:* The student is placed on academic probation at the end of any regular semester or summer session when either the cumulative Marshall or Overall GPA (includes Marshall grades and any grades earned at other institutions) is less than 2.0. The student will be notified by mail/e-mail that a hold has been placed on registration activity. This means the student cannot register or make schedule changes in myMU. All registration activity must take place in person at the Office of the Registrar or through the student’s advisor. After seeing his or her advisor, the student must also get written permission from the associate dean, or appropriate college representative, of his/her college to register or make schedule changes. If a student on academic probation is taking an add/drop slip to the Office of the Registrar for course registration or adjustment, an Academic Improvement Plan (AIP) must accompany the slip at the time of registration.

3. *Academic Suspension:*

If a student exceeds the maximum quality point deficits in the cumulative Marshall or Overall GPA (includes Marshall grades and any grades earned at other institutions) for his or her GPA hours at the end of any given semester, he or she will be suspended for the following semester. The college dean notifies suspended students by mail that a hold has been placed on their registration status and their registration for the following semester has been canceled (excluding summer terms). Please see “Academic Probation and Suspension” for details.

## Proposed Catalog Language

### Academic Standing

**(for more detailed information, see “Academic Rights and Responsibilities of Students”)**

Students receive official notification of academic standing in their grade report at the end of the regular semester or summer session.

Academic standing is defined by one of three categories:

- *Good Standing:*

The student is in good standing when the cumulative Marshall and Overall GPA (includes Marshall grades and any grades earned at other institutions), is at least 2.0. For purposes of participation in extracurricular activities, a student is considered to be in good standing if he or she is eligible to enroll in classes that semester and not

under specific restriction as described in the Marshall University Code of Student Rights and Responsibilities, Section C (1-3). Individual activities or organizations may have further requirements for participation such as minimum GPA.

- *Academic Probation:* The student is placed on academic probation at the end of any regular semester or summer session when either the cumulative Marshall or Overall GPA (includes Marshall grades and any grades earned at other institutions) is less than 2.0. The student will be notified by either mail or e-mail that a hold has been placed on registration activity. This means the student cannot register or make schedule changes in myMU. All registration activity must take place in person at the Office of the Registrar or through the student's advisor. After seeing his or her advisor, the student must also get written permission from the associate dean, or appropriate college representative, of his/her college to register or make schedule changes. If a student on academic probation is taking an add/drop slip to the Office of the Registrar for course registration or adjustment, an Academic Improvement Plan (AIP) must accompany the slip at the time of registration.
- *Academic Suspension:*  
If a student exceeds the maximum quality point deficits in the cumulative Marshall or Overall GPA (includes Marshall grades and any grades earned at other institutions) for his or her GPA hours at the end of any given semester, he or she will be suspended for the following semester. The college dean notifies suspended students by either certified regular mail or email with an electronic delivery and read receipt that a hold has been placed on their registration status and their registration for the following semester has been canceled (excluding summer terms). Please see "Academic Probation and Suspension" for details.



**BUDGET AND ACADEMIC POLICY COMMITTEE**  
**RECOMMENDATION**

**SR-22-23-43 BAPC**

Recommends that midterm grades (D, F, or NC) be reported for all undergraduate students.

**RATIONALE:**

The proposed policy change will ask faculty to submit midterm grades (D, F, or NC) for all undergraduate students. This early grade reporting will serve as an early alert for students to recognize their standing in the course at midterm allowing time to correct on their own, seek assistance, or withdraw without affecting their GPA. The early alert midterm grade report also allows intervention from academic advisors as well as faculty who have acknowledged their student's current standing in their classes.

Note: This policy change request was submitted by Associate Deans Council.

**FACULTY SENATE CHAIR:**

APPROVED BY THE

FACULTY SENATE: \_\_\_\_\_ DATE: \_\_\_\_\_

DISAPPROVED BY THE

FACULTY SENATE: \_\_\_\_\_ DATE: \_\_\_\_\_

**UNIVERSITY PRESIDENT:**

APPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_

DISAPPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_

**COMMENTS:**

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## Current Catalog Language

### Midterm Grade Reports for Freshmen and Sophomores

Shortly before the middle of the Fall and Spring semester (around the eighth week), all faculty evaluate the freshman and sophomore students in their classes. Freshman and sophomore students who are earning the equivalent of a grade of D, F, or NC at this time will receive a grade report mailed to their permanent address and a letter explaining how they can improve their academic performance. A midterm grade is not a promise of a particular final grade nor is it recorded on the student's official transcript. It is intended only as an early warning.

## Proposed Catalog Language

### Midterm Grade Reports for Freshmen and Sophomores

Shortly before the middle of the Fall and Spring semester, all faculty evaluate ~~the freshman and sophomore~~ **all undergraduate students' progress** in their classes. ~~Freshman and sophomore~~ **S**tudents who are earning the equivalent of a grade of D, F, or NC at this time will receive a grade report mailed to their permanent address ~~and~~ **including** a letter explaining how they can improve their academic performance. A midterm grade is not a promise of a particular final grade nor is it recorded on the student's official transcript. It is intended only as an early warning.

**For faculty in courses with no graded assignments or exams before midterm, an indicator is available in the midterm grade reporting tool to indicate that no grades will be reported.**

**BUDGET AND ACADEMIC POLICY COMMITTEE  
RECOMMENDATION**

**SR-22-23-44 BAPC**

Recommends the adjustment of language in the Marshall University Undergraduate Catalog to match current practice for meeting with probation students.

**RATIONALE:**

The proposed edits to the Marshall University Undergraduate Catalog will update language to reflect the current practice in some or most colleges. In many cases, probation students do not actually meet with the Dean or the Associate Dean. It is intended that students view probation as a time to seek assistance rather than a time of punishment. In some colleges, probation students continue to meet with their regularly assigned advisor or the lead advisor. To reflect this change, it is proposed that the language in the catalog be changed to include a designated college official.

Note: This policy change request was submitted by Associate Deans Council.

**FACULTY SENATE CHAIR:**

APPROVED BY THE

FACULTY SENATE: \_\_\_\_\_ DATE: \_\_\_\_\_

DISAPPROVED BY THE

FACULTY SENATE: \_\_\_\_\_ DATE: \_\_\_\_\_

**UNIVERSITY PRESIDENT:**

APPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_

DISAPPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_

**COMMENTS:**

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## Current Catalog Language

### Academic Probation And Suspension

For information on Financial Aid Probation, please see the section on [Student Financial Assistance](#).

#### Probation for Academic Deficiencies

All undergraduate students whose Overall or Marshall GPA drops below a 2.0 will be placed on Academic Probation. Academic Probation is a period of restricted enrollment for a student. All probation students are subject to the following restrictions.

- Students on probation must meet with the Associate/Assistant Dean of their College before registering for classes to develop an Academic Improvement Plan to achieve good academic standing. This plan will be binding on the student.
- Students on probation may take a maximum of 14 hours and should repeat courses under the D/F Repeat Rule to reduce deficiency points.
- Students on probation must earn a 2.0 GPA or higher during every semester they are on probation. Failure to achieve a 2.0 semester GPA or higher while on Academic Probation will result in suspension (see below).
- Students on probation are not allowed to register by myMU.
- Students on probation must participate in their College's Retention Program.
- Other requirements may be imposed in the Academic Improvement Plan.

The student is returned to Academic Good Standing when his or her Marshall and Overall GPA are 2.0 or higher.

## Proposed Catalog Language

### Academic Probation And Suspension

For information on Financial Aid Probation, please see the section on [Student Financial Assistance](#).

#### Probation for Academic Deficiencies

All undergraduate students whose Overall or Marshall GPA drops below a 2.0 will be placed on Academic Probation. Academic Probation is a period of restricted enrollment for a student. All probation students are subject to the following restrictions.

- **Students on probation must meet with the Associate/Assistant Dean of their College or Designated College Official** before registering for classes to develop an Academic Improvement Plan to achieve good academic standing. This plan will be binding on the student.
- Students on probation may take a maximum of 14 hours and should repeat courses under the D/F Repeat Rule to reduce deficiency points.
- Students on probation must earn a 2.0 GPA or higher during every semester they are on probation. Failure to achieve a 2.0 semester GPA or higher while on Academic Probation will result in suspension (see below).
- Students on probation are not allowed to register by myMU.
- Students on probation must participate in their College's Retention Program.
- Other requirements may be imposed in the Academic Improvement Plan.

The student is returned to Academic Good Standing when his or her Marshall and Overall GPA are 2.0 or higher.

**BUDGET AND ACADEMIC POLICY COMMITTEE  
RECOMMENDATION**

**SR-22-23-45 BAPC**

Recommends the adjustment of language in the Marshall University Undergraduate Catalog related to Minors by allowing students to earn minors in the same department, but not in the same subject area.

**RATIONALE:**

The proposed edits to the Marshall University Undergraduate Catalog related to Minors would align the policy with what is specified by the WVHEPC, Title 133, Series 11 (see [§133-11-3](#)).

There are several examples at Marshall where major and minor programs have been housed in the same department to alleviate budgetary constraints and to foster faculty research synergies. However, while these programs would be quite complementary (and in said cases, students would be encouraged to pursue these minors), the current catalog language prevents them from doing so. Examples include students majoring in Electrical Engineering and minoring in Computer Science and students majoring in Accountancy and minoring in Legal Environment. The proposed language would expand opportunities for students to declare minors whilst also ensuring students cannot declare minors in the same program as their major.

**FACULTY SENATE CHAIR:**

APPROVED BY THE  
FACULTY SENATE: \_\_\_\_\_ DATE: \_\_\_\_\_

DISAPPROVED BY THE  
FACULTY SENATE: \_\_\_\_\_ DATE: \_\_\_\_\_

**UNIVERSITY PRESIDENT:**

APPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_

DISAPPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_

**COMMENTS:**

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# Current Catalog Language

## Minors

A minor is a program of study outside the major department requiring at least 12 semester credit hours for completion. All courses in the minor must be taken for a grade except for approved study abroad courses. With the exception of college-approved interdisciplinary minors, each academic department/division designates the specific courses or range of courses required for each minor it offers. Please consult the department description in the catalog for requirements.

Students declaring or changing an academic major and/or minor can declare or request the change prior to the beginning of the term or through the schedule adjustment period to be effective for that term. For a fall or spring semester, the schedule adjustment period is the first week of the semester. For Summer 1, the schedule adjustment period is the first three days of the term. For the remaining summer terms (Intersession, Summer 2, and Summer 3), the schedule adjustment period is the first day of class. Exact dates for each schedule adjustment period are provided in the official academic calendar available at <https://www.marshall.edu/academic-calendar/>. Any declaration or change after the schedule adjustment period becomes effective for the next term of enrollment. Untimely declaration or changing of majors and/or minors may affect financial aid eligibility.

# Proposed Catalog Language

## Minors

~~A minor is a program of study outside the major department requiring at least 12 semester credit hours for completion.~~  
A minor is earned in a specific subject area of study and requires at least 12 semester credit hours for completion. A student may not earn a minor in a subject area in which he/she is earning a baccalaureate major. All courses in the minor must be taken for a grade except for approved study abroad courses. With the exception of college-approved interdisciplinary minors, each academic department/division designates the specific courses or range of courses required for each minor it offers. Please consult the department description in the catalog for requirements.

Students declaring or changing an academic major and/or minor can declare or request the change prior to the beginning of the term or through the schedule adjustment period to be effective for that term. For a fall or spring semester, the schedule adjustment period is the first week of the semester. For Summer 1, the schedule adjustment period is the first three days of the term. For the remaining summer terms (Intersession, Summer 2, and Summer 3), the schedule adjustment period is the first day of class. Exact dates for each schedule adjustment period are provided in the official academic calendar available at <https://www.marshall.edu/academic-calendar/>. Any declaration or change after the schedule adjustment period becomes effective for the next term of enrollment. Untimely declaration or changing of majors and/or minors may affect financial aid eligibility.

**STUDENT CONDUCT AND WELFARE  
RECOMMENDATION**

**SR 22-23-46 SCWC**

Recommends that the Faculty Senate support the trauma-informed resilience-infused campus initiative by encouraging faculty education through the various available mental health trainings. We also recommend that we increase the availability of these trainings and that the university provide financial support to increase the number of certified trainers.

**RATIONALE:**

Based on research that shows a surge in demand for mental health care on other college campuses including our own, these trainings would enable faculty to fulfill our responsibilities to students by improving our ability to competently assist students with their mental wellness challenges.

**FACULTY SENATE CHAIR:**

APPROVED BY THE  
FACULTY SENATE: \_\_\_\_\_ DATE: \_\_\_\_\_

DISAPPROVED BY THE  
FACULTY SENATE: \_\_\_\_\_ DATE: \_\_\_\_\_

**UNIVERSITY PRESIDENT:**

APPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_

DISAPPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_

**COMMENTS:** \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

## University Curriculum Committee RECOMMENDATION

**SR 22-23-47 CC**

Recommends approval of the listed **UNDERGRADUATE AREA OF EMPHASIS ADDITION, DELETION, CHANGE** in the following college and/or schools/programs:

### **College of Liberal Arts**

#### **Area of Emphasis Addition: Applied Sociology**

- **Rationale:** In proposing an applied track in Sociology we are thinking of something that would be more “relevant” (i.e., marketable) than the general track that currently exists. This would seem to be in line with the thinking of the new administration. I have tried to fit as many of our current course offerings into one or more of these categories. The list of options in each would be greatly expanded if we add new courses or accept a certain number of courses from other departments.
- **Form with signature:** [Undergrad Area of Emphasis Addition - Applied Sociology signed.pdf](#)

#### **Area of Emphasis Change: Meteorology (BS Geography LG-20)**

- **Rationale:** The meteorology area of emphasis is designed for students who wish to pursue a career in forecasting and work with companies and agencies such as the National Weather Service. The changes in the curriculum reflect standards set forth by the National Weather Service.
- **Form with signature:** [Undergrad Area of Emphasis Change GEO - Meteorology signed.pdf](#)

#### **Area of Emphasis Change: Weather Broadcasting (BS Geography LG-20)**

- **Rationale:** Changes are proposed to include more broadcasting experience for students, either through internships or Radio/TV course experience.
- **Form with signature:** [Undergrad Area of Emphasis Change GEO - Weather Broadcasting signed.pdf](#)

### **College of Science**

**Supporting letter for following:** [StatementToPresidentSmith.pdf](#)

#### **Area of Emphasis Addition: Forensic Chemistry (SC61; SC60 Biochemistry)**

- **Rationale:** Currently, the Department of Chemistry does not allow a double major in biochemistry and forensic chemistry. The addition of an area of emphasis in forensic chemistry, will allow biochemistry majors to obtain sufficient coursework to be competitive for a master’s degree in forensic science should they decide to pursue a different career later in their education.
- **Form with signature:** [ForensicChem Biochem AoEAddition.pdf](#)



## University Curriculum Committee RECOMMENDATION

### SR 22-23-47 CC

#### **Area of Emphasis Addition: Forensic Chemistry (SC81; SC80 Chemical Sciences)**

- **Rationale:** Currently, the Department of Chemistry does not allow a double major in biochemistry and forensic chemistry. The addition of an area of emphasis in forensic chemistry, will allow biochemistry majors to obtain sufficient coursework to be competitive for a master's degree in forensic science should they decide to pursue a different career later in their education.
- **Form with signature:** [ForensicChem\\_ChemSci\\_AoEAddition.pdf](#)

#### **Area of Emphasis Deletion: Computer Forensics (SI21)**

- **Rationale:** The entire program will be moved from the College of Science to the College of Engineering and Computer Sciences, the department of Computer and Information Technology will be merged with the department of Computer Sciences and Electrical Engineering. For these reasons all the courses, the major, the minors, and the areas of emphasis need to be moved accordingly.
- **Form with signature:** [UCCAreaofEmphasisAdditionChangeDeletionFormS21.pdf](#)

#### **Area of Emphasis Change: Computer Appl Development (SI22)**

- **Rationale:** The entire program will be moved from the College of Science to the College of Engineering and Computer Sciences, the department of Computer and Information Technology will be merged with the department of Computer Sciences and Electrical Engineering. For these reasons all the courses, the major, the minors, and the areas of emphasis need to be moved accordingly.
- **Form with signature:** [UCCAreaofEmphasisAdditionChangeDeletionFormS22.pdf](#)

#### **Area of Emphasis Change: Web Application Development (SI23)**

- **Rationale:** The entire program will be moved from the College of Science to the College of Engineering and Computer Sciences, the department of Computer and Information Technology will be merged with the department of Computer Sciences and Electrical Engineering. For these reasons all the courses, the major, the minors, and the areas of emphasis need to be moved accordingly.
- **Form with signature:** [UCCAreaofEmphasisAdditionChangeDeletionFormS23.pdf](#)

#### **Area of Emphasis Deletion: Game Development (SI24)**

- **Rationale:** The entire program will be moved from the College of Science to the College of Engineering and Computer Sciences, the department of Computer and Information Technology will be merged with the department of Computer Sciences and Electrical Engineering. For these reasons all the courses, the major, the minors, and the areas of emphasis need to be moved accordingly.
- **Form with signature:** [UCCAreaofEmphasisAdditionChangeDeletionFormS24.pdf](#)

#### **Area of Emphasis Change: Game/Simulation Development (SI25)**

- **Rationale:** The entire program will be moved from the College of Science to the College of Engineering and Computer Sciences, the department of Computer and

**University Curriculum Committee  
RECOMMENDATION**

**SR 22-23-47 CC**

Information Technology will be merged with the department of Computer Sciences and Electrical Engineering. For these reasons all the courses, the major, the minors, and the areas of emphasis need to be moved accordingly.

- **Form with signature:** [UCCAreaofEmphasisAdditionChangeDeletionFormS25.pdf](#)

**Area of Emphasis Change: Web/Mobile App Development (SI26)**

- **Rationale:** The entire program will be moved from the College of Science to the College of Engineering and Computer Sciences, the department of Computer and Information Technology will be merged with the department of Computer Sciences and Electrical Engineering. For these reasons all the courses, the major, the minors, and the areas of emphasis need to be moved accordingly.

- **Form with signature:** [UCCAreaofEmphasisAdditionChangeDeletionFormS26.pdf](#)

**Area of Emphasis Change: Computer/Web App Development (SI27)**

- **Rationale:** The entire program will be moved from the College of Science to the College of Engineering and Computer Sciences, the department of Computer and Information Technology will be merged with the department of Computer Sciences and Electrical Engineering. For these reasons all the courses, the major, the minors, and the areas of emphasis need to be moved accordingly.

- **Form with signature:** [UCCAreaofEmphasisAdditionChangeDeletionFormS27.pdf](#)

**FACULTY SENATE CHAIR:**

APPROVED BY THE  
FACULTY SENATE: \_\_\_\_\_ DATE: \_\_\_\_\_

DISAPPROVED BY THE  
FACULTY SENATE: \_\_\_\_\_ DATE: \_\_\_\_\_

**UNIVERSITY PRESIDENT:**

APPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_

DISAPPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_

**COMMENTS:** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## Request for Undergraduate Addition, Deletion, or Change of an Area of Emphasis

1. Prepare one paper copy and obtain signatures from the Department Chair/Head, Librarian, and College Dean. 2. Submit the form to your College Curriculum Committee. 3. After attaining the signature of the College Curriculum Chair, send the paper copy to the current University Curriculum Committee (UCC) Chair. 4. Send an identical (sans signatures) ELECTRONIC COPY and all supporting documentation in PDF format by email to the current UCC Chair.

College: COLA Department/Division: Sociology and Anthropology  
 Contact Person: Richard Garnett Phone: 696-2800

**ACTION REQUESTED:**

Check action requested:  Addition  Deletion  Change

Name of Area of Emphasis: Applied Sociology

Within which Major is/will this Area of Emphasis be listed (please provide code as well): Sociology LS10

**RATIONALE:**

In proposing an applied track in Sociology we are thinking of something that would be more "relevant" (i.e., marketable) than the general track that currently exists. This would seem to be in line with the thinking of the new administration. I have tried to fit as many of our current course offerings into one or more of these categories. The list of options in each would be greatly expanded if we add new courses or accept a certain number of courses from other departments.

**CURRICULUM:** (If addition or change, number of hours and courses; indicate if required or optional) May be submitted as separate document.  
 See attached document.

**NOTIFICATION REQUIREMENTS:**

Attach a copy of written notification regarding this curriculum request to the following:

1. **Statement of Non-Duplication:** If this area of emphasis will be similar in title or content to an existing area of emphasis at the university, please send a memo to the affected department and include it with this packet, as well as, the response received from the affected department.
2. If your department/division requires additional faculty, equipment, or specialized materials, attach an estimation of money and time required to secure these items.
3. Send a copy of this completed form to the Marshall University Catalog Editor.

**SIGNATURES:** (If disapproved at any level, do not sign. Return to previous signer.)

Department Chair/Division Head: <u>Marty Laubach</u>	Date: <u>2/20/2023</u>
Registrar: <u><i>[Signature]</i></u>	Date: <u>2.20.2023</u>
College Dean: <u><i>[Signature]</i></u>	Date: <u>2/21/2023</u>
College Curriculum Chair: <u>Jonathan Kozar</u>	Date: <u>2/24/23</u>
University Curriculum Committee Chair: <u>Zach Garrett</u>	Date: <u>3.24.23</u>
Faculty Senate Chair: _____	Date: _____
VP Academic Affairs/VP Health Science: _____	Date: _____

## **Proposal for Track in Applied Sociology**

The core requirements for the applied option are the same as for the general track:

SOC 200 Introductory Sociology

SOC 344 Social Research I

SOC 345 Social Statistics I

SOC 360 Sociological Theory

SOC 492 Senior Seminar

SOC 493 Senior Seminar II (Capstone)

In addition to the core courses above, the following three **required** courses serve as the basis for the applied option:

SOC 311 Contemporary Social Issues and Problems

SOC 443 Evaluation and Survey Research

SOC 470 Field Experience in Applied Sociology or SOC 489 Internship

Beyond these 9 credit hours, the student opting for the applied track will choose **TWO** additional classes (6 credit hours) from among the following:

SOC 300 Social Organization

SOC 362 Health, Culture, and Society

SOC 403 Social Research II

SOC 433 Sociology of Work

SOC 442 Urban Sociology

SOC 432 Sociology of Appalachia

SOC 466 Culture and Environment

## Request for Undergraduate Addition, Deletion, or Change of an Area of Emphasis

1. Prepare one paper copy and obtain signatures from the Department Chair/Head, Librarian, and College Dean. 2. Submit the form to your College Curriculum Committee. 3. After attaining the signature of the College Curriculum Chair, send the paper copy to the current University Curriculum Committee (UCC) Chair. 4. Send an identical (sans signatures) ELECTRONIC COPY and all supporting documentation in PDF format by email to the current UCC Chair.

College: COLA Department/Division: Geography  
 Contact Person: Kevin Law Phone: 696-2503

**ACTION REQUESTED:**

Check action requested: <input type="checkbox"/> Addition <input type="checkbox"/> Deletion <input checked="" type="checkbox"/> Change
Name of Area of Emphasis: <u>Meteorology</u>
Within which Major is/will this Area of Emphasis be listed (please provide code as well): <u>Geography; LG-20 BS</u>

**RATIONALE:**

The meteorology area of emphasis is designed for students who wish to pursue a career in forecasting and work with companies and agencies such as the National Weather Service. The changes in the curriculum reflect standards set forth by the National Weather Service.

**CURRICULUM:** (If addition or change, number of hours and courses; indicate if required or optional) May be submitted as separate document.

See attached

**NOTIFICATION REQUIREMENTS:**

- Attach a copy of written notification regarding this curriculum request to the following:
1. **Statement of Non-Duplication:** If this area of emphasis will be similar in title or content to an existing area of emphasis at the university, please send a memo to the affected department and include it with this packet, as well as, the response received from the affected department.
  2. If your department/division requires additional faculty, equipment, or specialized materials, attach an estimation of money and time required to secure these items.
  3. Send a copy of this completed form to the Marshall University Catalog Editor.

**SIGNATURES:** (If disapproved at any level, do not sign. Return to previous signer.)

Department Chair/Division Head: <u>[Signature]</u>	Date: <u>2/15/23</u>
Registrar: <u>[Signature]</u>	Date: <u>2/17/2023</u>
College Dean: <u>[Signature]</u>	Date: <u>2/17/2023</u>
College Curriculum Chair: <u>Jonathan Kozar</u>	Date: <u>2/24/23</u>
University Curriculum Committee Chair: <u>Zach Garrett</u>	Date: <u>3.24.23</u>
Faculty Senate Chair: _____	Date: _____
VP Academic Affairs/VP Health Science: _____	Date: _____

### Changes to Meteorology Area of Emphasis

Rationale: The meteorology area of emphasis is designed for students who wish to pursue a career in forecasting and work with companies and agencies such as the National Weather Service. The changes in the curriculum reflect standards set forth by the National Weather Service.

Current Curriculum:

Students must complete the Geography Core courses

Additionally, students must complete the following required Courses: 20 credit hours

GEO 230: Introduction to Meteorology (4 credits)

GEO 425: Climatology (4 credits)

GEO 431: Remote Sensing (4 credits) or BSC 410: Remote Sensing/GIS Applications (4 credits)

GEO 450: Extreme Weather (4 credits)

GEO 460: Weather Analysis (4 credits)

Required support courses: 9 credit hours

MTH 229: Calculus with Analytic Geometry I (5 credits)

MTH 230: Calculus with Analytic Geometry II (4 credits)

Students must select from one of the following:

- PHY 308: Thermal Physics (3 credits); prerequisites PHY 213 and PHY 204 lab; MTH 231
- ENGR 219: Engineering Thermodynamics (3 credits); prerequisites MTH 230
- PHY 330: Mechanics (3 credits); prerequisites PHY 213; MTH 231
- ENGR 214: Dynamics (3 credits); prerequisites ENGR 213 and MTH 230

Proposed Changed Curriculum:

Students must complete the Geography Core courses

Additionally, students must complete the following required Courses: 23 credit hours

GEO 230: Introduction to Meteorology (4 credits)

GEO 355: Aviation Weather (3 credits)

GEO 425: Climatology (4 credits)

GEO 431: Remote Sensing (4 credits) or BSC 410: Remote Sensing/GIS Applications (4 credits)

GEO 450: Extreme Weather (4 credits)

GEO 460: Weather Analysis (4 credits)

Required support courses:

MTH 229: Calculus with Analytic Geometry I (5 credits)

MTH 230: Calculus with Analytic Geometry II (4 credits)

MTH 231: Calculus with Analytic Geometry III (4 credits)

MTH 335: Ordinary Diff Equations (3 credits)

PHY 211: University Physics I (4 credits)

PHY 202: General Physics Lab (1 credit)

PHY 213: University Physics II (4 credits)

Students must select from two of the following:

- PHY 308: Thermal Physics (3 credits); prerequisites PHY 213; MTH 231
- ENGR 219: Engineering Thermodynamics (3 credits); prerequisites MTH 230
- PHY 330: Mechanics (3 credits); prerequisites PHY 213; MTH 231
- ENGR 214: Dynamics (3 credits); prerequisites ENGR 213 and MTH 230

Students must select at least a total of 9 credit hours from the following:

- GLY 150: Oceanography (3 credits)
- GLY 150: Oceanography lab (1 credit)
- STA 150: Foundations of Statistics (3 credits)
- STA 225: Introductory Statistics (3 credits)
- GEO 440: Spatial Statistics and GIS (4 credits)
- CS 110: Computer Science I (3 credits)
- CS 205: Scientific Computing (3 credits)
- CHM 111: Foundations of Chemistry (3 credits)
- CHM 211: Principles of Chemistry (3 credits)

### Request for Undergraduate Addition, Deletion, or Change of an Area of Emphasis

1. Prepare one paper copy and obtain signatures from the Department Chair/Head, Librarian, and College Dean. 2. Submit the form to your College Curriculum Committee. 3. After attaining the signature of the College Curriculum Chair, send the paper copy to the current University Curriculum Committee (UCC) Chair. 4. Send an identical (sans signatures) ELECTRONIC COPY and all supporting documentation in PDF format by email to the current UCC Chair.

College: COLA Department/Division: Geography  
Contact Person: Kevin Law Phone: 696-2503

**ACTION REQUESTED:**

Check action requested: <input type="checkbox"/> Addition <input type="checkbox"/> Deletion <input checked="" type="checkbox"/> Change
Name of Area of Emphasis: <u>Weather Broadcasting</u>
Within which Major is/will this Area of Emphasis be listed (please provide code as well): <u>Geography; LG-20 BS</u>

**RATIONALE:**

Changes are proposed to include more broadcasting experience for students, either through internships or Radio/TV course experience

**CURRICULUM:** (If addition or change, number of hours and courses; indicate if required or optional) May be submitted as separate document.

See Attached

**NOTIFICATION REQUIREMENTS:**

- Attach a copy of written notification regarding this curriculum request to the following:
1. **Statement of Non-Duplication:** If this area of emphasis will be similar in title or content to an existing area of emphasis at the university, please send a memo to the affected department and include it with this packet, as well as, the response received from the affected department.
  2. If your department/division requires additional faculty, equipment, or specialized materials, attach an estimation of money and time required to secure these items.
  3. Send a copy of this completed form to the Marshall University Catalog Editor.

**SIGNATURES:** (If disapproved at any level, do not sign. Return to previous signer.)

Department Chair/Division Head: <u>[Signature]</u>	Date: <u>2/15/23</u>
Registrar: <u>[Signature]</u>	Date: <u>2/17/2023</u>
College Dean: <u>[Signature]</u>	Date: <u>2/17/2023</u>
College Curriculum Chair: <u>Jonathan Kozar</u>	Date: <u>2/24/23</u>
University Curriculum Committee Chair: <u>Zach Garrett</u>	Date: <u>3.24.23</u>
Faculty Senate Chair: _____	Date: _____
VP Academic Affairs/VP Health Science: _____	Date: _____



### Changes to Weather Broadcasting Area of Emphasis

Rationale: Changes are proposed to include more broadcasting experience for students, either through internships or Radio/TV course experience

#### Current Curriculum:

Students must complete the Geography Core courses

Additional Required courses: 22 credit hours

GEO 230: Introduction to Meteorology (4 credits)

GEO 425: Climatology (4 credits)

GEO 450: Extreme Weather (4 credits)

GEO 460: Weather Analysis (4 credits)

GEO 490: Internship (3 credits) OR JMC 340 Basic Broadcast News (3 credits); prerequisite JMC 102

JMC 331: Radio-TV Announcing and Newscasting (3 credits); prerequisite JMC 101

#### Proposed Curriculum:

Students must complete the Geography Core courses

Additional Required courses: 22 credit hours

GEO 230: Introduction to Meteorology (4 credits)

GEO 425: Climatology (4 credits)

GEO 450: Extreme Weather (4 credits)

GEO 460: Weather Analysis (4 credits)

JMC 340 Basic Broadcast News (3 credits); prerequisite JMC 102

JMC 331: Radio-TV Announcing and Newscasting (3 credits); prerequisite JMC 101

Choose from the following at least 3 credit hours:

GEO 490: Internship (3 credits) \* Internship must be broadcast related

JMC 272: Practice in Radio (1 credit)

JMC 273: Practice in Radio (1 credit)

JMC 372: Practice in Radio or TV (1-2 credits)

JMC 373: Practice in Radio or TV (1-2 credits)

## Request for Undergraduate Addition, Deletion, or Change of an Area of Emphasis

1. Prepare one paper copy and obtain signatures from the Department Chair/Head, Librarian, and College Dean. 2. Submit the form to your College Curriculum Committee. 3. After attaining the signature of the College Curriculum Chair, send the paper copy to the current University Curriculum Committee (UCC) Chair. 4. Send an identical (sans signatures) ELECTRONIC COPY and all supporting documentation in PDF format by email to the current UCC Chair.

College: Science Department/Division: Chemistry  
Contact Person: Derrick Kolling Phone: x62307

### ACTION REQUESTED:

Check action requested: <input checked="" type="checkbox"/> Addition <input type="checkbox"/> Deletion <input type="checkbox"/> Change
Name of Area of Emphasis: <u>Forensic Chemistry</u>
Within which Major is/will this Area of Emphasis be listed (please provide code as well): <u>SC61</u> SC60 Biochemistry

### RATIONALE:

Currently, the Department of Chemistry does not allow a double major in biochemistry and forensic chemistry. The addition of an area of emphasis in forensic chemistry, will allow biochemistry majors to obtain sufficient coursework to be competitive for a master's degree in forensic science should they decide to pursue a different career later in their education.

### CURRICULUM: (If addition or change, number of hours and courses; indicate if required or optional) May be submitted as separate document.

See attached proposed 4-year plan. The plan includes courses available as in-major electives (CHM 345 and CHM 411) and proposes only 3 additional courses (FSC 224; CS 110; and CJ 314, 323, or 422).

### NOTIFICATION REQUIREMENTS:

- Attach a copy of written notification regarding this curriculum request to the following:
- Statement of Non-Duplication:** If this area of emphasis will be similar in title or content to an existing area of emphasis at the university, please send a memo to the affected department and include it with this packet, as well as, the response received from the affected department.
  - If your department/division requires additional faculty, equipment, or specialized materials, attach an estimation of money and time required to secure these items.
  - Send a copy of this completed form to the Marshall University Catalog Editor.

### SIGNATURES: (If disapproved at any level, do not sign. Return to previous signer.)

Department Chair/Division Head: <u>Derrick Kolling</u>	Date: <u>2/14/2023</u>
Registrar: <u>[Signature]</u>	Date: <u>2.10.23</u>
College Dean: <u>[Signature]</u>	Date: <u>02/20/2023</u>
College Curriculum Chair: <u>Maria Hamilton</u>	Date: <u>2.17.23</u>
University Curriculum Committee Chair: <u>Zach Garrett</u>	Date: <u>3.24.23</u>
Faculty Senate Chair: _____	Date: _____
VP Academic Affairs/VP Health Science: _____	Date: _____

## Biochemistry with an emphasis in Forensic Chemistry

### Major

The Core Curriculum is designed to foster critical thinking skills and introduce students to basic domains of thinking that transcend disciplines. The Core applies to all majors. Information on specific classes in the Core can be found at <https://www.marshall.edu/gened/>.

Code	Course List Title	Credit Hours
<b>Core Curriculum</b>		
<b>Core 1: Critical Thinking</b>		
<a href="#">FYS 100</a>	First Yr Sem Critical Thinking	3
<a href="#">MTH 229</a>	Calculus/Analytic Geom I (CT)	5
Critical Thinking Course		3
<b>Core 2</b>		
<a href="#">ENG 101</a>	Beginning Composition	3
<a href="#">ENG 201</a>	Advanced Composition	3
<a href="#">CMM 103</a>	Fund Speech-Communication	3
<a href="#">MTH 229</a>	Calculus/Analytic Geom I (CT)	5
<a href="#">BSC 120</a>	Principles of Biology I	3
<a href="#">BSC 120L</a>	Principles of Biology I Lab	1
Core II Humanities		3
Core II Social Science		3
Core II Fine Arts		3
<b>Additional University Requirements</b>		
Writing Intensive ( <a href="#">CHM 357</a> or <a href="#">CHM 358</a> )		3
Writing Intensive		3
Multicultural or International		3
<a href="#">CHM 491</a>	Capstone Experience	2
or <a href="#">CHM 490</a>	Internship	
<b>Major-Specific</b>		
<a href="#">CHM 211</a>	Principles of Chemistry I	3
<a href="#">CHM 217</a>	Principles of Chem Lab I	2
<a href="#">CHM 212</a>	Principles Chemistry II	3
<a href="#">CHM 218</a>	Principles of Chem Lab II	2
<a href="#">CHM 345</a>	<b>Intro to Analytical Chem</b>	<b>3</b>
<a href="#">CHM 355</a>	Organic Chemistry I	3
<a href="#">CHM 356</a>	Organic Chemistry II	3
<a href="#">CHM 361</a>	Intro Organic Chm Lab	3
<a href="#">CHM 305</a>	Research Methods Chem (WI)	1
Select one of the following:		4
<a href="#">CHM 358</a>	Physical Chemistry: Thermo. (WI) <sup>1</sup>	
<a href="#">CHM 357</a>	Physical Chemistry: Quantum (WI)	
<a href="#">CHM 365</a>	Introductory Biochemistry	3
<a href="#">CHM 366</a>	Intro Biochemistry Lab	2
<a href="#">CHM 411</a>	<b>Modern Instrument Methods</b>	<b>4</b>
<a href="#">CHM 467</a>	Intermediate Biochemistry	3
<a href="#">CHM 491</a>	Capstone Experience (C)	2
or <a href="#">CHM 490</a>	Internship	
<a href="#">CHM 432</a>	Chemistry Seminar	0

<a href="#">FSC 224</a>	Intro to Forensic Science	3
<a href="#">CJ 200 or 211</a>	Intro to Criminal Justice or Intro to Law Enforcement	2
<a href="#">CJ 314, 323, or 422</a>	Crime Scene & Investigations, Criminal Procedure, or Law of Evidence	2
<a href="#">CJ 200 or 211</a>	Intro to Criminal Justice or Intro to Law Enforcement	3
<a href="#">CJ 314, 323, or 422</a>	Crime Scene & Investigations, Criminal Procedure, or Law of Evidence	3
<a href="#">CS 110</a>	Computer Science I	3
<a href="#">BSC 121</a>	Principles of Biology II	3
<a href="#">BSC 121L</a>	Prin of Biology II Lab	1
<a href="#">BSC 322</a>	Principles Cell Biology	4
<a href="#">BSC 324</a>	Principles of Genetics	4
<a href="#">PHY 201</a>	College Physics I	3
<a href="#">PHY 202</a>	General Physics I Laboratory	1
<a href="#">PHY 203</a>	College Physics II	3
<a href="#">PHY 204</a>	General Physics 2 Laboratory	1
<b>Biochemistry Electives</b>		
Select from the following courses. At least one course must be 4 credit hours, and at least one must be a CHM course.		10-12
<a href="#">BSC 302</a>	Principles of Microbiology	3
<a href="#">BSC 332</a>	Principles of Human Anatomy (and 332L)	4
<a href="#">BSC 334</a>	Principles of Human Physiology (and <a href="#">BSC 334L</a> )	4
<a href="#">BSC 422</a>	Animal Physiology	3
<a href="#">BSC 428</a>	Neuroscience	3
<a href="#">BSC 443</a>	Microbial Genetics	3
<a href="#">BSC 448</a>	Introductory Immunology	3
<a href="#">BSC 450</a>	Molecular Biology	3
<a href="#">BSC 456</a>	Genes and Development	3
<a href="#">CHM 357</a>	Physical Chemistry: Quantum	4
<a href="#">CHM 358</a>	Physical Chemistry: Thermo.	4
<a href="#">CHM 448</a>	Adv Inorganic Chemistry I	4
<a href="#">CHM 451</a>	Biological Mass Spectrometry	4
<a href="#">CHM 465</a>	Adv Organic Chemistry I	3
<a href="#">CHM 466</a>	Adv Organic Chemistry II	3
Free Elective		2

1

[CHM 358](#) Physical Chemistry: Thermo. or [CHM 411](#) Modern Instrument Methods is recommended for students considering graduate school.

## Major Information

- Students are required to know and track their degree requirements for graduation or for entrance to a professional school.
- In addition to the Core General Education requirements, the College of Science requires 3 hours of Calculus, and 40 hours of upper level credit.

- Coursework listed as “elective” may vary for each student. Students are encouraged to use elective hours toward a 2nd minor or toward prerequisites.
- Students are strongly encouraged to select courses that meet two or more Core or College requirements. For example, a writing intensive literature course could satisfy the Core II Humanities requirement as well as the University writing intensive requirement.
- Course offerings and course attributes are subject to change each semester. Please consult each semesters schedule of courses for availability and attributes.
- Math is based on an ACT Mathematics score of 27 or higher. Students with an ACT Mathematics score less than 27 will be placed in the appropriate prerequisite mathematics and science courses.
- The BSC coursework provides a Biological Sciences minor.
- A Grade Point Average of 2.0 is required
  1. overall,
  2. at MU,
  3. in all required Chemistry courses,
  4. in all Chemistry courses, and
  5. in all required Chemistry courses taken at MU.

## Four Year Plan

Students completing the Biochemistry major will be prepared for career opportunities in the biotechnology, forensics, environmental, pharmaceutical, agricultural, and medical fields. Students will also be well prepared for graduate-level study in biochemistry, biotechnology, genetics and molecular biology. Additionally, Biochemistry is an excellent choice for students desiring to attend professional training in Medicine, Dentistry, Pharmacy, Law or Engineering.

### Plan of Study Grid

First Year		
FIRST SEMESTER		CRED
<a href="#"><u>CHM 211</u></a>	Principles of Chemistry I	3
<a href="#"><u>CHM 217</u></a>	Principles of Chem Lab I	2
<a href="#"><u>BSC 120</u></a>	Principles of Biology I	3
<a href="#"><u>BSC 120L</u></a>	Principles of Biology I Lab	1
<a href="#"><u>ENG 101</u></a>	Beginning Composition	3
<a href="#"><u>FYS 100</u></a>	First Yr Sem Critical Thinking	3
<a href="#"><u>UNI 100</u></a>	Freshman First Class	1
	<b>Credit Hours</b>	<b>16</b>
SECOND SEMESTER		
<a href="#"><u>BSC 121</u></a>	Principles of Biology II	3
<a href="#"><u>BSC 121L</u></a>	Prin of Biology II Lab	1
<a href="#"><u>CHM 212</u></a>	Principles Chemistry II	3
<a href="#"><u>CHM 218</u></a>	Principles of Chem Lab II	2

<a href="#">MTH 229</a>	Calculus/Analytic Geom I (CT)	5
<b>Credit Hours</b>		<b>14</b>
<b>Second Year</b>		
<b>FIRST SEMESTER</b>		
Core I Critical Thinking		3
<a href="#">CHM 355</a>	Organic Chemistry I	3
<a href="#">ENG 201</a>	Advanced Composition	3
<a href="#">BSC 324</a>	Principles of Genetics	4
Free Elective		2
<b>Credit Hours</b>		<b>15</b>
<b>SECOND SEMESTER</b>		
<a href="#">CHM 356</a>	Organic Chemistry II	3
<a href="#">CHM 361</a>	Intro Organic Chm Lab	3
<a href="#">CMM 103</a>	Fund Speech-Communication	3
<a href="#">PHY 201</a>	College Physics I	3
<a href="#">PHY 202</a>	General Physics I Laboratory	1
Core II Fine Arts		3
<b>Credit Hours</b>		<b>16</b>
<b>Third Year</b>		
<b>FIRST SEMESTER</b>		
<a href="#">BSC 322</a>	Principles Cell Biology	4
<a href="#">CHM 305</a>	Research Methods Chem	1

<a href="#">CHM 365</a>	Introductory Biochemistry	3
<a href="#">PHY 203</a>	College Physics II	3
<a href="#">PHY 204</a>	General Physics 2 Laboratory	1
Core II Social Science (MC/I)		3
<b>Credit Hours</b>		<b>15</b>
<b>SECOND SEMESTER</b>		
<a href="#">CHM 366</a>	Intro Biochemistry Lab	2
<a href="#">CHM 467</a>	Intermediate Biochemistry	3
Core II Humanities		3
Biochemistry Elective—CHM 411		4
Free Elective		3
<b>Credit Hours</b>		<b>15</b>
<b>Fourth Year</b>		
<b>FIRST SEMESTER</b>		
<a href="#">CHM 491</a> or <a href="#">CHM 490</a>	Capstone Experience or Internship	2
Writing Intensive		3
Biochemistry Elective—CHM 345		4
<a href="#">FSC 224</a>		3
<a href="#">CJ 211</a> (prereq. for <a href="#">CJ 314</a> ) or <a href="#">CJ 200</a> (prereq. for <a href="#">CJ 323</a> or <a href="#">CJ 422</a> )		3
<b>Credit Hours</b>		<b>15</b>
<b>SECOND SEMESTER</b>		



<a href="#">CHM 432</a>	Chemistry Seminar	0
Biochemistry Elective		3
Select one of the following:		3
<a href="#">CHM 357</a>	Physical Chemistry: Quantum (WI)	
<a href="#">CHM 358</a>	Physical Chemistry: Thermo. (WI)	
<a href="#">CS 110</a>		3
<a href="#">CJ 314, CJ 323, or CJ 422</a>		3
Free Elective		2
<b>Credit Hours</b>		<b>14</b>
<b>Total Credit Hours</b>		<b>120</b>

## Request for Undergraduate Addition, Deletion, or Change of an Area of Emphasis

1. Prepare one paper copy and obtain signatures from the Department Chair/Head, Librarian, and College Dean. 2. Submit the form to your College Curriculum Committee. 3. After attaining the signature of the College Curriculum Chair, send the paper copy to the current University Curriculum Committee (UCC) Chair. 4. Send an identical (sans signatures) ELECTRONIC COPY and all supporting documentation in PDF format by email to the current UCC Chair.

College: Science Department/Division: Chemistry  
 Contact Person: Derrick Kolling Phone: x62307

**ACTION REQUESTED:**

Check action requested: <input checked="" type="checkbox"/> Addition <input type="checkbox"/> Deletion <input type="checkbox"/> Change Name of Area of Emphasis: <u>Forensic Chemistry</u> Within which Major is/will this Area of Emphasis be listed (please provide code as well): <u>SC81</u> <u>SC80 Chemical Sciences</u>
--

**RATIONALE:**

Currently, the Department of Chemistry does not allow a double major in chemical sciences and forensic chemistry. The addition of an area of emphasis in forensic chemistry, will allow chemical science majors to obtain sufficient coursework to be competitive for a master's degree in forensic science should they decide to pursue a different career later in their education.

**CURRICULUM:** (If addition or change, number of hours and courses; indicate if required or optional) May be submitted as separate document.

See attached proposed 4-year plan. The plan includes courses available as in-major electives (CHM 411 and CHM 467) and proposes only 3 additional courses (FSC 224; CS 110; and CJ 314, 323, or 422).

**NOTIFICATION REQUIREMENTS:**

Attach a copy of written notification regarding this curriculum request to the following:

1. **Statement of Non-Duplication:** If this area of emphasis will be similar in title or content to an existing area of emphasis at the university, please send a memo to the affected department and include it with this packet, as well as, the response received from the affected department.
2. If your department/division requires additional faculty, equipment, or specialized materials, attach an estimation of money and time required to secure these items.
3. Send a copy of this completed form to the Marshall University Catalog Editor.

**SIGNATURES:** (If disapproved at any level, do not sign. Return to previous signer.)

Department Chair/Division Head: <u>Derrick Kolling</u>	Date: <u>2/14/2023</u>
Registrar: <u>[Signature]</u>	Date: <u>2.10.23</u>
College Dean: <u>[Signature]</u>	Date: <u>02/20/2023</u>
College Curriculum Chair: <u>Maria Hamilton</u>	Date: <u>2.17.23</u>
University Curriculum Committee Chair: <u>Zach Garrett</u>	Date: <u>3.24.23</u>
Faculty Senate Chair: _____	Date: _____
VP Academic Affairs/VP Health Science: _____	Date: _____

## Chemical Sciences with an emphasis in Forensic Chemistry

### Major

The Core Curriculum is designed to foster critical thinking skills and introduce students to basic domains of thinking that transcend disciplines. The Core applies to all majors. Information on specific classes in the Core can be found at <https://www.marshall.edu/gened/>.

#### Course List

Code	Title	Credit Hours
<b>Core Curriculum</b>		
<b>Core 1: Critical Thinking</b>		
<a href="#">FYS 100</a>	First Yr Sem Critical Thinking	3
<a href="#">MTH 229</a>	Calculus/Analytic Geom I (CT)	5
Critical Thinking Course		3
<b>Core 2</b>		
<a href="#">ENG 101</a>	Beginning Composition	3
<a href="#">ENG 201</a>	Advanced Composition	3
<a href="#">CMM 103</a>	Fund Speech-Communication	3
<a href="#">MTH 229</a>	Calculus/Analytic Geom I (CT)	5
<a href="#">CHM 211</a> & <a href="#">CHM 217</a>	Principles of Chemistry I and Principles of Chem Lab I	5
Core II Humanities		3
Core II Social Science		3
Core II Fine Arts		3
<b>Additional University Requirements</b>		
Writing Intensive ( <a href="#">CHM 357</a> or <a href="#">358</a> )		3
Writing Intensive		3
Multicultural or International		3
<a href="#">CHM 491</a> or <a href="#">CHM 490</a>	Capstone Experience Internship	2
<b>Major-Specific</b>		
<a href="#">CHM 211</a>	Principles of Chemistry I	3
<a href="#">CHM 217</a>	Principles of Chem Lab I	2
<a href="#">CHM 212</a>	Principles Chemistry II	3
<a href="#">CHM 218</a>	Principles of Chem Lab II	2
<a href="#">CHM 355</a>	Organic Chemistry I	3
<a href="#">CHM 356</a>	Organic Chemistry II	3
<a href="#">CHM 361</a>	Intro Organic Chm Lab	3
<a href="#">CHM 305</a>	Research Methods Chem	1
Select one of the following:		4
<a href="#">CHM 357</a>	Physical Chemistry: Quantum (WI)	
<a href="#">CHM 358</a>	Physical Chemistry: Thermo. (WI)	
<a href="#">CHM 345</a>	Intro to Analytical Chem	4
<a href="#">CHM 365</a>	Introductory Biochemistry	3
<a href="#">CHM 411</a>	Modern Instrument Methods	4
<a href="#">CHM 448</a>	Adv Inorganic Chemistry I	4
<a href="#">CHM 467</a>	Intermediate Biochemistry	3
<a href="#">CHM 491</a> or <a href="#">CHM 490</a>	Capstone Experience (C) Internship	2
<a href="#">CHM 432</a>	Chemistry Seminar	0

300/400 CHM Elective		3
<a href="#">FSC 224</a>	Intro to Forensic Science	3
<a href="#">CJ 200 or 211</a>	Intro to Criminal Justice or Intro to Law Enforcement	2
<a href="#">CJ 314, 323, or 422</a>	Crime Scene & Investigations, Criminal Procedure, or Law of Evidence	2
<a href="#">CS 110</a>	Computer Science I	3
<a href="#">PHY 201</a>	College Physics I	3
<a href="#">PHY 202</a>	General Physics I Laboratory	1
<a href="#">PHY 203</a>	College Physics II	3
<a href="#">PHY 204</a>	General Physics 2 Laboratory	1
Electives		
Science or Math Elective		4
Science or Math Elective		4
Science or Math Elective		4
Free Elective		3
Free Elective		2

Students interested in careers in technical sales, management, and marketing in the chemical industry are encouraged to take the following courses as electives:

[ECN 250](#) Principles Microeconomics

[ECN 253](#) Principles Macroeconomics

[MKT 340](#) MKT Concepts and Applications

[MKT 440](#) Sales Management

[MKT 442](#) Market Research

[MGT 320](#) Principles of Management

## Major Information

- Students are required to know and track their degree requirements for graduation or for entrance to a professional school.
- In addition to the Core General Education requirements, the College of Science requires 3 hours of Calculus, and 40 hours of upper level credit.
- Coursework listed as “elective” may vary for each student. Students are encouraged to use elective hours toward a minor or toward prerequisites.
- Students are strongly encouraged to select courses that meet two or more Core or College requirements. For example, a writing intensive literature course could satisfy the Core II Humanities requirement as well as the University writing intensive requirement.
- Course offerings and course attributes are subject to change semesters. Please consult each semester’s schedule of courses for availability and attributes.
- Math is based on an ACT Mathematics score of 27 or higher. Students with an ACT Mathematics score less than 27 will be placed in the appropriate prerequisite mathematics and science courses.
- A Grade Point Average of 2.0 is required
  1. overall,

2. at MU,
3. in all required Chemistry courses,
4. in all Chemistry courses, and
5. in all required Chemistry courses taken at MU.

## Four Year Plan

This major in chemistry is intended for students needing a broadly based, flexible science background. Degrees offered by the Department of Chemistry provide a program of studies that allows the individual to: obtain high quality instruction in chemistry as a scientific discipline, obtain a sound background in preparation for advanced studies, meet the qualifications of professional chemists and accrediting agencies, or prepare for a professional career in medicine, dentistry, pharmacy, medical technology, engineering, nursing and other fields.

### Plan of Study Grid

First Year		
FIRST SEMESTER		CREDIT HO
<a href="#"><u>CHM 211</u></a>	Principles of Chemistry I	3
<a href="#"><u>CHM 217</u></a>	Principles of Chem Lab I	2
<a href="#"><u>MTH 229</u></a>	Calculus/Analytic Geom I (CT)	5
<a href="#"><u>FYS 100</u></a>	First Yr Sem Critical Thinking	3
Free Elective		1
<a href="#"><u>UNI 100</u></a>	Freshman First Class	1
<b>Credit Hours</b>		<b>15</b>
SECOND SEMESTER		
<a href="#"><u>ENG 101</u></a>	Beginning Composition	3
<a href="#"><u>CHM 212</u></a>	Principles Chemistry II	3
<a href="#"><u>CHM 218</u></a>	Principles of Chem Lab II	2
Core I Critical Thinking		3
Science or Math Elective		4
<b>Credit Hours</b>		<b>15</b>
Second Year		

<b>FIRST SEMESTER</b>		
<a href="#">CHM 355</a>	Organic Chemistry I	3
<a href="#">PHY 201</a>	College Physics I	3
<a href="#">PHY 202</a>	General Physics I Laboratory	1
Core II Social Science		3
<a href="#">ENG 201</a>	Advanced Composition	3
Free Elective		2
	<b>Credit Hours</b>	<b>15</b>
<b>SECOND SEMESTER</b>		
<a href="#">CHM 356</a>	Organic Chemistry II	3
<a href="#">CHM 361</a>	Intro Organic Chm Lab	3
<a href="#">PHY 203</a>	College Physics II	3
<a href="#">PHY 204</a>	General Physics 2 Laboratory	1
<a href="#">CMM 103</a>	Fund Speech-Communication	3
Core II Fine Arts		3
	<b>Credit Hours</b>	<b>16</b>
<b>Third Year</b>		
<b>FIRST SEMESTER</b>		
300/400 CHM Elective		3
<a href="#">CHM 305</a>	Research Methods Chem	1
Core II Humanities		3
Writing Intensive		3
<a href="#">FSC 224</a>		3
Free Elective—CHM 365		3
	<b>Credit Hours</b>	<b>16</b>

<b>SECOND SEMESTER</b>		
Select one of the following:		4
<a href="#">CHM 358</a>	Physical Chemistry: Thermo. (WI)	
<a href="#">CHM 357</a>	Physical Chemistry: Quantum (WI)	
Science or Math Elective		4
Free Elective—CHM 467		3
Free Elective		1
	<b>Credit Hours</b>	<b>12</b>
<b>Fourth Year</b>		
<b>FIRST SEMESTER</b>		
<a href="#">CHM 345</a>	Intro to Analytical Chem	4
<a href="#">CHM 491</a> or <a href="#">CHM 490</a>	Capstone Experience or Internship	2
<a href="#">CHM 448</a>	Adv Inorganic Chemistry I	4
Writing Intensive		3
CJ 211 (prereq. for CJ 314) or CJ 200 (prereq. for CJ 323 or CJ 422)		3
	<b>Credit Hours</b>	<b>16</b>
<b>SECOND SEMESTER</b>		
<a href="#">CHM 432</a>	Chemistry Seminar	0
Science or Math Elective—CHM 411		4
Multicultural or International		3
CS 110		3
CJ 314, CJ 323, or CJ 422		3
Free Elective		2
	<b>Credit Hours</b>	<b>15</b>



**Total Credit Hours**

**120**

## Request for Undergraduate Addition, Deletion, or Change of an Area of Emphasis

1. Prepare one paper copy and obtain signatures from the Department Chair/Head, Librarian, and College Dean. 2. Submit the form to your College Curriculum Committee. 3. After attaining the signature of the College Curriculum Chair, send the paper copy to the current University Curriculum Committee (UCC) Chair. 4. Send an identical (sans signatures) ELECTRONIC COPY and all supporting documentation in PDF format by email to the current UCC Chair.

College: College of Science Department/Division: Computer and Information Technology  
 Contact Person: Davide Andrea Mauro maurod@marshall.edu Phone: 3046966418

**ACTION REQUESTED:**

Check action requested: <input type="checkbox"/> Addition <input checked="" type="checkbox"/> Deletion <input type="checkbox"/> Change
Name of Area of Emphasis: <u>Computer Forensics (SI21)</u>
Within which Major is/will this Area of Emphasis be listed (please provide code as well): _____

**RATIONALE:**

The entire program will be moved from the College of Science to the College of Engineering and Computer Sciences, the department of Computer and Information Technology will be merged with the department of Computer Sciences and Electrical Engineering. For these reasons all the courses, the major, the minors, and the areas of emphasis need to be moved accordingly.

**CURRICULUM:** (If addition or change, number of hours and courses; indicate if required or optional) May be submitted as separate document.

Areas of Emphasis no longer used and with no students enrolled will be deleted.

**NOTIFICATION REQUIREMENTS:**

Attach a copy of written notification regarding this curriculum request to the following:

1. **Statement of Non-Duplication:** If this area of emphasis will be similar in title or content to an existing area of emphasis at the university, please send a memo to the affected department and include it with this packet, as well as, the response received from the affected department.
2. If your department/division requires additional faculty, equipment, or specialized materials, attach an estimation of money and time required to secure these items.
3. Send a copy of this completed form to the Marshall University Catalog Editor.

**SIGNATURES:** (If disapproved at any level, do not sign. Return to previous signer.)

Department Chair/Division Head: <u><i>Davide Andrea Mauro</i></u>	Date: <u>01/25/2023</u>
Registrar: <u><i>Sonya HCF</i></u>	Date: <u>1.25.23</u>
College Dean: <u><i>Bob Allen</i></u>	Date: <u>02/10/2023</u>
College Curriculum Chair: <u><i>Maria Hamilton</i></u>	Date: <u>2.17.23</u>
University Curriculum Committee Chair: <u><i>Zach Garrett</i></u>	Date: <u>3.24.23</u>
Faculty Senate Chair: _____	Date: _____
VP Academic Affairs/VP Health Science: _____	Date: _____

## Request for Undergraduate Addition, Deletion, or Change of an Area of Emphasis

1. Prepare one paper copy and obtain signatures from the Department Chair/Head, Librarian, and College Dean. 2. Submit the form to your College Curriculum Committee. 3. After attaining the signature of the College Curriculum Chair, send the paper copy to the current University Curriculum Committee (UCC) Chair. 4. Send an identical (sans signatures) ELECTRONIC COPY and all supporting documentation in PDF format by email to the current UCC Chair.

College: College of Science Department/Division: Computer and Information Technology  
 Contact Person: Davide Andrea Mauro maurod@marshall.edu Phone: 3046966418

**ACTION REQUESTED:**

Check action requested: <input type="checkbox"/> Addition <input type="checkbox"/> Deletion <input checked="" type="checkbox"/> Change
Name of Area of Emphasis: <u>Computer Appl Development (SI22)</u>
Within which Major is/will this Area of Emphasis be listed (please provide code as well): _____

**RATIONALE:**

The entire program will be moved from the College of Science to the College of Engineering and Computer Sciences, the department of Computer and Information Technology will be merged with the department of Computer Sciences and Electrical Engineering. For these reasons all the courses, the major, the minors, and the areas of emphasis need to be moved accordingly.

**CURRICULUM:** (If addition or change, number of hours and courses; indicate if required or optional) May be submitted as separate document.

New college should suspend admission to this AoE. It is maintained active for currently enrolled students.

**NOTIFICATION REQUIREMENTS:**

Attach a copy of written notification regarding this curriculum request to the following:

1. **Statement of Non-Duplication:** If this area of emphasis will be similar in title or content to an existing area of emphasis at the university, please send a memo to the affected department and include it with this packet, as well as, the response received from the affected department.
2. If your department/division requires additional faculty, equipment, or specialized materials, attach an estimation of money and time required to secure these items.
3. Send a copy of this completed form to the Marshall University Catalog Editor.

**SIGNATURES:** (If disapproved at any level, do not sign. Return to previous signer.)

Department Chair/Division Head: <u><i>Davide Andrea Mauro</i></u>	Date: <u>01/25/2023</u>
Registrar: <u><i>Sonye A. C. J.</i></u>	Date: <u>2.10.23</u>
College Dean: <u><i>Bob [Signature]</i></u>	Date: <u>02/10/2023</u>
College Curriculum Chair: <u><i>Maria Hamilton</i></u>	Date: <u>2.17.23</u>
University Curriculum Committee Chair: <u><i>Zach Garrett</i></u>	Date: <u>3.24.23</u>
Faculty Senate Chair: _____	Date: _____
VP Academic Affairs/VP Health Science: _____	Date: _____

## Request for Undergraduate Addition, Deletion, or Change of an Area of Emphasis

1. Prepare one paper copy and obtain signatures from the Department Chair/Head, Librarian, and College Dean. 2. Submit the form to your College Curriculum Committee. 3. After attaining the signature of the College Curriculum Chair, send the paper copy to the current University Curriculum Committee (UCC) Chair. 4. Send an identical (sans signatures) ELECTRONIC COPY and all supporting documentation in PDF format by email to the current UCC Chair.

College: College of Science Department/Division: Computer and Information Technology

Contact Person: Davide Andrea Mauro maurod@marshall.edu Phone: 3046966418

### ACTION REQUESTED:

Check action requested:  Addition  Deletion  Change

Name of Area of Emphasis: Web Application Development (SI23)

Within which Major is/will this Area of Emphasis be listed (please provide code as well): \_\_\_\_\_

### RATIONALE:

The entire program will be moved from the College of Science to the College of Engineering and Computer Sciences, the department of Computer and Information Technology will be merged with the department of Computer Sciences and Electrical Engineering. For these reasons all the courses, the major, the minors, and the areas of emphasis need to be moved accordingly.

**CURRICULUM:** (If addition or change, number of hours and courses; indicate if required or optional) May be submitted as separate document.

New college should suspend admission to this AoE. It is maintained active for currently enrolled students.

### NOTIFICATION REQUIREMENTS:

Attach a copy of written notification regarding this curriculum request to the following:

- Statement of Non-Duplication:** If this area of emphasis will be similar in title or content to an existing area of emphasis at the university, please send a memo to the affected department and include it with this packet, as well as, the response received from the affected department.
- If your department/division requires additional faculty, equipment, or specialized materials, attach an estimation of money and time required to secure these items.
- Send a copy of this completed form to the Marshall University Catalog Editor.

**SIGNATURES:** (If disapproved at any level, do not sign. Return to previous signer.)

Department Chair/Division Head: <u><i>Davide Andrea Mauro</i></u>	Date: <u>01/25/2023</u>
Registrar: <u><i>Sonye L. C. J.</i></u>	Date: <u>2.10.23</u>
College Dean: <u><i>[Signature]</i></u>	Date: <u>02/10/2023</u>
College Curriculum Chair: <u><i>Maria Hamilton</i></u>	Date: <u>2.17.23</u>
University Curriculum Committee Chair: <u><i>Zach Garrett</i></u>	Date: <u>3.24.23</u>
Faculty Senate Chair: _____	Date: _____
VP Academic Affairs/VP Health Science: _____	Date: _____

## Request for Undergraduate Addition, Deletion, or Change of an Area of Emphasis

1. Prepare one paper copy and obtain signatures from the Department Chair/Head, Librarian, and College Dean. 2. Submit the form to your College Curriculum Committee. 3. After attaining the signature of the College Curriculum Chair, send the paper copy to the current University Curriculum Committee (UCC) Chair. 4. Send an identical (sans signatures) ELECTRONIC COPY and all supporting documentation in PDF format by email to the current UCC Chair.

College: College of Science Department/Division: Computer and Information Technology  
 Contact Person: Davide Andrea Mauro maurod@marshall.edu Phone: 3046966418

**ACTION REQUESTED:**

Check action requested: <input type="checkbox"/> Addition <input checked="" type="checkbox"/> Deletion <input type="checkbox"/> Change
Name of Area of Emphasis: <u>Game Development (SI24)</u>
Within which Major is/will this Area of Emphasis be listed (please provide code as well): _____

**RATIONALE:**

The entire program will be moved from the College of Science to the College of Engineering and Computer Sciences, the department of Computer and Information Technology will be merged with the department of Computer Sciences and Electrical Engineering. For these reasons all the courses, the major, the minors, and the areas of emphasis need to be moved accordingly.

**CURRICULUM:** (If addition or change, number of hours and courses; indicate if required or optional) May be submitted as separate document.

Areas of Emphasis no longer used and with no students enrolled will be deleted.

**NOTIFICATION REQUIREMENTS:**

Attach a copy of written notification regarding this curriculum request to the following:

1. **Statement of Non-Duplication:** If this area of emphasis will be similar in title or content to an existing area of emphasis at the university, please send a memo to the affected department and include it with this packet, as well as, the response received from the affected department.
2. If your department/division requires additional faculty, equipment, or specialized materials, attach an estimation of money and time required to secure these items.
3. Send a copy of this completed form to the Marshall University Catalog Editor.

**SIGNATURES:** (If disapproved at any level, do not sign. Return to previous signer.)

Department Chair/Division Head: <u><i>Davide Andrea Mauro</i></u>	Date: <u>01/25/2023</u>
Registrar: <u><i>Sonye [Signature]</i></u>	Date: <u>2.10.23</u>
College Dean: <u><i>[Signature]</i></u>	Date: <u>02/10/2023</u>
College Curriculum Chair: <u><i>Maria Hamilton</i></u>	Date: <u>2.17.23</u>
University Curriculum Committee Chair: <u><i>Zach Garrett</i></u>	Date: <u>3.24.23</u>
Faculty Senate Chair: _____	Date: _____
VP Academic Affairs/VP Health Science: _____	Date: _____

## Request for Undergraduate Addition, Deletion, or Change of an Area of Emphasis

1. Prepare one paper copy and obtain signatures from the Department Chair/Head, Librarian, and College Dean. 2. Submit the form to your College Curriculum Committee. 3. After attaining the signature of the College Curriculum Chair, send the paper copy to the current University Curriculum Committee (UCC) Chair. 4. Send an identical (sans signatures) ELECTRONIC COPY and all supporting documentation in PDF format by email to the current UCC Chair.

College: College of Science Department/Division: Computer and Information Technology

Contact Person: Davide Andrea Mauro maurod@marshall.edu Phone: 3046966418

**ACTION REQUESTED:**

Check action requested: <input type="checkbox"/> Addition <input type="checkbox"/> Deletion <input checked="" type="checkbox"/> Change
Name of Area of Emphasis: <u>Game/Simulation Development (SI25)</u>
Within which Major is/will this Area of Emphasis be listed (please provide code as well): _____

**RATIONALE:**

The entire program will be moved from the College of Science to the College of Engineering and Computer Sciences, the department of Computer and Information Technology will be merged with the department of Computer Sciences and Electrical Engineering. For these reasons all the courses, the major, the minors, and the areas of emphasis need to be moved accordingly.

**CURRICULUM:** (If addition or change, number of hours and courses; indicate if required or optional) May be submitted as separate document.

No other changes.

**NOTIFICATION REQUIREMENTS:**

- Attach a copy of written notification regarding this curriculum request to the following:
1. **Statement of Non-Duplication:** If this area of emphasis will be similar in title or content to an existing area of emphasis at the university, please send a memo to the affected department and include it with this packet, as well as, the response received from the affected department.
  2. If your department/division requires additional faculty, equipment, or specialized materials, attach an estimation of money and time required to secure these items.
  3. Send a copy of this completed form to the Marshall University Catalog Editor.

**SIGNATURES:** (If disapproved at any level, do not sign. Return to previous signer.)

Department Chair/Division Head: <u><i>David Shea Tanno</i></u>	Date: <u>01/25/2023</u>
Registrar: <u><i>Sonye GCA</i></u>	Date: <u>2.10.23</u>
College Dean: <u><i>Bob [Signature]</i></u>	Date: <u>02/10/2023</u>
College Curriculum Chair: <u><i>Maria Hamilton</i></u>	Date: <u>2.17.23</u>
University Curriculum Committee Chair: <u><i>Zach Garrett</i></u>	Date: <u>3.24.23</u>
Faculty Senate Chair: _____	Date: _____
VP Academic Affairs/VP Health Science: _____	Date: _____

## Request for Undergraduate Addition, Deletion, or Change of an Area of Emphasis

1. Prepare one paper copy and obtain signatures from the Department Chair/Head, Librarian, and College Dean. 2. Submit the form to your College Curriculum Committee. 3. After attaining the signature of the College Curriculum Chair, send the paper copy to the current University Curriculum Committee (UCC) Chair. 4. Send an identical (sans signatures) ELECTRONIC COPY and all supporting documentation in PDF format by email to the current UCC Chair.

College: College of Science Department/Division: Computer and Information Technology

Contact Person: Davide Andrea Mauro maurod@marshall.edu Phone: 3046966418

### ACTION REQUESTED:

Check action requested:  Addition  Deletion  Change

Name of Area of Emphasis: Web/Mobile App Development (SI26)

Within which Major is/will this Area of Emphasis be listed (please provide code as well): \_\_\_\_\_

### RATIONALE:

The entire program will be moved from the College of Science to the College of Engineering and Computer Sciences, the department of Computer and Information Technology will be merged with the department of Computer Sciences and Electrical Engineering. For these reasons all the courses, the major, the minors, and the areas of emphasis need to be moved accordingly.

**CURRICULUM:** (If addition or change, number of hours and courses; indicate if required or optional) May be submitted as separate document.

New college should suspend admission to this AoE. It is maintained active for currently enrolled students.

### NOTIFICATION REQUIREMENTS:

Attach a copy of written notification regarding this curriculum request to the following:

- Statement of Non-Duplication:** If this area of emphasis will be similar in title or content to an existing area of emphasis at the university, please send a memo to the affected department and include it with this packet, as well as, the response received from the affected department.
- If your department/division requires additional faculty, equipment, or specialized materials, attach an estimation of money and time required to secure these items.
- Send a copy of this completed form to the Marshall University Catalog Editor.

**SIGNATURES:** (If disapproved at any level, do not sign. Return to previous signer.)

Department Chair/Division Head: <u><i>Davide Andrea Mauro</i></u>	Date: <u>01/25/2023</u>
Registrar: <u><i>Sonia</i></u>	Date: <u>2.10.23</u>
College Dean: <u><i>Bob</i></u>	Date: <u>02/10/2023</u>
College Curriculum Chair: <u><i>Maria Hamilton</i></u>	Date: <u>2.17.23</u>
University Curriculum Committee Chair: <u><i>Zach Garrett</i></u>	Date: <u>3.24.23</u>
Faculty Senate Chair: _____	Date: _____
VP Academic Affairs/VP Health Science: _____	Date: _____

## Request for Undergraduate Addition, Deletion, or Change of an Area of Emphasis

1. Prepare one paper copy and obtain signatures from the Department Chair/Head, Librarian, and College Dean. 2. Submit the form to your College Curriculum Committee. 3. After attaining the signature of the College Curriculum Chair, send the paper copy to the current University Curriculum Committee (UCC) Chair. 4. Send an identical (sans signatures) ELECTRONIC COPY and all supporting documentation in PDF format by email to the current UCC Chair.

College: College of Science Department/Division: Computer and Information Technology  
 Contact Person: Davide Andrea Mauro maurod@marshall.edu Phone: 3046966418

**ACTION REQUESTED:**

Check action requested: <input type="checkbox"/> Addition <input type="checkbox"/> Deletion <input checked="" type="checkbox"/> Change
Name of Area of Emphasis: <u>Computer/Web App Development (SI27)</u>
Within which Major is/will this Area of Emphasis be listed (please provide code as well): _____

**RATIONALE:**

The entire program will be moved from the College of Science to the College of Engineering and Computer Sciences, the department of Computer and Information Technology will be merged with the department of Computer Sciences and Electrical Engineering. For these reasons all the courses, the major, the minors, and the areas of emphasis need to be moved accordingly.

**CURRICULUM:** (If addition or change, number of hours and courses; indicate if required or optional) May be submitted as separate document.

No other changes.

**NOTIFICATION REQUIREMENTS:**

Attach a copy of written notification regarding this curriculum request to the following:

1. **Statement of Non-Duplication:** If this area of emphasis will be similar in title or content to an existing area of emphasis at the university, please send a memo to the affected department and include it with this packet, as well as, the response received from the affected department.
2. If your department/division requires additional faculty, equipment, or specialized materials, attach an estimation of money and time required to secure these items.
3. Send a copy of this completed form to the Marshall University Catalog Editor.

**SIGNATURES:** (If disapproved at any level, do not sign. Return to previous signer.)

Department Chair/Division Head: <u><i>Davide Andrea Mauro</i></u>	Date: <u>01/25/2023</u>
Registrar: <u><i>Sonye LCA</i></u>	Date: <u>2.10.23</u>
College Dean: <u><i>Bob</i></u>	Date: <u>02/10/2023</u>
College Curriculum Chair: <u><i>Maria Hamilton</i></u>	Date: <u>2.17.23</u>
University Curriculum Committee Chair: <u><i>Zach Garrett</i></u>	Date: <u>3.24.23</u>
Faculty Senate Chair: _____	Date: _____
VP Academic Affairs/VP Health Science: _____	Date: _____



**University Curriculum Committee  
RECOMMENDATION**

**SR 22-23-48 CC**

Recommends approval of the listed **UNDERGRADUATE CERTIFICATE PROGRAM ADDITION, DELETION, CHANGE** in the following college and/or schools/programs:

**College of Liberal Arts**

**Certificate Addition: Meteorology (LG-20)**

- **Rationale:** We have received interest from students interested in meteorological studies but do not necessarily want a career in forecasting or broadcasting. The proposed curriculum would provide the extra credentials for majors and non-majors who would like to learn the fundamentals of meteorology.
- **Curriculum:** Undergrad Certificate Addition GEO Meteorology signed.pdf

**College of Science**

**Certificate Change: Information Assurance**

- **Rationale:** Replace IST 264 with CFS 200. These courses have changed when CFS became a separate program. CFS 200 has replace IST 264 in the CFS plan of Student.
- **Form with signatures:** CFS\_IACertificateChange.pdf

**FACULTY SENATE CHAIR:**

APPROVED BY THE  
FACULTY SENATE: \_\_\_\_\_ DATE: \_\_\_\_\_

DISAPPROVED BY THE  
FACULTY SENATE: \_\_\_\_\_ DATE: \_\_\_\_\_

**UNIVERSITY PRESIDENT:**

APPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_

DISAPPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_

**COMMENTS:** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## Request for Undergraduate Addition, Deletion, or Change of a Certificate Program

1. Prepare one paper copy and obtain signatures from the Department Chair/Head, Librarian, and College Dean. 2. Submit the form to your College Curriculum Committee. 3. After attaining the signature of the College Curriculum Chair, send the paper copy to the current University Curriculum Committee (UCC) Chair. 4. Send an identical (sans signatures) ELECTRONIC COPY and all supporting documentation in PDF format by email to the current UCC Chair.

College: COLA Department/Division: Geography  
 Contact Person: Kevin Law Phone: 696-2503

**ACTION REQUESTED:**

Check action requested:  Addition  Deletion  Change

Name of Certificate Program (provide code if this is an existing program): Meteorology; LG-20 BS

**RATIONALE:**

We have received interest from students interested in meteorological studies but do not necessarily want a career in forecasting or broadcasting. The proposed curriculum would provide the extra credentials for majors and non-majors who would like to learn the fundamentals of meteorology.

**CURRICULUM:** (If addition or change, number of hours and courses; indicate if required or optional) May be submitted as separate document.

See attached sheet

**NOTIFICATION REQUIREMENTS:**

Attach a copy of written notification regarding this curriculum request to the following:

- Statement of Non-Duplication:** If this certificate program will be similar in title or content to an existing certificate program at the university, please send a memo to the affected department and include it with this packet, as well as, the response received from the affected department.
- If your department/division requires additional faculty, equipment, or specialized materials, attach an estimation of money and time required to secure these items.
- Send a copy of this completed form to the Marshall University Catalog Editor.

**SIGNATURES:** (If disapproved at any level, do not sign. Return to previous signer.)

Department Chair/Division Head: 	Date: <u>2/15/23</u>
Registrar: 	Date: <u>2/17/2023</u>
College Dean: 	Date: <u>2/17/2023</u>
College Curriculum Chair: <u>Jonathan Kozar</u>	Date: <u>2/24/23</u>
University Curriculum Committee Chair: <u>Zach Garrett</u>	Date: <u>3.24.23</u>
Faculty Senate Chair: _____	Date: _____
VP Academic Affairs/VP Health Science: _____	Date: _____

## Addition of Meteorology Certificate

**Rationale:** We have received interest from students interested in meteorological studies but do not necessarily want a career in forecasting or broadcasting. The proposed curriculum would provide the extra credentials for majors and non-majors who would like to learn the fundamentals of meteorology.

PROPOSED CURRICULUM : At least 19 credit hours

Required: 12 credits

GEO 230 Introduction to Meteorology (4 credits)

GEO 450 Extreme Weather (4 credits)

GEO 460 Weather Analysis (4 credits)

CHOOSE AT LEAST A TOTAL OF 7 CREDIT HOURS FROM THE FOLLOWING COURSES:

GEO 101 Physical Geography (4 credits)

GEO 355 Aviation Weather (3 credits)

GEO 425 Climatology (4 credits)

GEO 426 Principles of GIS (4 credits)

GEO 431 Remote Sensing (4 credits)

GEO 480 Special Topics (1-4 credits)

GEO 481 Special Topics (1-4 credits)

GEO 482 Special Topics (1-4 credits)

GEO 483 Special Topics (1-4 credits)

GLY 150 Oceanography (3 credits)

GLY 150L Oceanography Lab (1 credit)

NOTE: STUDENTS CANNOT EARN BOTH A CERTIFICATE AND MINOR IN METEOROLOGY.

#### NOTIFICATION REQUIREMENTS

This certificate does not duplicate another certificate at the university.

The addition will not require additional faculty, equipment, or specialized materials.

## Request for Undergraduate Addition, Deletion, or Change of a Certificate Program

1. Prepare one paper copy and obtain signatures from the Department Chair/Head, Librarian, and College Dean. 2. Submit the form to your College Curriculum Committee. 3. After attaining the signature of the College Curriculum Chair, send the paper copy to the current University Curriculum Committee (UCC) Chair. 4. Send an identical (sans signatures) ELECTRONIC COPY and all supporting documentation in PDF format by email to the current UCC Chair.

College: Science Department/Division: Cyber Forensics & Security  
 Contact Person: Bill Gardner Phone: 304-696-2658

**ACTION REQUESTED:**

Check action requested: <input type="checkbox"/> Addition <input type="checkbox"/> Deletion <input checked="" type="checkbox"/> Change
Name of Certificate Program (provide code if this is an existing program): <u>Information Assurance</u>

**RATIONALE:**

Replace IST 264 with CFS 200. These course have changed when CFS became a seperate program. CFS 200 has replace IST 264 in the CFS plan of Student

**CURRICULUM:** (If addition or change, number of hours and courses; indicate if required or optional) May be submitted as separate document.

Replace IST 264 with CFS 200. The other required course remain the same. Please see attached document for futher information.

**NOTIFICATION REQUIREMENTS:**

- Attach a copy of written notification regarding this curriculum request to the following:
1. **Statement of Non-Duplication:** If this certificate program will be similar in title or content to an existing certificate program at the university, please send a memo to the affected department and include it with this packet, as well as, the response received from the affected department.
  2. If your department/division requires additional faculty, equipment, or specialized materials, attach an estimation of money and time required to secure these items.
  3. Send a copy of this completed form to the Marshall University Catalog Editor.

**SIGNATURES:** (If disapproved at any level, do not sign. Return to previous signer.)

Department Chair/Division Head: <u>[Signature]</u>	Date: <u>2-8-2023</u>
Registrar: <u>[Signature]</u>	Date: <u>2-8-2023</u>
College Dean: <u>[Signature]</u>	Date: <u>02/10/2023</u>
College Curriculum Chair: <u>Maria Hamilton</u>	Date: <u>3.24.23</u>
University Curriculum Committee Chair: <u>Zach Garrett</u>	Date: <u>3.24.23</u>
Faculty Senate Chair: _____	Date: _____
VP Academic Affairs/VP Health Science: _____	Date: _____

## Admission Requirements

Students may pursue the certificate while enrolled in Marshall University or as a certificate-only student. Students already enrolled in the undergraduate degree program should submit to the Office of Admissions a Secondary Program Request form.

Applicants interested in the certificate-only program should apply for admission to Marshall University as a Certificate/Professional Development student and select on the application form the Undergraduate Certificate in Information Assurance.

## Requirements

Code	Title
<a href="#">CFS 357</a>	Network Penetration and Attack
<a href="#">CFS 454</a>	Network Defense
IST 264	Technology Foundations
<a href="#">CFS 461</a>	Cyber Warfare

**Total Credit Hours 12**

### Course List

All courses are required for the certificate. A student must maintain a grade of *C* or better for each of the required courses to complete the certificate.

## Updated Requirements

Code	Title
<a href="#">CFS 357</a>	Network Penetration and Attack
<a href="#">CFS 454</a>	Network Defense
CFS 200	Introduction to CFS
<a href="#">CFS 461</a>	Cyber Warfare

**Total Credit Hours 12**

### Course List

All courses are required for the certificate. A student must maintain a grade of *C* or better for each of the required courses to complete the certificate.

# University Curriculum Committee RECOMMENDATION

## SR 22-23-49 CC

Recommends approval of the listed **UNDERGRADUATE COURSES ADDITIONS** in the following college and/or schools/programs:

### School of Aviation

#### **AVSC 280-283 Special Topics**

- **Rationale:** Addition of special topics options
- **Curriculum:** [Course Addition AVSC 280 \(1\)1.pdf](#)

#### **AVSC 311 Aircraft Systems and Powerplants**

- **Rationale:** Learn FAA rules and safety procedures; prepare for Remote Pilot licensing exam; operate drones to collect remote sensing data; process imagery for analysis; integrate sUAS imagery with existing GIS data.
- **Curriculum:** [Course Addition AVSC 311.pdf](#)

#### **AVSC 420 International Aviation**

- **Rationale:** Review of international flights including planning, documentation, navigation, international regulations, safety, and respect for local cultures.
- **Curriculum:** [Course Addition AVSC 420 1.pdf](#)

#### **AVSC 454 Drones: Remote Sensing & GIS**

- **Rationale:** Learn FAA rules and safety procedures; prepare for Remote Pilot licensing exam; operate drones to collect remote sensing data; process imagery for analysis; integrate sUAS imagery with existing GIS data.
- **Curriculum:** [Course Addition AVSC 454 1.pdf](#)

#### **AVSC 480-483 Special Topics**

- **Rationale:** Addition of special topics options
- **Curriculum:** [Course Addition AVSC 480 \(1\) 1.pdf](#)

### College of Engineering and Computer Sciences

#### **BME 410 Biomedical Imaging**

- **Rationale:** Introduces medical imaging and physical principles, instrumentation methods, and imaging-related algorithms of X-ray, CT, MRI , PET
- **Curriculum:** [Course Addition \(BME 410, Biomedical Imaging\).pdf](#)

## University Curriculum Committee RECOMMENDATION

### SR 22-23-49 CC

#### **BME 420 Nanomedicine**

- **Rationale:** This course focuses on the fundamental properties, synthesis and characterization of nanomaterials, coupled with their applications in nanomedicine.
- **Curriculum:** [Course Addition \(BME 420, Nanomedicine\).pdf](#)

### College of Liberal Arts

#### **GEO 223 Digital Earth**

- **Rationale:** Students employ GIS, GPS, Remote Sensing, and Drones for spatial data collection and analysis and investigate how the tools function for studying human and physical Earth systems.
- **Curriculum:** [Undergrad Course Addition GEO223 signed.pdf](#)

### College of Business

#### **ENT 200H Smith StartUp Incubator Honors**

- **Rationale:** An interdisciplinary experiential course that guides student entrepreneurs on discovering a problem they are passionate about.
- **Curriculum:** [ENT 200H.pdf](#)

### School of Pharmacy

#### **BSPS 444 – Princ of Disease Drug Act**

- **Rationale:** Topics covered include the concepts and mechanism of the basic processes underlying disease and pathophysiology, the general principles underlying drug action and therapeutics, including receptor pharmacology, enzyme inhibition and pharmacology, and the relationship between drug concentration at the target tissue and drug effect.
- **Curriculum:** [BSPS444 course addition and syllabus.pdf](#)

#### **BSPS 447 – Pharmaceutical Chemistry**

- **Rationale:** Topics covered include functional groups found in drug structures and their chemical properties drug solubility, absorption, metabolic pathways of drug molecules, biomolecules, enzymes and enzyme kinetics.
- **Curriculum:** [BSPS 447 course addition and syllabus.pdf](#)



**University Curriculum Committee  
RECOMMENDATION**

**SR 22-23-49 CC**

**FACULTY SENATE CHAIR:**

APPROVED BY THE  
FACULTY SENATE: \_\_\_\_\_ DATE: \_\_\_\_\_

DISAPPROVED BY THE  
FACULTY SENATE: \_\_\_\_\_ DATE: \_\_\_\_\_

**UNIVERSITY PRESIDENT:**

APPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_

DISAPPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_

**COMMENTS:** \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

## Request for Undergraduate Course Addition

1. Prepare **one** paper copy and obtain signatures from the Department Chair/Division Head, Registrar and College Dean.
2. Submit the form to your College Curriculum Committee.
3. After obtaining the signature of the College Curriculum Chair, send the paper copy to the current University Curriculum Committee Chair
4. Send an identical (sans signatures) ELECTRONIC COPY and all supporting documentation in a single PDF file (PDF Portfolio recommended) to UCC chair.

College: Avation Department/Division: Bill Noe Flight School Alpha Designator/Number: AVSC  
 Contact Person: David J. Pittenger Phone: 304-696-2818

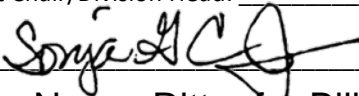
**NEW COURSE DATA:**

Course Title: <u>Special Topics</u> (Limit of 30 characters & spaces.)	
Alpha Designator/Number: <u>AVSC 280-283</u>	
General Education Designator(s) (check all that apply): <input type="checkbox"/> CT <input type="checkbox"/> INTL <input type="checkbox"/> MC <input type="checkbox"/> Core II (Core II type: _____)	
<b>Note: Applications for Gen Ed attributes must be attached.</b> <a href="http://www.marshall.edu/wpmu/gened/core-ii-courses-info/">http://www.marshall.edu/wpmu/gened/core-ii-courses-info/</a>	
Catalog Description (Limit of 30 words):  	
Co-requisite(s): _____	First Term to be Offered: _____
Prerequisite(s): <u>Admission to FL10</u>	Credit Hours: <u>1 - 4</u>
Grading Mode: Graded: <input checked="" type="checkbox"/> Credit/No Credit: _____	
Course(s) being deleted in place of this addition (must submit course deletion form): _____	

**CHECKLIST/REQUIREMENTS**

1. After completing this two page form in its entirety, include a complete syllabus and route through the departments/committees below.
2. A complete syllabus can be from when this course was previously taught as a special topics course or by creating a new, intended syllabus to use with the course. The sample syllabus must at a minimum address the following areas:
  - a. COURSE OBJECTIVES, COURSE OUTLINE, SAMPLE TEXT(S) WITH AUTHOR(S) AND PUBLICATION DATE, INSTRUCTIONAL METHODS (Lecture, Lab, Internship, Practicum, etc.), and EVALUATION METHODS (Unit/Chapter, Midterm, Final, Projects, etc.)
3. If this course will replace a course that is required by another department, please send a memo to the affected department and include it with this packet, as well as, the response received from the affected department.
4. If this course will be similar in title or content to another department's courses, please send a memo to the affected department and include it with this packet, as well as, the response received from the affected department.

**SIGNATURES:** (If disapproved at any level, do not sign. Return to previous signer.)

Department Chair/Division Head: <u>Nancy Ritter</u>	Date: <u>03/02/2023</u>
Registrar: 	Date: <u>3.6.2023</u>
College Dean: <u>Nancy Ritter for Bill Noe</u>	Date: <u>03/02//2023</u>
College Curriculum Chair: <u>David J. Pittenger</u>	Date: <u>1/26/2023</u>
General Education Council Chair *: _____	Date: _____
University Curriculum Committee Chair: <u>Zack Garrett</u>	Date: <u>3.29.23</u>
Faculty Senate Chair: _____	Date: _____
VP Academic Affairs/VP Health Science _____	Date: _____

\* - Signature necessary only if course is to be Core Curriculum Course

**Request for Undergraduate Course Addition - Page 2**  
**Additional Information Required for Undergraduate Course Addition**

College: Aviation Department/Division: Bill Noe Flight School Alpha Designator/Number: AVSC 280

Provide complete information regarding the new course addition for each topic listed below. Before routing this form, a complete syllabus also must be attached addressing the items listed on the first page of this form.

---

1. Identify by name the faculty in your department/division who may teach this course.

N. Ritter, N. Ramsey, T. Kingsaver, D. Pittenger, W. Noe

2. If your department/division requires additional faculty, equipment, or specialized materials, attach an estimation of money and time required to secure these items.

NA

3. If this course will be required by a department/division other than your own, identify by name.

NA

4. If there are any agreements required to provide clinical experience, attach details and signed agreements.

NA

5. If library resources are deemed inadequate, attach a plan to overcome this. The plan must include the cost as stated by the Dean of Libraries.

NA

6. EQUIPMENT/SUPPLIES NEEDED TO TEACH THIS COURSE (this does not refer to additional equipment/supplies that need to be purchased; simply what materials are needed in order to teach this course successfully.):

NA

7. ADDITIONAL GRADUATE REQUIREMENTS IF LISTED AS AN UNDERGRADUATE OR GRADUATE COURSE (please also submit to Graduate Council course addition for 5xx graduate component):

NA

8. PROVIDE A COMPLETE BIBLIOGRAPHY INCLUDING ALL PUBLICATIONS RESEARCHED TO CREATE THIS COURSE AND WHAT PUBLICATIONS MAY BE BENEFICIAL TO STUDENTS TAKING THIS COURSE (separate page).

## Request for Undergraduate Course Addition

1. Prepare **one** paper copy and obtain signatures from the Department Chair/Division Head, Registrar and College Dean.
2. Submit the form to your College Curriculum Committee.
3. After obtaining the signature of the College Curriculum Chair, send the paper copy to the current University Curriculum Committee Chair
4. Send an identical (sans signatures) ELECTRONIC COPY and all supporting documentation in a single PDF file (PDF Portfolio recommended) to UCC chair.

College: Aviation Department/Division: Bill Noe Flight School Alpha Designator/Number: AVSC 311  
 Contact Person: David Pittenger Phone: 696-2818

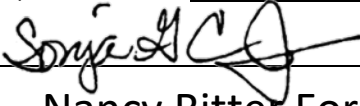

**NEW COURSE DATA:**

Course Title: <u>Aircraft Systems</u> (Limit of 30 characters & spaces.)	
Alpha Designator/Number: <u>AVSC 311</u>	
General Education Designator(s) (check all that apply): <input type="checkbox"/> CT <input type="checkbox"/> INTL <input type="checkbox"/> MC <input type="checkbox"/> Core II (Core II type: _____)	
<b>Note: Applications for Gen Ed attributes must be attached.</b> <a href="http://www.marshall.edu/wpmu/gened/core-ii-courses-info/">http://www.marshall.edu/wpmu/gened/core-ii-courses-info/</a>	
Catalog Description (Limit of 30 words): <u>Learn FAA rules and safety procedures; prepare for Remote Pilot licensing exam; operate drones to collect remote sensing data; process imagery for analysis; integrate sUAS imagery with existing GIS data.</u>	
Co-requisite(s): _____	First Term to be Offered: _____
Prerequisite(s): <u>FL10 Major</u>	Credit Hours: <u>3</u>
Grading Mode: Graded: <input checked="" type="checkbox"/> Credit/No Credit: _____	
Course(s) being deleted in place of this addition ( <i>must submit course deletion form</i> ): _____	

**CHECKLIST/REQUIREMENTS**

1. After completing this two page form in its entirety, include a complete syllabus and route through the departments/committees below.
2. A complete syllabus can be from when this course was previously taught as a special topics course or by creating a new, intended syllabus to use with the course. The sample syllabus must at a minimum address the following areas:
  - a. COURSE OBJECTIVES, COURSE OUTLINE, SAMPLE TEXT(S) WITH AUTHOR(S) AND PUBLICATION DATE, INSTRUCTIONAL METHODS (Lecture, Lab, Internship, Practicum, etc.), and EVALUATION METHODS (Unit/Chapter, Midterm, Final, Projects, etc.)
3. If this course will replace a course that is required by another department, please send a memo to the affected department and include it with this packet, as well as, the response received from the affected department.
4. If this course will be similar in title or content to another department's courses, please send a memo to the affected department and include it with this packet, as well as, the response received from the affected department.

**SIGNATURES:** (If disapproved at any level, do not sign. Return to previous signer.)

Department Chair/Division Head: <u>Nancy Ritter</u>	Date: <u>03/02/2023</u>
Registrar: 	Date: _____
College Dean: <u>Nancy Ritter For Bill Noe</u>	Date: <u>03/02/2023</u>
College Curriculum Chair: <u>David J. Pittenger</u>	Date: <u>1/26/2023</u>
General Education Council Chair *: _____	Date: _____
University Curriculum Committee Chair: 	Date: <u>3.29.23</u>
Faculty Senate Chair: _____	Date: _____
VP Academic Affairs/VP Health Science: _____	Date: _____

\* - Signature necessary only if course is to be Core Curriculum Course

**Request for Undergraduate Course Addition - Page 2**  
**Additional Information Required for Undergraduate Course Addition**

College: **Aviation** \_\_\_\_\_ Department/Division: **Bill Noe Flight School** \_\_\_\_\_ Alpha Designator/Number: **ACSC 454** \_\_\_\_\_

Provide complete information regarding the new course addition for each topic listed below. Before routing this form, a complete syllabus also must be attached addressing the items listed on the first page of this form.

---

1. Identify by name the faculty in your department/division who may teach this course.

**J. Leonard, N. Ramsey, T. Kingsolver**

2. If your department/division requires additional faculty, equipment, or specialized materials, attach an estimation of money and time required to secure these items.

**NA**

3. If this course will be required by a department/division other than your own, identify by name.

**Note: This course is to be cross-listed with a Geography – GEO 454.**

4. If there are any agreements required to provide clinical experience, attach details and signed agreements.

**NA**

5. If library resources are deemed inadequate, attach a plan to overcome this. The plan must include the cost as stated by the Dean of Libraries.

**NA**

6. EQUIPMENT/SUPPLIES NEEDED TO TEACH THIS COURSE (this does not refer to additional equipment/supplies that need to be purchased; simply what materials are needed in order to teach this course successfully.):

**NA**

7. ADDITIONAL GRADUATE REQUIREMENTS IF LISTED AS AN UNDERGRADUATE OR GRADUATE COURSE (please also submit to Graduate Council course addition for 5xx graduate component):

**NA**

8. PROVIDE A COMPLETE BIBLIOGRAPHY INCLUDING ALL PUBLICATIONS RESEARCHED TO CREATE THIS COURSE AND WHAT PUBLICATIONS MAY BE BENEFICIAL TO STUDENTS TAKING THIS COURSE (separate page).

**NA This request is to cross list an existing course.**

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## AVSC 311: Aircraft Systems

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**INSTRUCTOR**

TBD

**CONTACT INFORMATION**

- Office: TBD
- Office Hours: TBD
- Office Phone: TBD
- Marshall Email:  
[TBD@marshall.edu](mailto:TBD@marshall.edu)

**COURSE DESCRIPTION:**

Students learn about aircraft system related to propulsion; fuel; cabin pressure, oxygenation, and HVAC; fire control, ice abatement; landing and breaking, and hydraulic and pneumatic controls of flight surfaces.

**CREDITS:** 3**PREREQUISITES:** NONE**TERM/YEAR:** TBD**CLASS MEETING DAYS/TIMES**

TBD

**LOCATION**

Yeager: Bill Noe Flight School

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**REQUIRED TEXTS AND MATERIALS**

Pilot's Handbook of Aeronautical Knowledge: [https://qa-www.faa.gov/regulations\\_policies/handbooks\\_manuals/aviation/phak](https://qa-www.faa.gov/regulations_policies/handbooks_manuals/aviation/phak)  
**FAA in the course outline**

Aviation Maintenance Technician Handbook: Powerplant:  
[https://www.faa.gov/regulations\\_policies/handbooks\\_manuals/aviation/media/FAA-H-8083-32-AMT-Powerplant-Vol-2.pdf](https://www.faa.gov/regulations_policies/handbooks_manuals/aviation/media/FAA-H-8083-32-AMT-Powerplant-Vol-2.pdf)  
**AMP in the course outline**

**COURSE GOALS**

Aircraft are complex systems that include the airplane's design, its avionics, and its method of propulsion. Therefore, airline Transport Pilots require a comprehensive knowledge of how these systems operate, their limitations, and the capacity to overcome an inflight incident with one of these systems.

**ATTENDANCE/PARTICIPATION POLICY**

You are expected to attend each class meeting. If you cannot attend, please contact the instructor before the class to make arrangements for completing tasks present during the class session.

**COURSE GRADED ASSIGNMENTS**

We will use Blackboard for all submitted assignments. As you will see, each assignment has a due date. Exams are timed. You will have three hours to complete each.

Number	Type	Points	Total Points	% Final Grade
12	Lecture Preparations	10	120	23%
4	Exams	100	400	77%
	Total		520	100%

## FINAL GRADE POLICY

	PERCENTAGE		POINTS*	
A	90%	100%	468	520
B	80%	89%	416	467
C	70%	79%	364	415
D	60%	69%	312	363
F	0%	59%	0	311

- \* If your final points total is two less than the next highest grade (e.g., 898), I will consider rounding up if you were a consistent participant in class discussions, asked questions, and found other ways to contribute to the class meeting.

## LECTURE PREPARATIONS:

The lecture preparations will guide your reading and allow you to understand better what you are reading. This low-risk/high-return assignment will help you “own” what you are reading and what we will discuss in our course meetings. You are free to talk with others about the reading. However, what you should submit should be written by you.

**Terms and Concepts:** I have prepared a list of important terms and concepts in each chapter. Describe each in your own words. When possible, include a comment about how the term/concept relates to you, aviation, or both.

**Questions:** Asking questions is the first step in learning. After you read each chapter, prepare two questions. The question can ask for clarification about the relevance or importance of something you read or how something you learned elsewhere relates to the material presented in the chapter. During class, I will randomly ask students to ask a question they prepared.

## EXAMS

Each exam will require you to write essays to answer questions related to topics presented in class.

**COURSE SCHEDULE: ASSIGNMENTS AND DATES**

	<b>Reading and Course Discussion Topic</b>	<b>Assignment</b>
<b>Week 1</b>	TOPIC: Course orientation READING: Read the syllabus before coming to class	
<b>Week 2</b>	TOPIC: Aircraft Construction READING: FAA Chapter 2	Lecture Preparation 1
<b>Week 3</b>	TOPIC: Principles of Flight READING: FAA Chapter 3	Lecture Preparation 2
<b>Week 4</b>	TOPIC: Aerodynamics READING: FAA Chapter 4	Lecture Preparation 3 Exam #1
<b>Week 5</b>	TOPIC: Flight Controls READING: FAA Chapter 6	Lecture Preparation 4
<b>Week 6</b>	TOPIC: Systems READING: FAA Chapter 7	Lecture Preparation 5
<b>Week 7</b>	TOPIC: Instruments READING: FAA Chapter 8	Lecture Preparation 6 Exam #3
<b>Week 8</b>	TOPIC: Powerplant I READING: AMP Chapters 4 & 5	Lecture Preparation 7
<b>Week 9</b>	TOPIC: Powerplant II READING: AMP Chapter 8	Lecture Preparation 8
<b>Week 10</b>	TOPIC: Powerplant III READING: AMP Chapter 9	Lecture Preparation 9
<b>Week 11</b>	TOPIC: Powerplant IV READING: AMP Chapter 10	Lecture Preparation 10 Exam #1
<b>Week 12</b>	TOPIC: Airspace READING: FAA Chapter 15	Lecture Preparation 11
<b>Week 13</b>	TOPIC: Navigation READING: FAA Chapter 16	Lecture Preparation 12
<b>Week 14</b>	Thanksgiving Break	Relax, Take It Easy
<b>Week 15</b>	TOPIC: Course Summary READING:	
<b>Week 16</b>	Exam Week	Final Exam



**POTENTIAL MODIFICATION OF SCHEDULE**

As with any schedule, this course outline is an approximation given the conditions while I was planning the course. Things change, and as they do, we will need to adjust the schedule. This course requires a team effort, and changes to the schedule will reflect the collaboration of all.

**UNIVERSITY POLICIES**

By enrolling in this course, you agree to the University Policies. Please read each policy’s full text (listed below) by going to [MU Academic Affairs: University Policies](http://www.marshall.edu/academic-affairs/university-policies). URL: <http://www.marshall.edu/academic-affairs/policies/>

- Academic Dishonesty Policy
- Academic Dismissal Policy
- Academic Forgiveness Policy
- Academic Probation and Suspension Policy
- Affirmative Action Policy
- Dead Week Policy
- D/F Repeat Rule
- Excused Absence Policy for Undergraduates
- Inclement Weather Policy
- Sexual Harassment Policy
- Students with Disabilities (Policies and Procedures)
- University Computing Services Acceptable Use Policy

**ACADEMIC CALENDAR**

For the beginning, ending, and add/drop dates, see the [Marshall University Academic Calendar](http://www.marshall.edu/academic-calendar) URL: <http://www.marshall.edu/academic-calendar/>

**COURSE STUDENT LEARNING OUTCOMES**

The following table shows how each student’s learning outcomes will be practiced and assessed in the course.

Student Learning Outcomes	Student Development	Student Assessment
<p>1) <b>Integrative Thinking:</b> Students will make connections and transfer skills and learning among varied disciplines, domains of thinking, experiences, and situations.</p> <p>a. Students will demonstrate that they understand how the many systems of an airplane interact and how they, as pilots, can control these processes.</p>	<ul style="list-style-type: none"> <li>• Reading assignments</li> <li>• Course discussion</li> <li>• Exams</li> <li>• Guest speakers</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture Preparation</li> <li>• Exams</li> </ul>
<p>2) <b>Inquiry-Based Thinking:</b> Students will formulate focused questions and hypotheses, evaluate existing knowledge, collect and analyze data, and draw justifiable conclusions.</p> <p>a. Students will demonstrate that they use specific computations to plan a flight.</p> <p>b. Students will be able to demonstrate that they can use information from the airplane’s avionics to diagnose a problem with a system or the power plant.</p> <p>c. Students will be able to demonstrate their use of Crew Resource Management strategies to diagnose a problem with and aircraft.</p>	<ul style="list-style-type: none"> <li>• Reading assignments</li> <li>• Course discussion</li> <li>• Exams</li> <li>• Guest speakers</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture Preparation</li> <li>• Exams</li> </ul>
<p>3) <b>Metacognitive Thinking:</b> Students will evaluate the effectiveness of a project plan or strategy to determine the degree of their improvement in knowledge and skills.</p> <p>a. Students will identify how learning the material in the course will Ensure the safety of their customers, crew, and aircraft while flying.</p>	<ul style="list-style-type: none"> <li>• Reading assignments</li> <li>• Course discussion</li> <li>• Analytic essays</li> <li>• Guest speakers</li> </ul>	<ul style="list-style-type: none"> <li>• Analytic essays</li> <li>• Quizzes</li> <li>• Final Analytic Essay</li> </ul>

Student Learning Outcomes	Student Development	Student Assessment
<p>4) <b>Quantitative Thinking:</b> Students will analyze real-world problems quantitatively, formulate plausible estimates, assess the validity of visual representations of quantitative information, and differentiate valid from questionable statistical conclusions.</p> <p>a. Students will use NTSB reports to understand how specific events created an aviation incident.</p>	<ul style="list-style-type: none"> <li>• Reading assignments</li> <li>• Course discussion</li> <li>• Analytic essays</li> <li>• Guest speakers</li> </ul>	<ul style="list-style-type: none"> <li>• Analytic essays</li> <li>• Quizzes</li> <li>• Final Analytic Essay</li> </ul>

## Request for Undergraduate Course Addition

1. Prepare **one** paper copy and obtain signatures from the Department Chair/Division Head, Registrar and College Dean.
2. Submit the form to your College Curriculum Committee.
3. After obtaining the signature of the College Curriculum Chair, send the paper copy to the current University Curriculum Committee Chair
4. Send an identical (sans signatures) ELECTRONIC COPY and all supporting documentation in a single PDF file (PDF Portfolio recommended) to UCC chair.

College: Avation Department/Division: Bill Noe Flight School Alpha Designator/Number: AVSC  
 Contact David J. Pittenger Phone 304-696-2818

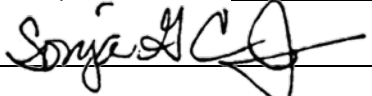
**NEW COURSE DATA:**

Course Title: <u>International Aviation</u> (Limit of 30 characters & spaces.)	
Alpha Designator/Number: <u>AVSC 420</u>	
General Education Designator(s) (check all that apply): <input type="checkbox"/> CT <input type="checkbox"/> INTL <input type="checkbox"/> MC <input type="checkbox"/> Core II (Core II type: _____)	
<b>Note: Applications for Gen Ed attributes must be attached.</b> <a href="http://www.marshall.edu/wpmu/gened/core-ii-courses-info/">http://www.marshall.edu/wpmu/gened/core-ii-courses-info/</a>	
Catalog Description (Limit of 30 words): <u>Review of international flights including planning, documentation, navigation, international regulations, safety, and respect for local cultures.</u>	
Co-requisite(s): _____	First Term to be Offered: <u>TBD</u>
Prerequisite(s): <u>Admission to FL10</u>	Credit Hours: <u>3</u>
Grading Mode: Graded: <input checked="" type="checkbox"/> Credit/No Credit: _____	
Course(s) being deleted in place of this addition (must submit course deletion form): _____	

**CHECKLIST/REQUIREMENTS**

1. After completing this two page form in its entirety, include a complete syllabus and route through the departments/committees below.
2. A complete syllabus can be from when this course was previously taught as a special topics course or by creating a new, intended syllabus to use with the course. The sample syllabus must at a minimum address the following areas:
  - a. COURSE OBJECTIVES, COURSE OUTLINE, SAMPLE TEXT(S) WITH AUTHOR(S) AND PUBLICATION DATE, INSTRUCTIONAL METHODS (Lecture, Lab, Internship, Practicum, etc.), and EVALUATION METHODS (Unit/Chapter, Midterm, Final, Projects, etc.)
3. If this course will replace a course that is required by another department, please send a memo to the affected department and include it with this packet, as well as, the response received from the affected department.
4. If this course will be similar in title or content to another department's courses, please send a memo to the affected department and include it with this packet, as well as, the response received from the affected department.

**SIGNATURES:** (If disapproved at any level, do not sign. Return to previous signer.)

Department Chair/Division Head: <u>Nancy Ritter</u>	Date: <u>03/02/2023</u>
Registrar: 	Date: <u>3.6.2023</u>
College Dean: <u>Nancy Ritter for Bill Noe</u>	Date: <u>03/02/2023</u>
College Curriculum Chair: <u>David J. Pittenger</u>	Date: <u>1/29/2023</u>
General Education Council Chair *: _____	Date: _____
University Curriculum Committee Chair: <u>Zach Garrett</u>	Date: <u>3.29.23</u>
Faculty Senate Chair: _____	Date: _____
VP Academic Affairs/VP Health Science: _____	Date: _____

\* - Signature necessary only if course is to be Core Curriculum Course

**Request for Undergraduate Course Addition - Page 2**  
**Additional Information Required for Undergraduate Course Addition**

College: Aviation Department/Division: Bill Noe Flight School Alpha Designator/Number: AVSC 420

Provide complete information regarding the new course addition for each topic listed below. Before routing this form, a complete syllabus also must be attached addressing the items listed on the first page of this form.

---

1. Identify by name the faculty in your department/division who may teach this course.

N. Ritter, N. Ramsey, T. Kingsolver, W. Noe

2. If your department/division requires additional faculty, equipment, or specialized materials, attach an estimation of money and time required to secure these items.

NA

3. If this course will be required by a department/division other than your own, identify by name.

NA

4. If there are any agreements required to provide clinical experience, attach details and signed agreements.

NA

5. If library resources are deemed inadequate, attach a plan to overcome this. The plan must include the cost as stated by the Dean of Libraries.

NA

6. EQUIPMENT/SUPPLIES NEEDED TO TEACH THIS COURSE (this does not refer to additional equipment/supplies that need to be purchased; simply what materials are needed in order to teach this course successfully.):

NA

7. ADDITIONAL GRADUATE REQUIREMENTS IF LISTED AS AN UNDERGRADUATE OR GRADUATE COURSE (please also submit to Graduate Council course addition for 5xx graduate component):

NA

8. PROVIDE A COMPLETE BIBLIOGRAPHY INCLUDING ALL PUBLICATIONS RESEARCHED TO CREATE THIS COURSE AND WHAT PUBLICATIONS MAY BE BENEFICIAL TO STUDENTS TAKING THIS COURSE (separate page).

## AVSC 420: INTERNATIONAL AVIATION

### INSTRUCTOR

To be determined

### CLASS MEETING DAYS/TIMES

TBD

### CONTACT INFORMATION

- Office: Bill Noe Flight School
- Office Hours: By Appointment
- Office Phone: TBD
- Marshall e-mail:  
[TBD](#)

### COURSE DESCRIPTION

Review of international flights, including planning and documentation, navigation, internal regulations, safety, and respect for local culture.

**CREDITS:** 3

**COURSE LOCATION:** Bill Noe Flight School

**PREREQUISITES:** AVSC 329

**COURSE SPRING TERM:** TBD

### REQUIRED TEXTS AND MATERIALS

Albright, J. (2021) *International Flight Operations*. (ISBN: 978-1735647517)

### COURSE GOALS

International flight has become commonplace in the industry, especially as current corporate and commercial aircraft have incorporated sophisticated avionics and are designed for longer flights. Nevertheless, international flights require additional attention to flight planning. For example, long flights increase crew fatigue; may require passage over oceans, the arctic poles, or both; and passage over sovereign nations with varying regulations. This course will help students who have completed the Commercial Pilot training develop those skills to participate in international and domestic flight operations.

### COURSE STUDENT LEARNING OUTCOMES

The following table shows how each student's learning outcome will be practiced and assessed in the course.

<b>Student Learning Outcomes</b>	<b>Student Development</b>	<b>Student Assessment</b>
1. Students will learn essential components of an international flight, including: <ol style="list-style-type: none"> <li>Crew resource management</li> <li>Global navigation</li> <li>International regulations</li> <li>Unique sovereign nation flight regulations</li> <li>Respect for cultural differences among nations</li> <li>Preparation of robust documentation required when requestion permission to enter another nation's airspace and pass through another country's customs.</li> </ol>	1. Students will: <ol style="list-style-type: none"> <li>Complete assigned readings related to assigned topics</li> <li>Participate in classroom discussions regarding assigned topics</li> <li>Complete independent research regarding foreign nations for unique flight regulations and the Department of State's status</li> </ol>	1. Students prepare several flight plans that include matters related to: <ol style="list-style-type: none"> <li>Extended flight time</li> <li>Global navigation</li> <li>Extended flight over a body of water</li> <li>Flight over polar caps</li> <li>Passage over different nations' airspace</li> <li>Preparation for civil communication with foreign nations.</li> </ol>

### COURSE REQUIREMENTS

Your course grade will represent your performance on essay exams and an article review.

3 Flight Plans	100 points each	300
2 Exams	50 points Each	100

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<b>Total</b>		<b>400</b>
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### COURSE EVALUATION

#### Flight Plans

You will complete three flight plans involving more complex operations and planning. You will also complete two exams that will test your knowledge of the material presented in the course.

#### FINAL GRADE POLICY

	PERCENTAGE		POINTS	
A	90%	100%	360	400
B	80%	89%	320	356
C	70%	79%	280	316

D 60% 69% 240 276

### **ATTENDANCE/PARTICIPATION POLICY**

Please plan to attend all scheduled class meetings. We will use the time to review course material and, most importantly, ensure you understand the material. Your success depends on your understanding of current regulations and best practices within the industry.

For each class meeting, you will:

- Have read the assigned readings
- Prepare questions based on the readings
- Be prepared to talk about the readings and their importance.

### **ACADEMIC DISHONESTY POLICY**

During the course, you will complete various written projects. All work must be yours.

#### **Policy Regarding Plagiarism**

Plagiarism is a form of academic dishonesty. So is cheating on a quiz.

**Students who engage in academic dishonesty for this course will receive a failing grade for the course.** Please review the University's Academic Dishonesty Policy. Also, if you need help knowing how to avoid plagiarising, meet with one of the *Writing Center* staff for assistance.

### **UNIVERSITY POLICIES**

By enrolling in this course, you agree to the University Policies. You may review each policy:

[MU Academic Affairs: University Policies.](http://www.marshall.edu/academic-affairs/university-policies/)

(URL: <http://www.marshall.edu/academic-affairs/policies/> )

- Academic Dishonesty Policy
- Academic Dismissal Policy
- Academic Forgiveness Policy
- Academic Probation and Suspension Policy
- Affirmative Action Policy
- Dead Week Policy
- D/F Repeat Rule
- Excused Absence Policy for Undergraduates
- Inclement Weather Policy
- Sexual Harassment Policy
- Students with Disabilities (Policies and Procedures)
- University Computing Services Acceptable Use Policy

### **COVID-19 POLICY**

Marshall's official COVID-19 protocols are online at <https://www.marshall.edu/coronavirus>.

Policies and protocols may change over time as we respond to changing conditions. The website will always contain the most recent information.

#### ACADEMIC CALENDAR

For the beginning, ending, and add/drop dates, see the [Marshall University Academic Calendar](http://www.marshall.edu/academic-calendar/) (URL: <http://www.marshall.edu/academic-calendar/> ).

### Course Schedule: Assignments and Dates

Week 1	Course Overview
Week 2	Regulatory Compliance Part I: FAA Regulations
Week 3	Regulatory Compliance Part II: ICAO Regulations
Week 4	Aviation Planning Part I: Crew Resource Management for long flights
Week 5	Aviation Planning Part II: Coordinates, Direction, Initial v. Midpoint Navigation
Week 6	Aviation Planning Part III: Plotting, Reduced Vertical Separation Minimums, Global Navigation Satellite System Flight Plan #1
Week 7	Aviation Planning Part IV: Regional cultural practices Exam I
Week 8	Aviation Planning Part V: Proactive risk management
Week 9	Aviation Planning Part VI: Documentation for entering a sovereign nations
	Spring Break
Week 10	Navigation Part I: Performance-Based Navigation, Class A through Class G Airspace
Week 11	Navigation Part II: North Atlantic High-Level Airspace Flight Plan #2
Week 12 & 13	Navigation Part III: Communications and Surveillance
Week 14 & 15	Navigation Part IV: Precision Area Navigation
Week 16	Course Summary Flight Plan #3 Final Exam – See posted dates



## Bibliography

[AC 91-70B - Oceanic and Remote Continental Airspace Operations \(faa.gov\)](#)

<https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32021R1217&from=EN>

<https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32021R1224&from=EN>

<https://store.icao.int/en/global-navigation-satellite-system-gnss-manual-doc-9849>

<https://store.icao.int/en/annex-6-operation-of-aircraft-part-i-international-commercial-air-transport-aeroplanes>

<https://store.icao.int/en/annex-6-operation-of-aircraft-part-ii-international-general-aviation-aeroplanes>

<https://store.icao.int/en/location-indicators-doc-7910-186>

[https://www.icao.int/WACAF/AFIRAN08\\_Doc/9734\\_parta\\_cons\\_en.pdf](https://www.icao.int/WACAF/AFIRAN08_Doc/9734_parta_cons_en.pdf)

Re

## Request for Undergraduate Course Addition

1. Prepare one paper copy and obtain signatures from the Department Chair/Division Head, Registrar and College Dean.
2. Submit the form to your College Curriculum Committee.
3. After obtaining the signature of the College Curriculum Chair, send the paper copy to the current University Curriculum Committee Chair
4. Send an identical (sans signatures) ELECTRONIC COPY and all supporting documentation in a single PDF file (PDF Portfolio recommended) to UCC chair.

College: Aviation Department/Division: Bill Noe Flight School Alpha Designator/Number: AVSC 454  
 Contact Person: David Pittenger Phone: 696-2818


**NEW COURSE DATA:**

Course Title: <u>Drones: Remote Sensing &amp; GIS</u> (Limit of 30 characters & spaces.)	
Alpha Designator/Number: <u>AVSC 454</u>	
General Education Designator(s) (check all that apply): <input type="checkbox"/> CT <input type="checkbox"/> INTL <input type="checkbox"/> MC <input type="checkbox"/> Core II (Core II type: _____)	
<b>Note: Applications for Gen Ed attributes must be attached.</b> <a href="http://www.marshall.edu/wpmu/gened/core-ii-courses-info/">http://www.marshall.edu/wpmu/gened/core-ii-courses-info/</a>	
Catalog Description (Limit of 30 words): <u>Learn FAA rules and safety procedures; prepare for Remote Pilot licensing exam; operate drones to collect remote sensing data; process imagery for analysis; integrate sUAS imagery with existing GIS data.</u>	
Co-requisite(s): _____	First Term to be Offered: _____
Prerequisite(s): <u>FL10 Major</u>	Credit Hours: <u>3</u>
Grading Mode: Graded: <input checked="" type="checkbox"/> Credit/No Credit: _____	
Course(s) being deleted in place of this addition (must submit course deletion form): _____	

**CHECKLIST/REQUIREMENTS**

1. After completing this two page form in its entirety, include a complete syllabus and route through the departments/committees below.
2. A complete syllabus can be from when this course was previously taught as a special topics course or by creating a new, intended syllabus to use with the course. The sample syllabus must at a minimum address the following areas:
  - a. COURSE OBJECTIVES, COURSE OUTLINE, SAMPLE TEXT(S) WITH AUTHOR(S) AND PUBLICATION DATE, INSTRUCTIONAL METHODS (Lecture, Lab, Internship, Practicum, etc.), and EVALUATION METHODS (Unit/Chapter, Midterm, Final, Projects, etc.)
3. If this course will replace a course that is required by another department, please send a memo to the affected department and include it with this packet, as well as, the response received from the affected department.
4. If this course will be similar in title or content to another department's courses, please send a memo to the affected department and include it with this packet, as well as, the response received from the affected department.

**SIGNATURES:** (If disapproved at any level, do not sign. Return to previous signer.)

Department Chair/Division Head: <u>Nancy Ritter</u>	Date: <u>03/02/2023</u>
Registrar: 	Date: <u>3.6.2023</u>
College Dean: <u>Nancy Ritter</u>	Date: <u>03/02/2023</u>
David J. Pittenger	Date: <u>1/29/2023</u>
College Curriculum Chair: _____	Date: _____
General Education Council Chair *: _____	Date: _____
University Curriculum Committee Chair: <u>Zach Garrett</u>	Date: <u>3.29.23</u>
Faculty Senate Chair: _____	Date: _____
VP Academic Affairs/VP Health Science: _____	Date: _____

\* - Signature necessary only if course is to be Core Curriculum Course

**Request for Undergraduate Course Addition - Page 2**  
**Additional Information Required for Undergraduate Course Addition**

College: **Aviation** \_\_\_\_\_ Department/Division: **Bill Noe Flight School** \_\_\_\_ Alpha Designator/Number: **ACSC 454** \_\_\_\_\_

Provide complete information regarding the new course addition for each topic listed below. Before routing this form, a complete syllabus also must be attached addressing the items listed on the first page of this form.

---

1. Identify by name the faculty in your department/division who may teach this course.

**J. Leonard, N. Ramsey, T. Kingsolver**

2. If your department/division requires additional faculty, equipment, or specialized materials, attach an estimation of money and time required to secure these items.

**NA**

3. If this course will be required by a department/division other than your own, identify by name.

**Note: This course is to be cross-listed with a Geography – GEO 454.**

4. If there are any agreements required to provide clinical experience, attach details and signed agreements.

**NA**

5. If library resources are deemed inadequate, attach a plan to overcome this. The plan must include the cost as stated by the Dean of Libraries.

**NA**

6. EQUIPMENT/SUPPLIES NEEDED TO TEACH THIS COURSE (this does not refer to additional equipment/supplies that need to be purchased; simply what materials are needed in order to teach this course successfully.):

**NA**

7. ADDITIONAL GRADUATE REQUIREMENTS IF LISTED AS AN UNDERGRADUATE OR GRADUATE COURSE (please also submit to Graduate Council course addition for 5xx graduate component):

**NA**

8. PROVIDE A COMPLETE BIBLIOGRAPHY INCLUDING ALL PUBLICATIONS RESEARCHED TO CREATE THIS COURSE AND WHAT PUBLICATIONS MAY BE BENEFICIAL TO STUDENTS TAKING THIS COURSE (separate page).

**NA This request is to cross-list an existing course.**

## Syllabus for GEO454/554 Drones: GIS and Remote Sensing

Instructor: James M. Leonard, Ph.D. email: <a href="mailto:leonard@marshall.edu">leonard@marshall.edu</a> Phone: (304) 696-4626	Campus CRN 3232 (GEO454) or CRN 3247 (GEO554); Section 101; Online CRN 3233 (GEO485) or CRN 3248 (GEO585)
Office hours: Harris Hall 208, M 8-11; noon-2pm; many other times available by appointment, too.	Semester: Spring 2022 Classroom: Harris Hall 202 Class time: Tuesday/Thursday 12:30-1:45pm

**Instructor:** I'm Dr. Leonard from the Geography Department, College of Liberal Arts, Marshall University. I've been a professor here since 2001. Before then I was a GIS Systems Administrator for the WV Environmental Protection Agency. I'm a Christian, father of five, and married to the same lovely, talented wife for 25 years. Please share a few sentences about yourself in the Blackboard Discussion Board so we can get to know you as well.

**Catalog description:** Learn FAA rules and safety procedures; prepare for Remote Pilot licensing exam; operate drones to collect remote sensing data; process imagery for analysis; integrate sUAS imagery with existing GIS data.

Course Learning Outcomes	How students will practice each outcome	How student achievement will be assessed
Students will safely fly a quadcopter drone and use automated programming to collect remote sensing imagery.	Discussion, flight practice	Field work
Students will use software for drone flight planning and to post process imagery including 3D modeling and NDVI.	Discussion, readings, software	Software exercises
Students will integrate drone imagery with GIS and RS data.	Discussion, readings, software	Software exercises
Students will pass a practice FAA part 107 licensure exam featuring concepts about airspace, weather, regulations, and emergency procedures.	Discussion, readings, quizzes	Online exam

### Required materials:

- Frazier, Amy E. and Kunwar K. Singh. Fundamentals of Capturing and Processing Drone Imagery and Data. 2021. CRC Press. ISBN: 978-0-367-24572-6. Cost \$120.
- Subscription to Gleim.com test prep for FAA part 107 exam. The company has graciously agreed to give each of you 20% off the regular price. Cost \$48. Call Bruce Blashka, 800-874-5346 ext. 442; tell him you are a student of James Leonard at Marshall University.
- Before you fly for "education" or "recreation" the FAA requires that you pass their TRUST test. We'll discuss in class, but here's the link:  
[https://www.faa.gov/uas/recreational\\_fliers/knowledge\\_test\\_updates/](https://www.faa.gov/uas/recreational_fliers/knowledge_test_updates/)

- Readings provided by the instructor.
- Pix4D software provided by the department of Geography.
- A drone that will work with an app such as Pix4D Capture or Drone Deploy that will permit automated flights capturing a grid of photos. Campus students will use one from the Department of Geography. Online students must use their own drones. I highly recommend either DJI Phantom 4, Phantom 4 Pro (not plus), Mavic Pro, or Mavic 2 Pro. Some other drones will work, but I don't know them all. Suitable drones will be discussed in class weeks before any flights are necessary.

**Blended delivery, attendance, and time commitment:** This course is offered simultaneously online and in the classroom. **Attendance is required!** Classroom students attend in Harris Hall 202 at 12:30-1:45pm Eastern USA on Tuesdays and Thursdays. Lecture and assignments are discussed live and can be attended by online students using Teams. Online are strongly encouraged to attend the live Teams sessions. Online students who can't attend live sessions due to a time conflict must watch the recorded sessions. Most universities (including Marshall University) recommend spending about 6-9 hours a week during fall/spring for a three-credit hour course in order to get a grade of C. You may require more or less time.

**Grading:** Grades will be based on: 1) ten **readings/lecture quizzes** (20 points each) for 200 points; 2) **drone flights** followed by **computer exercises** for 150 points; a **mock FAA exam** for 50 points. Graduate students will have more extensive and difficult material. Final grades will be determined by the total number of points you have earned:

A = 400 - 364 points (100-91%)	C = 323 - 284 (80-71%)	F = 259 and below (less than 65%)
B = 363 - 324 (90-81%)	D = 283 - 260 (70-65%)	

No extra credit is available and no grades will be scaled or curved. Please be aware that this is a senior-/graduate-level course. You will be expected to perform at a high level. Homework must be submitted at the beginning of the class period after the instructor gives the assignment. No late work is accepted.

**Readings/lecture quizzes** will be based on your textbook, the class lectures, the Gleim.com website study materials, and online materials supplied by the instructor. A few quizzes will be taken during class time. The others will be taken outside class using Blackboard.

**Drone flights** will be completed live during class for campus students. Online students will have live chats with the instructor for assistance as they fly. The products of the flights will be supplied to the instructor. You will be required to travel short distances to selected sites for drone flights. **Computer exercises** will use software to process drone imagery. Classroom students can begin these during class time and finish on GIS lab computers. Online students will need to remotely login to a Marshall GIS lab computer to access the software.

The **mock FAA exam** is similar to the FAA Part 107 licensure exam. You are NOT required to take the FAA part 107 exam for this course.

**Discussion boards:** Discussions may take place with the Discussions tool. No grades are assigned for discussions.

## Weekly Schedule:

Note: We will try to catch a warm day or two in January, February, or March to fly drones which may mean shifting the schedule slightly.

- Week 1: 11-13 Jan.: Class intro; equipment orientation; Gleim.com – Regulations; Read Frazier and Singh chapter 1.
- Week 2: 18-20 Jan.: **Quiz #1**; Read Frazier and Singh chapter 2; Gleim.com - Airspace Classification and Operating Requirements.
- Week 3: 25-27 Jan.: **Quiz #2 and #3**; Read Frazier and Singh chapter 3; Gleim.com - Aviation Weather Services.
- Week 4: 1-3 Feb.: **Quiz #4**; Read Frazier and Singh chapter 4; Gleim.com - Weather Effects on Performance; Pix4d processing (Quarry; graduate students also complete Forensic);
- Week 5: 8-10 Feb.: **Quiz #5 and #6**; Read Frazier and Singh chapter 5; Gleim.com - Loading and Performance + Radio Communications Procedures; Pix4d processing (Rostock S.O.D.A. RGB camera; graduate students also complete Rostock Sequoia multispectral).
- Week 6: 15-17 Feb.: **Quiz #7**; Read Frazier and Singh chapter 6; Gleim.com - Airport Operations; Pix4d processing (Cadastre; graduate students also complete Thermal);
- Week 7: 22-24 Feb.: **Quiz #8 and #9**; Read Frazier and Singh chapter 8; Gleim.com - Aeronautical Decision Making and Physiology + Emergency Procedures, Maintenance, and Inspections; Visit to Huntington Tri-State Airport (subject to scheduling change)
- Week 8: 1-3 Mar.: **Quiz #10**; Read Frazier and Singh chapter 9; Pix4d processing (Bellevue Avenue; graduate students also complete Dominica hurricane damage); Review for mock FAA exam.
- Week 9: 8-10 Mar.: **mock FAA Exam** 8 and 10 Mar.
- Week 10: Spring Break! If you want to be a licensed pilot, you should probably take the FAA exam this week. It is not required, but the material will be fresh in your mind.
- Week 11: 22-24 Mar.: Drone flights; Grad Students: Read Frazier and Singh chapter 10, complete exercises 1.1, 1.2., and 1.3.
- Week 12: 29-31 Mar.: Drone flights; Pix4D processing; Read Frazier and Singh chapter 10, complete exercises 2.1., and 2.2.
- Week 13: 5-7 Apr.: Drone flights; Pix4D processing
- Week 14: 12-14 Apr.: Drone flights; Pix4D processing
- Week 15: 19-21 Apr.: Drone flights; Pix4D processing
- Week 16: Course wrap-up

**Resources:** Marshall University offers a variety of support services to students enrolled in classroom and online courses. For online students, access these support services by clicking the Help links at left in the Blackboard course.

**Academic Honesty and other University policies:** You must do your own work for this class. For any cheating or plagiarism, however minor, you will earn a final grade of F for the semester. Additional University sanctions apply. By enrolling in this course, you agree to the University Policies found at [www.marshall.edu/academic-affairs](http://www.marshall.edu/academic-affairs). They are many; best read them.

## Request for Undergraduate Course Addition

1. Prepare **one** paper copy and obtain signatures from the Department Chair/Division Head, Registrar and College Dean.
2. Submit the form to your College Curriculum Committee.
3. After obtaining the signature of the College Curriculum Chair, send the paper copy to the current University Curriculum Committee Chair
4. Send an identical (sans signatures) ELECTRONIC COPY and all supporting documentation in a single PDF file (PDF Portfolio recommended) to UCC chair.

College: Avation Department/Division: Bill Noe Flight School Alpha Designator/Number: AVSC  
 Contact Person: David J. Pittenger Phone: 304-696-2818

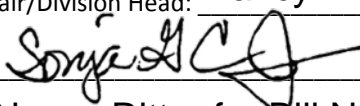
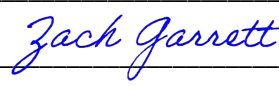
**NEW COURSE DATA:**

Course Title: <u>Special Topics</u> (Limit of 30 characters & spaces.)	
Alpha Designator/Number: <u>AVSC 480-483</u>	
General Education Designator(s) (check all that apply): <input type="checkbox"/> CT <input type="checkbox"/> INTL <input type="checkbox"/> MC <input type="checkbox"/> Core II (Core II type: _____)	
<b>Note: Applications for Gen Ed attributes must be attached.</b> <a href="http://www.marshall.edu/wpmu/gened/core-ii-courses-info/">http://www.marshall.edu/wpmu/gened/core-ii-courses-info/</a>	
Catalog Description (Limit of 30 words):  	
Co-requisite(s): _____	First Term to be Offered: _____
Prerequisite(s): <u>Admission to FL10</u>	Credit Hours: <u>1 - 4</u>
Grading Mode: Graded: <input checked="" type="checkbox"/> Credit/No Credit: _____	
Course(s) being deleted in place of this addition (must submit course deletion form): _____	

**CHECKLIST/REQUIREMENTS**

1. After completing this two page form in its entirety, include a complete syllabus and route through the departments/committees below.
2. A complete syllabus can be from when this course was previously taught as a special topics course or by creating a new, intended syllabus to use with the course. The sample syllabus must at a minimum address the following areas:
  - a. COURSE OBJECTIVES, COURSE OUTLINE, SAMPLE TEXT(S) WITH AUTHOR(S) AND PUBLICATION DATE, INSTRUCTIONAL METHODS (Lecture, Lab, Internship, Practicum, etc.), and EVALUATION METHODS (Unit/Chapter, Midterm, Final, Projects, etc.)
3. If this course will replace a course that is required by another department, please send a memo to the affected department and include it with this packet, as well as, the response received from the affected department.
4. If this course will be similar in title or content to another department's courses, please send a memo to the affected department and include it with this packet, as well as, the response received from the affected department.

**SIGNATURES:** (If disapproved at any level, do not sign. Return to previous signer.)

Department Chair/Division Head: <u>Nancy Ritter</u>	Date: <u>03/02/2023</u>
Registrar: 	Date: <u>3.6.2023</u>
College Dean: <u>Nancy Ritter for Bill Noe</u>	Date: <u>03/02/2023</u>
College Curriculum Chair: <u>David J. Pittenger</u>	Date: <u>1/26/2023</u>
General Education Council Chair *: _____	Date: _____
University Curriculum Committee Chair: 	Date: <u>3.29.23</u>
Faculty Senate Chair: _____	Date: _____
VP Academic Affairs/VP Health Science _____	Date: _____

\* - Signature necessary only if course is to be Core Curriculum Course



**Request for Undergraduate Course Addition - Page 2**  
**Additional Information Required for Undergraduate Course Addition**

College: Aviation Department/Division: Bill Noe Flight School Alpha Designator/Number: AVSC 480

Provide complete information regarding the new course addition for each topic listed below. Before routing this form, a complete syllabus also must be attached addressing the items listed on the first page of this form.

---

1. Identify by name the faculty in your department/division who may teach this course.

N. Ritter, N. Ramsey, T. Kingsaver, D. Pittenger, W. Noe

2. If your department/division requires additional faculty, equipment, or specialized materials, attach an estimation of money and time required to secure these items.

NA

3. If this course will be required by a department/division other than your own, identify by name.

NA

4. If there are any agreements required to provide clinical experience, attach details and signed agreements.

NA

5. If library resources are deemed inadequate, attach a plan to overcome this. The plan must include the cost as stated by the Dean of Libraries.

NA

6. EQUIPMENT/SUPPLIES NEEDED TO TEACH THIS COURSE (this does not refer to additional equipment/supplies that need to be purchased; simply what materials are needed in order to teach this course successfully.):

NA

7. ADDITIONAL GRADUATE REQUIREMENTS IF LISTED AS AN UNDERGRADUATE OR GRADUATE COURSE (please also submit to Graduate Council course addition for 5xx graduate component):

NA

8. PROVIDE A COMPLETE BIBLIOGRAPHY INCLUDING ALL PUBLICATIONS RESEARCHED TO CREATE THIS COURSE AND WHAT PUBLICATIONS MAY BE BENEFICIAL TO STUDENTS TAKING THIS COURSE (separate page).

## Request for Undergraduate Course Addition

1. Prepare **one** paper copy and obtain signatures from the Department Chair/Division Head, Registrar and College Dean.
2. Submit the form to your College Curriculum Committee.
3. After obtaining the signature of the College Curriculum Chair, send the paper copy to the current University Curriculum Committee Chair
4. Send an identical (sans signatures) ELECTRONIC COPY and all supporting documentation in a single PDF file (PDF Portfolio recommended) to UCC chair.

College: CECS Department/Division: Biomedical Engineering Alpha Designator/Number: BME 410  
 Contact Person: Masudur Rahman Phone: x65683





**NEW COURSE DATA:**

Course Title:	<u>Biomedical Imaging</u>	(Limit of 30 characters & spaces.)
Alpha Designator/Number:	<u>BME 410</u>	
General Education Designator(s) (check all that apply):	<input type="checkbox"/> CT <input type="checkbox"/> INTL <input type="checkbox"/> MC <input type="checkbox"/> Core II (Core II type: _____)	
<b>Note: Applications for Gen Ed attributes must be attached.</b> <a href="http://www.marshall.edu/wpmu/gened/core-ii-courses-info/">http://www.marshall.edu/wpmu/gened/core-ii-courses-info/</a>		
Catalog Description (Limit of 30 words):	<u>Introduce medical imaging and physical principles, instrumentation methods, and imaging-related algorithms of X-ray, CT, MRI , PET</u>	
Co-requisite(s):	First Term to be Offered:	<u>Fall 2023</u>
Prerequisite(s):	<u>PHY 211</u>	Credit Hours: <u>3</u>
Grading Mode:	Graded: <input checked="" type="checkbox"/>	Credit/No Credit: _____
Course(s) being deleted in place of this addition (must submit course deletion form): _____		

**CHECKLIST/REQUIREMENTS**

1. After completing this two page form in its entirety, include a complete syllabus and route through the departments/committees below.
2. A complete syllabus can be from when this course was previously taught as a special topics course or by creating a new, intended syllabus to use with the course. The sample syllabus must at a minimum address the following areas:
  - a. COURSE OBJECTIVES, COURSE OUTLINE, SAMPLE TEXT(S) WITH AUTHOR(S) AND PUBLICATION DATE, INSTRUCTIONAL METHODS (Lecture, Lab, Internship, Practicum, etc.), and EVALUATION METHODS (Unit/Chapter, Midterm, Final, Projects, etc.)
3. If this course will replace a course that is required by another department, please send a memo to the affected department and include it with this packet, as well as, the response received from the affected department.
4. If this course will be similar in title or content to another department's courses, please send a memo to the affected department and include it with this packet, as well as, the response received from the affected department.

**SIGNATURES:** (If disapproved at any level, do not sign. Return to previous signer.)

Department Chair/Division Head: 	Date: <u>3.24.23</u>
Registrar:  140501	Date: <u>2/27/2023</u>
College Dean: 	Date: <u>27-Feb-2023</u>
College Curriculum Chair: 	Date: <u>27-Feb-2023</u>
General Education Council Chair *:	Date: _____
University Curriculum Committee Chair: <u>Zach Garrett</u>	Date: <u>3.24.23</u>
Faculty Senate Chair:	Date: _____
VP Academic Affairs/VP Health Science	Date: _____

\* - Signature necessary only if course is to be Core Curriculum Course

**Request for Undergraduate Course Addition - Page 2**  
**Additional Information Required for Undergraduate Course Addition**

College: CECS Department/Division: Biomedical Engineering Alpha Designator/Number: BME 410

Provide complete information regarding the new course addition for each topic listed below. Before routing this form, a complete syllabus also must be attached addressing the items listed on the first page of this form.

---

1. Identify by name the faculty in your department/division who may teach this course.

Masudur Rahman, Nasim Nosoudi, Prabir Patra

2. If your department/division requires additional faculty, equipment, or specialized materials, attach an estimation of money and time required to secure these items.

N/A

3. If this course will be required by a department/division other than your own, identify by name.

N/A

4. If there are any agreements required to provide clinical experience, attach details and signed agreements.

N/A

5. If library resources are deemed inadequate, attach a plan to overcome this. The plan must include the cost as stated by the Dean of Libraries.

N/A

6. EQUIPMENT/SUPPLIES NEEDED TO TEACH THIS COURSE (this does not refer to additional equipment/supplies that need to be purchased; simply what materials are needed in order to teach this course successfully.):

N/A

7. ADDITIONAL GRADUATE REQUIREMENTS IF LISTED AS AN UNDERGRADUATE OR GRADUATE COURSE (please also submit to Graduate Council course addition for 5xx graduate component):

N/A

8. PROVIDE A COMPLETE BIBLIOGRAPHY INCLUDING ALL PUBLICATIONS RESEARCHED TO CREATE THIS COURSE AND WHAT PUBLICATIONS MAY BE BENEFICIAL TO STUDENTS TAKING THIS COURSE (separate page).



**Marshall University Syllabus**  
**College of Engineering and Computer Sciences**  
**Department of Biomedical Engineering**

**Course**

BME 410 Biomedical Imaging

**Course Description in Catalog**

Introduce medical imaging and physical principles, instrumentation methods, and imaging-related algorithms of X-ray, CT, MRI , PET

**Course Overview**

This course is an introduction to the current biomedical imaging technologies, including planar x-ray radiography, computed tomography (CT), nuclear medicine, optical imaging, ultrasound (US), magnetic resonance imaging (MRI), Single photon emission computed tomography (SPECT) and positron emission tomography (PET). The primary focus is on the physical principles, instrumentation methods, and imaging-related algorithms; medical interpretation of images will also be included where possible to give students a deeper understanding and practical examples of the development and applications of medical imaging.

**Credits**

3 credit hours, undergraduate

**Prerequisites**

PHY 211

**Term/Year**

Spring 2022

**Class Meeting Days/Times**

TR 9:30 am-10.45 am

## Location

WAEC 1205

## Academic Calendar

For the beginning, ending, and add/drop dates, see the [Marshall University Academic Calendar](https://www.marshall.edu/academic-calendar/spring-2022-semester/) (URL: <https://www.marshall.edu/academic-calendar/spring-2022-semester/>).

## Instructor

Masudur Rahman (Dr. Rahman)

## Contact Information

- Office: WAEC 3221
- Office Hours: TR 12.30 pm- 2:30 pm; by appointment
- Office Phone: 304-696-5683
- Marshall Email: [rahmanm@marshall.edu](mailto:rahmanm@marshall.edu)

## Health and Safety Information

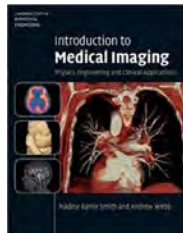
All members of the Marshall University community are expected to always observe health and safety protocols. This includes general health and safety protocols as well as specific protocols that might emerge in response to community and campus health conditions.

## Required and/or Recommended Texts and Materials

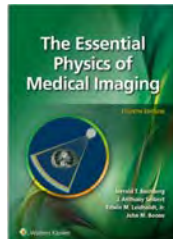
### Required Texts and Materials

Although there are no required textbooks for this course, students will be assigned readings from published journal articles. In some instances, students will be asked to obtain the necessary information from the library. It is the responsibility of the student to find the book or the article, read the assigned material, and comprehend it before class.

### Recommended/Optional Texts and Materials



Introduction to Medical Imaging: Physics, Engineering and Clinical Applications, Nadine Barrie Smith and Andrew Webb, Cambridge University Press (2011). ISBN: 9780521190657



Introduction to Physics in Modern Medicine, Second Edition, Suzanne Amador Kane, CRC Press, Taylor & Francis Group (2009). ISBN: 9781584889434

## Course Student Learning Outcomes

The table below shows the following relationships: How each student' learning outcome will be practiced and assessed in the course.

Course Learning Outcomes <i>student will:</i>	How students will practice each outcome in this course	How student achievement each outcome will be assessed in this course
<ul style="list-style-type: none"> <li>Understanding biomedical imaging modalities</li> </ul>	<ul style="list-style-type: none"> <li>In-class discussions</li> <li>In-class examples</li> <li>Homework assignments</li> </ul>	<ul style="list-style-type: none"> <li>Homework Assignments</li> <li>Exam problems</li> <li>Review paper</li> </ul>
Understand the image quality affected as related to modality used and image processing	<ul style="list-style-type: none"> <li>In-class discussions</li> <li>In-class examples</li> <li>Homework assignments</li> </ul>	<ul style="list-style-type: none"> <li>Homework</li> <li>Exam problems</li> <li>Review paper</li> </ul>
<ul style="list-style-type: none"> <li>Understanding the principles of physiology and medical imaging connect in clinical application</li> </ul>	<ul style="list-style-type: none"> <li>In-class discussions</li> <li>In-class examples</li> <li>Homework assignments</li> </ul>	<ul style="list-style-type: none"> <li>Homework Assignments</li> <li>Paper presentation</li> <li>Exam problems</li> <li>Review paper</li> </ul>
<ul style="list-style-type: none"> <li>Understand x-ray, CT, MRI, and optical imaging</li> </ul>	<ul style="list-style-type: none"> <li>In-class discussions</li> <li>In-class examples</li> <li>Online demonstration</li> </ul>	<ul style="list-style-type: none"> <li>Paper presentation</li> <li>Exam problems</li> <li>Review paper</li> </ul>

## Course Requirements/Due Dates

At the end of this course, students should be able to figure out at least one sub-discipline of biomedical engineering to work on April further. 30, 2022

## Course Objectives:

This course will provide the distinctive features to biomedical imaging and modern imaging modalities and emphasize the fundamental scientific principles behind each modality. This course shows how existing physical principles transcend into medical imaging and establish an important link into life sciences, illustrating the contributions physics can make to life sciences. Practical examples will be shown to illustrate the respective imaging modality, its use, premise and limitations, and biological safety will be touched upon. Students will be able to judge which imaging modality is adequate for specific life science needs and to understand the limits and promises of each modality

## Course Learning Outcomes:

By successfully completing this course, a student will be able to:

1. Distinguish between biomedical imaging modalities.
2. Describe how biomedical images are created using different imaging modalities.

3. Interpret biomedically-relevant images to determine the measure of image quality affected as related to modality used and image processing.
4. Perform image processing and explain the steps of the process.
5. Demonstrate how the principles of physiology and biomedical imaging connect in clinical application.
6. Increase proficiency in written and oral communication.

## Course Policies

By enrolling in this course, you agree to the following course policies. The policies below assume that students are healthy enough to take classes without absence. Deviations from there due to the COVID-19 will require post-incidence proof of unhealthiness when available. Students can receive partial or full credit, depending on the instructor's evaluation during COVID-19 related absence.

## Grading Policy

Midterm	100
Final	100
Assignments	300
Paper review & report	200
Presentation	100
Labs	100
Attendance	50
Professor evaluation	25
Bonus point	25
<b>Total</b>	<b>1000</b>

**Grading Scale:** **A** > 90%, **B** 80 to 89%, **C** 70 to 79%, **D** 60 to 69%, and **F** < 60%.

**Exam and assignments will assign on Blackboard. Only Word Doc or PDF files will be accepted.**

**Late submission:** 30% points will be docked for up to 5 hours late submission and after that, no submission will be accepted.

**Make-up Exams:** There has no make-up exam unless the student has an academic excuse.

**Exam Policy:** During the exams, the use of cell phones, books, or class notes is prohibited. This also includes the use of your cell phones for calculation purposes.

### **Homework Submission and Grading Policy**

1. Bring each homework set individual READY for submission on its possible collection date:
  - a. COMPLETE homework on ENGINEERING PAPER.
  - b. STAPLE all sheets of EACH ASSIGNMENT together in the UPPER LEFT
  - c. PRINT course designation "**ENGR 482**" at TOP CENTER.
  - d. PRINT your LAST name, then the first name in the UPPER RIGHT of the top sheet
  - e. PRINT the DUE DATE of homework printed under your name
  - f. FOLD your homework set Lengthwise and **PRINT Last name, First name** to the **upper-right of the fold on the outside sheet** (next to where the staple would be)
2. For a designated problem, the maximum amount of points will be given for getting the correct answers by clearly and fully following procedures developed in lectures and handouts.
3. You will get proportionate points for each of the remaining assigned problems that display a reasonable attempt to solve (i.e., you show an acceptable amount of effort as defined by the instructor).
4. No late homework will be accepted. You can always have a trusted person bring and submit them or scan and email them to me by their collection date/time if you cannot be in class.
5. Homework submissions that are sloppy, illegible, or difficult to follow may be given reduced credit – perhaps down to zero credit – at the grader's discretion.

### **Attendance/Participation Policy**

1. Attendance is mandatory.
2. Makeup exams will be granted only in cases that are recognized by the university. Students should contact the instructor as soon as they are able to return to classes. If students know that they will miss the class in advance (and qualify for a University-approved excuse), they should contact the instructor as soon as possible to arrange for an alternate class time. The process to petition for such a university excused absence is given at <http://www.marshall.edu/academic-affairs/policies/#ExcusedAbsences>.
3. If the class is canceled unexpectedly, scheduled assignments will be due, and scheduled tests will be given during the next class meeting. Please read the conditions and follow the procedures carefully. If the instructor receives an official university excused absence, makeups for each assignment will be handled according to instructor instruction.

The attendance policy assumes that students are healthy enough to take classes



without absence. Deviations therefrom due to the COVID-19 will require a post-incident proof of unhealthiness, when available. Students can receive partial or full credit, depending on the instructor's evaluation during COVID-19 related absence.

Missing more than four unexcused classes during the semester will lower the overall course score you would have otherwise earned by one letter grade. You are responsible for any material missed by being absent. Excused absences are dealt with above in the Syllabus. Until final grades have been submitted, you must keep copies of all submitted and graded work (homework, presentations, tests). No makeup or delayed submission in assignments will be permitted without an official excuse sent by the Dean of Students' office.

## **University Policies**

By enrolling in this course, you agree to the University Policies. Please read the full text of each policy (listed below) by going to [MU Academic Affairs: University Policies](http://www.marshall.edu/academic-affairs/policies/). (URL: <http://www.marshall.edu/academic-affairs/policies/> )

- Academic Dishonesty Policy
- Academic Dismissal Policy
- Academic Forgiveness Policy
- Academic Probation and Suspension Policy
- Affirmative Action Policy
- Dead Week Policy
- D/F Repeat Rule
- Excused Absence Policy for Undergraduates
- Inclement Weather Policy
- Sexual Harassment Policy
- Students with Disabilities (Policies and Procedures)
- University Computing Services Acceptable Use Policy

## Course Schedule

Week of:	Topics:
Week 1	Course Introduction What is medical imaging and history
Week 2	Review of signal and systems basic concepts
Week 3	Image processing X-ray planar radiography
Week 4	Ultrasound imaging
Week 5	Computed Tomography (CT) imaging
Week 6	Midterm Student presentation 1
Week 7	Magnetic Resonance Imaging (MRI)
Week 8	Single photon emission computed tomography (SPECT) and positron emission tomography (PET)
Week 9	Optical Imaging
<b>Week 10</b>	<b>Spring Break (March 14, Monday – March 18, Friday)</b>
Week 11	Emerging areas in medical imaging. Diagnostic value, statistical performance measures
Week 12	Student presentation 2
Week 13	Journal and technology review and report
Week 14	<b>Final Exam</b>

## Request for Undergraduate Course Addition

1. Prepare one paper copy and obtain signatures from the Department Chair/Division Head, Registrar and College Dean.
2. Submit the form to your College Curriculum Committee.
3. After obtaining the signature of the College Curriculum Chair, send the paper copy to the current University Curriculum Committee Chair
4. Send an identical (sans signatures) ELECTRONIC COPY and all supporting documentation in a single PDF file (PDF Portfolio recommended) to UCC chair.

College: CECS Department/Division: Biomedical Engineering Alpha Designator/Number: BME 420  
 Contact Person: Masudur Rahman Phone: x65683





**NEW COURSE DATA:**

Course Title: <u>Nanomedicine</u> (Limit of 30 characters & spaces.)	
Alpha Designator/Number: <u>BME 420</u>	
General Education Designator(s) (check all that apply): <input type="checkbox"/> CT <input type="checkbox"/> INTL <input type="checkbox"/> MC <input type="checkbox"/> Core II (Core II type: _____)	
<b>Note: Applications for Gen Ed attributes must be attached.</b> <a href="http://www.marshall.edu/wpmu/gened/core-ii-courses-info/">http://www.marshall.edu/wpmu/gened/core-ii-courses-info/</a>	
Catalog Description (Limit of 30 words): <u>See syllabus.</u>	
Co-requisite(s): _____	First Term to be Offered: _____
Prerequisite(s): <u>CHM 211</u>	Credit Hours: <u>3</u>
Grading Mode: Graded: <u>X</u> Credit/No Credit: _____	
Course(s) being deleted in place of this addition (must submit course deletion form): _____	

**CHECKLIST/REQUIREMENTS**

1. After completing this two page form in its entirety, include a complete syllabus and route through the departments/committees below.
2. A complete syllabus can be from when this course was previously taught as a special topics course or by creating a new, intended syllabus to use with the course. The sample syllabus must at a minimum address the following areas:
  - a. COURSE OBJECTIVES, COURSE OUTLINE, SAMPLE TEXT(S) WITH AUTHOR(S) AND PUBLICATION DATE, INSTRUCTIONAL METHODS (Lecture, Lab, Internship, Practicum, etc.), and EVALUATION METHODS (Unit/Chapter, Midterm, Final, Projects, etc.)
3. If this course will replace a course that is required by another department, please send a memo to the affected department and include it with this packet, as well as, the response received from the affected department.
4. If this course will be similar in title or content to another department's courses, please send a memo to the affected department and include it with this packet, as well as, the response received from the affected department.

**SIGNATURES:** (If disapproved at any level, do not sign. Return to previous signer.)

Department Chair/Division Head: 	Date: <u>2.23.23</u>
Registrar:  140501	Date: <u>2/27/2023</u>
College Dean: 	Date: <u>27-Feb-2023</u>
College Curriculum Chair: 	Date: <u>27-Feb 2023</u>
General Education Council Chair *: _____	Date: _____
University Curriculum Committee Chair: <u>Zach Garrett</u>	Date: <u>3.24.23</u>
Faculty Senate Chair: _____	Date: _____
VP Academic Affairs/VP Health Science: _____	Date: _____

\* - Signature necessary only if course is to be Core Curriculum Course

**Request for Undergraduate Course Addition - Page 2**  
**Additional Information Required for Undergraduate Course Addition**

College: CECS Department/Division: Biomedical Engineering Alpha Designator/Number: BME 420

Provide complete information regarding the new course addition for each topic listed below. Before routing this form, a complete syllabus also must be attached addressing the items listed on the first page of this form.

---

1. Identify by name the faculty in your department/division who may teach this course.

Masudur Rahman, Joon Shim, Nasim Nosoudi, Mohammed Ferdjallah, Prabir Patra

2. If your department/division requires additional faculty, equipment, or specialized materials, attach an estimation of money and time required to secure these items.

N/A

3. If this course will be required by a department/division other than your own, identify by name.

N/A

4. If there are any agreements required to provide clinical experience, attach details and signed agreements.

N/A

5. If library resources are deemed inadequate, attach a plan to overcome this. The plan must include the cost as stated by the Dean of Libraries.

N/A

6. EQUIPMENT/SUPPLIES NEEDED TO TEACH THIS COURSE (this does not refer to additional equipment/supplies that need to be purchased; simply what materials are needed in order to teach this course successfully.):

7. ADDITIONAL GRADUATE REQUIREMENTS IF LISTED AS AN UNDERGRADUATE OR GRADUATE COURSE (please also submit to Graduate Council course addition for 5xx graduate component):

8. PROVIDE A COMPLETE BIBLIOGRAPHY INCLUDING ALL PUBLICATIONS RESEARCHED TO CREATE THIS COURSE AND WHAT PUBLICATIONS MAY BE BENEFICIAL TO STUDENTS TAKING THIS COURSE (separate page).



**Marshall University Syllabus**  
**College of Engineering and Computer Sciences**  
**Department of Biomedical Engineering**

**Course**

BME 420 Nanomedicine

**Course Description in Catalog**

This course focuses on the fundamental properties, synthesis and characterization of nanomaterials, coupled with their applications in nanomedicine.

**Course Overview**

The use of nanoscience and technology for biomedical problems has spawned applications ranging from nanoparticles for imaging and therapeutics to biosensors for disease diagnostics. Nanomedicine is a rapidly growing field that exploits the novel properties of nanoscale materials and techniques to rapidly advance our understanding of human biology and the practice of medicine. This course focuses on the fundamental properties, synthesis and characterization of nanomaterials, coupled with their applications in nanomedicine, including micro and nanoparticles for drug delivery and imaging, microfluidics for in vitro diagnostics, nanomaterials and platforms for biological applications. The biomedical applications include cancer, cardiovascular disease, and infectious diseases.

**Credits**

3 credit hours, undergraduate

**Prerequisites**

CHM 211

**Term/Year**

Spring 2023

**Class Meeting Days/Times**

TR 08:00 am-09:15 pm

## Location

WAEC 1101

## Academic Calendar

For the beginning, ending, and add/drop dates, see the [Marshall University Academic Calendar](https://www.marshall.edu/academic-calendar/) (URL: <https://www.marshall.edu/academic-calendar/> ).

## Instructor

Masudur Rahman (Dr. Rahman)

## Contact Information

- Office: WAEC 3221
- Office Hours: TR 9:15-10:00 am by appointment
- Office Phone: 304-696-5683
- Marshall Email: [rahmanm@marshall.edu](mailto:rahmanm@marshall.edu)

## Health and Safety Information

All members of the Marshall University community are expected to always observe health and safety protocols. This includes general health and safety protocols as well as specific protocols that might emerge in response to community and campus health conditions.

## Required and/or Recommended Texts and Materials

### Required Texts and Materials

Although there are no required textbooks for this course, students will be assigned readings from published journal articles. In some instances, students will be asked to obtain the necessary information from the library. It is the student's responsibility to find the book or the article, read the assigned material, and comprehend it before class.

### Recommended/Optional Texts and Materials

Nanomedicine in Drug Delivery, Arun Kumar, Heidi M. Mansour, Adam Friedman, Eric R. Blough  
The Handbook of Nanomedicine, Jain, Kewal K.

## Course Student Learning Outcomes

The table below shows the following relationships: How each student' learning outcome will be practiced and assessed in the course.

Course Learning Outcomes <i>student will:</i>	How students will practice each outcome in this course	How student achievement each outcome will be assessed in this course
<ul style="list-style-type: none"> <li>• Understanding nanotechnology applied to medicine</li> </ul>	<ul style="list-style-type: none"> <li>• In-class discussions</li> <li>• In-class examples</li> <li>• Homework assignments</li> </ul>	<ul style="list-style-type: none"> <li>• Homework Assignments</li> <li>• Exam problems</li> <li>• Review paper</li> </ul>
<ul style="list-style-type: none"> <li>• Synthesis, characterization, and functionalization of nanoparticles</li> </ul>	<ul style="list-style-type: none"> <li>• In-class discussions</li> <li>• In-class examples</li> <li>• online lab demonstration</li> </ul>	<ul style="list-style-type: none"> <li>• Homework</li> <li>• Exam problems</li> <li>• Review paper</li> </ul>
<ul style="list-style-type: none"> <li>• Understanding different types of nanoparticles in nanomedicine</li> </ul>	<ul style="list-style-type: none"> <li>• In-class discussions</li> <li>• In-class examples</li> <li>• online lab demonstration</li> </ul>	<ul style="list-style-type: none"> <li>• Homework Assignments</li> <li>• Paper presentation</li> <li>• Exam problems</li> <li>• Review paper</li> </ul>
<ul style="list-style-type: none"> <li>• Studying the environmental and social impact of nanotechnology, nanotoxicology</li> </ul>	<ul style="list-style-type: none"> <li>• In-class discussions</li> <li>• In-class examples</li> <li>• Homework assignments</li> </ul>	<ul style="list-style-type: none"> <li>• Paper presentation</li> <li>• Exam problems</li> <li>• Review paper</li> </ul>

## Course Requirements/Due Dates

At the end of this course, students should be able to figure out at least one sub-discipline of biomedical engineering to work on April 28, 2023

## Course Objectives:

This course will provide the distinctive features of nanotechnology and its application to biomedical. The prefix nano is used liberally and indicates the nanodimension of existing scientific disciplines and medical specialties. Cutting-edge nanomedical technologies for sensing, imaging, drug delivery, and therapeutic applications will be discussed.

### Course Learning Outcomes:

- Understanding nanotechnology applied to medicine
- Synthesis, characterization, and functionalization of nanoparticles
- Development of Quantum-Dot and magnetic nanoparticles for sensing and imaging
- Polymeric nanoparticles and their applications
- Liposomes and micelles
- Gene therapy
- Microfluidics for high throughput diagnostics
- Nanodevices and techniques for clinical applications
- Studying the environmental and social impact of nanotechnology,

## Grading Policy

Midterm	100
Final	100
Assignments	300
Paper review & report	100
Presentation	100
Labs	200
Attendance	50
Professor evaluation	25
Bonus point	25
<b>Total</b>	<b>1000</b>

**Grading Scale:** **A** > 90%, **B** 80 to 89%, **C** 70 to 79%, **D** 60 to 69%, and **F** < 60%.

**Exam and assignments will assign on Blackboard. Only Word Doc or PDF files will be accepted.**

**Late submission:** 30% points will be docked for up to 5 hours late submission, and after that, no submission will be accepted.

**Make-up Exams:** There has no make-up exam unless the student has an academic excuse.

**Exam Policy:** During the exams, the use of cell phones, books, or class notes is prohibited. This also includes the use of your cell phones for calculation purposes.

### Homework Submission and Grading Policy

1. Bring each homework set individual READY for submission on its possible collection date:
  - a. COMPLETE homework on ENGINEERING PAPER.
  - b. STAPLE all sheets of EACH ASSIGNMENT together in the UPPER LEFT
  - c. PRINT course designation "**ENGR 481**" at TOP CENTER.
  - d. PRINT your LAST name, then the first name in the UPPER RIGHT of the top sheet
  - e. PRINT the DUE DATE of homework printed under your name
  - f. FOLD your homework set Lengthwise and **PRINT Last name, First name** to the **upper-right of the fold on the outside sheet** (next to where the staple would be)
2. For a designated problem, the maximum amount of points will be given for getting the correct answers by clearly and fully following procedures developed in lectures and handouts.
3. You will get proportionate points for each of the remaining assigned problems that display a reasonable attempt to solve (i.e., you show an acceptable amount of effort as defined by the instructor).



4. No late homework will be accepted. You can always have a trusted person bring and submit them or scan and email them to me by their collection date/time if you cannot be in class.
5. Homework submissions that are sloppy, illegible, or difficult to follow may be given reduced credit – perhaps down to zero credit – at the grader’s discretion.

## **Attendance/Participation Policy**

1. Attendance is mandatory.
2. Makeup exams will be granted only in cases that are recognized by the university. Students should contact the instructor as soon as they are able to return to classes. If students know that they will miss the class in advance (and qualify for a University-approved excuse), they should contact the instructor as soon as possible to arrange for an alternate class time. The process to petition for such a university excused absence is given at <http://www.marshall.edu/academic-affairs/policies/#ExcusedAbsences>.
3. If the class is canceled unexpectedly, scheduled assignments will be due, and scheduled tests will be given during the next class meeting. Please read the conditions and follow the procedures carefully. If the instructor receives an official university excused absence, makeups for each assignment will be handled according to instructor instruction.

The attendance policy assumes that students are healthy enough to take classes without absence. Deviations therefrom due to the COVID-19 will require a post-incidence proof of unhealthiness, when available. Students can receive partial or full credit, depending on the instructor’s evaluation during COVID-19 related absence.

Missing more than four unexcused classes during the semester will lower the overall course score you would have otherwise earned by one letter grade. You are responsible for any material missed by being absent. Excused absences are dealt with above in the Syllabus. Until final grades have been submitted, you must keep copies of all submitted and graded work (homework, presentations, tests). No makeup or delayed submission in assignments will be permitted without an official excuse sent by the Dean of Students' office.

## **University Policies**

By enrolling in this course, you agree to the University Policies. Please read the full text of each policy (listed below) by going to [MU Academic Affairs: University Policies](http://www.marshall.edu/academic-affairs/policies/). (URL: <http://www.marshall.edu/academic-affairs/policies/> )

- Academic Dishonesty Policy
- Academic Dismissal Policy
- Academic Forgiveness Policy
- Academic Probation and Suspension Policy
- Affirmative Action Policy
- Dead Week Policy

- D/F Repeat Rule
- Excused Absence Policy for Undergraduates
- Inclement Weather Policy
- Sexual Harassment Policy
- Students with Disabilities (Policies and Procedures)
- University Computing Services Acceptable Use Policy

## Course Schedule

Week of:	Topics:
Week 1	Introduction
	Nanobiotechnology
Week 2	Synthesis of nanomedicine-1
	Student Journal presentation-1
Week 3	Synthesis of nanomedicine-2
	Nanoparticle Characterization-1
Week 4	Nanoparticle Characterization-2
	Lab-1 AFM
Week 5	Targeted nanomedicine
	Student Journal presentation-2
Week 6	Independent Assignment-1
	Review before midterm
Week 7	<b>Midterm</b>
	Quantum Dot
Week 8	Gold nanoparticle
	Zeta potential and DLS for nanomedicine
Week 9	Lab-2 DSL/Zeta potential
	Lab-3 SEM
<b>Week 10</b>	<b>Spring Break (March 13, Monday – March 17, Friday)</b>
Week 11	Endocytosis mechanisms of Nanomedicine
	Journal Review
Week 12	Surface Chemistry
	Drug Dose
Week 13	Pharmacokinetics
	Nanomedicine: Regulatory issues
Week 14	Review week/Final Exam

## Request for Undergraduate Course Addition

1. Prepare one paper copy and obtain signatures from the Department Chair/Division Head, Registrar and College Dean.
2. Submit the form to your College Curriculum Committee.
3. After obtaining the signature of the College Curriculum Chair, send the paper copy to the current University Curriculum Committee Chair
4. Send an identical (sans signatures) ELECTRONIC COPY and all supporting documentation in a single PDF file (PDF Portfolio recommended) to UCC chair.

College: Liberal Arts Department/Division: Geography Alpha Designator/Number: GEO223  
 Contact Person: James Leonard Phone: 6-4626

**NEW COURSE DATA:**

Course Title: Digital Earth (Limit of 30 characters & spaces.)  
 Alpha Designator/Number: GEO223  
 General Education Designator(s) (check all that apply):  CT  INTL  MC  Core II (Core II type: \_\_\_\_\_)  
**Note: Applications for Gen Ed attributes must be attached.** <http://www.marshall.edu/wpmu/gened/core-ii-courses-info/>  
 Catalog Description (Limit of 30 words):  
Students employ GIS, GPS, Remote Sensing, and Drones for spatial data collection and analysis and investigate how the tools function for studying human and physical Earth systems.  
 Co-requisite(s): none First Term to be Offered: Spring 2024  
 Prerequisite(s): none Credit Hours: 4  
 Grading Mode: Graded:  Credit/No Credit:   
 Course(s) being deleted in place of this addition (must submit course deletion form): n/a

**CHECKLIST/REQUIREMENTS**

1. After completing this two page form in its entirety, include a complete syllabus and route through the departments/committees below.
2. A complete syllabus can be from when this course was previously taught as a special topics course or by creating a new, intended syllabus to use with the course. The sample syllabus must at a minimum address the following areas:
  - a. COURSE OBJECTIVES, COURSE OUTLINE, SAMPLE TEXT(S) WITH AUTHOR(S) AND PUBLICATION DATE, INSTRUCTIONAL METHODS (Lecture, Lab, Internship, Practicum, etc.), and EVALUATION METHODS (Unit/Chapter, Midterm, Final, Projects, etc.)
3. If this course will replace a course that is required by another department, please send a memo to the affected department and include it with this packet, as well as, the response received from the affected department.
4. If this course will be similar in title or content to another department's courses, please send a memo to the affected department and include it with this packet, as well as, the response received from the affected department.

**SIGNATURES: (If disapproved at any level, do not sign. Return to previous signer.)**

Department Chair/Division Head: <u>[Signature]</u>	Date: <u>2/16/23</u>
Registrar: <u>[Signature]</u> 450701	Date: <u>2/17/2023</u>
College Dean: <u>[Signature]</u>	Date: <u>2/17/2023</u>
College Curriculum Chair: <u>Jonathan Kozar</u>	Date: <u>2/24/23</u>
General Education Council Chair *: _____	Date: _____
University Curriculum Committee Chair: <u>Zach Garrett</u>	Date: <u>3.24.23</u>
Faculty Senate Chair: _____	Date: _____
VP Academic Affairs/VP Health Science _____	Date: _____

\* - Signature necessary only if course is to be Core Curriculum Course

**Request for Undergraduate Course Addition - Page 2**  
**Additional Information Required for Undergraduate Course Addition**

College: Liberal Arts Department/Division: Geography Alpha Designator/Number: GEO223

Provide complete information regarding the new course addition for each topic listed below. Before routing this form, a complete syllabus also must be attached addressing the items listed on the first page of this form.

---

1. Identify by name the faculty in your department/division who may teach this course.

Leonard, Cordoba, Walz

2. If your department/division requires additional faculty, equipment, or specialized materials, attach an estimation of money and time required to secure these items.

N/A

3. If this course will be required by a department/division other than your own, identify by name.

N/A

4. If there are any agreements required to provide clinical experience, attach details and signed agreements.

N/A

5. If library resources are deemed inadequate, attach a plan to overcome this. The plan must include the cost as stated by the Dean of Libraries.

N/A

6. EQUIPMENT/SUPPLIES NEEDED TO TEACH THIS COURSE (this does not refer to additional equipment/supplies that need to be purchased; simply what materials are needed in order to teach this course successfully.):

N/A

7. ADDITIONAL GRADUATE REQUIREMENTS IF LISTED AS AN UNDERGRADUATE OR GRADUATE COURSE (please also submit to Graduate Council course addition for 5xx graduate component):

N/A

8. PROVIDE A COMPLETE BIBLIOGRAPHY INCLUDING ALL PUBLICATIONS RESEARCHED TO CREATE THIS COURSE AND WHAT PUBLICATIONS MAY BE BENEFICIAL TO STUDENTS TAKING THIS COURSE (separate page).



**Marshall University Syllabus**  
**College of Liberal Arts**  
**Department of Geography**

**Course**

GEO 223 Digital Earth

**Course Description**

Students employ GIS, GPS, Remote Sensing, and Drones for spatial data collection and analysis and investigate how the tools function for studying human and physical Earth systems.

**Credits**

4 undergraduate

**Prerequisites**

None

**Term/Year**

Spring 2024

**Class Meeting Days/Times**

Wednesday from ~~noon~~ until 4pm *until 8pm*

**Location**

Harris Hall 202

**Academic Calendar**

For beginning, ending, and add/drop dates, see the [Marshall University Academic Calendar](https://www.marshall.edu/academic-calendar/) (URL: <https://www.marshall.edu/academic-calendar/> ).

**Instructor**

James Leonard, Ph.D.

**Contact Information**

- Office: Harris Hall 205
- Office Hours: Tuesday, Wednesday, and Thursday from 8 until noon; or by appointment.

- Office Phone: 304 696 4626
- Marshall Email: leonard@marshall.edu

## Health and Safety Information

All members of the Marshall University community are expected to always observe health and safety protocols. This includes general health and safety protocols as well as specific protocols that might emerge in response to community and campus health conditions.

## Required and/or Recommended Texts and Materials

### Required Texts and Materials

Bradley A. Shellito. 2023. Introduction to Geospatial Technology. MacMillian. ISBN:9781319322250. Cost \$65.

## Course Student Learning Outcomes

The table below shows the following relationships: How each student learning outcome will be practiced and assessed in the course.

Course Learning Outcomes	How students will practice each outcome	How student achievement will be assessed
Students will employ geospatial tools for spatial data collection and analysis.	Labs, discussion, readings	Lab reports, exams
Students will assess and apply geospatial data.	Labs, discussion, readings	Lab reports, exams
Students will conduct lab exercises to demonstrate how geospatial technology works to create digital models of the Earth.	Labs, discussion, readings	Lab reports, exams
Students will map portions of the Earth with data collected during lab exercises and analyze and present data using the latest geospatial technologies.	Labs, discussion, readings	Lab reports, exams

## Course Requirements/Due Dates

See below.

## Grading Policy

All grades will be available for you to view with the Grades tool in Blackboard. Your grade will consist of thirteen lab exercises (20 points each; drop the lowest) for a subtotal of 240 points and two exams (80 points each) for a subtotal of 160 points. Your final grade will be calculated using the following scale, based on the total number of points you have accumulated:

- A = 400 - 360 points (100-90%)
- B = 359 - 320 (89-80%)
- C = 319 - 280 (79-70%)
- D = 279 - 260 (69-65%)
- F = 259 and below (less than 65%)

Most Lab exercises will have elements completed in the field; many will have elements completed with a computer as well. The exams are taken during class times using Blackboard. More information will be given in class.

## Attendance/Participation Policy

Required.

## University Policies

By enrolling in this course, you agree to the University Policies. Please read the full text of each policy (listed below) by going to [MU Academic Affairs: University Policies](https://www.marshall.edu/academic-affairs/policies/). (URL: <https://www.marshall.edu/academic-affairs/policies/> )

- Academic Dishonesty Policy
- Academic Dismissal Policy
- Academic Forgiveness Policy
- Academic Probation and Suspension Policy
- Affirmative Action Policy
- Dead Week Policy
- D/F Repeat Rule
- Excused Absence Policy for Undergraduates
- Inclement Weather Policy
- Sexual Harassment Policy-Marshall's Title IX Office may be contacted at [TitleIX@marshall.edu](mailto:TitleIX@marshall.edu)
- Students with Disabilities (Policies and Procedures)
- University Computing Services Acceptable Use Policy



## Course Schedule

<b>Assignment</b>	<b>Date</b>
<b>Lab 1:</b> Latitude, Longitude, and Altitude (computer lab)	17 Jan.
<b>Lab 2:</b> Introduction to GPS/GNSS (computer lab)	24 Jan.
<b>Lab 3:</b> Using GPS to collect data for GIS (field)	31 Jan.
<b>Lab 4:</b> Introduction to GIS analysis (computer lab)	7 Feb.
<b>Lab 5:</b> GIS analysis 2 (computer lab)	14 Feb.
<b>Lab 6:</b> Map projection (computer lab)	21 Feb.
<b>Lab 7:</b> Cartography (computer lab)	28 Feb.
<b>Exam 1</b> (computer lab)	6 Mar.
<b>Lab 8:</b> Introduction to Remote Sensing analysis (computer lab)	13 Mar.
<b>Spring Break!</b>	20 Mar.
<b>Lab 9:</b> Spot checking remote sensing data (field)	27 Mar.
<b>Lab 10:</b> Remote Sensing analysis 2 (computer lab)	3 Apr.
<b>Lab 11:</b> Using a drone to collect RS data (field)	10 Apr.
<b>Lab 12:</b> Using a drone to take atmospheric measurements (field)	17 Apr.
<b>Lab 13:</b> Web mapping apps (computer lab)	24 Apr.
<b>Exam 2</b> (computer lab)	1 May

## GEO 223 Digital Earth: Bibliography

- Association of American Geographers. (2012). *Practicing geography*. Boston: Pearson.
- Bolstad, Paul. 2016. *GIS Fundamentals, A First Text on Geographic Information Systems*, 5th ed., Eider Press, White Bear Lake, Minnesota.
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- Chapman, Arthur D. and John Wieczorek, eds. 2006. *Guide to best practices for georeferencing*. Global Biodiversity Information Facility, Copenhagen, [Denmark]. c2006, The Regents of the University of California.
- Clemmer, Gina. 2018. *The GIS 20: Essential Skills*, 3rd ed., ESRI Press, Redlands, California.
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- C. P. Lo (Author), Albert K. W. Yeung. 2006. *Concepts And Techniques Of Geographic Information Systems*. Pearson.
- Victor Mesev, ed. 2007. *Integration of GIS and remote sensing* ISBN: 9780470864104
- Bradley A. Shellito. 2023. *Introduction to Geospatial Technology*. MacMillian.
- Richard Teeuw, Martin Whiteside, Nicholas McWilliam and Paul Zukowskyj. 2005. *Field Techniques: GIS, GPS and Remote Sensing*. London: Royal Geographical Society.
- Teixeira, S. (2018). Qualitative Geographic Information Systems (GIS): An untapped research approach for social work. *Qualitative Social Work*, 17(1), 9–23. <https://doi.org/10.1177/1473325016655203>
- Wouter A. Marra, Liesbeth van de Grint, Koko Alberti & Derek Karsenberg (2017) Using GIS in an Earth Sciences field course for quantitative exploration, data management and digital mapping, *Journal of Geography in Higher Education*, 41:2, 213-229, DOI: 10.1080/03098265.2017.1291587

## Request for Undergraduate Course Addition

1. Prepare **one** paper copy and obtain signatures from the Department Chair/Division Head, Registrar and College Dean.
2. Submit the form to your College Curriculum Committee.
3. After obtaining the signature of the College Curriculum Chair, send the paper copy to the current University Curriculum Committee Chair
4. Send an identical (sans signatures) ELECTRONIC COPY and all supporting documentation in a single PDF file (PDF Portfolio recommended) to UCC chair.

College: Lewis College of Business Department/Division: Marketing, MIS, and Entrepreneurship Alpha Designator/Number: ENT 200H  
 Contact Person: Ben Eng Phone: 818-720-4470

**NEW COURSE DATA:**

Course Title: Smith StartUp Incubator Honors (Limit of 30 characters & spaces.)  
 Alpha Designator/Number: ENT 200H  
 General Education Designator(s) (check all that apply):  CT  INTL  MC  Core II (Core II type: \_\_\_\_\_)  
**Note: Applications for Gen Ed attributes must be attached.** <http://www.marshall.edu/wpmu/gened/core-ii-courses-info/>  
 Catalog Description (Limit of 30 words): An interdisciplinary experiential course that guides student entrepreneurs on discovering a problem they are passionate about  
 Co-requisite(s): \_\_\_\_\_ First Term to be Offered: Fall 2023  
 Prerequisite(s): Admitted to Start-up Incubator; Admitted Honors College Credit Hours: 3  
 Grading Mode: Graded: \_\_\_\_\_ Credit/No Credit: X  
 Course(s) being deleted in place of this addition (must submit course deletion form): \_\_\_\_\_

**CHECKLIST/REQUIREMENTS**

1. After completing this two page form in its entirety, include a complete syllabus and route through the departments/committees below.
2. A complete syllabus can be from when this course was previously taught as a special topics course or by creating a new, intended syllabus to use with the course. The sample syllabus must at a minimum address the following areas:
  - a. COURSE OBJECTIVES, COURSE OUTLINE, SAMPLE TEXT(S) WITH AUTHOR(S) AND PUBLICATION DATE, INSTRUCTIONAL METHODS (Lecture, Lab, Internship, Practicum, etc.), and EVALUATION METHODS (Unit/Chapter, Midterm, Final, Projects, etc.)
3. If this course will replace a course that is required by another department, please send a memo to the affected department and include it with this packet, as well as, the response received from the affected department.
4. If this course will be similar in title or content to another department's courses, please send a memo to the affected department and include it with this packet, as well as, the response received from the affected department.

**SIGNATURES: (If disapproved at any level, do not sign. Return to previous signer.)**

Department Chair/Division Head: <u>EC Alexander</u>	Date: <u>Jan 17, 2023</u>
Registrar: <u>William D. [Signature]</u> 520703	Date: <u>1/19/2023</u>
College Dean: <u>Nancy [Signature]</u> 1/23/23	Date: _____
College Curriculum Chair: <u>Vijay [Signature]</u> 1/26/23	Date: <u>01/26/2023</u>
General Education Council Chair *: _____	Date: _____
University Curriculum Committee Chair: <u>Zach Garrett</u>	Date: <u>3.24.23</u>
Faculty Senate Chair: _____	Date: _____
VP Academic Affairs/VP Health Science: _____	Date: _____

\* - Signature necessary only if course is to be Core Curriculum Course

**Request for Undergraduate Course Addition - Page 2**  
**Additional Information Required for Undergraduate Course Addition**

College: Lewis College of Business Department/Division: Marketing, MIS, and Entrepreneurship Alpha Designator/Number: ENT 200H

Provide complete information regarding the new course addition for each topic listed below. Before routing this form, a complete syllabus also must be attached addressing the items listed on the first page of this form.

---

1. Identify by name the faculty in your department/division who may teach this course.

Ben Eng, Olen York, Entrepreneurs in Residence, iCenter Directors and Assistant Directors

2. If your department/division requires additional faculty, equipment, or specialized materials, attach an estimation of money and time required to secure these items.

No

3. If this course will be required by a department/division other than your own, identify by name.

No

4. If there are any agreements required to provide clinical experience, attach details and signed agreements.

No

5. If library resources are deemed inadequate, attach a plan to overcome this. The plan must include the cost as stated by the Dean of Libraries.

No

6. EQUIPMENT/SUPPLIES NEEDED TO TEACH THIS COURSE (this does not refer to additional equipment/supplies that need to be purchased; simply what materials are needed in order to teach this course successfully.):

Standard classroom equipment (computer, projector/monitor, classroom)

7. ADDITIONAL GRADUATE REQUIREMENTS IF LISTED AS AN UNDERGRADUATE OR GRADUATE COURSE (please also submit to Graduate Council course addition for 5xx graduate component):

No

8. PROVIDE A COMPLETE BIBLIOGRAPHY INCLUDING ALL PUBLICATIONS RESEARCHED TO CREATE THIS COURSE AND WHAT PUBLICATIONS MAY BE BENEFICIAL TO STUDENTS TAKING THIS COURSE (separate page).

## Request for Undergraduate Addition/Deletion/Change of Department Honors Option

1. Prepare one paper copy and obtain signatures from the Department Chair/Head, Registrar, and College Dean. 2. Submit the form to the Honors College Curriculum Committee. 3. After attaining the signature of the Honors College Curriculum Chair and the Dean of the Honors College, send the paper copy to the current University Curriculum Committee (UCC) Chair. 4. Send an identical (sans signatures) ELECTRONIC COPY and all supporting documentation in PDF format by email to the current UCC Chair.

College: Business Department/Division: Marketing, MIS, Entrepr  
 Contact Person: Bennie Eng Phone: 304-633-4320

**ACTION REQUESTED:**

Check action requested:     Addition     Deletion     Change  
 Within which Major is/will the honors option be listed (please provide code as well): Entrepreneurship

**RATIONALE:**

An interdisciplinary experiential course that guides student entrepreneurs on discovering a problem they are passionate about solving and applying design thinking principles to solve it for one person.

**CURRICULUM:** Number of Hours and Courses; Indicate Required/Optional

This 3 hour course is the initial stage of the Student Incubator program which is design to cultivate start-up businesses. This course is not required for either the Honors or Entrepreneurship programs.

**OTHER REQUIREMENTS:** GPA, etc.

Admitted to Start-up Incubator; Admitted Honors College

**NOTIFICATION REQUIREMENTS:**

Attach a copy of written notification regarding this curriculum request to the following:  
 1. If this honors option requires additional faculty, equipment, or specialized materials, attach an estimation of money and time required to secure these items.  
 2. Send a copy of this completed form to the Marshall University Catalog Editor.

**SIGNATURES:** (If disapproved at any level, do not sign. Return to previous signer.)

Department Chair/Division Head: <u>[Signature]</u>	Date: <u>Nov 30 2022</u>
Registrar: <u>[Signature]</u>	Date: <u>11/30/2022</u>
College Dean: <u>Nancy Janton</u>	Date: <u>1/23/23</u>
Honors College Curriculum Committee Chair: <u>[Signature]</u>	Date: <u>02/23/23</u>
Honors College Dean: <u>[Signature]</u>	Date: _____
University Curriculum Committee Chair: _____	Date: _____
Faculty Senate Chair: _____	Date: _____
VP Academic Affairs/VP Health Science: _____	Date: _____



**Marshall University Syllabus**  
**Brad D. Smith Schools of Business**  
**Department of Marketing, MIS, and Entrepreneurship**

**Course**

ENT 200H – Brad D. Smith Start-Up Incubator Honors (CRN: XXXX Section XXX)

**Course Description**

An interdisciplinary experiential course that guides student entrepreneurs on discovering a problem they are passionate about solving and applying design thinking principles to solve it for one person.

**Credits**

3 credit hours

**Prerequisites**

Admitted to Start-up Incubator; Admitted Honors College

**Term/Year**

Fall/Spring 20XX

**Class Meeting Days/Times**

Team Meeting: Monday 4:00-5:15pm OR Friday 1:00pm-2:15pm (just attend one of these times a week)

Mentor Meeting: Time and location determined by you and your mentor (meet once a week with mentor for an hour and fifteen minutes)

**Location**

TBD

**Academic Calendar**

For beginning, ending, and add/drop dates, see the [Marshall University Academic Calendar](http://www.marshall.edu/academic-calendar/) (URL: <http://www.marshall.edu/academic-calendar/>).

## Instructor & Mentors

Ben Eng – Instructor and Associate Professor

Paige Leonard – iCenter Assistant Director

Brandon Dennison – Entrepreneur in Residence

Collin Meadows - Entrepreneur in Residence

Ariana Shives - Entrepreneur in Residence

David Wiley - Entrepreneur in Residence

## Office Information for Instructor

- Office: Corbly Hall 425 or virtually via zoom upon request
- Office Hours: By appointment
- Office Phone: 304-696-4320

## Email Information for Instructor & Mentors

- Ben Eng - [eng2@marshall.edu](mailto:eng2@marshall.edu)
- Paige Leonard - [leonard64@marshall.edu](mailto:leonard64@marshall.edu)
- Brandon Dennison - [bdennison@coalfield-development.org](mailto:bdennison@coalfield-development.org)
- Collin Meadows - [collin.meadows@tech304.com](mailto:collin.meadows@tech304.com)
- David Wiley - [david@lumenlearning.com](mailto:david@lumenlearning.com)
- Ariana Shives - [ariana@arianashives.com](mailto:ariana@arianashives.com)

## Preferred Communication Method and Expected Response Time

Our preferred communication method is email and the time it typically takes to respond is within 24 hours (if it's urgent please let us know in the email and we'll respond back quickly).

## COVID-19 Related Information

Marshall's official COVID-19 protocols are online at

<https://www.marshall.edu/coronavirus> (URL:

<https://www.marshall.edu/coronavirus/>). Policies and protocols may change over time as we respond to changing conditions. The website will always contain the most recent information – check it frequently for the most current information.

Key policies and practices at the start of the Fall 2022 semester include the following:

- **Wear a mask inside university buildings, when required.** To see the campus current masking status, visit Marshall's COVID-19 Dashboard

([www.marshall.edu/coronavirus](http://www.marshall.edu/coronavirus)). Masks are not required in personal residence hall rooms or workspaces.

- **Students will disinfect their personal workspaces and virtual learning hubs** with disinfectant wipes provided nearby.
- **All members of the Marshall University community are expected to observe all COVID-19 protocols at all times. Students who are unable to follow University requirements due to a disability** should seek reasonable accommodations from the Office of Disability Services (ODS; [disabilityservices@marshall.edu](mailto:disabilityservices@marshall.edu)) during the first week of class.

## Course Student Learning Outcomes

The table below shows each student learning outcome will be practiced and assessed in the course.

<b>Course student learning outcomes</b>	<b>How students will practice each outcome in this course</b>	<b>How student achievement of each outcome will be assessed in this course</b>
Students write a Customer Problem Statement that meets the criteria for Customer Driven Innovation	Weekly in-class pitches to peers, mentors, and guest mentors	Student presentation of Customer Problem Statement that meets the criteria for "Customer Driven Innovation"  Criteria for "Customer Driven Innovation": <ol style="list-style-type: none"> <li>1) Important unsolved customer problem</li> <li>2) That student and/or partner can solve well</li> <li>3) And can build a durable competitive advantage with</li> </ol>



<b>Course student learning outcomes</b>	<b>How students will practice each outcome in this course</b>	<b>How student achievement of each outcome will be assessed in this course</b>
Students presents an "innovative" idea	Weekly in-class pitches to peers, mentors, and guest mentors	<p>Student presentation of an "innovative" idea</p> <p>Criteria for "innovative" idea:</p> <ol style="list-style-type: none"> <li>1) Impactful – solves problem well</li> <li>2) Delightful – solves problem in surprising way</li> </ol>
Students rapidly experiment "key" assumptions by building a "working" MVP (Minimum Viable Product)	Weekly in-class pitches to peers, mentors, and guest mentors	<p>Student presentation of rapid experiments testing "key" assumptions using a "working" MVP</p> <p>Criteria for "key" assumptions:</p> <ol style="list-style-type: none"> <li>1) Crucial to success of idea</li> <li>2) Hasn't been proven elsewhere</li> </ol> <p>Criteria for "working" MVP:</p> <ol style="list-style-type: none"> <li>1) "no-code" MVP or</li> <li>2) manual MVP</li> </ol>
Students continuously iterates their MVP until it is "loved" by customers	Weekly in-class pitches to peers, mentors, and guest mentors	<p>Student presentation of their iterations and the measurements of the customers' "love" for the latest iteration of their MVP</p> <p>Criteria for "Love Metrics":</p> <ol style="list-style-type: none"> <li>1) Did the solution deliver the expected customer benefit?</li> <li>2) How easy was the solution to use?</li> <li>3) How likely is the customer to recommend the solution to their friends and family?</li> </ol>

<b>Course student learning outcomes</b>	<b>How students will practice each outcome in this course</b>	<b>How student achievement of each outcome will be assessed in this course</b>
Students sell their MVP to one customer	Weekly in-class pitches to peers, mentors, and guest mentors	Student presentation of sales data
Students evaluate the effectiveness of their own work, reflect on strengths and weakness of their knowledge and skills in defined areas, and devise ways to make improvements.	Weekly in-class pitches to peers, mentors, and guest mentors	Student presentations
Students make connections while adapting and applying skills and learning among varied disciplines, domains of thinking, experiences, and situations.	Weekly in-class pitches to peers, mentors, and guest mentors	Student presentations
Students produce cohesive oral, written, and visual communications capable of connecting effectively with specific audiences.	Weekly in-class pitches to peers, mentors, and guest mentors	Student presentations

## **Course Milestones/Suggested Due Dates**

Each week in class, each start-up will share-out a short presentation of their progress towards achieving the following milestones:

- Customer Problem Statement/CDI End of Week 3
- Innovative Idea End of Week 5
- Testing Assumptions with MVP End of Week 8
- MVP that Customers Love End of Week 12
- 1 Paying Customer End of Week 14

## Grading Policy & Attendance/Participation Policy

Because innovating a solution that a customer loves and is willing to pay for is an indefinite iterative process that is determined by the customer, this course is graded on a **Credit/No Credit** basis.

The primary objective of this course is to help you find out if you're obsessed with your problem/idea because that's what it takes to start-up a successful business. You will not be graded on whether or not you actually innovate an idea that the customer loves or pays for. You will be graded on your effort to discover your obsession.

Obsession is demonstrated with actions, not words. Your actions demonstrate obsession when you: 1) regularly attend class and mentor sessions and 2) continuously iterate and work towards the above course requirements and suggested due dates. If you do so, you'll get **credit** for the course and an offer to move onto the **next step of the Incubator - ENT 300** - next semester where we will continue to help you grow your obsession.

Of course, life happens from time to time and you have to miss class occasionally. No big deal. But a track record of weak attendance and immersion is a sign that you may not be obsessed with the topic and another topic may be a better use of your time. If you find out during the semester that you aren't as obsessed with your idea as you thought you were (which is OK!), then it probably makes sense for you to spend your time discovering another area that you are obsessed with, in which case it wouldn't make sense for you to return to the incubator.

## University Policies

By enrolling in this course, you agree to the University Policies. Please read the full text of each policy (listed below) by going to [MU Academic Affairs: University Policies](http://www.marshall.edu/academic-affairs/university-policies/). (URL: <http://www.marshall.edu/academic-affairs/policies/> )

- Academic Dishonesty Policy
- Academic Dismissal Policy
- Academic Forgiveness Policy
- Academic Probation and Suspension Policy
- Affirmative Action Policy
- Dead Week Policy
- D/F Repeat Rule
- Excused Absence Policy for Undergraduates
- Inclement Weather Policy
- Sexual Harassment Policy
- Students with Disabilities (Policies and Procedures)
- University Computing Services Acceptable Use Policy

## Course Schedule

Week	Date	"TedTalk" Topic	Suggested Milestone
Week 1	8/22	Intros	<b>Customer Problem Statement that meets CDI Criteria</b>
	8/26	Intros	
Week 2	8/29	Mom Test	
	9/2	Mom Test	
Week 3	9/5	D4D	
	9/9	D4D	
Week 4	9/12	Social Ent	<b>Innovate Awesome Idea</b>
	9/16	Social Ent	
Week 5	9/19	Brainstorming	
	9/23	Brainstorming	
Week 6	9/26	Assumption Testing	<b>Testing Assumptions with MVP</b>
	9/30	Assumption Testing	
Week 7	10/3	No Code	
	10/7	No-Code	
Week 8	10/10	Storytelling	
	10/14	Storytelling	
Week 9	10/17	<b>PITCH DAY</b>	<b>Achieve Love Metrics</b>
	10/21	<b>PITCH DAY</b>	
Week 10	10/24	Guest Topic	
	10/28	Guest Topic	
Week 11	10/31	Grants/Funding Models	
	11/4	Grants/Funding Models	
Week 12	11/7	Digital Marketing	
	11/11	Digital Marketing	
Week 13	11/14	Pitch Day Prep	<b>Make 1 Sale</b>
	11/18	Pitch Day Prep	
	11/21	<b>NO CLASS FALL BREAK</b>	
	11/25	<b>NO CLASS FALL BREAK</b>	
Week 14	11/28	<b>PITCH DAY</b>	
	12/2	<b>PITCH DAY</b>	
Week 15	12/4 (TBD)	<b>END OF THE SEMESTER PARTAY</b>	

**This syllabus (including the course schedule) is subject to revision during the course at the instructor's discretion. Any revisions will be communicated to the students.**

## Bibliography

- Ashoka Social Enterprise Curriculum - <https://www.ashoka.org/en-hu/story/social-entrepreneurship-101-online-course>
- Bland, D. (2019). Testing Business Ideas: A Field Guide for Rapid Experimentation.
- Bornstein, D. & Davis, S. (2010). Social Entrepreneurship: What Everyone Needs to Know.
- Brooks, A.C. (2008). Social Entrepreneurship: A Modern Approach to Social Value Creation.
- Chang, A.M. (2018). Lean Impact: How to Innovate for Radically Greater Social Good.
- Eisenmann, T., Ries, E., and Dillard, S. (2013). Hypothesis-Driven Entrepreneurship: The Lean Start-Up. Free here: <https://chalmers.instructure.com/courses/10897/files/818439/download?verifier=EqYgPOSYL9AuhVVurJpR6scgDjaSzEj0oIOsjkaf&wrap=1>
- Fitzpatrick, R (2013). The Mom Test: How to talk to customers & learn if your business is a good idea when everyone is lying to you.
- Intuit Design for Delight Foundations Course: [https://intuit.novoed.com/#!/courses/d4d\\_ongoing\\_course\\_educators/flyer](https://intuit.novoed.com/#!/courses/d4d_ongoing_course_educators/flyer)

## Request for Undergraduate Course Addition

1. Prepare one paper copy and obtain signatures from the Department Chair/Division Head, Registrar and College Dean.
2. Submit the form to your College Curriculum Committee.
3. After obtaining the signature of the College Curriculum Chair, send the paper copy to the current University Curriculum Committee Chair
4. Send an identical (sans signatures) ELECTRONIC COPY and all supporting documentation in a single PDF file (PDF Portfolio recommended) to UCC chair.

College: School of Pharmacy Department/Division: Pharmaceutical Science Alpha Designator/Number: BSPS444  
 Contact Person: Melinda Varney, Ph.D. Phone: 304-696-6057

**NEW COURSE DATA:**

Course Title:	<u>Princ of Disease Drug Act</u>	(Limit of 30 characters & spaces.)
Alpha Designator/Number:	<u>BSPS444</u>	
General Education Designator(s) (check all that apply):	<input type="checkbox"/> CT <input type="checkbox"/> INTL <input type="checkbox"/> MC <input type="checkbox"/> Core II (Core II type: _____)	
<b>Note: Applications for Gen Ed attributes must be attached.</b> <a href="http://www.marshall.edu/wpmu/gened/core-ii-courses-info/">http://www.marshall.edu/wpmu/gened/core-ii-courses-info/</a>		
Catalog Description (Limit of 30 words):	<u>Topics covered include the concepts and mechanisms of the basic processes underlying disease and pathophysiology, the general principles underlying drug action and therapeutics including</u>	
Co-requisite(s):	First Term to be Offered:	<u>Spring 2024</u>
Prerequisite(s):	<u>BSC120, BSC121, CHM211, CHM212, BSC227, BSC228</u>	Credit Hours: <u>4</u>
Grading Mode:	Graded: <u>YES</u>	Credit/No Credit: _____
Course(s) being deleted in place of this addition (must submit course deletion form): _____		

**CHECKLIST/REQUIREMENTS**

1. After completing this two page form in its entirety, include a complete syllabus and route through the departments/committees below.
2. A complete syllabus can be from when this course was previously taught as a special topics course or by creating a new, intended syllabus to use with the course. The sample syllabus must at a minimum address the following areas:
  - a. COURSE OBJECTIVES, COURSE OUTLINE, SAMPLE TEXT(S) WITH AUTHOR(S) AND PUBLICATION DATE, INSTRUCTIONAL METHODS (Lecture, Lab, Internship, Practicum, etc.), and EVALUATION METHODS (Unit/Chapter, Midterm, Final, Projects, etc.)
3. If this course will replace a course that is required by another department, please send a memo to the affected department and include it with this packet, as well as, the response received from the affected department.
4. If this course will be similar in title or content to another department's courses, please send a memo to the affected department and include it with this packet, as well as, the response received from the affected department.

**SIGNATURES: (If disapproved at any level, do not sign. Return to previous signer.)**

Department Chair/Division Head: <u>[Signature]</u>	Date: <u>3/23/23</u>
Registrar: <u>[Signature]</u>	Date: <u>3.24.23</u>
College Dean: <u>[Signature]</u>	Date: <u>3/23/23</u>
College Curriculum Chair: <u>[Signature]</u>	Date: <u>3/23/23</u>
General Education Council Chair *:	Date: _____
University Curriculum Committee Chair: <u>Zach Garrett</u>	Date: <u>3.24.23</u>
Faculty Senate Chair:	Date: _____
VP Academic Affairs/VP Health Science	Date: _____

\* - Signature necessary only if course is to be Core Curriculum Course

**Request for Undergraduate Course Addition - Page 2**  
**Additional Information Required for Undergraduate Course Addition**

College: School of Pharmacy Department/Division: Pharmaceutical Science Alpha Designator/Number: BSPS/444

Provide complete information regarding the new course addition for each topic listed below. Before routing this form, a complete syllabus also must be attached addressing the items listed on the first page of this form.

1. Identify by name the faculty in your department/division who may teach this course.

Melinda Varney, Ph.D. (coordinator), Boyd Rorabaugh, Ph.D., and Michael Hambuchen, Pharm

2. If your department/division requires additional faculty, equipment, or specialized materials, attach an estimation of money and time required to secure these items.

N/A

3. If this course will be required by a department/division other than your own, identify by name.

N/A

4. If there are any agreements required to provide clinical experience, attach details and signed agreements.

N/A

5. If library resources are deemed inadequate, attach a plan to overcome this. The plan must include the cost as stated by the Dean of Libraries.

N/A

6. EQUIPMENT/SUPPLIES NEEDED TO TEACH THIS COURSE (this does not refer to additional equipment/supplies that need to be purchased; simply what materials are needed in order to teach this course successfully.):

Classrooms equipped with seating that is conducive to group work, whiteboards, a computer, n

7. ADDITIONAL GRADUATE REQUIREMENTS IF LISTED AS AN UNDERGRADUATE OR GRADUATE COURSE (please also submit to Graduate Council course addition for 5xx graduate component):

A similar course is listed as PHAR544. PHAR544, a graduate level course will have an addition

8. PROVIDE A COMPLETE BIBLIOGRAPHY INCLUDING ALL PUBLICATIONS RESEARCHED TO CREATE THIS COURSE AND WHAT PUBLICATIONS MAY BE BENEFICIAL TO STUDENTS TAKING THIS COURSE (separate page).

**Bibliography:**

1. Essentials of Human Physiology and Pathophysiology for Pharmacy and Allied Health by Laurie K. McCorry, Martin M. Zdanowicz, Cynthia Yvon Gonnella, 2019, CRC Press.
2. Gashaw I, Ellinghaus P, Sommer A, Asadullah K. What makes a good drug target? Drug Discov Today. 2012;17 Suppl:S24-30. Epub 2011/12/14. doi: 10.1016/j.drudis.2011.12.008. PubMed PMID: 22155646.
3. Katzung's Basic and Clinical Pharmacology [Katzung BG. Basic & Clinical Pharmacology, 14th ed. McGraw-Hill. 2018. ISBN 978-1-259-64115-2].

While the resources above will be incorporated into the course, we tend to use updated information from various sources in teaching the course.





**Marshall University Syllabus**  
**School of Pharmacy**  
**BSPS**

**Course**

**BSPS444 Princ of Disease Drug Act**

**Course Description**

Topics covered include the concepts and mechanisms of the basic processes underlying disease and pathophysiology, the general principles underlying drug action and therapeutics, including receptor pharmacology, enzyme inhibition and pharmacology, and the relationship between drug concentration at the target tissue and drug effect.

**Credits**

4 credits

**Prerequisites**

BSC120, BSC121, CHM211, CHM212, BSC227, BSC228

**Term/Year**

Spring

**Class Meeting Days/Times**

Two days: 2 h/day

**Location**

TBD

**Academic Calendar**

For beginning, ending, and add/drop dates, see the [Marshall University Academic Calendar](https://www.marshall.edu/academic-calendar/) (URL: <https://www.marshall.edu/academic-calendar/>).

**Instructor(s)**

Melinda Varney, Ph.D. (Course Coordinator)

Boyd Rorabaugh, Ph.D.

Michael Hambuchen, PharmD, Ph.D.

## Contact Information

- Office: SKH339
- Office Hours: TBD
- Office Phone: 304-696-6057
- Marshall Email: varney31@marshall.edu

## COVID-19 Related Information

Marshall's official COVID-19 protocols are online at <https://www.marshall.edu/coronavirus> (URL: <https://www.marshall.edu/coronavirus/>). Policies and protocols may change over time as we respond to changing conditions. The website will always contain the most recent information – check it frequently for the most current information.

Key policies and practices at the start of the Fall 2022 semester include the following:

- **Wear a mask inside university buildings, *when required*.** To see the campus current masking status, visit Marshall's COVID-19 Dashboard ([www.marshall.edu/coronavirus](http://www.marshall.edu/coronavirus)). Masks are not required in personal residence hall rooms or workspaces.
- **Students will disinfect their personal workspaces and virtual learning hubs** with disinfectant wipes provided nearby.
- **All members of the Marshall University community are expected to observe all COVID-19 protocols at all times. Students who are unable to follow University requirements due to a disability** should seek reasonable accommodations from the Office of Disability Services (ODS; [disabilityservices@marshall.edu](mailto:disabilityservices@marshall.edu)) during the first week of class.

## Required and/or Recommended Texts and Materials

### Required Texts and Materials

### Recommended/Optional Texts and Materials

*Essentials of Human Physiology and Pathophysiology for Pharmacy and Allied Health* by Laurie K. McCorry, Martin M. Zdanowicz, Cynthia Yvon Gonnella, 2019, CRC Press.

<https://www.routledge.com/Essentials-of-Human-Physiology-and-Pathophysiology-for-Pharmacy-and-Allied/McCorry-Zdanowicz-Gonnella/p/book/9780367000486>

## Course Student Learning Outcomes

Course student learning outcomes	How students will practice each outcome in this course	How student achievement of each outcome will be assessed in this course
Apply principles of normal anatomy and physiology of human body systems to the pathophysiologic processes of common health problems.	Group discussions and problem-solving activities in class	Quiz Exam
Identify concepts, principles, and responses related to pathophysiologic processes that result in disease.	Group discussions and problem-solving activities in class	Quiz Exam
List clinical manifestations of selected disease processes and health problems.	Group discussions and problem-solving activities in class	Quiz Exam
Choose appropriate pharmacological approaches for treatment of specific diseases.	Group discussions and problem-solving activities in class	Quiz Exam
Identify concepts and principles underlying the pharmacology of drug therapy.	Group discussions and problem-solving activities in class	Quiz Exam

## Course Requirements/Due Dates

None

## Grading Policy

Course Grades. Final course grades will be calculated as follows:

Point Distribution:

- Assignments, homework, Quizzes: 15%
- Exam 1: 20%

- Exam 2: 20%
- Exam 3: 20%
- Final Exam: 20% (cumulative)
- Participation: 5%

Letter Grade Distribution:

- A = 90 to 100%
- B = 80 to less than 89%
- C = 70 to less than 79%
- D = 60 to less than 69%
- F = Less than 60%

## Attendance/Participation Policy

The University's policy on class attendance is described within the [Board of Governors Policy No. AA-13 Class Attendance](#) document. For more information about excused absences and professional leave, please refer to [200.010 Student Leave](#)

## University Policies

By enrolling in this course, you agree to the University Policies. Please read the full text of each policy (listed below) by going to [MU Academic Affairs: University Policies](#). (URL: <https://www.marshall.edu/academic-affairs/policies/> )

- Academic Dishonesty Policy
- Academic Dismissal Policy
- Academic Forgiveness Policy
- Academic Probation and Suspension Policy
- Affirmative Action Policy
- Dead Week Policy
- D/F Repeat Rule
- Excused Absence Policy for Undergraduates
- Inclement Weather Policy
- Sexual Harassment Policy-Marshall's Title IX Office may be contacted at [TitleIX@marshall.edu](mailto:TitleIX@marshall.edu)
- Students with Disabilities (Policies and Procedures)
- University Computing Services Acceptable Use Policy

## Course Schedule

Date	Meeting Format	Meeting Topic	Course Student Learning Outcomes	Instructor
Week 1 Day 1	Lecture/ ALE	Course Introduction and Principles of Drug Discovery	Define and differentiate fundamental terminology pertaining to disease and drug action. Describe the general process of drug discovery. Identify how subsequent topics covered in this course are vital to the process of drug discovery and understanding drug mechanism of action.	Varney
Week 1 Day 2	Lecture/ ALE	Cell Physiology Part I	Relate structure to function for organelles and macromolecules found in a typical human cell. Define the purposes of the cell cytoskeleton. Explain the processes of transcription, translation, and posttranslational processing of proteins.	Varney
Week 2 Day 1	Lecture/ ALE	Cell Physiology Part II	Describe stem cells, cellular development, and cellular differentiation. Describe cell cycle and replication. Compare and contrast the various processes of cell death and cellular aging.	Varney
Week 2 Day 2	Quiz Lecture/ ALE	<b>Quiz 1</b> Inflammation/ Immune Response in Disease	Describe the pathophysiology of inflammation. Differentiate immune mediator involvement in acute and chronic inflammation. Characterize immune responses in disease. Discuss diseases of overactive immune response.	Varney
Week 3 Day 1	Lecture/ ALE	Anti-inflammatory and Immunosuppressant Drug Actions	Describe mechanisms of action of anti-inflammatory (NSAIDs, corticosteroids) and immuno-suppressant drugs and how these relate to the treatment of disease. Compare and contrast the major drugs in these classes, including their major therapeutic uses and adverse effects.	Varney
Week 3 Day 2	Quiz Lecture/ ALE	<b>Quiz 2</b> Introduction to Signal Transduction	Describe the general process and major goals of signal transduction. Define parts of a receptor pathway. Compare and contrast general types of receptors. Explain the roles of phosphorylation, second messengers, and scaffolding in signal transduction.	Varney
Week 4 Day 1	Lecture/ ALE	Receptor Pharmacodynamics and Signal Transduction Part I	Identify how receptor structure relates to function. Compare and contrast types of ligands (full agonists, partial agonists, inverse agonists, competitive vs noncompetitive antagonists). Describe graded vs quantal dose response curves. Define EC <sub>50</sub> , ED <sub>50</sub> , TD <sub>50</sub> .	Rorabaugh
Week 4 Day 2	Quiz Lecture/ ALE	<b>Quiz 3</b> Receptor Pharmacodynamics and Signal Transduction Part II	Describe therapeutic index, (concepts of efficacy, intrinsic activity, potency). Understand the concepts of spare receptors / receptor reserve.	Rorabaugh

Week 5 Day 1	Lecture/ ALE	Receptor Pharmacodyn amics and Signal Transduction Part III	Discuss therapeutic applications of receptor pharmacodynamics and signal transduction principles.	Rorabaugh
<b>End of Exam I material</b>				

Date	Meeting Format	Meeting Topic	Course Student Learning Outcomes	Instructor
Week 5 Day 2	Lecture/ ALE	Cell Pathophysiology; Cell Injury/ Cellular Responses to Stress/ Wound Repair	Define cell injury and describe the pathophysiology of cell injury and cell death. Compare and contrast principle adaptive responses to cellular stress. Outline the processes of wound repair.	Varney
Exam Block	<b>EXAM I*</b>			
Week 6 Day 1	Post-Exam Review/ ALE	Identifying remaining gaps in knowledge from Exam I material and addressing plans to fill them	Utilize peer teaching and learning to identify and better understand challenging concepts in Exam I material.	Varney/ Rorabaugh
Week 6 Day 2	Quiz Lecture/ ALE	<b>Quiz 4</b> Autonomic Pharmacology Part I	Describe the anatomical localization, receptor activation and function of neurotransmitters in the autonomic nervous system. Predict responses to agonists and antagonists at each type of cholinergic and adrenergic receptor. Understand the therapeutic uses, adverse effects, and contraindications for individual drugs that impact the autonomic nervous system. Understand the rationale for the therapeutic use of drugs effecting the autonomic nervous system.	Rorabaugh
Week 7 Day 1	Lecture/ ALE	Autonomic Pharmacology Part II		Rorabaugh
Week 7 Day 2	Quiz Lecture/ ALE	<b>Quiz 5</b> Autonomic Pharmacology Part III		Rorabaugh
Week 8 Day 1	Lecture/ ALE	Autonomic Pharmacology Part IV		Rorabaugh
Week 8 Day 2	Quiz Lecture/ ALE	<b>Quiz 6</b> Central Nervous System Anatomy and Physiology		Define the components of central nervous system (CNS) anatomy. Describe the cellular basis and physiology of neural cell function, including action potential, within the central nervous system. Describe neurotransmission in the CNS.
Week 9 Day 1	Lecture/ ALE	Central Nervous System Pathophysiology	Describe the pathophysiology of CNS diseases and identify mechanisms for CNS drug action.	Hambuchen
<b>End of Exam II material</b>				

<b>Date</b>	<b>Meeting Format</b>	<b>Meeting Topic</b>	<b>Course Student Learning Outcomes</b>	<b>Instructor</b>
Week 9 Day 2	Quiz Lecture/ ALE	<b>Quiz 7</b> Circulatory (Cardio-vascular) System	Describe the physiology of the circulatory system. Understand the pathophysiology of circulatory system disorders. Identify mechanisms of action to treat these disorders.	Varney
Exam Block	<b>EXAM II*</b>			
Week 10 Day 1	Post-Exam Review/ ALE	Identifying remaining gaps in knowledge from Exam II material and addressing plans to fill them	Utilize peer teaching and learning to identify and better understand challenging concepts in Exam II material.	Varney/ Hambuchen/ Rorabaugh
Week 10 Day 2	Lecture/ ALE	Renal System	Describe the physiology of the renal system. Understand the pathophysiology of renal system disorders. Identify mechanisms of action to treat these disorders.	Varney
Week 11 Day 1	Quiz Lecture/ ALE	<b>Quiz 8</b> Digestive System	Describe the physiology of the digestive system. Understand the pathophysiology of digestive system disorders. Identify mechanisms of action to treat these disorders.	Varney
Week 11 Day 2	Lecture/ ALE	Endocrine System	Describe the physiology of the endocrine system. Understand the pathophysiology of endocrine system disorders. Identify mechanisms of action to treat these disorders.	Varney
Week 12 Day 1	Quiz Lecture/ ALE	<b>Quiz 9</b> Respiratory System	Describe the physiology of the respiratory system. Understand the pathophysiology of respiratory system disorders. Identify mechanisms of action to treat these disorders.	Varney
Week 12 Day 2	Lecture/ ALE	Hematologic System	Describe the physiology of the hematologic system. Understand the pathophysiology of hematologic system disorders. Identify mechanisms of action to treat these disorders.	Varney
<b>End of Exam III material</b>				



Date	Meeting Format	Meeting Topic	Course Student Learning Outcomes	Instructor
Week 13 Day 1	Quiz Lecture/ ALE	<b>Quiz 10</b> Patho- physiology and Treatment of Cancer I	Define the hallmarks of cancer. Describe the pathophysiology of various malignancies, the staging of cancer, and common treatment strategies.	Varney
Week 13 Day 2	Lecture/ ALE	Patho- physiology and Treatment of Cancer II	Identify and compare and contrast common drug targets in the field of oncology. Outline commonly dysregulated processes that initiate cancer and mechanisms of action used to treat malignancies.	Varney
Exam Block	<b>EXAM III*</b>			
Week 14 Day 1	Post- Exam Review/ ALE	Identifying remaining gaps in knowledge from Exam II material and addressing plans to fill them	Utilize peer teaching and learning to identify and better understand challenging concepts in Exam III material.	Varney
Week 14 Day 2	Lecture/ ALE	Application of Principles of Disease and Drug Action	Demonstrate cumulative understanding of principles discussed in this course.	Varney
<b>End of Cumulative Exam material</b>				
Exam Block	<b>CUMULATIVE FINAL EXAM*</b>			

**\*Indicates Major Exam / Assessment**

## Request for Undergraduate Course Addition

1. Prepare one paper copy and obtain signatures from the Department Chair/Division Head, Registrar and College Dean.
2. Submit the form to your College Curriculum Committee.
3. After obtaining the signature of the College Curriculum Chair, send the paper copy to the current University Curriculum Committee Chair
4. Send an identical (sans signatures) ELECTRONIC COPY and all supporting documentation in a single PDF file (PDF Portfolio recommended) to UCC chair.

College: Pharmacy Department/Division: Pharmaceutical Sciences Alpha Designator/Number: BSPS 447  
 Contact Person: Hasan Koc, Ph.D. Phone: 304-696-7368

**NEW COURSE DATA:**

Course Title: <u>Pharmaceutical Chemistry</u> (Limit of 30 characters & spaces.)	
Alpha Designator/Number: <u>447</u>	
General Education Designator(s) (check all that apply): <input type="checkbox"/> CT <input type="checkbox"/> INTL <input type="checkbox"/> MC <input type="checkbox"/> Core II (Core II type: _____)	
<b>Note: Applications for Gen Ed attributes must be attached.</b> <a href="http://www.marshall.edu/wpmu/gened/core-ii-courses-info/">http://www.marshall.edu/wpmu/gened/core-ii-courses-info/</a>	
Catalog Description (Limit of 30 words): <u>Topics covered include functional groups found in drug structures and their chemical properties, drug solubility, absorption, metabolic</u>	
Co-requisite(s): <u>None</u>	First Term to be Offered: <u>Fall2023</u>
Prerequisite(s): <u>CHM356 Organic Chemistry II</u>	Credit Hours: _____
Grading Mode: Graded: <input checked="" type="checkbox"/> Credit/No Credit: _____	
Course(s) being deleted in place of this addition (must submit course deletion form): _____	

**CHECKLIST/REQUIREMENTS**

1. After completing this two page form in its entirety, include a complete syllabus and route through the departments/committees below.
2. A complete syllabus can be from when this course was previously taught as a special topics course or by creating a new, intended syllabus to use with the course. The sample syllabus must at a minimum address the following areas:
  - a. COURSE OBJECTIVES, COURSE OUTLINE, SAMPLE TEXT(S) WITH AUTHOR(S) AND PUBLICATION DATE, INSTRUCTIONAL METHODS (Lecture, Lab, Internship, Practicum, etc.), and EVALUATION METHODS (Unit/Chapter, Midterm, Final, Projects, etc.)
3. If this course will replace a course that is required by another department, please send a memo to the affected department and include it with this packet, as well as, the response received from the affected department.
4. If this course will be similar in title or content to another department's courses, please send a memo to the affected department and include it with this packet, as well as, the response received from the affected department.

**SIGNATURES: (If disapproved at any level, do not sign. Return to previous signer.)**

Department Chair/Division Head: <u>[Signature]</u>	Date: <u>3/23/23</u>
Registrar: <u>[Signature]</u>	Date: <u>3.23.23</u>
College Dean: <u>[Signature]</u>	Date: <u>3/23/23</u>
College Curriculum Chair: <u>[Signature]</u>	Date: <u>3/23/23</u>
General Education Council Chair: _____	Date: _____
University Curriculum Committee Chair: <u>Zach Garrett</u>	Date: <u>3.24.23</u>
Faculty Senate Chair: _____	Date: _____
VP Academic Affairs/VP Health Science: _____	Date: _____

\* - Signature necessary only if course is to be Core Curriculum Course

**Request for Undergraduate Course Addition - Page 2**  
**Additional Information Required for Undergraduate Course Addition**

College: Pharmacy Department/Division: Pharmaceutical Sciences Alpha Designator/Number: BSPS447

Provide complete information regarding the new course addition for each topic listed below. Before routing this form, a complete syllabus also must be attached addressing the items listed on the first page of this form.

---

1. Identify by name the faculty in your department/division who may teach this course.

Hasan Koc, Ph.D.

2. If your department/division requires additional faculty, equipment, or specialized materials, attach an estimation of money and time required to secure these items.

None

3. If this course will be required by a department/division other than your own, identify by name.

No

4. If there are any agreements required to provide clinical experience, attach details and signed agreements.

No

5. If library resources are deemed inadequate, attach a plan to overcome this. The plan must include the cost as stated by the Dean of Libraries.

No

6. EQUIPMENT/SUPPLIES NEEDED TO TEACH THIS COURSE (this does not refer to additional equipment/supplies that need to be purchased; simply what materials are needed in order to teach this course successfully.):

No

7. ADDITIONAL GRADUATE REQUIREMENTS IF LISTED AS AN UNDERGRADUATE OR GRADUATE COURSE (please also submit to Graduate Council course addition for 5xx graduate component):

No

8. PROVIDE A COMPLETE BIBLIOGRAPHY INCLUDING ALL PUBLICATIONS RESEARCHED TO CREATE THIS COURSE AND WHAT PUBLICATIONS MAY BE BENEFICIAL TO STUDENTS TAKING THIS COURSE (separate page).

## **BIBLIOGRAPHY FOR BSPS 447 – Pharmaceutical Chemistry**

1. Lehninger Principles of Biochemistry, 6e., David L. Nelson, Michael M. Cox (ISBN-13: 793-1-4641-4181-2, ISBN-10: 1-4641-4181-9)
2. Harper's Illustrated Biochemistry, 31e, Victor W. Rodwell; David A. Bender; Kathleen M. Botham; Peter J. Kennelly; P. Anthony Wei (ISBN 978-1-259-83793-7, MHID 1-259-83793-9, ISSN 1043-981)
3. Introduction to Pharmaceutical Chemistry, 2e, Nita K. Pandit, Robert P. Soltis (ISBN-13: 978-1-6913-001-5, ISBN-10: 1-60913-001-4)
4. Foye's Principles of Medicinal Chemistry, 7e, Thomas L. Lemke, David A. Williams, Victoria F. Roche, S. William Zito (ISBN-13: 978-1-60913-345-0, ISBN-10: 1-60913-345-5)



**Marshall University Syllabus  
School of Pharmacy  
BS in Pharmaceutical Sciences**

**Course**

BSPS 447 – Pharmaceutical Chemistry

**Course Description**

Topics covered include functional groups found in drug structures and their chemical properties, drug solubility, absorption, metabolic pathways of drug molecules, biomolecules, enzymes and enzyme kinetics.

**Credits**

4

**Prerequisites:** CHM356 Organic Chemistry II

**Term/Year**

Fall 2023

**Class Meeting Days/Times**

TBD

**Location**

TBD

**Academic Calendar**

For the beginning, ending, and add/drop dates, see the [Marshall University Academic Calendar](https://www.marshall.edu/academic-calendar/) (URL: <https://www.marshall.edu/academic-calendar/> ).

**Instructor**

Hasan Koc

**Contact Information**

Hasan Koc  
SKH 341  
By appointment  
304– 696 -7368  
[kocha@marshall.edu](mailto:kocha@marshall.edu)

## Course Learning Outcomes

Course student learning outcomes	How students will practice each outcome in this course	How Assessed
Identify, define and describe the properties of various functional groups of drugs and biomolecules and determine the chemical and physical properties of those molecules.	ALEs	exams
Define and describe the chemical and physical properties of drug molecules and determine how they influence their biopharmaceutical properties.	ALEs	exams
Define and describe the molecular interactions of drug substances with enzymes or receptors.	ALEs	exams
Describe major metabolic pathways for drugs	ALEs	exams
Describe the importance of major metabolic pathways of drugs and the important intermediates as it applies to a drugs mechanism of action or side effects.	ALEs	exams
Identify, define, and describe the properties of various biomolecules and how they dictate the chemical and physical properties of those molecules.	ALEs	RATs, ALEs, and exams
Describe the basic structure and properties of amino acids, proteins, carbohydrates, nucleic acids, and lipids and the structure and function of biological membranes, transport mechanisms, ion transport, and signaling.	ALEs	RATs, ALEs, and exams
Describe basic enzyme structure, function, kinetics, and inhibition.	ALEs	RATs, ALEs, and exams

Describe metabolic pathways for naturally occurring substances and their interrelationships.	ALEs	RATs, ALEs, and exams
Describe metabolic regulation by hormones and neurotransmitters as it applies to disease states and the mechanism of action of drugs.	ALEs	RATs, ALEs, and exams

ALE: Active learning excercizes, RAT: readiness assurance test

<b>Course student learning outcomes</b>	<b>How students will practice each outcome in this course</b>	<b>How Assessed</b>
Identify, define and describe the properties of various functional groups of drugs and biomolecules and determine the chemical and physical properties of those molecules.	ALEs	exams
Define and describe the chemical and physical properties of drug molecules and determine how they influence their biopharmaceutical properties.	ALEs	exams
Define and describe the molecular interactions of drug substances with enzymes or receptors.	ALEs	exams
Describe major metabolic pathways for drugs	ALEs	exams
Describe the importance of major metabolic pathways of drugs and the important intermediates as it applies to a drugs mechanism of action or side effects.	ALEs	exams
Identify, define, and describe the properties of various biomolecules and how they dictate the chemical and physical properties of those molecules.	ALEs	RATs, ALEs, and exams

Describe the basic structure and properties of amino acids, proteins, carbohydrates, nucleic acids, and lipids and the structure and function of biological membranes, transport mechanisms, ion transport, and signaling.	ALEs	RATs, ALEs, and exams
Describe basic enzyme structure, function, kinetics, and inhibition.	ALEs	RATs, ALEs, and exams
Describe metabolic pathways for naturally occurring substances and their interrelationships.	ALEs	RATs, ALEs, and exams
Describe metabolic regulation by hormones and neurotransmitters as it applies to disease states and the mechanism of action of drugs.	ALEs	RATs, ALEs, and exams

### COVID-19 Related Information

Marshall's official COVID-19 protocols are online at <https://www.marshall.edu/coronavirus> (URL: <https://www.marshall.edu/coronavirus>). Policies and protocols may change over time as we respond to changing conditions. The website will always contain the most recent information – check it frequently for the most current information.

Key policies and practices at the start of the Fall 2022 semester include the following:

- **Wear a mask inside university buildings, when required.** To see the campus current masking status, visit Marshall's COVID-19 Dashboard ([www.marshall.edu/coronavirus](http://www.marshall.edu/coronavirus)). Masks are not required in personal residence hall rooms or workspaces.
- **Students will disinfect their personal workspaces and virtual learning hubs** with disinfectant wipes provided nearby.
- **All members of the Marshall University community are expected to observe all COVID-19 protocols at all times. Students who are unable to follow University requirements due to a disability** should seek reasonable accommodations from the Office of Disability Services (ODS; [disabilityservices@marshall.edu](mailto:disabilityservices@marshall.edu)) during the first week of class.

### Required Texts and Materials

None

### Recommended/Optional Texts and Materials

Harper's Illustrated Biochemistry, 31e, Victor W. Rodwell; David A. Bender; Kathleen M. Botham; Peter J. Kennelly; P. Anthony Wei (ISBN 978-1-259-83793-7, MHID 1-259-83793-9,



ISSN 1043-981)

This book is also available at <https://accesspharmacy.mhmedical.com/Book.aspx?bookid=2386> for free of charge for MUSOP.

### **Course Requirements/Due Dates**

None

### **Grading Policy**

#### **Course Evaluation (grading):**

Midterm exams: 70%

Final Exam: 20%

IRAT: 5%

GRAT: 5%

#### **Letter grades distribution\*:**

A = 90 to 100%

B = 80 to 89%

C = 70 to 79%

D = 60 to 69%

F = Less than 60%

\* Final percentages will be rounded, using traditional rounding rules, to the nearest integer to determine the final grade (e.g. 89.49% rounds to 89%, 89.50% rounds to 90%).

### **Attendance/Participation Policy**

Attendance is required

### **University Policies**

By enrolling in this course, you agree to the University Policies. Please read the full text of each policy (listed below) by going to [MU Academic Affairs: University Policies](https://www.marshall.edu/academic-affairs/policies/). (URL: <https://www.marshall.edu/academic-affairs/policies/> )

- Academic Dishonesty Policy
- Academic Dismissal Policy
- Academic Forgiveness Policy
- Academic Probation and Suspension Policy
- Affirmative Action Policy
- Dead Week Policy
- D/F Repeat Rule
- Excused Absence Policy for Undergraduates
- Inclement Weather Policy
- Sexual Harassment Policy-Marshall's Title IX Office may be contacted at [TitleIX@marshall.edu](mailto:TitleIX@marshall.edu)
- Students with Disabilities (Policies and Procedures)
- University Computing Services Acceptable Use Policy

## Course Schedule

Meeting Format	Meeting Topic	Course Student Learning Outcomes
IL, ALE, IRAT, GRAT	<b>Proteins</b>	Classify amino acids according to the properties of side chains Explain acid-base chemistry of amino acids Explain the major functions of proteins Distinguish between fibrous and globular proteins and name a few representative examples Distinguish between the structure and functions of the oxygen-binding proteins Hb and myoglobin List most commonly observed Post-Translational Modifications (PTMs) and discuss their roles in protein function
IL, ALE, IRAT, GRAT	<b>Carbohydrates</b>	Describe general properties and functions of carbohydrates in living systems Classify monosaccharides and discuss various types of isomers List common glucose polymers and their unique properties and functions Discuss the importance of stereochemistry in carbohydrates
ALE, IRAT, GRAT	<b>Nucleic acids</b>	List major roles of nucleotides in the cell Describe structural features of pyrimidine and purine bases and distinguish between bases, nucleosides, and nucleotides. List various species/types of RNA and describe their functions Discuss the significance of base-pairing / hybridization and its applications List common covalent modifications to DNA and explain their significance.
ALE, IRAT, GRAT	<b>Lipids and membranes</b>	Classify lipids based on their functions and structural features Describe membrane structure and its components Explain the roles of membrane proteins and classify them Describe the hydrophobic effect and resulting structures in lipids Describe types of transport
IL, ALE, IRAT, GRAT	<b>Receptors and Biosignaling</b>	Explain the sequence of events in hormonal signaling List major types of receptors involved in signal transduction Explain how G-proteins are involved in signaling and how they work Describe GPCRs and list common signaling events that they facilitate Classify common hormones according to their structure and how they work

		Explain how/when each hormones is released and what the outcome is
	<b>EXAM 1</b>	
IL, ALE, IRAT, GRAT	<b>Enzymes</b>	<p>Categorize enzymes according to the types of reactions they catalyze</p> <p>Explain how enzymes work so efficiently using induced-fit and binding energy</p> <p>List mechanisms by which enzymes and enzyme activity can be regulated</p> <p>Describe the important kinetic parameters, their utility in characterizing enzymes, and how they can be measured</p> <p>List the major types of enzyme inhibition</p>
IL, ALE, IRAT, GRAT	<b>Water, pH, functional groups, and drug chemistry</b>	<p>Identify functional groups in drug molecules</p> <p>Apply the Lewis and Brønsted-Lowry definitions of acids and bases</p> <p>Apply the concept of conjugates in acid-base chemistry</p> <p>Apply how acid and base strength is expressed (<math>pK_a</math>)</p> <p>Identify acidic, basic and neutral functional groups commonly found in drug molecules and write out the conjugate form</p> <p>Apply factors controlling acid and base strength</p> <p>Predict the degree of ionization of a drug molecule using knowledge of trends derived from the Henderson-Hasselbalch equation</p> <p>Predict the formation of salts of acidic and basic drugs</p> <p>Define the pH partition theory and its significance to drug pharmacokinetics</p>
IL, ALE, IRAT, GRAT	<b>Pharmaceutical properties of drugs and stereochemistry</b>	<p>Apply knowledge of factors contributing to water solubility (intermolecular interactions)</p> <p>Predict lipophilicity (i.e. permeability) using quantitative descriptors: partition and distribution coefficients (<math>\log P</math> and <math>\log D</math>)</p> <p>Define mechanisms of drug absorption: passive diffusion and active transport</p> <p>Identify common strategies used to enhance drug absorption (prodrugs) or delivery (nanomedicines and antibody-drug conjugates)</p> <p>Apply principles of stereochemistry to drugs, including target recognition (stereoisomers, configuration assignment).</p> <p>Analyze the various types of drug-receptor interactions and their relative contributions to binding affinity, including recognition of amino acid residues within the active site</p>

IL, ALE, IRAT, GRAT	<b>Drug metabolism</b>	<p>Define Phase 1 and Phase 2 metabolism</p> <p>Define and apply the concepts of CYP450 inhibition and induction for the practicing pharmacist</p> <p>Define the pathways involved in the oxidation</p> <p>Apply general oxidation reactions using examples</p> <p>Know the mechanism for glucuronidation (includes general mechanism &amp; mechanisms for <i>O</i>-, <i>N</i>-, <i>S</i>- and <i>C</i>-glucuronidation) and major players: enzymes, cofactor (including biosynthesis), endogenous conjugating moiety</p> <p>Know the mechanism for glutathione conjugation and major players: conjugate (including biosynthesis), enzyme</p>
IL, ALE, IRAT, GRAT	<b>Carbohydrate metabolism</b>	<p>Define metabolism</p> <p>Explain catabolic and anabolic processes along with key coenzymes that carry electrons</p> <p>Describe metabolic pathways that involve carbohydrates and identify key metabolites that are shared by multiple processes and play role in the regulation of metabolism</p> <p>Explain the effect of epinephrine and insulin on carbohydrate metabolism</p> <p>Describe feedback inhibition</p>
	<b>EXAM 2</b>	
IL, ALE, IRAT, GRAT	<b>Nitrogen metabolism</b>	<p>Explain the need for removal and toxicity of excess nitrogen</p> <p>Describe key pathways involving nitrogen-containing biomolecules</p> <p>Identify molecules involved in nitrogen transfer and transport</p> <p>Explain the roles of transamination in nitrogen metabolism</p>
IL, ALE, IRAT, GRAT	<b>Lipid metabolism</b>	<p>Explain key steps in the breakdown of triacylglycerol in a hormone-dependent manner</p> <p>Describe the production of ketone bodies and explain how this process is regulated</p> <p>Describe cholesterol synthesis and the role of statins in the regulation of this process</p> <p>List hormones originating from cholesterol</p>
	<b>EXAM 3</b>	
IL, ALE, IRAT, GRAT	<b>Hormones and regulation of metabolism</b>	<p>Explain the relationship between hormonal signaling and metabolism</p> <p>Predict the effect of every major hormone on a given metabolic process</p>
	<b>Final Exam Review</b>	
	<b>Comprehensive FINAL Exam</b>	

## University Curriculum Committee RECOMMENDATION

### SR 22-23-50 CC

Recommends approval of the listed **UNDERGRADUATE COURSES CHANGES** in the following college and/or schools/programs:

#### **School of Aviation**

##### **AVSC 205 Solo Flight Lab**

- **Summary of Change:** Course description
- **Rationale:** We find that students and their families sometimes require extra counseling about the fees they are charged. Therefore, we are working on increasing the transparency of our degree requirements. We are also installing new software that will allow us to track each student's flight. Having this information will improve our accounting of hours and fees. Essentially, we want to ensure a clear link between the labs and their fees.
- **Form with signature:** [AVSC 205 Request for Undergraduate Course Change \(3\)1.pdf](#)

##### **AVSC 210 Private Pilot Cert ASEL Lab**

- **Summary of Change:** Course description
- **Rationale:** We find that students and their families sometimes require extra counseling about the fees they are charged. Therefore, we are working on increasing the transparency of our degree requirements. We are also installing new software that will allow us to track each student's flight. Having this information will improve our accounting of hours and fees. Essentially, we want to ensure a clear link between the labs and their fees.
- **Form with signature:** [AVSC 210 Request for Undergraduate Course Change1.pdf](#)

##### **AVSC 220 Instrument Certification Lab**

- **Summary of Change:** Course description
- **Rationale:** We find that students and their families sometimes require extra counseling about the fees they are charged. Therefore, we are working on increasing the transparency of our degree requirements. We are also installing new software that will allow us to track each student's flight. Having this information will improve our accounting of hours and fees. Essentially, we want to ensure a clear link between the labs and their fees.
- **Form with signature:** [AVSC 220 Request for Undergraduate Course Change1.pdf](#)

##### **AVSC 221 Flight Management Systems**

- **Summary of Change:** Title and course description
- **Rationale:** The course title and description are not correct and incomplete. "Flight Systems" refer to the controls that change the airplane's heading and altitude. Systems refers to all the systems – navigation, communication, engine, and other components – that are essential for the operation of the airplane. The changes to the title and description are in keeping with FAA expectations for a course like this.
- **Form with signature:** [AVSC 221 Request for Undergraduate Course Change1.pdf](#)

## University Curriculum Committee RECOMMENDATION

### SR 22-23-50 CC

#### AVSC 241 AV Safety and Human Factors

- **Summary of Change:** Title and course description
- **Rationale:** We believe the change of the course's title and catalog description offer a better description of the course, which examines how knowledge of human cognition improves aviation safety. Discussion of "federal aviation regulations and aircraft certification" should be reviewed in other courses. As for "weather operations," students complete two meteorology courses (GEO 230 and AVSC 355) to learn the science of meteorology. Students also review concepts related to weather in each of their ground school courses.
- **Form with signature:** [AVSC 241 Request for Undergraduate Course Change1.pdf](#)

#### AVSC 305 CFII Lab

- **Summary of Change:** Course description
- **Rationale:** We find that students and their families sometimes require extra counseling about the fees they are charged. Therefore, we are working on increasing the transparency of our degree requirements. We are also installing new software that will allow us to track each student's flight. Having this information will improve our accounting of hours and fees. Essentially, we want to ensure a clear link between the labs and their fees.
- **Form with signature:** [AVSC 305 Request for Undergraduate Course Change1.pdf](#)

#### AVSC 310 Aircraft Sys and Powerplants

- **Summary of Change:** Title and course description
- **Rationale:** The topics covered in this course are too complex to adequately review in one semester. Therefore, we are dividing the course into two courses that will review topics the FAA expects us to cover in a more comprehensive manner.
- **Form with signature:** [AVSC 310 #1 Request for Undergraduate Course Change1.pdf](#)

#### AVSC 325 Ntnl Airspace Sys and NextGen

- **Summary of Change:** Title and course description
- **Rationale:** The title and course description are inaccurate incomplete. The FAA requires that we teach students about air traffic control (ATC) with regard to Federal Regulation, navigation systems, standard operating procedures, and how the plan for flight in different geographic areas.
- **Form with signature:** [AVSC 325 Request for Undergraduate Course Change1.pdf](#)

#### AVSC 330 Commercial Phase I Lab

- **Summary of Change:** Course description
- **Rationale:** We find that students and their families sometimes require extra counseling about the fees they are charged. Therefore, we are working on increasing the transparency of our degree requirements. We are also installing new software that will allow us to track each student's flight. Having this information will improve our accounting of hours and fees. Essentially, we want to ensure a clear link between the labs and their fees.
- **Form with signature:** [AVSC 330 Request for Undergraduate Course Change1.pdf](#)

## University Curriculum Committee RECOMMENDATION

### SR 22-23-50 CC

#### AVSC 340 Commercial Phase II ASEL Lab

- **Summary of Change:** Course description
- **Rationale:** We find that students and their families sometimes require extra counseling about the fees they are charged. Therefore, we are working on increasing the transparency of our degree requirements. We are also installing new software that will allow us to track each student's flight. Having this information will improve our accounting of hours and fees. Essentially, we want to ensure a clear link between the labs and their fees.
- **Form with signature:** [AVSC 340 Request for Undergraduate Course Change1.pdf](#)

#### AVSC 345 Initial CFI ASEL Lab

- **Summary of Change:** Course description
- **Rationale:** We find that students and their families sometimes require extra counseling about the fees they are charged. Therefore, we are working on increasing the transparency of our degree requirements. We are also installing new software that will allow us to track each student's flight. Having this information will improve our accounting of hours and fees. Essentially, we want to ensure a clear link between the labs and their fees.
- **Form with signature:** [AVSC 345 Request for Undergraduate Course Change1.pdf](#)

#### AVSC 375 Commercial AMEL Add-On Lab

- **Summary of Change:** Course description
- **Rationale:** We find that students and their families sometimes require extra counseling about the fees they are charged. Therefore, we are working on increasing the transparency of our degree requirements. We are also installing new software that will allow us to track each student's flight. Having this information will improve our accounting of hours and fees. Essentially, we want to ensure a clear link between the labs and their fees.
- **Form with signature:** [AVSC 375 Request for Undergraduate Course Change1.pdf](#)

### College of Engineering and Computer Sciences

#### BME 306 Mechanics of Biological Tissue

- **Summary of Change:** Title
- **Rationale:** Tissue Engineering; The new name of the course more accurately reflects the materials covered in the course.
- **Form with signature:** [Course Change \(BME 306, Mechanics of Biological Tissue\).pdf](#)

## University Curriculum Committee RECOMMENDATION

### SR 22-23-50 CC

#### ENGR 217 Engineering Co-Op Preparation

- **Summary of Change:** Title and course description
- **Rationale:** Change in Course Title: since many of the topics in the course apply to a student's entire career, and not just Co-Op, the updated title more accurately represents the intended scope of the material. Change in Catalog Description: the updated description replaces the preference reference to "Co-Op" with mention of "career", and also includes more detail on the specific topics covered during the course.
- **Form with signature:** [Course Change \(ENGR 217, Engineering Co-Op Preparation\).pdf](#)

#### ME 325 Experimental Design and Thermo

- **Summary of Change:** Title, credit hours, and description
- **Rationale:** Major revision is removing the experimental design part of the lab and replacing with STA 345. See the attached syllabus for more details.
- **Form with signature:** [Course Change \(ME 325, Experimental Design and Thermo\).pdf](#)
- **Curriculum:** [ME325-Lab1\\_Syllabus.pdf](#)

### College of Business

#### ACC 215 Accounting Principles (CT)

- **Summary of Change:** Title and course description
- **Rationale:** Changing the course title to better differentiate between ACC 215 and ACC 216. Changing description to better describe what is already being taught in the course.
- **Form with signature:** [ACC 215 Course Change.pdf](#)

#### ACC 216 Principles of Accounting

- **Summary of Change:** Title and course description
- **Rationale:** Changing the course title to better differentiate between ACC 215 and ACC 216. Changing description to better describe what is already being taught in the course.
- **Form with signature:** [ACC 216 Course Change.pdf](#)

### College of Health Professions

#### CD 472: SLP-A Practicum II: Clinical Practicum with School

- **Summary of Change:** Grading mode
- **Rationale:** Change from Credit/No Credit to Graded Course: A request for an undergraduate course change was submitted for CD 472 when integrating the course into the Speech Language Pathology Assistant program. It was previously approved by Faculty Senate. Through departmental oversight, this course was not changed from a Credit/No Credit designation to Graded status when it was submitted. This course should be a Graded course of 3, 1 hour sections, according to the requirements of the SLPA program. This is the rationale for this request.
- **Form with signature:** [CD 472 Course Change-2023.pdf](#)



# University Curriculum Committee RECOMMENDATION

SR 22-23-50 CC

## College of Liberal Arts

### ENG 205 Popular Literature

- **Summary of Change:** Course description
- **Rationale:** The change is intended to give prospective students a more detailed sense of what the course entails, without overly determining an instructor's approach to the material.
- **Form with signature:** [Undergrad Course Change ENG 205 signed.pdf](#)

### ENG 240 African American Literatures

- **Summary of Change:** Course description
- **Rationale:** The change is intended to give prospective students a more detailed sense of what the course entails, without overly determining an instructor's approach to the material.
- **Form with signature:** [Undergrad Course Change ENG 240 signed.pdf](#)

### ENG 377 Creative Writing Poetry

- **Summary of Change:** Course description
- **Rationale:** The change is intended to give prospective students a more detailed sense of what the course entails, without overly determining an instructor's approach to the material.
- **Form with signature:** [Undergrad Course Change ENG 377 signed.pdf](#)

### ENG 378 Creative Writing Fiction

- **Summary of Change:** Course description
- **Rationale:** The change is intended to give prospective students a more detailed sense of what the course entails, without overly determining an instructor's approach to the material.
- **Form with signature:** [Undergrad Course Change ENG 378 signed.pdf](#)

### ENG 379 Creative Writing Nonfiction

- **Summary of Change:** Course description
- **Rationale:** The change is intended to give prospective students a more detailed sense of what the course entails, without overly determining an instructor's approach to the material.
- **Form with signature:** [Undergrad Course Change ENG 379 signed.pdf](#)

### ENG 445 Screenwriting

- **Summary of Change:** Course description
- **Rationale:** The change is intended to give prospective students a more detailed sense of what the course entails, without overly determining an instructor's approach to the material.
- **Form with signature:** [Undergrad Course Change ENG 445 signed.pdf](#)

**University Curriculum Committee  
RECOMMENDATION**

**SR 22-23-50 CC**

**College of Science**

- **Summary of Change:** Move courses from COS to CECS (see list on attached form)
- **Rationale:** The entire program will be moved from the College of Science to the College of Engineering and Computer Sciences, the department of Computer and Information Technology will be merged with the department of Computer Sciences and Electrical Engineering. For these reasons all the courses, the major, the minors, and the areas of emphasis need to be moved accordingly.
- **Form with signature:** [UCCCourseChangeFormCITAll.pdf](#)

**FACULTY SENATE CHAIR:**

APPROVED BY THE  
FACULTY SENATE: \_\_\_\_\_ DATE: \_\_\_\_\_

DISAPPROVED BY THE  
FACULTY SENATE: \_\_\_\_\_ DATE: \_\_\_\_\_

**UNIVERSITY PRESIDENT:**

APPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_

DISAPPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_

**COMMENTS:** \_\_\_\_\_

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## Request for Undergraduate Course Change

1. Prepare **one** paper copy and obtain signatures from the Department Chair/Division Head, Registrar and College Dean.
2. Submit the form to your College Curriculum Committee.
3. After obtaining the signature of the College Curriculum Chair, send the paper copy to the current University Curriculum Committee Chair
4. Send an identical (sans signatures) ELECTRONIC COPY and all supporting documentation in a single PDF file (PDF Portfolio recommended) to UCC chair.

College: Aviation Department/Division: Bill Noe Flight School Current Alpha Designator/Number: AVSC 205  
 Contact Person: David Pittenger Phone 696-2818

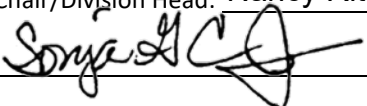
**CURRENT COURSE DATA:**

Course Title (Current Title within Banner): <u>Solo Flight Lab</u>	
Alpha Designator/Number: <u>AVSC 205</u>	Credit Hours: <u>1</u>
Term for which changes will be effective (Fill in with appropriate calendar year.):	
Fall <u>2023</u> Spring _____ Summer _____ Other _____	

**CHECKLIST/QUESTIONS:**

1. Complete this **three** page form in its entirety and route through the departments/committees below for changes to a course involving: course title, alpha designator (see accompanying note to the section on the next page), course number, course content, credit hours, or catalog description.
2. If this change will affect other departments that require this course, please send a memo to the affected department and include it with this packet, as well as, the response received from the affected department.
3. If the changes made to this course will make the course similar in title or content to another department's courses, please send a memo to the affected department and include it with this packet, as well as, the response received from the affected department.
4. List courses, if any, that will be deleted because of this change (*must submit course deletion form*): NA
5. If the faculty requirements and/or equipment need to be changed upon approval of this proposal, attach a written estimate of additional needs.
6. If library resources are deemed inadequate, include in the rationale a plan to overcome this. The plan must include the cost as stated by the Dean of Libraries.

**SIGNATURES:** (If disapproved at any level, do not sign. Return to previous signer.)

Department Chair/Division Head: <u>Nancy Ritter</u>	Date: <u>03/02/2023</u>
Registrar: 	Date: <u>3.6.2023</u>
College Dean: <u>Nancy Ritter for Bill Noe</u>	Date: <u>03/02/2023</u>
College Curriculum Chair: <u>David J. Pittenger</u>	Date: <u>1/26/2023</u>
General Education Council Chair *: _____	Date: _____
University Curriculum Committee Chair: <u>Zach Garrett</u>	Date: <u>3.29.23</u>
Faculty Senate Chair: _____	Date: _____
VP Academic Affairs/VP Health Science: _____	Date: _____

\* - Signature necessary only if course is to be Core Curriculum Course

**Request for Undergraduate Course Change – Page 2**  
**Additional Information Required for Undergraduate Course Change**

College: Aviation Department/Division: Bill Noe Flight School Current Alpha Designator/Number: AVSC 205

**Change in COURSE TITLE:** \_\_\_\_\_ Yes  No **NOTE:** If changing to Critical Thinking, you MUST reserve (CT) at the end of new title

From: \_\_\_\_\_

To: \_\_\_\_\_ (Limited to 30 characters and spaces.)

**Change in ALPHA DESIGNATOR:** \_\_\_\_\_ Yes  No

From: \_\_\_\_\_ To: \_\_\_\_\_

**Change in COURSE NUMBER:** \_\_\_\_\_ Yes  No

From: \_\_\_\_\_ To: \_\_\_\_\_

**Change in GRADING MODE** (Graded or Credit/No Credit): \_\_\_\_\_ Yes  No

From: \_\_\_\_\_ To: \_\_\_\_\_

**Change in CREDIT HOURS:** \_\_\_\_\_ Yes  No

(A change in credit hours requires documentation that specifies the work requirements have been adjusted accordingly.)

From: \_\_\_\_\_ To: \_\_\_\_\_

**Addition of GENERAL EDUCATION ATTRIBUTES:** \_\_\_\_\_ Yes  No

From: \_\_\_\_\_ To (check all that apply):  CT  INTL  MC  Core II (Core II type: \_\_\_\_\_)

**Note:** Applications for Gen Ed attributes must be attached. <http://www.marshall.edu/wpmu/gened/core-ii-courses-info/>

**Change in CATALOG DESCRIPTION:**  Yes \_\_\_\_\_ No

(Limit of 30 words. If change is substantial, document in the rationale. If change is minor, simply show the change below.)

From: A course designed to prepare students for pilot's first solo flight.

To: Prepares students to complete the first solo flight. The course requires 15 flight hours that must be conducted for issuance of the grade.

**Request for Undergraduate Course Change – Page 3**  
**Additional Information Required for Undergraduate Course Change**

College: Aviation Department/Division: Bill Noe Flight School Current Alpha Designator/Number: AVSC 205

**Define the rationale for EACH type of change here. NOTE: If major change in content, please consider creating a new course.**

We find that students and their families sometimes require extra counseling about the fees they are charged. Therefore, we are working on increasing the transparency of our degree requirements. We are also installing new software that will allow us to track each student's flight. Having this information will improve our accounting of hours and fees. Essentially, we want to ensure a clear link between the labs and their fees.

## Request for Undergraduate Course Change

1. Prepare **one** paper copy and obtain signatures from the Department Chair/Division Head, Registrar and College Dean.
2. Submit the form to your College Curriculum Committee.
3. After obtaining the signature of the College Curriculum Chair, send the paper copy to the current University Curriculum Committee Chair
4. Send an identical (sans signatures) ELECTRONIC COPY and all supporting documentation in a single PDF file (PDF Portfolio recommended) to UCC chair.

College: Aviation Department/Division: Bill Noe Flight School Current Alpha Designator/Number: AVSC 210  
 Contact Person: David Pittenger Phone 696-2818

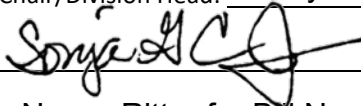

**CURRENT COURSE DATA:**

Course Title (Current Title within Banner): <u>Private Pilot Cert ASEL Lab</u>	
Alpha Designator/Number: <u>AVSC 210</u>	Credit Hours: <u>2</u>
Term for which changes will be effective (Fill in with appropriate calendar year.):	
Fall <u>2023</u> Spring _____ Summer _____ Other _____	

**CHECKLIST/QUESTIONS:**

1. Complete this **three** page form in its entirety and route through the departments/committees below for changes to a course involving: course title, alpha designator (see accompanying note to the section on the next page), course number, course content, credit hours, or catalog description.
2. If this change will affect other departments that require this course, please send a memo to the affected department and include it with this packet, as well as, the response received from the affected department.
3. If the changes made to this course will make the course similar in title or content to another department's courses, please send a memo to the affected department and include it with this packet, as well as, the response received from the affected department.
4. List courses, if any, that will be deleted because of this change (*must submit course deletion form*): NA
5. If the faculty requirements and/or equipment need to be changed upon approval of this proposal, attach a written estimate of additional needs.
6. If library resources are deemed inadequate, include in the rationale a plan to overcome this. The plan must include the cost as stated by the Dean of Libraries.

**SIGNATURES:** (If disapproved at any level, do not sign. Return to previous signer.)

Department Chair/Division Head: <u>Nancy Ritter</u>	Date: <u>03/02/2023</u>
Registrar: <u></u>	Date: <u>3.6.2023</u>
College Dean: <u>Nancy Ritter for Bill Noe</u>	Date: _____
College Curriculum Chair: <u>David J. Pittenger</u>	Date: <u>1/26/2023</u>
General Education Council Chair *: _____	Date: _____
University Curriculum Committee Chair: <u></u>	Date: <u>3.29.23</u>
Faculty Senate Chair: _____	Date: _____
VP Academic Affairs/VP Health Science: _____	Date: _____

\* - Signature necessary only if course is to be Core Curriculum Course

**Request for Undergraduate Course Change – Page 2**  
**Additional Information Required for Undergraduate Course Change**

College: Aviation Department/Division: Bill Noe Flight School Current Alpha Designator/Number: AVSC 210

**Change in COURSE TITLE:** \_\_\_\_\_ Yes  No **NOTE:** If changing to Critical Thinking, you MUST reserve (CT) at the end of new title

From: \_\_\_\_\_

To: \_\_\_\_\_ (Limited to 30 characters and spaces.)

**Change in ALPHA DESIGNATOR:** \_\_\_\_\_ Yes  No

From: \_\_\_\_\_ To: \_\_\_\_\_

**Change in COURSE NUMBER:** \_\_\_\_\_ Yes  No

From: \_\_\_\_\_ To: \_\_\_\_\_

**Change in GRADING MODE** (Graded or Credit/No Credit): \_\_\_\_\_ Yes  No

From: \_\_\_\_\_ To: \_\_\_\_\_

**Change in CREDIT HOURS:** \_\_\_\_\_ Yes  No

(A change in credit hours requires documentation that specifies the work requirements have been adjusted accordingly.)

From: \_\_\_\_\_ To: \_\_\_\_\_

**Addition of GENERAL EDUCATION ATTRIBUTES:** \_\_\_\_\_ Yes  No

From: \_\_\_\_\_ To (check all that apply):  CT  INTL  MC  Core II (Core II type: \_\_\_\_\_)

**Note:** Applications for Gen Ed attributes must be attached. <http://www.marshall.edu/wpmu/gened/core-ii-courses-info/>

**Change in CATALOG DESCRIPTION:**  Yes \_\_\_\_\_ No

(Limit of 30 words. If change is substantial, document in the rationale. If change is minor, simply show the change below.)

From: A course designed to prepare students to pass the Federal Aviation Administration Private Pilot Practical Exam: ASEL

To: Prepares students to pass the FAA Private Pilot Practical Exam: ASEL. The course requires 20 flight hours that must be conducted for issuance of the grade.

**Request for Undergraduate Course Change – Page 3**  
**Additional Information Required for Undergraduate Course Change**

College: Aviation Department/Division: Bill Noe Flight School Current Alpha Designator/Number: AVSC 210

**Define the rationale for EACH type of change here. NOTE: If major change in content, please consider creating a new course.**

We find that students and their families sometimes require extra counseling about the fees they are charged. Therefore, we are working on increasing the transparency of our degree requirements. We are also installing new software that will allow us to track each student's flight. Having this information will improve our accounting of hours and fees. Essentially, we want to ensure a clear link between the labs and their fees.



## Request for Undergraduate Course Change

1. Prepare **one** paper copy and obtain signatures from the Department Chair/Division Head, Registrar and College Dean.
2. Submit the form to your College Curriculum Committee.
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4. Send an identical (sans signatures) ELECTRONIC COPY and all supporting documentation in a single PDF file (PDF Portfolio recommended) to UCC chair.

College: Aviation Department/Division: Bill Noe Flight School Current Alpha Designator/Number: AVSC 220  
 Contact Person: David Pittenger Phone 696-2818

**CURRENT COURSE DATA:**

Course Title (Current Title within Banner): <u>Instrument Certification Lab</u>	
Alpha Designator/Number: <u>AVSC 220</u>	Credit Hours: <u>3</u>
Term for which changes will be effective (Fill in with appropriate calendar year.):	
Fall <u>2023</u> Spring _____ Summer _____ Other _____	

**CHECKLIST/QUESTIONS:**

1. Complete this **three** page form in its entirety and route through the departments/committees below for changes to a course involving: course title, alpha designator (see accompanying note to the section on the next page), course number, course content, credit hours, or catalog description.
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3. If the changes made to this course will make the course similar in title or content to another department's courses, please send a memo to the affected department and include it with this packet, as well as, the response received from the affected department.
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**SIGNATURES:** (If disapproved at any level, do not sign. Return to previous signer.)

Department Chair/Division Head: <u>Nancy Ritter</u>	Date: <u>03/02/2023</u>
Registrar: 	Date: <u>3.6.2023</u>
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General Education Council Chair *: _____	Date: _____
University Curriculum Committee Chair: <u>Zach Garrett</u>	Date: <u>3.29.23</u>
Faculty Senate Chair: _____	Date: _____
VP Academic Affairs/VP Health Science: _____	Date: _____

\* - Signature necessary only if course is to be Core Curriculum Course

**Request for Undergraduate Course Change – Page 2**  
**Additional Information Required for Undergraduate Course Change**

College: Aviation Department/Division: Bill Noe Flight School Current Alpha Designator/Number: AVSC 220

**Change in COURSE TITLE:** \_\_\_\_\_ Yes  No **NOTE:** If changing to Critical Thinking, you MUST reserve (CT) at the end of new title

From: \_\_\_\_\_

To: \_\_\_\_\_ (Limited to 30 characters and spaces.)

**Change in ALPHA DESIGNATOR:** \_\_\_\_\_ Yes  No

From: \_\_\_\_\_ To: \_\_\_\_\_

**Change in COURSE NUMBER:** \_\_\_\_\_ Yes  No

From: \_\_\_\_\_ To: \_\_\_\_\_

**Change in GRADING MODE** (Graded or Credit/No Credit): \_\_\_\_\_ Yes  No

From: \_\_\_\_\_ To: \_\_\_\_\_

**Change in CREDIT HOURS:** \_\_\_\_\_ Yes  No

(A change in credit hours requires documentation that specifies the work requirements have been adjusted accordingly.)

From: \_\_\_\_\_ To: \_\_\_\_\_

**Addition of GENERAL EDUCATION ATTRIBUTES:** \_\_\_\_\_ Yes  No

From: \_\_\_\_\_ To (check all that apply):  CT  INTL  MC  Core II (Core II type: \_\_\_\_\_)

**Note:** Applications for Gen Ed attributes must be attached. <http://www.marshall.edu/wpmu/gened/core-ii-courses-info/>

**Change in CATALOG DESCRIPTION:** \_\_\_\_\_ Yes  No

(Limit of 30 words. If change is substantial, document in the rationale. If change is minor, simply show the change below.)

From: A course designed to prepare students to pass the Federal Aviation Administration Instrument Practical Exam.

To: Prepares students to pass the FAA Instrument Practical Exam. The course requires 36 flight and 14 simulator hours that must be conducted for issuance of the grade.

**Request for Undergraduate Course Change – Page 3**  
**Additional Information Required for Undergraduate Course Change**

College: Aviation Department/Division: Bill Noe Flight School Current Alpha Designator/Number: AVSC 220

**Define the rationale for EACH type of change here. NOTE: If major change in content, please consider creating a new course.**

We find that students and their families sometimes require extra counseling about the fees they are charged. Therefore, we are working on increasing the transparency of our degree requirements. We are also installing new software that will allow us to track each student's flight. Having this information will improve our accounting of hours and fees. Essentially, we want to ensure a clear link between the labs and their fees.

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4. Send an identical (sans signatures) ELECTRONIC COPY and all supporting documentation in a single PDF file (PDF Portfolio recommended) to UCC chair.

College: Aviation Department/Division: Bill Noe Flight School Current Alpha Designator/Number: AVSC 221  
 Contact Person: David Pittenger Phone: 696-2818

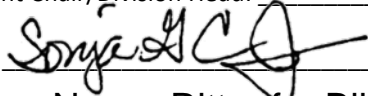

**CURRENT COURSE DATA:**

Course Title (Current Title within Banner): <u>Flight Management Systems</u>	
Alpha Designator/Number: <u>AVSC 221</u>	Credit Hours: <u>3</u>
Term for which changes will be effective (Fill in with appropriate calendar year.):	
Fall <u>2023</u> Spring _____ Summer _____ Other _____	

**CHECKLIST/QUESTIONS:**

1. Complete this **three** page form in its entirety and route through the departments/committees below for changes to a course involving: course title, alpha designator (see accompanying note to the section on the next page), course number, course content, credit hours, or catalog description.
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3. If the changes made to this course will make the course similar in title or content to another department's courses, please send a memo to the affected department and include it with this packet, as well as, the response received from the affected department.
4. List courses, if any, that will be deleted because of this change (*must submit course deletion form*): NA
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6. If library resources are deemed inadequate, include in the rationale a plan to overcome this. The plan must include the cost as stated by the Dean of Libraries.

**SIGNATURES:** (If disapproved at any level, do not sign. Return to previous signer.)

Department Chair/Division Head: <u>Nancy Ritter</u>	Date: <u>03/02/2023</u>
Registrar: <u></u>	Date: <u>3.6.2023</u>
College Dean: <u>Nancy Ritter for Bill Noe</u>	Date: <u>03/02/2023</u>
College Curriculum Chair: <u>David J. Pittenger</u>	Date: <u>1/26/2023</u>
General Education Council Chair *: _____	Date: _____
University Curriculum Committee Chair: <u></u>	Date: <u>3.29.23</u>
Faculty Senate Chair: _____	Date: _____
VP Academic Affairs/VP Health Science _____	Date: _____

\* - Signature necessary only if course is to be Core Curriculum Course

**Request for Undergraduate Course Change – Page 2**  
**Additional Information Required for Undergraduate Course Change**

College: Aviation Department/Division: Bill Noe Flight School Current Alpha Designator/Number: AVSC 221

**Change in COURSE TITLE:**  Yes  No **NOTE:** If changing to Critical Thinking, you MUST reserve (CT) at the end of new title

From: Flight Management Systems

To: Systems Management (Limited to 30 characters and spaces.)

**Change in ALPHA DESIGNATOR:**  Yes  No

From: \_\_\_\_\_ To: \_\_\_\_\_

**Change in COURSE NUMBER:**  Yes  No

From: \_\_\_\_\_ To: \_\_\_\_\_

**Change in GRADING MODE** (Graded or Credit/No Credit):  Yes  No

From: \_\_\_\_\_ To: \_\_\_\_\_

**Change in CREDIT HOURS:**  Yes  No

(A change in credit hours requires documentation that specifies the work requirements have been adjusted accordingly.)

From: \_\_\_\_\_ To: \_\_\_\_\_

**Addition of GENERAL EDUCATION ATTRIBUTES:**  Yes  No

From: \_\_\_\_\_ To (check all that apply):  CT  INTL  MC  Core II (Core II type: \_\_\_\_\_)

**Note:** Applications for Gen Ed attributes must be attached. <http://www.marshall.edu/wpmu/gened/core-ii-courses-info/>

**Change in CATALOG DESCRIPTION:**  Yes  No

(Limit of 30 words. If change is substantial, document in the rationale. If change is minor, simply show the change below.)

From: **This course familiarizes students with popular flight management systems in use in aircraft today and introduces flight management systems that may still be in various stages of development.**

To: **This course will provide students with a comprehensive survey of fixed wing aircraft systems that affect all aspects of a flight related to safety, efficiency, navigation, and customer comfort.**

**Request for Undergraduate Course Change – Page 3**  
**Additional Information Required for Undergraduate Course Change**

College: Aviation Department/Division: Bill Noe Flight School Current Alpha Designator/Number: 221

**Define the rationale for EACH type of change here. NOTE: If major change in content, please consider creating a new course.**

The course title and description are not correct and incomplete. "Flight Systems" refer to the controls that change the airplane's heading and altitude. Systems refers to all the systems -- navigation, communication, engine, and other components -- that are essential for the operation of the airplane. The changes to the title and description are in keeping with FAA expectations for a course like this.

## Request for Undergraduate Course Change

1. Prepare **one** paper copy and obtain signatures from the Department Chair/Division Head, Registrar and College Dean.
2. Submit the form to your College Curriculum Committee.
3. After obtaining the signature of the College Curriculum Chair, send the paper copy to the current University Curriculum Committee Chair
4. Send an identical (sans signatures) ELECTRONIC COPY and all supporting documentation in a single PDF file (PDF Portfolio recommended) to UCC chair.

College: Aviation Department/Division: Bill Noe Flight School Current Alpha Designator/Number: AVSC 241  
 Contact Person: David Pittenger Phone: 304-696-2818

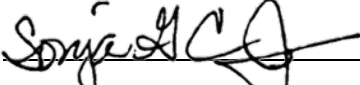
**CURRENT COURSE DATA:**

Course Title (Current Title within Banner): <u>AV Safety and Human Factors</u>	
Alpha Designator/Number: <u>AVSC 241</u>	Credit Hours: <u>3</u>
Term for which changes will be effective (Fill in with appropriate calendar year.):	
Fall <u>2023</u> Spring _____ Summer _____ Other _____	

**CHECKLIST/QUESTIONS:**

1. Complete this **three** page form in its entirety and route through the departments/committees below for changes to a course involving: course title, alpha designator (see accompanying note to the section on the next page), course number, course content, credit hours, or catalog description.
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3. If the changes made to this course will make the course similar in title or content to another department's courses, please send a memo to the affected department and include it with this packet, as well as, the response received from the affected department.
4. List courses, if any, that will be deleted because of this change (*must submit course deletion form*): NA
5. If the faculty requirements and/or equipment need to be changed upon approval of this proposal, attach a written estimate of additional needs.
6. If library resources are deemed inadequate, include in the rationale a plan to overcome this. The plan must include the cost as stated by the Dean of Libraries.

**SIGNATURES:** (If disapproved at any level, do not sign. Return to previous signer.)

Department Chair/Division Head: <u>Nancy Ritter</u>	Date: <u>03/02/2023</u>
Registrar: 	Date: <u>3.6.2023</u>
College Dean: <u>Nancy Ritter for Bill Noe</u>	Date: <u>03/02/2023</u>
College Curriculum Chair: <u>David J. Pittenger</u>	Date: <u>1/23/2023</u>
General Education Council Chair *: _____	Date: _____
University Curriculum Committee Chair: <u>Zach Garrett</u>	Date: <u>3.29.23</u>
Faculty Senate Chair: _____	Date: _____
VP Academic Affairs/VP Health Science: _____	Date: _____

\* - Signature necessary only if course is to be Core Curriculum Course

**Request for Undergraduate Course Change – Page 2**  
**Additional Information Required for Undergraduate Course Change**

College: Aviation Department/Division: Bill Noe Flight School Current Alpha Designator/Number: AVSC 241

**Change in COURSE TITLE:**  Yes  No **NOTE:** If changing to Critical Thinking, you MUST reserve (CT) at the end of new title

From: AV Safety and Human Factors

To: Cognition and Aviation Safety (Limited to 30 characters and spaces.)

**Change in ALPHA DESIGNATOR:**  Yes  No

From: \_\_\_\_\_ To: \_\_\_\_\_

**Change in COURSE NUMBER:**  Yes  No

From: \_\_\_\_\_ To: \_\_\_\_\_

**Change in GRADING MODE (Graded or Credit/No Credit):**  Yes  No

From: \_\_\_\_\_ To: \_\_\_\_\_

**Change in CREDIT HOURS:**  Yes  No

(A change in credit hours requires documentation that specifies the work requirements have been adjusted accordingly.)

From: \_\_\_\_\_ To: \_\_\_\_\_

**Addition of GENERAL EDUCATION ATTRIBUTES:**  Yes  No

From: \_\_\_\_\_ To (check all that apply):  CT  INTL  MC  Core II (Core II type: \_\_\_\_\_)

**Note:** Applications for Gen Ed attributes must be attached. <http://www.marshall.edu/wpmu/gened/core-ii-courses-info/>

**Change in CATALOG DESCRIPTION:**  Yes  No

(Limit of 30 words. If change is substantial, document in the rationale. If change is minor, simply show the change below.)

From:

This course familiarizes students with the Federal Aviation Regulations, aircraft certification, all weather operations, and the impacts of stress in aviation.

To:

This course reviews the cognitive phenomena that influence aviation safety.



**Request for Undergraduate Course Change – Page 3**  
**Additional Information Required for Undergraduate Course Change**

College: Aviation Department/Division: Bill Noe Flight School Current Alpha Designator/Number: AVSC 241

**Define the rationale for EACH type of change here. NOTE: If major change in content, please consider creating a new course.**

We believe the change of the course's title and catalog description offer a better description of the course, which examines how knowledge of human cognition improves aviation safety.

Discussion of "federal aviation regulations and aircraft certification" should be reviewed in other courses. As for "weather operations," students complete two meteorology courses (GEO 230 and AVSC 355) to learn the science of meteorology. Students also review concepts related to weather in each of their ground school courses.

## Request for Undergraduate Course Change

1. Prepare **one** paper copy and obtain signatures from the Department Chair/Division Head, Registrar and College Dean.
2. Submit the form to your College Curriculum Committee.
3. After obtaining the signature of the College Curriculum Chair, send the paper copy to the current University Curriculum Committee Chair
4. Send an identical (sans signatures) ELECTRONIC COPY and all supporting documentation in a single PDF file (PDF Portfolio recommended) to UCC chair.

College: Aviation Department/Division: Bill Noe Flight School Current Alpha Designator/Number: AVSC 305  
 Contact Person: David Pittenger Phone 696-2818

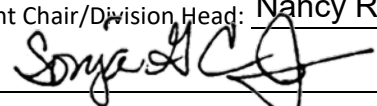
**CURRENT COURSE DATA:**

Course Title (Current Title within Banner): <u>CFII Lab</u>	
Alpha Designator/Number: <u>AVSC 305</u>	Credit Hours: <u>1</u>
Term for which changes will be effective (Fill in with appropriate calendar year.):	
Fall <u>2023</u> Spring _____ Summer _____ Other _____	

**CHECKLIST/QUESTIONS:**

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4. List courses, if any, that will be deleted because of this change (*must submit course deletion form*): NA
5. If the faculty requirements and/or equipment need to be changed upon approval of this proposal, attach a written estimate of additional needs.
6. If library resources are deemed inadequate, include in the rationale a plan to overcome this. The plan must include the cost as stated by the Dean of Libraries.

**SIGNATURES:** (If disapproved at any level, do not sign. Return to previous signer.)

Department Chair/Division Head: <u>Nancy Ritter</u>	Date: <u>03/02/2023</u>
Registrar: 	Date: <u>3.6.2023</u>
College Dean: <u>Nancy Ritter for Bill Noe</u>	Date: <u>6/02/2023</u>
College Curriculum Chair: <u>David J. Pittenger</u>	Date: <u>1/26/2023</u>
General Education Council Chair *: _____	Date: _____
University Curriculum Committee Chair: <u>Zach Garrett</u>	Date: <u>3.29.23</u>
Faculty Senate Chair: _____	Date: _____
VP Academic Affairs/VP Health Science _____	Date: _____

\* - Signature necessary only if course is to be Core Curriculum Course

**Request for Undergraduate Course Change – Page 2**  
**Additional Information Required for Undergraduate Course Change**

College: Aviation Department/Division: Bill Noe Flight School Current Alpha Designator/Number: AVSC 305

**Change in COURSE TITLE:** \_\_\_\_\_ Yes  No **NOTE:** If changing to Critical Thinking, you MUST reserve (CT) at the end of new title

From: \_\_\_\_\_

To: \_\_\_\_\_ (Limited to 30 characters and spaces.)

**Change in ALPHA DESIGNATOR:** \_\_\_\_\_ Yes  No

From: \_\_\_\_\_ To: \_\_\_\_\_

**Change in COURSE NUMBER:** \_\_\_\_\_ Yes  No

From: \_\_\_\_\_ To: \_\_\_\_\_

**Change in GRADING MODE** (Graded or Credit/No Credit): \_\_\_\_\_ Yes  No

From: \_\_\_\_\_ To: \_\_\_\_\_

**Change in CREDIT HOURS:** \_\_\_\_\_ Yes  No

(A change in credit hours requires documentation that specifies the work requirements have been adjusted accordingly.)

From: \_\_\_\_\_ To: \_\_\_\_\_

**Addition of GENERAL EDUCATION ATTRIBUTES:** \_\_\_\_\_ Yes  No

From: \_\_\_\_\_ To (check all that apply):  CT  INTL  MC  Core II (Core II type: \_\_\_\_\_)

**Note:** Applications for Gen Ed attributes must be attached. <http://www.marshall.edu/wpmu/gened/core-ii-courses-info/>

**Change in CATALOG DESCRIPTION:**  Yes \_\_\_\_\_ No

(Limit of 30 words. If change is substantial, document in the rationale. If change is minor, simply show the change below.)

From: Designed to prepare pilots to pass the FAA Certified Flight Instructor Instrument Practical Exam.

To: Prepares pilots for the FAA Certified Flight Instructor Instrument Practical Exam. The course requires 10 flight and 2 simulator hours that must be conducted for issuance of the grade.

**Request for Undergraduate Course Change – Page 3**  
**Additional Information Required for Undergraduate Course Change**

College: Aviation Department/Division: Bill Noe Flight School Current Alpha Designator/Number: AVSC 305

**Define the rationale for EACH type of change here. NOTE: If major change in content, please consider creating a new course.**

We find that students and their families sometimes require extra counseling about the fees they are charged. Therefore, we are working on increasing the transparency of our degree requirements. We are also installing new software that will allow us to track each student's flight. Having this information will improve our accounting of hours and fees. Essentially, we want to ensure a clear link between the labs and their fees.

## Request for Undergraduate Course Change

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College: Aviation Department/Division: Bill Noe Flight School Current Alpha Designator/Number: AVSC 310  
 Contact Person: David Pittenger Phone: 696-2818

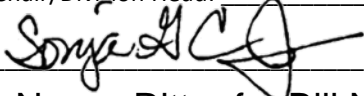
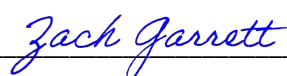
**CURRENT COURSE DATA:**

Course Title (Current Title within Banner): <u>Aircraft Sys and Powerplants</u>	
Alpha Designator/Number: <u>AVSC 310</u>	Credit Hours: <u>3</u>
Term for which changes will be effective (Fill in with appropriate calendar year.):	
Fall <u>2023</u> Spring _____ Summer _____ Other _____	

**CHECKLIST/QUESTIONS:**

1. Complete this **three** page form in its entirety and route through the departments/committees below for changes to a course involving: course title, alpha designator (see accompanying note to the section on the next page), course number, course content, credit hours, or catalog description.
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6. If library resources are deemed inadequate, include in the rationale a plan to overcome this. The plan must include the cost as stated by the Dean of Libraries.

**SIGNATURES:** (If disapproved at any level, do not sign. Return to previous signer.)

Department Chair/Division Head: <u>Nancy Ritter</u>	Date: <u>03/02/2023</u>
Registrar: <u></u>	Date: <u>3.6.2023</u>
College Dean: <u>Nancy Ritter for Bill Noe</u>	Date: <u>03/02//2023</u>
College Curriculum Chair: <u>David J. Pittenger</u>	Date: <u>1/26/2023</u>
General Education Council Chair *:	Date: _____
University Curriculum Committee Chair: <u></u>	Date: <u>3.29.23</u>
Faculty Senate Chair:	Date: _____
VP Academic Affairs/VP Health Science	Date: _____

\* - Signature necessary only if course is to be Core Curriculum Course

**Request for Undergraduate Course Change – Page 2**  
**Additional Information Required for Undergraduate Course Change**

College: Aviation Department/Division: Bill Noe Flight School Current Alpha Designator/Number: AVSC 310

**Change in COURSE TITLE:**  Yes  No **NOTE:** If changing to Critical Thinking, you MUST reserve (CT) at the end of new title

From: Aircraft Sys and Powerplants

To: Aerodynamics & Performance (Limited to 30 characters and spaces.)

**Change in ALPHA DESIGNATOR:**  Yes  No

From: \_\_\_\_\_ To: \_\_\_\_\_

**Change in COURSE NUMBER:**  Yes  No

From: \_\_\_\_\_ To: \_\_\_\_\_

**Change in GRADING MODE** (Graded or Credit/No Credit):  Yes  No

From: \_\_\_\_\_ To: \_\_\_\_\_

**Change in CREDIT HOURS:**  Yes  No

(A change in credit hours requires documentation that specifies the work requirements have been adjusted accordingly.)

From: \_\_\_\_\_ To: \_\_\_\_\_

**Addition of GENERAL EDUCATION ATTRIBUTES:**  Yes  No

From: \_\_\_\_\_ To (check all that apply):  CT  INTL  MC  Core II (Core II type: \_\_\_\_\_)

**Note:** Applications for Gen Ed attributes must be attached. <http://www.marshall.edu/wpmu/gened/core-ii-courses-info/>

**Change in CATALOG DESCRIPTION:**  Yes  No

(Limit of 30 words. If change is substantial, document in the rationale. If change is minor, simply show the change below.)

From: **This course familiarizes students with the Federal Aviation Regulations relating to aircraft certification of systems and the various powerplants for fixed wing aircraft.**

To: **Students learn about complex aircraft aerodynamics and performance related to method of propulsion, the interactive forces that affect performance, flight conditions experienced by commercial pilots, and transonic and supersonic flight.**

**Request for Undergraduate Course Change – Page 3**  
**Additional Information Required for Undergraduate Course Change**

College: Aviation Department/Division: Bill Noe Flight School Current Alpha Designator/Number: 310

**Define the rationale for EACH type of change here. NOTE: If major change in content, please consider creating a new course.**

The topics covered in this course are too complex to adequately review in one semester. Therefore, we are dividing the course into two courses that will review topics the FAA expects us to cover in a more comprehensive manner.

## Request for Undergraduate Course Change

1. Prepare **one** paper copy and obtain signatures from the Department Chair/Division Head, Registrar and College Dean.
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3. After obtaining the signature of the College Curriculum Chair, send the paper copy to the current University Curriculum Committee Chair
4. Send an identical (sans signatures) ELECTRONIC COPY and all supporting documentation in a single PDF file (PDF Portfolio recommended) to UCC chair.

College: Aviation Department/Division: Bill Noe Flight School Current Alpha Designator/Number: AVSC 325  
 Contact Person: David Pittenger Phone: 696-2818

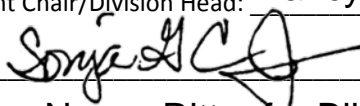
**CURRENT COURSE DATA:**

Course Title (Current Title within Banner): <u>Ntnl Airspace Sys and NextGen</u>	
Alpha Designator/Number: <u>AVSC 325</u>	Credit Hours: <u>3</u>
Term for which changes will be effective (Fill in with appropriate calendar year.):	
Fall <u>2023</u> Spring _____ Summer _____ Other _____	

**CHECKLIST/QUESTIONS:**

1. Complete this **three** page form in its entirety and route through the departments/committees below for changes to a course involving: course title, alpha designator (see accompanying note to the section on the next page), course number, course content, credit hours, or catalog description.
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**SIGNATURES:** (If disapproved at any level, do not sign. Return to previous signer.)

Department Chair/Division Head: <u>Nancy Ritter</u>	Date: <u>03/02/2023</u>
Registrar: 	Date: <u>3.6.2023</u>
College Dean: <u>Nancy Ritter for Bill Noe</u>	Date: <u>03/02/2023</u>
College Curriculum Chair: <u>David J. Pittenger</u>	Date: <u>1/26/2023</u>
General Education Council Chair *:	Date: _____
University Curriculum Committee Chair: <u>Zach Garrett</u>	Date: <u>3.29.23</u>
Faculty Senate Chair:	Date: _____
VP Academic Affairs/VP Health Science	Date: _____

\* - Signature necessary only if course is to be Core Curriculum Course



**Request for Undergraduate Course Change – Page 2**  
**Additional Information Required for Undergraduate Course Change**

College: Aviation Department/Division: Bill Noe Flight School Current Alpha Designator/Number: AVSC 325

**Change in COURSE TITLE:**  Yes  No **NOTE:** If changing to Critical Thinking, you MUST reserve (CT) at the end of new title

From: Ntnl Airspace Sys and NextGen

To: Evolution of ATC Systems (Limited to 30 characters and spaces.)

**Change in ALPHA DESIGNATOR:**  Yes  No

From: \_\_\_\_\_ To: \_\_\_\_\_

**Change in COURSE NUMBER:**  Yes  No

From: \_\_\_\_\_ To: \_\_\_\_\_

**Change in GRADING MODE** (Graded or Credit/No Credit):  Yes  No

From: \_\_\_\_\_ To: \_\_\_\_\_

**Change in CREDIT HOURS:**  Yes  No

(A change in credit hours requires documentation that specifies the work requirements have been adjusted accordingly.)

From: \_\_\_\_\_ To: \_\_\_\_\_

**Addition of GENERAL EDUCATION ATTRIBUTES:**  Yes  No

From: \_\_\_\_\_ To (check all that apply):  CT  INTL  MC  Core II (Core II type: \_\_\_\_\_)

**Note:** Applications for Gen Ed attributes must be attached. <http://www.marshall.edu/wpmu/gened/core-ii-courses-info/>

**Change in CATALOG DESCRIPTION:**  Yes  No

(Limit of 30 words. If change is substantial, document in the rationale. If change is minor, simply show the change below.)

From: An overview of the US National Airspace System and an in-depth analysis of the methods and procedures used in controlling air traffic.

To: Students will learn about USA's ATC system, Federal Aviation Regulations, procedures, navigational aids, radar and nonradar operations, airspace and control tower communications, and operations required in different geographic areas.

**Request for Undergraduate Course Change – Page 3**  
**Additional Information Required for Undergraduate Course Change**

College: Aviation Department/Division: Bill Noe Flight School Current Alpha Designator/Number: 325

**Define the rationale for EACH type of change here. NOTE: If major change in content, please consider creating a new course.**

The title and course description are innacurate incomplete. The FAA requires that we teach students about air traffic contol (ATC) with regard to Federal Regulation, navigation systems, standard operating procedures, and how the plan for flight in different geographic areas.

## Request for Undergraduate Course Change

1. Prepare **one** paper copy and obtain signatures from the Department Chair/Division Head, Registrar and College Dean.
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College: Aviation Department/Division: Bill Noe Flight School Current Alpha Designator/Number: AVSC 330  
 Contact Person: David Pittenger Phone 696-2818

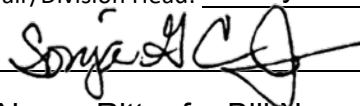

**CURRENT COURSE DATA:**

Course Title (Current Title within Banner): <u>Commercial Phase I Lab</u>	
Alpha Designator/Number: <u>AVSC 330</u>	Credit Hours: <u>3</u>
Term for which changes will be effective (Fill in with appropriate calendar year.):	
Fall <u>2023</u> Spring _____ Summer _____ Other _____	

**CHECKLIST/QUESTIONS:**

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Department Chair/Division Head: <u>Nancy Ritter</u>	Date: <u>03/02/2023</u>
Registrar: 	Date: <u>3.6.2023</u>
College Dean: <u>Nancy Ritter for Bill Noe</u>	Date: <u>03/02/2023</u>
College Curriculum Chair: <u>David J. Pittenger</u>	Date: <u>1/26/2023</u>
General Education Council Chair *: _____	Date: _____
University Curriculum Committee Chair: 	Date: <u>3.29.23</u>
Faculty Senate Chair: _____	Date: _____
VP Academic Affairs/VP Health Science: _____	Date: _____

\* - Signature necessary only if course is to be Core Curriculum Course

**Request for Undergraduate Course Change – Page 2**  
**Additional Information Required for Undergraduate Course Change**

College: Aviation Department/Division: Bill Noe Flight School Current Alpha Designator/Number: AVSC 330

**Change in COURSE TITLE:** \_\_\_\_\_ Yes  No **NOTE:** If changing to Critical Thinking, you MUST reserve (CT) at the end of new title

From: \_\_\_\_\_

To: \_\_\_\_\_ (Limited to 30 characters and spaces.)

**Change in ALPHA DESIGNATOR:** \_\_\_\_\_ Yes  No

From: \_\_\_\_\_ To: \_\_\_\_\_

**Change in COURSE NUMBER:** \_\_\_\_\_ Yes  No

From: \_\_\_\_\_ To: \_\_\_\_\_

**Change in GRADING MODE** (Graded or Credit/No Credit): \_\_\_\_\_ Yes  No

From: \_\_\_\_\_ To: \_\_\_\_\_

**Change in CREDIT HOURS:** \_\_\_\_\_ Yes  No

(A change in credit hours requires documentation that specifies the work requirements have been adjusted accordingly.)

From: \_\_\_\_\_ To: \_\_\_\_\_

**Addition of GENERAL EDUCATION ATTRIBUTES:** \_\_\_\_\_ Yes  No

From: \_\_\_\_\_ To (check all that apply):  CT  INTL  MC  Core II (Core II type: \_\_\_\_\_)

**Note:** Applications for Gen Ed attributes must be attached. <http://www.marshall.edu/wpmu/gened/core-ii-courses-info/>

**Change in CATALOG DESCRIPTION:**  Yes \_\_\_\_\_ No

(Limit of 30 words. If change is substantial, document in the rationale. If change is minor, simply show the change below.)

From: A continued review of topics required for flying an airplane in VFR & IFR environments during day and night cross-country flights, and development of Pilot and Command decision-making skills.

To: Develops flying in VFR & IFR environments and decision-making skills. The course requires 52.5 flight and 17.5 simulator hours that must be conducted for issuance of the grade.

**Request for Undergraduate Course Change – Page 3**  
**Additional Information Required for Undergraduate Course Change**

College: Aviation Department/Division: Bill Noe Flight School Current Alpha Designator/Number: AVSC 330

**Define the rationale for EACH type of change here. NOTE: If major change in content, please consider creating a new course.**

We find that students and their families sometimes require extra counseling about the fees they are charged. Therefore, we are working on increasing the transparency of our degree requirements. We are also installing new software that will allow us to track each student's flight. Having this information will improve our accounting of hours and fees. Essentially, we want to ensure a clear link between the labs and their fees.

## Request for Undergraduate Course Change

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College: Aviation Department/Division: Bill Noe Flight School Current Alpha Designator/Number: AVSC 340  
 Contact Person: David Pittenger Phone 696-2818

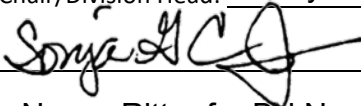
**CURRENT COURSE DATA:**

Course Title (Current Title within Banner): <u>Commercial Phase II ASEL Lab</u>	
Alpha Designator/Number: <u>AVSC 340</u>	Credit Hours: <u>3</u>
Term for which changes will be effective (Fill in with appropriate calendar year.):	
Fall <u>2023</u> Spring _____ Summer _____ Other _____	

**CHECKLIST/QUESTIONS:**

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6. If library resources are deemed inadequate, include in the rationale a plan to overcome this. The plan must include the cost as stated by the Dean of Libraries.

**SIGNATURES:** (If disapproved at any level, do not sign. Return to previous signer.)

Department Chair/Division Head: <u>Nancy Riter</u>	Date: <u>03/02/2023</u>
Registrar: <u></u>	Date: <u>3.6.2023</u>
College Dean: <u>Nancy Ritter for Bill Noe</u>	Date: <u>03/02/2023</u>
College Curriculum Chair: <u>David J. Pittenger</u>	Date: <u>1/26/2023</u>
General Education Council Chair *: _____	Date: _____
University Curriculum Committee Chair: <u>Zach Garrett</u>	Date: <u>3.29.23</u>
Faculty Senate Chair: _____	Date: _____
VP Academic Affairs/VP Health Science: _____	Date: _____

\* - Signature necessary only if course is to be Core Curriculum Course

**Request for Undergraduate Course Change – Page 2**  
**Additional Information Required for Undergraduate Course Change**

College: Aviation Department/Division: Bill Noe Flight School Current Alpha Designator/Number: AVSC 340

**Change in COURSE TITLE:** \_\_\_\_\_ Yes  No **NOTE:** If changing to Critical Thinking, you MUST reserve (CT) at the end of new title

From: \_\_\_\_\_

To: \_\_\_\_\_ (Limited to 30 characters and spaces.)

**Change in ALPHA DESIGNATOR:** \_\_\_\_\_ Yes  No

From: \_\_\_\_\_ To: \_\_\_\_\_

**Change in COURSE NUMBER:** \_\_\_\_\_ Yes  No

From: \_\_\_\_\_ To: \_\_\_\_\_

**Change in GRADING MODE** (Graded or Credit/No Credit): \_\_\_\_\_ Yes  No

From: \_\_\_\_\_ To: \_\_\_\_\_

**Change in CREDIT HOURS:** \_\_\_\_\_ Yes  No

(A change in credit hours requires documentation that specifies the work requirements have been adjusted accordingly.)

From: \_\_\_\_\_ To: \_\_\_\_\_

**Addition of GENERAL EDUCATION ATTRIBUTES:** \_\_\_\_\_ Yes  No

From: \_\_\_\_\_ To (check all that apply):  CT  INTL  MC  Core II (Core II type: \_\_\_\_\_)

**Note:** Applications for Gen Ed attributes must be attached. <http://www.marshall.edu/wpmu/gened/core-ii-courses-info/>

**Change in CATALOG DESCRIPTION:**  Yes \_\_\_\_\_ No

(Limit of 30 words. If change is substantial, document in the rationale. If change is minor, simply show the change below.)

From: A course designed to prepare students to pass the Federal Aviation Administration ASEL Commercial Practical Exam.

To: Prepares students for the FAA ASEL Commercial Practical Exam. The course requires 43.5 flight and 6.5 simulator hours that must be conducted for issuance of the grade.

**Request for Undergraduate Course Change – Page 3**  
**Additional Information Required for Undergraduate Course Change**

College: Aviation Department/Division: Bill Noe Flight School Current Alpha Designator/Number: AVSC 340

**Define the rationale for EACH type of change here. NOTE: If major change in content, please consider creating a new course.**

We find that students and their families sometimes require extra counseling about the fees they are charged. Therefore, we are working on increasing the transparency of our degree requirements. We are also installing new software that will allow us to track each student's flight. Having this information will improve our accounting of hours and fees. Essentially, we want to ensure a clear link between the labs and their fees.



## Request for Undergraduate Course Change

1. Prepare **one** paper copy and obtain signatures from the Department Chair/Division Head, Registrar and College Dean.
2. Submit the form to your College Curriculum Committee.
3. After obtaining the signature of the College Curriculum Chair, send the paper copy to the current University Curriculum Committee Chair
4. Send an identical (sans signatures) ELECTRONIC COPY and all supporting documentation in a single PDF file (PDF Portfolio recommended) to UCC chair.

College: Aviation Department/Division: Bill Noe Flight School Current Alpha Designator/Number: AVSC 345  
 Contact Person: David Pittenger Phone 696-2818

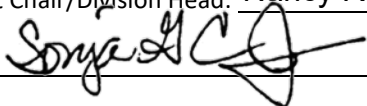
**CURRENT COURSE DATA:**

Course Title (Current Title within Banner): <u>Initial CFI ASEL Lab</u>	
Alpha Designator/Number: <u>AVSC 345</u>	Credit Hours: <u>3</u>
Term for which changes will be effective (Fill in with appropriate calendar year.):	
Fall <u>2023</u> Spring _____ Summer _____ Other _____	

**CHECKLIST/QUESTIONS:**

1. Complete this **three** page form in its entirety and route through the departments/committees below for changes to a course involving: course title, alpha designator (see accompanying note to the section on the next page), course number, course content, credit hours, or catalog description.
2. If this change will affect other departments that require this course, please send a memo to the affected department and include it with this packet, as well as, the response received from the affected department.
3. If the changes made to this course will make the course similar in title or content to another department's courses, please send a memo to the affected department and include it with this packet, as well as, the response received from the affected department.
4. List courses, if any, that will be deleted because of this change (*must submit course deletion form*): NA
5. If the faculty requirements and/or equipment need to be changed upon approval of this proposal, attach a written estimate of additional needs.
6. If library resources are deemed inadequate, include in the rationale a plan to overcome this. The plan must include the cost as stated by the Dean of Libraries.

**SIGNATURES:** (If disapproved at any level, do not sign. Return to previous signer.)

Department Chair/Division Head: <u>Nancy Ritter</u>	Date: <u>03/02/2023</u>
Registrar: 	Date: <u>3.6.2023</u>
College Dean: <u>Nancy Ritter</u>	Date: <u>03/02/2023</u>
College Curriculum Chair: <u>David J. Pittenger</u>	Date: <u>1/26/2023</u>
General Education Council Chair *: _____	Date: _____
University Curriculum Committee Chair: <u>Zach Garrett</u>	Date: <u>3.29.23</u>
Faculty Senate Chair: _____	Date: _____
VP Academic Affairs/VP Health Science: _____	Date: _____

\* - Signature necessary only if course is to be Core Curriculum Course

**Request for Undergraduate Course Change – Page 2**  
**Additional Information Required for Undergraduate Course Change**

College: Aviation Department/Division: Bill Noe Flight School Current Alpha Designator/Number: AVSC 345

**Change in COURSE TITLE:** \_\_\_\_\_ Yes  No **NOTE:** If changing to Critical Thinking, you MUST reserve (CT) at the end of new title

From: \_\_\_\_\_

To: \_\_\_\_\_ (Limited to 30 characters and spaces.)

**Change in ALPHA DESIGNATOR:** \_\_\_\_\_ Yes  No

From: \_\_\_\_\_ To: \_\_\_\_\_

**Change in COURSE NUMBER:** \_\_\_\_\_ Yes  No

From: \_\_\_\_\_ To: \_\_\_\_\_

**Change in GRADING MODE** (Graded or Credit/No Credit): \_\_\_\_\_ Yes  No

From: \_\_\_\_\_ To: \_\_\_\_\_

**Change in CREDIT HOURS:** \_\_\_\_\_ Yes  No

(A change in credit hours requires documentation that specifies the work requirements have been adjusted accordingly.)

From: \_\_\_\_\_ To: \_\_\_\_\_

**Addition of GENERAL EDUCATION ATTRIBUTES:** \_\_\_\_\_ Yes  No

From: \_\_\_\_\_ To (check all that apply):  CT  INTL  MC  Core II (Core II type: \_\_\_\_\_)

**Note:** Applications for Gen Ed attributes must be attached. <http://www.marshall.edu/wpmu/gened/core-ii-courses-info/>

**Change in CATALOG DESCRIPTION:**  Yes \_\_\_\_\_ No

(Limit of 30 words. If change is substantial, document in the rationale. If change is minor, simply show the change below.)

From: A course designed to train to become Federal Aviation Administration certified flight instructors.

To: Trains students to be FAA-certified flight instructors. The course requires 20 flight and 2 simulator hours that must be conducted for issuance of the grade.

**Request for Undergraduate Course Change – Page 3**  
**Additional Information Required for Undergraduate Course Change**

College: Aviation Department/Division: Bill Noe Flight School Current Alpha Designator/Number: AVSC 345

**Define the rationale for EACH type of change here. NOTE: If major change in content, please consider creating a new course.**

We find that students and their families sometimes require extra counseling about the fees they are charged. Therefore, we are working on increasing the transparency of our degree requirements. We are also installing new software that will allow us to track each student's flight. Having this information will improve our accounting of hours and fees. Essentially, we want to ensure a clear link between the labs and their fees.

## Request for Undergraduate Course Change

1. Prepare **one** paper copy and obtain signatures from the Department Chair/Division Head, Registrar and College Dean.
2. Submit the form to your College Curriculum Committee.
3. After obtaining the signature of the College Curriculum Chair, send the paper copy to the current University Curriculum Committee Chair
4. Send an identical (sans signatures) ELECTRONIC COPY and all supporting documentation in a single PDF file (PDF Portfolio recommended) to UCC chair.

College: Aviation Department/Division: Bill Noe Flight School Current Alpha Designator/Number: AVSC 375  
 Contact Person: David Pittenger Phone 696-2818

**CURRENT COURSE DATA:**

Course Title (Current Title within Banner): Commercial AMEL Add-On Lab  
 Alpha Designator/Number: AVSC 375 Credit Hours: 1  
 Term for which changes will be effective (Fill in with appropriate calendar year.):  
 Fall 2023 Spring \_\_\_\_\_ Summer \_\_\_\_\_ Other \_\_\_\_\_

**CHECKLIST/QUESTIONS:**

1. Complete this **three** page form in its entirety and route through the departments/committees below for changes to a course involving: course title, alpha designator (see accompanying note to the section on the next page), course number, course content, credit hours, or catalog description.
2. If this change will affect other departments that require this course, please send a memo to the affected department and include it with this packet, as well as, the response received from the affected department.
3. If the changes made to this course will make the course similar in title or content to another department's courses, please send a memo to the affected department and include it with this packet, as well as, the response received from the affected department.
4. List courses, if any, that will be deleted because of this change (*must submit course deletion form*): NA
5. If the faculty requirements and/or equipment need to be changed upon approval of this proposal, attach a written estimate of additional needs.
6. If library resources are deemed inadequate, include in the rationale a plan to overcome this. The plan must include the cost as stated by the Dean of Libraries.

**SIGNATURES:** (If disapproved at any level, do not sign. Return to previous signer.)

Department Chair/Division Head: <u>Nancy Ritter</u>	Date: <u>03/02/2023</u>
Registrar:	Date: <u>3.6.2023</u>
College Dean: <u>Nancy Ritter for Bill Noe</u>	Date: <u>03/02/2023</u>
College Curriculum Chair: <u>David J. Pittenger</u>	Date: <u>1/26/2023</u>
General Education Council Chair *: _____	Date: _____
University Curriculum Committee Chair: <u>Zack Garrett</u>	Date: <u>3.29.23</u>
Faculty Senate Chair: _____	Date: _____
VP Academic Affairs/VP Health Science _____	Date: _____

\* - Signature necessary only if course is to be Core Curriculum Course

**Request for Undergraduate Course Change – Page 2**  
**Additional Information Required for Undergraduate Course Change**

College: Aviation Department/Division: Bill Noe Flight School Current Alpha Designator/Number: AVSC 375

**Change in COURSE TITLE:** \_\_\_\_\_ Yes  No **NOTE:** If changing to Critical Thinking, you MUST reserve (CT) at the end of new title

From: \_\_\_\_\_

To: \_\_\_\_\_ (Limited to 30 characters and spaces.)

**Change in ALPHA DESIGNATOR:** \_\_\_\_\_ Yes  No

From: \_\_\_\_\_ To: \_\_\_\_\_

**Change in COURSE NUMBER:** \_\_\_\_\_ Yes  No

From: \_\_\_\_\_ To: \_\_\_\_\_

**Change in GRADING MODE** (Graded or Credit/No Credit): \_\_\_\_\_ Yes  No

From: \_\_\_\_\_ To: \_\_\_\_\_

**Change in CREDIT HOURS:** \_\_\_\_\_ Yes  No

(A change in credit hours requires documentation that specifies the work requirements have been adjusted accordingly.)

From: \_\_\_\_\_ To: \_\_\_\_\_

**Addition of GENERAL EDUCATION ATTRIBUTES:** \_\_\_\_\_ Yes  No

From: \_\_\_\_\_ To (check all that apply):  CT  INTL  MC  Core II (Core II type: \_\_\_\_\_)

**Note:** Applications for Gen Ed attributes must be attached. <http://www.marshall.edu/wpmu/gened/core-ii-courses-info/>

**Change in CATALOG DESCRIPTION:**  Yes \_\_\_\_\_ No

(Limit of 30 words. If change is substantial, document in the rationale. If change is minor, simply show the change below.)

From: **Designed to prepare pilots to complete the Federal Aviation Administration's Instrument Practical exam and Commercial Pilot Add-On Practical exam for multi-engine airplane.**

To: **Preparation for the FAA multi-engine Instrument Practical and Commercial Pilot Add-On Practical exams. The course requires 12 multi-engine flight hours that must be conducted for issuance of the grade.**

**Request for Undergraduate Course Change – Page 3**  
**Additional Information Required for Undergraduate Course Change**

College: Aviation Department/Division: Bill Noe Flight School Current Alpha Designator/Number: AVSC 375

**Define the rationale for EACH type of change here. NOTE: If major change in content, please consider creating a new course.**

We find that students and their families sometimes require extra counseling about the fees they are charged. Therefore, we are working on increasing the transparency of our degree requirements. We are also installing new software that will allow us to track each student's flight. Having this information will improve our accounting of hours and fees. Essentially, we want to ensure a clear link between the labs and their fees.

## Request for Undergraduate Course Change

1. Prepare one paper copy and obtain signatures from the Department Chair/Division Head, Registrar and College Dean.
2. Submit the form to your College Curriculum Committee.
3. After obtaining the signature of the College Curriculum Chair, send the paper copy to the current University Curriculum Committee Chair
4. Send an identical (sans signatures) ELECTRONIC COPY and all supporting documentation in a single PDF file (PDF Portfolio recommended) to UCC chair.

College: CECS Department/Division: Biomedical Engineering Current Alpha Designator/Number: BME 306  
 Contact Person: David Dampier Phone: x63066

**CURRENT COURSE DATA:**

Course Title (Current Title within Banner): <u>Mechanics of Biological Tissue</u>	
Alpha Designator/Number: <u>BME 306</u>	Credit Hours: <u>3</u>
Term for which changes will be effective (Fill in with appropriate calendar year.):	
Fall <u>2023</u> Spring _____ Summer _____ Other _____	

**CHECKLIST/QUESTIONS:**

1. Complete this **three** page form in its entirety and route through the departments/committees below for changes to a course involving: course title, alpha designator (see accompanying note to the section on the next page), course number, course content, credit hours, or catalog description.
2. If this change will affect other departments that require this course, please send a memo to the affected department and include it with this packet, as well as, the response received from the affected department.
3. If the changes made to this course will make the course similar in title or content to another department's courses, please send a memo to the affected department and include it with this packet, as well as, the response received from the affected department.
4. List courses, if any, that will be deleted because of this change (*must submit course deletion form*): \_\_\_\_\_
5. If the faculty requirements and/or equipment need to be changed upon approval of this proposal, attach a written estimate of additional needs.
6. If library resources are deemed inadequate, include in the rationale a plan to overcome this. The plan must include the cost as stated by the Dean of Libraries.

**SIGNATURES:** (If disapproved at any level, do not sign. Return to previous signer.)

Department Chair/Division Head: 	Date: <u>2.23.23</u>
Registrar: 	Date: <u>2/27/2023</u>
College Dean: 	Date: <u>27-Feb-2023</u>
College Curriculum Chair: 	Date: <u>27-feb 2023</u>
General Education Council Chair *: _____	Date: _____
University Curriculum Committee Chair: <u>Zack Garrett</u>	Date: <u>3.24.23</u>
Faculty Senate Chair: _____	Date: _____
VP Academic Affairs/VP Health Science: _____	Date: _____

\* - Signature necessary only if course is to be Core Curriculum Course

**Request for Undergraduate Course Change – Page 2**  
**Additional Information Required for Undergraduate Course Change**

College: CECS Department/Division: Biomedical Engineering Current Alpha Designator/Number: BME 306

**Change in COURSE TITLE:**  Yes  No **NOTE:** If changing to Critical Thinking, you MUST reserve (CT) at the end of new title

From: Mechanics of Biological Tissue

To: Tissue Engineering (Limited to 30 characters and spaces.)

**Change in ALPHA DESIGNATOR:**  Yes  No

From: \_\_\_\_\_ To: \_\_\_\_\_

**Change in COURSE NUMBER:**  Yes  No

From: \_\_\_\_\_ To: \_\_\_\_\_

**Change in GRADING MODE** (Graded or Credit/No Credit):  Yes  No

From: \_\_\_\_\_ To: \_\_\_\_\_

**Change in CREDIT HOURS:**  Yes  No

(A change in credit hours requires documentation that specifies the work requirements have been adjusted accordingly.)

From: \_\_\_\_\_ To: \_\_\_\_\_

**Addition of GENERAL EDUCATION ATTRIBUTES:**  Yes  No

From: \_\_\_\_\_ To (check all that apply):  CT  INTL  MC  Core II (Core II type: \_\_\_\_\_)

**Note:** Applications for Gen Ed attributes must be attached. <http://www.marshall.edu/wpmu/gened/core-ii-courses-info/>

**Change in CATALOG DESCRIPTION:**  Yes  No

(Limit of 30 words. If change is substantial, document in the rationale. If change is minor, simply show the change below.)

From:

To:



**Request for Undergraduate Course Change – Page 3**  
**Additional Information Required for Undergraduate Course Change**

College: CECS Department/Division: Biomedical Engineering Current Alpha Designator/Number: BME 306

**Define the rationale for EACH type of change here. NOTE: If major change in content, please consider creating a new course.**

The new name of the course more accurately reflects the materials covered in the course.

### Request for Undergraduate Course Change

1. Prepare **one** paper copy and obtain signatures from the Department Chair/Division Head, Registrar and College Dean.
2. Submit the form to your College Curriculum Committee.
3. After obtaining the signature of the College Curriculum Chair, send the paper copy to the current University Curriculum Committee Chair
4. Send an identical (sans signatures) ELECTRONIC COPY and all supporting documentation in a single PDF file (PDF Portfolio recommended) to UCC chair.

College: CECS Department/Division: Civil Engineering Current Alpha Designator/Number: ENGR 217  
 Contact Person: Isaac Wait Phone: 304-696-5444



**CURRENT COURSE DATA:**

Course Title (Current Title within Banner): Engineering Co-Op Preparation  
 Alpha Designator/Number: ENGR / 217 Credit Hours: 1  
 Term for which changes will be effective (Fill in with appropriate calendar year.):  
 Fall 2023 Spring \_\_\_\_\_ Summer \_\_\_\_\_ Other \_\_\_\_\_

**CHECKLIST/QUESTIONS:**

1. Complete this **three** page form in its entirety and route through the departments/committees below for changes to a course involving: course title, alpha designator (see accompanying note to the section on the next page), course number, course content, credit hours, or catalog description.
2. If this change will affect other departments that require this course, please send a memo to the affected department and include it with this packet, as well as, the response received from the affected department.
3. If the changes made to this course will make the course similar in title or content to another department's courses, please send a memo to the affected department and include it with this packet, as well as, the response received from the affected department.
4. List courses, if any, that will be deleted because of this change (must submit course deletion form): \_\_\_\_\_  
n/a
5. If the faculty requirements and/or equipment need to be changed upon approval of this proposal, attach a written estimate of additional needs.
6. If library resources are deemed inadequate, include in the rationale a plan to overcome this. The plan must include the cost as stated by the Dean of Libraries.

**SIGNATURES:** (If disapproved at any level, do not sign. Return to previous signer.)

Department Chair/Division Head: <u>Isaac Wait</u>	Date: <u>2/20/2023</u>
Registrar: 	Date: <u>2.20.2023</u>
College Dean: 	Date: <u>27-Feb-2023</u>
College Curriculum Chair: 	Date: <u>27-Feb-2023</u>
General Education Council Chair *:	Date: _____
University Curriculum Committee Chair: <u>Zach Garrett</u>	Date: <u>3.24.23</u>
Faculty Senate Chair:	Date: _____
VP Academic Affairs/VP Health Science	Date: _____

\* - Signature necessary only if course is to be Core Curriculum Course

**Request for Undergraduate Course Change – Page 2**  
**Additional Information Required for Undergraduate Course Change**

College: CECS Department/Division: Civil Engineering Current Alpha Designator/Number: ENGR 217

**Change in COURSE TITLE:**  Yes  No **NOTE:** If changing to Critical Thinking, you MUST reserve (CT) at the end of new title

From: Engineering Co-Op Preparation

To: Engineering Career Preparation (Limited to 30 characters and spaces.)

**Change in ALPHA DESIGNATOR:**  Yes  No

From: \_\_\_\_\_ To: \_\_\_\_\_

**Change in COURSE NUMBER:**  Yes  No

From: \_\_\_\_\_ To: \_\_\_\_\_

**Change in GRADING MODE** (Graded or Credit/No Credit):  Yes  No

From: \_\_\_\_\_ To: \_\_\_\_\_

**Change in CREDIT HOURS:**  Yes  No

(A change in credit hours requires documentation that specifies the work requirements have been adjusted accordingly.)

From: \_\_\_\_\_ To: \_\_\_\_\_

**Addition of GENERAL EDUCATION ATTRIBUTES:**  Yes  No

From: \_\_\_\_\_ To (check all that apply):  CT  INTL  MC  Core II (Core II type: \_\_\_\_\_)

**Note:** Applications for Gen Ed attributes must be attached. <http://www.marshall.edu/wpmu/gened/core-ii-courses-info/>

**Change in CATALOG DESCRIPTION:**  Yes  No

(Limit of 30 words. If change is substantial, document in the rationale. If change is minor, simply show the change below.)

From:   
To prepare students for both the job search and employment in the field of engineering.  
Students will learn strategies for conducting a successful Co-Op.

To:   
To prepare students for both the job search and a career in the field of engineering. Includes professional communication, networking, interviews, technology, ethics, and licensure.

**Request for Undergraduate Course Change – Page 3**  
**Additional Information Required for Undergraduate Course Change**

College: CECS Department/Division: Civil Engineering Current Alpha Designator/Number: ENGR 217

**Define the rationale for EACH type of change here. NOTE: If major change in content, please consider creating a new course.**

Change in Course Title: since many of the topics in the course apply to a student's entire career, and not just Co-Op, the updated title more accurately represents the intended scope of the material.

Change in Catalog Description: the updated description replaces the preference reference to "Co-Op" with mention of "career", and also includes more detail on the specific topics covered during the course.

**Marshall University**  
College of Engineering and Computer Sciences

<b>Course Title / Number</b>	<b>Engineering Career Preparation / ENGR 217– 1 CH</b>
<b>Semester / Year</b>	Fall / 2023
<b>Days / Time / Location</b>	Tuesday (CRN: 1120, section 101) / 2:00 pm – 2:50 pm (WAEC 1105) Monday (CRN: 1121, section 102) / 3:30 pm – 4:20 pm (WAEC 1105)
<b>Instructor</b>	Isaac Wait, PhD, PE
<b>Office</b>	WAEC 2201A
<b>Phone</b>	304-696-5444
<b>Email</b>	<a href="mailto:wait@marshall.edu">wait@marshall.edu</a>
<b>Office Hours</b>	Monday: 2:00 pm - 4:00 pm Wednesday: 1:30 pm -3:30 pm Friday: 2:00 pm – 4:00 pm
<b>University Policies</b>	By enrolling in this course, you agree to the University Policies listed below. Please read the full text of each policy by going to <a href="http://www.marshall.edu/academic-affairs/">http://www.marshall.edu/academic-affairs/</a> and clicking on “Marshall University Policies.” Or, you can access the policies directly by going to <a href="http://www.marshall.edu/academic-affairs/policies/">http://www.marshall.edu/academic-affairs/policies/</a> .  Academic Dishonesty/ Excused Absences/ University Computing Services’ Acceptable Use/ Inclement Weather/ Dead Week/ Students with Disabilities/ Academic Dismissal/ Academic Forgiveness/ Academic Probation and Suspension/ Affirmative Action/ Sexual Harassment

**Course Description (From Catalog)**

To prepare students for both the job search and a career in the field of engineering. Includes professional communication, networking, interviews, technology, ethics, and licensure. 1 lec.

**Prerequisite / Concurrent Courses**

PR: ENGR 102 (Introduction to CAD) or CE 102 (Introduction to CAD) or CS 110 (Computer Science I)

**Required Textbook / Course Materials**

No textbook is required. Handout materials will be distributed as required.

**Grading Basis (Total = 100%)**

- Attendance: 25%
- Assignments: 75%

**Grading Scale**

- A: Total  $\geq$  90%
- B:  $80\% \leq$  Total  $<$  90%
- C:  $70\% \leq$  Total  $<$  80%
- D:  $60\% \leq$  Total  $<$  70%
- F: Total  $<$  60%

**Course Objectives**

The objective of this course is to prepare students for practicing as an engineering professional, assist students in the development of effective communication skills, and expose the student to professional responsibilities, ethics, and liabilities.

**Communication Policy**

- **Blackboard**: Course materials such as lecture notes, homework assignments, and other supplemental material will be posted on Blackboard. Students are responsible for checking this site daily for any posted updates. You are encouraged to setup up automatic notifications.
- **Emails**: Emails are the easiest way for the faculty to communicate collectively with the class. All students should check their Marshall University email accounts daily, and are responsible for knowing and applying the information and announcements made by the instructor via email.

**Attendance & Lecture Policy**

Students are expected to attend all class sessions. Attendance will be taken at the beginning of each lecture and/or required event; late arrivals (up to 25 minutes late) will count as half an absence, and students arriving more than 25 minutes late will not receive any attendance credit for that class meeting. Students are required to participate in class discussions.

- Talk only to participate in class discussions.
- All cell phones and mobile communication devices should be put away and be out of sight during class.
- Do not work on other assignments during class.
- Any student missing class is responsible for any material covered and any assignments made. In the event of an excused absence (i.e., illness, death in the family, school activity, work requirements, etc.), notify the instructor as soon as possible.

**Homework & Grading Policy**

Homework assignments will be assigned throughout the semester and due at the time and date indicated on the assignment. An assignment that is illegible or is presented in an unprofessional manner will not be accepted. Late submittals will only be accepted in case of an official university-excused absence, and in such case should be submitted at the next class meeting that the student attends. See: <https://www.marshall.edu/student-affairs/excused-absence-form/> If you do not have an official university-excused absence, please do not ask to submit late work. Assignments must be exclusively the work of the student submitting it.

**Submission Formatting Guidelines**

All work must be legible, clear, and written in a professional manner. All work must indicate the student’s name and date(s) work was performed. An assignment that cannot be read or is not presented in a professional manner will not be accepted.

**ABET Outcomes that are related to the material covered in this course**

- (3) an ability to communicate effectively with a range of audiences
- (4) an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
- (7) an ability to acquire and apply new knowledge as needed, using appropriate learning strategies

**Course Learning Outcomes (CLOs)**

Outcome	Implementation	Evaluation Method
Students will be able to produce a résumé that can be used to obtain an engineering internship or co-op.	In-class discussions & exercises	Résumé submissions
Students will be able to search for internship or co-op opportunities using publicly available resources.	In-class discussions & exercises	Preparation of potential employer lists
Students will expand their understanding of employment opportunities by attending a career fair and interacting with engineering employers.	In-class discussions & exercises	Attendance at the MU Career Expo
Students will develop verbal communication skills by participating in a mock interview for an engineering position.	In-class discussions & exercises	Performance at mock interviews
Students will demonstrate an understanding of engineering ethics as it relates to professional conduct.	In-class discussions & exercises	Ethics writing assignment
Students will demonstrate proper business etiquette related to communication.	In-class discussions & exercises	Evaluations of written assignments

## **Health and Safety Information**

All members of the Marshall University community are expected to always observe health and safety protocols. This includes general health and safety protocols as well as specific protocols that might emerge in response to community and campus health conditions.

## **University Policies**

By enrolling in this course, you agree to the University Policies. Please read the full text of each policy (listed below) by going to [MU Academic Affairs: University Policies](https://www.marshall.edu/academic-affairs/policies/). (URL: <https://www.marshall.edu/academic-affairs/policies/> )

- Academic Dishonesty Policy
- Academic Dismissal Policy
- Academic Forgiveness Policy
- Academic Probation and Suspension Policy
- Affirmative Action Policy
- Dead Week Policy
- D/F Repeat Rule
- Excused Absence Policy for Undergraduates
- Inclement Weather Policy
- Sexual Harassment Policy-Marshall's Title IX Office may be contacted at [TitleIX@marshall.edu](mailto:TitleIX@marshall.edu)
- Students with Disabilities (Policies and Procedures)
- University Computing Services Acceptable Use Policy

## Course Schedule

Week	Topic	Assignment Due
1	Course Overview: Syllabus, Course Operations, Engineering Careers	HW 1 - Introductory Assignment.
2	CECS Co-Op Program and Application Process	HW 2 - CECS Co-Op Program.
3	Cover Letter & Resume Workshop (MU Career Education)	HW 3 - Cover Letter & Resume.
4	Corporate Environments, Professional Concepts, and Business Communication	HW 4 - Professional Concepts and Business Communication.
5	Technology in the Workplace	HW 5 - Workplace Technology.
6	LinkedIn and Professional Networking	HW 6 - Professional Networking.
7	Career Expo	HW 7 - Career Expo: attendance and reflection.
8	Engineering Ethics, Part 1	HW 8 - Engineering Ethics pt. 1.
9	Engineering Ethics, Part 2	HW 9 - Engineering Ethics pt. 2.
10	Etiquette Dinner	HW 10 - Etiquette Dinner: attendance and reflection.
11	Interview Workshop & Mock Interviews (MU Career Education)	HW 11 - Mock Interview Preparation.
12	Mock Interviews	HW 12 - Mock Interviews.
13	Licensure and the Engineering Profession	HW 13 - Engineering Licensure.
14	Human Resources: Benefits, Insurance, Retirement, Investments	



## Request for Undergraduate Course Change

1. Prepare one paper copy and obtain signatures from the Department Chair/Division Head, Registrar and College Dean.
2. Submit the form to your College Curriculum Committee.
3. After obtaining the signature of the College Curriculum Chair, send the paper copy to the current University Curriculum Committee Chair
4. Send an identical (sans signatures) ELECTRONIC COPY and all supporting documentation in a single PDF file (PDF Portfolio recommended) to UCC chair,

College: CECS Department/Division: Mechanical Engr. Current Alpha Designator/Number: ME 325  
 Contact Person: Jim McIntosh Phone: x63113

**CURRENT COURSE DATA:**

Course Title (Current Title within Banner): <u>Experimental Design and Thermo</u>	
Alpha Designator/Number: <u>ME 325</u>	Credit Hours: <u>2</u>
Term for which changes will be effective (Fill in with appropriate calendar year.):	
Fall <u>2023</u> Spring _____ Summer _____ Other _____	

**CHECKLIST/QUESTIONS:**

1. Complete this **three** page form in its entirety and route through the departments/committees below for changes to a course involving: course title, alpha designator (see accompanying note to the section on the next page), course number, course content, credit hours, or catalog description.
2. If this change will affect other departments that require this course, please send a memo to the affected department and include it with this packet, as well as, the response received from the affected department.
3. If the changes made to this course will make the course similar in title or content to another department's courses, please send a memo to the affected department and include it with this packet, as well as, the response received from the affected department.
4. List courses, if any, that will be deleted because of this change (*must submit course deletion form*): \_\_\_\_\_
5. If the faculty requirements and/or equipment need to be changed upon approval of this proposal, attach a written estimate of additional needs.
6. If library resources are deemed inadequate, include in the rationale a plan to overcome this. The plan must include the cost as stated by the Dean of Libraries.

**SIGNATURES:** (If disapproved at any level, do not sign. Return to previous signer.)

Department Chair/Division Head: <u>[Signature]</u>	Date: <u>2-20-23</u>
Registrar: <u>[Signature]</u>	Date: <u>2/21/2023</u>
College Dean: <u>[Signature]</u>	Date: <u>27-Feb-2023</u>
College Curriculum Chair: <u>[Signature]</u>	Date: <u>27-Feb-2023</u>
General Education Council Chair *:	Date: _____
University Curriculum Committee Chair: <u>Zack Garrett</u>	Date: <u>3.24.23</u>
Faculty Senate Chair:	Date: _____
VP Academic Affairs/VP Health Science	Date: _____

\* - Signature necessary only if course is to be Core Curriculum Course

**Request for Undergraduate Course Change – Page 2**  
**Additional Information Required for Undergraduate Course Change**

College: CECS Department/Division: Mechanical Engr. Current Alpha Designator/Number: ME 325

**Change in COURSE TITLE:**  Yes  No **NOTE:** If changing to Critical Thinking, you MUST reserve (CT) at the end of new title

From: Experimental Design and Thermo

To: Mechanical Engineering Lab-I (Limited to 30 characters and spaces.)

**Change in ALPHA DESIGNATOR:**  Yes  No

From: \_\_\_\_\_ To: \_\_\_\_\_

**Change in COURSE NUMBER:**  Yes  No

From: \_\_\_\_\_ To: \_\_\_\_\_

**Change in GRADING MODE** (Graded or Credit/No Credit):  Yes  No

From: \_\_\_\_\_ To: \_\_\_\_\_

**Change in CREDIT HOURS:**  Yes  No

(A change in credit hours requires documentation that specifies the work requirements have been adjusted accordingly.)

From: 2 To: 1

**Addition of GENERAL EDUCATION ATTRIBUTES:**  Yes  No

From: \_\_\_\_\_ To (check all that apply):  CT  INTL  MC  Core II (Core II type: \_\_\_\_\_)

**Note:** Applications for Gen Ed attributes must be attached. <http://www.marshall.edu/wpmu/gened/core-ii-courses-info/>

**Change in CATALOG DESCRIPTION:**  Yes  No

(Limit of 30 words. If change is substantial, document in the rationale. If change is minor, simply show the change below.)

From: Experimental analysis and design; probability and statistical, uncertainty, and error analysis; Experiments in fluid, heat and thermodynamics; principles and performance of measuring systems; Laboratory experience. 1 Hour for lecture and 3 hours for lab.

To: Experiments in fluid, heat, and thermodynamics; Experimental analysis, planning, and design; Estimation of error and Uncertainty analysis; Principles and performance of measuring systems; Laboratory experience; Technical report writing.

**Request for Undergraduate Course Change – Page 3**  
**Additional Information Required for Undergraduate Course Change**

College: CECS Department/Division: Mechanical Engr. Current Alpha Designator/Number: ME 325

Define the rationale for EACH type of change here. *NOTE: If major change in content, please consider creating a new course.*

Major revision is removing the experimental design part of the lab and replacing with STA 345. See the attached syllabus for more details.



**Bachelor of Science in Mechanical Engineering**  
**Department of Mechanical and Industrial Engineering**  
**College of Engineering and Computer Sciences**  
**Marshall University**

Course Title/Number	<b>ME 325: Mechanical Engineering Lab I (1 C.H)</b>
Semester/Year	Spring 2024
Days/Time	Wednesdays, 4:00 PM – 6:20 PM
Location	WAEC 1303
Instructor	Mehdi Esmailpour
Office	WAEC 3211
Phone	Office:304-696-5826
E-Mail	<a href="mailto:esmailpour@marshall.edu">esmailpour@marshall.edu</a>
Office/Hours	TBD
Health and Safety Information	All members of the Marshall University community are expected to always observe health and safety protocols. This includes the general health and safety protocols as well as specific protocols that might emerge in response to community and campus health conditions.
University Policies	<p>By enrolling in this course, you agree to the University Policies. Please read the full text of each policy (listed below) by going to <a href="https://www.marshall.edu/academic-affairs/policies/">MU Academic Affairs: University Policies</a>. (URL: <a href="https://www.marshall.edu/academic-affairs/policies/">https://www.marshall.edu/academic-affairs/policies/</a> )</p> <ul style="list-style-type: none"> <li>• Academic Dishonesty Policy</li> <li>• Academic Dismissal Policy</li> <li>• Academic Forgiveness Policy</li> <li>• Academic Probation and Suspension Policy</li> <li>• Affirmative Action Policy</li> <li>• Dead Week Policy</li> <li>• D/F Repeat Rule</li> <li>• Excused Absence Policy for Undergraduates</li> <li>• Inclement Weather Policy</li> <li>• Sexual Harassment Policy-Marshall’s Title IX Office may be contacted at <a href="mailto:TitleIX@marshall.edu">TitleIX@marshall.edu</a></li> <li>• Students with Disabilities (Policies and Procedures)</li> <li>• University Computing Services Acceptable Use Policy</li> </ul>

**Course Description:** Experiments in fluid, heat, and thermodynamics; Experimental analysis, planning, and design; Estimation of error and Uncertainty analysis; Principles and performance of measuring systems; Laboratory experience; Technical report writing.

**Course Prerequisites:** ME310-Thermodynamics II and (ENGR318-Fluid Mechanics or  
**Course Co-requisites:** ME360-Fluid Dynamics)  
ME350 - Heat Transfer.

**Teaching Assistant:** No TA is assigned for this course.

**Course Objective:** The overall objectives of the Experimental Design and Thermo-Fluid Lab are to:

- (1) develop an awareness and understanding of experimental methods with particular applications to mechanical engineering,
- (2) apply statistical approaches to real-world situations through engineering application of statistical concepts
- (3) develop ways to communicate effectively the experimental methodology, results, and conclusions.

These objectives are accomplished by the following methods:

- Students will professionally prepare lab reports and present the interpreted results of a designed experiment;
- Students will exchange information among team members to design and conduct an experiment, as well as interpret the data;
- Students will develop and describe an experimental procedure and instructions on how to collect data for the experimental test;
- Students will prepare a tabular summary of data and calculations performed, including a description of the equations used in computing table entries;
- Students will identify, quantify, and comment on the significance of trends illustrated by the experimental results.

**Course Structure:** In this course, the emphasis is on experiments related to heat transfer, fluid mechanics, and thermodynamics. Proper experimental methods, data, and uncertainty analysis related to thermal and fluid measurements will be discussed. The laboratory assignment includes a Lab report. All lab guidelines, instrumentation manuals, grading forms, and grades will be posted on Blackboard throughout the semester. Lab reports need to be submitted as a **Word file** through the Blackboard by assigned dates throughout the session. One exam will be taken at the end of the semester for this part. According to Marshall University Spring 2024 Exam Schedule, the final exam will be held on Wednesday of exam week from 4:00 pm to 6:00 pm. No makeup exam will be given except for an official university excused absence approved and validated by the [Student Affairs Office](#).

**References:**

- R.S. Figliola, D. E. Beasley, *Theory and Design for Mechanical Measurements*, 5<sup>th</sup> Edition, John Wiley and Sons, Inc, New York, 2011.
- J. Holman, *Experimental Methods for Engineers*, 8<sup>th</sup> Edition, McGraw Hill, 2011
- M. A. Boles, Y. A. Cengel, *Thermodynamics: An Engineering Approach*, 8<sup>th</sup> Edition, McGraw Hill, 2014.
- I. Shames, *Mechanics of Fluids*, 4th Edition, McGraw Hill, 2003.
- T. L. Bergman, A. S. Lavine, F. P. Incropera, D. P. DeWitt, *Introduction to Heat Transfer*, 7<sup>th</sup> Edition, Wiley&Sons, New York, 2011.

**Grading scheme:**

- Attendance ..... 5%
- Homework ..... 5%
- Technical report ..... 75%
- Final exam ..... 15%
- **Total** ..... 100%

**Grading scale:**

- A.....90.0% - 100.0%
- B.....80.0% - 89.99%
- C.....70.0% - 79.99%
- D.....60.0% - 69.99%
- F.....0.00% - 59.99%

**Scheduling conflicts:**

Students anticipating a scheduling conflict should contact the instructor as soon as possible. It is suggested to review all dates and times published in the Spring 2024 Academic Calendar.

**Collaboration Policy, and academic dishonesty:**

In this class, students will prepare both individual and group lab reports. The discussion of experimental results with other students in the class and/or working in groups is acceptable and encouraged. This is a good way to develop that team concept, and to learn from each other, thereby putting in fewer hours on preparing lab reports. However, direct copying of lab reports in part or total is not allowed. College regulations recommend that a zero be given in all assignments if this policy is violated.

**Experimental Labs:**

<b>Lab Experiments:</b>	
<b>Title</b>	<b>Type</b>
Pump	Fluid
Wind Tunnel Testing Principles	Fluid
Conduction Heat Transfer	Thermal-Fluid
Force and Free convection over objects	Thermal-Fluid

Forced convection inside a pipe	Thermal-Fluid
Heat Exchangers	Thermal-Fluid
Combustion Engine	Thermal-Fluid
Power Plant	Thermodynamics

**Experimental Lab Policies:**

**1. Lab Attendance Policy**

Attendance at the lab is **mandatory** to receive a passing grade. 50% of the total possible for that particular report score will be subtracted for every 30 minutes of the lab that you miss without an excused absence. Students should contact the course instructor to receive an excused absence **before** an unavoidable conflict with the lab occurs. Only acceptable reasons for an excused absence will be considered, such as a medical condition supported by a doctor’s report, job interviews, and family emergencies.

**2. Late Policy for Lab Reports**

Lab reports will have a 10% penalty for every day they are turned in late, except for excused reasons as discussed above. Reports will be due by 4:00 pm on the due dates indicated on the schedule. The word file of technical reports must be submitted online to Blackboard.

**4. Lab safety guidelines**

Please follow these important guidelines:

***General:***

- No food (sandwiches, candy, fruit, etc.) or drinks (soda, coffee, etc.) are allowed in the laboratory. A spilled cup or wayward crumbs can be very harmful to the instruments and create a safety hazard.
- Maintain clean and orderly laboratories and work areas. Make sure all spilled liquids (water, oils, etc.) are wiped up immediately.
- Any injuries should be reported immediately for proper care.
- Keep aisles/walkways clear.
- You are responsible for maintaining your work area in a safe and reasonable condition.
- Do not leave experiments running unattended unless the instructor explicitly grants permission to do so.
- All **members** of the team **must** be present while performing experiments or operating instrumentation.

***Electrical:***

- Be careful of all electrical instruments. Watch for worn/exposed power cords.
- Unplug electrical equipment before repairing or servicing it.

***Mechanical:***

- Never wear gloves when working with equipment that has exposed moving or rotating parts.
- Always maintain awareness of the activity around you.
- You must be aware of the various machine controls (start button, stop button, speed-change control) for each machine you are authorized to operate. **Always know how to stop a machine before you start it!**

**Laboratory Behavior and Practice:**

In view of their purpose, laboratories exhibit the potential to be hazardous. Delicate and expensive equipment demands that special precautions be taken to ensure proper operation and safety for the user. A few basic steps can be taken to make the laboratory safe and an enjoyable and productive experience. Some of these steps are listed below:

- No excessive noise (loud talking, radios, etc.) is allowed as a disturbance to others may easily occur.
- Absolutely no smoking in laboratories.
- Report immediately any defective or malfunctioning equipment. If a piece of equipment is broken, report it to the instructor immediately.
- Return all tools, equipment, and manuals to their proper place so that you and others always know where to find them.
- Make sure all equipment, valves, lights, etc., are turned off when you leave the laboratory. Points will be deducted for groups who continually leave lab equipment running or lab space untidy.

**Laboratory and Classroom Behavior Expectations:**

Attitude and actions define who we are. Students are expected to behave professionally in the laboratory. Coming to class unprepared, apathetic, disrespectful, and unmotivated shows a degree of unprofessionalism that is unacceptable for seniors about to graduate. Some guidance:

- Read through the syllabus carefully to know what to expect in the course.
- Read the material before the labs.
- Reports should look and sound professional and of good quality.
- Always be honest and show uncompromising integrity.
- Show up for laboratory either before laboratory starts or on time.
- Do not include funny comments in your assignments.
- Stay awake during class.
- Spit out gum and turn off cell phones.
- Do not work on other assignments during laboratory sessions.



**Table 1.** Relationships between Course, Student Outcomes, and Degree Profile Outcomes.

<b>Course Outcome</b>	<b>Implementation Method</b>	<b>Evaluation Method</b>	<b>Student Outcomes</b>
(1) Students will develop and describe an experimental procedure and instructions on how to collect data in each experiment.	Lab Manuals Lab Experiment	Lap Reports	6
(2) Students will exchange information among team members to conduct an experiment, as well as interpret the data.	Lab Manuals Lab Experiment	Lab Reports	5
(3) Students will prepare a tabular summary of data and calculations performed, including a description of the equations used in computing table entries.	Lab Manuals Lab Experiment	Lap Reports	6
(4) Students will identify, quantify, and comment on the significance of trends illustrated by the experimental results.	Lab Manuals Lab Experiment Exam	Lab Reports Exams	6
(5) Students will professionally prepare lab reports and present the interpreted results of an experiment.	Lab Manuals Lab Experiment	Lab Reports	3
(6) Students will learn basic rules of error analysis and will be able to use them in modeling uncertainty in obtaining and recording data.	Lectures Homework Exam	Exams Homework	1

**Table 2.** Course Learning Outcome (CLO) student outcome measurement.

<b>Course Outcome</b>	<b>Implementation Method</b>	<b>Evaluation Method</b>
(1) Students will develop and describe an experimental procedure and instructions on how to collect data in each experiment.	Lab Manuals	Lap Reports
(2) Students will exchange information among team members to conduct an experiment, as well as interpret the data.	Lab Manuals	Lab Reports
(3) Students will prepare a tabular summary of data and calculations performed, including a description of the equations used in computing table entries.	Lab Manuals	Lap Reports
(4) Students will identify, quantify, and comment on the significance of trends illustrated by the experimental results.	Lab Manuals Lectures Exam	Lab Reports Exam
(5) Students will professionally prepare lab reports and present the interpreted results of an experiment.	Lab Manuals	Lab Reports
(6) Students will learn basic rules of error analysis and will be able to use them in modeling uncertainty in obtaining and recording data.	Lectures Homework Exam	Homework Exam

**Table 3.** ABET student outcome measurement.

<b>Outcome</b>	<b>Implementation Method</b>	<b>Evaluation Method</b>
1. an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.	Lab Manuals Lab Experiment	Exam Homework
2. an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.		
3. an ability to communicate effectively with a range of audiences.	Lab Manuals Lab Experiment	Lab Report
4. an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.		
5. an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.	Lab Manuals Lab Experiment	Lab Report
6. an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.	Lab Manuals Lab Experiment	Lab Report
7. an ability to acquire and apply new knowledge as needed, using appropriate learning strategies.		

## Request for Undergraduate Course Change

1. Prepare one paper copy and obtain signatures from the Department Chair/Division Head, Registrar and College Dean.
2. Submit the form to your College Curriculum Committee.
3. After obtaining the signature of the College Curriculum Chair, send the paper copy to the current University Curriculum Committee Chair
4. Send an identical (sans signatures) ELECTRONIC COPY and all supporting documentation in a single PDF file (PDF Portfolio recommended) to UCC chair.

College: LCOB Department/Division: ACC/LE Current Alpha Designator/Number: ACC 215  
 Contact Person: Amanda Meadows Phone: 304-696-2660

**CURRENT COURSE DATA:**

Course Title (Current Title within Banner): <u>Accounting Principles(CT)</u>	
Alpha Designator/Number: <u>ACC 215</u>	Credit Hours: <u>3</u>
Term for which changes will be effective (Fill in with appropriate calendar year.):	
Fall <u>2023</u> Spring _____ Summer _____ Other _____	

**CHECKLIST/QUESTIONS:**

1. Complete this **three** page form in its entirety and route through the departments/committees below for changes to a course involving: course title, alpha designator (see accompanying note to the section on the next page), course number, course content, credit hours, or catalog description.
2. If this change will affect other departments that require this course, please send a memo to the affected department and include it with this packet, as well as, the response received from the affected department.
3. If the changes made to this course will make the course similar in title or content to another department's courses, please send a memo to the affected department and include it with this packet, as well as, the response received from the affected department.
4. List courses, if any, that will be deleted because of this change (*must submit course deletion form*): \_\_\_\_\_
5. If the faculty requirements and/or equipment need to be changed upon approval of this proposal, attach a written estimate of additional needs.
6. If library resources are deemed inadequate, include in the rationale a plan to overcome this. The plan must include the cost as stated by the Dean of Libraries.

**SIGNATURES:** (If disapproved at any level, do not sign. Return to previous signer.)

Department Chair/Division Head: <u>Jean Puce</u>	Date: <u>2/1/2023</u>
Registrar: <u>[Signature]</u>	Date: <u>2/3/2023</u>
College Dean: <u>Jeffrey J. Archibald</u>	Date: <u>2/7/2023</u>
College Curriculum Chair: <u>[Signature]</u>	Date: <u>03/07/2023</u>
General Education Council Chair *:	Date: _____
University Curriculum Committee Chair: <u>Zach Garrett</u>	Date: <u>3.24.23</u>
Faculty Senate Chair:	Date: _____
VP Academic Affairs/VP Health Science	Date: _____

\* - Signature necessary only if course is to be Core Curriculum Course

**Request for Undergraduate Course Change – Page 2**  
**Additional Information Required for Undergraduate Course Change**

College: LCOB Department/Division: ACC/LE Current Alpha Designator/Number: ACC 215

**Change in COURSE TITLE:**  Yes  No **NOTE:** If changing to Critical Thinking, you MUST reserve (CT) at the end of new title

From: Accounting Principles(CT)  
To: Intro Financial Accounting(CT) (Limited to 30 characters and spaces.)

**Change in ALPHA DESIGNATOR:**  Yes  No

From: \_\_\_\_\_ To: \_\_\_\_\_

**Change in COURSE NUMBER:**  Yes  No

From: \_\_\_\_\_ To: \_\_\_\_\_

**Change in GRADING MODE (Graded or Credit/No Credit):**  Yes  No

From: \_\_\_\_\_ To: \_\_\_\_\_

**Change in CREDIT HOURS:**  Yes  No  
(A change in credit hours requires documentation that specifies the work requirements have been adjusted accordingly.)

From: \_\_\_\_\_ To: \_\_\_\_\_

**Addition of GENERAL EDUCATION ATTRIBUTES:**  Yes  No

From: \_\_\_\_\_ To (check all that apply):  CT  INTL  MC  Core II (Core II type: \_\_\_\_\_)

**Note:** Applications for Gen Ed attributes must be attached. <http://www.marshall.edu/wpmu/gened/core-ii-courses-info/>

**Change in CATALOG DESCRIPTION:**  Yes  No

(Limit of 30 words. If change is substantial, document in the rationale. If change is minor, simply show the change below.)

From: Introduction to principles and procedures of double-entry accounting records and reports.  
This course meets a Core 1/Critical Thinking requirement.

To: Introduction to financial accounting principles and procedures, including transaction analysis, journalizing, financial statement preparation, business formations, internal control, and financial statement analysis. ~~Students will practice critical thinking and analytical skills.~~ This course meets a Core 1/Critical Thinking requirement.

**Request for Undergraduate Course Change – Page 3**  
**Additional Information Required for Undergraduate Course Change**

College: LCOB Department/Division: ACC/LE Current Alpha Designator/Number: ACC 215

Define the rationale for EACH type of change here. *NOTE: If major change in content, please consider creating a new course.*

Changing the course title to better differentiate between ACC 215 and ACC 216. Changing description to better describe what is already being taught in the course.

## Request for Undergraduate Course Change

1. Prepare one paper copy and obtain signatures from the Department Chair/Division Head, Registrar and College Dean.
2. Submit the form to your College Curriculum Committee.
3. After obtaining the signature of the College Curriculum Chair, send the paper copy to the current University Curriculum Committee Chair
4. Send an identical (sans signatures) ELECTRONIC COPY and all supporting documentation in a single PDF file (PDF Portfolio recommended) to UCC chair.

College: LCOB Department/Division: ACC/LE Current Alpha Designator/Number: ACC 216  
 Contact Person: Amanda Meadows Phone: 304-696-2660

**CURRENT COURSE DATA:**

Course Title (Current Title within Banner): <u>Principles of Accounting</u>	
Alpha Designator/Number: <u>ACC 216</u>	Credit Hours: <u>3</u>
Term for which changes will be effective (Fill in with appropriate calendar year.):	
Fall <u>2023</u> Spring _____ Summer _____ Other _____	

**CHECKLIST/QUESTIONS:**

1. Complete this **three** page form in its entirety and route through the departments/committees below for changes to a course involving: course title, alpha designator (see accompanying note to the section on the next page), course number, course content, credit hours, or catalog description.
2. If this change will affect other departments that require this course, please send a memo to the affected department and include it with this packet, as well as, the response received from the affected department.
3. If the changes made to this course will make the course similar in title or content to another department's courses, please send a memo to the affected department and include it with this packet, as well as, the response received from the affected department.
4. List courses, if any, that will be deleted because of this change (*must submit course deletion form*): \_\_\_\_\_
5. If the faculty requirements and/or equipment need to be changed upon approval of this proposal, attach a written estimate of additional needs.
6. If library resources are deemed inadequate, include in the rationale a plan to overcome this. The plan must include the cost as stated by the Dean of Libraries.

**SIGNATURES:** (If disapproved at any level, do not sign. Return to previous signer.)

Department Chair/Division Head: <u>Teann Price</u>	Date: <u>2/1/2023</u>
Registrar: <u>[Signature]</u>	Date: <u>2/3/2023</u>
College Dean: <u>Jeffrey J. Archibald</u>	Date: <u>2/7/2023</u>
College Curriculum Chair: <u>Vijaywan</u>	Date: <u>03/07/2023</u>
General Education Council Chair *:	Date: _____
University Curriculum Committee Chair: <u>Zach Garrett</u>	Date: <u>3.24.23</u>
Faculty Senate Chair: _____	Date: _____
VP Academic Affairs/VP Health Science	Date: _____

\* - Signature necessary only if course is to be Core Curriculum Course

**Request for Undergraduate Course Change – Page 2**  
**Additional Information Required for Undergraduate Course Change**

College: LCOB Department/Division: ACC/LE Current Alpha Designator/Number: ACC 216

**Change in COURSE TITLE:**  Yes  No **NOTE:** If changing to Critical Thinking, you MUST reserve (CT) at the end of new title

From: Principles of Accounting

To: Intro Managerial Accounting (Limited to 30 characters and spaces.)

**Change in ALPHA DESIGNATOR:**  Yes  No

From: \_\_\_\_\_ To: \_\_\_\_\_

**Change in COURSE NUMBER:**  Yes  No

From: \_\_\_\_\_ To: \_\_\_\_\_

**Change in GRADING MODE (Graded or Credit/No Credit):**  Yes  No

From: \_\_\_\_\_ To: \_\_\_\_\_

**Change in CREDIT HOURS:**  Yes  No

(A change in credit hours requires documentation that specifies the work requirements have been adjusted accordingly.)

From: \_\_\_\_\_ To: \_\_\_\_\_

**Addition of GENERAL EDUCATION ATTRIBUTES:**  Yes  No

From: \_\_\_\_\_ To (check all that apply):  CT  INTL  MC  Core II (Core II type: \_\_\_\_\_)

**Note: Applications for Gen Ed attributes must be attached.** <http://www.marshall.edu/wpmu/gened/core-ii-courses-info/>

**Change in CATALOG DESCRIPTION:**  Yes  No

(Limit of 30 words. If change is substantial, document in the rationale. If change is minor, simply show the change below.)

From: Using accounting information to assist in managerial control and decision making.

To:

Introduction to managerial accounting for use in managerial control and decision making. The course explores cost application methods, budgeting, profitability analysis, and decision-making models.



**Request for Undergraduate Course Change – Page 3**  
**Additional Information Required for Undergraduate Course Change**

College: LCOB Department/Division: ACC/LE Current Alpha Designator/Number: ACC 216

Define the rationale for EACH type of change here. *NOTE: If major change in content, please consider creating a new course.*

Changing the course title to better differentiate between ACC 215 and ACC 216. Changing description to better describe what is already being taught in the course.

## Request for Undergraduate Course Change

1. Prepare one paper copy and obtain signatures from the Department Chair/Division Head, Registrar and College Dean.
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3. After obtaining the signature of the College Curriculum Chair, send the paper copy to the current University Curriculum Committee Chair
4. Send an identical (sans signatures) ELECTRONIC COPY and all supporting documentation in a single PDF file (PDF Portfolio recommended) to UCC chair.

College: COHP Department/Division: CD Current Alpha Designator/Number: HC 40- BS CD 472  
 Contact Person: Loukia Dixon, Pam Holland, Shae Dean Phone: 304-696-2980

**CURRENT COURSE DATA:**

Course Title (Current Title within Banner): <u>SLP-A Practicum II: Clinical Practicum with School</u>	
Alpha Designator/Number: <u>HC 40-BS CD 472</u>	Credit Hours: <u>1</u>
Term for which changes will be effective (Fill in with appropriate calendar year.):	
Fall _____ Spring _____ Summer <u>2023</u> Other _____	

**CHECKLIST/QUESTIONS:**

1. Complete this **three** page form in its entirety and route through the departments/committees below for changes to a course involving: course title, alpha designator (see accompanying note to the section on the next page), course number, course content, credit hours, or catalog description.
2. If this change will affect other departments that require this course, please send a memo to the affected department and include it with this packet, as well as, the response received from the affected department.
3. If the changes made to this course will make the course similar in title or content to another department's courses, please send a memo to the affected department and include it with this packet, as well as, the response received from the affected department.
4. List courses, if any, that will be deleted because of this change (*must submit course deletion form*): N/A
5. If the faculty requirements and/or equipment need to be changed upon approval of this proposal, attach a written estimate of additional needs.
6. If library resources are deemed inadequate, include in the rationale a plan to overcome this. The plan must include the cost as stated by the Dean of Libraries.

**SIGNATURES:** (If disapproved at any level, do not sign. Return to previous signer.)

Department Chair/Division Head: <u>[Signature]</u>	Date: <u>2/6/23</u>
Registrar: <u>[Signature]</u>	Date: <u>2.9.2023</u>
College Dean: <u>[Signature]</u>	Date: <u>2.6.23</u>
College Curriculum Chair: <u>Zach Garrett</u>	Date: <u>2.24.23</u>
General Education Council Chair *:	Date: _____
University Curriculum Committee Chair: <u>Zach Garrett</u>	Date: <u>3.24.23</u>
Faculty Senate Chair:	Date: _____
VP Academic Affairs/VP Health Science	Date: _____

\* - Signature necessary only if course is to be Core Curriculum Course

**Request for Undergraduate Course Change – Page 2**  
**Additional Information Required for Undergraduate Course Change**

College: COHP Department/Division: CD Current Alpha Designator/Number: HC30-BS, CD 472

**Change in COURSE TITLE:** \_\_\_\_\_ Yes  No **NOTE:** If changing to Critical Thinking, you MUST reserve (CT) at the end of new title

From: \_\_\_\_\_

To: \_\_\_\_\_ (Limited to 30 characters and spaces.)

**Change in ALPHA DESIGNATOR:** \_\_\_\_\_ Yes  No

From: \_\_\_\_\_ To: \_\_\_\_\_

**Change in COURSE NUMBER:** \_\_\_\_\_ Yes  No

From: \_\_\_\_\_ To: \_\_\_\_\_

**Change in GRADING MODE (Graded or Credit/No Credit):**  Yes \_\_\_\_\_ No

From: Credit To: Graded

**Change in CREDIT HOURS:** \_\_\_\_\_ Yes  No  
(A change in credit hours requires documentation that specifies the work requirements have been adjusted accordingly.)

From: \_\_\_\_\_ To: \_\_\_\_\_

**Addition of GENERAL EDUCATION ATTRIBUTES:** \_\_\_\_\_ Yes  No

From: \_\_\_\_\_ To (check all that apply):  CT  INTL  MC  Core II (Core II type: \_\_\_\_\_)

**Note:** Applications for Gen Ed attributes must be attached. <http://www.marshall.edu/wpmu/gened/core-ii-courses-info/>

**Change in CATALOG DESCRIPTION:** \_\_\_\_\_ Yes  No  
(Limit of 30 words. If change is substantial, document in the rationale. If change is minor, simply show the change below.)  
From:

To:

**Request for Undergraduate Course Change – Page 3**  
**Additional Information Required for Undergraduate Course Change**

College: COHP Department/Division: CD Current Alpha Designator/Number: HC30-BS, CD 472

Define the rationale for EACH type of change here. *NOTE: If major change in content, please consider creating a new course.*

Change from Credit/No Credit to Graded Course:

A request for an undergraduate course change was submitted for CD 472 when integrating the course into the Speech Language Pathology Assistant program. It was previously approved by Faculty Senate. Through departmental oversight, this course was not changed from a Credit/No Credit designation to Graded status when it was submitted. This course should be a Graded course of 3, 1 hour sections, according to the requirements of the SLPA program. This is the rationale for this request.

## Request for Undergraduate Course Change

1. Prepare **one** paper copy and obtain signatures from the Department Chair/Division Head, Registrar and College Dean.
2. Submit the form to your College Curriculum Committee.
3. After obtaining the signature of the College Curriculum Chair, send the paper copy to the current University Curriculum Committee Chair
4. Send an identical (sans signatures) ELECTRONIC COPY and all supporting documentation in a single PDF file (PDF Portfolio recommended) to UCC chair.

College: COLA Department/Division: English Current Alpha Designator/Number: ENG 205  
 Contact Person: Daniel O'Malley Phone: 696-6605

**CURRENT COURSE DATA:**

Course Title (Current Title within Banner): Popular Literature  
 Alpha Designator/Number: ENG 205 Credit Hours: 3  
 Term for which changes will be effective (Fill in with appropriate calendar year.):  
 Fall 2023 Spring \_\_\_\_\_ Summer \_\_\_\_\_ Other \_\_\_\_\_

**CHECKLIST/QUESTIONS:**

1. Complete this **three** page form in its entirety and route through the departments/committees below for changes to a course involving: course title, alpha designator (see accompanying note to the section on the next page), course number, course content, credit hours, or catalog description.
2. If this change will affect other departments that require this course, please send a memo to the affected department and include it with this packet, as well as, the response received from the affected department.
3. If the changes made to this course will make the course similar in title or content to another department's courses, please send a memo to the affected department and include it with this packet, as well as, the response received from the affected department.
4. List courses, if any, that will be deleted because of this change (*must submit course deletion form*): \_\_\_\_\_
5. If the faculty requirements and/or equipment need to be changed upon approval of this proposal, attach a written estimate of additional needs.
6. If library resources are deemed inadequate, include in the rationale a plan to overcome this. The plan must include the cost as stated by the Dean of Libraries.

**SIGNATURES:** (If disapproved at any level, do not sign. Return to previous signer.)

Department Chair/Division Head: <u>Allison E. Carey</u>	Date: <u>2/8/2023</u>
Registrar: <u>[Signature]</u> 231404	Date: <u>2/9/2023</u>
College Dean: <u>[Signature]</u>	Date: <u>2/13/23</u>
College Curriculum Chair: <u>Jonathan Kozar</u>	Date: <u>2/24/23</u>
General Education Council Chair *:	Date: _____
University Curriculum Committee Chair: <u>Zach Garrett</u>	Date: <u>3.24.23</u>
Faculty Senate Chair:	Date: _____
VP Academic Affairs/VP Health Science	Date: _____

\* - Signature necessary only if course is to be Core Curriculum Course

**Request for Undergraduate Course Change – Page 2**  
**Additional Information Required for Undergraduate Course Change**

College: COLA Department/Division: English Current Alpha Designator/Number: ENG 205

**Change in COURSE TITLE:** \_\_\_\_\_ Yes  No **NOTE:** If changing to Critical Thinking, you MUST reserve (CT) at the end of new title

From: \_\_\_\_\_

To: \_\_\_\_\_ (Limited to 30 characters and spaces.)

**Change in ALPHA DESIGNATOR:** \_\_\_\_\_ Yes  No

From: \_\_\_\_\_ To: \_\_\_\_\_

**Change in COURSE NUMBER:** \_\_\_\_\_ Yes  No

From: \_\_\_\_\_ To: \_\_\_\_\_

**Change in GRADING MODE (Graded or Credit/No Credit):** \_\_\_\_\_ Yes  No

From: \_\_\_\_\_ To: \_\_\_\_\_

**Change in CREDIT HOURS:** \_\_\_\_\_ Yes  No

(A change in credit hours requires documentation that specifies the work requirements have been adjusted accordingly.)

From: \_\_\_\_\_ To: \_\_\_\_\_

**Addition of GENERAL EDUCATION ATTRIBUTES:** \_\_\_\_\_ Yes  No

From: \_\_\_\_\_ To (check all that apply):  CT  INTL  MC  Core II (Core II type: \_\_\_\_\_)

**Note: Applications for Gen Ed attributes must be attached.** <http://www.marshall.edu/wpmu/gened/core-ii-courses-info/>

**Change in CATALOG DESCRIPTION:** \_\_\_\_\_ Yes  No

(Limit of 30 words. If change is substantial, document in the rationale. If change is minor, simply show the change below.)

From: The study of popular literature in its cultural contexts

To:

Study of popular literature in cultural contexts. Selections may include horror, adventure, romance, or espionage, among other popular genres.

**Request for Undergraduate Course Change – Page 3**  
**Additional Information Required for Undergraduate Course Change**

College: COLA Department/Division: English Current Alpha Designator/Number: ENG 205

Define the rationale for EACH type of change here. *NOTE: If major change in content, please consider creating a new course.*  
The change is intended to give prospective students a more detailed sense of what the course entails, without overly determining an instructor's approach to the material.

## Request for Undergraduate Course Change

1. Prepare one paper copy and obtain signatures from the Department Chair/Division Head, Registrar and College Dean.
2. Submit the form to your College Curriculum Committee.
3. After obtaining the signature of the College Curriculum Chair, send the paper copy to the current University Curriculum Committee Chair
4. Send an identical (sans signatures) ELECTRONIC COPY and all supporting documentation in a single PDF file (PDF Portfolio recommended) to UCC chair.

College: COLA Department/Division: English Current Alpha Designator/Number: ENG 240  
 Contact Person: Daniel O'Malley Phone: 696-6605

**CURRENT COURSE DATA:**

Course Title (Current Title within Banner): African American Literatures  
 Alpha Designator/Number: ENG 240 Credit Hours: 3  
 Term for which changes will be effective (Fill in with appropriate calendar year.):  
 Fall 2023 Spring \_\_\_\_\_ Summer \_\_\_\_\_ Other \_\_\_\_\_

**CHECKLIST/QUESTIONS:**

1. Complete this **three** page form in its entirety and route through the departments/committees below for changes to a course involving: course title, alpha designator (see accompanying note to the section on the next page), course number, course content, credit hours, or catalog description.
2. If this change will affect other departments that require this course, please send a memo to the affected department and include it with this packet, as well as, the response received from the affected department.
3. If the changes made to this course will make the course similar in title or content to another department's courses, please send a memo to the affected department and include it with this packet, as well as, the response received from the affected department.
4. List courses, if any, that will be deleted because of this change (*must submit course deletion form*): \_\_\_\_\_
5. If the faculty requirements and/or equipment need to be changed upon approval of this proposal, attach a written estimate of additional needs.
6. If library resources are deemed inadequate, include in the rationale a plan to overcome this. The plan must include the cost as stated by the Dean of Libraries.

**SIGNATURES:** (If disapproved at any level, do not sign. Return to previous signer.)

Department Chair/Division Head: <u>Allyson Carey</u>	Date: <u>2/8/2023</u>
Registrar: <u>[Signature]</u> 230101 <u>[Signature]</u>	Date: <u>2/9/2023</u>
College Dean: <u>[Signature]</u>	Date: <u>2/13/23</u>
College Curriculum Chair: <u>Jonathan Kozar</u>	Date: <u>2/24/23</u>
General Education Council Chair *:	Date: _____
University Curriculum Committee Chair: <u>Zach Garrett</u>	Date: <u>3.24.23</u>
Faculty Senate Chair:	Date: _____
VP Academic Affairs/VP Health Science	Date: _____

\* - Signature necessary only if course is to be Core Curriculum Course



**Request for Undergraduate Course Change – Page 2**  
**Additional Information Required for Undergraduate Course Change**

College: COLA Department/Division: English Current Alpha Designator/Number: ENG 240

**Change in COURSE TITLE:** \_\_\_\_\_ Yes  No **NOTE:** If changing to Critical Thinking, you MUST reserve (CT) at the end of new title

From: \_\_\_\_\_

To: \_\_\_\_\_ (Limited to 30 characters and spaces.)

**Change in ALPHA DESIGNATOR:** \_\_\_\_\_ Yes  No

From: \_\_\_\_\_ To: \_\_\_\_\_

**Change in COURSE NUMBER:** \_\_\_\_\_ Yes  No

From: \_\_\_\_\_ To: \_\_\_\_\_

**Change in GRADING MODE** (Graded or Credit/No Credit): \_\_\_\_\_ Yes  No

From: \_\_\_\_\_ To: \_\_\_\_\_

**Change in CREDIT HOURS:** \_\_\_\_\_ Yes  No

(A change in credit hours requires documentation that specifies the work requirements have been adjusted accordingly.)

From: \_\_\_\_\_ To: \_\_\_\_\_

**Addition of GENERAL EDUCATION ATTRIBUTES:** \_\_\_\_\_ Yes  No

From: \_\_\_\_\_ To (check all that apply):  CT  INTL  MC  Core II (Core II type: \_\_\_\_\_)

**Note:** Applications for Gen Ed attributes must be attached. <http://www.marshall.edu/wpmu/gened/core-ii-courses-info/>

**Change in CATALOG DESCRIPTION:** \_\_\_\_\_ Yes  No

(Limit of 30 words. If change is substantial, document in the rationale. If change is minor, simply show the change below.)

From: Examination of the tradition in African American literatures through close reading.

To:

Study of African American literature in cultural contexts. Genres may include poetry, fiction, nonfiction, drama, film, and graphic narratives.

**Request for Undergraduate Course Change – Page 3**  
**Additional Information Required for Undergraduate Course Change**

College: COLA Department/Division: English Current Alpha Designator/Number: ENG 240

Define the rationale for EACH type of change here. *NOTE: If major change in content, please consider creating a new course.*  
The change is intended to give prospective students a more detailed sense of what the course entails, without overly determining an instructor's approach to the material.

## Request for Undergraduate Course Change

1. Prepare one paper copy and obtain signatures from the Department Chair/Division Head, Registrar and College Dean.
2. Submit the form to your College Curriculum Committee.
3. After obtaining the signature of the College Curriculum Chair, send the paper copy to the current University Curriculum Committee Chair
4. Send an identical (sans signatures) ELECTRONIC COPY and all supporting documentation in a single PDF file (PDF Portfolio recommended) to UCC chair.

College: COLA Department/Division: English Current Alpha Designator/Number: ENG 377  
 Contact Person: Daniel O'Malley Phone: 696-6605

**CURRENT COURSE DATA:**

Course Title (Current Title within Banner): <u>Creative Writing Poetry</u>	
Alpha Designator/Number: <u>ENG 377</u>	Credit Hours: <u>3</u>
Term for which changes will be effective (Fill in with appropriate calendar year.):	
Fall <u>2023</u>	Spring _____ Summer _____ Other _____

**CHECKLIST/QUESTIONS:**

1. Complete this **three** page form in its entirety and route through the departments/committees below for changes to a course involving: course title, alpha designator (see accompanying note to the section on the next page), course number, course content, credit hours, or catalog description.
2. If this change will affect other departments that require this course, please send a memo to the affected department and include it with this packet, as well as, the response received from the affected department.
3. If the changes made to this course will make the course similar in title or content to another department's courses, please send a memo to the affected department and include it with this packet, as well as, the response received from the affected department.
4. List courses, if any, that will be deleted because of this change (*must submit course deletion form*): \_\_\_\_\_
5. If the faculty requirements and/or equipment need to be changed upon approval of this proposal, attach a written estimate of additional needs.
6. If library resources are deemed inadequate, include in the rationale a plan to overcome this. The plan must include the cost as stated by the Dean of Libraries.

**SIGNATURES:** (If disapproved at any level, do not sign. Return to previous signer.)

Department Chair/Division Head: <u>Allison Elan</u>	Date: <u>2/8/2023</u>
Registrar: <u>Christy Hill</u> <u>23102</u> <u>231302</u>	Date: <u>2/9/2023</u>
College Dean: <u>FB Brubaker</u>	Date: <u>2/13/23</u>
College Curriculum Chair: <u>Jonathan Kozar</u>	Date: <u>2/24/23</u>
General Education Council Chair *:	Date: _____
University Curriculum Committee Chair: <u>Zach Garrett</u>	Date: <u>3.24.23</u>
Faculty Senate Chair:	Date: _____
VP Academic Affairs/VP Health Science	Date: _____

\* - Signature necessary only if course is to be Core Curriculum Course

**Request for Undergraduate Course Change – Page 2**  
**Additional Information Required for Undergraduate Course Change**

College: COLA Department/Division: English Current Alpha Designator/Number: ENG 377

**Change in COURSE TITLE:** \_\_\_\_\_ Yes  No **NOTE:** If changing to Critical Thinking, you MUST reserve (CT) at the end of new title

From: \_\_\_\_\_

To: \_\_\_\_\_ (Limited to 30 characters and spaces.)

**Change in ALPHA DESIGNATOR:** \_\_\_\_\_ Yes  No

From: \_\_\_\_\_ To: \_\_\_\_\_

**Change in COURSE NUMBER:** \_\_\_\_\_ Yes  No

From: \_\_\_\_\_ To: \_\_\_\_\_

**Change in GRADING MODE** (Graded or Credit/No Credit): \_\_\_\_\_ Yes  No

From: \_\_\_\_\_ To: \_\_\_\_\_

**Change in CREDIT HOURS:** \_\_\_\_\_ Yes  No

(A change in credit hours requires documentation that specifies the work requirements have been adjusted accordingly.)

From: \_\_\_\_\_ To: \_\_\_\_\_

**Addition of GENERAL EDUCATION ATTRIBUTES:** \_\_\_\_\_ Yes  No

From: \_\_\_\_\_ To (check all that apply):  CT  INTL  MC  Core II (Core II type: \_\_\_\_\_)

**Note:** Applications for Gen Ed attributes must be attached. <http://www.marshall.edu/wpmu/gened/core-ii-courses-info/>

**Change in CATALOG DESCRIPTION:** \_\_\_\_\_ Yes  No

(Limit of 30 words. If change is substantial, document in the rationale. If change is minor, simply show the change below.)

From: **Practice in writing poetry.**

To:

**Development of techniques and strategies for writing poetry in a variety of styles and forms.**

**Request for Undergraduate Course Change – Page 3**  
**Additional Information Required for Undergraduate Course Change**

College: COLA Department/Division: English Current Alpha Designator/Number: ENG 377

Define the rationale for EACH type of change here. *NOTE: If major change in content, please consider creating a new course.*  
The change is intended to give prospective students a more detailed sense of what the course entails, without overly determining an instructor's approach to the material.

## Request for Undergraduate Course Change

1. Prepare one paper copy and obtain signatures from the Department Chair/Division Head, Registrar and College Dean.
2. Submit the form to your College Curriculum Committee.
3. After obtaining the signature of the College Curriculum Chair, send the paper copy to the current University Curriculum Committee Chair
4. Send an identical (sans signatures) ELECTRONIC COPY and all supporting documentation in a single PDF file (PDF Portfolio recommended) to UCC chair.

College: COLA Department/Division: English Current Alpha Designator/Number: ENG 378  
 Contact Person: Daniel O'Malley Phone: 696-6605

**CURRENT COURSE DATA:**

Course Title (Current Title within Banner): <u>Creative Writing Fiction</u>	
Alpha Designator/Number: <u>ENG 378</u>	Credit Hours: <u>3</u>
Term for which changes will be effective (Fill in with appropriate calendar year.):	
Fall <u>2023</u> Spring _____ Summer _____ Other _____	

**CHECKLIST/QUESTIONS:**

1. Complete this **three** page form in its entirety and route through the departments/committees below for changes to a course involving: course title, alpha designator (see accompanying note to the section on the next page), course number, course content, credit hours, or catalog description.
2. If this change will affect other departments that require this course, please send a memo to the affected department and include it with this packet, as well as, the response received from the affected department.
3. If the changes made to this course will make the course similar in title or content to another department's courses, please send a memo to the affected department and include it with this packet, as well as, the response received from the affected department.
4. List courses, if any, that will be deleted because of this change (*must submit course deletion form*): \_\_\_\_\_
5. If the faculty requirements and/or equipment need to be changed upon approval of this proposal, attach a written estimate of additional needs.
6. If library resources are deemed inadequate, include in the rationale a plan to overcome this. The plan must include the cost as stated by the Dean of Libraries.

**SIGNATURES:** (If disapproved at any level, do not sign. Return to previous signer.)

Department Chair/Division Head: <u>Allison E. Carey</u>	Date: <u>2/8/2023</u>
Registrar: <u>[Signature]</u> 231 302	Date: <u>2/9/2023</u>
College Dean: <u>[Signature]</u>	Date: <u>2/13/23</u>
College Curriculum Chair: <u>Jonathan Kozar</u>	Date: <u>2/24/23</u>
General Education Council Chair *:	Date: _____
University Curriculum Committee Chair: <u>Zach Garrett</u>	Date: <u>3.24.23</u>
Faculty Senate Chair: _____	Date: _____
VP Academic Affairs/VP Health Science _____	Date: _____

\* - Signature necessary only if course is to be Core Curriculum Course

**Request for Undergraduate Course Change – Page 2**  
**Additional Information Required for Undergraduate Course Change**

College: COLA Department/Division: English Current Alpha Designator/Number: ENG 378

**Change in COURSE TITLE:** \_\_\_\_\_ Yes  No **NOTE:** If changing to Critical Thinking, you MUST reserve (CT) at the end of new title

From: \_\_\_\_\_

To: \_\_\_\_\_ (Limited to 30 characters and spaces.)

**Change in ALPHA DESIGNATOR:** \_\_\_\_\_ Yes  No

From: \_\_\_\_\_ To: \_\_\_\_\_

**Change in COURSE NUMBER:** \_\_\_\_\_ Yes  No

From: \_\_\_\_\_ To: \_\_\_\_\_

**Change in GRADING MODE (Graded or Credit/No Credit):** \_\_\_\_\_ Yes  No

From: \_\_\_\_\_ To: \_\_\_\_\_

**Change in CREDIT HOURS:** \_\_\_\_\_ Yes  No

(A change in credit hours requires documentation that specifies the work requirements have been adjusted accordingly.)

From: \_\_\_\_\_ To: \_\_\_\_\_

**Addition of GENERAL EDUCATION ATTRIBUTES:** \_\_\_\_\_ Yes  No

From: \_\_\_\_\_ To (check all that apply):  CT  INTL  MC  Core II (Core II type: \_\_\_\_\_)

**Note:** Applications for Gen Ed attributes must be attached. <http://www.marshall.edu/wpmu/gened/core-ii-courses-info/>

**Change in CATALOG DESCRIPTION:** \_\_\_\_\_ Yes  No

(Limit of 30 words. If change is substantial, document in the rationale. If change is minor, simply show the change below.)

From: Practice in writing fiction.

To:

Development of techniques and strategies for writing fiction in a variety of styles and forms.

**Request for Undergraduate Course Change – Page 3**  
**Additional Information Required for Undergraduate Course Change**

College: COLA Department/Division: English Current Alpha Designator/Number: ENG 378

Define the rationale for EACH type of change here. *NOTE: If major change in content, please consider creating a new course.*  
The change is intended to give prospective students a more detailed sense of what the course entails, without overly determining an instructor's approach to the material.



## Request for Undergraduate Course Change

1. Prepare **one** paper copy and obtain signatures from the Department Chair/Division Head, Registrar and College Dean.
2. Submit the form to your College Curriculum Committee.
3. After obtaining the signature of the College Curriculum Chair, send the paper copy to the current University Curriculum Committee Chair
4. Send an identical (sans signatures) ELECTRONIC COPY and all supporting documentation in a single PDF file (PDF Portfolio recommended) to UCC chair.

College: COLA Department/Division: English Current Alpha Designator/Number: ENG 379  
 Contact Person: Daniel O'Malley Phone: 696-6605

**CURRENT COURSE DATA:**

Course Title (Current Title within Banner): <u>Creative Writing Nonfiction</u>	
Alpha Designator/Number: <u>ENG 379</u>	Credit Hours: <u>3</u>
Term for which changes will be effective (Fill in with appropriate calendar year.):	
Fall <u>2023</u> Spring _____ Summer _____ Other _____	

**CHECKLIST/QUESTIONS:**

1. Complete this **three** page form in its entirety and route through the departments/committees below for changes to a course involving: course title, alpha designator (see accompanying note to the section on the next page), course number, course content, credit hours, or catalog description.
2. If this change will affect other departments that require this course, please send a memo to the affected department and include it with this packet, as well as, the response received from the affected department.
3. If the changes made to this course will make the course similar in title or content to another department's courses, please send a memo to the affected department and include it with this packet, as well as, the response received from the affected department.
4. List courses, if any, that will be deleted because of this change (*must submit course deletion form*): \_\_\_\_\_
5. If the faculty requirements and/or equipment need to be changed upon approval of this proposal, attach a written estimate of additional needs.
6. If library resources are deemed inadequate, include in the rationale a plan to overcome this. The plan must include the cost as stated by the Dean of Libraries.

**SIGNATURES:** (If disapproved at any level, do not sign. Return to previous signer.)

Department Chair/Division Head: <u>Allyse Gray</u>	Date: <u>2/8/2023</u>
Registrar: <u>[Signature]</u> 231302	Date: <u>2/9/2023</u>
College Dean: <u>[Signature]</u>	Date: <u>2/13/23</u>
College Curriculum Chair: <u>Jonathan Kozar</u>	Date: <u>2/24/23</u>
General Education Council Chair *:	Date: _____
University Curriculum Committee Chair: <u>Zach Garrett</u>	Date: <u>3.24.23</u>
Faculty Senate Chair: _____	Date: _____
VP Academic Affairs/VP Health Science: _____	Date: _____

\* - Signature necessary only if course is to be Core Curriculum Course

**Request for Undergraduate Course Change – Page 2**  
**Additional Information Required for Undergraduate Course Change**

College: COLA Department/Division: English Current Alpha Designator/Number: ENG 379

**Change in COURSE TITLE:** \_\_\_\_\_ Yes  No **NOTE:** If changing to Critical Thinking, you MUST reserve (CT) at the end of new title

From: \_\_\_\_\_

To: \_\_\_\_\_ (Limited to 30 characters and spaces.)

**Change in ALPHA DESIGNATOR:** \_\_\_\_\_ Yes  No

From: \_\_\_\_\_ To: \_\_\_\_\_

**Change in COURSE NUMBER:** \_\_\_\_\_ Yes  No

From: \_\_\_\_\_ To: \_\_\_\_\_

**Change in GRADING MODE (Graded or Credit/No Credit):** \_\_\_\_\_ Yes  No

From: \_\_\_\_\_ To: \_\_\_\_\_

**Change in CREDIT HOURS:** \_\_\_\_\_ Yes  No

(A change in credit hours requires documentation that specifies the work requirements have been adjusted accordingly.)

From: \_\_\_\_\_ To: \_\_\_\_\_

**Addition of GENERAL EDUCATION ATTRIBUTES:** \_\_\_\_\_ Yes  No

From: \_\_\_\_\_ To (check all that apply):  CT  INTL  MC  Core II (Core II type: \_\_\_\_\_)

**Note: Applications for Gen Ed attributes must be attached.** <http://www.marshall.edu/wpmu/gened/core-ii-courses-info/>

**Change in CATALOG DESCRIPTION:** \_\_\_\_\_ Yes  No

(Limit of 30 words. If change is substantial, document in the rationale. If change is minor, simply show the change below.)

From: **Practice in writing creative nonfiction.**

To:

**Development of techniques and strategies for writing creative nonfiction in a variety of styles and forms.**

**Request for Undergraduate Course Change – Page 3**  
**Additional Information Required for Undergraduate Course Change**

College: COLA Department/Division: English Current Alpha Designator/Number: ENG 379

Define the rationale for EACH type of change here. *NOTE: If major change in content, please consider creating a new course.*  
The change is intended to give prospective students a more detailed sense of what the course entails, without overly determining an instructor's approach to the material.

## Request for Undergraduate Course Change

1. Prepare one paper copy and obtain signatures from the Department Chair/Division Head, Registrar and College Dean.
2. Submit the form to your College Curriculum Committee.
3. After obtaining the signature of the College Curriculum Chair, send the paper copy to the current University Curriculum Committee Chair
4. Send an identical (sans signatures) ELECTRONIC COPY and all supporting documentation in a single PDF file (PDF Portfolio recommended) to UCC chair.

College: COLA Department/Division: English Current Alpha Designator/Number: ENG 445  
 Contact Person: Daniel O'Malley Phone: 696-6605

**CURRENT COURSE DATA:**

Course Title (Current Title within Banner): <u>Screenwriting</u>	
Alpha Designator/Number: <u>ENG 445</u>	Credit Hours: <u>3</u>
Term for which changes will be effective (Fill in with appropriate calendar year.):	
Fall <u>2023</u> Spring _____ Summer _____ Other _____	

**CHECKLIST/QUESTIONS:**

1. Complete this **three** page form in its entirety and route through the departments/committees below for changes to a course involving: course title, alpha designator (see accompanying note to the section on the next page), course number, course content, credit hours, or catalog description.
2. If this change will affect other departments that require this course, please send a memo to the affected department and include it with this packet, as well as, the response received from the affected department.
3. If the changes made to this course will make the course similar in title or content to another department's courses, please send a memo to the affected department and include it with this packet, as well as, the response received from the affected department.
4. List courses, if any, that will be deleted because of this change (*must submit course deletion form*): \_\_\_\_\_
5. If the faculty requirements and/or equipment need to be changed upon approval of this proposal, attach a written estimate of additional needs.
6. If library resources are deemed inadequate, include in the rationale a plan to overcome this. The plan must include the cost as stated by the Dean of Libraries.

**SIGNATURES:** (If disapproved at any level, do not sign. Return to previous signer.)

Department Chair/Division Head: <u><i>Alison Glavin</i></u>	Date: <u>2/8/2023</u>
Registrar: <u><i>Caleb J. Hall</i></u> 230101	Date: <u>2/9/2023</u>
College Dean: <u><i>RJ Zwick</i></u>	Date: <u>2/13/23</u>
College Curriculum Chair: <u><i>Jonathan Kozar</i></u>	Date: <u>2/24/23</u>
General Education Council Chair *:	Date: _____
University Curriculum Committee Chair: <u><i>Zach Garrett</i></u>	Date: <u>3.24.23</u>
Faculty Senate Chair: _____	Date: _____
VP Academic Affairs/VP Health Science _____	Date: _____

\* - Signature necessary only if course is to be Core Curriculum Course

**Request for Undergraduate Course Change – Page 2**  
**Additional Information Required for Undergraduate Course Change**

College: COLA Department/Division: English Current Alpha Designator/Number: ENG 445

**Change in COURSE TITLE:** \_\_\_\_\_ Yes  No **NOTE:** If changing to Critical Thinking, you MUST reserve (CT) at the end of new title

From: \_\_\_\_\_

To: \_\_\_\_\_ (Limited to 30 characters and spaces.)

**Change in ALPHA DESIGNATOR:** \_\_\_\_\_ Yes  No

From: \_\_\_\_\_ To: \_\_\_\_\_

**Change in COURSE NUMBER:** \_\_\_\_\_ Yes  No

From: \_\_\_\_\_ To: \_\_\_\_\_

**Change in GRADING MODE (Graded or Credit/No Credit):** \_\_\_\_\_ Yes  No

From: \_\_\_\_\_ To: \_\_\_\_\_

**Change in CREDIT HOURS:** \_\_\_\_\_ Yes  No

(A change in credit hours requires documentation that specifies the work requirements have been adjusted accordingly.)

From: \_\_\_\_\_ To: \_\_\_\_\_

**Addition of GENERAL EDUCATION ATTRIBUTES:** \_\_\_\_\_ Yes  No

From: \_\_\_\_\_ To (check all that apply):  CT  INTL  MC  Core II (Core II type: \_\_\_\_\_)

**Note:** Applications for Gen Ed attributes must be attached. <http://www.marshall.edu/wpmu/gened/core-ii-courses-info/>

**Change in CATALOG DESCRIPTION:** \_\_\_\_\_ Yes  No

(Limit of 30 words. If change is substantial, document in the rationale. If change is minor, simply show the change below.)

From: Practice in writing screenplays.

To:

Study of writing for film, including practice in methods to discover, organize, and draft screenplays for film production, with an emphasis on workshop methods for revision.

**Request for Undergraduate Course Change – Page 3**  
**Additional Information Required for Undergraduate Course Change**

College: COLA Department/Division: English Current Alpha Designator/Number: ENG 445

Define the rationale for EACH type of change here. *NOTE: If major change in content, please consider creating a new course.*  
The change is intended to give prospective students a more detailed sense of what the course entails, without overly determining an instructor's approach to the material.

## Request for Undergraduate Course Change

1. Prepare **one** paper copy and obtain signatures from the Department Chair/Division Head, Registrar and College Dean.
2. Submit the form to your College Curriculum Committee.
3. After obtaining the signature of the College Curriculum Chair, send the paper copy to the current University Curriculum Committee Chair
4. Send an identical (sans signatures) ELECTRONIC COPY and all supporting documentation in a single PDF file (PDF Portfolio recommended) to UCC chair.

College: College of Science Department/Division: Computer and Information Technology Current Alpha Designator/Number: See notes

Contact Person: Davide Andrea Mauro maurod@marshall.edu Phone: 3046966418

**CURRENT COURSE DATA:**

Course Title (Current Title within Banner): <u>See notes</u>
Alpha Designator/Number: _____ Credit Hours: _____
Term for which changes will be effective (Fill in with appropriate calendar year.):
Fall _____ Spring _____ Summer _____ Other _____

**CHECKLIST/QUESTIONS:**

1. Complete this **three** page form in its entirety and route through the departments/committees below for changes to a course involving: course title, alpha designator (see accompanying note to the section on the next page), course number, course content, credit hours, or catalog description.
2. If this change will affect other departments that require this course, please send a memo to the affected department and include it with this packet, as well as, the response received from the affected department.
3. If the changes made to this course will make the course similar in title or content to another department's courses, please send a memo to the affected department and include it with this packet, as well as, the response received from the affected department.
4. List courses, if any, that will be deleted because of this change (*must submit course deletion form*): \_\_\_\_\_
5. If the faculty requirements and/or equipment need to be changed upon approval of this proposal, attach a written estimate of additional needs.
6. If library resources are deemed inadequate, include in the rationale a plan to overcome this. The plan must include the cost as stated by the Dean of Libraries.

**SIGNATURES:** (If disapproved at any level, do not sign. Return to previous signer.)

Department Chair/Division Head: <u><i>Davide Andrea Mauro</i></u>	Date: <u>01/24/2023</u>
Registrar: <u><i>Sonye H. C. J.</i></u>	Date: <u>2.10.23</u>
College Dean: <u><i>Bob [Signature]</i></u>	Date: <u>02/10/2023</u>
College Curriculum Chair: <u><i>Maria Hamilton</i></u>	Date: <u>2.17.23</u>
General Education Council Chair *: _____	Date: <u>3.24.23</u>
University Curriculum Committee Chair: <u><i>Zach Garrett</i></u>	Date: _____
Faculty Senate Chair: _____	Date: _____
VP Academic Affairs/VP Health Science _____	Date: _____

\* - Signature necessary only if course is to be Core Curriculum Course

**Request for Undergraduate Course Change – Page 2**  
**Additional Information Required for Undergraduate Course Change**

College: College of Science Department/Division: Computer and Information Technology Current Alpha Designator/Number: See notes

**Change in COURSE TITLE:** \_\_\_\_\_ Yes \_\_\_\_\_ No **NOTE:** If changing to Critical Thinking, you MUST reserve (CT) at the end of new title

From: \_\_\_\_\_

To: \_\_\_\_\_ (Limited to 30 characters and spaces.)

**Change in ALPHA DESIGNATOR:** \_\_\_\_\_ Yes \_\_\_\_\_ No

From: \_\_\_\_\_ To: \_\_\_\_\_

**Change in COURSE NUMBER:** \_\_\_\_\_ Yes \_\_\_\_\_ No

From: \_\_\_\_\_ To: \_\_\_\_\_

**Change in GRADING MODE (Graded or Credit/No Credit):** \_\_\_\_\_ Yes \_\_\_\_\_ No

From: \_\_\_\_\_ To: \_\_\_\_\_

**Change in CREDIT HOURS:** \_\_\_\_\_ Yes \_\_\_\_\_ No

(A change in credit hours requires documentation that specifies the work requirements have been adjusted accordingly.)

From: \_\_\_\_\_ To: \_\_\_\_\_

**Addition of GENERAL EDUCATION ATTRIBUTES:** \_\_\_\_\_ Yes \_\_\_\_\_ No

From: \_\_\_\_\_ To (check all that apply):  CT  INTL  MC  Core II (Core II type: \_\_\_\_\_)

**Note:** Applications for Gen Ed attributes must be attached. <http://www.marshall.edu/wpmu/gened/core-ii-courses-info/>

**Change in CATALOG DESCRIPTION:** \_\_\_\_\_ Yes \_\_\_\_\_ No

(Limit of 30 words. If change is substantial, document in the rationale. If change is minor, simply show the change below.)

From:

To:



**Request for Undergraduate Course Change – Page 3**  
**Additional Information Required for Undergraduate Course Change**

College: College of Science Department/Division: Computer and Information Technology Current Alpha Designator/Number: See notes

**Define the rationale for EACH type of change here. NOTE: If major change in content, please consider creating a new course.**

The entire program will be moved from the College of Science to the College of Engineering and Computer Sciences, the department of Computer and Information Technology will be merged with the department of Computer Sciences and Electrical Engineering. For these reasons all the courses, the major, the minors, and the areas of emphasis need to be moved accordingly.

The courses are:

CIT 150 - Spreadsheet and Database Apps  
CIT 163 - Intro to Programming: C++  
CIT 260 - Instrumentation  
CIT 263 - Web Programming I  
CIT 265 - C# NET Programming  
CIT 266 - Applied C++ Programming  
CIT 280 - Special Topics  
CIT 281 - Special Topics  
CIT 282 - Special Topics  
CIT 283 - Special Topics  
CIT 285 - Independent Study  
CIT 301 - Public Service Experience  
CIT 313 - Web Programming II  
CIT 332 - Software Engineering I  
CIT 333 - Software Engineering II  
CIT 340 - Game Development I:2D  
CIT 352 - Network Protocols and Admin  
CIT 365 - Database Management  
CIT 410 - Electronic Commerce  
CIT 413 - iOS Development  
CIT 414 - Android Development  
CIT 416 - Advanced Web Programming  
CIT 440 - Computer Graphics for Gaming  
CIT 441 - Game Development II:3D  
CIT 443 - Game Development III: AI  
CIT 446 - 3D Modeling and Animation  
CIT 447 - Modeling/Simulation Dev  
CIT 448 - Mobile Game Development  
CIT 466 - Database Programming  
CIT 470 - Internship in CIT  
CIT 480 - Special Topics  
CIT 481 - Special Topics  
CIT 482 - Special Topics  
CIT 483 - Special Topics  
CIT 485 - Independent Study  
CIT 490 - Capstone Project in CIT

**University Curriculum Committee  
RECOMMENDATION**

**SR 22-23-51 CC**

Recommends approval of the listed **UNDERGRADUATE DEGREE PROGRAM ADDITION, DELETION, CHANGE** in the following college and/or schools/programs:

**School of Aviation**

**Degree Change: Commercial Pilot: Fixed Wing FL 10**

- **Rationale:** The previous Chief Flight Instructor made many changes to the existing curriculum. Upon further review, the current leadership finds that many of the new AVSC courses are redundant with other courses or superfluous. In addition, the volume of required courses does not allow students to pursue a course of study that suits their professional goals.
- **Form with signatures:** [Request for Undergraduate Change of a Degree Program Aviation.pdf](#)

**College of Business**

**Degree Change: BA10 BBA, Accounting**

- **Summary of changes:** Replace ACC 448, Federal Income Tax II and the required ACC elective with free electives. This will reduce the number of required credits in the major from 31 to 25.
- **Rationale:** To reduce the number of credit hours for the program to be more consistent with other LCOB degree programs and provide students with more flexibility to customize their degree (pursue a second major, minor, or specialization)
- **Form with signatures:** [ACC BBA Changes.pdf](#)

**FACULTY SENATE CHAIR:**

APPROVED BY THE  
FACULTY SENATE: \_\_\_\_\_ DATE: \_\_\_\_\_

DISAPPROVED BY THE  
FACULTY SENATE: \_\_\_\_\_ DATE: \_\_\_\_\_

**UNIVERSITY PRESIDENT:**

APPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_

DISAPPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_

**COMMENTS:** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## Request for Undergraduate Addition, Deletion, or Change of a Degree Program

1. Prepare one paper copy and obtain signatures from the Department Chair/Head, Registrar, and College Dean.
2. Submit the form to your College Curriculum Committee.
3. After attaining the signature of the College Curriculum Chair, send the paper copy to the current University Curriculum Committee (UCC) Chair.
4. Send an identical (sans signatures) ELECTRONIC COPY and all supporting documentation in PDF format by email to the current UCC Chair.

College: Aviation Department/Division: Bill Noe Flight  
Contact Person: David J. Pittenger Phone: 696-2818

### ACTION REQUESTED:

Check action requested:  Addition  Deletion  Change  
Name of Degree program (provide code if this is an existing program): Commercial Pilot: Fixed Wing FL10  
If this request is for a Degree Program addition, please indicate if the Board of Governors has approved the Intent to Plan for this program?  Yes  No  N/A  
Enter date of approval \_\_\_\_\_

### RATIONALE:

The previous Chief Flight Instructor made many changes to the existing curriculum. Upon further review, the current leadership finds that many of the new AVSC courses are redundant with other courses or superfluous. In addition the volume of required courses does not allow students to pursue a course of study that suites their professional goals

**CURRICULUM:** (If addition or change, number of hours and courses; indicate if required or optional) May be submitted as separate document.

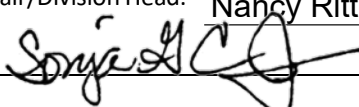
\_\_\_\_\_

### NOTIFICATION REQUIREMENTS:

Attach a copy of written notification regarding this curriculum request to the following:

1. **Statement of Non-Duplication:** If this degree program will be similar in title or content to an existing degree program at the university, please send a memo to the affected department and include it with this packet, as well as, the response received from the affected department.
2. If your department/division requires additional faculty, equipment, or specialized materials, attach an estimation of money and time required to secure these items.
3. Send a copy of this completed form to the Marshall University Catalog Editor.

**SIGNATURES:** (If disapproved at any level, do not sign. Return to previous signer.)

Department Chair/Division Head: <u>Nancy Ritter</u>	Date: <u>03/02/2023</u>
Registrar: <u></u>	Date: <del>03/02/2023</del> <u>3.16.2023</u>
College Dean: <u>Nancy Ritter for Bill Noe</u>	Date: <u>03/02/2023</u>
College Curriculum Chair: <u>David J. Pittenger</u>	Date: <u>1/26/2023</u>
University Curriculum Committee Chair: <u>Zach Garrett</u>	Date: <u>3.29.23</u>
Faculty Senate Chair: _____	Date: _____
VP Academic Affairs/VP Health Science: _____	Date: _____

## Commercial Pilot: Fixed Wing

### Overview

The program objectives for the B. S. in Commercial Pilot - Fixed Wing, are to:

1. Provide a high-quality flight training program that follows requirements outlined by the Federal Aviation Administration specified in 14 CFR Part 141.
2. Provide future fixed-wing pilots a general education that will allow them to work for national or international aeronautics corporations.
3. Provide students with the theoretical information that will allow them to understand the operation of aircraft and the technical skills to operate aircraft using advanced aeronautics technology.
4. Prepare students to be effective pilots and flight instructors.

Student learning outcomes for the B.S. in Commercial Pilot - Fixed Wing:

1. Students will complete an FAA-approved course of study and demonstrate that they can operate technically advanced aircraft under a range of flight conditions.
2. Students will demonstrate the ability to communicate effectively and work collaboratively in diverse and demanding environments.
3. Students will demonstrate the ability to engage in continual professional development related to skills as pilots and professionals working in commercial aviation settings.
4. Students will demonstrate the application of skills and perspectives.

*Note:* This program is not approved for the usage of veterans' education benefits.

### All Flight Students

For initial consideration, all applicants must meet Marshall University's general freshman or transfer admission requirements. Admission to the Bachelor of Science program in Commercial Pilot - Fixed Wing will be selective each year, depending on both the number of applications received and the capacity to enroll new students. Not all applicants who qualify for general admission to the university will be admissible to this program.

As required by FAA regulations, and determined by the Bill Noe Flight School, students must speak, read, write and understand English. Prior to commencing flight training, non-U.S. citizens must complete all Transportation Security Administration (TSA) background checks and appropriate approvals.

Marshall requires that all flight students have at least a Second Class Medical when starting the flight program. However, we recommend students get a First Class Medical prior to flight training to make sure they do not have any medical conditions that could disqualify them from flying with airlines. Medicals must be done by a Federal Aviation Administration (FAA) Aviation Medical Examiner (AME). Prospective students will find AMEs by location using the resource at <https://designee.faa.gov/#/designeeLocator>.

Upon admission to the program and before beginning AVSC coursework, students who do not have at least a Private Pilot certification must apply for and receive a Student Pilot certificate.

See [https://www.faa.gov/pilots/become/student\\_cert/](https://www.faa.gov/pilots/become/student_cert/) for details. Contact the Bill Noe Flight School if you have questions.

### Transfer Student / Intercollege Transfer Policy

Transfer students must have a minimum cumulative GPA of 2.25 or Chief Instructor approval.

Students who hold one or more FAA pilot certificates will not need to repeat required courses for these certifications but must discuss their specific situations with the Chief Instructor before enrolling.

Students allowed to enroll with previous FAA pilot certifications, however, must complete

AVSC 105 Transition Lab, a course designed to train students to operate the Cirrus SR20. Successful completion requires students to pass the knowledge and practical test requirements of the FAA certification standards at a level commensurate with the pilot certification held while operating the Cirrus SR20 aircraft. Students with previous FAA pilot certifications must successfully complete AVSC 105 before proceeding with further flight courses.

Transfer students who completed college-level courses from a regionally accredited institution of higher education may receive credit for those courses. Please review the Admissions section in the Undergraduate Catalog for more information regarding the university's transfer policies.

### **Progression Requirements**

Flight students are expected to complete each flight course in one semester. However, with permission, students experiencing extensive uncontrollable situations, such as weather, may complete the course the following semester with permission. Any student failing to complete the course requirements in that following semester may be dismissed from the program due to lack of progress. Students must maintain a minimum of a *C* or better in all courses required for the major. AVSC ground schools (AVSC 200, AVSC 215, and AVSC 329) also require an 80% minimum score for all exams.

## **Graduation/ Other Requirements**

Systems221, 221, The Commercial Pilot - Fixed Wing, B.S. degree requires a minimum of 120 hours for graduation.

Students planning to apply for student instructor positions at the Bill Noe Flight School are required to take AVSC 305 CFII Lab, AVSC 335 Course AVSC 335 Not Found, AVSC 345 Course AVSC 345 Not Found, and AVSC 375 Course AVSC 375 Not Found. See advisor and Chief Instructor.

### **Core Curriculum**

#### *Core I: Critical Thinking*

FYS 100 First Yr Sem Critical Thinking	3
GEO 230 Intro to Meteorology (CT)	4
Critical Thinking Course	3

#### *Core II*

ENG 101 Beginning Composition	3
ENG 201 Advanced Composition	3
Core II Communications	
Core II Mathematics	
GEO 230 Intro to Meteorology (CT)	4
CMM 213 Fund Interpersonal Com	3
Core II Humanities (WI section recommended)	
Core II Fine Arts	

#### *Additional University Requirements*

Multicultural/International	
Writing Intensive (Core II Humanities recommended)	
Writing Intensive	
AVSC 405 Business Aviation	3
Major Specific Requirements	
<i>General</i>	
ACC 215 Accounting Principles (CT)	3

CMM 213	Fund Interpersonal Com	3
GEO 230	Intro to Meteorology (CT)	4
MGT 320	Principles of Management	3
MGT 422	Organizational Behavior	3

*Aviation Core Courses*

AVSC 102	Flight School Orientation	3
AVSC 221	Flight Management Systems	3
AVSC 231	Aviation Law and Regulations	3
AVSC 241	AV Safety and Human Factors	3
AVSC 310	Aircraft Sys and Powerplants	3
AVSC 315	Airport Operations and Mgmt	3
AVSC 320	Flight Phys and Human Factors	3
AVSC 325	Ntnl Airspace Sys and NextGen	3
AVSC 355	Aviation Weather	3
AVSC 405	Business Aviation	3
AVSC 410	Air Transportation Operations	3
AVSC 450	Crew Resource Management	3

*Aviation Flight Courses*

AVSC 200	Private Pilot Ground School	4
AVSC 215	Instrument Ground School	3
AVSC 329	Commercial Ground School	3
AVSC 205	Solo Flight Lab	1
AVSC 210	Private Pilot Cert ASEL Lab	2
AVSC 220	Instrument Certification Lab	3
AVSC 330	Commercial Phase I Lab	3
AVSC 340	Commercial Phase II ASEL Lab	3

Choose one 8-hour track

*Track A*

Students planning to apply for student instructor positions at the Bill Noe Flight School are required to take AVSC 305, AVSC 335, AVSC 345, and AVSC 375. See advisor and Chief Instructor.

AVSC 305	CFII Lab
AVSC 335	CFI Ground School
AVSC 345	Initial CFI ASEL Lab
AVSC 375	Commercial AMEL Add-On Lab

*Track B*

Students must meet with the Chief Instructor to discuss career opportunities before selecting Track B. Students not planning to apply for student instructor positions at the Bill Noe Flight School may enroll in 300/400-Level electives. Must see advisor and Chief Instructor before enrolling in electives.

*300/400 Level Electives*

- The purpose of this Four Year Plan is to illustrate how your general education requirements, your program requirements, and any recommended elective or minor courses fit within a 4-year time frame. It also takes into account the order of pre-requisites. It is designed primarily as a tool to assist you in timely graduation. If you have transferred from another institution or another college within Marshall University, please see your advisor about how your coursework may be applied to

degree requirements.

- A minimum of 120 credit hours are required for the baccalaureate degree, including a minimum of 40 credit hours at the 300/400 level.
- Six hours of Writing Intensive (WI) credits are required for the degree. Students are encouraged to select WI sections of courses when available within the plan of study.
- Students planning to apply for student instructor positions at the Bill Noe Flight School are required to take AVSC 305\*, AVSC 335\*, AVSC 345\*, and AVSC 375\*. Other students may choose to pursue a minor or enroll in 300/400-level electives. Students must see advisor and Chief Instructor to discuss minor options and/or before enrolling in electives.

The Core Curriculum is designed to foster critical thinking skills and introduce students to basic domains of thinking that transcend disciplines. The Core applies to all majors.

Information on specific classes in the Core can be found at <https://www.marshall.edu/gened/>.

### First Year

First Semester Credit Hours

AVSC 102	Flight School Orientation	3
AVSC 200	Private Pilot Ground School	4
AVSC 205	Solo Flight Lab	1
AVSC 210	Private Pilot Cert ASEL Lab	2
ENG 101	Beginning Composition	3
UNI 100	Freshman First Class	1
FYS 100	First Yr Sem Critical Thinking	3
Credit Hours		17

Second Semester

AVSC 215	Instrument Ground School	3
AVSC 220	Instrument Certification Lab	3
AVSC 221	Flight Management Systems	3
GEO 230	Intro to Meteorology (CT)	4
Core II Mathematics		3
MTH 121: Concepts and Applications (CT) recommended		
Credit Hours		16

### Second Year

First Semester Credit Hours

AVSC 231	Aviation Law and Regulations	3
AVSC 329	Commercial Ground School	3
AVSC 330	Commercial Phase I Lab	3
CMM 213	Fund Interpersonal Com	3
ENG 201	Advanced Composition	3
Credit Hours		15

Second Semester

AVSC 241	AV Safety and Human Factors	3
AVSC 340	Commercial Phase II ASEL Lab	3
AVSC 355	Aviation Weather	3
ACC 215	Accounting Principles (CT)	3
Core II Communications		3
CMM 207: Business and Professional Communication recommended		

Credit Hours		15
<b>Third Year</b>		
First Semester	Credit Hours	
AVSC 310	Aircraft Sys and Powerplants	3
AVSC 315	Airport Operations and Mgmt	3
AVSC 335	CFI Ground School (or Minor or 300/400 Level Elective)	3
AVSC 375	Commercial AMEL Add-On Lab ((or Minor or 300/400 Level Elective))	1
	Critical Thinking and Writing Intensive	3
	PSC 104: American National Government and Politics (CT), Writing Intensive section recommended	
	Free Elective	3
	ECN 200: Survey of Economics recommended	
Credit Hours		16
Second Semester		
AVSC 320	Flight Phys and Human Factors ((or Minor or 300/400 Level Elective))	3
AVSC 325	Ntnl Airspace Sys and NextGen	3
AVSC 345	Initial CFI ASEL Lab ((or Minor or 300/400 Level Elective))	3
MGT 320	Principles of Management	3
	Core II Humanities	3
	Choose a Writing Intensive section	
Credit Hours		15
<b>Fourth Year</b>		
First Semester	Credit Hours	
AVSC 305	CFII Lab ((or Minor or 300/400 Level Elective))	1
AVSC 405	Business Aviation	3
AVSC 410	Air Transportation Operations	3
	Multicultural/International	3
	CMM: 322 Intercultural Communication (MC) recommended	
MKT 340	MKT Concepts and Applications	3
Credit Hours		13
Second Semester		
AVSC 450	Crew Resource Management	3
	Free Elective	1
	AVSC 495: Internship in Aviation Operations (3 hrs.) or other elective (1 or more hrs.)	
MGT 422	Organizational Behavior	3
	Core II Fine Arts	3
	Free Elective	3
	CMM 319: Superior-Subordinate Communications recommended, or other elective	
Credit Hours		13
Total Credit Hours		120



## Commercial Pilot: Fixed Wing

### Overview

#### Our Vision

Inspiring excellence as the world's premier aviation training organization, positioning aspirant aviators for a rewarding and fulfilling future by improving aviation safety, providing exceptional customer service, and serving as notable stewards of our university and community.

The objectives for the B. S. in Commercial Pilot - Fixed Wing, are to:

~~The program objectives for the B. S. in Commercial Pilot - Fixed Wing, are to:~~

1. Provide a high-quality flight training program that follows requirements outlined by the Federal Aviation Administration specified in 14 CFR Part 141.
2. Provide future fixed-wing pilots a general education that will allow them to work for national or international aeronautics corporations.
3. Provide students with the theoretical information that will allow them to understand the operation of aircraft and the technical skills to operate aircraft using advanced aeronautics technology.
4. Prepare students to be effective pilots and flight instructors.

Student learning outcomes for the B.S. in Commercial Pilot - Fixed Wing:

1. Students will demonstrate an uncompromising commitment to maintain and improve aviation safety.
- ~~1.2.~~ Students will complete an FAA-approved course of study and demonstrate that they can operate technically advanced aircraft under a range of flight conditions.
- ~~2.3.~~ Students will demonstrate the ability to communicate effectively and work collaboratively in diverse and demanding environments.
- ~~3.4.~~ Students will demonstrate the ability to engage in continual professional development related to skills as pilots and professionals working in commercial aviation settings.
- ~~4.5.~~ Students will demonstrate the application of skills and perspectives.

*Note:* This program is not approved for the usage of veterans' education benefits.

#### Admission

All prospective students must meet the requirements of Marshall University's general first-time or transfer admission. Admission to the Bachelor of Science program in Commercial Pilot - Fixed Wing is selective and competitive. Consequently, not all applicants who qualify for general admission to the university will be admissible to this program.

FAA regulations require students be able to speak, read, write, and understand English.

Marshall requires that all flight students have a First Class Medical Certificate. Medical examinations must be performed by a FAA Aviation Medical Examiner (AME). Prospective students will find AMEs by location using the resource at <https://designee.faa.gov/#/designeeLocator>.

#### Transfer Students

Students with one or more FAA pilot certificates (Private Pilot – Instrument) will receive credit for the courses corresponding to the certifications.

Students who enroll with previous FAA pilot certifications who receive credit for the courses corresponding to the certifications must complete AVSC 105 Transition Lab, a course designed to train students to operate the Cirrus SR20. Successful completion requires

students to pass the knowledge and practical test requirements of the FAA certification standards at a level commensurate with the pilot certification held while operating the Cirrus SR20 aircraft. Students with previous FAA pilot certifications must successfully complete AVSC 105 before proceeding with further flight laboratories.

Transfer students who completed college-level courses from a regionally accredited institution of higher education may receive credit for those courses. Please review the Admissions section in the Undergraduate Catalog for more information regarding the university's transfer policies.

### **All Flight Students**

~~For initial consideration, all applicants must meet Marshall University's general freshman or transfer admission requirements. Admission to the Bachelor of Science program in Commercial Pilot—Fixed Wing will be selective each year, depending on both the number of applications received and the capacity to enroll new students. Not all applicants who qualify for general admission to the university will be admissible to this program.~~

~~As required by FAA regulations, and determined by the Bill Noe Flight School, students must speak, read, write and understand English. Prior to commencing flight training, non-U.S. citizens must complete all Transportation Security Administration (TSA) background checks and appropriate approvals.~~

~~Marshall requires that all flight students have at least a Second Class Medical when starting the flight program. However, we recommend students get a First Class Medical prior to flight training to make sure they do not have any medical conditions that could disqualify them from flying with airlines. Medicals must be done by a Federal Aviation Administration (FAA) Aviation Medical Examiner (AME). Prospective students will find AMEs by location using the resource at <https://designee.faa.gov/#/designeeLocator>.~~

~~Upon admission to the program and before beginning AVSC coursework, students who do not have at least a Private Pilot certification must apply for and receive a Student Pilot certificate.~~

~~See [https://www.faa.gov/pilots/become/student\\_cert/](https://www.faa.gov/pilots/become/student_cert/) for details. Contact the Bill Noe Flight School if you have questions.~~

### **Transfer Student / Intercollege Transfer Policy**

~~Transfer students must have a minimum cumulative GPA of 2.25 or Chief Instructor approval.~~

~~Students who hold one or more FAA pilot certificates will not need to repeat required courses for these certifications but must discuss their specific situations with the Chief Instructor before enrolling.~~

~~Students allowed to enroll with previous FAA pilot certifications, however, must complete AVSC 105 Transition Lab, a course designed to train students to operate the Cirrus SR20. Successful completion requires students to pass the knowledge and practical test requirements of the FAA certification standards at a level commensurate with the pilot certification held while operating the Cirrus SR20 aircraft. Students with previous FAA pilot certifications must successfully complete AVSC 105 before proceeding with further flight courses.~~

~~Transfer students who completed college-level courses from a regionally accredited institution of higher education may receive credit for those courses. Please review the Admissions section in the Undergraduate Catalog for more information regarding the university's transfer policies.~~

### **Progression Requirements**

Flight students are expected to complete each flight course in one semester. However, when circumstances beyond the students' control (e.g., weather) prevent them from completing their flight courses, they may be given permission to complete the course the following semester. Please review the section in the Undergraduate Catalog regarding the Incomplete (I) grade.

~~Flight students are expected to complete each flight course in one semester. However, with permission, students experiencing extensive uncontrollable situations, such as weather, may complete the course the following semester with permission. Any student failing to complete the course requirements in that following semester may be dismissed from the program due to lack of progress. Students must maintain a minimum of a C or better in all courses required for the major. AVSC ground schools (AVSC 200, AVSC 215, and AVSC 329) also require an 80% minimum score for all exams.~~

## **Graduation/ Other Requirements**

### **Core Curriculum**

#### *Core I: Critical Thinking*

FYS 100	First Yr Sem Critical Thinking	3
GEO 230	Intro to Meteorology (CT)	4
	Additional Critical Thinking Course	3

#### *Core II*

CMM 213	Fund Interpersonal Com	3
	Core II Fine Arts	3
	Core II Humanities (WI section recommended)	3
	Core II Multicultural/International (WI section recommended)	3
ENG 101	Beginning Composition	3
ENG 201	Advanced Composition	3
GEO 230	Intro to Meteorology (Natural Science)	4
MTH 121	Concepts and Applications	3
PSY 201	General Psychology (Social Science)	3

#### *Additional University Requirements*

#### Multicultural/International

AVSC 450	Professional Aviation (CC: Capstone)	3
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#### Major Specific Requirements

#### *General Education*

CMM 213	Fund Interpersonal Com	3
GEO 230	Intro to Meteorology	4

#### *Required Aviation Core Courses*

AVSC 102	Flight School Orientation	3
AVSC 231	Aviation Law and Regulations	3
AVSC 241	Cognition and Aviation Safety	3
AVSC 310	Aerodynamics & Performance	3
AVSC 311	Aircraft Systems	3
AVSC 325	Evolution of ATC Systems	3
AVSC 355	Aviation Weather	3
AVSC 450	Professional Aviation	3

Required Aviation Flight Courses

AVSC 200	Private Pilot Ground School	4
AVSC 205	Solo Flight Lab	1
AVSC 210	Private Pilot Cert ASEL Lab	2
AVSC 215	Instrument Ground School	3
AVSC 220	Instrument Certification Lab	3
AVSC 250	Commercial Phase II AMEL Lab	2
AVSC 305	CFII Lab	4
AVSC 329	Commercial Ground School	3
AVSC 330	Commercial Phase I Lab	3
AVSC 335	CFI Ground School	3
AVSC 340	Commercial Phase II ASEL Lab	3
AVSC 345	Initial CFI ASEL Lab	3

Elective Flight Courses

AVSC 255	Initial CFI AMEL Lab	3
AVSC 260	ASEL Private Add-On Lab	4
AVSC 265	AMEL Private Add-On Lab	4
AVSC 270	Commercial ASEL Add-On Lab	4
AVSC 290	CFI ASEL Add-On Lab	4
AVSC 295	CFI AMEL Add-On Lab	4

Elective Aviation Courses

Any Four Of The Following Courses

AVSC 221	Systems Management	3
AVSC 315	Airport Operations and Management	3
AVSC 410	Air Transportation Operations	3
AVSC 420	International Aviation	3
AVSC 454	Drones: Remote Sensing & GIS	3
AVSC 495	Internship in Aviation Operations	3

**Four-Year Plan**

The following Four-Year Plan presents a sequence of courses that allows students to complete the degree in eight semesters. Individual student plans will depend upon the courses they have completed, the availability of courses, and other factors.

- A minimum of 120 credit hours are required for the baccalaureate degree.
- Six hours of Writing Intensive (WI) credits are required for the degree. Students are encouraged to select WI sections of courses when available within the plan of study.

The Core Curriculum is designed to foster critical thinking skills and introduce students to basic domains of thinking that transcend disciplines. The Core applies to all majors.

Information on specific classes in the Core can be found at <https://www.marshall.edu/gened/>.

First Year

First Semester

AVSC 102	Flight School Orientation	3
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AVSC 200	Private Pilot Ground School	4
AVSC 205	Solo Flight Lab	1
CMM 213	Fund Interpersonal Com (CORE II: Communication)	3
FYS 100	First Yr Sem Critical Thinking	3
		Credit Hours 14

**Second Semester**

AVSC 210	Private Pilot Cert ASEL Lab	2
AVSC 215	Instrument Ground School	3
AVSC 220	Instrument Certification Lab	3
ENG 101	Beginning Composition (CORE II: Composition)	3
GEO 230	Intro to Meteorology (CT & CORE II: Natural/Physical Science)	4
		Credit Hours 15

**Second Year**

**First Semester**

AVSC 329	Commercial Ground School	3
AVSC 330	Commercial Phase I Lab	3
MTH 121	Concepts and Applications (CT & CORE II: Mathematics)	3
PSY 201	Concepts and Applications (CT & CORE II: Social science)	3
ENG 201	Advanced Composition (CORE II: Composition)	3
		Credit Hours 15

**Second Semester**

AVSC 231	Aviation Law and Regulations	3
AVSC 241	Cognition and Aviation Safety	4
AVSC 335	CFI Ground School	3
AVSC 340	Commercial Phase II ASEL Lab	3
Core II: Fine Arts		3
		Credit Hours 16

**Third Year**

**First Semester**

AVSC 250	Commercial Phase II AMEL Lab	2
AVSC Elective: AVSC 221, 315, 410, 420, 454, or 495		3
Core II: Humanities		3
Core II: Multicultural/International		3
Free Elective		3
		Credit Hours 14

**Second Semester**

AVSC Elective: AVSC 221, 315, 410, 420, 454, or 495		3
AVSC 345	Initial CFI ASEL Lab	3
AVSC 355	Aviation Weather	3
Free Elective		3
Free Elective		3
		Credit Hours 15

**Fourth Year**

**First Semester**

AVSC Elective: AVSC 221, 315, 410, 420, 454, or 495		3
AVSC 305	CFII lab	4
AVSC 310	Aerodynamics & Performance	3

Free Elective	3
Free Elective	3
	Credit Hours 16
<b>Second Semester</b>	
AVSC 450 Professional Aviation	3
AVSC Elective: AVSC 221, 315, 410, 420, 454, or 495	3
AVSC 311 Aircraft Systems	3
AVSC 325 Evolution of ATC Systems	3
Free Elective	3
	Credit Hours 15
	Total Credit Hours 120

Systems221, 221, The Commercial Pilot—Fixed Wing, B.S. degree requires a minimum of 120 hours for graduation.

Students planning to apply for student instructor positions at the Bill Noe Flight School are required to take AVSC 305 CFII Lab, AVSC 335 Course AVSC 335 Not Found, AVSC 345 Course AVSC 345 Not Found, and AVSC 375 Course AVSC 375 Not Found. See advisor and Chief Instructor.

**Core Curriculum**

*Core I: Critical Thinking*

FYS 100 First Yr Sem Critical Thinking	3
GEO 230 Intro to Meteorology (CT)	4
Critical Thinking Course	3

*Core II*

ENG 101 Beginning Composition	3
ENG 201 Advanced Composition	3

Core II Communications

Core II Mathematics

GEO 230 Intro to Meteorology (CT)	4
CMM 213 Fund Interpersonal Com	3

Core II Humanities (WI section recommended)

Core II Fine Arts

*Additional University Requirements*

Multicultural/International

Writing Intensive (Core II Humanities recommended)

Writing Intensive

AVSC 405 Business Aviation	3
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Major Specific Requirements

*General*

ACC 215 Accounting Principles (CT)	3
CMM 213 Fund Interpersonal Com	3
GEO 230 Intro to Meteorology (CT)	4
MGT 320 Principles of Management	3
MGT 422 Organizational Behavior	3

*Aviation Core Courses*

AVSC 102 Flight School Orientation	3
AVSC 221 Flight Management Systems	3

AVSC 231	Aviation Law and Regulations	3
AVSC 241	AV Safety and Human Factors	3
AVSC 310	Aircraft Sys and Powerplants	3
AVSC 315	Airport Operations and Mgmt	3
AVSC 320	Flight Phys and Human Factors	3
AVSC 325	Ntnl Airspace Sys and NextGen	3
AVSC 355	Aviation Weather	3
AVSC 405	Business Aviation	3
AVSC 410	Air Transportation Operations	3
AVSC 450	Crew Resource Management	3
<i>Aviation Flight Courses</i>		
AVSC 200	Private Pilot Ground School	4
AVSC 215	Instrument Ground School	3
AVSC 329	Commercial Ground School	3
AVSC 205	Solo Flight Lab	1
AVSC 210	Private Pilot Cert ASEL Lab	2
AVSC 220	Instrument Certification Lab	3
AVSC 330	Commercial Phase I Lab	3
AVSC 340	Commercial Phase II ASEL Lab	3

Choose one 8-hour track

**Track A**

Students planning to apply for student instructor positions at the Bill Noe Flight School are required to take AVSC 305, AVSC 335, AVSC 345, and AVSC 375. See advisor and Chief Instructor.

- AVSC 305 — CFII Lab
- AVSC 335 — CFI Ground School
- AVSC 345 — Initial CFI ASEL Lab
- AVSC 375 — Commercial AMEL Add-On Lab

**Track B**

Students must meet with the Chief Instructor to discuss career opportunities before selecting Track B. Students not planning to apply for student instructor positions at the Bill Noe Flight School may enroll in 300/400 Level electives. Must see advisor and Chief Instructor before enrolling in electives.

**300/400 Level Electives**

- The purpose of this Four Year Plan is to illustrate how your general education requirements, your program requirements, and any recommended elective or minor courses fit within a 4 year time frame. It also takes into account the order of pre-requisites. It is designed primarily as a tool to assist you in timely graduation. If you have transferred from another institution or another college within Marshall University, please see your advisor about how your coursework may be applied to degree requirements.
- A minimum of 120 credit hours are required for the baccalaureate degree, including a minimum of 40 credit hours at the 300/400 level.
- Six hours of Writing Intensive (WI) credits are required for the degree. Students are encouraged to select WI sections of courses when available within the plan of study.
- Students planning to apply for student instructor positions at the Bill Noe Flight School are required to take AVSC 305\*, AVSC 335\*, AVSC 345\*, and AVSC 375\*.

~~Other students may choose to pursue a minor or enroll in 300/400 level electives. Students must see advisor and Chief Instructor to discuss minor options and/or before enrolling in electives.~~

~~The Core Curriculum is designed to foster critical thinking skills and introduce students to basic domains of thinking that transcend disciplines. The Core applies to all majors. Information on specific classes in the Core can be found at <https://www.marshall.edu/gened/>.~~

### **First Year**

#### ~~First Semester Credit Hours~~

<del>AVSC 102</del>	<del>Flight School Orientation</del>	<del>3</del>
<del>AVSC 200</del>	<del>Private Pilot Ground School</del>	<del>4</del>
<del>AVSC 205</del>	<del>Solo Flight Lab</del>	<del>1</del>
<del>AVSC 210</del>	<del>Private Pilot Cert ASEL Lab</del>	<del>2</del>
<del>ENG 101</del>	<del>Beginning Composition</del>	<del>3</del>
<del>UNI 100</del>	<del>Freshman First Class</del>	<del>1</del>
<del>FYS 100</del>	<del>First Yr Sem Critical Thinking</del>	<del>3</del>
<del>Credit Hours</del>		<del>17</del>

#### ~~Second Semester~~

<del>AVSC 215</del>	<del>Instrument Ground School</del>	<del>3</del>
<del>AVSC 220</del>	<del>Instrument Certification Lab</del>	<del>3</del>
<del>AVSC 221</del>	<del>Flight Management Systems</del>	<del>3</del>
<del>GEO 230</del>	<del>Intro to Meteorology (CT)</del>	<del>4</del>
<del>Core II Mathematics</del>		<del>3</del>
<del>MTH 121: Concepts and Applications (CT) recommended</del>		
<del>Credit Hours</del>		<del>16</del>

### **Second Year**

#### ~~First Semester Credit Hours~~

<del>AVSC 231</del>	<del>Aviation Law and Regulations</del>	<del>3</del>
<del>AVSC 329</del>	<del>Commercial Ground School</del>	<del>3</del>
<del>AVSC 330</del>	<del>Commercial Phase I Lab</del>	<del>3</del>
<del>CMM 213</del>	<del>Fund Interpersonal Com</del>	<del>3</del>
<del>ENG 201</del>	<del>Advanced Composition</del>	<del>3</del>
<del>Credit Hours</del>		<del>15</del>

#### ~~Second Semester~~

<del>AVSC 241</del>	<del>AV Safety and Human Factors</del>	<del>3</del>
<del>AVSC 340</del>	<del>Commercial Phase II ASEL Lab</del>	<del>3</del>
<del>AVSC 355</del>	<del>Aviation Weather</del>	<del>3</del>
<del>ACC 215</del>	<del>Accounting Principles (CT)</del>	<del>3</del>
<del>Core II Communications</del>		<del>3</del>
<del>CMM 207: Business and Professional Communication recommended</del>		
<del>Credit Hours</del>		<del>15</del>

### **Third Year**

#### ~~First Semester Credit Hours~~

<del>AVSC 310</del>	<del>Aircraft Sys and Powerplants</del>	<del>3</del>
<del>AVSC 315</del>	<del>Airport Operations and Mgmt</del>	<del>3</del>
<del>AVSC 335</del>	<del>CFI Ground School (or Minor or 300/400 Level Elective)</del>	<del>3</del>
<del>AVSC 375</del>	<del>Commercial AMEL Add-On Lab ((or Minor or 300/400 Level Elective))</del>	
<del>_____</del>		<del>1</del>



Critical Thinking and Writing Intensive	3
PSC 104: American National Government and Politics (CT), Writing Intensive section recommended	
Free Elective	3
ECN 200: Survey of Economics recommended	
Credit Hours	16
<b>Second Semester</b>	
AVSC 320 — Flight Phys and Human Factors ((or Minor or 300/400 Level Elective))	3
AVSC 325 — Ntnl Airspace Sys and NextGen	3
AVSC 345 — Initial CFI ASEL Lab ((or Minor or 300/400 Level Elective))	3
MGT 320 — Principles of Management	3
Core II Humanities	3
Choose a Writing Intensive section	
Credit Hours	15
<b>Fourth Year</b>	
<b>First Semester Credit Hours</b>	
AVSC 305 — CFII Lab ((or Minor or 300/400 Level Elective))	1
AVSC 405 — Business Aviation	3
AVSC 410 — Air Transportation Operations	3
Multicultural/International	3
CMM: 322 Intercultural Communication (MC) recommended	
MKT 340 — MKT Concepts and Applications	3
Credit Hours	13
<b>Second Semester</b>	
AVSC 450 — Crew Resource Management	3
Free Elective	1
AVSC 495: Internship in Aviation Operations (3 hrs.) or other elective (1 or more hrs.)	
MGT 422 — Organizational Behavior	3
Core II Fine Arts	3
Free Elective	3
CMM 319: Superior Subordinate Communications recommended, or other elective	
Credit Hours	13
Total Credit Hours	120

## Commercial Pilot: Fixed Wing

### Overview

#### Our Vision

Inspiring excellence as the world's premier aviation training organization, positioning aspirant aviators for a rewarding and fulfilling future by improving aviation safety, providing exceptional customer service, and serving as notable stewards of our university and community.

The objectives for the B. S. in Commercial Pilot - Fixed Wing, are to:

1. Provide a high-quality flight training program that follows requirements outlined by the Federal Aviation Administration specified in 14 CFR Part 141.
2. Provide future fixed-wing pilots a general education that will allow them to work for national or international aeronautics corporations.
3. Provide students with the theoretical information that will allow them to understand the operation of aircraft and the technical skills to operate aircraft using advanced aeronautics technology.
4. Prepare students to be effective pilots and flight instructors.

Student learning outcomes for the B.S. in Commercial Pilot - Fixed Wing:

1. Students will demonstrate an uncompromising commitment to maintain and improve aviation safety.
2. Students will complete an FAA-approved course of study and demonstrate that they can operate technically advanced aircraft under a range of flight conditions.
3. Students will demonstrate the ability to communicate effectively and work collaboratively in diverse and demanding environments.
4. Students will demonstrate the ability to engage in continual professional development related to skills as pilots and professionals working in commercial aviation settings.
5. Students will demonstrate the application of skills and perspectives.

*Note:* This program is not approved for the usage of veterans' education benefits.

### Admission

All prospective students must meet the requirements of Marshall University's general first-time or transfer admission. Admission to the Bachelor of Science program in Commercial Pilot - Fixed Wing is selective and competitive. Consequently, not all applicants who qualify for general admission to the university will be admissible to this program.

FAA regulations require students to be able to speak, read, write, and understand English.

Marshall requires that all flight students have a First Class Medical Certificate. Medical examinations must be performed by an FAA Aviation Medical Examiner (AME).

Prospective students will find AMEs by location using the resource at <https://designee.faa.gov/#/designeeLocator>.

## Transfer Students

Students with one or more FAA pilot certificates (Private Pilot – Instrument) will receive credit for the courses corresponding to the certifications.

Students who enroll with previous FAA pilot certifications who receive credit for the courses corresponding to the certifications must complete AVSC 105 Transition Lab, a course designed to train students to operate the Cirrus SR20. Successful completion requires students to pass the knowledge and practical test requirements of the FAA certification standards at a level commensurate with the pilot certification held while operating the Cirrus SR20 aircraft. Students with previous FAA pilot certifications must successfully complete AVSC 105 before proceeding with further flight laboratories.

Transfer students who completed college-level courses from a regionally accredited institution of higher education may receive credit for those courses. Please review the Admissions section in the Undergraduate Catalog for more information regarding the university's transfer policies.

## Progression Requirements

Flight students are expected to complete each flight course in one semester. However, when circumstances beyond the students' control (e.g., weather) prevent them from completing their flight courses, they may be given permission to complete the course the following semester. Please review the section in the Undergraduate Catalog regarding the Incomplete (I) grade.

## Graduation/ Other Requirements

### Core Curriculum

#### *Core I: Critical Thinking*

FYS 100	First Yr Sem Critical Thinking	3
GEO 230	Intro to Meteorology (CT)	4
	Additional Critical Thinking Course	3

#### *Core II*

CMM 213	Fund Interpersonal Com	3
	Core II Fine Arts	3
	Core II Humanities (WI section recommended)	3
	Core II Multicultural/International (WI section recommended)	3
ENG 101	Beginning Composition	3
ENG 201	Advanced Composition	3
GEO 230	Intro to Meteorology (Natural Science)	4
MTH 121	Concepts and Applications	3
PSY 201	General Psychology (Social Science)	3

#### *Additional University Requirements*

	Multicultural/International	
AVSC 450	Professional Aviation (CC: Capstone)	3
	Major Specific Requirements	

#### *General Education*

CMM 213	Fund Interpersonal Com	3
GEO 230	Intro to Meteorology	4

*Required Aviation Core Courses*

AVSC 102	Flight School Orientation	3
AVSC 231	Aviation Law and Regulations	3
AVSC 241	Cognition and Aviation Safety	3
AVSC 310	Aerodynamics & Performance	3
AVSC 311	Aircraft Systems	3
AVSC 325	Evolution of ATC Systems	3
AVSC 355	Aviation Weather	3
AVSC 450	Professional Aviation	3

*Required Aviation Flight Courses*

AVSC 200	Private Pilot Ground School	4
AVSC 205	Solo Flight Lab	1
AVSC 210	Private Pilot Cert ASEL Lab	2
AVSC 215	Instrument Ground School	3
AVSC 220	Instrument Certification Lab	3
AVSC 250	Commercial Phase II AMEL Lab	2
AVSC 305	CFII Lab	4
AVSC 329	Commercial Ground School	3
AVSC 330	Commercial Phase I Lab	3
AVSC 335	CFI Ground School	3
AVSC 340	Commercial Phase II ASEL Lab	3
AVSC 345	Initial CFI ASEL Lab	3

*Elective Flight Courses*

AVSC 255	Initial CFI AMEL Lab	3
AVSC 260	ASEL Private Add-On Lab	4
AVSC 265	AMEL Private Add-On Lab	4
AVSC 270	Commercial ASEL Add-On Lab	4
AVSC 290	CFI ASEL Add-On Lab	4
AVSC 295	CFI AMEL Add-On Lab	4

Elective Aviation Courses

Any Four Of The Following Courses

AVSC 221	Systems Management	3
AVSC 315	Airport Operations and Management	3
AVSC 410	Air Transportation Operations	3
AVSC 420	International Aviation	3
AVSC 454	Drones: Remote Sensing & GIS	3
AVSC 495	Internship in Aviation Operations	3

## Four-Year Plan

The following Four-Year Plan presents a sequence of courses that allows students to complete the degree in eight semesters. Individual student plans will depend upon the courses they have completed, the availability of courses, and other factors.

- A minimum of 120 credit hours are required for the baccalaureate degree.
- Six hours of Writing Intensive (WI) credits are required for the degree. Students are encouraged to select WI sections of courses when available within the plan of study.

The Core Curriculum is designed to foster critical thinking skills and introduce students to basic domains of thinking that transcend disciplines. The Core applies to all majors.

Information on specific classes in the Core can be found at <https://www.marshall.edu/gened/>.

First Year		
First Semester		
AVSC 102	Flight School Orientation	3
AVSC 200	Private Pilot Ground School	4
AVSC 205	Solo Flight Lab	1
CMM 213	Fund Interpersonal Com (CORE II: Communication)	3
FYS 100	First Yr Sem Critical Thinking	3
USI 100	University Studies	1
	Credit Hours	15
Second Semester		
AVSC 210	Private Pilot Cert ASEL Lab	2
AVSC 215	Instrument Ground School	3
AVSC 220	Instrument Certification Lab	3
ENG 101	Beginning Composition (CORE II: Composition)	3
GEO 230	Intro to Meteorology (CT & CORE II: Natural/Physical Science)	4
	Credit Hours	15
Second Year		
First Semester		
AVSC 329	Commercial Ground School	3
AVSC 330	Commercial Phase I Lab	3
MTH 121	Concepts and Applications (CT & CORE II: Mathematics)	3
PSY 201	Concepts and Applications (CT & CORE II: Social science)	3
ENG 201	Advanced Composition (CORE II: Composition)	3
	Credit Hours	15
Second Semester		
AVSC 231	Aviation Law and Regulations	3
AVSC 241	Cognition and Aviation Safety	3
AVSC 335	CFI Ground School	3
AVSC 340	Commercial Phase II ASEL Lab	3
Core II: Fine Arts		3
	Credit Hours	15

Commercial Pilot: Fixed Wing

<b>Third Year</b>		
<b>First Semester</b>		
AVSC 250	Commercial Phase II AMEL Lab	2
AVSC Elective:	AVSC 221, 315, 410, 420, 454, or 495	3
Core II:	Humanities	3
Core II:	Multicultural/International	3
Free Elective		3
	Credit Hours	14
<b>Second Semester</b>		
AVSC Elective:	AVSC 221, 315, 410, 420, 454, or 495	3
AVSC 345	Initial CFI ASEL Lab	3
AVSC 355	Aviation Weather	3
Free Elective		3
Free Elective		3
	Credit Hours	15
<b>Fourth Year</b>		
<b>First Semester</b>		
AVSC Elective:	AVSC 221, 315, 410, 420, 454, or 495	3
AVSC 305	CFII lab	4
AVSC 310	Aerodynamics & Performance	3
Free Elective		3
Free Elective		3
	Credit Hours	16
<b>Second Semester</b>		
AVSC 450	Professional Aviation	3
AVSC Elective:	AVSC 221, 315, 410, 420, 454, or 495	3
AVSC 311	Aircraft Systems	3
AVSC 325	Evolution of ATC Systems	3
Free Elective		3
	Credit Hours	15
	Total Credit Hours	120

## Request for Undergraduate Addition, Deletion, or Change of a Degree Program

1. Prepare one paper copy and obtain signatures from the Department Chair/Head, Registrar, and College Dean. 2. Submit the form to your College Curriculum Committee. 3. After attaining the signature of the College Curriculum Chair, send the paper copy to the current University Curriculum Committee (UCC) Chair. 4. Send an identical (sans signatures) ELECTRONIC COPY and all supporting documentation in PDF format by email to the current UCC Chair.

College: LCOB Department/Division: Accountancy and Legal Environment  
 Contact Person: Jean Price Phone: 304-696-2657

**ACTION REQUESTED:**

Check action requested:     Addition     Deletion     Change  
 Name of Degree program (provide code if this is an existing program): BA 10 BBA, Accounting  
 If this request is for a Degree Program addition, please indicate if the Board of Governors has approved the Intent to Plan for this program?     Yes    \_\_\_\_\_ Enter date of approval     No     N/A

**RATIONALE:**

To reduce the number of credit hours for the program to be more consistent with other LCOB degree programs and provide students with more flexibility to customize their degree (pursue a second major, minor, or specialization).

**CURRICULUM:** (If addition or change, number of hours and courses; indicate if required or optional) May be submitted as separate document.

Replace ACC 448, Federal Income Tax II and the required ACC elective with free electives. This will reduce the number of required credits in the major from 31 to 25. See attached document detailing the catalog before and after the change.

**NOTIFICATION REQUIREMENTS:**

- Attach a copy of written notification regarding this curriculum request to the following:
- Statement of Non-Duplication:** If this degree program will be similar in title or content to an existing degree program at the university, please send a memo to the affected department and include it with this packet, as well as, the response received from the affected department.
  - If your department/division requires additional faculty, equipment, or specialized materials, attach an estimation of money and time required to secure these items.
  - Send a copy of this completed form to the Marshall University Catalog Editor.

**SIGNATURES:** (If disapproved at any level, do not sign. Return to previous signer.)

Department Chair/Division Head: <u>Jean Price</u>	Date: <u>2/1/2023</u>
Registrar: <u>[Signature]</u>	Date: <u>2/3/2023</u>
College Dean: <u>Jeffrey J. Archuleta</u>	Date: <u>2/7/2023</u>
College Curriculum Chair: <u>Viji Gnanini</u>	Date: <u>03/07/2023</u>
University Curriculum Committee Chair: <u>Zach Garrett</u>	Date: <u>3.24.23</u>
Faculty Senate Chair: _____	Date: _____
VP Academic Affairs/VP Health Science: _____	Date: _____

## Current Catalog with Changes

### Major-Specific

<a href="#">ACC 311</a> Intermediate Accounting I	3
<a href="#">ACC 312</a> Intermediate Accounting II	3
<a href="#">ACC 318</a> Cost Accounting I	3
<a href="#">ACC 341</a> Acc Information Systems	3
<a href="#">ACC 348</a> Federal Taxation	3
<a href="#">ACC 429</a> Auditing I	3
<a href="#">ACC 440</a> Accounting Analytics	3
<del><a href="#">ACC 448</a> Federal Income Tax II</del>	<del>3</del>
<a href="#">ACC 499</a> Professional and Ethics Sem	3
<a href="#">ACC 198</a> <del>is also required for ACC majors.</del> <a href="#">Accounting Professionalism</a>	1
<del>ACC Elective</del>	<del>3</del>
<del>Students can take any 300- or 400-level ACC course (except <a href="#">ACC 310</a>, <a href="#">ACC 490</a>), or <a href="#">LE 308</a>, or an approved graduate course.</del>	
Free Elective*	3
Free Elective*	3
Free Elective*	3
Free Elective*	3
Free Elective*	3
<del>Free Elective*</del>	<del>3</del>
<del>Free Elective*</del>	<del>3</del>

\*Students who plan to sit for the CPA exam in West Virginia need 30 credits of accounting courses at the 300-level or higher. This requirement can be satisfied by pursuing the Master of Science in Accountancy degree or using six of the free elective credits to take additional accounting credits. For the six free elective hours, students are encouraged to choose from undergraduate courses at the 300- or 400-level (except ACC 310 and ACC 490) that are not a required course or ACC 512, ACC 514, ACC 544, or ACC 548 for graduate credit through the 3+2 Program.

### Major Information

- The total number of free electives required depends on the number of hours completed in [STA 150](#) Foundations of Statistics or [STA 150B](#) Foundations of Stats-Expanded and [ENG 101](#) Beginning Composition or [ENG 101P](#) Beginning Composition Plus and the number of hours that can be double-counted toward multiple degree requirements.
- Student must earn a grade of "C" or better in all ACC [prerequisite courses \(including \[ACC 215\]\(#\) Accounting Principles \(CT\) and \[ACC 216\]\(#\) Principles of Accounting\). 100-, 200-, and 300-level required courses.](#)
- ~~The ACC Elective can be any 300/400 level ACC course (except [ACC 310](#) Acct for Entrepreneurs or [ACC 490](#) Internship), or [LE 308](#) Commercial Law, or an approved graduate course (GPA requirement exists).~~



- [ACC 499](#) Professional and Ethics Sem is the capstone course for all Accounting majors. It can only be taken during the senior year after all prerequisites are met.
- Multicultural or International additional university requirement met with International Business Elective.
- Please check with advisor about course offerings. Not all classes will be offered every semester.

## Catalog after Changes

### Major-Specific

<a href="#">ACC 311</a> Intermediate Accounting I	3
<a href="#">ACC 312</a> Intermediate Accounting II	3
<a href="#">ACC 318</a> Cost Accounting I	3
<a href="#">ACC 341</a> Acc Information Systems	3
<a href="#">ACC 348</a> Federal Taxation	3
<a href="#">ACC 429</a> Auditing I	3
<a href="#">ACC 440</a> Accounting Analytics	3
<a href="#">ACC 499</a> Professional and Ethics Sem	3
<a href="#">ACC 198</a> Accounting Professionalism	1
Free Elective*	3
Free Elective*	3
Free Elective*	3
Free Elective*	3
Free Elective*	3
Free Elective*	3
Free Elective*	3

\*Students who plan to sit for the CPA exam in West Virginia need 30 credits of accounting courses at the 300-level or higher. This requirement can be satisfied by pursuing the Master of Science in Accountancy degree or using six of the free elective credits to take additional accounting credits. For the six free elective hours, students are encouraged to choose from undergraduate courses at the 300- or 400-level (except ACC 310 and ACC 490) that are not a required course or ACC 512, ACC 514, ACC 544, or ACC 548 for graduate credit through the 3+2 Program.

### Major Information

- The total number of free electives required depends on the number of hours completed in [STA 150](#) Foundations of Statistics or [STA 150B](#) Foundations of Stats-Expanded and [ENG 101](#) Beginning Composition or [ENG 101P](#) Beginning Composition Plus and the number of hours that can be double-counted toward multiple degree requirements.
- Student must earn a grade of “C” or better in all ACC 100-, 200-, and 300-level required courses.

- ACC 499 Professional and Ethics Sem is the capstone course for all Accounting majors. It can only be taken during the senior year after all prerequisites are met.
- Multicultural or International additional university requirement met with International Business Elective.
- Please check with advisor about course offerings. Not all classes will be offered every semester.

## University Curriculum Committee RECOMMENDATION

### SR 22-23-52 CC

Recommends approval of the listed **UNDERGRADUATE MAJOR ADDITION, DELETION, CHANGE** in the following college and/or schools/programs:

#### **School of Aviation**

##### **Major Change: FL10 BS Commercial Pilot: Fixed Wing**

- **Summary of Changes:** Name
- **Rationale:** We are working closely with Federal Aviation Administration (FAA) officials to offer the Restricted Aviation Transport Pilot (ATP) training program. Students graduating from the restricted ATP are in greater demand in the industry as they require fewer hours to earn their ATP license. Indeed, we have submitted for approval and extensively revised the curriculum to meet the FAA requirements for this license. Aviation programs that offer ATP training are typically named "Professional Pilot" We now seek your help in changing the program's name.  
When Marshall University created the aviation program, we planned to train students to fly fixed-wing or rotor-wing aircraft. Unfortunately, our collaboration with Southern Utah State did not work out. Nevertheless, "Commercial Pilot: Fixed Wing" was approved before Southern Utah State's exit. Therefore, we wish to change the name to "Professional Pilot." Changing the name has greater recognition in the industry. Furthermore, the term "commercial" does not appropriately cover the range of responsibilities an ATP license covers. In short, we believe the name better represents the purpose and objective of the flight school.  
We understand that changing the name of a current degree requires many steps and coordination with the Higher Learning Commission. To that end, please advise us on the steps to request this change.
- **Form with signatures:** [Request for Undergraduate Change Renaming the Major.pdf](#)

#### **College of Engineering and Computer Sciences**

##### **Major Change: Computer Science TC10**

- **Summary of Changes:** Revisions to standardized test admission requirements
- **Rationale:** SAT score admission criteria revisions are proposed to align with the most recent version of the CollegeBoard ACT/SAT Concordance.
- **Curriculum:** [Major Change \(TC10, Computer Science\).pdf](#)

##### **Major Change: Computer & Info Security TC20**

- **Summary of Changes:** Revisions to standardized test admission requirements
- **Rationale:** SAT score admission criteria revisions are proposed to align with the most recent version of the CollegeBoard ACT/SAT Concordance.
- **Curriculum:** [Major Change \(TC20, Computer & Info Security\).pdf](#)

## University Curriculum Committee RECOMMENDATION

SR 22-23-52 CC

### **Major Change: Engineering BSE TE20**

- **Summary of Changes:** Revisions to standardized test admission requirements
- **Rationale:** SAT score admission criteria revisions are proposed to align with the most recent version of the CollegeBoard ACT/SAT Concordance.
- **Curriculum:** [Major Change \(TE20, Engineering BSE\).pdf](#)

### **Major Change: B.S. Mech Engineering TE30**

- **Summary of Changes:** Revisions to curriculum and standardized test admission requirements
- **Rationale:** Adjustments are proposed to reduce course overlap and to optimize section offerings in CECS. Also SAT score admission criteria revisions are proposed to align with the most recent version of the CollegeBoard ACT/SAT Concordance.
- **Curriculum:** [Major Change \(TE30, Bach of Sci Mech Engineering\).pdf](#)

### **Major Change: BSEE Electrical/Computer Engr TE40**

- **Summary of Changes:** Revisions to standardized test admission requirements
- **Rationale:** SAT score admission criteria revisions are proposed to align with the most recent version of the CollegeBoard ACT/SAT Concordance.
- **Curriculum:** [Major Change \(TE40, BSEE Electrical Computer Engr\).pdf](#)

### **Major Change: BSBME Biomedical Engineering TE50**

- **Summary of Changes:** Revisions to curriculum and standardized test admission requirements
- **Rationale:** This change is being made to align the curriculum with other disciplines within the college. Mechanical Engineering is removing ME 360 from its curriculum. Since this will impact the Biomedical Engineering curriculum, we are changing the ME 360 requirement to ENGR 318. Also SAT score admission criteria revisions are proposed to align with the most recent version of the CollegeBoard ACT/SAT Concordance.
- **Curriculum:** [Major Change \(TE50, BSBME, Biomedical Engineering\).pdf](#)

### **Major Change: BSCE Civil Engineering TE60**

- **Summary of Changes:** Revisions to standardized test admission requirements
- **Rationale:** SAT score admission criteria revisions are proposed to align with the most recent version of the CollegeBoard ACT/SAT Concordance.
- **Curriculum:** [Major Change \(TE60, BSCE Civil Engineering\).pdf](#)

**University Curriculum Committee  
RECOMMENDATION**

**SR 22-23-52 CC**

**College of Liberal Arts**

**Major Change: Geography BA (LG10)/Geography BS (LG20)**

- **Summary of Changes:** Revisions to curriculum
- **Rationale:** Changing the capstone from 2 semester sequence to 1 semester. Updating electives lists.
- **Curriculum:** [Undergrad Major Change GEO BA -GEO BS\\_signed.pdf](#)

**College of Science**

**Major Change: Computer and Information Technology (SI20)**

- **Rationale:** The entire program will be moved from the College of Science to the College of Engineering and Computer Sciences, the department of Computer and Information Technology will be merged with the department of Computer Sciences and Electrical Engineering. For these reasons all the courses, the major, the minors, and the areas of emphasis need to be moved accordingly.
- **Curriculum:** [UCCMajorAdditionChangeDeletionFormCIT.pdf](#)

**School of Pharmacy**

**Major Change: BS in Pharmaceutical Sciences (BSPS)**

- **Rationale:** The B.S. in Pharmaceutical Sciences was originally approved with the inclusion of 500 level courses in the 4<sup>th</sup> year. This would allow a student to complete the B.S. and the Pharm.D. within 7 years (rather than 8 years). The change that we are requesting provides an alternative pathway (with no 500 level courses) for students to complete the B.S. If they do not meet the minimum G.P.A. required to take 500 level courses in year \$. Students with an appropriate G.P.A. can still follow the curriculum that was originally approved to complete both the B.S. and Pharm.D. However the change proposed here adds an additional pathway to enable students that do not meet the G.P.A. requirement to complete the B.S. without taking 500 level courses.
- **Curriculum:** [bsps change of major for students not continuing into pharmd program 031523.pdf](#)

**University Curriculum Committee  
RECOMMENDATION**

**SR 22-23-52 CC**

**FACULTY SENATE CHAIR:**

APPROVED BY THE  
FACULTY SENATE: \_\_\_\_\_ DATE: \_\_\_\_\_

DISAPPROVED BY THE  
FACULTY SENATE: \_\_\_\_\_ DATE: \_\_\_\_\_

**UNIVERSITY PRESIDENT:**

APPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_

DISAPPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_

**COMMENTS:** \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

## Request for Undergraduate Addition, Deletion, or Change of a Major

1. Prepare one paper copy and obtain signatures from the Department Chair/Head, Registrar, and College Dean. 2. Submit the form to your College Curriculum Committee. 3. After attaining the signature of the College Curriculum Chair, send the paper copy to the current University Curriculum Committee (UCC) Chair. 4. Send an identical (sans signatures) ELECTRONIC COPY and all supporting documentation in PDF format by email to the current UCC Chair.

College: Aviation Department/Division: Bill Noe Flight School  
Contact Person: David Pittenger Phone: 696-2818

### ACTION REQUESTED:

Check action requested:     Addition     Deletion     Change  
Name of Major (provide code if this is an existing major): FL10 BS Commercial Pilot: Fixed Wing  
Within which Degree Program is/ will this Major be listed (please provide code as well): \_\_\_\_\_

### RATIONALE:

See Attached

**CURRICULUM:** (If addition or change, number of hours and courses; indicate if required or optional) May be submitted as separate document.

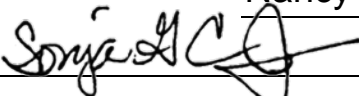
This request does not include a change in the curriculum.

### NOTIFICATION REQUIREMENTS:

Attach a copy of written notification regarding this curriculum request to the following:

1. **Statement of Non-Duplication:** If this major will be similar in title or content to an existing major at the university, please send a memo to the affected department and include it with this packet, as well as, the response received from the affected department.
2. If your department/division requires additional faculty, equipment, or specialized materials, attach an estimation of money and time required to secure these items.
3. Send a copy of this completed form to the Marshall University Catalog Editor.

**SIGNATURES:** (If disapproved at any level, do not sign. Return to previous signer.)

Department Chair/Division Head: <u>Nancy Ritter</u>	Date: <u>03/27/2023</u>
Registrar: <u></u>	Date: <u>03/27/2023</u>
College Dean: <u>Nancy Ritter for Bill Noe</u>	Date: <u>03/27/2023</u>
College Curriculum Chair: <u>David J. Pittenger</u>	Date: <u>03/27/2023</u>
University Curriculum Committee Chair: <u>Zach Garrett</u>	Date: <u>3/29/23</u>
Faculty Senate Chair: _____	Date: _____
VP Academic Affairs/VP Health Science _____	Date: _____

## RATIONALE FOR NAME CHANGE

### Commercial Pilot-Fixed Wing to Professional Pilot

We are working closely with Federal Aviation Administration (FAA) officials to offer the Restricted Aviation Transport Pilot (ATP) training program. Students graduating from the restricted ATP are in greater demand in the industry as they require fewer hours to earn their ATP license. Indeed, we have submitted for approval and extensively revised the curriculum to meet the FAA requirements for this license. Aviation programs that offer ATP training are typically named “Professional Pilot” We now seek your help in changing the program’s name.

When Marshall University created the aviation program, we planned to train students to fly fixed-wing or rotor-wing aircraft. Unfortunately, our collaboration with Southern Utah State did not work out. Nevertheless, “Commercial Pilot: Fixed Wing” was approved before Southern Utah State’s exit. Therefore, we wish to change the name to “Professional Pilot.”

Changing the name has greater recognition in the industry. Furthermore, the term “commercial” does not appropriately cover the range of responsibilities an ATP license covers. In short, we believe the name better represents the purpose and objective of the flight school.

We understand that changing the name of a current degree requires many steps and coordination with the Higher Learning Commission. To that end, please advise us on the steps to request this change.



## Request for Undergraduate Addition, Deletion, or Change of a Major

1. Prepare one paper copy and obtain signatures from the Department Chair/Head, Registrar, and College Dean. 2. Submit the form to your College Curriculum Committee. 3. After attaining the signature of the College Curriculum Chair, send the paper copy to the current University Curriculum Committee (UCC) Chair. 4. Send an identical (sans signatures) ELECTRONIC COPY and all supporting documentation in PDF format by email to the current UCC Chair.

College: CECS Department/Division: CSEE  
Contact Person: Greg Michaelson Phone: x65606

### ACTION REQUESTED:

Check action requested:	<input type="checkbox"/> Addition	<input type="checkbox"/> Deletion	<input checked="" type="checkbox"/> Change
Name of Major (provide code if this is an existing major):	<u>TC10 (Computer Science)</u>		
Within which Degree Program is/ will this Major be listed (please provide code as well):	_____		

### RATIONALE:

SAT score admission criteria revisions are proposed to align with the most recent version of the CollegeBoard ACT/SAT Concordance.
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**CURRICULUM:** (If addition or change, number of hours and courses; indicate if required or optional) May be submitted as separate document.

See attachment.
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### NOTIFICATION REQUIREMENTS:

Attach a copy of written notification regarding this curriculum request to the following:
1. <b>Statement of Non-Duplication:</b> If this major will be similar in title or content to an existing major at the university, please send a memo to the affected department and include it with this packet, as well as, the response received from the affected department.
2. If your department/division requires additional faculty, equipment, or specialized materials, attach an estimation of money and time required to secure these items.
3. Send a copy of this completed form to the Marshall University Catalog Editor.

**SIGNATURES:** (If disapproved at any level, do not sign. Return to previous signer.)

Department Chair/Division Head: <u>[Signature]</u>	Date: <u>2/24/23</u>
Registrar: <u>[Signature]</u>	Date: <u>2/27/2023</u>
College Dean: <u>[Signature]</u>	Date: <u>27-Feb-2023</u>
College Curriculum Chair: <u>[Signature]</u>	Date: <u>27-Feb-2023</u>
University Curriculum Committee Chair: <u>Zach Garrett</u>	Date: <u>3.24.23</u>
Faculty Senate Chair: _____	Date: _____
VP Academic Affairs/VP Health Science _____	Date: _____

# TC10 – Computer Science

## *Current Catalog Description*

### Admission and Transfer Criteria

Minimum requirements for admission into the Computer Science major for first-time freshmen are

- an ACT composite score of 21 (composite SAT of 980) and
- an ACT mathematics score of 24 (Math SAT of 560).

Minimum requirements for admission into the Computer Science major for transfer students, whether from within Marshall University or from another institution, are:

- 15 earned semester credit hours of college-level coursework,
- an overall Grade Point Average of at least 2.0 in all college-level coursework,
- completion of [ENG 101](#) Beginning Composition (or equivalent) with a grade of C, and
- completion of [MTH 132](#) Precalculus with Sci Applica, or [MTH 127](#) College Algebra-Expanded/[MTH 130](#) College Algebra and [MTH 132](#) Precalculus with Sci Applica (or equivalent) with a grade of C.

Since enrollment may be limited, prospective students are encouraged to apply for admission as soon as possible and are urged to contact an advisor.

For those desiring to major in computer science who do not meet the admission or transfer criteria listed above:

- Students may be admitted to “Pre-Computer Science” with a minimum ACT composite of 19 and an ACT mathematics score of 19-23 (composite SAT of 900; Math SAT of 460-550). Transfer students must be eligible for [MTH 127](#) College Algebra-Expanded/[MTH 130](#) College Algebra and [MTH 132](#) Precalculus with Sci Applica.

Students in Pre-Computer Science must complete the criteria for transfer students to Computer Science. Registration for Computer Science courses will be limited until transfer criteria are met.

# TC10 – Computer Science

## *Edited Catalog Description*

### Admission and Transfer Criteria

Minimum requirements for admission into the Computer Science major for first-time freshmen are

- an ACT composite score of 21 (composite SAT of ~~980~~ 1060) and
- an ACT mathematics score of 24 (Math SAT of ~~560~~ 570).

Minimum requirements for admission into the Computer Science major for transfer students, whether from within Marshall University or from another institution, are:

- 15 earned semester credit hours of college-level coursework,
- an overall Grade Point Average of at least 2.0 in all college-level coursework,
- completion of [ENG 101](#) Beginning Composition (or equivalent) with a grade of C, and
- completion of [MTH 132](#) Precalculus with Sci Applica, or [MTH 127](#) College Algebra-Expanded/[MTH 130](#) College Algebra and MTH 132 Precalculus with Sci Applica (or equivalent) with a grade of C.

Since enrollment may be limited, prospective students are encouraged to apply for admission as soon as possible and are urged to contact an advisor.

For those desiring to major in computer science who do not meet the admission or transfer criteria listed above:

- Students may be admitted to “Pre-Computer Science” with a minimum ACT composite of 19 and an ACT mathematics score of 19-23 (composite SAT of ~~900~~ 990; Math SAT of ~~460-550~~ 510-560). Transfer students must be eligible for [MTH 127](#) College Algebra-Expanded/[MTH 130](#) College Algebra and [MTH 132](#) Precalculus with Sci Applica.

Students in Pre-Computer Science must complete the criteria for transfer students to Computer Science. Registration for Computer Science courses will be limited until transfer criteria are met.

# TC10 – Computer Science

## *Final Catalog Description*

### Admission and Transfer Criteria

Minimum requirements for admission into the Computer Science major for first-time freshmen are

- an ACT composite score of 21 (composite SAT of 1060) and
- an ACT mathematics score of 24 (Math SAT of 570).

Minimum requirements for admission into the Computer Science major for transfer students, whether from within Marshall University or from another institution, are:

- 15 earned semester credit hours of college-level coursework,
- an overall Grade Point Average of at least 2.0 in all college-level coursework,
- completion of [ENG 101](#) Beginning Composition (or equivalent) with a grade of C, and
- completion of [MTH 132](#) Precalculus with Sci Applica, or [MTH 127](#) College Algebra-Expanded/[MTH 130](#) College Algebra and [MTH 132](#) Precalculus with Sci Applica (or equivalent) with a grade of C.

Since enrollment may be limited, prospective students are encouraged to apply for admission as soon as possible and are urged to contact an advisor.

For those desiring to major in computer science who do not meet the admission or transfer criteria listed above:

- Students may be admitted to “Pre-Computer Science” with a minimum ACT composite of 19 and an ACT mathematics score of 19-23 (composite SAT of 990; Math SAT of 510-560). Transfer students must be eligible for [MTH 127](#) College Algebra-Expanded/[MTH 130](#) College Algebra and [MTH 132](#) Precalculus with Sci Applica.

Students in Pre-Computer Science must complete the criteria for transfer students to Computer Science. Registration for Computer Science courses will be limited until transfer criteria are met.

## Request for Undergraduate Addition, Deletion, or Change of a Major

1. Prepare one paper copy and obtain signatures from the Department Chair/Head, Registrar, and College Dean. 2. Submit the form to your College Curriculum Committee. 3. After attaining the signature of the College Curriculum Chair, send the paper copy to the current University Curriculum Committee (UCC) Chair. 4. Send an identical (sans signatures) ELECTRONIC COPY and all supporting documentation in PDF format by email to the current UCC Chair.

College: CECS Department/Division: CSEE  
Contact Person: Greg Michaelson Phone: x65606

### ACTION REQUESTED:

Check action requested:	<input type="checkbox"/> Addition	<input type="checkbox"/> Deletion	<input checked="" type="checkbox"/> Change
Name of Major (provide code if this is an existing major):	<u>TC20 (Computer &amp; Info Security)</u>		
Within which Degree Program is/ will this Major be listed (please provide code as well):	_____		

### RATIONALE:

<p>SAT score admission criteria revisions are proposed to align with the most recent version of the CollegeBoard ACT/SAT Concordance.</p>
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**CURRICULUM:** (If addition or change, number of hours and courses; indicate if required or optional) May be submitted as separate document.

<p>See attachment.</p>
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### NOTIFICATION REQUIREMENTS:

<p>Attach a copy of written notification regarding this curriculum request to the following:</p> <ol style="list-style-type: none"><li><b>Statement of Non-Duplication:</b> If this major will be similar in title or content to an existing major at the university, please send a memo to the affected department and include it with this packet, as well as, the response received from the affected department.</li><li>If your department/division requires additional faculty, equipment, or specialized materials, attach an estimation of money and time required to secure these items.</li><li>Send a copy of this completed form to the Marshall University Catalog Editor.</li></ol>
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**SIGNATURES:** (If disapproved at any level, do not sign. Return to previous signer.)

Department Chair/Division Head: <u>[Signature]</u>	Date: <u>2/24/23</u>
Registrar: <u>[Signature]</u>	Date: <u>2/27/2023</u>
College Dean: <u>[Signature]</u>	Date: <u>27-Feb-2023</u>
College Curriculum Chair: <u>[Signature]</u>	Date: <u>27-feb-2023</u>
University Curriculum Committee Chair: <u>Zach Garrett</u>	Date: <u>3.24.23</u>
Faculty Senate Chair: _____	Date: _____
VP Academic Affairs/VP Health Science _____	Date: _____

# TC20 – Computer & Info Security

## *Current Catalog Description*

### Admission and Transfer Criteria

Minimum requirements for admission into the Computer Science major for first-time freshmen are

- an ACT composite score of 21 (SAT 1060) and
- an ACT mathematics score of 24 (SAT math section score of 580).

Minimum requirements for admission into the Computer and Information Security major for transfer students, whether from within Marshall University or from another institution, are:

- 15 earned semester credit hours of college-level coursework,
- an overall Grade Point Average of at least 2.0 in all college-level coursework,
- completion of [ENG 101](#) Beginning Composition (or equivalent) with a grade of C, and
- completion of [MTH 132](#) Precalculus with Sci Applica, or [MTH 127](#) College Algebra-Expanded/[MTH 130](#) College Algebra and [MTH 132](#) Precalculus with Sci Applica (or equivalent) with a grade of C.

For those desiring to major in computer and information security who do not meet the admission or transfer criteria listed above:

- Students may be admitted to “Pre-Computer Science” with a minimum ACT composite of 19 and an ACT mathematics score of 19-23 (composite SAT of 900; Math SAT of 460-550). Transfer students must be eligible for [MTH 127](#) College Algebra-Expanded/[MTH 130](#) College Algebra and [MTH 132](#) Precalculus with Sci Applica.

Students in Pre-Computer Science must complete the criteria for transfer students to Computer Science. Registration for Computer Science courses will be limited until transfer criteria are met.

# TC20 – Computer & Info Security

## *Edited Catalog Description*

### Admission and Transfer Criteria

Minimum requirements for admission into the Computer Science and Information Security major for first-time freshmen are

- an ACT composite score of 21 (SAT 1060) and
- an ACT mathematics score of 24 (SAT math section score of 580-570).

Minimum requirements for admission into the Computer and Information Security major for transfer students, whether from within Marshall University or from another institution, are:

- 15 earned semester credit hours of college-level coursework,
- an overall Grade Point Average of at least 2.0 in all college-level coursework,
- completion of [ENG 101](#) Beginning Composition (or equivalent) with a grade of C, and
- completion of [MTH 132](#) Precalculus with Sci Applica, or [MTH 127](#) College Algebra-Expanded/[MTH 130](#) College Algebra and MTH 132 Precalculus with Sci Applica (or equivalent) with a grade of C.

For those desiring to major in Computer and Information Security who do not meet the admission or transfer criteria listed above:

For those desiring to major in computer science who do not meet the admission or transfer criteria listed above:

- Students may be admitted to “Pre-Computer Science” with a minimum ACT composite of 19 and an ACT mathematics score of 19-23 (composite SAT of 900-990; Math SAT of 460-550-510-560). Transfer students must be eligible for [MTH 127](#) College Algebra-Expanded/[MTH 130](#) College Algebra and [MTH 132](#) Precalculus with Sci Applica.

Students in Pre-Computer Science must complete the criteria for transfer students to Computer Science. Registration for Computer Science courses will be limited until transfer criteria are met.

## TC20 – Computer & Info Security

### *Final Catalog Description*

#### Admission and Transfer Criteria

Minimum requirements for admission into the Computer and Information Security major for first-time freshmen are

- an ACT composite score of 21 (SAT 1060) and
- an ACT mathematics score of 24 (SAT math section score of 570).

Minimum requirements for admission into the Computer and Information Security major for transfer students, whether from within Marshall University or from another institution, are:

- 15 earned semester credit hours of college-level coursework,
- an overall Grade Point Average of at least 2.0 in all college-level coursework,
- completion of [ENG 101](#) Beginning Composition (or equivalent) with a grade of C, and
- completion of [MTH 132](#) Precalculus with Sci Applica, or [MTH 127](#) College Algebra-Expanded/[MTH 130](#) College Algebra and [MTH 132](#) Precalculus with Sci Applica (or equivalent) with a grade of C.

For those desiring to major in Computer and Information Security who do not meet the admission or transfer criteria listed above:

For those desiring to major in computer science who do not meet the admission or transfer criteria listed above:

- Students may be admitted to “Pre-Computer Science” with a minimum ACT composite of 19 and an ACT mathematics score of 19-23 (composite SAT of 990; Math SAT of 510-560). Transfer students must be eligible for [MTH 127](#) College Algebra-Expanded/[MTH 130](#) College Algebra and [MTH 132](#) Precalculus with Sci Applica.

Students in Pre-Computer Science must complete the criteria for transfer students to Computer Science. Registration for Computer Science courses will be limited until transfer criteria are met.



## Request for Undergraduate Addition, Deletion, or Change of a Major

1. Prepare one paper copy and obtain signatures from the Department Chair/Head, Registrar, and College Dean. 2. Submit the form to your College Curriculum Committee. 3. After attaining the signature of the College Curriculum Chair, send the paper copy to the current University Curriculum Committee (UCC) Chair. 4. Send an identical (sans signatures) ELECTRONIC COPY and all supporting documentation in PDF format by email to the current UCC Chair.

College: CECS Department/Division: College-Wide  
Contact Person: Greg Michaelson Phone: x65606

### ACTION REQUESTED:

Check action requested:	<input type="checkbox"/> Addition	<input type="checkbox"/> Deletion	<input checked="" type="checkbox"/> Change
Name of Major (provide code if this is an existing major):	<u>TE20 (Engineering BSE)</u>		
Within which Degree Program is/ will this Major be listed (please provide code as well):	_____		

### RATIONALE:

<p>SAT score admission criteria revisions are proposed to align with the most recent version of the CollegeBoard ACT/SAT Concordance.</p>
---

**CURRICULUM:** (If addition or change, number of hours and courses; indicate if required or optional) May be submitted as separate document.

<p>See attachment.</p>
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### NOTIFICATION REQUIREMENTS:

<p>Attach a copy of written notification regarding this curriculum request to the following:</p> <ol style="list-style-type: none"><li><b>Statement of Non-Duplication:</b> If this major will be similar in title or content to an existing major at the university, please send a memo to the affected department and include it with this packet, as well as, the response received from the affected department.</li><li>If your department/division requires additional faculty, equipment, or specialized materials, attach an estimation of money and time required to secure these items.</li><li>Send a copy of this completed form to the Marshall University Catalog Editor.</li></ol>
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**SIGNATURES:** (If disapproved at any level, do not sign. Return to previous signer.)

Department Chair/Division Head: 	Date: <u>23-Feb-2023</u>
Registrar: 	Date: <u>2/27/2023</u>
College Dean: 	Date: <u>27-Feb-2023</u>
College Curriculum Chair: 	Date: <u>27-Feb-2023</u>
University Curriculum Committee Chair: <u>Zach Garrett</u>	Date: <u>3.24.23</u>
Faculty Senate Chair: _____	Date: _____
VP Academic Affairs/VP Health Science _____	Date: _____

## TE20 – Engineering BSE

### *Current Catalog Description*

#### Admission Requirements

- Meet Marshall University admission requirements
- Admission to the B.S.E. Engineering program requires a minimum composite ACT score of 21 with a math score of 24, or a minimum SAT composite of 980 with a math SAT of 560.
- Transfer students must have completed [MTH 127](#) College Algebra-Expanded/[MTH 130](#) College Algebra and [MTH 132](#) Precalculus with Sci Applica.

For those needing to complete some requirements first, there is Pre-Engineering. Requirements for Pre-Engineering are a minimum composite ACT score of 19 with a math score of 19-23, or a minimum SAT composite of 900 with a math SAT of 460-550. Students who are admitted to the Pre-Engineering program generally will require an additional calendar year to complete the requirements for the B.S.E. degree. Transfer students must be eligible to take [MTH 127](#) College Algebra-Expanded/[MTH 130](#) College Algebra and [MTH 132](#) Precalculus with Sci Applica.

#### Graduation Requirements

The B.S.E. degree program requires a minimum of 124 credit hours of coursework as outlined below. In addition to fulfilling the university's requirements for graduation, B.S.E. students must maintain a minimum GPA of 2.0 in all professional courses. These professional courses include mathematics ([MTH 229](#) Calculus/Analytic Geom I (CT) or above), required science courses, core engineering (ENGR) courses, engineering emphasis courses (CE), and courses used as technical electives. Entering students with a math ACT of 24-26 are required to take [MTH 132](#) Precalculus with Sci Applica. Such students will likely need an extra semester or summer term to satisfy BSE requirements.

## TE20 – Engineering BSE

### *Edited Catalog Description*

#### Admission Requirements

- Meet Marshall University admission requirements
- Admission to the B.S.E. Engineering program requires a minimum composite ACT score of 21 with a math score of 24, or a minimum SAT composite of ~~980~~ **1060** with a math SAT of ~~560~~ **570**.
- Transfer students must have completed [MTH 127](#) College Algebra-Expanded/[MTH 130](#) College Algebra and [MTH 132](#) Precalculus with Sci Applica.

For those needing to complete some requirements first, there is Pre-Engineering. Requirements for Pre-Engineering are a minimum composite ACT score of 19 with a math score of 19-23, or a minimum SAT composite of ~~900~~ **990** with a math SAT of ~~460-550~~ **510-560**. Students who are admitted to the Pre-Engineering program generally will require an additional calendar year to complete the requirements for the B.S.E. degree. Transfer students must be eligible to take [MTH 127](#) College Algebra-Expanded/[MTH 130](#) College Algebra and [MTH 132](#) Precalculus with Sci Applica.

#### Graduation Requirements

The B.S.E. degree program requires a minimum of 124 credit hours of coursework as outlined below. In addition to fulfilling the university's requirements for graduation, B.S.E. students must maintain a minimum GPA of 2.0 in all professional courses. These professional courses include mathematics ([MTH 229](#) Calculus/Analytic Geom I (CT) or above), required science courses, core engineering (ENGR) courses, engineering emphasis courses (~~CE~~), and courses used as technical electives. Entering students with a math ACT of 24-26 are required to take [MTH 132](#) Precalculus with Sci Applica. Such students will likely need an extra semester or summer term to satisfy BSE requirements.

## TE20 – Engineering BSE

### *Final Catalog Description*

#### Admission Requirements

- Meet Marshall University admission requirements
- Admission to the B.S.E. Engineering program requires a minimum composite ACT score of 21 with a math score of 24, or a minimum SAT composite of 1060 with a math SAT of 570.
- Transfer students must have completed [MTH 127](#) College Algebra-Expanded/[MTH 130](#) College Algebra and [MTH 132](#) Precalculus with Sci Applica.

For those needing to complete some requirements first, there is Pre-Engineering. Requirements for Pre-Engineering are a minimum composite ACT score of 19 with a math score of 19-23, or a minimum SAT composite of 990 with a math SAT of 510-560. Students who are admitted to the Pre-Engineering program generally will require an additional calendar year to complete the requirements for the B.S.E. degree. Transfer students must be eligible to take [MTH 127](#) College Algebra-Expanded/[MTH 130](#) College Algebra and [MTH 132](#) Precalculus with Sci Applica.

#### Graduation Requirements

The B.S.E. degree program requires a minimum of 124 credit hours of coursework as outlined below. In addition to fulfilling the university's requirements for graduation, B.S.E. students must maintain a minimum GPA of 2.0 in all professional courses. These professional courses include mathematics ([MTH 229](#) Calculus/Analytic Geom I (CT) or above), required science courses, core engineering (ENGR) courses, engineering emphasis courses, and courses used as technical electives. Entering students with a math ACT of 24-26 are required to take [MTH 132](#) Precalculus with Sci Applica. Such students will likely need an extra semester or summer term to satisfy BSE requirements.

## Request for Undergraduate Addition, Deletion, or Change of a Major

1. Prepare one paper copy and obtain signatures from the Department Chair/Head, Registrar, and College Dean. 2. Submit the form to your College Curriculum Committee. 3. After attaining the signature of the College Curriculum Chair, send the paper copy to the current University Curriculum Committee (UCC) Chair. 4. Send an identical (sans signatures) ELECTRONIC COPY and all supporting documentation in PDF format by email to the current UCC Chair.

College: CECS Department/Division: Mechanical Engineering  
 Contact Person: Jim McIntosh Phone: x63113

**ACTION REQUESTED:**

Check action requested:     Addition     Deletion     Change  
 Name of Major (provide code if this is an existing major): TE30 (Bach of Sci Mech Engineering)  
 Within which Degree Program is/ will this Major be listed (please provide code as well): \_\_\_\_\_

**RATIONALE:**

Adjustments are proposed to reduce course overlap and to optimize section offerings in CECS. Also, SAT score admission criteria revisions are proposed to align with the most recent version of the CollegeBoard ACT/SAT Concordance.




**CURRICULUM:** (If addition or change, number of hours and courses; indicate if required or optional) May be submitted as separate document.

See attachment.

**NOTIFICATION REQUIREMENTS:**

- Attach a copy of written notification regarding this curriculum request to the following:
- Statement of Non-Duplication:** If this major will be similar in title or content to an existing major at the university, please send a memo to the affected department and include it with this packet, as well as, the response received from the affected department.
  - If your department/division requires additional faculty, equipment, or specialized materials, attach an estimation of money and time required to secure these items.
  - Send a copy of this completed form to the Marshall University Catalog Editor.

**SIGNATURES:** (If disapproved at any level, do not sign. Return to previous signer.)

Department Chair/Division Head: <u></u>	Date: <u>2-20-23</u>
Registrar: <u></u>	Date: <u>2/21/2023</u>
College Dean: <u></u>	Date: <u>27-Feb-2023</u>
College Curriculum Chair: <u></u>	Date: <u>27-Feb-2023</u>
University Curriculum Committee Chair: <u>Zach Garrett</u>	Date: <u>3.24.23</u>
Faculty Senate Chair: _____	Date: _____
VP Academic Affairs/VP Health Science _____	Date: _____

TE30

BS in Mechanical Engineering

Current Catalog Description

# Overview

Dr. Asad Salem, Department Chair; [asad.salem@marshall.edu](mailto:asad.salem@marshall.edu)

The Marshall University Bachelor of Science in Mechanical Engineering (B.S.M.E.) program goals are as follows:

1. Practice the mechanical engineering discipline successfully within community accepted standards.
2. Achieve personal and professional success with awareness and commitment to ethical and social responsibilities, both as individuals and in team environments.
3. Engage in professional service, such as participation in professional society and community service.
4. Engage in lifelong learning activities, such as graduate studies or professional workshops.
5. Develop a professional career in the prevailing market that meets personal goals, objectives and desires.

The student learning outcomes of the B.S.M.E. are as follows:

1. An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.
2. An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.
3. An ability to communicate effectively with a range of audiences.
4. An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.
5. An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.
6. An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.
7. An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

## Admission Requirements

- Meet Marshall University admission requirements
- Admission to the B.S.M.E. program requires a minimum composite ACT score of 21 with a math score of 24, or a minimum SAT composite of 980 with a math SAT of 560.
- Transfer students must have completed MTH 127 College Algebra-Expanded/MTH 130 College Algebra and MTH 132 Precalculus with Sci Applica.

Students not meeting the ACT/SAT score requirements above may enroll in Pre-Engineering. Requirements for Pre-Engineering are a minimum composite ACT score of 19 with a math score of 19-23, or a minimum SAT composite of 900 with a math SAT of 460-550. Students who are admitted to the Pre-Engineering program generally will require an additional calendar year to complete the requirements for the B.S.M.E. degree. Transfer students must be eligible to take MTH 127 College Algebra-Expanded/MTH 130 College Algebra and MTH 132 Precalculus with Sci Applica.

## Graduation Requirements

The B.S.M.E. degree program requires a minimum of 125 credit hours of coursework. In addition to fulfilling the university's requirements for graduation, B.S.M.E. students must maintain a minimum GPA of 2.0 in all professional courses. These professional courses include mathematics (MTH 229 Calculus/Analytic Geom I (CT) or above), required science courses, core engineering (ENGR) courses, mechanical engineering courses (ME), and courses used as technical electives. Entering students with a Math ACT of 24-26 are required to take MTH 132 Precalculus with Sci Applica. Such students will likely need an extra semester or summer term to satisfy B.S.M.E. requirements.

## Co-Operative Education

Students may elect to participate in the co-operative education program. Students in the program will have periodic full-time work experiences in their area of interest with participating companies. Information on the program can be obtained from the department chair or academic advisor.

# Major

The Core Curriculum is designed to foster critical thinking skills and introduce students to basic domains of thinking that transcend disciplines. The Core applies to all majors. Information on specific classes in the Core can be found at <https://www.marshall.edu/gened/>.

## Core Curriculum

### Core 1: Critical Thinking

FYS 100 or FYS 100H	First Yr Sem Critical Thinking or First Year Seminar-Honors	3
	Two Critical Thinking Course	6

### Core 2: Critical Thinking

















ENG 101 🌱	Beginning Composition	3
ENG 201 🌱 🎓	Advanced Composition	3
CMM 103 🌱 or CMM 207 🌱	Fund Speech-Communication or Bus & Prof Communication	3
Math	Requirement met in major	
Physical/Natural Science	Requirement met in major	
Core II Social Science		3
Core II Humanities		3
Core II Fine Arts		3

### Additional University Requirements

	Two Writing Intensive Courses	6
	One Multicultural (M) or International (I)	3



## Major-Specific

MTH 229  	Calculus/Analytic Geom I (CT)	5
MTH 230  	Calculus/Analytic Geom II (CT)	4
MTH 231 	Calculus/Analytic Geom III (CT)	4
MTH 335 	Ordinary Diff Equations	3
CHM 211  	Principles of Chemistry I	3
PHY 211 	University Physics I	4
PHY 202  	General Physics I Laboratory	1
PHY 213 	University Physics II	4
ENGR 102	Introduction to CAD	2
ENGR 103	First-Year Engineering Seminar	1
ENGR 104	The Engineering Profession	1
ENGR 213 	Statics	3
ENGR 214 	Dynamics	3
ENGR 215	Engineering Materials	3
ENGR 216	Mech of Deformable Bodies	3
ENGR 217	Engineering Co-Op Preparation	1
ENGR 219	Engineering Thermodynamics	3
ENGR 222	Engr Cost Analysis & Economy	3
ENGR 335 	Adv Engineering Analysis	3
ME 111	Mech Engineering Computations	3
ME 240	Manufacturing Processes	3
ME 245	Circuits and Instrumentation	3
ME 310	Thermodynamics II	3
ME 325	Experimental Design and Thermo	2
ME 340	Machine Element Design	3
ME 350	Heat Transfer	3
ME 360	Fluid Dynamics	4
ME 410	Kinematics and Design of Machine	3
ME 420	Control Systems	3
ME 425	Mechanical Engineering Lab-II	1
ME 455	Metallurgy	3
	<b>Students who select aerospace engineering as an area of emphasis must take the following courses:</b>	
ME 305	Aircraft Systems (in place of ME 240-Manufacturing Processes)	3
ME 312	Flight Mechanics (in place of ME 410, Kinematics and Machine Design)	3
ME 422	Flight Stability and Control (in place of ME 420, Control Systems)	3
ME 456	Materials for Aerospace (in place of ME 455, Metallurgy)	3
	<b>Capstone Design, Design Elective, and Technical Electives</b>	
ME 452	Capstone Design I <sup>1</sup>	1
ME 453 	Capstone Design II <sup>2</sup>	3
	<b>Design Elective</b> At least one design elective must be taken from the following courses:	<b>3</b>
ME 430	Design of Thermal Systems	
ME 435	Design of Mechanical Systems	

	<p><b>Technical Electives</b></p> <p>At least three design electives must be taken from the following courses:</p> <ul style="list-style-type: none"> <li>• Any 300-level or higher ME course not taken to satisfy other B.S.M.E. degree requirements</li> <li>• Any 300-level or higher CE, EE, or BME course not taken to satisfy other B.S.M.E. requirements</li> <li>• Any 300-level or higher ENGR course not taken to satisfy other B.S.M.E. degree requirements</li> <li>• Other courses with the approval of the student's advisor and the department chair</li> </ul>	<b>9</b>
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<sup>1</sup> To be eligible to take ME 452 Capstone Design I, students must have senior standing in mechanical engineering. Senior standing is defined for the B.S.M.E. as having completed or concurrently taking these three courses: ME 325 Experimental Design and Thermo, ME 350 Heat Transfer, and ME 410 Kinematics & Design of Machine.

<sup>2</sup> To be eligible to take ME 453 Capstone Design II, students must have completed ME 452 Capstone Design I and at least one of the design electives (ME 430 Design of Thermal Systems or ME 435 Design of Mechanical System).





## Major Information

- Course offerings and course attributes are subject to change each semester. Please consult each semester's schedule of courses for availability and attributes.
- Students are required to know and track their degree requirements for graduation or for entrance to a professional school.

# Four-Year Plan

Mechanical Engineers apply fundamental math and physics laws to design, fabricate and innovate mechanical devices. They are multi-skilled and have working knowledge of computers, electricity, structures and mechanisms, materials, and manufacturing processes. The Bachelor of Science in Mechanical Engineering (B.M.S.E.) at Marshall University is designed to emphasize service, systems-based knowledge, and sustainability combining a traditional engineering approach with new and emerging fields.

First Year		
FIRST SEMESTER		CREDIT HOURS
CHM 211 🌿🎓	Principles of Chemistry I	3
MTH 229 🌿🎓	Calculus/Analytic Geom I (CT)	5
ENGR 103	First-Year Engineering Seminar	1
ENGR 104	The Engineering Profession	1
CMM 103 🌿	Fund Speech-Communication	3
FYS 100	First Yr Sem Critical Thinking	3
UNI 100	Freshman First Class	1
	<b>Credit Hours</b>	<b>16</b>
SECOND SEMESTER		CREDIT HOURS
MTH 230 🌿🎓	Calculus/Analytic Geom II (CT)	4
ENG 101 🌿	Beginning Composition	3
ENGR 102	Introduction to CAD	2
PHY 211 🌿	University Physics I	4
PHY 202 🌿🎓	General Physics I Laboratory	1
ME 111	Mech Engineering Computations	3
	<b>Credit Hours</b>	<b>17</b>
Second Year		
FIRST SEMESTER		CREDIT HOURS
ENGR 213 🎓	Statics	3
ENGR 215	Engineering Materials	3
ME 245	Circuits and Instrumentation	3
MTH 231 🌿	Calculus/Analytic Geom III (CT)	4
PHY 213 🌿	University Physics II	4
	<b>Credit Hours</b>	<b>17</b>
SECOND SEMESTER		CREDIT HOURS
ENGR 214 🎓	Dynamics	3
ENGR 216	Mech of Deformable Bodies	3
ENGR 217	Engineering Co-Op Preparation	1
ENGR 219	Engineering Thermodynamics	3
ME 240	Manufacturing Processes	3
MTH 335 🎓	Ordinary Diff Equations	3
	<b>Credit Hours</b>	<b>16</b>

Third Year		
FIRST SEMESTER		CREDIT HOURS
ME 360	Fluid Dynamics	4
ME 310	Thermodynamics II	3
ENGR 335 	Adv Engineering Analysis	3
ME 340	Machine Element Design	3
ENGR 222	Engr Cost Analysis & Economy	3
	<b>Credit Hours</b>	<b>16</b>
SECOND SEMESTER		CREDIT HOURS
	Core II Social Science (MC/I, WI)	3
ME 420	Control Systems	3
ME 325	Experimental Design and Thermo	2
ME 350	Heat Transfer	3
ME 410	Kinematics and Design of Machine	3
ENG 201  	Advanced Composition	3
	<b>Credit Hours</b>	<b>17</b>
Fourth Year		
FIRST SEMESTER		CREDIT HOURS
ME 425	Mechanical Engineering Lab-II	1
ME 452	Capstone Design I	1
	ME Technical Elective I	3
	ME Technical Elective II	3
	Core II Fine Arts	3
	ME Design Elective	3
	<b>Credit Hours</b>	<b>14</b>
SECOND SEMESTER		CREDIT HOURS
ME 453 	Capstone Design II	3
ME 455	Metallurgy	3
	ME Technical Elective III	3
	Core II Humanities (CT, WI)	3
	<b>Credit Hours</b>	<b>12</b>
	<b>Total Credit Hours</b>	<b>125</b>

TE30

BS in Mechanical Engineering

Edited Catalog Description

# Overview

Dr. Asad Salem, Department Chair; [asad.salem@marshall.edu](mailto:asad.salem@marshall.edu)

Prof. James D. McIntosh, CIH CSP, Department Chair; [mcintoshj@marshall.edu](mailto:mcintoshj@marshall.edu)

The Marshall University Bachelor of Science in Mechanical Engineering (B.S.M.E.) program goals are as follows:

1. Practice the mechanical engineering discipline successfully within community accepted standards.
2. Achieve personal and professional success with awareness and commitment to ethical and social responsibilities, both as individuals and in team environments.
3. Engage in professional service, such as participation in professional society and community service.
4. Engage in lifelong learning activities, such as graduate studies or professional workshops.
5. Develop a professional career in the prevailing market that meets personal goals, objectives and desires.

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1. An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.
2. An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.
3. An ability to communicate effectively with a range of audiences.
4. An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.
5. An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.
6. An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.
7. An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

## Admission Requirements

- Meet Marshall University admission requirements
- Admission to the B.S.M.E. program requires a minimum composite ACT score of 21 with a math score of 24, or a minimum SAT composite of ~~980~~ 1060 with a math SAT of ~~560~~ 570.
- Transfer students must have completed MTH 127 College Algebra-Expanded/MTH 130 College Algebra and MTH 132 Precalculus with Sci Applica.

Students not meeting the ACT/SAT score requirements above may enroll in Pre-Engineering. Requirements for Pre-Engineering are a minimum composite ACT score of 19 with a math score of 19-23, or a minimum SAT composite of ~~900~~ 990 with a math SAT of ~~460-550~~ 510-560. Students who are admitted to the Pre-Engineering program generally will require an additional calendar year to complete the requirements for the B.S.M.E. degree. Transfer students must be eligible to take MTH 127 College Algebra-Expanded/MTH 130 College Algebra and MTH 132 Precalculus with Sci Applica.

## Graduation Requirements

The B.S.M.E. degree program requires a minimum of ~~125~~ 126 credit hours of coursework. In addition to fulfilling the university's requirements for graduation, B.S.M.E. students must maintain a minimum GPA of 2.0 in all professional courses. These professional courses include mathematics (MTH 229 Calculus/Analytic Geom I (CT) or above), required science courses, core engineering (ENGR) courses, mechanical engineering courses (ME), and courses used as technical electives. Entering students with a Math ACT of 24-26 are required to take MTH 132 Precalculus with Sci Applica. Such students will likely need an extra semester or summer term to satisfy B.S.M.E. requirements.

## Co-Operative Education

Students may elect to participate in the co-operative education program. Students in the program will have periodic full-time work experiences in their area of interest with participating companies. Information on the program can be obtained from the department chair or academic advisor.

# Major

The Core Curriculum is designed to foster critical thinking skills and introduce students to basic domains of thinking that transcend disciplines. The Core applies to all majors. Information on specific classes in the Core can be found at <https://www.marshall.edu/gened/>.

## Core Curriculum

### Core 1: Critical Thinking

FYS 100 or FYS 100H	First Yr Sem Critical Thinking or First Year Seminar-Honors	3
	Two Critical Thinking Course	6

### Core 2: Critical Thinking

















ENG 101 🌱	Beginning Composition	3
ENG 201 🌱 🎓	Advanced Composition	3
CMM 103 🌱 or CMM 207 🌱	Fund Speech-Communication or Bus & Prof Communication	3
Math	Requirement met in major	
Physical/Natural Science	Requirement met in major	
Core II Social Science		3
Core II Humanities		3
Core II Fine Arts		3

### Additional University Requirements

	Two Writing Intensive Courses	6
	One Multicultural (M) or International (I)	3



## Major-Specific

MTH 229  	Calculus/Analytic Geom I (CT)	5
MTH 230  	Calculus/Analytic Geom II (CT)	4
MTH 231 	Calculus/Analytic Geom III (CT)	4
MTH 335 	Ordinary Diff Equations	3
<b>STA 345</b>	<b>Applied Prob and Stat</b>	<b>3</b>
CHM 211  	Principles of Chemistry I	3
PHY 211 	University Physics I	4
PHY 202  	General Physics I Laboratory	1
PHY 213 	University Physics II	4
ENGR 102	Introduction to CAD	2
ENGR 103	First-Year Engineering Seminar	1
ENGR 104	The Engineering Profession	1
ENGR 213 	Statics	3
ENGR 214 	Dynamics	3
ENGR 215	Engineering Materials	3
ENGR 216	Mech of Deformable Bodies	3
<b>ENGR 217</b>	<del>Engineering Co-Op Preparation</del> <b>Engineering Career Preparation</b>	1
ENGR 219	Engineering Thermodynamics	3
ENGR 222	Engr Cost Analysis & Economy	3
<b>ENGR 318</b>	<b>Fluid Mechanics</b>	<b>3</b>
ENGR 335 	Adv Engineering Analysis	3
ME 111	Mech Engineering Computations	3
ME 240	Manufacturing Processes	3
ME 245	Circuits and Instrumentation	3
ME 310	Thermodynamics II	3
<b>ME 325</b>	<del>Experimental Design and Thermo</del> <b>Mechanical Engineering Lab-I</b>	<del>2</del> <b>1</b>
ME 340	Machine Element Design	3
ME 350	Heat Transfer	3
<del>ME 360</del>	<del>Fluid Dynamics</del>	<del>4</del> <b>4</b>
ME 410	Kinematics and Design of Machine	3
ME 420	Control Systems	3
ME 425	Mechanical Engineering Lab-II	1
ME 455	Metallurgy	3
	<b>Students who select aerospace engineering as an area of emphasis must take the following courses:</b>	
ME 305	Aircraft Systems (in place of ME 240-Manufacturing Processes)	3
ME 312	Flight Mechanics (in place of ME 410, Kinematics and Machine Design)	3
ME 422	Flight Stability and Control (in place of ME 420, Control Systems)	3
ME 456	Materials for Aerospace (in place of ME 455, Metallurgy)	3
	<b>Capstone Design, Design Elective, and Technical Electives</b>	
ME 452	Capstone Design I <sup>1</sup>	1
ME 453 	Capstone Design II <sup>2</sup>	3
	<b>Design Elective</b>	<b>3</b>

	At least one design elective must be taken from the following courses:	
ME 430	Design of Thermal Systems	
ME 435	Design of Mechanical Systems	
	<p><b>Technical Electives</b></p> <p>At least three design electives must be taken from the following courses:</p> <ul style="list-style-type: none"> <li>• Any 300-level or higher ME course not taken to satisfy other B.S.M.E. degree requirements</li> <li>• Any 300-level or higher CE, EE, or BME course not taken to satisfy other B.S.M.E. requirements</li> <li>• Any 300-level or higher ENGR course not taken to satisfy other B.S.M.E. degree requirements</li> <li>• Other courses with the approval of the student's advisor and the department chair</li> </ul>	<b>9</b>

<sup>1</sup> To be eligible to take ME 452 Capstone Design I, students must have senior standing in mechanical engineering. Senior standing is defined for the B.S.M.E. as having completed or concurrently taking these three courses: ME 325 Experimental Design and Thermo, ME 350 Heat Transfer, and ME 410 Kinematics & Design of Machine.

<sup>2</sup> To be eligible to take ME 453 Capstone Design II, students must have completed ME 452 Capstone Design I and at least one of the design electives (ME 430 Design of Thermal Systems or ME 435 Design of Mechanical System).





## Major Information

- Course offerings and course attributes are subject to change each semester. Please consult each semester's schedule of courses for availability and attributes.
- Students are required to know and track their degree requirements for graduation or for entrance to a professional school.

# Four-Year Plan

Mechanical Engineers apply fundamental math and physics laws to design, fabricate and innovate mechanical devices. They are multi-skilled and have working knowledge of computers, electricity, structures and mechanisms, materials, and manufacturing processes. The Bachelor of Science in Mechanical Engineering (B.M.S.E.) at Marshall University is designed to emphasize service, systems-based knowledge, and sustainability combining a traditional engineering approach with new and emerging fields.

First Year		
FIRST SEMESTER		CREDIT HOURS
CHM 211 🌿🎓	Principles of Chemistry I	3
MTH 229 🌿🎓	Calculus/Analytic Geom I (CT)	5
ENGR 103	First-Year Engineering Seminar	1
ENGR 104	The Engineering Profession	1
CMM 103 🌿	Fund Speech-Communication	3
FYS 100	First Yr Sem Critical Thinking	3
UNI 100	Freshman First Class	1
	<b>Credit Hours</b>	<b>16</b>
SECOND SEMESTER		CREDIT HOURS
MTH 230 🌿🎓	Calculus/Analytic Geom II (CT)	4
ENG 101 🌿	Beginning Composition	3
ENGR 102	Introduction to CAD	2
PHY 211 🌿	University Physics I	4
PHY 202 🌿🎓	General Physics I Laboratory	1
ME 111	Mech Engineering Computations	3
	<b>Credit Hours</b>	<b>17</b>
Second Year		
FIRST SEMESTER		CREDIT HOURS
ENGR 213 🎓	Statics	3
ENGR 215	Engineering Materials	3
ME 245	Circuits and Instrumentation	3
MTH 231 🌿	Calculus/Analytic Geom III (CT)	4
PHY 213 🌿	University Physics II	4
	<b>Credit Hours</b>	<b>17</b>
SECOND SEMESTER		CREDIT HOURS
ENGR 214 🎓	Dynamics	3
ENGR 216	Mech of Deformable Bodies	3
ENGR 217	Engineering Co-Op Preparation Engineering Career Preparation	1
ENGR 219	Engineering Thermodynamics	3
ME 240	Manufacturing Processes	3
MTH 335 🎓	Ordinary Diff Equations	3
	<b>Credit Hours</b>	<b>16</b>

Third Year		
FIRST SEMESTER		CREDIT HOURS
ME 360	Fluid Dynamics	4
ENGR 318	Fluid Mechanics	3
ME 310	Thermodynamics II	3
ENGR 335 	Adv Engineering Analysis	3
ME 340	Machine Element Design	3
ENGR 222	Engr Cost Analysis & Economy	3
STA 345	Applied Prob and Stat	3
	<b>Credit Hours</b>	<del>16</del> 18
SECOND SEMESTER		CREDIT HOURS
	Core II Social Science (MC/I, WI)	3
ME 420	Control Systems	3
ME 325	Experimental Design and Thermo Mechanical Engineering Lab-I	2 1
ME 350	Heat Transfer	3
ME 410	Kinematics and Design of Machine	3
ENG 201  	Advanced Composition	3
	<b>Credit Hours</b>	<del>17</del> 16
Fourth Year		
FIRST SEMESTER		CREDIT HOURS
ME 425	Mechanical Engineering Lab-II	1
ME 452	Capstone Design I	1
	ME Technical Elective I	3
	ME Technical Elective II	3
	Core II Fine Arts	3
	ME Design Elective	3
	<b>Credit Hours</b>	14
SECOND SEMESTER		CREDIT HOURS
ME 453 	Capstone Design II	3
ME 455	Metallurgy	3
	ME Technical Elective III	3
	Core II Humanities (CT, WI)	3
	<b>Credit Hours</b>	12
	<b>Total Credit Hours</b>	<del>125</del> 126

TE30

BS in Mechanical Engineering

New Catalog Description

# Overview

Prof. James D. McIntosh, CIH CSP, Department Chair; [mcintoshj@marshall.edu](mailto:mcintoshj@marshall.edu)

The Marshall University Bachelor of Science in Mechanical Engineering (B.S.M.E.) program goals are as follows:

1. Practice the mechanical engineering discipline successfully within community accepted standards.
2. Achieve personal and professional success with awareness and commitment to ethical and social responsibilities, both as individuals and in team environments.
3. Engage in professional service, such as participation in professional society and community service.
4. Engage in lifelong learning activities, such as graduate studies or professional workshops.
5. Develop a professional career in the prevailing market that meets personal goals, objectives and desires.

The student learning outcomes of the B.S.M.E. are as follows:

1. An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.
2. An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.
3. An ability to communicate effectively with a range of audiences.
4. An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.
5. An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.
6. An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.
7. An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

## Admission Requirements

- Meet Marshall University admission requirements
- Admission to the B.S.M.E. program requires a minimum composite ACT score of 21 with a math score of 24, or a minimum SAT composite of 1060 with a math SAT of 570.
- Transfer students must have completed MTH 127 College Algebra-Expanded/MTH 130 College Algebra and MTH 132 Precalculus with Sci Applica.

Students not meeting the ACT/SAT score requirements above may enroll in Pre-Engineering. Requirements for Pre-Engineering are a minimum composite ACT score of 19 with a math score of 19-23, or a minimum SAT composite of 990 with a math SAT of 510-560. Students who are admitted to the Pre-Engineering program generally will require an additional calendar year to complete the requirements for the B.S.M.E. degree. Transfer students must be eligible to take MTH 127 College Algebra-Expanded/MTH 130 College Algebra and MTH 132 Precalculus with Sci Applica.

## Graduation Requirements

The B.S.M.E. degree program requires a minimum of 126 credit hours of coursework. In addition to fulfilling the university's requirements for graduation, B.S.M.E. students must maintain a minimum GPA of 2.0 in all professional courses. These professional courses include mathematics (MTH 229 Calculus/Analytic Geom I (CT) or above), required science courses, core engineering (ENGR) courses, mechanical engineering courses (ME), and courses used as technical electives. Entering students with a Math ACT of 24-26 are required to take MTH 132 Precalculus with Sci Applica. Such students will likely need an extra semester or summer term to satisfy B.S.M.E. requirements.

## Co-Operative Education

Students may elect to participate in the co-operative education program. Students in the program will have periodic full-time work experiences in their area of interest with participating companies. Information on the program can be obtained from the department chair or academic advisor.

# Major

The Core Curriculum is designed to foster critical thinking skills and introduce students to basic domains of thinking that transcend disciplines. The Core applies to all majors. Information on specific classes in the Core can be found at <https://www.marshall.edu/gened/>.

## Core Curriculum

### Core 1: Critical Thinking

FYS 100 or FYS 100H	First Yr Sem Critical Thinking or First Year Seminar-Honors	3
	Two Critical Thinking Course	6

### Core 2: Critical Thinking

















ENG 101 🌱	Beginning Composition	3
ENG 201 🌱 🎓	Advanced Composition	3
CMM 103 🌱 or CMM 207 🌱	Fund Speech-Communication or Bus & Prof Communication	3
Math	Requirement met in major	
Physical/Natural Science	Requirement met in major	
Core II Social Science		3
Core II Humanities		3
Core II Fine Arts		3

### Additional University Requirements

	Two Writing Intensive Courses	6
	One Multicultural (M) or International (I)	3



## Major-Specific

MTH 229  	Calculus/Analytic Geom I (CT)	5
MTH 230  	Calculus/Analytic Geom II (CT)	4
MTH 231 	Calculus/Analytic Geom III (CT)	4
MTH 335 	Ordinary Diff Equations	3
STA 345	Applied Prob and Stat	3
CHM 211  	Principles of Chemistry I	3
PHY 211 	University Physics I	4
PHY 202  	General Physics I Laboratory	1
PHY 213 	University Physics II	4
ENGR 102	Introduction to CAD	2
ENGR 103	First-Year Engineering Seminar	1
ENGR 104	The Engineering Profession	1
ENGR 213 	Statics	3
ENGR 214 	Dynamics	3
ENGR 215	Engineering Materials	3
ENGR 216	Mech of Deformable Bodies	3
ENGR 217	Engineering Career Preparation	1
ENGR 219	Engineering Thermodynamics	3
ENGR 222	Engr Cost Analysis & Economy	3
ENGR 318	Fluid Mechanics	3
ENGR 335 	Adv Engineering Analysis	3
ME 111	Mech Engineering Computations	3
ME 240	Manufacturing Processes	3
ME 245	Circuits and Instrumentation	3
ME 310	Thermodynamics II	3
ME 325	Mechanical Engineering Lab-I	1
ME 340	Machine Element Design	3
ME 350	Heat Transfer	3
ME 410	Kinematics and Design of Machine	3
ME 420	Control Systems	3
ME 425	Mechanical Engineering Lab-II	1
ME 455	Metallurgy	3
	<b>Students who select aerospace engineering as an area of emphasis must take the following courses:</b>	
ME 305	Aircraft Systems (in place of ME 240-Manufacturing Processes)	3
ME 312	Flight Mechanics (in place of ME 410, Kinematics and Machine Design)	3
ME 422	Flight Stability and Control (in place of ME 420, Control Systems)	3
ME 456	Materials for Aerospace (in place of ME 455, Metallurgy)	3
	<b>Capstone Design, Design Elective, and Technical Electives</b>	
ME 452	Capstone Design I <sup>1</sup>	1
ME 453 	Capstone Design II <sup>2</sup>	3
	<b>Design Elective</b> At least one design elective must be taken from the following courses:	<b>3</b>
ME 430	Design of Thermal Systems	

ME 435	Design of Mechanical Systems	
	<p><b>Technical Electives</b></p> <p>At least three design electives must be taken from the following courses:</p> <ul style="list-style-type: none"> <li>• Any 300-level or higher ME course not taken to satisfy other B.S.M.E. degree requirements</li> <li>• Any 300-level or higher CE, EE, or BME course not taken to satisfy other B.S.M.E. requirements</li> <li>• Any 300-level or higher ENGR course not taken to satisfy other B.S.M.E. degree requirements</li> <li>• Other courses with the approval of the student's advisor and the department chair</li> </ul>	<b>9</b>

<sup>1</sup> To be eligible to take ME 452 Capstone Design I, students must have senior standing in mechanical engineering. Senior standing is defined for the B.S.M.E. as having completed these three courses: ME 325 Experimental Design and Thermo, ME 350 Heat Transfer, and ME 410 Kinematics & Design of Machine.

<sup>2</sup> To be eligible to take ME 453 Capstone Design II, students must have completed ME 452 Capstone Design I and at least one of the design electives (ME 430 Design of Thermal Systems or ME 435 Design of Mechanical System).




## Major Information

- Course offerings and course attributes are subject to change each semester. Please consult each semester's schedule of courses for availability and attributes.
- Students are required to know and track their degree requirements for graduation or for entrance to a professional school.

# Four-Year Plan

Mechanical Engineers apply fundamental math and physics laws to design, fabricate and innovate mechanical devices. They are multi-skilled and have working knowledge of computers, electricity, structures and mechanisms, materials, and manufacturing processes. The Bachelor of Science in Mechanical Engineering (B.M.S.E.) at Marshall University is designed to emphasize service, systems-based knowledge, and sustainability combining a traditional engineering approach with new and emerging fields.

First Year		
FIRST SEMESTER		CREDIT HOURS
CHM 211 🌿🎓	Principles of Chemistry I	3
MTH 229 🌿🎓	Calculus/Analytic Geom I (CT)	5
ENGR 103	First-Year Engineering Seminar	1
ENGR 104	The Engineering Profession	1
CMM 103 🌿	Fund Speech-Communication	3
FYS 100	First Yr Sem Critical Thinking	3
UNI 100	Freshman First Class	1
	<b>Credit Hours</b>	<b>16</b>
SECOND SEMESTER		CREDIT HOURS
MTH 230 🌿🎓	Calculus/Analytic Geom II (CT)	4
ENG 101 🌿	Beginning Composition	3
ENGR 102	Introduction to CAD	2
PHY 211 🌿	University Physics I	4
PHY 202 🌿🎓	General Physics I Laboratory	1
ME 111	Mech Engineering Computations	3
	<b>Credit Hours</b>	<b>17</b>
Second Year		
FIRST SEMESTER		CREDIT HOURS
ENGR 213 🎓	Statics	3
ENGR 215	Engineering Materials	3
ME 245	Circuits and Instrumentation	3
MTH 231 🌿	Calculus/Analytic Geom III (CT)	4
PHY 213 🌿	University Physics II	4
	<b>Credit Hours</b>	<b>17</b>
SECOND SEMESTER		CREDIT HOURS
ENGR 214 🎓	Dynamics	3
ENGR 216	Mech of Deformable Bodies	3
ENGR 217	Engineering Career Preparation	1
ENGR 219	Engineering Thermodynamics	3
ME 240	Manufacturing Processes	3
MTH 335 🎓	Ordinary Diff Equations	3
	<b>Credit Hours</b>	<b>16</b>

Third Year		
FIRST SEMESTER		CREDIT HOURS
ENGR 318	Fluid Mechanics	3
ME 310	Thermodynamics II	3
ENGR 335 	Adv Engineering Analysis	3
ME 340	Machine Element Design	3
ENGR 222	Engr Cost Analysis & Economy	3
STA 345	Applied Prob and Stat	3
	<b>Credit Hours</b>	<b>18</b>
SECOND SEMESTER		CREDIT HOURS
	Core II Social Science (MC/I, WI)	3
ME 420	Control Systems	3
ME 325	Mechanical Engineering Lab-I	1
ME 350	Heat Transfer	3
ME 410	Kinematics and Design of Machine	3
ENG 201 	Advanced Composition	3
	<b>Credit Hours</b>	<b>16</b>
Fourth Year		
FIRST SEMESTER		CREDIT HOURS
ME 425	Mechanical Engineering Lab-II	1
ME 452	Capstone Design I	1
	ME Technical Elective I	3
	ME Technical Elective II	3
	Core II Fine Arts	3
	ME Design Elective	3
	<b>Credit Hours</b>	<b>14</b>
SECOND SEMESTER		CREDIT HOURS
ME 453 	Capstone Design II	3
ME 455	Metallurgy	3
	ME Technical Elective III	3
	Core II Humanities (CT, WI)	3
	<b>Credit Hours</b>	<b>12</b>
	<b>Total Credit Hours</b>	<b>126</b>

See <http://www.marshall.edu/senate/ucc/> for information on chair

## Request for Undergraduate Addition, Deletion, or Change of a Major

1. Prepare one paper copy and obtain signatures from the Department Chair/Head, Registrar, and College Dean. 2. Submit the form to your College Curriculum Committee. 3. After attaining the signature of the College Curriculum Chair, send the paper copy to the current University Curriculum Committee (UCC) Chair. 4. Send an identical (sans signatures) ELECTRONIC COPY and all supporting documentation in PDF format by email to the current UCC Chair.

College: CECS Department/Division: CSEE

Contact Person: Greg Michaelson Phone: x65606

### ACTION REQUESTED:

Check action requested:  Addition  Deletion  Change

Name of Major (provide code if this is an existing major): TE40 (BSEE Electrical/Computer Engr)

Within which Degree Program is/ will this Major be listed (please provide code as well): \_\_\_\_\_

### RATIONALE:

SAT score admission criteria revisions are proposed to align with the most recent version of the CollegeBoard ACT/SAT Concordance.

**CURRICULUM:** (If addition or change, number of hours and courses; indicate if required or optional) May be submitted as separate document.

See attachment.

### NOTIFICATION REQUIREMENTS:

Attach a copy of written notification regarding this curriculum request to the following:

1. **Statement of Non-Duplication:** If this major will be similar in title or content to an existing major at the university, please send a memo to the affected department and include it with this packet, as well as, the response received from the affected department.
2. If your department/division requires additional faculty, equipment, or specialized materials, attach an estimation of money and time required to secure these items.
3. Send a copy of this completed form to the Marshall University Catalog Editor.

**SIGNATURES:** (If disapproved at any level, do not sign. Return to previous signer.)

Department Chair/Division Head: [Signature]

Date: 2/24/23

Registrar: [Signature]

Date: 2/27/2023

College Dean: [Signature]

Date: 27-Feb-2023

College Curriculum Chair: [Signature]

Date: 27-Feb-2023

University Curriculum Committee Chair: Zach Garrett

Date: 3.24.23

Faculty Senate Chair: \_\_\_\_\_

Date: \_\_\_\_\_

VP Academic Affairs/VP Health Science \_\_\_\_\_

Date: \_\_\_\_\_

## TE40 – BSEE Electrical/Computer Engr

### *Current Catalog Description*

#### Admission Requirements

- Meet Marshall University admission requirements
- Admission to the B.S.E.E. program requires a minimum composite ACT score of 21 with a math score of 24, or a minimum SAT composite of 980 with a math SAT of 560.
- Transfer students must have completed [MTH 127](#) College Algebra-Expanded/[MTH 130](#) College Algebra and [MTH 132](#) Precalculus with Sci Applica.

For those needing to complete some requirements first, there is Pre-Engineering. Requirements for Pre-Engineering are a minimum composite ACT score of 19 with a math score of 19-23, or a minimum SAT composite of 900 with a math SAT of 460-550. Students who are admitted to the Pre-Engineering program generally will require an additional calendar year to complete the requirements for the B.S.E.E. degree. Transfer students must be eligible to take [MTH 127](#) College Algebra-Expanded/[MTH 130](#) College Algebra and [MTH 132](#) Precalculus with Sci Applica.

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## TE40 – BSEE Electrical/Computer Engr

### *Edited Catalog Description*

#### Admission Requirements

- Meet Marshall University admission requirements
- Admission to the B.S.E.E. Engineering program requires a minimum composite ACT score of 21 with a math score of 24, or a minimum SAT composite of ~~980~~ 1060 with a math SAT of ~~560~~ 570.
- Transfer students must have completed [MTH 127](#) College Algebra-Expanded/[MTH 130](#) College Algebra and [MTH 132](#) Precalculus with Sci Applica.

For those needing to complete some requirements first, there is Pre-Engineering. Requirements for Pre-Engineering are a minimum composite ACT score of 19 with a math score of 19-23, or a minimum SAT composite of ~~900~~ 990 with a math SAT of ~~460-550~~ 510-560. Students who are admitted to the Pre-Engineering program generally will require an additional calendar year to complete the requirements for the B.S.E.E. degree. Transfer students must be eligible to take [MTH 127](#) College Algebra-Expanded/[MTH 130](#) College Algebra and [MTH 132](#) Precalculus with Sci Applica.

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## TE40 – BSEE Electrical/Computer Engr

### *Final Catalog Description*

#### Admission Requirements

- Meet Marshall University admission requirements
- Admission to the B.S.E.E. Engineering program requires a minimum composite ACT score of 21 with a math score of 24, or a minimum SAT composite of 1060 with a math SAT of 570.
- Transfer students must have completed [MTH 127](#) College Algebra-Expanded/[MTH 130](#) College Algebra and [MTH 132](#) Precalculus with Sci Applica.

For those needing to complete some requirements first, there is Pre-Engineering. Requirements for Pre-Engineering are a minimum composite ACT score of 19 with a math score of 19-23, or a minimum SAT composite of 990 with a math SAT of 510-560. Students who are admitted to the Pre-Engineering program generally will require an additional calendar year to complete the requirements for the B.S.E.E. degree. Transfer students must be eligible to take [MTH 127](#) College Algebra-Expanded/[MTH 130](#) College Algebra and [MTH 132](#) Precalculus with Sci Applica.

## Request for Undergraduate Addition, Deletion, or Change of a Major

1. Prepare one paper copy and obtain signatures from the Department Chair/Head, Registrar, and College Dean. 2. Submit the form to your College Curriculum Committee. 3. After attaining the signature of the College Curriculum Chair, send the paper copy to the current University Curriculum Committee (UCC) Chair. 4. Send an identical (sans signatures) ELECTRONIC COPY and all supporting documentation in PDF format by email to the current UCC Chair.

College: CECS Department/Division: Biomedical Engineering  
 Contact Person: David Dampier Phone: x63066

**ACTION REQUESTED:**

Check action requested:     Addition     Deletion     Change

Name of Major (provide code if this is an existing major): TE50 (BSBME, Biomedical Engineering)

Within which Degree Program is/ will this Major be listed (please provide code as well): \_\_\_\_\_

**RATIONALE:**

This change is being made to align the curriculum with other disciplines within the college. Mechanical Engineering is removing ME 360 from its curriculum. Since this will impact the Biomedical Engineering curriculum, we are changing the ME 360 requirement to ENGR 318. Also, SAT score admission criteria revisions are proposed to align with the most recent version of the CollegeBoard ACT/SAT Concordance.





**CURRICULUM:** (If addition or change, number of hours and courses; indicate if required or optional) May be submitted as separate document.

See attachment.

**NOTIFICATION REQUIREMENTS:**

- Attach a copy of written notification regarding this curriculum request to the following:
- Statement of Non-Duplication:** If this major will be similar in title or content to an existing major at the university, please send a memo to the affected department and include it with this packet, as well as, the response received from the affected department.
  - If your department/division requires additional faculty, equipment, or specialized materials, attach an estimation of money and time required to secure these items.
  - Send a copy of this completed form to the Marshall University Catalog Editor.

**SIGNATURES:** (If disapproved at any level, do not sign. Return to previous signer.)

Department Chair/Division Head: 	Date: <u>2.23.23</u>
Registrar: 	Date: <u>2/27/2023</u>
College Dean: 	Date: <u>27-Feb-2023</u>
College Curriculum Chair: 	Date: <u>27-Feb-2023</u>
University Curriculum Committee Chair: <u>Zach Garrett</u>	Date: <u>3.24.23</u>
Faculty Senate Chair: _____	Date: _____
VP Academic Affairs/VP Health Science _____	Date: _____

TE50

BS in Biomedical Engineering

Current Catalog Description



# Overview

Contacts: Dr. David Dampier; [dampierd@marshall.edu](mailto:dampierd@marshall.edu)

The Marshall University Bachelor of Science in Biomedical Engineering (B.S.B.M.E.) program objectives are as follows:

1. Graduates demonstrate technical and/or professional skills, which may include engineering problem-solving, scientific inquiry, and/or engineering design, to solve challenging problems in biomedical engineering and related fields.
2. Graduates are accomplished at communicating and working collaboratively in diverse work environments.
3. Graduates engaging in life-long learning activities at graduate, medical or other professional programs or workshops. Graduates entering professional careers find appropriate career progression and success.

The student learning outcomes of the B.S.B.M.E. are as follows:

1. An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.
2. An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.
3. An ability to communicate effectively with a range of audiences.
4. An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.
5. An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.
6. An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.
7. An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

## Admission Requirements

- Meet Marshall University admission requirements
- Admission to the B.S.B.M.E. program requires a minimum composite ACT score of 21 with a math score of 24, or a minimum SAT composite of 750 with a math SAT of 580.
- Transfer students must have completed MTH 127 College Algebra-Expanded/MTH 130 College Algebra and MTH 132 Precalculus with Sci Applica.

Students not meeting the ACT/SAT score requirements above may enroll in Pre-Engineering. Requirements for Pre-Engineering are a minimum composite ACT score of 19 with a math score of 19-23, or a minimum SAT composite of 700 with a math SAT of 500-560. Students who are admitted to the Pre-Engineering program generally will require an additional calendar year to complete the requirements for the B.S.B.M.E. degree. Transfer students must be eligible to take MTH 127 College Algebra-Expanded/MTH 130 College Algebra, and MTH 132 Precalculus with Sci Applica.

## Graduation Requirements


The B.S.B.M.E. degree program requires a minimum of 124 credit hours of coursework. In addition to fulfilling the university's requirements for graduation, B.S.B.M.E. students must maintain a minimum GPA of 2.0 in all professional courses. These professional courses include mathematics (MTH 229 Calculus/Analytic Geom I (CT) or above), required science courses, core engineering (ENGR) courses, biomedical engineering courses (BME), and courses used as technical electives. Entering students with a Math ACT of 24-26 are required to take MTH 132 Precalculus with Sci Applica. Such students will likely need an extra semester or summer term to satisfy B.S.B.M.E. requirements.

# Major








The Core Curriculum is designed to foster critical thinking skills and introduce students to basic domains of thinking that transcend disciplines. The Core applies to all majors. Information on specific classes in the Core can be found at <https://www.marshall.edu/gened/>.

## Core Curriculum

### Core 1: Critical Thinking

FYS 100	First Yr Sem Critical Thinking	3
MTH 229 	Calculus/Analytic Geom I (CT)	5
Critical Thinking Course		3

### Core 2: Critical Thinking

ENG 101 	Beginning Composition	3
ENG 201  	Advanced Composition	3
CMM 103 	Fund Speech-Communication	3
MTH 229  	Calculus/Analytic Geom I (CT)	5
BSC 120 	Principles of Biology	4
Core II Humanities		3
Core II Social Science		3
Core II Fine Arts		3

### Additional University Requirements

Writing Intensive		3
Writing Intensive		3
Multicultural or International		3
BME 465	Biomedical Engr Capstone I	2
BME 466	Biomedical Engr Capstone II	2

## Major-Specific

Select one of the following: MTH 132 🌿 and MTH 229 🌿 MTH 229 🌿	Select one of the following: Precalculus with Sci Applica and Calculus/Analytic Geom I (CT) Calculus/Analytic Geom I (CT)	10 5
MTH 230 🌿	Calculus/Analytic Geom II (CT)	4
MTH 231 🌿	Calculus/Analytic Geom III (CT)	4
MTH 335 🎓	Ordinary Diff Equations	3
BSC 120 🌿	Principles of Biology	4
BSC 121 🌿	Principles of Biology	4
BSC 227	Human Anatomy	4
BSC 228 🌿	Human Physiology	4
CHM 211 🌿🎓	Principles of Chemistry I	3
CHM 217 🌿	Principles of Chem Lab I	2
CHM 212 🌿🎓	Principles of Chemistry II	3
CHM 218 🌿	Principles of Chem Lab II	2
PHY 211 🌿	University Physics I	4
PHY 213 🌿	University Physics II	4
ENGR 102	Introduction to CAD	2
ENGR 104	The Engineering Profession	1
ENGR 111	Engineering Computations	3
EE 202 or BSC 322	Circuits II or Principles Cell Biology	3 or 4
ENGR 213 🎓	Statics	3
ME 360	Fluid Dynamics	4
ME 245	Circuits and Instrumentation	3
BME 101	Intro to Biomedical Engr	1
BME 201	Biomedical Engineering Seminar	2
BME 302	Engineering Biomechanics	3
BME 305	Intro to Biophysical Measmnt	3
BME 306	Mechanics of Biological Tissue	3
BME 310	Modeling & Simulation Bio Syst	3
BME 405	Mech & Performance Bio Mtrls	3
BME 460	Mechanics of Biofuilids	3
BME 465 🌿	Biomedical Engr Capstone I	2
BME 466 🌿	Biomedical Engr Capstone II	2
BME Technical Electives	Select three courses from the following: <ul style="list-style-type: none"> <li>• Any BME 300- or 400-level course not already taken to satisfy degree requirements</li> <li>• Any BSC 300- or 400-level course</li> <li>• Any CHM 300- or 400-level course</li> <li>• ENGR 222 (Engr Cost Analysis &amp; Economy)</li> <li>• ENGR 451 (Intro to Proj Management)</li> <li>• ME 330 (Manufacturing Methods/Design)</li> </ul>	9

## Major Information

- Students are required to know and track their degree requirements for graduation or for entrance to a professional school.
- The B.S.B.M.E. degree program requires a minimum of 136 credit hours of coursework.
- Course offerings and course attributes are subject to change each semester. Please consult each semester's schedule of courses for availability and attributes.

# Four-Year Plan

The Biomedical Engineering discipline is the application of engineering principles and design concepts to medicine and biology for health care purposes. This discipline aims to narrow the gap between engineering and medicine, combining the design and problem-solving skills of engineering with medical and biosciences to advance health care treatment, including diagnosis, monitoring, and therapy. Biomedical engineering has only recently emerged as its own study, compared to many other engineering fields. Biomedical engineering is a rapidly growing field, and Marshall University has a unique program that will highlight the technical strengths of the university and garner interest in the development of the biomedical industry in the state.

First Year		
FIRST SEMESTER		CREDIT HOURS
ENG 101 🌿	Beginning Composition	3
MTH 229 🌿 🎓	Calculus/Analytic Geom I (CT)	5
FYS 100	First Yr Sem Critical Thinking	3
ENGR 104	The Engineering Profession	1
BME 101	Intro to Biomedical Engr	1
CHM 211 🌿 🎓	Principles of Chemistry I	3
CHM 217 🌿	Principles of Chem Lab I	2
UNI 100	Freshman First Class	1
	<b>Credit Hours</b>	<b>19</b>
SECOND SEMESTER		CREDIT HOURS
MTH 230 🌿	Calculus/Analytic Geom II	4
CHM 212 🌿 🎓	Principles Chemistry II	3
CHM 218 🌿	Principles of Chem Lab II	2
ENGR 111	Engineering Computations	3
BSC 120 🌿	Principles of Biology	4
ENGR 102	Introduction to CAD	2
	<b>Credit Hours</b>	<b>18</b>
Second Year		
FIRST SEMESTER		CREDIT HOURS
MTH 231 🌿	Calculus/Analytic Geom III	4
BSC 227	Human Anatomy	4
PHY 211 🌿	University Physics I	4
ENGR 213 🎓	Statics	3
	<b>Credit Hours</b>	<b>15</b>
SECOND SEMESTER		CREDIT HOURS
PHY 213 🌿	University Physics II	4
BSC 121 🌿	Principles of Biology	4
BSC 228 🌿	Human Physiology	4
BME 201	Biomedical Engineering Seminar	2
	<b>Credit Hours</b>	<b>14</b>

Third Year		
FIRST SEMESTER		CREDIT HOURS
MTH 335	Ordinary Diff Equations	3
BME 305	Intro to Biophysical Measmnt	3
CMM 103 🌱	Fund Speech-Communication	3
BME 302	Engineering Biomechanics	3
ME 245	Circuits and Instrumentation	3
	<b>Credit Hours</b>	<b>15</b>
SECOND SEMESTER		CREDIT HOURS
ME 360	Fluid Dynamics	4
ENG 201 🌱 🎓	Advanced Composition	3
BME 310	Modeling & Simulation Bio Syst	3
BME 306	Mechanics of Biological Tissue	3
EE 202 or BSC 322	Circuits II or Principles Cell Biology	3 or 4
	<b>Credit Hours</b>	<b>16 or 17</b>
Fourth Year		
FIRST SEMESTER		CREDIT HOURS
BME 405	Mech & Performance Bio Mtrls	3
BME Technical Elective		3
BME Technical Elective		3
BME 465 🌱	Biomedical Engr Capstone I	2
BME 460	Mechanics of Biofuils	3
	<b>Credit Hours</b>	<b>14</b>
SECOND SEMESTER		CREDIT HOURS
BME Technical Elective		3
Core II Social Science (MC/I, WI)		3
BME 466 🌱	Biomedical Engr Capstone II	2
Core II Humanities (WI, CT)		3
Core II Fine Arts		3
	<b>Credit Hours</b>	<b>14</b>
	<b>Total Credit Hours</b>	<b>125 or 126</b>

TE50

BS in Biomedical Engineering

Edited Catalog Description

# Overview

Contacts: Dr. David Dampier; [dampierd@marshall.edu](mailto:dampierd@marshall.edu)

The Marshall University Bachelor of Science in Biomedical Engineering (B.S.B.M.E.) program objectives are as follows:

1. Graduates demonstrate technical and/or professional skills, which may include engineering problem-solving, scientific inquiry, and/or engineering design, to solve challenging problems in biomedical engineering and related fields.
2. Graduates are accomplished at communicating and working collaboratively in diverse work environments.
3. Graduates engaging in life-long learning activities at graduate, medical or other professional programs or workshops. Graduates entering professional careers find appropriate career progression and success.

The student learning outcomes of the B.S.B.M.E. are as follows:

1. An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.
2. An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.
3. An ability to communicate effectively with a range of audiences.
4. An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.
5. An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.
6. An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.
7. An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

## Admission Requirements

- Meet Marshall University admission requirements
- Admission to the B.S.B.M.E. program requires a minimum composite ACT score of 21 with a math score of 24, or a minimum SAT composite of **750 1060** with a math SAT of **580 570**.
- Transfer students must have completed MTH 127 College Algebra-Expanded/MTH 130 College Algebra and MTH 132 Precalculus with Sci Applica.

Students not meeting the ACT/SAT score requirements above may enroll in Pre-Engineering. Requirements for Pre-Engineering are a minimum composite ACT score of 19 with a math score of 19-23, or a minimum SAT composite of **700 990** with a math SAT of **500-560 510-560**. Students who are admitted to the Pre-Engineering program generally will require an additional calendar year to complete the requirements for the B.S.B.M.E. degree. Transfer students must be eligible to take MTH 127 College Algebra-Expanded/MTH 130 College Algebra, and MTH 132 Precalculus with Sci Applica.

## Graduation Requirements

The B.S.B.M.E. degree program requires a minimum of **124 123** credit hours of coursework. In addition to fulfilling the university's requirements for graduation, B.S.B.M.E. students must maintain a minimum GPA of 2.0 in all professional courses. These professional courses include mathematics (MTH 229 Calculus/Analytic Geom I (CT) or above), required science courses, core engineering (ENGR) courses, biomedical engineering courses (BME), and courses used as technical electives. Entering students with a Math ACT of 24-26 are required to take MTH 132 Precalculus with Sci Applica. Such students will likely need an extra semester or summer term to satisfy B.S.B.M.E. requirements.

# Major

The Core Curriculum is designed to foster critical thinking skills and introduce students to basic domains of thinking that transcend disciplines. The Core applies to all majors. Information on specific classes in the Core can be found at <https://www.marshall.edu/gened/>.

## Core Curriculum

### Core 1: Critical Thinking

FYS 100	First Yr Sem Critical Thinking	3
MTH 229 🌿	Calculus/Analytic Geom I (CT)	5
Critical Thinking Course		3

### Core 2: Critical Thinking

ENG 101 🌿	Beginning Composition	3
ENG 201 🌿 🎓	Advanced Composition	3
CMM 103 🌿	Fund Speech-Communication	3
MTH 229 🌿 🎓	Calculus/Analytic Geom I (CT)	5
BSC 120 🌿	Principles of Biology I	4 3
BSC 120L 🌿	Principles of Biology I Lab	1
Core II Humanities		3
Core II Social Science		3
Core II Fine Arts		3

### Additional University Requirements

Writing Intensive		3
Writing Intensive		3
Multicultural or International		3
BME 465	Biomedical Engr Capstone I	2
BME 466	Biomedical Engr Capstone II	2



## Major-Specific

Select one of the following: MTH 132 🌿 and MTH 229 🌿 MTH 229 🌿	Select one of the following: Precalculus with Sci Applica and Calculus/Analytic Geom I (CT) Calculus/Analytic Geom I (CT)	10 5
MTH 230 🌿	Calculus/Analytic Geom II (CT)	4
MTH 231 🌿	Calculus/Analytic Geom III (CT)	4
MTH 335 🎓	Ordinary Diff Equations	3
BSC 120 🌿	Principles of Biology	4 3
<b>BSC 120L</b>	<b>Principles of Biology I Lab</b>	<b>1</b>
BSC 121	Principles of Biology	4 3
<b>BSC 121L</b>	<b>Principles of Biology I Lab</b>	<b>1</b>
BSC 227	Human Anatomy	4 3
<b>BSC 227L</b>	<b>Human Anatomy Lab</b>	<b>1</b>
BSC 228 🌿	Human Physiology	4 3
<b>BSC 228L</b> 🌿	<b>Human Anatomy Lab</b>	<b>1</b>
CHM 211 🌿 🎓	Principles of Chemistry I	3
CHM 217 🌿	Principles of Chem Lab I	2
CHM 212 🌿 🎓	Principles of Chemistry II	3
CHM 218 🌿	Principles of Chem Lab II	2
PHY 211 🌿	University Physics I	4
PHY 213 🌿	University Physics II	4
ENGR 102	Introduction to CAD	2
ENGR 104	The Engineering Profession	1
ENGR 111	Engineering Computations	3
<del>EE 202 or BSC 322</del>	<del>Circuits II or Principles Cell Biology</del>	<del>3 or 4</del>
ENGR 213 🎓	Statics	3
<b>ENGR 214</b>	<b>Dynamics</b>	<b>3</b>
<b>ENGR 318</b> 🌿	<b>Fluid Mechanics</b>	<b>3</b>
<del>ME 360</del>	<del>Fluid Dynamics</del>	<del>4</del>
ME 245	Circuits and Instrumentation	3
BME 101	Intro to Biomedical Engr	1
BME 201	Biomedical Engineering Seminar	2
BME 302 🌿	Engineering Biomechanics	3
BME 305	Intro to Biophysical Measmnt	3
BME 306	<del>Mechanics of Biological Tissue</del> <b>Tissue Engineering</b>	3
BME 310	Modeling & Simulation Bio Syst	3
BME 405	Mech & Performance Bio Mtrls	3
BME 460	Mechanics of Biofuilds	3
BME 465 🌿	Biomedical Engr Capstone I	2
BME 466 🌿	Biomedical Engr Capstone II	2
<b>BME</b> Technical Electives	Select <del>three</del> <b>two</b> courses from the following: <ul style="list-style-type: none"> <li>Any BME 300- or 400-level course not already taken to satisfy degree requirements</li> <li>Any BSC 300- or 400-level course</li> <li>Any CHM 300- or 400-level course</li> <li>ENGR 222 (Engr Cost Analysis &amp; Economy)</li> <li>ENGR 451 (Intro to Proj Management)</li> <li>ME 330 (Manufacturing Methods/Design)</li> </ul>	<b>6 9</b>

ENGR Elective	Any BME, CE, EE, ENGR, IE, or ME (300- or 400-level) course not already taken to satisfy degree requirements	3
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## Major Information

- Students are required to know and track their degree requirements for graduation or for entrance to a professional school.
- The B.S.B.M.E. degree program requires a minimum of ~~136~~ 123 credit hours of coursework.
- Course offerings and course attributes are subject to change each semester. Please consult each semester's schedule of courses for availability and attributes.

# Four-Year Plan

The Biomedical Engineering discipline is the application of engineering principles and design concepts to medicine and biology for health care purposes. This discipline aims to narrow the gap between engineering and medicine, combining the design and problem-solving skills of engineering with medical and biosciences to advance health care treatment, including diagnosis, monitoring, and therapy. Biomedical engineering has only recently emerged as its own study, compared to many other engineering fields. Biomedical engineering is a rapidly growing field, and Marshall University has a unique program that will highlight the technical strengths of the university and garner interest in the development of the biomedical industry in the state.

First Year		
FIRST SEMESTER		CREDIT HOURS
ENG 101 🌿	Beginning Composition	3
MTH 229 🌿 🎓	Calculus/Analytic Geom I (CT)	5
FYS 100	First Yr Sem Critical Thinking	3
ENGR 104	The Engineering Profession	1
BME 101	Intro to Biomedical Engr	1
<del>CHM 211</del> 🌿 🎓	<del>Principles of Chemistry I</del>	<del>3</del>
<del>CHM 217</del> 🌿	<del>Principles of Chem Lab I</del>	<del>2</del>
BSC 227	Human Anatomy	3
BSC 227L	Human Anatomy Lab	1
UNI 100	Freshman First Class	1
	<b>Credit Hours</b>	<b><del>19</del> 18</b>
SECOND SEMESTER		CREDIT HOURS
MTH 230 🌿	Calculus/Analytic Geom II	4
<del>CHM 212</del> 🌿 🎓	<del>Principles Chemistry II</del>	<del>3</del>
<del>CHM 218</del> 🌿	<del>Principles of Chem Lab II</del>	<del>2</del>
BSC 228 🌿	Human Physiology	3
BSC 228L 🌿	Human Anatomy Lab	1
ENGR 111	Engineering Computations	3
BSC 120 🌿	Principles of Biology	4 3
BSC 120L	Principles of Biology I Lab	1
ENGR 102	Introduction to CAD	2
	<b>Credit Hours</b>	<b><del>18</del> 17</b>
Second Year		
FIRST SEMESTER		CREDIT HOURS
MTH 231 🌿	Calculus/Analytic Geom III	4
<del>BSC 227</del>	<del>Human Anatomy</del>	<del>4</del>
BME 201	Biomedical Engineering Seminar	2
CHM 211 🌿 🎓	Principles of Chemistry I	3
CHM 217 🌿	Principles of Chem Lab I	2
PHY 211 🌿	University Physics I	4
ENGR 213 🎓	Statics	3
	<b>Credit Hours</b>	<b><del>15</del> 18</b>

SECOND SEMESTER		CREDIT HOURS
PHY 213 🌿	University Physics II	4
ENGR 214	Dynamics	3
BSC 121 🌿	Principles of Biology	4 3
BSC 121L	Principles of Biology I Lab	1
BSC 228 🌿	Human Physiology	4
CHM 212 🌿🎓	Principles of Chemistry II	3
CHM 218 🌿	Principles of Chem Lab II	2
BME 201	Biomedical Engineering Seminar	2
		<b>Credit Hours</b> <del>14</del> 16

Third Year		
FIRST SEMESTER		CREDIT HOURS
<del>MTH 335</del>	<del>Ordinary Diff Equations</del>	<del>3</del>
BME 305	Intro to Biophysical Measmnt	3
<del>CMM 103 🌿</del>	<del>Fund Speech-Communication</del>	<del>3</del>
BME 302	Engineering Biomechanics	3
ME 245	Circuits and Instrumentation	3
ENGR 318 🌿	Fluid Mechanics	3
		<b>Credit Hours</b> <del>15</del> 12
SECOND SEMESTER		CREDIT HOURS
<del>ME 360</del>	<del>Fluid Dynamics</del>	<del>4</del>
ENG 201 🌿🎓	Advanced Composition	3
BME 310	Modeling & Simulation Bio Syst	3
BME 306	<del>Mechanics of Biological Tissue</del> Tissue Engineering	3
<del>EE 202 or BSC 322</del>	<del>Circuits II or Principles Cell Biology</del>	<del>3 or 4</del>
MTH 335	Ordinary Diff Equations	3
ENGR Elective		3
		<b>Credit Hours</b> <del>16 or 17</del> 15
Fourth Year		
FIRST SEMESTER		CREDIT HOURS
BME 405	Mech & Performance Bio Mtrls	3
BME Technical Elective		3
<del>BME Technical Elective</del>		<del>3</del>
BME 465 🌿	Biomedical Engr Capstone I	2
BME 460	Mechanics of Biofuils	3
CMM 103 🌿	Fund Speech-Communication	3
		<b>Credit Hours</b> 14
SECOND SEMESTER		CREDIT HOURS
BME Technical Elective		3
Core II Social Science (MC/I, WI)		3
BME 466 🌿	Biomedical Engr Capstone II	2
Core II Humanities (WI, CT)		3
Core II Fine Arts		3
		<b>Credit Hours</b> 14
		<b>Total Credit Hours</b> <del>125 or 126</del> 124

TE50

BS in Biomedical Engineering

New Catalog Description

# Overview

Contacts: Dr. David Dampier; [dampierd@marshall.edu](mailto:dampierd@marshall.edu)

The Marshall University Bachelor of Science in Biomedical Engineering (B.S.B.M.E.) program objectives are as follows:

1. Graduates demonstrate technical and/or professional skills, which may include engineering problem-solving, scientific inquiry, and/or engineering design, to solve challenging problems in biomedical engineering and related fields.
2. Graduates are accomplished at communicating and working collaboratively in diverse work environments.
3. Graduates engaging in life-long learning activities at graduate, medical or other professional programs or workshops. Graduates entering professional careers find appropriate career progression and success.

The student learning outcomes of the B.S.B.M.E. are as follows:

1. An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.
2. An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.
3. An ability to communicate effectively with a range of audiences.
4. An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.
5. An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.
6. An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.
7. An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

## Admission Requirements

- Meet Marshall University admission requirements
- Admission to the B.S.B.M.E. program requires a minimum composite ACT score of 21 with a math score of 24, or a minimum SAT composite of 1060 with a math SAT of 570.
- Transfer students must have completed MTH 127 College Algebra-Expanded/MTH 130 College Algebra and MTH 132 Precalculus with Sci Applica.

Students not meeting the ACT/SAT score requirements above may enroll in Pre-Engineering. Requirements for Pre-Engineering are a minimum composite ACT score of 19 with a math score of 19-23, or a minimum SAT composite of 990 with a math SAT of 510-560. Students who are admitted to the Pre-Engineering program generally will require an additional calendar year to complete the requirements for the B.S.B.M.E. degree. Transfer students must be eligible to take MTH 127 College Algebra-Expanded/MTH 130 College Algebra, and MTH 132 Precalculus with Sci Applica.

## Graduation Requirements


The B.S.B.M.E. degree program requires a minimum of 123 credit hours of coursework. In addition to fulfilling the university's requirements for graduation, B.S.B.M.E. students must maintain a minimum GPA of 2.0 in all professional courses. These professional courses include mathematics (MTH 229 Calculus/Analytic Geom I (CT) or above), required science courses, core engineering (ENGR) courses, biomedical engineering courses (BME), and courses used as technical electives. Entering students with a Math ACT of 24-26 are required to take MTH 132 Precalculus with Sci Applica. Such students will likely need an extra semester or summer term to satisfy B.S.B.M.E. requirements.

# Major









The Core Curriculum is designed to foster critical thinking skills and introduce students to basic domains of thinking that transcend disciplines. The Core applies to all majors. Information on specific classes in the Core can be found at <https://www.marshall.edu/gened/>.

## Core Curriculum

### Core 1: Critical Thinking

FYS 100	First Yr Sem Critical Thinking	3
MTH 229 	Calculus/Analytic Geom I (CT)	5
Critical Thinking Course		3

### Core 2: Critical Thinking

ENG 101 	Beginning Composition	3
ENG 201  	Advanced Composition	3
CMM 103 	Fund Speech-Communication	3
MTH 229  	Calculus/Analytic Geom I (CT)	5
BSC 120 	Principles of Biology I	3
BSC 120L 	Principles of Biology I Lab	1
Core II Humanities		3
Core II Social Science		3
Core II Fine Arts		3

### Additional University Requirements

Writing Intensive		3
Writing Intensive		3
Multicultural or International		3
BME 465	Biomedical Engr Capstone I	2
BME 466	Biomedical Engr Capstone II	2

## Major-Specific

Select one of the following: MTH 132 🌿 and MTH 229 🌿 MTH 229 🌿	Select one of the following: Precalculus with Sci Applica and Calculus/Analytic Geom I (CT) Calculus/Analytic Geom I (CT)	10 5
MTH 230 🌿	Calculus/Analytic Geom II (CT)	4
MTH 231 🌿	Calculus/Analytic Geom III (CT)	4
MTH 335 🎓	Ordinary Diff Equations	3
BSC 120 🌿	Principles of Biology	3
BSC 120L	Principles of Biology I Lab	1
BSC 121	Principles of Biology	3
BSC 121L	Principles of Biology I Lab	1
BSC 227	Human Anatomy	3
BSC 227L	Human Anatomy Lab	1
BSC 228 🌿	Human Physiology	3
BSC 228L 🌿	Human Anatomy Lab	1
CHM 211 🌿 🎓	Principles of Chemistry I	3
CHM 217 🌿	Principles of Chem Lab I	2
CHM 212 🌿 🎓	Principles of Chemistry II	3
CHM 218 🌿	Principles of Chem Lab II	2
PHY 211 🌿	University Physics I	4
PHY 213 🌿	University Physics II	4
ENGR 102	Introduction to CAD	2
ENGR 104	The Engineering Profession	1
ENGR 111	Engineering Computations	3
ENGR 213 🎓	Statics	3
ENGR 214	Dynamics	3
ENGR 318 🌿	Fluid Mechanics	3
ME 245	Circuits and Instrumentation	3
BME 101	Intro to Biomedical Engr	1
BME 201	Biomedical Engineering Seminar	2
BME 302 🌿	Engineering Biomechanics	3
BME 305	Intro to Biophysical Measmnt	3
BME 306	Tissue Engineering	3
BME 310	Modeling & Simulation Bio Syst	3
BME 405	Mech & Performance Bio Mtrls	3
BME 460	Mechanics of Biofuilds	3
BME 465 🌿	Biomedical Engr Capstone I	2
BME 466 🌿	Biomedical Engr Capstone II	2
BME Technical Electives	Select two courses from the following: <ul style="list-style-type: none"> <li>Any BME 300- or 400-level course not already taken to satisfy degree requirements</li> <li>Any BSC 300- or 400-level course</li> <li>Any CHM 300- or 400-level course</li> <li>ENGR 222 (Engr Cost Analysis &amp; Economy)</li> <li>ENGR 451 (Intro to Proj Management)</li> <li>ME 330 (Manufacturing Methods/Design)</li> </ul>	6
ENGR Elective	Any BME, CE, EE, ENGR, IE, or ME (300- or 400-level) course not already taken to satisfy degree requirements	3



## Major Information

- Students are required to know and track their degree requirements for graduation or for entrance to a professional school.
- The B.S.B.M.E. degree program requires a minimum of 123 credit hours of coursework.
- Course offerings and course attributes are subject to change each semester. Please consult each semester's schedule of courses for availability and attributes.

# Four-Year Plan

The Biomedical Engineering discipline is the application of engineering principles and design concepts to medicine and biology for health care purposes. This discipline aims to narrow the gap between engineering and medicine, combining the design and problem-solving skills of engineering with medical and biosciences to advance health care treatment, including diagnosis, monitoring, and therapy. Biomedical engineering has only recently emerged as its own study, compared to many other engineering fields. Biomedical engineering is a rapidly growing field, and Marshall University has a unique program that will highlight the technical strengths of the university and garner interest in the development of the biomedical industry in the state.

First Year		
FIRST SEMESTER		CREDIT HOURS
ENG 101 🌿	Beginning Composition	3
MTH 229 🌿 🎓	Calculus/Analytic Geom I (CT)	5
FYS 100	First Yr Sem Critical Thinking	3
ENGR 104	The Engineering Profession	1
BME 101	Intro to Biomedical Engr	1
BSC 227	Human Anatomy	3
BSC 227L	Human Anatomy Lab	1
UNI 100	Freshman First Class	1
	<b>Credit Hours</b>	<b>18</b>
SECOND SEMESTER		CREDIT HOURS
MTH 230 🌿	Calculus/Analytic Geom II	4
BSC 228 🌿	Human Physiology	3
BSC 228L 🌿	Human Anatomy Lab	1
ENGR 111	Engineering Computations	3
BSC 120 🌿	Principles of Biology	3
BSC 120L	Principles of Biology I Lab	1
ENGR 102	Introduction to CAD	2
	<b>Credit Hours</b>	<b>17</b>
Second Year		
FIRST SEMESTER		CREDIT HOURS
MTH 231 🌿	Calculus/Analytic Geom III	4
BME 201	Biomedical Engineering Seminar	2
CHM 211 🌿 🎓	Principles of Chemistry I	3
CHM 217 🌿	Principles of Chem Lab I	2
PHY 211 🌿	University Physics I	4
ENGR 213 🎓	Statics	3
	<b>Credit Hours</b>	<b>18</b>
SECOND SEMESTER		CREDIT HOURS
PHY 213 🌿	University Physics II	4
ENGR 214	Dynamics	3
BSC 121 🌿	Principles of Biology	3
BSC 121L	Principles of Biology I Lab	1
CHM 212 🌿 🎓	Principles of Chemistry II	3
CHM 218 🌿	Principles of Chem Lab II	2
	<b>Credit Hours</b>	<b>16</b>

Third Year		
FIRST SEMESTER		CREDIT HOURS
BME 305	Intro to Biophysical Measmnt	3
BME 302	Engineering Biomechanics	3
ME 245	Circuits and Instrumentation	3
ENGR 318 🌿	Fluid Mechanics	3
	<b>Credit Hours</b>	<b>12</b>
SECOND SEMESTER		CREDIT HOURS
ENG 201 🌿 🎓	Advanced Composition	3
BME 310	Modeling & Simulation Bio Syst	3
BME 306	Tissue Engineering	3
MTH 335	Ordinary Diff Equations	3
ENGR Elective		3
	<b>Credit Hours</b>	<b>15</b>
Fourth Year		
FIRST SEMESTER		CREDIT HOURS
BME 405	Mech & Performance Bio Mtrls	3
BME Technical Elective		3
BME 465 🌿	Biomedical Engr Capstone I	2
BME 460	Mechanics of Biofuilids	3
CMM 103 🌿	Fund Speech-Communication	3
	<b>Credit Hours</b>	<b>14</b>
SECOND SEMESTER		CREDIT HOURS
BME Technical Elective		3
Core II Social Science (MC/I, WI)		3
BME 466 🌿	Biomedical Engr Capstone II	2
Core II Humanities (WI, CT)		3
Core II Fine Arts		3
	<b>Credit Hours</b>	<b>14</b>
	<b>Total Credit Hours</b>	<b>124</b>

## Request for Undergraduate Addition, Deletion, or Change of a Major

1. Prepare one paper copy and obtain signatures from the Department Chair/Head, Registrar, and College Dean.
2. Submit the form to your College Curriculum Committee.
3. After attaining the signature of the College Curriculum Chair, send the paper copy to the current University Curriculum Committee (UCC) Chair.
4. Send an identical (sans signatures) ELECTRONIC COPY and all supporting documentation in PDF format by email to the current UCC Chair.

College: CECS Department/Division: Civil Engineering  
 Contact Person: Greg Michaelson Phone: x65606

### ACTION REQUESTED:

Check action requested:     Addition     Deletion     Change  
 Name of Major (provide code if this is an existing major): TE60 (BSCE Civil Engineering)  
 Within which Degree Program is/ will this Major be listed (please provide code as well): \_\_\_\_\_

### RATIONALE:

SAT score admission criteria revisions are proposed to align with the most recent version of the CollegeBoard ACT/SAT Concordance.

**CURRICULUM:** (If addition or change, number of hours and courses; indicate if required or optional) May be submitted as separate document.

See attachment.

### NOTIFICATION REQUIREMENTS:

Attach a copy of written notification regarding this curriculum request to the following:

1. **Statement of Non-Duplication:** If this major will be similar in title or content to an existing major at the university, please send a memo to the affected department and include it with this packet, as well as, the response received from the affected department.
2. If your department/division requires additional faculty, equipment, or specialized materials, attach an estimation of money and time required to secure these items.
3. Send a copy of this completed form to the Marshall University Catalog Editor.

**SIGNATURES:** (If disapproved at any level, do not sign. Return to previous signer.)

Department Chair/Division Head: <u>Chris Witt</u>	Date: <u>2/24/2023</u>
Registrar: <u>[Signature]</u>	Date: <u>2/27/2023</u>
College Dean: <u>[Signature]</u>	Date: <u>27-Feb-2023</u>
College Curriculum Chair: <u>[Signature]</u>	Date: <u>27-feb-2023</u>
University Curriculum Committee Chair: <u>Zach Garrett</u>	Date: <u>3.24.23</u>
Faculty Senate Chair: _____	Date: _____
VP Academic Affairs/VP Health Science _____	Date: _____

## TE60 – BSCE Civil Engineering

### *Current Catalog Description*

#### Admission Requirements

- Meet Marshall University admission requirements
- Admission to the B.S.C.E. program requires a minimum composite ACT score of 21 with a math score of 24, or a minimum SAT composite of 980 with a math SAT of 560.
- Transfer students must have completed [MTH 127](#) College Algebra-Expanded/[MTH 130](#) College Algebra and [MTH 132](#) Precalculus with Sci Applica.

For those needing to complete some requirements first, there is Pre-Engineering. Requirements for Pre-Engineering are a minimum composite ACT score of 19 with a math score of 19-23, or a minimum SAT composite of 900 with a math SAT of 460-550. Students who are admitted to the Pre-Engineering program generally will require an additional calendar year to complete the requirements for the B.S.C.E. degree. Transfer students must be eligible to take [MTH 127](#) College Algebra-Expanded/[MTH 130](#) College Algebra and [MTH 132](#) Precalculus with Sci Applica.

#### Graduation Requirements

The B.S.C.E. degree program requires a minimum of 124 credit hours of coursework as outlined below. In addition to fulfilling the university's requirements for graduation, B.S.C.E. students must maintain a minimum GPA of 2.0 in all professional courses. These professional courses include mathematics ([MTH 229](#) Calculus/Analytic Geom I (CT) or above), required science courses, core engineering (ENGR) courses, engineering emphasis courses (CE), and courses used as technical electives. Entering students with a math ACT of 24-26 are required to take [MTH 132](#) Precalculus with Sci Applica. Such students will likely need an extra semester or summer term to satisfy BSE requirements.

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## TE60 – BSCE Civil Engineering

### *Edited Catalog Description*

#### Admission Requirements

- Meet Marshall University admission requirements
- Admission to the B.S.C.E. Engineering program requires a minimum composite ACT score of 21 with a math score of 24, or a minimum SAT composite of ~~980~~ **1060** with a math SAT of ~~560~~ **570**.
- Transfer students must have completed [MTH 127](#) College Algebra-Expanded/[MTH 130](#) College Algebra and [MTH 132](#) Precalculus with Sci Applica.

For those needing to complete some requirements first, there is Pre-Engineering. Requirements for Pre-Engineering are a minimum composite ACT score of 19 with a math score of 19-23, or a minimum SAT composite of ~~900~~ **990** with a math SAT of ~~460-550~~ **510-560**. Students who are admitted to the Pre-Engineering program generally will require an additional calendar year to complete the requirements for the B.S.C.E. degree. Transfer students must be eligible to take [MTH 127](#) College Algebra-Expanded/[MTH 130](#) College Algebra and [MTH 132](#) Precalculus with Sci Applica.

#### Graduation Requirements

The B.S.C.E. degree program requires a minimum of 124 credit hours of coursework as outlined below. In addition to fulfilling the university's requirements for graduation, B.S.C.E. students must maintain a minimum GPA of 2.0 in all professional courses. These professional courses include mathematics ([MTH 229](#) Calculus/Analytic Geom I (CT) or above), required science courses, core engineering (ENGR) courses, **civil** engineering **emphasis** courses (CE), and courses used as technical electives. Entering students with a math ACT of 24-26 are required to take [MTH 132](#) Precalculus with Sci Applica. Such students will likely need an extra semester or summer term to satisfy BSE requirements.

# TE60 – BSCE Civil Engineering

## *Final Catalog Description*

### Admission Requirements

- Meet Marshall University admission requirements
- Admission to the B.S.C.E. Engineering program requires a minimum composite ACT score of 21 with a math score of 24, or a minimum SAT composite of 1060 with a math SAT of 570.
- Transfer students must have completed [MTH 127](#) College Algebra-Expanded/[MTH 130](#) College Algebra and [MTH 132](#) Precalculus with Sci Applica.

For those needing to complete some requirements first, there is Pre-Engineering. Requirements for Pre-Engineering are a minimum composite ACT score of 19 with a math score of 19-23, or a minimum SAT composite of 990 with a math SAT of 510-560. Students who are admitted to the Pre-Engineering program generally will require an additional calendar year to complete the requirements for the B.S.C.E. degree. Transfer students must be eligible to take [MTH 127](#) College Algebra-Expanded/[MTH 130](#) College Algebra and [MTH 132](#) Precalculus with Sci Applica.

### Graduation Requirements

The B.S.C.E. degree program requires a minimum of 124 credit hours of coursework as outlined below. In addition to fulfilling the university's requirements for graduation, B.S.C.E. students must maintain a minimum GPA of 2.0 in all professional courses. These professional courses include mathematics ([MTH 229](#) Calculus/Analytic Geom I (CT) or above), required science courses, core engineering (ENGR) courses, civil engineering courses (CE), and courses used as technical electives. Entering students with a math ACT of 24-26 are required to take [MTH 132](#) Precalculus with Sci Applica. Such students will likely need an extra semester or summer term to satisfy BSE requirements.

## Request for Undergraduate Addition, Deletion, or Change of a Major

1. Prepare one paper copy and obtain signatures from the Department Chair/Head, Registrar, and College Dean.
2. Submit the form to your College Curriculum Committee.
3. After attaining the signature of the College Curriculum Chair, send the paper copy to the current University Curriculum Committee (UCC) Chair.
4. Send an identical (sans signatures) ELECTRONIC COPY and all supporting documentation in PDF format by email to the current UCC Chair.

College: Liberal Arts Department/Division: Geography  
Contact Person: James Leonard Phone: 6-4626

### ACTION REQUESTED:

Check action requested:  Addition  Deletion  Change  
Name of Major (provide code if this is an existing major): Geography BA (LG10) / Geography BS (LG20)  
Within which Degree Program is/ will this Major be listed (please provide code as well): Geography

### RATIONALE:

Changing the capstone from 2 semester sequence to 1 semester. Updating electives lists.

**CURRICULUM:** (If addition or change, number of hours and courses; indicate if required or optional) May be submitted as separate document.

See attached.

### NOTIFICATION REQUIREMENTS:

Attach a copy of written notification regarding this curriculum request to the following:

1. **Statement of Non-Duplication:** If this major will be similar in title or content to an existing major at the university, please send a memo to the affected department and include it with this packet, as well as, the response received from the affected department.
2. If your department/division requires additional faculty, equipment, or specialized materials, attach an estimation of money and time required to secure these items.
3. Send a copy of this completed form to the Marshall University Catalog Editor.

**SIGNATURES:** (If disapproved at any level, do not sign. Return to previous signer.)

Department Chair/Division Head: <u>James Leonard</u> <i>JML</i>	Date: <u>1/19/23</u>
Registrar: <i>William D. Ross</i>	Date: <u>1/24/2023</u>
College Dean: <i>R. S. Smith</i>	Date: <u>1/30/2023</u>
College Curriculum Chair: <u>Jonathan Kozar</u>	Date: <u>2/24/23</u>
University Curriculum Committee Chair: <u>Zach Garrett</u>	Date: <u>3.24.23</u>
Faculty Senate Chair: _____	Date: _____
VP Academic Affairs/VP Health Science _____	Date: _____

# Geography BA/BS Program Description

## Proposed changes to the BA/BS - 2023

### Edits Marked

Geography is the systematic study of the spatial aspects of human activity, the natural world, and human-environment interaction. The discipline of Geography occupies a unique position as a bridge between the social sciences (Human Geography), natural sciences (Physical Geography), and STEM fields (GIScience). As a result, the Geography Department offers both a Bachelor of Arts (B.A.) and Bachelor of Science (B.S.) degree. Both degrees offer students broad exposure to the various subfields of Geography and provide specialized career training and preparation. From this interdisciplinary perspective, Geography helps us understand and address numerous contemporary challenges ranging from economic development, urban planning, and ethnic conflict to climate change, environmental sustainability, and natural resource management. Geography is a rapidly expanding discipline with diverse career opportunities across the environmental sciences, social sciences, and technological fields in both the public and private sectors.

The Geography Department prepares students to succeed as professionals in today's job market through an innovative curriculum focusing on building critical thinking, technical, and practical skills across a range of Human Geography, Physical Geography, and Geospatial Information Science (GIScience) courses. The curriculum includes a mixture of classroom and lab instruction, hands-on projects, and professional internship experiences that actively engage students in the learning process and provide the skills necessary for life-long learning. The Department maintains state-of-the-art facilities, including technology-enhanced classrooms, a Physical Geography lab, and a GIScience computer lab supporting students as they utilize the latest software and hardware. The Department provides a supportive learning environment where students work closely with faculty and peers while enjoying numerous opportunities to participate in campus, state, and national professional activities.

Geography alumni have successfully applied their knowledge and practical skills in a variety of career paths in both the public and private sectors, including urban and regional planning, economic development, environmental science, natural resource and energy management, weather forecasting, emergency response and homeland security, GIScience analysis, and education. Other alumni have continued with Geography studies at the graduate level. The Department also offers an Accelerated Master's program which allows qualifying students to begin earning graduate student credit during their senior year.

### Geography Core Requirements (B.A.): 19 credit hours

- GEO 100 Human Geography (CT) (3 credits)
- GEO 101 Physical Geography (CT) (4 credits)
- Any Regional Geography course (3 credits)
- GEO 300 Methods in Geography (3 credits; prerequisite STA150 and 150L (preferred), STA225 or MGT 218, PSY 223, SOC 345/ANT 301 or equivalent)
- GEO 423 Cartography and GIS (3 credits)
- ~~GEO 498 Senior Capstone I (2 credits)~~



- GEO 499 Senior Capstone II (3 credits)

### **Geography Core Requirements (B.S.): 23 credit hours**

- GEO 100 Human Geography (CT) (3 credits)
- GEO 101 Physical Geography (CT) (4 credits)
- Any Regional Geography course (3 credits)
- GEO 300 Methods in Geography (3 credits; prerequisite STA150 and 150L (preferred), STA225 or MGT 218, PSY 223, SOC 345/ANT 301 or equivalent)
- GEO 423 Cartography and GIS (3 credits)
- GEO 426 Principles of GIS (4 credits)
- ~~GEO 498 Senior Capstone I (2 credits)~~
- GEO 499 Senior Capstone II (3 credits)

All Geography majors are required to earn a C or better in their Geography courses if those hours are to count toward the major requirements.

### **B.A. in Geography**

The B.A. in Geography is for students interested in the spatial and human dimensions of places, cities, and regions. Students will explore concepts and issues related to population dynamics and migration, globalization, planning, economic development, transportation systems, connectivity and accessibility, segregation, urban growth and decline. These themes are explored at the local, regional, and global scales. Students will have a chance to benefit from our current areas of regional specialization: West Virginia, Appalachia, U.S. & Canada, and Latin America. The B.A. in Geography degree requires a minimum total of 39 hours of Geography coursework. Beyond the Geography Core Requirements, students choose a minimum of 12 credit hours from Human or Regional Geography. Remaining electives may be chosen from any GEO courses.

### **B.S. in Geography**

The B.S. in Geography is for students interested in natural science—concepts and issues related to the environment, earth processes, atmospheric processes, and climate—or in GIScience. Students will have a chance to benefit from our expertise in ecology, weather analysis, meteorology, climatology, hurricanes and other types of severe weather, plus GIS spatial analysis and technologies. The B.S. in Geography requires a minimum total of 45 credit hours of Geography coursework. Beyond the Geography Core Requirements, students choose a minimum of 15 credits from Physical Geography or GIScience. Remaining electives may be chosen from any GEO courses. To compensate for the increased number of hours for the B.S. in Geography (including areas of emphasis), students are exempted from the College of Liberal Arts foreign language requirement.

### **Electives**

#### *Human Geography Courses*

- GEO 203 Economic Geography (CT) (3 credits)
- GEO 207 Biblical Geography (Humanities; 3 credits)
- GEO 222 Global Environmental Issues (3 credits)

- GEO 401 Historical Geography (3 credits)
- GEO 405 Political Geography (3 credits)
- GEO 406 Population Geography (3 credits)
- GEO 410 Urban Geography (3 credits)
- GEO 414 Principles and Methods of Planning (3 credits)
- GEO 415 Urban Land Use Planning (3 credits)
- GEO 418 Geography for Educators (3 credits)
- GEO 422 Environmental Geography (3 credits)
- GEO 424 Transportation Geography (3 credits)
- Other Human Geography courses offered infrequently

#### *Regional Geography Courses*

- GEO 206 Geography of West Virginia (3 credits)
- GEO 305 Geography of North America (3 credits)
- GEO 402 Geography of Appalachia (3 credits)
- GEO 404 Geography of Europe (3 credits)
- GEO 408 Geography of South and Middle America (3 credits)
- Other Regional Geography courses offered infrequently

#### *GIScience Courses*

- GEO 110 Basic GIS (1 credit)
- GEO 111 Air Photos and Satellite Imagery (1 credit)
- GEO 112 Smartphone Global Positioning Systems (GPS) (1 credit)
- GEO 113 Web GIS (1 credit)
- GEO 426 Principles of GIS (4 credits)
- GEO 427 Principles of GIS 2 (4 credits)
- GEO 429 Location Analysis and GIS (4 credits)
- GEO 430 Environmental Raster Analysis (4 credits)
- GEO 431 Principles of Remote Sensing and Photogrammetry (3 credits)
- GEO 432 Enterprise GIS (3 credits)
- GEO 433 GPS and Mobile Geospatial Technologies (3 credits)
- GEO 434 Flood Hazards and GIS (3 credits)
- GEO 440 Spatial Statistics and GIS (4 credits)
- GEO 454 Drones for Remote Sensing & GIS (3 credits)

#### *Physical Geography Courses*

- GEO 222 Global Environmental Issues (CT) (3 credits)
- GEO 230 Introduction to Meteorology (CT) (4 credits)
- GEO 355 Aviation Weather (3 credits)
- GEO 422 Environmental Geography (3 credits)
- GEO 425 Climatology (4 credits)
- GEO 450 Extreme Weather (4 credits)

- GEO 460 Weather Analysis (4 credits)

All Geography Core Requirements and many electives are also offered online on a regular basis, sufficient to meet all Geography degree requirements online. (Some courses required for Areas of Emphasis in GIScience, Meteorology, and Weather Broadcasting are not available online. Students wishing to complete those Areas of Emphasis may be able to transfer courses from other institutions to meet the requirements; see an advisor for more information.)

### **B.S. in Geography with an Area of Emphasis in GIScience**

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**[Remaining material remains unchanged]**

# Geography BA/BS Program Description

## Proposed changes to the BA/BS - 2023

### Clean Copy

Geography is the systematic study of the spatial aspects of human activity, the natural world, and human-environment interaction. The discipline of Geography occupies a unique position as a bridge between the social sciences (Human Geography), natural sciences (Physical Geography), and STEM fields (GIScience). As a result, the Geography Department offers both a Bachelor of Arts (B.A.) and Bachelor of Science (B.S.) degree. Both degrees offer students broad exposure to the various subfields of Geography and provide specialized career training and preparation. From this interdisciplinary perspective, Geography helps us understand and address numerous contemporary challenges ranging from economic development, urban planning, and ethnic conflict to climate change, environmental sustainability, and natural resource management. Geography is a rapidly expanding discipline with diverse career opportunities across the environmental sciences, social sciences, and technological fields in both the public and private sectors.

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### **Electives**

#### *Human Geography Courses*

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- GEO 454 Drones for Remote Sensing & GIS (3 credits)

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- GEO 425 Climatology (4 credits)
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- GEO 460 Weather Analysis (4 credits)

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Emphasis in GIScience, Meteorology, and Weather Broadcasting are not available online. Students wishing to complete those Areas of Emphasis may be able to transfer courses from other institutions to meet the requirements; see an advisor for more information.)

**B.S. in Geography with an Area of Emphasis in GIScience**

...

**[Remaining material remains unchanged]**

## Request for Undergraduate Addition, Deletion, or Change of a Major

1. Prepare one paper copy and obtain signatures from the Department Chair/Head, Registrar, and College Dean. 2. Submit the form to your College Curriculum Committee. 3. After attaining the signature of the College Curriculum Chair, send the paper copy to the current University Curriculum Committee (UCC) Chair. 4. Send an identical (sans signatures) ELECTRONIC COPY and all supporting documentation in PDF format by email to the current UCC Chair.

College: College of Science Department/Division: Computer and Information Technology  
 Contact Person: Davide Andrea Mauro maurod@marshall.edu Phone: 3046966418

**ACTION REQUESTED:**

Check action requested:     Addition     Deletion     Change

Name of Major (provide code if this is an existing major): Computer and Information Technology (SI20)

Within which Degree Program is/ will this Major be listed (please provide code as well): \_\_\_\_\_

**RATIONALE:**

The entire program will be moved from the College of Science to the College of Engineering and Computer Sciences, the department of Computer and Information Technology will be merged with the department of Computer Sciences and Electrical Engineering. For these reasons all the courses, the major, the minors, and the areas of emphasis need to be moved accordingly.

**CURRICULUM:** (If addition or change, number of hours and courses; indicate if required or optional) May be submitted as separate document.

No other changes.

**NOTIFICATION REQUIREMENTS:**

Attach a copy of written notification regarding this curriculum request to the following:

- Statement of Non-Duplication:** If this major will be similar in title or content to an existing major at the university, please send a memo to the affected department and include it with this packet, as well as, the response received from the affected department.
- If your department/division requires additional faculty, equipment, or specialized materials, attach an estimation of money and time required to secure these items.
- Send a copy of this completed form to the Marshall University Catalog Editor.

**SIGNATURES:** (If disapproved at any level, do not sign. Return to previous signer.)

Department Chair/Division Head: <u><i>Dave Shea Russo</i></u>	Date: <u>1.24.23</u>
Registrar: <u><i>Sonya G. C. [Signature]</i></u>	Date: <u>2.10.23</u>
College Dean: <u><i>[Signature]</i></u>	Date: <u>02/10/2023</u>
College Curriculum Chair: <u><i>Maria Hamilton</i></u>	Date: <u>2.17.23</u>
University Curriculum Committee Chair: <u><i>Zach Garrett</i></u>	Date: <u>3.24.23</u>
Faculty Senate Chair: _____	Date: _____
VP Academic Affairs/VP Health Science _____	Date: _____



See <http://www.marshall.edu/senate/ucc/> for information on chair

## Request for Undergraduate Addition, Deletion, or Change of a Major

1. Prepare one paper copy and obtain signatures from the Department Chair/Head, Registrar, and College Dean. 2. Submit the form to your College Curriculum Committee. 3. After attaining the signature of the College Curriculum Chair, send the paper copy to the current University Curriculum Committee (UCC) Chair. 4. Send an identical (sans signatures) ELECTRONIC COPY and all supporting documentation in PDF format by email to the current UCC Chair.

College: Pharmacy Department/Division: Pharmaceutical Sciences  
 Contact Person: Boyd Rorabaugh Phone: 304-696-7289

**ACTION REQUESTED:**

Check action requested:     Addition     Deletion     Change  
 Name of Major (provide code if this is an existing major): B.S. in Pharmaceutical Sciences  
 Within which Degree Program is/ will this Major be listed (please provide code as well): BSPS

**RATIONALE:**

The B.S. in Pharmaceutical Sciences was originally approved with the inclusion of 500 level courses in the 4th year. This would allow a student to complete the B.S. and the Pharm.D. within 7 years (rather than 8 years). The change that we are requesting provides an alternative pathway (with no 500 level courses) for students to complete the B.S. if they do not meet the minimum G.P.A. required to take 500 level courses in year 4. Students with an appropriate G.P.A. can still follow the curriculum that was originally approved to complete both the B.S. and Pharm.D. However, the change proposed here adds an additional pathway to enable students that do not meet the G.P.A. requirement to complete the B.S. without taking 500 level courses.

**CURRICULUM:** (If addition or change, number of hours and courses; indicate if required or optional) May be submitted as separate document.

Please see the attached curriculum for students that do not meet the university's G.P.A. requirement to take graduate level courses in year 4.

**NOTIFICATION REQUIREMENTS:**

- Attach a copy of written notification regarding this curriculum request to the following:
- Statement of Non-Duplication:** If this major will be similar in title or content to an existing major at the university, please send a memo to the affected department and include it with this packet, as well as, the response received from the affected department.
  - If your department/division requires additional faculty, equipment, or specialized materials, attach an estimation of money and time required to secure these items.
  - Send a copy of this completed form to the Marshall University Catalog Editor.

**SIGNATURES:** (If disapproved at any level, do not sign. Return to previous signer.)

Department Chair/Division Head: <u><i>Boyd Rorabaugh</i></u>	Date: <u>3/15/23</u>
Registrar: <u><i>Sonia...</i></u>	Date: <u>3.15.23</u>
College Dean: <u><i>[Signature]</i></u>	Date: <u>3/15/23</u>
College Curriculum Chair: <u><i>[Signature]</i></u>	Date: <u>3/16/23</u>
University Curriculum Committee Chair: <u><i>Zach Garrett</i></u>	Date: <u>3.24.23</u>
Faculty Senate Chair: _____	Date: _____
VP Academic Affairs/VP Health Science _____	Date: _____

**B.S. in Pharmaceutical Sciences for students not continuing into the PharmD program.**

Fall, Year 1			Spring, Year 1		
<a href="#">BSC 120</a>	Biology I with lab (BSC120 + BSC120L) (Core II Science)	4	BSC 121	Biology II with lab (BSC121+BSC121L)	4
CHM 211	Principles of Chem I (Core II Science)	3	CHM 212	Principles of Chem II	3
CHM 217	Principles of Chem Lab I (Core II Science)	2	CHM 218	Principles of Chem Lab II	2
<a href="#">ENG 101</a>	Beginning Composition	3	ENG 201	Advanced Composition	3
FYS 100	Core I First Yr Sem	3	<a href="#">STA 225</a>	Introductory Statistics (CT)	3
UNI100		1	BSPS 201	Careers in Pharm Sci*	2
	Total	16		Total	17

Fall, Year 2			Spring, Year 2		
CHM 355	Organic Chemistry I	3	CHM 356	Organic Chemistry II	3
BSC 227	Human Anatomy	3	CHM 361	Intro Organic Chm Lab	3
BSC 227L	Human Anatomy Lab	1	BSC 228	Human Physiology	3
MTH 140	Applied Calculus	3	BSC 228L	Human Physiology Lab	1
BSPS 202	Intro to Pharm Sci*	2	BSC304	Microbiology Lab	2
PHY 201	General Physics	3	BSC302	Principles of Microbiology	3
PHY 202	General Physics Lab	1			
	Total	16		Total	15

Fall, Year 3			Spring, Year 3		
	Multicultural / Intl req.	3		Free Elective (select an elective with the critical thinking attribute)	3
	Social Science Core II	3	BSPS 303	Drug Regulatory Affairs*	3
	Core II Fine Arts req	3		BSPS Elective*	3
BSPS 447	Pharmaceutical Chemistry	4		BSPS Elective*	3
	Core II: Humanities (writing intensive)	3	BSPS 333	Pharmacology	3
		16		Total	15

Fall, Year 4			Spring, Year 4		
	Free Elective	3	BSPS 471	Capstone*	4
BSPS ###	BSPS Elective*	3	BSPS444	Princ of Disease Drug Act	4
	Core II Communication	3		BSPS elective	3
	Free Elective	3	BSPS 442	Seminar (repeated for credit)*	1
BSPS 442	Seminar*	1			
	Total	13		Total	12

Students are required to complete 6 credit hours of writing-intensive coursework.

**BSPS Electives**

Pharmacology of Illicit Drugs (BSPS 350) 3 credits

Immunotherapeutics (BSPS 340) 3 credits

Pharmaceutical Analysis (BSPS 320) 3 credits

Cardiovascular Pharmacology (BSPS 302) 3 credits

Introduction to Cancer Biology (BSPS 330) 3 credits

Principles of Infectious Diseases (BSPS 360) 4 credits

Pharmaceutical Biotechnology (BSPS XXX) 3 credits

Methods in Pharmaceutical Chemistry (BSPS XXX) 3 credits

Independent Study (BSPS485) 1 – 3 credits

Problem Report (BSPS486) 1-3 credits

Special Topics (BSPS499]

BSPS outcomes	Baccalaureate Degree Outcomes	Courses
1. Use fundamental and foundational principles of pharmaceutical sciences to solve problems related to drug discovery and development.	<b>Creative Thinking Integrative Thinking</b>	BSPS 333,444, 471,
2. Explain the relationships between common diseases and associated drug treatments.	<b>Integrative Thinking</b>	BSPS 333, 444
3. Demonstrate written and verbal communication skills, including evidence-based knowledge of pharmaceutical sciences.	<b>Communication Fluency Creative Thinking Information Literacy Inquiry-based Thinking Integrative Thinking Quantitative Thinking</b>	BSPS 442, 471, 485, 486
4. Describe the basis of drug discovery and development.	<b>Integrative Thinking</b>	BSPS 202, 303, 333, 471
5. Develop a written statement of professional goals	<b>Information Literacy</b>	BSPS 201,
6. Have a broad and in-depth understanding of key areas of research and careers in pharmaceutical sciences.	<b>Information Literacy</b>	BSPS 201,485, 486, 499
7. Apply knowledge and principles of pharmaceutical sciences to generate hypotheses, design experiments using the scientific method, execute experimental techniques with standard laboratory equipment, statistically analyze and interpret scientific data, and present research.	<b>Communication Fluency Creative Thinking Information Literacy Inquiry-based Thinking Metacognitive Thinking Quantitative Thinking</b>	BSPS 442, 471, 485, 486

## University Curriculum Committee RECOMMENDATION

### SR 22-23-53 CC

Recommends approval of the listed **UNDERGRADUATE MINOR ADDITION, DELETION, CHANGE** in the following college and/or schools/programs:

#### College of Liberal Arts

##### **Minor Change: Meteorology (BS Geography; LG20)**

- **Summary of changes:** revisions to curriculum
- **Rationale:** We have received inquiries from students interested in meteorological studies but do not necessarily want a career in forecasting or broadcasting. The proposed curriculum would provide basic weather skills designed to complement other majors.
- **Curriculum:** [Undergrad Minor Change GEO - Meteorology\\_signed.pdf](#)

#### College of Science

##### **Minor Change: Computer and Information Technology (SI20)**

- **Rationale:** The entire program will be moved from the College of Science to the College of Engineering and Computer Sciences, the department of Computer and Information Technology will be merged with the department of Computer Sciences and Electrical Engineering. For these reasons all the courses, the major, the minors, and the areas of emphasis need to be moved accordingly.
- **Curriculum:** [UCCMinorAdditionChangeDeletionFormCIT.pdf](#)

##### **Minor Change: Game Development (SI20)**

- **Rationale:** The entire program will be moved from the College of Science to the College of Engineering and Computer Sciences, the department of Computer and Information Technology will be merged with the department of Computer Sciences and Electrical Engineering. For these reasons all the courses, the major, the minors, and the areas of emphasis need to be moved accordingly.
- **Curriculum:** [UCCMinorAdditionChangeDeletionFormGameDev.pdf](#)

##### **Minor Change: Web Development (SI20)**

- **Rationale:** The entire program will be moved from the College of Science to the College of Engineering and Computer Sciences, the department of Computer and Information Technology will be merged with the department of Computer Sciences and Electrical Engineering. For these reasons all the courses, the major, the minors, and the areas of emphasis need to be moved accordingly.
- **Curriculum:** [UCCMinorAdditionChangeDeletionFormWebDev.pdf](#)

**University Curriculum Committee  
RECOMMENDATION**

**SR 22-23-53 CC**

**FACULTY SENATE CHAIR:**

APPROVED BY THE  
FACULTY SENATE: \_\_\_\_\_ DATE: \_\_\_\_\_

DISAPPROVED BY THE  
FACULTY SENATE: \_\_\_\_\_ DATE: \_\_\_\_\_

**UNIVERSITY PRESIDENT:**

APPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_

DISAPPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_

**COMMENTS:** \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

## Request for Undergraduate Addition, Deletion, or Change of a Minor

1. Prepare one paper copy and obtain signatures from the Department Chair/Head, Librarian, and College Dean. 2. Submit the form to your College Curriculum Committee. 3. After attaining the signature of the College Curriculum Chair, send the paper copy to the current University Curriculum Committee (UCC) Chair. 4. Send an identical (sans signatures) ELECTRONIC COPY and all supporting documentation in PDF format by email to the current UCC Chair.

College: COLA Department/Division: Geography  
 Contact Person: Kevin Law Phone: 696-2503

**ACTION REQUESTED:**

Check action requested:  Addition  Deletion  Change

Name of Minor: Meteorology

Within which Major is/will this minor be listed (please provide code as well): Geography; LG-20 BS

**RATIONALE:**

We have received inquiries from students interested in meteorological studies but do not necessarily want a career in forecasting or broadcasting. The proposed curriculum would provide basic weather skills designed to compliment other majors.

**CURRICULUM:** (If addition or change, number of hours and courses; indicate if required or optional) May be submitted as separate document.

See attached document

**NOTIFICATION REQUIREMENTS:**

Attach a copy of written notification regarding this curriculum request to the following:

1. **Statement of Non-Duplication:** If this minor will be similar in title or content to an existing minor at the university, please send a memo to the affected department and include it with this packet, as well as, the response received from the affected department.
2. If your department/division requires additional faculty, equipment, or specialized materials, attach an estimation of money and time required to secure these items.
3. Send a copy of this completed form to the Marshall University Catalog Editor.

**SIGNATURES:** (If disapproved at any level, do not sign. Return to previous signer.)

Department Chair/Division Head: <u></u>	Date: <u>2/15/23</u>
Registrar: <u></u>	Date: <u>2/17/2023</u>
College Dean: <u></u>	Date: <u>2/17/2023</u>
College Curriculum Chair: <u>Jonathan Kozar</u>	Date: <u>2/24/23</u>
University Curriculum Committee Chair: <u>Zach Garrett</u>	Date: <u>3.24.23</u>
Faculty Senate Chair: _____	Date: _____
VP Academic Affairs/VP Health Science: _____	Date: _____

## Changes to Meteorology Minor

**Rationale:** We have received inquiries from students interested in meteorological studies but do not necessarily want a career in forecasting or broadcasting. The proposed curriculum would provide basic weather skills designed to compliment other majors.

Current: 16 total credit hours

Required: 12 credits

GEO 230 Introduction to Meteorology (4 credits)

GEO 350 Severe Storms and Natl Hazards (4 credits)

GEO 460 Weather Analysis (4 credits)

Select one of the following: 4 credits

GEO 101 Physical Geography (4 credits)

GEO 425 Climatology (4 credits)

GEO 480 Special Topics (1-4 credits)

GEO 481 Special Topics (1-4 credits)

GEO 482 Special Topics (1-4 credits)

GEO 483 Special Topics (1-4 credits)



(CHANGES MARKED IN RED)

PROPOSED CURRICULUM : At least 19 credit hours

Required: 12 credits

GEO 230 Introduction to Meteorology (4 credits)

GEO 450 Extreme Weather (4 credits) \*\*this course was formerly called GEO 350 Severe Storms and Natl Hazards and changes have already been approved by the university

GEO 460 Weather Analysis (4 credits)

CHOOSE AT LEAST A TOTAL OF 7 CREDIT HOURS FROM THE FOLLOWING COURSES: AT LEAST 7 CREDITS

GEO 101 Physical Geography (4 credits)

GEO 355 Aviation Weather (3 credits)

GEO 425 Climatology (4 credits)

GEO 426 Principles of GIS (4 credits)

GEO 431 Remote Sensing (4 credits)

GEO 480 Special Topics (1-4 credits)

GEO 481 Special Topics (1-4 credits)

GEO 482 Special Topics (1-4 credits)

GEO 483 Special Topics (1-4 credits)

GLY 150 Oceanography (3 credits)

GLY 150L Oceanography Lab (1 credit)

NOTE: STUDENTS CANNOT EARN BOTH A CERTIFICATE AND MINOR IN METEOROLOGY.

#### NOTIFICATION REQUIREMENTS

This minor does not duplicate another minor at the university.

The proposed changes will not require additional faculty, equipment, or specialized materials.

## Request for Undergraduate Addition, Deletion, or Change of a Minor

1. Prepare one paper copy and obtain signatures from the Department Chair/Head, Librarian, and College Dean. 2. Submit the form to your College Curriculum Committee. 3. After attaining the signature of the College Curriculum Chair, send the paper copy to the current University Curriculum Committee (UCC) Chair. 4. Send an identical (sans signatures) ELECTRONIC COPY and all supporting documentation in PDF format by email to the current UCC Chair.

College: College of Science Department/Division: Computer and Information Technology  
 Contact Person: Davide Andrea Mauro maurod@marshall.edu Phone: 3046966418

**ACTION REQUESTED:**

Check action requested: <input type="checkbox"/> Addition <input type="checkbox"/> Deletion <input checked="" type="checkbox"/> Change
Name of Minor: <u>Computer and Information Technology</u>
Within which Major is/will this minor be listed (please provide code as well): <u>Computer and Information Technology(SI20)</u>

**RATIONALE:**

The entire program will be moved from the College of Science to the College of Engineering and Computer Sciences, the department of Computer and Information Technology will be merged with the department of Computer Sciences and Electrical Engineering. For these reasons all the courses, the major, the minors, and the areas of emphasis need to be moved accordingly.

**CURRICULUM:** (If addition or change, number of hours and courses; indicate if required or optional) May be submitted as separate document.

No other changes.

**NOTIFICATION REQUIREMENTS:**

Attach a copy of written notification regarding this curriculum request to the following:

1. **Statement of Non-Duplication:** If this minor will be similar in title or content to an existing minor at the university, please send a memo to the affected department and include it with this packet, as well as, the response received from the affected department.
2. If your department/division requires additional faculty, equipment, or specialized materials, attach an estimation of money and time required to secure these items.
3. Send a copy of this completed form to the Marshall University Catalog Editor.

**SIGNATURES:** (If disapproved at any level, do not sign. Return to previous signer.)

Department Chair/Division Head: <u><i>Davide Andrea Mauro</i></u>	Date: <u>01/24/2023</u>
Registrar: <u><i>[Signature]</i></u>	Date: <u>2.10.23</u>
College Dean: <u><i>[Signature]</i></u>	Date: <u>02/10/2023</u>
College Curriculum Chair: <u><i>Maria Hamilton</i></u>	Date: <u>2.17.23</u>
University Curriculum Committee Chair: <u><i>Zach Garrett</i></u>	Date: <u>3.24.23</u>
Faculty Senate Chair: _____	Date: _____
VP Academic Affairs/VP Health Science: _____	Date: _____

## Request for Undergraduate Addition, Deletion, or Change of a Minor

1. Prepare one paper copy and obtain signatures from the Department Chair/Head, Librarian, and College Dean. 2. Submit the form to your College Curriculum Committee. 3. After attaining the signature of the College Curriculum Chair, send the paper copy to the current University Curriculum Committee (UCC) Chair. 4. Send an identical (sans signatures) ELECTRONIC COPY and all supporting documentation in PDF format by email to the current UCC Chair.

College: College of Science Department/Division: Computer and Information Technology  
 Contact Person: Davide Andrea Mauro maurod@marshall.edu Phone: 3046966418

**ACTION REQUESTED:**

Check action requested: <input type="checkbox"/> Addition <input type="checkbox"/> Deletion <input checked="" type="checkbox"/> Change
Name of Minor: <u>Game Development</u>
Within which Major is/will this minor be listed (please provide code as well): <u>Computer and Information Technology(SI20)</u>

**RATIONALE:**

The entire program will be moved from the College of Science to the College of Engineering and Computer Sciences, the department of Computer and Information Technology will be merged with the department of Computer Sciences and Electrical Engineering. For these reasons all the courses, the major, the minors, and the areas of emphasis need to be moved accordingly.

**CURRICULUM:** (If addition or change, number of hours and courses; indicate if required or optional) May be submitted as separate document.

No other changes.

**NOTIFICATION REQUIREMENTS:**

- Attach a copy of written notification regarding this curriculum request to the following:
1. **Statement of Non-Duplication:** If this minor will be similar in title or content to an existing minor at the university, please send a memo to the affected department and include it with this packet, as well as, the response received from the affected department.
  2. If your department/division requires additional faculty, equipment, or specialized materials, attach an estimation of money and time required to secure these items.
  3. Send a copy of this completed form to the Marshall University Catalog Editor.

**SIGNATURES:** (If disapproved at any level, do not sign. Return to previous signer.)

Department Chair/Division Head: <u><i>Dave Shea</i></u>	Date: <u>01/24/2023</u>
Registrar: <u><i>Sonye</i></u>	Date: <u>2.10.23</u>
College Dean: <u><i>Bob</i></u>	Date: <u>02/10/2023</u>
College Curriculum Chair: <u><i>Maria Hamilton</i></u>	Date: <u>2.17.23</u>
University Curriculum Committee Chair: <u><i>Zach Garrett</i></u>	Date: <u>3.24.23</u>
Faculty Senate Chair: _____	Date: _____
VP Academic Affairs/VP Health Science: _____	Date: _____

## Request for Undergraduate Addition, Deletion, or Change of a Minor

1. Prepare one paper copy and obtain signatures from the Department Chair/Head, Librarian, and College Dean. 2. Submit the form to your College Curriculum Committee. 3. After attaining the signature of the College Curriculum Chair, send the paper copy to the current University Curriculum Committee (UCC) Chair. 4. Send an identical (sans signatures) ELECTRONIC COPY and all supporting documentation in PDF format by email to the current UCC Chair.

College: College of Science Department/Division: Computer and Information Technology

Contact Person: Davide Andrea Mauro maurod@marshall.edu Phone: 3046966418

**ACTION REQUESTED:**

Check action requested: <input type="checkbox"/> Addition <input type="checkbox"/> Deletion <input checked="" type="checkbox"/> Change
Name of Minor: <u>Web Development</u>
Within which Major is/will this minor be listed (please provide code as well): <u>Computer and Information Technology(SI20)</u>

**RATIONALE:**

The entire program will be moved from the College of Science to the College of Engineering and Computer Sciences, the department of Computer and Information Technology will be merged with the department of Computer Sciences and Electrical Engineering. For these reasons all the courses, the major, the minors, and the areas of emphasis need to be moved accordingly.

**CURRICULUM:** (If addition or change, number of hours and courses; indicate if required or optional) May be submitted as separate document.

No other changes.

**NOTIFICATION REQUIREMENTS:**

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1. **Statement of Non-Duplication:** If this minor will be similar in title or content to an existing minor at the university, please send a memo to the affected department and include it with this packet, as well as, the response received from the affected department.
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  3. Send a copy of this completed form to the Marshall University Catalog Editor.

**SIGNATURES:** (If disapproved at any level, do not sign. Return to previous signer.)

Department Chair/Division Head: <u><i>Davide Andrea Mauro</i></u>	Date: <u>01/24/2023</u>
Registrar: <u><i>Sonye A. [Signature]</i></u>	Date: <u>2.10.23</u>
College Dean: <u><i>[Signature]</i></u>	Date: <u>02/10/2023</u>
College Curriculum Chair: <u><i>Maria Hamilton</i></u>	Date: <u>2.17.23</u>
University Curriculum Committee Chair: <u><i>Zach Garrett</i></u>	Date: <u>3.24.23</u>
Faculty Senate Chair: _____	Date: _____
VP Academic Affairs/VP Health Science: _____	Date: _____