

## Graduate Intent to Plan--Major or Degree

NOTE: This "Intent to Plan" form must be submitted and go through the approval process BEFORE you submit the form titled, "Request for Graduate Addition, Deletion or Change of a Major or Degree." For detailed information on new programs please see: <http://wvhepcdoc.wvnet.edu/resources/133-11.pdf>.

1. Prepare one paper copy with all signatures and supporting material and forward to the Graduate Council Chair.
2. E-mail one PDF copy without signatures to the Graduate Council Chair. If attachments are included, please merge into a single file.
3. **The Graduate Council cannot process this application until it has received both the PDF copy and the signed hard copy.**

College: CITE

Dept/Division: Computer Science

Contact Person: Wook-Sung Yoo

Phone: x5452

New Degree Program Data Analytics

Effective Term/Year

Fall 20

☐

Spring 20



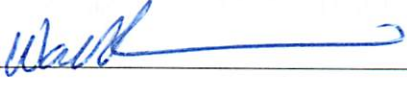

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Summer 20

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**Information on the following pages must be completed before signatures are obtained.**

Signatures: if disapproved at any level, do not sign. Return to previous signer with recommendation attached.

|  |                           |
|--|---------------------------|
| Dept. Chair/Division Head <u></u> | Date <u>March 18, '19</u> |
| College Curriculum Chair <u></u>  | Date <u>3/20/19</u>       |
| College Dean <u></u>              | Date <u>04/01/2019</u>    |
| Graduate Council Chair <u></u>    | Date <u>4/29/19</u>       |
| Provost/VP Academic Affairs _____  | Date _____                |
| Presidential Approval _____  | Date _____                |
| Board of Governors Approval _____  | Date _____                |

## Graduate Intent to Plan--Major or Degree-Page 2

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Please provide a rationale for new degree program: (May attach separate page if needed)

With exponentially increasing amounts of data accumulating in real-time, every business and entrepreneur in today's society needs data analytics to have the ability to turn data into a competitive advantage to augment their competitive position relative to others in the field.

As a result, Data Analysts are among the most sought-after positions in America. With 163 zettabytes of data to be created by 2025 (10 times the amount of data in the digital universe in 2016), employers will have an extensive need for data experts who can manage and analyze the vast amount of information they collect. IBM predicts that by 2020, the number of jobs for all U.S. data professionals will increase by 364,000 openings to 2,720,000 jobs. This data boom is challenging businesses in every industry to hire professionals with a master's degree in data analytics who are skilled at data management and governance. Nearly 40% of advanced data and business analytic positions require a master's degree or Ph.D. according to a research study performed by IBM.

- Top 5 jobs by Google Careers are related to data analytics.

- According to the U.S Bureau of Labor and Statistics, the average wage of the U.S data scientists in 2016 is \$130,000.

- McKinsey & Co. estimates that big data analytics revenue will be \$325 billion by 2020.

Data scientist has been named the best job in America for three years running, according to Glassdoor's 2018 Rankings, with a median base salary of \$110,000. Common data analytics jobs are Chief Executive Officer, Chief Data Officer, Director of IT, Human Resources Manager, Financial Manager and Marketing Manager.

Data analyst skills and competencies have different forms of analytics that will add value to a business. However, the elite data analyst must master five essential skills: programming, quantitative skills, technologies, domain knowledge, and critical thinking. A data analyst should know how to code and have mathematical knowledge to include probability and statistics in order to conduct numerical and statistical analysis. The curriculum of the proposed M.S. in Data Analytics program provides courses to build the skills necessary to become an elite data analyst to analyze, discover, and innovate in a data-rich world.



**1. ADDITIONAL RESOURCE REQUIREMENTS:** If your new program requires additional faculty, equipment or specialized materials, attach an estimate of the time and money required to secure these items.

NOTE: Approval of this form does not imply approval for additional resources. Enter NONE if not applicable.

**2. NON-DUPLICATION:** If a question of possible duplication occurs, attach a copy of the correspondence sent to the appropriate department(s) describing the request and any response received from them. Enter NONE if not applicable.

None

*For catalog changes as a result of the above actions, please fill in the following pages.*

## Graduate Intent to Plan--Major or Degree-Page 3

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### 5. New Catalog Description

Insert a 'clean' copy of your proposed description, i.e., no strikethroughs or highlighting included. This should be what you are proposing for the new description. (May attach separate page if needed)

See attachment

## Graduate Intent to Plan--Major or Degree-Page 4

Please insert in the text box below your summary information for the Graduate Council agenda. Please enter the information exactly in this way (including headings):

Department:

New Major or Degree:

Credit Hours:

Rationale:

Department: Weisberg Division of Computer Science

New Major or Degree: Masters of Science in Data Analytics

Credit Hours: 30 Credit Hours

Type of Change: Addition

Rationale: With exponentially increasing amounts of data accumulating in real-time, every business and entrepreneur in today's society needs data analytics to have the ability to turn data into a competitive advantage to augment their competitive position relative to others in the field.


As a result, Data Analysts are among the most sought-after positions in America. With 163 zettabytes of data to be created by 2025 (10 times the amount of data in the digital universe in 2016), employers will have an extensive need for data experts who can manage and analyze the vast amount of information they collect. IBM predicts that by 2020, the number of jobs for all U.S. data professionals will increase by 364,000 openings to 2,720,000 jobs. This data boom is challenging businesses in every industry to hire professionals with a master's degree in data analytics who are skilled at data management and governance. Nearly 40% of advanced data and business analytic positions require a master's degree or Ph.D. according to a research study performed by IBM.

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April 24, 2019

Dear Dr. Howard,

I would like to amend the Intent to Plan for the Master of Science in Data Analytics Degree Program that you received on April 1, 2019 by providing the attached document. The amendment was made to reflect the viewpoints and suggestions from the College of Science, College of Health Professions and College of Business. The amended Intent to Plan has received the full support from the Provost, College of Business, College of Science and College of Health Professions.

Thank you for your kind consideration of this timely request. Please let me know if I can provide any additional information.

Sincerely,

Wael Zatar  
Dean

**Marshall University**  
**College of Information Technology and Engineering**  
**Office of the Dean**

Arthur Weisberg Family Applied Engineering Complex  
1676 Third Avenue, Suite 2103  
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[marshall.edu/cite](http://marshall.edu/cite)

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BE A SON OR DAUGHTER OF MARSHALL.



## **MARSHALL UNIVERSITY**

**College of Information Technology and Engineering  
Weisberg Division of Computer Science**

March 18, 2019

**Master of Science in Data Science**

**Effective Date: Spring 2020**

**Contact Person:**

Dr. Wael Zatar, Dean

College of Information Technology and Engineering  
and

Dr. Wook Sung Yoo, Chair

Weisberg Division of Computer Science

### **Summary Statement**

The Weisberg Division of Computer Science in the College of Information Technology and Engineering (CITE) proposes the establishment of the Master of Science (M.S.) in Data Science degree program at Marshall University.

Data Science is the process of examining data sets in order to draw conclusions about the information they contain, increasingly with the aid of specialized systems and software. Data analysts extract meaningful insight from various data sources using techniques such as data mining, machine learning, and other data sources to forecast the future. This information can then be used to optimize the processes to increase the overall efficiency of a business or system.

The proposed M.S. in Data Science provides students with technical expertise in computational modeling, data collection and integration, data storage and retrieval, data processing, modeling and analytics, and visualization. Data analysts are among the most sought-after positions in America. Although data analyst jobs are often multidisciplinary, in industry today, there is a need to hire data analysts who are skilled at data management and governance. Nearly 40% of advanced data and business analyst positions require a master's degree or Ph.D. The Weisberg Division of Computer Science in the College of Information Technology and Engineering currently offers the required core data Science courses, and various domain emphases will be provided using existing courses in different programs at Marshall University. We believe the proposed degree program will not only create exciting and productive new pathways for research and development, but will increase educational opportunities and inter-departmental collaborations across the campus.

The proposed program does not anticipate any need of additional faculty lines, major funding, or other resources to establish the program. The program will become viable from its first year and will grow each year. The College of Information Technology and Engineering aims at enrolling 70 students and graduating 28 students with a M.S. in Data Science in the fifth year of the program. The projected net revenue in the fifth year is estimated at \$955,528. The program will generate close to \$3.2 million in new revenue during its first five years.

## **1. Program Description**

Data analysis is a process of inspecting, cleansing, transforming, and modeling data with the goal of discovering useful information, informing conclusions, and supporting decision-making with the aid of specialized systems and software. Data analysts extract meaningful insight from various data sources using techniques such as data mining, machine learning, and many other data sources to forecast the future. This information can then be used to optimize the processes to increase the overall efficiency of a business, reduce business costs by identifying more efficient ways of doing business, and make more informed business decisions, leading to better products and services.

The proposed M.S. in Data Science degree program provides students with technical expertise in computational modeling, data collection and integration, data storage and retrieval, data processing, modeling and analytics, and visualization. Students graduating with a M.S. degree in Data Science will have the ability to handle large data sets, write software to work with large data sets, and apply statistical skills to model and analyze sub-data sets of interest. The Data Science degree program offers a holistic approach to data Science education and takes advantage of the strong related programs in the Weisberg Division of Computer Science (Computer Science, Information Systems, and Cybersecurity), as well as other programs at Marshall University. The Data Science degree program prepares graduates to succeed in professional careers in a rapidly growing data science field, thus leading to technological changes in the industry and research fields both locally and nationally. The following sections provide additional details of the proposed M.S. in the Data Science degree program.

### ***1.1 Program Mission***

Marshall University provides innovative undergraduate and graduate education programs that contribute to the development of the individual and their role in society. An important goal of the M.S. in Data Science (MSDS) is to equip students with a strong foundation in the theory and practice of data analytics. This foundation builds on Marshall's mission, where it is stated "to actively facilitate learning through the preservation, discovery, synthesis, and dissemination of knowledge". The proposed program will cover the fundamental concepts of data science and provide opportunities to apply the technical knowledge and skills to produce viable solutions for industry and research fields. Graduates from the M.S. in Data Science program will achieve competency in the following four Program Educational Objectives (PEO): *After graduation, students will be able to:*

*PEO 1: be employed in Data Science or related areas*

*PEO 2: be engaged in life-long learning and professional development through self-study, continuing education or graduate and professional studies*

*PEO 3: become effective communicators, collaborators and innovators*

*PEO 4: practice professional ethics with social responsibility addressing social, technical and business challenges*

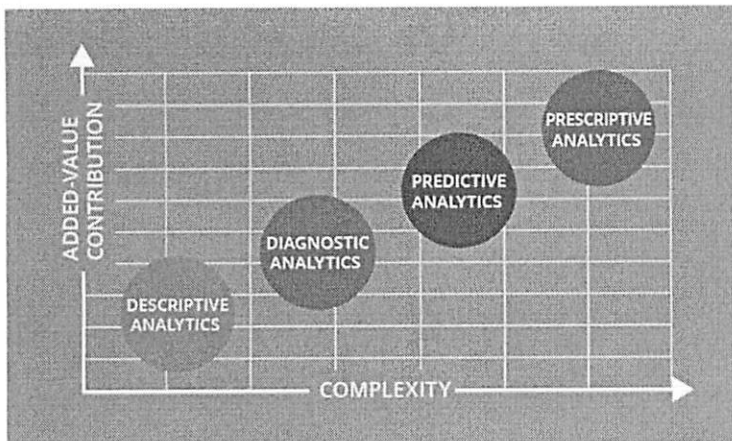
The M.S. in Data Science degree program will strive to ensure that its graduates are placed in data science jobs or closely related fields within the professional practice. The graduates are trained to contribute to the evolving technology at their workplace, identify opportunities for breakthrough research, and assume reasonable responsibilities in the decision-making process.

The M.S. in Data Science program aligns well with the mission of the College of Information Technology and Engineering (CITE):

- CITE will be a recognized leader in practice-oriented teaching and applied research.
- CITE is committed to serve the lifelong educational needs of students, new graduates, working professionals, and employees.
- CITE builds on combined traditions of student-focused education, entrepreneurship, and funded research and service emphasis.
- CITE provides education when and where needed, incorporating technology-enhanced methods, by full-time, dedicated faculty complemented by expert adjunct faculty from industry and government.

## ***1.2 Program Features***

With exponentially increasing amounts of data accumulating in real-time, every business and entrepreneur in today's society needs data science to have the ability to turn data into a competitive advantage to augment their competitive position relative to others in the field. Data Analytics in Data Science is broken down into four basic types:



- *Descriptive analytics* describes what has happened over a period of time.
- *Diagnostic analytics* focuses more on why something happened.
- *Predictive analytics* moves to what is likely going to happen in the future.
- *Prescriptive analytics* moves into the territory of suggesting actions.

Data analyst skills and competencies have different forms of analytics that will add value to a business. However, the elite data scientist must master five essential skills: programming, quantitative skills, technologies, domain knowledge, and critical thinking. A data analyst should know how to code and have mathematical knowledge to include probability and statistics in order to conduct numerical and statistical analysis. They should also be familiar with a wide range of technologies to include analytical tools, platforms, hardware, and software. Analysis of data would be useless if it cannot be applied to a business setting. All data scientists need to have a strong understanding of the business and domain knowledge they operate in, which enables data scientists to have insight and communicate effectively with different stakeholders. Data scientists need to be critical thinkers with creativity, to be able to apply objective analysis of facts on a given topic or problem before formulating opinions or rendering judgments.

The curriculum of the proposed M.S. in Data Science program provides courses to build the skills necessary to become an elite data analyst to analyze, discover, and innovate in a data-rich world. A total of 30 credit hours are required for graduation: 15 credit core courses provide opportunities for students to build programming skills, quantitative skills, technologies, and critical thinking, 9 credits domain emphasis will build domain knowledge, and 6 credits of electives or thesis option will provide opportunities for students to build research opportunities or areas of additional expertise.

Occupations in data science are multidisciplinary, which include areas of healthcare, business, science, retail, engineering, humanity, and education. Essentially any type of information can be subjected to data science techniques to get insight. The proposed program includes two domain emphases but the number of domain emphasis could be increased as the program matures and various domain knowledge courses from different programs at Marshall University are

expected to be offered. As an example, Business domain was not included due to the accreditation requirement issue of College of Business but Computation Biology domain can be added in near future once the discussion of curriculum revision is finalized. Initial two domain emphases are listed below:

- **Computing**  
This domain emphasis tackles computing areas including high performance computing, cloud computing, IoT, Artificial Intelligence, Cybersecurity, bioinformatics, etc.
- **Information Systems**  
This domain emphasizes the use of information technology and the expected utility of information systems.

The M.S. in Data Science will promote collaboration with industries, government agencies, and educational institutions by:

- developing partnerships and alliances with external corporate and industry organizations for pursuing joint educational and research opportunities in data science
- pursuing research and grant opportunities in data science related areas
- coordinating availability of data Science coursework to assist not only West Virginia, but the rest of the nation to meet the demand for data science professionals
- providing outreach opportunities to interested parties and organizations

We expect the M.S. in Data Science will make Marshall University a recognized leader in education, research and practice in data science fields. The program will attract traditional and non-traditional students from West Virginia, the Tri-State region and the surrounding states. The delivery of the M.S. in Data Science will be following classical instructional mechanisms at this time; however, the program can include online/hybrid courses and may be extended to an online degree program. The catalog description of the proposed M.S. in Data Science is as follows.

## **DATA SCIENCE, M.S.**

### **Program Description**

The Master of Science in Data Science provides students with technical expertise in computational modeling, data collection and integration, data storage and retrieval, data processing, modeling and analytics, and visualization. Students graduating from this program will be able to handle large

data sets (big data), write software to work with these large data sets, and apply the statistical skills to model and analyze sub-data sets of interest. The job opportunities in this field are rapidly growing.

### **Admission Requirements**

Minimum requirements for admission is a four-year bachelor's degree with GPA of 2.75 or higher out of 4.0 in Computer Science, or any related areas listed below.

- Data Science/Data Analytics
- Information Systems/Information Technology
- Computer Information Technology
- Mathematics/Statistics
- Computer Engineering
- Electrical Engineering
- Software Engineering

Whether a student meets the above requirements will be determined by the division chair or designee based on the information provided in the admission application and transcripts. Applicants with a bachelor's degree in a major not listed above may be admitted to the program with a provision of successful completion of the following three bridge courses with a grade of B or above in the first two semesters of the program:

- Data Structure and Algorithms (CS 210)
- Data Engineering (CS 410)
- Applied Probability and Statistics (STA 345)

Foreign nationals must provide proof of English proficiency with a minimum score of 6.5 in IELTS or 80 on TOEFL IBT (or 550 paper based) and must have met all other admission criteria prior to registering for the first semester of courses. Applicants should follow the admissions process as stated in the graduate catalog or on the graduate admissions web site.

### **Degree Requirements**

The MSDA degree requires 30 credit hours (CR) of graduate work. The 30 CR is comprised of the following components:

- Required Core courses (15 CR)
  - CS 511 Advanced Programming
  - CS 515 Data Mining
  - CS 630 Machine Learning
  - CS 660 Big Data Systems
  - CS 670 Visual Analytics

- Domain Emphasis (9 CR)

Domain Emphasis gives students a grounded understanding of a particular domain and a student should take 9 credits of courses in her/his domain area.

- Computing

This domain emphasis tackles computing areas including high performance computing, cloud computing, IoT, Artificial Intelligence, Cybersecurity, bioinformatics, etc.

- Information Systems

This domain emphasizes the use of information technology and their expected utility of their information systems.

A Domain Emphasis is comprised of three courses chosen from the list below:

| Computing | Information Systems |
|-----------|---------------------|
| CS 504    | IS 545              |
| CS 539    | IS 623              |
| CS 540    | IS 624              |
| CS 550    | IS 645              |
| CS 559    | IS 665              |
| CS 620    |                     |
| CS 625    |                     |
| CS 630    |                     |
| CS 645    |                     |

- Electives (6 CR) or Thesis Option (6 CR)

Student may choose a thesis option or take any two additional courses from the list of courses in the Domain Emphasis. The thesis option (Thesis I and II) offers students an opportunity for serious investigation into an area of interest. Students must summarize their thesis work in the form of a formal written document and deliver an oral presentation. Thesis work is typically conducted over two semesters. The thesis option can be taken after the completion of 12 credit hours. The 6 CR of the thesis option cannot be combined in a semester. In the event that a student in the thesis option wishes to switch to the other option, the course taken in the thesis option will not count toward fulfilling the graduation requirement.

### Plan of Study

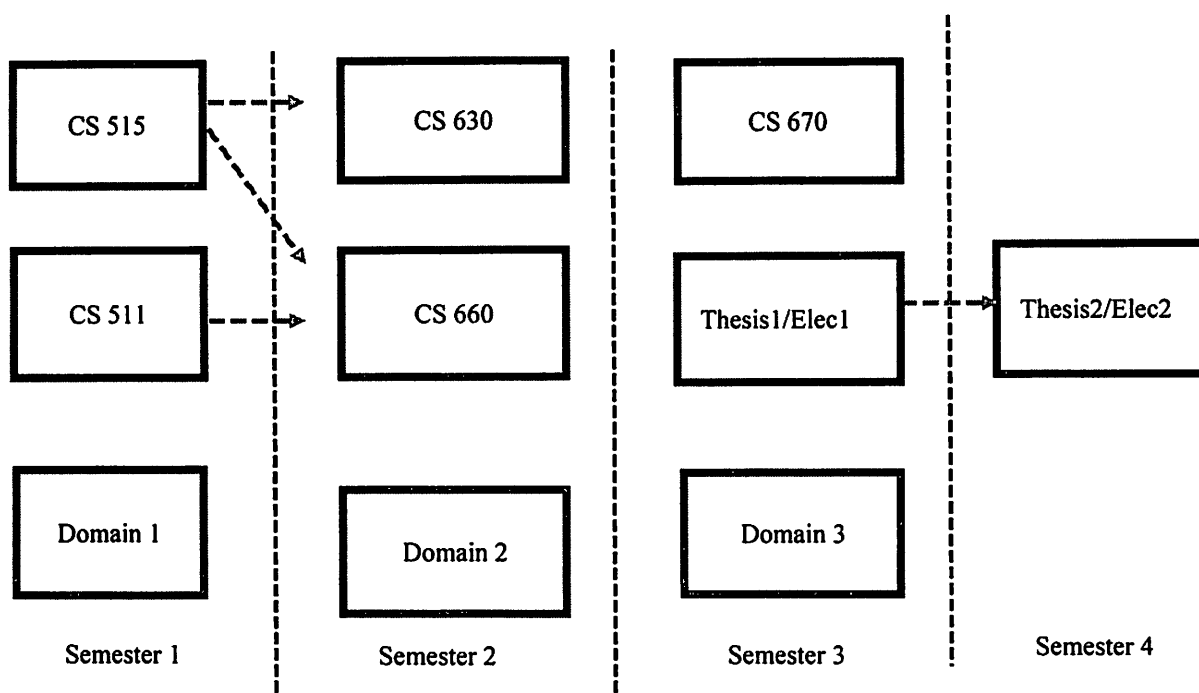
Below is a typical two-year study plan for full-time (9 credit hours a semester) students:

| Year | Term | Course                      | Hr | Pre-requisite |
|------|------|-----------------------------|----|---------------|
| 1    | FA   | CS 511 Advanced Programming | 3  | None          |
|      |      | CS 515 Data Mining          | 3  | None          |
|      |      | Domain Emphasis course 1    | 3  |               |
|      | SP   | CS 630 Machine Learning     | 3  | CS 515        |
|      |      | CS 660 Big Data Systems     | 3  | CS 511, CS515 |

|   |    |                               |   |  |
|---|----|-------------------------------|---|--|
|   |    | Domain Emphasis course 2      | 3 |  |
| 2 | FA | CS 670 Visual Analytics       | 3 |  |
|   |    | Domain Emphasis course 3      | 3 |  |
|   |    | Thesis 1 or Elective Course 1 | 3 |  |
|   | SP | Thesis 2 or Elective Course 2 | 3 |  |

*Note: All required core courses will be offered every semester. However, some elective courses may only be offered one semester a year. Students should work closely with advisors in developing a study plan.*

*Some courses may have a pre-requisite as indicated with ---->*



## 2. Program Needs and Justification

### 2.1 Existing Program

#### 2.1.1 Data Science Degree Programs in West Virginia

Shepherd University provides a B.S. in Data Analytics Comprehensive degree program. An online M.S. degree program in Business Data Analytics is offered at West Virginia University.

**Table 1: Data Science or Related Degree Programs in the State of West Virginia**

| Institution              | Degree                                 | Public | Distance from MU |
|--------------------------|--|--------|------------------|
| Shepherd University      | B.S. in Data Analytics Comprehensive   | Yes    | 353 miles        |
| West Virginia University | Online M.S. in Business Data Analytics | Yes    | 207 miles        |

### ***2.1.2 Data Science Degree Programs in the Surrounding States***

A few educational institutions within the surrounding 300 miles offers data Science related degrees or certificates as shown in table 2.

**Table 2: Data Science or Related Programs in Surrounding Area**

| <b>Institution</b>           | <b>Degree</b>  | <b>Public</b> | <b>Distance from MU</b> |
|------------------------------|--|---------------|-------------------------|
| Case Western University      | B.S. Degree in Data Science                              | No            | 278 Miles               |
| Miami University of Ohio     | Minor in Data Analytics                                  | Yes           | 188 Miles               |
| Northern Kentucky University | B.S. Degree in Data Science                              | Yes           | 144 Miles               |
| The Ohio State University    | B.S. Degree in Data Analytics                            | Yes           | 150 Miles               |
| Virginia Tech                | B.S. Degree in Computational Modeling and Data Analytics | Yes           | 188 Miles               |

At a national level, there is a growing list of undergraduate and graduate programs in data science and related areas.

## ***2.2 Program Planning & Development***

The Weisberg Division of Computer Science currently houses five programs (B.S. in Computer Science, B.S. in Computer and Information Security, M.S. in Computer Science, M.S. in Information Systems, and M.S. in Cybersecurity) and offers various data science related courses. The division has also been offering several CS courses (ex. CS 505 Computing for Bioinformatics, CS 510 Database Systems, CS 540 Digital Image Processing, CS 630 Machine Learning, CS 640 Advanced Topics in Bioinformatics) for Graduate Certificate in Bioinformatics and Information Systems courses (IS 623 Database Management, IS 665 Health Informatics Application, IS 535 Applied Healthcare Databases/Tools, IS 545 Healthcare Data Analysis & Visualization) for the Health Informatics program of the College of Health Professions (COHP).

### ***2.2.1 Clientele and Need***

Data analysts are among the most sought-after positions in America. With 163 zettabytes of data to be created by 2025 (10 times the amount of data in the digital universe in 2016), employers will

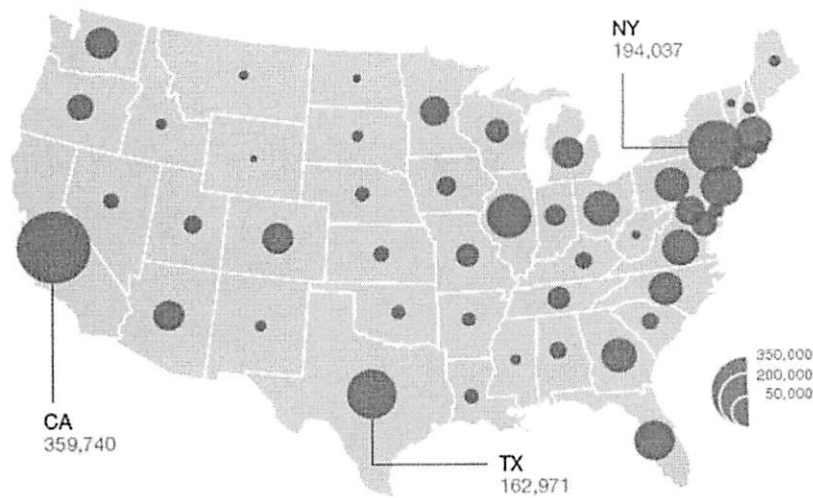
have an extensive need for data experts who can manage and analyze the vast amount of information they collect. IBM predicts that by 2020, the number of jobs for all U.S. data professionals will increase by 364,000 openings to 2,720,000 jobs. This data boom is challenging businesses in every industry to hire professionals with a master's degree in data science who are skilled at data management and governance. Nearly 40% of advanced data and business analytic positions require a master's degree or Ph.D. according to a research study performed by IBM.

- Top 5 jobs by Google Careers are related to data science.
- According to the U.S Bureau of Labor and Statistics, the average wage of the U.S data scientists in 2016 is \$130,000.
- McKinsey & Co. estimates that big data science revenue will be \$325 billion by 2020.

### **2.2.2 Employment Opportunities**

Data scientist has been named the best job in America for three years running, according to Glassdoor's 2018 Rankings, with a median base salary of \$110,000. The proposed M.S.

in Data Science degree program is very timely for West Virginia, the nation, and the world. Common data science jobs are Chief Executive Officer, Chief Data Officer, Director of IT, Human Resources Manager, Financial Manager and Marketing Manager. On October 1, 2018 a search on indeed.com for data science careers in West Virginia showed statistics for 231 different positions (<https://www.indeed.com/jobs?q=data+analyst&l=WV>) in various industries including government, health industries, IT, bank, engineering, education, etc. Figures in the USA map below shows the number of jobs in states in the US. Although the job of data science in WV is still under the growth, WV is located in the middle of very hot states of data science job market.



Source: PwC analysis based on Burning Glass Technologies data, January 2017.

### 2.2.3 Program Impact

The M.S. in Data Science will strengthen existing programs at Marshall University. Closely-related programs will greatly benefit from the addition of the M.S. in Data Science, as this new program will offer the students additional electives that can enrich their academic experience. Existing Marshall University undergraduate and graduate degree and certificate programs in Computer Science, Information System, Technology Management, Electrical and Computer Engineering, Management Information Systems, Health Informatics, and Bioinformatics will have the option of enhancing their offerings by incorporating data science courses. Students in the M.S. in Data Science may choose to get another major in any of the closely-related fields or may add a minor in one of these fields. The proposed program opens the door for graduates within non-CS undergraduate majors, and any graduates from other programs can pursue a master's degree in the M.S. in Data Science program after successful completion of the three bridge courses. As a result, the M.S. in Data Science will create exciting and productive new paths, which will eventually promote interdisciplinary education and research. The students in the M.S. in Data Science will have many opportunities to learn and implement advanced technologies in addition to participation in undergraduate and graduate research. Collaborative cutting-edge research in data science will be conducted in partnership with other universities and research institutions.

## **2.4 Cooperative Arrangements**

The Weisberg Division of Computer Science has strong partnerships with several industry partners and state government agencies. The proposed Data Science program has the strongest support of the local, state and Tri-State industries and employers. The advisory board members of the Weisberg Division of Computer Science have been very excited about this much-needed degree program and are in supportive providing suitable employment opportunities for the students and graduates of this proposed degree program. In addition, the advisory board members have committed to facilitating the pursuit of less formal relationships earlier in the students' curriculum through field experiences, internships, and co-ops beginning in their sophomore year.

## **2.5 Alternatives to Program Development**

The proposed M.S. in Data Science degree program at Marshall University will be the first established non-online M.S. in Data Science in the state of West Virginia. The needs of the stakeholders and the huge regional, national and international shortage of qualified graduates and experts in this specialized field shaped the process of identifying the program curriculum, learning objectives and learning outcomes, and deciding on the curriculum. There are no alternatives to the proposed degree program at Marshall University.

## **3. Program Implementation Projected Resource Requirements.**

The proposed program does not require additional resources and can be sustainable by leveraging already existing resources available at the Weisberg Division of Computer Science. The proposed program will provide multiple benefits at almost no cost upon its initiation.

### **3.1 Program Administration:**

The Weisberg Division of Computer Science of the College of Information Technology and Engineering will house the M.S. in Data Science degree program. The Chair of the Weisberg Division of Computer Science will supervise and manage the program with oversight by the Dean of the College of Information Technology and Engineering. The college does not project changes in the administration of the division with the addition of this new degree program.

### **3.2 Program Projections:**

Based upon the number of student inquiries and interest of the proposed degree, it is conservatively

estimated that the M.S. in Data Science program will have 20 full-time equivalent students in its first year, with an additional 20% annual growth and approximately 20% withdrawal (transferring out) from the program in the next 5 subsequent years as shown in Table 3. The anticipated program graduation rate should reach at least 28 full-time equivalent students in 5<sup>th</sup> year.

**Table 3: Student Enrollment Projection**

| Academic Year                             |                      | 2019-20   | 2020-21   | 2021-22   | 2022-23   | 2023-24   |
|---|----------------------|-----------|-----------|-----------|-----------|-----------|
| 2019-2020                                 | First Year Students  | 20        |           |           |           |           |
|   | Second Year Students | 0         |           |           |           |           |
| 2020-2021                                 | First Year Students  |           | 24        |           |           |           |
|   | Second Year Students |           | 16        |           |           |           |
| 2021-2022                                 | First Year Students  |           |           | 29        |           |           |
|   | Second Year Students |           |           | 19        |           |           |
| 2022-2023                                 | First Year Students  |           |           |           | 35        |           |
|   | Second Year Students |           |           |           | 23        |           |
| 2023-2024                                 | First Year Students  |           |           |           |           | 42        |
|   | Second Year Students |           |           |           |           | 28        |
| <b>Estimated Total Student Enrollment</b> |                      | <b>20</b> | <b>40</b> | <b>48</b> | <b>58</b> | <b>70</b> |

### 3.3 Faculty Instructional Requirements:

The College of Information Technology and Engineering has the administrative system and necessary faculty to support the proposed M.S. in Data Science degree program. The faculty in the Weisberg Division of Computer Science possess the technical expertise to support the program with excellent research and publication records.

Five required core courses for the M.S. in Data Science have been offered in the M.S. in Computer Science (MSCS) program since the start of the MSCS program as below:

**Table 4. Data Science Courses and Faculty Assignment**

| Data Science Courses        | Term  | Faculty            |
|-----------------------------|-------|--------------------|
| CS 511 Advanced Programming | FA/SP | Dr. Cong Pu        |
| CS 515 Data Mining          | FA    | Dr. Wook-Sung Yoo  |
| CS 630 Machine Learning     | SP    | Dr. Paulus Wahjudi |
| CS 660 Big Data Systems     | FA/SP | Dr. Haroon Malik   |
| CS 670 Visual Analytics     | SP    | Dr. Husnu Narman   |

If the program is successful in recruiting a large number of students in the future, additional faculty and adjuncts will be needed.

### **3.4 Library Resources and Instructional Materials:**

Marshall University Libraries have the majority of the resources needed to support the proposed degree program. The Computer Science programs in CITE share the library resources; however, a few additional library collections may need to be added over time to support the Data Science program.

### **3.5 Support Service Requirements:**

No special support will be needed unless the program acquires a critical mass (probably after 3 years from the starting of the program).

### **3.6 Facilities Requirements:**

Marshall University Computing Services currently supports all computing needs of the users on campus. The College of Information Technology and Engineering has fully equipped state-of-the-art computer labs and classrooms within the Arthur Weisberg Family Applied Engineering Complex (WAEC) to support the various programs of the Weisberg Division of Computer Science. The Weisberg Division of Computer Science houses a Cybersecurity lab, Computer Science Project lab, and Computer Graphics lab. These spaces are shared amongst the existing programs in the division and will support the addition of other programs in the division, including the proposed M.S. in Data Science degree program. The Data Science program will have access to the available computer workstations and Wi-Fi in the WAEC. As the program continues to grow, a Data Science specialized lab/classroom will be considered through the conversion of one of the existing spaces of the division.

### **3.7. Operating Resource Requirements:**

Since the Data Science program will be a part of the Weisberg Division of Computer Science, it will share the operating resources with the other programs offered by the division. Table 5 shows the estimated revenue generated by the proposed program during its first five years, as shown based on the number of students in the program summarized in Table 3.

**Table 5. Revenue Generated by the Proposed Program in 5 years**

|                            | Tuition<br>& Fees | 1st Year  |                  | 2nd Year  |                  | 3rd Year  |                  | 4th Year  |                  | 5th Year  |                  |
|----------------------------|-------------------|-----------|------------------|-----------|------------------|-----------|------------------|-----------|------------------|-----------|------------------|
|                            | Yearly            | FTE       | Revenue          | FTE       | Revenue          | FTE       | Revenue          | FTE       | Revenue          | FTE       | Revenue          |
| Resident<br>of WV<br>(50%) | \$9,188           | 10        | \$91,880         | 20        | \$183,760        | 24        | \$220,512        | 29        | \$266,452        | 35        | \$321,580        |
| Metro<br>resident<br>(20%) | \$16,040          | 6         | \$96,240         | 12        | \$192,480        | 14        | \$224,560        | 17        | \$272,680        | 21        | \$336,840        |
| Out of<br>State<br>(30%)   | \$21,222          | 4         | \$84,888         | 8         | \$169,776        | 10        | \$212,220        | 12        | \$254,664        | 14        | \$297,108        |
| <b>Total</b>               |                   | <b>20</b> | <b>\$273,008</b> | <b>40</b> | <b>\$546,016</b> | <b>48</b> | <b>\$657,292</b> | <b>58</b> | <b>\$793,796</b> | <b>70</b> | <b>\$955,528</b> |



**Brad D. Smith**  
**Schools of Business**

## **Memorandum**

**TO:** Dr. Lori Howard  
Chair, Marshall University Graduate Council

**CC:** Dr. Jaime Taylor  
Provost & Senior Vice President for Academic Affairs

Dr. Wael Zatar  
Dean, College of Information Technology & Engineering

Dr. Bonita Lawrence  
Professor of Mathematics  
College of Science Representative to the Graduate Council

**FROM:** Dr. Avi Mukherjee *A. Mukherjee*  
Dean, Lewis College of Business  
Brad D. Smith Schools of Business

**DATE:** April 25, 2019

**RE:** College of Science Endorsement for the MS Program in Data Analytics

We in the Brad D. Smith Schools of Business enthusiastically support the College of Information Technology and Engineering's revised Intent to Plan for the Master of Science degree in Data Sciences (MSDS). The rapid rise of big data collection and the concomitant need for developing effective tools to analyze such big data has certainly created a huge workforce demand for employees with advanced data computing, programming and data management skills. I am confident that Marshall's MSDS students will address this demand-supply gap in the marketplace. While data analysis and inference-building belong to the context being studied, the quality of data analysis is constrained by the capabilities of current data science tools and software. Graduating students from the MSDS program with the ability to write software and develop tools to be used in the analysis of data is exciting, and we applaud CITE's initiative in this area. We are in the process of developing a Masters in Supply Chain and Business Analytics, where Data Science courses could add value as optional electives.



College of Science  
Office of the Dean

## Memorandum

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Chair, Marshall University Graduate Council

**CC:** Dr. Jaime Taylor  
Provost & Senior Vice President for Academic Affairs

Dr. Wael Zatar  
Dean, College of Information Technology & Engineering

Dr. Bonita Lawrence  
Professor of Mathematics  
College of Science Representative to the Graduate Council

**From:** Dr. Charles Somerville   
Dean, College of Science

**Date:** 14 April 2019

**Re:** College of Science Endorsement for the MS Program in Data Analytics

I am writing, on behalf of the College of Science, to endorse the revised Intent to Plan for the Master of Science degree in Data Analytics in the College of Information Technology and Engineering. This program will provide important opportunities for students at Marshall University, and I anticipate that it will form the basis for future, cross-college, teaching and research collaborations in the management and analysis of large data sets.

**WE ARE... MARSHALL.**

One John Marshall Drive • Huntington, West Virginia 25755-2500 • Tel 304/696-2372 • Fax 304/696-3243  
A State University of West Virginia • An Affirmative Action/Equal Opportunity Employer



**Brad D. Smith**  
**Schools of Business**

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Chair, Marshall University Graduate Council

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## **DATA ANALYTICS, M.S.**

### **Program Description**

The Master of Science in Data Analytics provides students with technical expertise in computational modeling, data collection and integration, data storage and retrieval, data processing, modeling and analytics, and visualization. Students graduating from this program will be able to handle large data sets (big data), write software to work with these large data sets, and apply the statistical skills to model and analyze sub-data sets of interest. The job opportunities in this field are rapidly growing.

### **Admission Requirements**

Minimum requirements for admission is a four-year bachelor's degree with GPA of 2.75 or higher out of 4.0 in Computer Science, or any related areas listed below.

- Data Science/Data Analytics
- Information Systems/Information Technology
- Computer Information Technology
- Mathematics/Statistics
- Computer Engineering
- Electrical Engineering
- Software Engineering

Whether a student meets the above requirements will be determined by the division chair or designee based on the information provided in the admission application and transcripts. Applicants with a bachelor's degree in a major not listed above may be admitted to the program with a provision of successful completion of the following three bridge courses with a grade of B or above in the first two semesters of the program:

- Data Structure and Algorithms (CS 210)
- Data Engineering (CS 410)
- Applied Probability and Statistics (STA 345)

Foreign nationals must provide proof of English proficiency with a minimum score of 6.5 in IELTS or 80 on TOEFL IBT (or 550 paper based) and must have met all other admission criteria prior to registering for the first semester of courses. Applicants should follow the admissions process as stated in the graduate catalog or on the graduate admissions web site.

### **Degree Requirements**

The MSDA degree requires 30 credit hours (CR) of graduate work. The 30 CR is comprised of the following components:

- Required Core courses (15 CR)  
 CS 511 Advanced Programming  
 CS 515 Data Mining  
 CS 630 Machine Learning  
 CS 660 Big Data Systems  
 CS 670 Visual Analytics
- Domain Emphasis (9 CR)  
 Domain Emphasis gives students a grounded understanding of a particular domain and a student should take 9 credits of courses in her/his domain area.
  - **Mathematic Modeling**  
 This domain emphasis gives students the opportunity to explore mathematical techniques essential to mathematical modeling.
  - **Computing**  
 This domain emphasis tackles computing areas including high performance computing, cloud computing, IoT, Artificial Intelligence, Cybersecurity, bioinformatics, etc.
  - **Information Systems**  
 This domain emphasizes the use of information technology and their expected utility of their information systems.
  - **Healthcare**  
 This domain emphasis focuses on analysis of data collected from healthcare areas, including claims and cost data, pharmaceutical and R&D data, clinical data, and patient behavior and sentiment data.

A Domain Emphasis is comprised of three courses chosen from the list below:

| Mathematical Modeling | Computing | Information Systems | Healthcare |
|-----------------------|-----------|---------------------|------------|
| STA 513               | CS 504    | IS 545              | IS 535     |
| STA 520               | CS 539    | IS 623              | IS 545     |
| STA 525               | CS 540    | IS 624              | HP 605     |
| STA 564               | CS 550    | IS 645              | HP 615     |
| STA 570               | CS 559    | IS 665              | HP 630     |
| STA 660               | CS 620    |                     | HP 650     |
| STA 661               | CS 625    |                     |            |
| STA 662               | CS 630    |                     |            |
| STA 663               | CS 645    |                     |            |

- Electives (6 CR) or Thesis Option (6 CR)  
 Student may choose a thesis option or take any two additional courses from the list of courses in the Domain Emphasis. The thesis option (Thesis I and II) offers students an opportunity for serious investigation into an area of interest. Students must summarize their thesis work in the form of a formal written document and deliver an oral presentation. Thesis work is typically conducted over two semesters. The thesis option can be taken after

the completion of 12 credit hours. The 6 CR of the thesis option cannot be combined in a semester. In the event that a student in the thesis option wishes to switch to the other option, the course taken in the thesis option will not count toward fulfilling the graduation requirement.

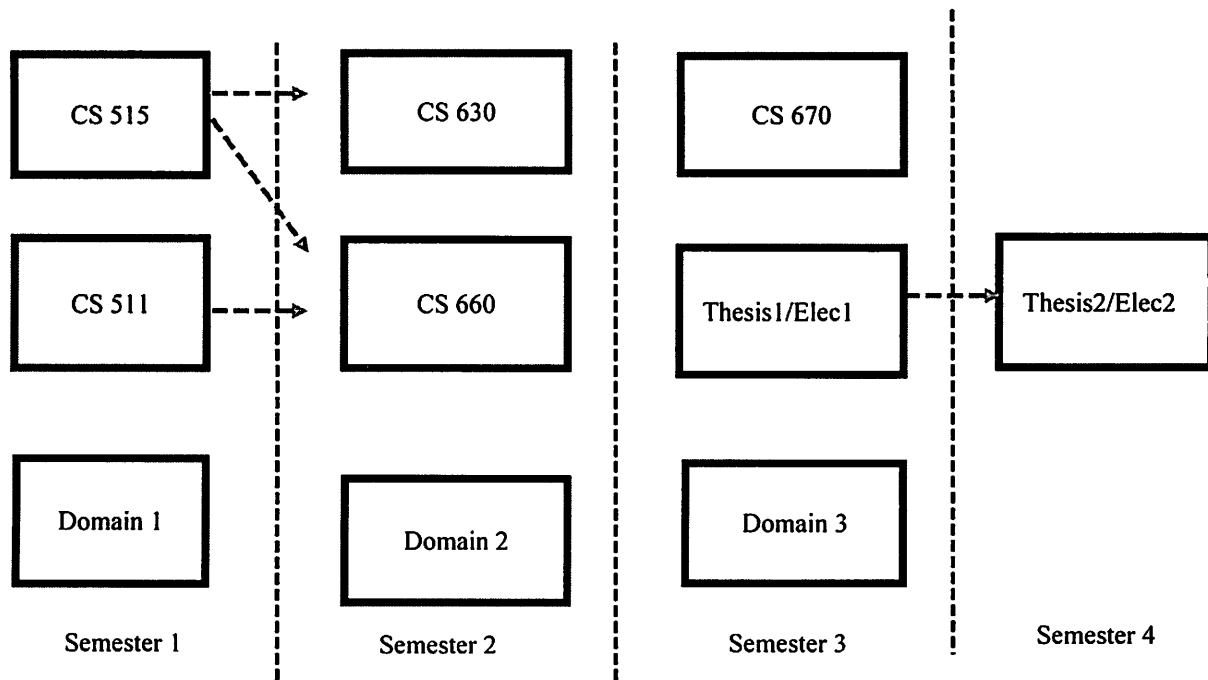
### Plan of Study

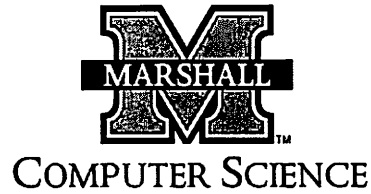
Below is a typical two-year study plan for full-time (9 credit hours a semester) students:

| Year | Term | Course                        | Hr | Pre-requisite |
|------|------|-------------------------------|----|---------------|
| 1    | FA   | CS 511 Advanced Programming   | 3  | None          |
|      |      | CS 515 Data Mining            | 3  | None          |
|      |      | Domain Emphasis course 1      | 3  |               |
|      | SP   | CS 630 Machine Learning       | 3  | CS 515        |
|      |      | CS 660 Big Data Systems       | 3  | CS 511, CS515 |
|      |      | Domain Emphasis course 2      | 3  |               |
| 2    | FA   | CS 670 Visual Analytics       | 3  |               |
|      |      | Domain Emphasis course 3      | 3  |               |
|      |      | Thesis 1 or Elective Course 1 | 3  |               |
|      | SP   | Thesis 2 or Elective Course 2 | 3  |               |

*Note: All required core courses will be offered every semester. However, some elective courses may only be offered one semester a year. Students should work closely with advisors in developing a study plan.*

*Some courses may have a pre-requisite as indicated with ---->*





# **MARSHALL UNIVERSITY**

**College of Information Technology and Engineering  
Weisberg Division of Computer Science**

March 18, 2019

**Master of Science in Data Analytics**

**Effective Date:** Spring 2020

**Contact Person:**

Dr. Wael Zatar, Dean

College of Information Technology and Engineering  
and

Dr. Wook Sung Yoo, Chair

Weisberg Division of Computer Science

### **Summary Statement**

The Weisberg Division of Computer Science in the College of Information Technology and Engineering (CITE) proposes the establishment of the Master of Science (M.S.) in Data Analytics degree program at Marshall University.

Data analytics is the process of examining data sets in order to draw conclusions about the information they contain, increasingly with the aid of specialized systems and software. Data analysts extract meaningful insight from various data sources using techniques such as data mining, machine learning, and other data sources to forecast the future. This information can then be used to optimize the processes to increase the overall efficiency of a business or system.

The proposed M.S. in Data Analytics provides students with technical expertise in computational modeling, data collection and integration, data storage and retrieval, data processing, modeling and analytics, and visualization. Data analysts are among the most sought-after positions in America. Although data analyst jobs are often multidisciplinary, in industry today, there is a need to hire data analysts who are skilled at data management and governance. Nearly 40% of advanced data and business analyst positions require a master's degree or Ph.D. The Weisberg Division of Computer Science in the College of Information Technology and Engineering currently offers the required core data analytics courses, and various domain emphases will be provided using existing courses in different programs at Marshall University. We believe the proposed degree program will not only create exciting and productive new pathways for research and development, but will increase educational opportunities and inter-departmental collaborations across the campus.

The proposed program does not anticipate any need of additional faculty lines, major funding, or other resources to establish the program. The program will become viable from its first year and will grow each year. The College of Information Technology and Engineering aims at enrolling 70 students and graduating 28 students with a M.S. in Data Analytics in the fifth year of the program. The projected net revenue in the fifth year is estimated at \$955,528. The program will generate close to \$3.2 million in new revenue during its first five years.

## **1. Program Description**

Data analysis is a process of inspecting, cleansing, transforming, and modeling data with the goal of discovering useful information, informing conclusions, and supporting decision-making with the aid of specialized systems and software. Data analysts extract meaningful insight from various data sources using techniques such as data mining, machine learning, and many other data sources to forecast the future. This information can then be used to optimize the processes to increase the overall efficiency of a business, reduce business costs by identifying more efficient ways of doing business, and make more informed business decisions, leading to better products and services.

The proposed M.S. in Data Analytics degree program provides students with technical expertise in computational modeling, data collection and integration, data storage and retrieval, data processing, modeling and analytics, and visualization. Students graduating with a M.S. degree in Data Analytics will have the ability to handle large data sets, write software to work with large data sets, and apply statistical skills to model and analyze sub-data sets of interest. The Data Analytics degree program offers a holistic approach to data analytics education and takes advantage of the strong related programs in the Weisberg Division of Computer Science (Computer Science, Information Systems, and Cybersecurity), as well as other programs at Marshall University. The Data Analytics degree program prepares graduates to succeed in professional careers in a rapidly growing data analytics field, thus leading to technological changes in the industry and research fields both locally and nationally. The following sections provide additional details of the proposed M.S. in the Data Analytics degree program.

### ***1.1 Program Mission***

Marshall University provides innovative undergraduate and graduate education programs that contribute to the development of the individual and their role in society. An important goal of the M.S. in Data Analytics (MSDA) is to equip students with a strong foundation in the theory and practice of data analytics. This foundation builds on Marshall's mission, where it is stated "to actively facilitate learning through the preservation, discovery, synthesis, and dissemination of knowledge". The proposed program will cover the fundamental concepts of data analytics and provide opportunities to apply the technical knowledge and skills to produce viable solutions for industry and research fields. Graduates from the M.S. in Data Analytics program will achieve competency in the following four Program Educational Objectives (PEO): *After graduation, students will be able to:*

*PEO 1: be employed in Data Analytics or related areas*

*PEO 2: be engaged in life-long learning and professional development through self-study, continuing education or graduate and professional studies*

*PEO 3: become effective communicators, collaborators and innovators*

*PEO 4: practice professional ethics with social responsibility addressing social, technical and business challenges*

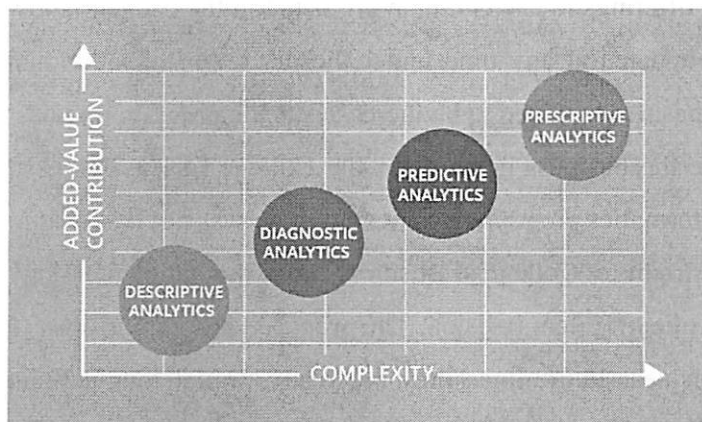
The M.S. in Data Analytics degree program will strive to ensure that its graduates are placed in data analytics jobs or closely related fields within the professional practice. The graduates are trained to contribute to the evolving technology at their workplace, identify opportunities for breakthrough research, and assume reasonable responsibilities in the decision-making process.

The M.S. in Data Analytics program aligns well with the mission of the College of Information Technology and Engineering (CITE):

- CITE will be a recognized leader in practice-oriented teaching and applied research.
- CITE is committed to serve the lifelong educational needs of students, new graduates, working professionals, and employees.
- CITE builds on combined traditions of student-focused education, entrepreneurship, and funded research and service emphasis.
- CITE provides education when and where needed, incorporating technology-enhanced methods, by full-time, dedicated faculty complemented by expert adjunct faculty from industry and government.

### ***1.2 Program Features***

With exponentially increasing amounts of data accumulating in real-time, every business and entrepreneur in today's society needs data analytics to have the ability to turn data into a competitive advantage to augment their competitive position relative to others in the field. Data analytics is broken down into four basic types:



- *Descriptive analytics* describes what has happened over a period of time.
- *Diagnostic analytics* focuses more on why something happened.
- *Predictive analytics* moves to what is likely going to happen in the future.
- *Prescriptive analytics* moves into the territory of suggesting actions.

Data analyst skills and competencies have different forms of analytics that will add value to a business. However, the elite data analyst must master five essential skills: programming, quantitative skills, technologies, domain knowledge, and critical thinking. A data analyst should know how to code and have mathematical knowledge to include probability and statistics in order to conduct numerical and statistical analysis. They should also be familiar with a wide range of technologies to include analytical tools, platforms, hardware, and software. Analysis of data would be useless if it cannot be applied to a business setting. All data analysts need to have a strong understanding of the business and domain knowledge they operate in, which enables data analysts to have insight and communicate effectively with different stakeholders. Data analysts need to be critical thinkers with creativity, to be able to apply objective analysis of facts on a given topic or problem before formulating opinions or rendering judgments.

The curriculum of the proposed M.S. in Data Analytics program provides courses to build the skills necessary to become an elite data analyst to analyze, discover, and innovate in a data-rich world. A total of 30 credit hours are required for graduation:

(1) **15 credits core courses** provide opportunities for students to build fundamental skills and knowledge of Data Analytics such as programming skills, quantitative skills, technologies, and critical thinking.

(2) **9 credits domain emphasis** will give students a grounded understanding of a particular domain. Any type of information can be subjected to data analytics techniques to get insight including the areas of healthcare, business, science, retail, engineering, humanity, and education. At this time, the proposed program includes four domain emphases which have been discussed and approved by the programs involved: statistical modeling (mathematics department), computing (computer science program), Information systems (information systems program), and healthcare (health

informatics program). The initial course offerings in each domain are listed in the catalog below but domain knowledge courses can be updated at any time under the discretion of individual department. The number of domain emphasis is expected to be increased as the program matures. Future domains to be included could be the business domain for the College of Business and computational biology domain for Bioinformatics program. Business domain was not included in this proposal due to the accreditation constraints of College of Business and computational biology domain is currently under the discussion of curriculum revision. The proposed program is open to those and other domains to be added in near future once they are ready. Initial four domain emphases and their course offerings are listed below:

- **Statistical Modeling**

This domain emphasis gives students the opportunity to explore statistical techniques essential to statistical modeling.

- **Computing**

This domain emphasis tackles computing areas including high performance computing, cloud computing, IoT, Artificial Intelligence, Cybersecurity, bioinformatics, etc.

- **Information Systems**

This domain emphasizes the use of information technology and the expected utility of information systems.

- **Healthcare**

This domain emphasis focuses on analysis of data collected from healthcare areas, including claims and cost data, pharmaceutical and R&D data, clinical data, and patient behavior and sentiment data.

**(3) 6 credits of electives or thesis option** will provide opportunities for students to build research opportunities or areas of additional expertise.

The M.S. in Data Analytics will promote collaboration with industries, government agencies, and educational institutions by:

- developing partnerships and alliances with external corporate and industry organizations for pursuing joint educational and research opportunities in data analytics
- pursuing research and grant opportunities in data analytics related areas
- coordinating availability of data analytics coursework to assist not only West Virginia, but the rest of the nation to meet the demand for data analytics professionals

- providing outreach opportunities to interested parties and organizations

We expect the M.S. in Data Analytics will make Marshall University a recognized leader in education, research and practice in data analytics fields. The program will attract traditional and non-traditional students from West Virginia, the Tri-State region and the surrounding states. The delivery of the M.S. in Data Analytics will be following classical instructional mechanisms at this time; however, the program can include online/hybrid courses and may be extended to an online degree program. The catalog description of the proposed M.S. in Data Analytics is as follows.

## **DATA ANALYTICS, M.S.**

### **Program Description**

The Master of Science in Data Analytics provides students with technical expertise in computational modeling, data collection and integration, data storage and retrieval, data processing, modeling and analytics, and visualization. Students graduating from this program will be able to handle large data sets (big data), write software to work with these large data sets, and apply the statistical skills to model and analyze sub-data sets of interest. The job opportunities in this field are rapidly growing.

### **Admission Requirements**

Minimum requirements for admission is a four-year bachelor's degree with GPA of 2.75 or higher out of 4.0 in Computer Science, or any related areas listed below.

- Data Science/Data Analytics
- Information Systems/Information Technology
- Computer Information Technology
- Mathematics/Statistics
- Computer Engineering
- Electrical Engineering
- Software Engineering

Whether a student meets the above requirements will be determined by the division chair or designee based on the information provided in the admission application and transcripts. Applicants with a bachelor's degree in a major not listed above may be admitted to the program with a provision of successful completion of the following three bridge courses with a grade of B or above in the first two semesters of the program:

- Data Structure and Algorithms (CS 210)
- Data Engineering (CS 410)
- Applied Probability and Statistics (STA 345)

Foreign nationals must provide proof of English proficiency with a minimum score of 6.5 in IELTS or 80 on TOEFL IBT (or 550 paper based) and must have met all other admission criteria prior to registering for the first semester of courses. Applicants should follow the admissions process as stated in the graduate catalog or on the graduate admissions web site.

### **Degree Requirements**

The MSDA degree requires 30 credit hours (CR) of graduate work. The 30 CR is comprised of the following components:

- *Required Core courses (15 CR)*

CS 511 Advanced Programming

CS 515 Data Mining

CS 630 Machine Learning

CS 660 Big Data Systems

CS 670 Visual Analytics

- *Domain Emphasis (9 CR)*

Domain Emphasis gives students a grounded understanding of a particular domain and a student should take 9 credits of courses in her/his domain area.

- Statistical Modeling

This domain emphasis gives students the opportunity to explore statistical techniques essential to statistical modeling.

- Computing

This domain emphasis tackles computing areas including high performance computing, cloud computing, IoT, Artificial Intelligence, Cybersecurity, bioinformatics, etc.

- Information Systems

This domain emphasizes the use of information technology and their expected utility of their information systems.

- Healthcare

This domain emphasis focuses on analysis of data collected from healthcare areas, including claims and cost data, pharmaceutical and R&D data, clinical data, and patient behavior and sentiment data.

A Domain Emphasis is comprised of three courses chosen from the list below:

| Statistical Modeling | Computing | Information Systems | Healthcare |
|----------------------|-----------|---------------------|------------|
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| STA 663              | CS 645    |                     |            |

- Electives (6 CR) or Thesis Option (6 CR)

Student may choose a thesis option or take any two additional courses from the list of courses in the Domain Emphasis. The thesis option (Thesis I and II) offers students an opportunity for serious investigation into an area of interest. Students must summarize their thesis work in the form of a formal written document and deliver an oral presentation. Thesis work is typically conducted over two semesters. The thesis option can be taken after the completion of 12 credit hours. The 6 CR of the thesis option cannot be combined in a semester. In the event that a student in the thesis option wishes to switch to the other option, the course taken in the thesis option will not count toward fulfilling the graduation requirement.

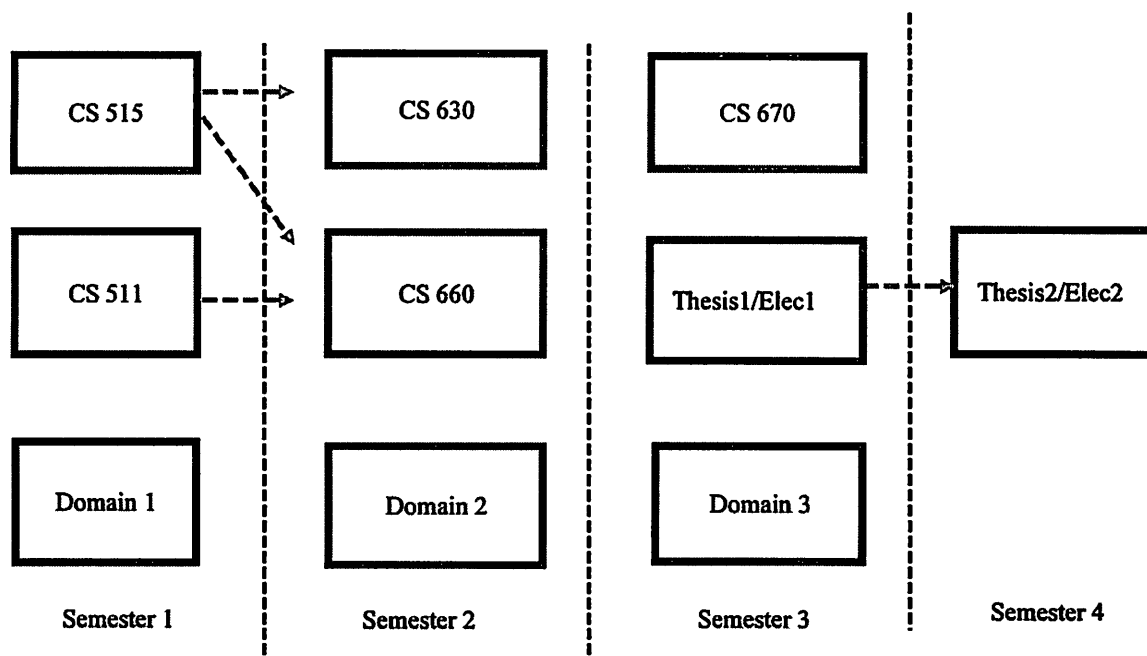
### Plan of Study

Below is a typical two-year study plan for full-time (9 credit hours a semester) students:

| Year | Term | Course                        | Hr | Pre-requisite |
|------|------|-------------------------------|----|---------------|
| 1    | FA   | CS 511 Advanced Programming   | 3  | None          |
|      |      | CS 515 Data Mining            | 3  | None          |
|      |      | Domain Emphasis course 1      | 3  |               |
|      | SP   | CS 630 Machine Learning       | 3  | CS 515        |
|      |      | CS 660 Big Data Systems       | 3  | CS 511, CS515 |
|      |      | Domain Emphasis course 2      | 3  |               |
| 2    | FA   | CS 670 Visual Analytics       | 3  |               |
|      |      | Domain Emphasis course 3      | 3  |               |
|      |      | Thesis 1 or Elective Course 1 | 3  |               |
|      | SP   | Thesis 2 or Elective Course 2 | 3  |               |

*Note: All required core courses will be offered every semester. However, some elective courses may only be offered one semester a year. Students should work closely with advisors in developing a study plan.*

*Some courses may have a pre-requisite as indicated with ---->*



## 2. Program Needs and Justification

### 2.1 Existing Program

#### 2.1.1 Data Analytics Degree Programs in West Virginia

Shepherd University provides a B.S. in Data Analytics Comprehensive degree program. An online M.S. degree program in Business Data Analytics is offered at West Virginia University.

**Table 1: Data Analytics or Related Degree Programs in the State of West Virginia**

| Institution              | Degree                                 | Public | Distance from MU |
|--------------------------|--|--------|------------------|
| Shepherd University      | B.S. in Data Analytics Comprehensive   | Yes    | 353 miles        |
| West Virginia University | Online M.S. in Business Data Analytics | Yes    | 207 miles        |

#### 2.1.2 Data Analytics Degree Programs in the Surrounding States

A few educational institutions within the surrounding 300 miles offers data analytics related degrees or certificates as shown in table 2.

**Table 2: Data Analytics or Related Programs in Surrounding Area**

| <b>Institution</b>           | <b>Degree</b>  | <b>Public</b> | <b>Distance from MU</b> |
|------------------------------|--|---------------|-------------------------|
| Case Western University      | B.S. Degree in Data Science                              | No            | 278 Miles               |
| Miami University of Ohio     | Minor in Data Analytics                                  | Yes           | 188 Miles               |
| Northern Kentucky University | B.S. Degree in Data Science                              | Yes           | 144 Miles               |
| The Ohio State University    | B.S. Degree in Data Analytics                            | Yes           | 150 Miles               |
| Virginia Tech                | B.S. Degree in Computational Modeling and Data Analytics | Yes           | 188 Miles               |

At a national level, there is a growing list of undergraduate and graduate programs in data analytics and related areas.

## ***2.2 Program Planning & Development***

The Weisberg Division of Computer Science currently houses five programs (B.S. in Computer Science, B.S. in Computer and Information Security, M.S. in Computer Science, M.S. in Information Systems, and M.S. in Cybersecurity) and offers various data analytics related courses. The division has also been offering several CS courses (ex. CS 505 Computing for Bioinformatics, CS 510 Database Systems, CS 540 Digital Image Processing, CS 630 Machine Learning, CS 640 Advanced Topics in Bioinformatics) for Graduate Certificate in Bioinformatics and Information Systems courses (IS 623 Database Management, IS 665 Health Informatics Application, IS 535 Applied Healthcare Databases/Tools, IS 545 Healthcare Data Analysis & Visualization) for the Health Informatics program of the College of Health Professions (COHP).

### **2.2.1 Clientele and Need**

Data analysts are among the most sought-after positions in America. With 163 zettabytes of data to be created by 2025 (10 times the amount of data in the digital universe in 2016), employers will have an extensive need for data experts who can manage and analyze the vast amount of information they collect. IBM predicts that by 2020, the number of jobs for all U.S. data

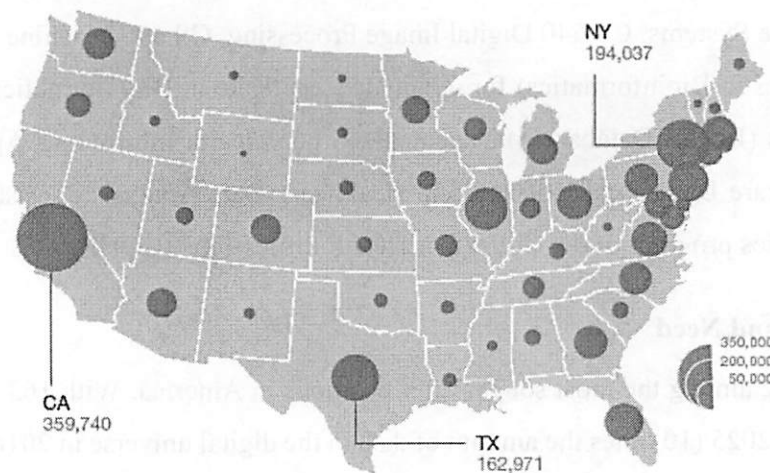
professionals will increase by 364,000 openings to 2,720,000 jobs. This data boom is challenging businesses in every industry to hire professionals with a master's degree in data analytics who are skilled at data management and governance. Nearly 40% of advanced data and business analytic positions require a master's degree or Ph.D. according to a research study performed by IBM.

- Top 5 jobs by Google Careers are related to data analytics.
- According to the U.S Bureau of Labor and Statistics, the average wage of the U.S data scientists in 2016 is \$130,000.
- McKinsey & Co. estimates that big data analytics revenue will be \$325 billion by 2020.

### 2.2.2 Employment Opportunities

Data scientist has been named the best job in America for three years running, according to Glassdoor's 2018 Rankings, with a median base salary of \$110,000. The proposed M.S.

in Data Analytics degree program is very timely for West Virginia, the nation, and the world. Common data analytics jobs are Chief Executive Officer, Chief Data Officer, Director of IT, Human Resources Manager, Financial Manager and Marketing Manager. On October 1, 2018 a search on indeed.com for data analytics careers in West Virginia showed statistics for 231 different positions (<https://www.indeed.com/jobs?q=data+analyst&l=WV>) in various industries including government, health industries, IT, bank, engineering, education, etc. Figures in the USA map below shows the number of jobs in states in the US. Although the job of data analysis in WV is still under the growth, WV is located in the middle of very hot states of data analytics job market.



Source: PwC analysis based on Burning Glass Technologies data, January 2017.

### **2.2.3 Program Impact**

The M.S. in Data Analytics will strengthen existing programs at Marshall University. Closely-related programs will greatly benefit from the addition of the M.S. in Data Analytics, as this new program will offer the students additional electives that can enrich their academic experience. Existing Marshall University undergraduate and graduate degree and certificate programs in Computer Science, Information System, Technology Management, Electrical and Computer Engineering, Management Information Systems, Health Informatics, and Bioinformatics will have the option of enhancing their offerings by incorporating data analytics courses. Students in the M.S. in Data Analytics may choose to get another major in any of the closely-related fields or may add a minor in one of these fields. The proposed program opens the door for graduates within non-CS undergraduate majors, and any graduates from other programs can pursue a master's degree in the M.S. in Data Analytics program after successful completion of the three bridge courses. As a result, the M.S. in Data Analytics will create exciting and productive new paths, which will eventually promote interdisciplinary education and research. The students in the M.S. in Data Analytics will have many opportunities to learn and implement advanced technologies in addition to participation in undergraduate and graduate research. Collaborative cutting-edge research in data analytics will be conducted in partnership with other universities and research institutions.

### **2.4 Cooperative Arrangements**

The Weisberg Division of Computer Science has strong partnerships with several industry partners and state government agencies. The proposed Data Analytics program has the strongest support of the local, state and Tri-State industries and employers. The advisory board members of the Weisberg Division of Computer Science have been very excited about this much-needed degree program and are in supportive providing suitable employment opportunities for the students and graduates of this proposed degree program. In addition, the advisory board members have committed to facilitating the pursuit of less formal relationships earlier in the students' curriculum through field experiences, internships, and co-ops beginning in their sophomore year.

### **2.5 Alternatives to Program Development**

The proposed M.S. in Data Analytics degree program at Marshall University will be the first established non-online M.S. in Data Analytics in the state of West Virginia. The needs of the

stakeholders and the huge regional, national and international shortage of qualified graduates and experts in this specialized field shaped the process of identifying the program curriculum, learning objectives and learning outcomes, and deciding on the curriculum. There are no alternatives to the proposed degree program at Marshall University.

### **3. Program Implementation Projected Resource Requirements.**

The proposed program does not require additional resources and can be sustainable by leveraging already existing resources available at the Weisberg Division of Computer Science. The proposed program will provide multiple benefits at almost no cost upon its initiation.

#### **3.1 Program Administration:**

The Weisberg Division of Computer Science of the College of Information Technology and Engineering will house the M.S. in Data Analytics degree program. The Chair of the Weisberg Division of Computer Science will supervise and manage the program with oversight by the Dean of the College of Information Technology and Engineering. The college does not project changes in the administration of the division with the addition of this new degree program.

#### **3.2 Program Projections:**

Based upon the number of student inquiries and interest of the proposed degree, it is conservatively estimated that the M.S. in Data Analytics program will have 20 full-time equivalent students in its first year, with an additional 20% annual growth and approximately 20% withdrawal (transferring out) from the program in the next 5 subsequent years as shown in Table 3. The anticipated program graduation rate should reach at least 28 full-time equivalent students in 5<sup>th</sup> year.

**Table 3: Student Enrollment Projection**

| <b>Academic Year</b>                      |                      | <b>2019-20</b> | <b>2020-21</b> | <b>2021-22</b> | <b>2022-23</b> | <b>2023-24</b> |
|---|----------------------|----------------|----------------|----------------|----------------|----------------|
| <b>2019-2020</b>                          | First Year Students  | 20             |                |                |                |                |
|   | Second Year Students | 0              |                |                |                |                |
| <b>2020-2021</b>                          | First Year Students  |                | 24             |                |                |                |
|   | Second Year Students |                | 16             |                |                |                |
| <b>2021-2022</b>                          | First Year Students  |                |                | 29             |                |                |
|   | Second Year Students |                |                | 19             |                |                |
| <b>2022-2023</b>                          | First Year Students  |                |                |                | 35             |                |
|   | Second Year Students |                |                |                | 23             |                |
| <b>2023-2024</b>                          | First Year Students  |                |                |                |                | 42             |
|   | Second Year Students |                |                |                |                | 28             |
| <b>Estimated Total Student Enrollment</b> |                      | <b>20</b>      | <b>40</b>      | <b>48</b>      | <b>58</b>      | <b>70</b>      |

### **3.3 Faculty Instructional Requirements:**

The College of Information Technology and Engineering has the administrative system and necessary faculty to support the proposed M.S. in Data Analytics degree program. The faculty in the Weisberg Division of Computer Science possess the technical expertise to support the program with excellent research and publication records.

Five required core courses for the M.S. in Data Analytics have been offered in the M.S. in Computer Science (MSCS) program since the start of the MSCS program as below:

**Table 4. New Data Analytics Courses and Faculty Assignment**

| <b>New Data Analytics Courses</b> | <b>Term</b> | <b>Faculty</b>     |
|-----------------------------------|-------------|--------------------|
| CS 511 Advanced Programming       | FA/SP       | Dr. Cong Pu        |
| CS 515 Data Mining                | FA          | Dr. Wook-Sung Yoo  |
| CS 630 Machine Learning           | SP          | Dr. Paulus Wahjudi |
| CS 660 Big Data Systems           | FA/SP       | Dr. Haroon Malik   |
| CS 670 Visual Analytics           | SP          | Dr. Husnu Narman   |

If the program is successful in recruiting a large number of students in the future, additional faculty and adjuncts will be needed.

### **3.4 Library Resources and Instructional Materials:**

Marshall University Libraries have the majority of the resources needed to support the proposed degree program. The Computer Science programs in CITE share the library resources; however, a few additional library collections may need to be added over time to support the Data Analytics program.

### **3.5 Support Service Requirements:**

No special support will be needed unless the program acquires a critical mass (probably after 3 years from the starting of the program).

### **3.6 Facilities Requirements:**

Marshall University Computing Services currently supports all computing needs of the users on campus. The College of Information Technology and Engineering has fully equipped state-of-the-art computer labs and classrooms within the Arthur Weisberg Family Applied Engineering Complex (WAEC) to support the various programs of the Weisberg Division of Computer Science. The Weisberg Division of Computer Science houses a Cybersecurity lab, Computer Science

Project lab, and Computer Graphics lab. These spaces are shared amongst the existing programs in the division and will support the addition of other programs in the division, including the proposed M.S. in Data Analytics degree program. The Data Analytics program will have access to the available computer workstations and Wi-Fi in the WAEC. As the program continues to grow, a Data Analytics specialized lab/classroom will be considered through the conversion of one of the existing spaces of the division.

### **3.7. Operating Resource Requirements:**

Since the Data Analytics program will be a part of the Weisberg Division of Computer Science, it will share the operating resources with the other programs offered by the division. Table 5 shows the estimated revenue generated by the proposed program during its first five years, as shown based on the number of students in the program summarized in Table 3.

**Table 5. Revenue Generated by the Proposed Program in 5 years**

|                            | Tuition<br>& Fees | 1st Year  |                  | 2nd Year  |                  | 3rd Year  |                  | 4th Year  |                  | 5th Year  |                  |
|----------------------------|-------------------|-----------|------------------|-----------|------------------|-----------|------------------|-----------|------------------|-----------|------------------|
|                            | Yearly            | FTE       | Revenue          | FTE       | Revenue          | FTE       | Revenue          | FTE       | Revenue          | FTE       | Revenue          |
| Resident<br>of WV<br>(50%) | \$9,188           | 10        | \$91,880         | 20        | \$183,760        | 24        | \$220,512        | 29        | \$266,452        | 35        | \$321,580        |
| Metro<br>resident<br>(20%) | \$16,040          | 6         | \$96,240         | 12        | \$192,480        | 14        | \$224,560        | 17        | \$272,680        | 21        | \$336,840        |
| Out of<br>State<br>(30%)   | \$21,222          | 4         | \$84,888         | 8         | \$169,776        | 10        | \$212,220        | 12        | \$254,664        | 14        | \$297,108        |
| <b>Total</b>               |                   | <b>20</b> | <b>\$273,008</b> | <b>40</b> | <b>\$546,016</b> | <b>48</b> | <b>\$657,292</b> | <b>58</b> | <b>\$793,796</b> | <b>70</b> | <b>\$955,528</b> |

### **ACCELERATED GRADUATE DEGREE (AGD)**

Prepare one paper copy with all signatures and forward to the Graduate Council Chair. Additionally, send one identical ELECTRONIC COPY with all supporting documentation as an e-mail attachment by to the Graduate Council Chair for electronic distribution to the Graduate Council Curriculum Committee.

#### **Guidelines for an AGD Proposal**

Accelerated Master's Degree Programs may be developed between an undergraduate and graduate program in a single department, between two programs in a single school/college or between programs in two different schools/colleges. AGD programs enrich the opportunities of the best undergraduates at Marshall University, enabling them to earn a Bachelor's and Master's degree in much less time than it would take following the traditional path.

Undergraduates accepted into an AGD program can begin taking graduate coursework during their senior year. Programs offering an accelerated master's degree option may allow up to 12 hours of graduate level course work. Programs offering an accelerated doctoral degree option may allow up to 18 hours of graduate level course work.

Programs may use one of two models for the AGD option.

For those offering a 3+ graduate option, the department may allow specified graduate-level courses to double-count as fulfilling a portion of the bachelor's and master's degree requirements.

For those offering an accelerated graduate degree option, the department will specify the graduate-level courses that to double-count as fulfilling a portion of the bachelor's and master's degree requirements and those graduate-level courses that will serve as electives for completion of the baccalaureate degree but not the graduate degree.

Each program offering a AGD will clearly list how students may count courses for both degrees in the description of the degree options presented the *Graduate Catalog*.

**Rationale:** The proposal should identify the rationale or need for an AGD, and, if the undergraduate and graduate programs are in different departments, clarify how they are appropriate for the AGD.

Students in the BA in Early Childhood Education complete three courses in common with the area of emphasis in Early Childhood Education that is part of the MA in Education – Administration of Early Childhood Programs, Multicultural Influences in Education, and Preschool Curriculum and Methods. Rather than having to repeat these same courses when pursuing the graduate program, it would streamline the experience for undergraduate students to have the option to complete these three related courses at the graduate level. This proposal was collaboratively planned by undergraduate and graduate faculty in the College of Education and Professional Development

**Admission Requirements:** requirements (e.g. waive test scores). The proposal should state whether admission requirements for the AMD differ from regular admission

Eligibility requirements for the Accelerated Master's Degree, outlined on p. 63 of the graduate catalog, indicate that a GPA of 3.30 is required. This is higher than the current full admission standard of the program, which is 3.0. Therefore, admission requirements will be higher.

**AGD Credits:** For AGD programs leading to a Master Degree, students may enroll in up to 12 hours of credit. For AGD programs leading to a Doctoral Degree, students may enroll in up to 18 hours of credit. Identify how courses completed for the AGD will count toward the undergraduate and graduate degrees.

The proposed program would follow the 3+ graduate option described above (as part of this form), which would allow students to double-count nine hours of course work toward BA and MA requirements.

**Curriculum:** Outline the required or elective courses students may use for the AGD. If there are no required courses, describe how the department will advise students to enroll in the appropriate course for their degrees.

The undergraduate/graduate courses are as follows:  
CI 449/559 Multicultural Influences in Education  
ECE 430/530 Preschool Curriculum and Methods  
ECE 435/535 Administration of Early Childhood Programs

**Student Eligibility:** AGD applicants must have a minimum over-all grade point average of 3.30 and 3.30 in the major. Programs may require a higher GPA. Please note your required GPA and any additional requirements for participation.

The program will adhere to eligibility requirements outlined in the graduate catalog (p. 63).

**Summary Statement:** Provide an abstract of your AGD proposal as a summary information for the Graduate Council agenda. Your abstract must include the following headings and corresponding brief statement: 1) DEPARTMENT, 2) AGD PROPOSAL, 3) AGD CREDITS AND ALLOCATION TO DEGREES, 4) STUDENT

**DEPARTMENT:** Curriculum & Instruction

**PROPOSAL:** An Accelerated Master's Degree is available for qualified undergraduate majors completing the BA in Early Childhood Education. Nine hours of undergraduate course work may be taken at the graduate level and may be applied to both the BA in Early Childhood Education and the MA in Education with an area of emphasis in Early Childhood Education. Courses include: CI 559 Multicultural Influences in Education, ECE 530 Preschool Curriculum and Methods and ECE 535 Administration of Early Childhood Programs.

**CREDITS:** 9 hours, applicable to BA in Early Childhood Education and MA in Education

**ELIGIBILITY:** The program will adhere to eligibility requirements outlined in the graduate catalog (p. 63).

**ELIGIBILITY.**

**Approvals**

*Rothmann Arneson*

3/11/19

Undergraduate Advisor

*John L. Allen*

Date

3/12/19

Graduate Program Director

*[Signature]*

Date

3/15/19

College Curriculum Committee Chair

Date

Veresa Cagle  
Dean, Undergraduate College

3-13-19  
Date

Song  
Registrar

3-20-19  
Date

Sam Harnett  
Graduate Council Chair

4/29/19  
Date

## **Current Catalog Copy**

p. 110

### **EDUCATION, M.A.**

#### **Areas of Emphasis**

- Early Childhood Education
- Elementary Mathematics Specialist
- Individualized Plan of Study
- Instructional Processes and Strategies
- Instructional Technology and Learning
- Math through Algebra I
- School Library Media Specialist
- Teaching English as a Second Language - Licensure
- Teaching English as a Second Language - Non-Licensure

#### **Graduate Certificates**

- Early Childhood Education
- Elementary Mathematics Specialist
- Instructional Technology and Learning
- Math through Algebra I
- Post-Baccalaureate Teacher Certificate
- Program Evaluation
- School Library Media Specialist
- Teaching English as a Second Language - Licensure
- Teaching English as a Second Language - Non-Licensure

p. 111

### **Admission Requirements to Master's Degree Programs**

Applicants to the MA in Education should follow the admissions process described in this catalog or at the Graduate Admissions website at [www.marshall.edu/graduate/admissions/how-to-apply-for-admission](http://www.marshall.edu/graduate/admissions/how-to-apply-for-admission).

For full admission, applicants must have an undergraduate degree from a regionally accredited institution with an undergraduate Grade Point Average (GPA) of 3.0 or higher on a 4.0 scale OR have a master's degree from a regionally accredited institution.

Applicants having an undergraduate degree from a regionally accredited institution with an undergraduate GPA of 2.5 or above, but below 3.0, may be granted provisional admission. Provisionally admitted applications will be granted full admission upon successful completion of 12 hours toward the approved plan of study with a GPA of 3.25 or higher, assuming that all other admission requirements are met.

Note: Some areas of emphasis are designed to lead to added endorsements for licensed teachers. Applicants may be asked to submit additional materials, such as documentation of current teacher licensure, before an admission decision is made.

### **Plan of Study**

A Plan of Study approved by the student's advisor must be on file before the student registers for his or her 12th semester hour. The Plan of Study is a student's "blueprint" for completing graduation requirements.

## **New Catalog Copy with Track Changes**

p. 110

### **EDUCATION, M.A.**

#### **Areas of Emphasis**

- Early Childhood Education (Accelerated Master's Degree)
- Elementary Mathematics Specialist
- Individualized Plan of Study
- Instructional Processes and Strategies
- Instructional Technology and Learning
- Math through Algebra I
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## **New Catalog Copy**

p. 110

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A Plan of Study approved by the student's advisor must be on file before the student registers for his or her 12th semester hour. The Plan of Study is a student's "blueprint" for completing graduation requirements.

## Request for Graduate Course Change

1. Prepare one paper copy with all signatures and supporting material and forward to the Graduate Council Chair.
2. E-mail one identical PDF copy to the Graduate Council Chair. If attachments included, please merge into a single file.
3. **The Graduate Council cannot process this application until it has received both the PDF copy and the signed hard copy.**

College: COEPD

Dept/Division: Leadership Studies

Current Alpha Designator/Number: LS 764

Contact Person: Bobbi Nicholson

Phone: 6-2094

### CURRENT COURSE DATA:

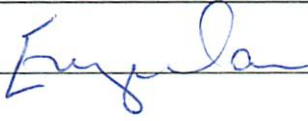

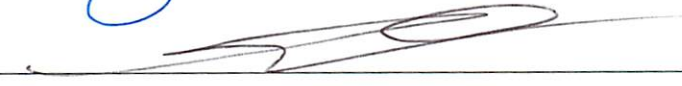

Course Title: Advanced Research I

Alpha Designator/Number: L S 7 6 4

Title Abbreviation: A d v a n c e d R e s e a r c h I

1. Complete this **five** page form in its entirety and route through the departments/committees below for changes to a course involving: course title, alpha designator, 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.

Signatures: if disapproved at any level, do not sign. Return to previous signer with recommendation attached.

|   |                     |
|---|---------------------|
| Dept. Chair/Division Head  | Date <u>2-7-19</u>  |
| Registrar                  | Date <u>3-13-19</u> |
| College Curriculum Chair  | Date <u>3-15-19</u> |
| Graduate Council Chair     | Date <u>4/29/19</u> |

## Request for Graduate Course Change - Page 2

College: COEPD

Department/Division: Leadership Studies

Alpha Designator/Number: LS 764

Provide complete information regarding the course change for each topic listed below.

Change in CATALOG TITLE: ☐ YES ☒ NO

From 



 (limited to 30 characters and spaces)

To

If Yes, Rationale



Change in COURSE ALPHA DESIGNATOR:

From: 



 To: 



☐ YES ☒ NO

If Yes, Rationale



Change in COURSE NUMBER: ☐ YES ☒ NO

From: 



 To:

If Yes, Rationale



Change in COURSE GRADING

From ☒ Grade To ☒ Credit/No Credit

Rationale 



  
Credit/No Credit is more consistent with the prospectus development that students do in the course and is a more accurate indication of their performance.

Change in CATALOG DESCRIPTION: ☐ YES ☒ NO IF YES, fill in below:

From

To

If Yes  
Rationale

## Request for Graduate Course Change - Page 3

---

Change in COURSE CREDIT HOURS: ☐ YES ☒ NO If YES, fill in below:

NOTE: If credit hours increase/decrease, please provide documentation that specifies the adjusted work requirements.

From

To

---

Change in COURSE CONTENT: ☐ YES ☒ NO

From

To

Rationale

## Request for Graduate Course Change-Page 4

---

College: COEPD

Department: Leadership Studies

Course Number/Title LS 764: Advanced Research I

---

1. REQUIRED COURSE: If this course is required by another department(s), identify it/them by name and attach the written notification you sent to them announcing to them the proposed change and any response received. Enter NOT APPLICABLE if not applicable.

2. COURSE DELETION: List any courses that will be deleted because of this change. A *Course Deletion* form is also required. Enter NOT APPLICABLE if not applicable.

3. ADDITIONAL RESOURCE REQUIREMENTS: If your department requires additional faculty, equipment, or specialized materials as a result of this change, attach an estimate of the time and cost etc. required to secure these items. (NOTE: approval of this form does not imply approval for additional resources. Enter NOT APPLICABLE if not applicable.

## Request for Graduate Course Change - Page 5

Please insert in the text box below your course change summary information for the Graduate Council agenda. Please enter the information exactly in this way (including headings) based on the appropriate change:

### COURSE DESCRIPTION CHANGE

Department:

Course Number and Title:

Rationale:

Course Description (old)

Course Description: (new)

Catalog Description:

### COURSE NUMBER CHANGE

Department:

Current Course Number/Title:

New Course Number:

Rationale:

Catalog Description:

Credit hours:

### COURSE TITLE CHANGE

Department:

Current Course Number/Title:

New Course Title:

Rationale:

Catalog Description:

### CHANGE IN COURSE GRADING

Department/Program: Leadership Studies

Course # and Title: LS 764

Rationale: Credit/No Credit is more consistent with the prospectus development that students do in the course and is a more accurate indication of their performance.

**Request for Graduate Non-Curricular Changes**

PLEASE USE THIS FORM FOR ALL NON-CURRICULAR CHANGE REQUESTS (changes in admission requirements or requirements for graduation, changes in existing or new policies/procedures, changes in program descriptions in catalog, general language changes in catalog).

SIGNATURES may not be required, depending on the nature of the request and from where it originates. Consult Graduate Council Chair.

1. Prepare one paper copy with all signatures and supporting material and forward to the Graduate Council Chair.
2. E-mail one identical PDF copy to the Graduate Council Chair.
3. **The Graduate Council cannot process this application until it has received both the PDF copy and the signed hard copy.**

College: COEPD Dept/Division: Counseling

Contact Person: Lori Ellison Phone: 304-746-2086

Rationale for Request:

The Counseling Program needs to make some adjustments to the admissions and candidacy policies listed in the Graduate Catalog. The purpose for the changes are to streamline the admissions process for professional development students (non-degree), to clarify language that is apparently contradictory in the requirements for transcripts for students, and to adjust the Candidacy Policy to no longer require an application process, replacing it with a faculty initiated review process to determine student candidacy. The first two of these changes are to help correct discrepancies in the admissions process that have made things difficult for applicants to know what information they must include in their applications and to clarify what is required for their admission. The third is to address logistical concerns that have made the Candidacy policy, as currently written, virtually impossible to enforce, replacing it with a model that will simplify the process of evaluation.

Signatures: if disapproved at any level, do not sign. Return to previous signer with recommendation attached.

NOTE: all requests may not require all signatures.

Department/Division Chair Lori Ellison Date Fall 2019

Registrar [Signature] Date 3-8-19

College Curriculum Committee Chair [Signature] Date 3-15-19  
(or Dean if no college curriculum committee)

Graduate Council Chair Lori Ellison Date 4/29/19

NOTE: please complete information required on the following pages before obtaining signatures above.

## **Request for Graduate Non-Curricular Changes – Page 2**

1. **Current Catalog Description (if applicable):** Please insert the catalog description from the current catalog for entries you would like to change.

See attachment

### **Request for Graduate Non-Curricular Changes – Page 3**

2. **Edits to current description:** Attach or insert a PDF copy of the current catalog description prepared in MS WORD with strikethroughs to mark proposed deletions and use the highlight function to indicate proposed new text.

See attachment

## **Request for Graduate Non-Curricular Changes – Page 4**

3. **New Catalog Description:** Provide a “clean” copy of your proposed description without strikethroughs or highlighting. This should be what you are proposing for the new description.

See attachment

## **Request for Graduate Non-Curricular Changes – Page 5**

Please insert below your proposed change information for the Graduate Council agenda.

Type of change request: **Adjustments to the admissions and candidacy policies**

Department: **Counseling**

Degree program: **MA in Counseling**

Effective date (fall/spring/summer, year): **Fall 2019**

## Admission Requirements

Admission to the Counseling Program is selective and competitive. Admission decisions for all program applicants are rooted in the specific standards of the Marshall University Graduate College and the minimum standards of the Counseling program. Students are admitted to an area of emphasis and must indicate their preferences during the admission application process.

## Graduate College

Applicants should follow the admissions process described in this catalog or at the Graduate Admissions website at [www.marshall.edu/graduate/admissions/how-to-apply-for-admission](http://www.marshall.edu/graduate/admissions/how-to-apply-for-admission).

## Counseling Program

Multiple criteria are used in making decisions to admit students to the degree program. Each applicant is evaluated using the following criteria (all material should be submitted directly to Graduate Admissions):

- 1) A bachelor's degree from a regionally accredited institution. (Transcript required from the degree-granting institution only.)
- 2) Evidence of academic aptitude for graduate-level study as evidenced by the following:
  - a) A 2.75 overall Undergraduate GPA or higher on a 4.0 scale on the final degree transcript, or for all previously completed undergraduate courses
  - b) A Graduate GPA of 3.0 on any previously completed advanced degree.
- 3) (International Students) Evidence of English language proficiency. Proof of your proficiency in English may be certified by submitting one of the following:
  - a) (TOEFL) Test of English as a Foreign Language (Internet based) minimum score of 80 for graduate study. ETS code for Marshall University is #5396.
  - b) (MELAB) Michigan English Language Assessment Battery minimum score of 82 for graduate study.
  - c) (IELTS) the International English Language Testing System minimum score of 6.5 for graduate study.
  - d) Completion of Level 6 of Marshall's Academic English program, with minimum Bs in all courses.
  - e) Completion of Marshall Pathway course ENG 160 or ENG 101A with minimum C grade.
  - f) Diploma or degree from an English-speaking school - a degree or diploma from an accredited secondary school, college, or university in which the primary language of instruction is English.
  - g) You have graduated from a regionally accredited college or university in the United States.

h) NOTE: English test results that were taken more than two (2) years prior to the date of the application submission cannot be accepted.

4) A writing sample expressing career goals and estimation of personal suitability for the profession of counseling. This should follow the Guidelines for the Written Statement found on the program website, or you may contact the program for a copy to be sent to you.

5) Two written references (from current or former professors, if possible). These should be completed by professionals with knowledge of the applicant's suitability for graduate work (*e.g.*, supervisors, undergraduate professors) in helping professions. They should be completed using the program-specific reference form found on the program website, or you may contact the program for a copy to be sent to you.

### **Conditional Admission**

The Counseling program may admit applicants conditionally for one term, on a limited basis, at the discretion of the program.

### **Provisional Admission**

The Counseling program may admit applicants provisionally on a limited basis, at the discretion of the program.

Applicants may submit their application materials at any time, but the program cannot guarantee that applications will be considered for the desired semester when submitted less than 14 days prior to the beginning of that semester. Applications too late to be considered for admission may be rolled to the following semester.

### **Candidacy Requirements**

Applicants who successfully meet the above six criteria are granted admission based on the Conditional, Provisional, or Full status noted above. At the end of the first 12-9 hours of prescribed coursework (COUN 574, 600, 602 or EDF 621 or advisor approved course substitutions) all students will undergo a Candidacy review. ~~Toward the end of the semester in which a student will complete their 12<sup>th</sup> hour of coursework, he or she must submit the Candidacy Application to the Program Director or Program Administrative Assistant.~~ Faculty will complete and review student performance evaluations ~~Candidacy applications~~ to determine each student's appropriateness for continuance in the Program. Faculty will notify students when they have been granted Candidacy Status upon a successful program review of the application.

## Professional Development Admission

Applicants not intending to complete an entire degree program, but who wish to take courses for licensure, certification, or to be admitted to the Certificate program (VoLT) need to follow the following guidelines for admission:

### VoLT certificate

Applicants who have obtained a Master's degree in Behavioral Health disciplines (Counseling, Psychology, School Psychology, Social work, etc.) or who are concurrently enrolled in one of these programs are eligible to apply for the VoLT certificate. They must follow one of the following routes:

- Students concurrently enrolled at Marshall University need only submit a Secondary Program Request form once they have completed the interview with Counseling Program faculty.
- Master's students at universities other than Marshall University may apply in the same way as one would apply for the full degree with the exception of designating "Professional Development – Certificate in Violence, Loss, and Trauma" as their intended program of study. They will submit the following materials:
  - an application
  - an application fee
  - a transcript from their current university
  - two (2) references
  - a written statement of goals which speaks to their desire to work with trauma victims (see the Guidelines for Written Statement on the Program website).
  - a letter from their Program chair or director as evidence of their good standing in their current degree program.
- Applicants who completed their degree in Counseling or a related Behavioral Health field at Marshall University may apply designating the "Professional Development – Certificate in Violence, Loss, and Trauma" and need to submit:
  - an application
  - an application fee
  - a written statement of goals which speaks to their desire to work with trauma victims (see the Guidelines for Written Statement on the Program website).  
(Note: Official MU transcripts will be obtained through the Banner system.)
- Applicants who have completed their degree outside of Marshall University and wish to take the Certificate courses must apply in the same way as one would apply for the full degree with the exception of designating "Professional Development – Certificate in Violence, Loss, and Trauma" as their intended program of study.
  - an application

- an application fee
- a transcript from the university where they completed their Master's degree
- two (2) references
- a written statement of goals which speaks to their desire to work with trauma victims (see the Guidelines for Written Statement on the Program website).

### Licensure/Certification

Applicants who wish to take a limited number of courses to complete the requirements for Licensed Professional Counselor or for their School Counseling certification will submit the following materials:

#### Licensed Professional Counselor Applicants

Applicants who need to take graduate coursework to complete the education requirements for the LPC in West Virginia are invited to apply as Non-degree students (see Admission Classifications under the Admissions Information section in the Graduate Catalog for more information). These students will submit:

- an application
- an application fee
- a transcript from the university where they completed their Master's degree.
- a statement of intent stating what courses they are being directed by the WVBE or other state board to take

#### School Counseling Certification Applicants

Applicants who wish to obtain the School Counseling Certification after having completed a Master's in Mental Health Counseling are invited to apply as Non-degree students as well. However, the courses specified for completing the School Certification will be determined by a transcript review completed by Program Faculty. The students will submit:

- an application
- an application fee
- a transcript from the university where they completed their Master's degree.
- a statement of intent that designates the School Counseling certification as their purpose for taking courses

## **Admission Requirements**

Admission to the Counseling Program is selective and competitive. Admission decisions for all program applicants are rooted in the specific standards of the Marshall University Graduate College and the minimum standards of the Counseling program. Students are admitted to an area of emphasis and must indicate their preferences during the admission application process.

## **Graduate College**

Applicants should follow the admissions process described in this catalog or at the Graduate Admissions website at [www.marshall.edu/graduate/admissions/how-to-apply-for-admission](http://www.marshall.edu/graduate/admissions/how-to-apply-for-admission).

## **Counseling Program**

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- 3) (International Students) Evidence of English language proficiency. Proof of your proficiency in English may be certified by submitting one of the following:
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h) NOTE: English test results that were taken more than two (2) years prior to the date of the application submission cannot be accepted.

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### **Conditional Admission**

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### **Provisional Admission**

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Applicants may submit their application materials at any time, but the program cannot guarantee that applications will be considered for the desired semester when submitted less than 14 days prior to the beginning of that semester. Applications too late to be considered for admission may be rolled to the following semester.

### **Candidacy Requirements**

Applicants who successfully meet the above six criteria are granted admission based on the Conditional, Provisional, or Full status noted above. At the end of the first 9 hours of prescribed coursework (COUN 574, 600, 602 or EDF 621 or advisor approved course substitutions) all students will undergo a Candidacy review. Faculty will complete and review student performance evaluations to determine each student's appropriateness for continuance in the Program. Faculty will notify students when they have been granted Candidacy Status upon a successful program review of the application.

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### Candidacy Requirements

Applicants who successfully meet the above five criteria are granted admission based on the conditional, provisional, or full status noted above. At the end of the first 12 hours of prescribed coursework (COUN 574, 600,

602 or EDF 621, or advisor-approved course substitutions) all students will undergo a candidacy review. Toward the end of the semester in which a student will complete their 12th hour of coursework, he or she must submit the Candidacy Application to the Program Director or Program Administrative Assistant. Faculty will review candidacy applications to determine each student's appropriateness for continuance in the program. Faculty will notify students when they have been granted candidacy status upon a successful program review of the application

## Request for Graduate Addition, Deletion, or Change of a Minor

1. Prepare one paper copy with all signatures and supporting material and forward to the Graduate Council Chair.
2. E-mail one identical PDF copy to the Graduate Council Chair. If attachments included, please merge into a single file.
3. **The Graduate Council cannot process this application until it has received both the PDF copy and the signed hard copy.**

College: COHP

Dept/Division: Public Health

Contact Person: Dr. Anthony Woart

Phone: 304-696-5772

Title of Minor: Rural Health

Check action requested: ☐ Addition ☒ Deletion ☐ Change

Effective Term/Year


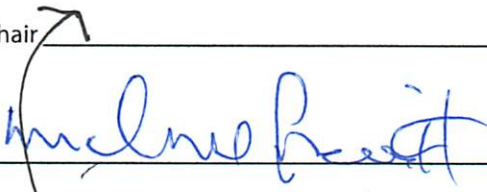
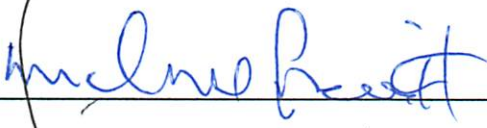

Fall 20

Spring 20

Summer 20

**Information on the following pages must be completed before signatures are obtained.**

Signatures: if disapproved at any level, do not sign. Return to previous signer with recommendation attached.

|   |                                       |
|---|---------------------------------------|
| Dept. Chair/Division Head  | Date <u>2/11/2019</u>                 |
| College Curriculum Chair   | Date _____                            |
| College Dean               | Date <u>2-11-19</u>                   |
| Graduate Council Chair     | Date <u>2-27-19</u><br><u>4/29/19</u> |
| Provost/VP Academic Affairs _____   | Date _____                            |
| Presidential Approval _____   | Date _____                            |

## Request for Graduate Addition, Deletion, or Change of a Minor-Page 2

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**1. Curriculum:** (Course numbers, titles and credit hours. Indicate if each course is required or optional.  
(May attach separate page if needed)

PH 603 Introduction to Rural Health 3 credit hours (required for minor)

PH 653 Rural Health in Appalachia I: Intervening with Addiction: 2 credit hours (required for minor)

PH 685 Rural Health in Appalachia II: Malnutrition and Obesity: 2 credit hours (required for minor)

PH 689 Community Outreach in Rural Health: 3 Credit hours  
(optional and can be replaced by non-minor MPH electives)

PH 688 Political Ecology, Sustainable Development and Human Health: 2 credit hours  
(required for minor)

Please describe any changes in curriculum:

List course number, title, credit hours. Note whether each course is required or optional. Enter NONE if no change.

None

**2. ADDITIONAL RESOURCE REQUIREMENTS:** If your program requires additional faculty, equipment or specialized materials to ADD or CHANGE this minor, attach an estimate of the time and money required to secure these items.

NOTE: Approval of this form does not imply approval for additional resources. Enter NONE if not applicable.

None

**3. NON-DUPLICATION:** If a question of possible duplication occurs, attach a copy of the correspondence sent to the appropriate department(s) describing the request and any response received from them. Enter NONE if not applicable.

None

*For catalog changes as a result of the above actions, please fill in the following pages.*

## Request for Graduate Addition, Deletion, or Change of a Minor-Page 3

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### 3. **Current Catalog Description**

Insert the *Current* Catalog Description and page number from the latest catalog for entries you would like to change.  
(May attach separate page if needed)

Please see attached pdf document for current catalog description. These changes correspond to pg 153 in current graduate catalog (2018-2019).

### 4. **Edits to the Current Description**

Attach a PDF copy of the current catalog description prepared in MS WORD with strikethroughs to mark proposed deletions and use the highlight function to indicate proposed new text.

### 5. **New Catalog Description**

Insert a 'clean' copy of your proposed description, i.e., no strikethroughs or highlighting included. This should be what you are proposing for the new description. (May attach separate page if needed)

#### Accelerated Master's Degree in Public Health

An Accelerated Master's Degree with the B.S. in Health Sciences will allow Health Sciences students to take a full semester load of M.P.H. courses in their final year. Twelve credit hours of undergraduate electives taken in the senior year of the B.S. in Health Sciences will be replaced with 12 credits from the first year of the M.P.H. program. Specifically, the M.P.H. courses for the senior year of the B.S. will include:

Fall Semester of Senior Year of BS in Health Sciences:

PH 601 Introduction to Public Health (1 credit hour)

PH 602 Public Health Biology (2 credit hours)

PH 611 Epidemiology (3 credit hours)

Spring Semester:

PH 686 Health Informatics & Technology (3 credit hours)

PH 693 Public Health Law & Ethics (3 credit hours)

Further information may be found in the section on Accelerated Master's Degree programs in "Academic Regulations and Requirements."

## Request for Graduate Addition, Deletion, or Change of a Minor-Page 4

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Please insert in the text box below your summary information for the Graduate Council agenda. Please enter the information exactly in this way (including headings):

Department:

Minor:

Credit Hours:

Type of Change: *(addition, deletion, change)*

Rationale:

Department: Public Health

Minor: Rural Health

Credit Hours: 12

Type of Change: deletion

Rationale: Minor in Rural Health was developed by the previous chair of the Department of Public Health. A minor is not commonly offered at the graduate level and as such we propose the removal of the minor. Furthermore, students currently enrolled in the program will not be affected by this change as the courses in the minor have never been offered. Students in the AMD program will be required to take the same courses a regular MPH student.

## **Current Catalog Description**

### **Accelerated Master's Degree in Public Health**

An Accelerated Master's Degree with the B.S. in Health Sciences will allow Health Sciences students to take a full semester load of M.P.H. courses in their final year. Twelve credit hours of undergraduate electives taken in the senior year of the B.S. in Health Sciences will be replaced with 12 credits from the first year of the M.P.H. program. Specifically, the M.P.H. courses for the senior year of the B.S. will include:

*Fall Semester of Senior Year of BS in Health Sciences:*

PH 601 Introduction to Public Health (1 credit hour)/ PH 602 Public Health Biology (2 credit hours)/ PH 611 Epidemiology (3 credit hours)

*Spring Semester:*

PH 641 Social and Behavioral aspects of Public Health (2 credit hours)/ PH 631 Environmental Health (2 credit hours) PH 642 Health Communication (2 credit hours) or PH 622 Statistical Methods (2 credit hours)

Further information may be found in the section on Accelerated Master's Degree programs in "Academic Regulations and Requirements."

### **Minor in Rural Health**

- |        |  |
|--------|--|
| PH 603 | Introduction to Rural Health 3 credit hours (required for minor)   |
| PH 653 | Rural Health in Appalachia I: Intervening with Addiction: 2 credit hours (required for minor)                |
| PH 685 | Rural Health in Appalachia II: Malnutrition and Obesity: 2 credit hours (required for minor)                 |
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**Current catalog description with strikethroughs to mark proposed deletions and highlighted areas for proposed new text.**

### **Accelerated Master's Degree in Public Health**

An Accelerated Master's Degree with the B.S. in Health Sciences will allow Health Sciences students to take a full semester load of M.P.H. courses in their final year. Twelve credit hours of undergraduate electives taken in the senior year of the B.S. in Health Sciences will be replaced with 12 credits from the first year of the M.P.H. program. Specifically, the M.P.H. courses for the senior year of the B.S. will include:

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PH 686 Health Informatics & Technology (3 credit hours)

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Further information may be found in the section on Accelerated Master's Degree programs in "Academic Regulations and Requirements."

### **Minor in Rural Health**

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~~PH 688 Political Ecology, Sustainable Development and Human Health: 2 credit hours (required for minor)~~

**Request for Graduate Non-Curricular Changes**

PLEASE USE THIS FORM FOR ALL NON-CURRICULAR CHANGE REQUESTS (changes in admission requirements or requirements for graduation, changes in existing or new policies/procedures, changes in program descriptions in catalog, general language changes in catalog).

SIGNATURES may not be required, depending on the nature of the request and from where it originates. Consult Graduate Council Chair.

1. Prepare one paper copy with all signatures and supporting material and forward to the Graduate Council Chair.
2. E-mail one identical PDF copy to the Graduate Council Chair.
3. **The Graduate Council cannot process this application until it has received both the PDF copy and the signed hard copy.**

College: Liberal Arts Dept/Division: Sociology and Anthropology  
 Contact Person: Kristi M. Fondren Phone: 304-696-2795

**Rationale for Request:**

We would like to remove the GRE requirement for admission into our MA program in Sociology. While we will no longer require the GRE, we will strongly encourage students to take the exam and submit scores for their professionalization and future graduate studies.

We also no longer offer an Anthropology Area of Emphasis which also needs to be removed.

*Tabled*

Signatures: if disapproved at any level, do not sign. Return to previous signer with recommendation attached.  
 NOTE: all requests may not require all signatures.

Department/Division Chair [Signature] Date Spring 2019  
 Registrar [Signature] Date 2-21-19  
 College Curriculum Committee Chair [Signature] Date 3/20/19  
 (or Dean if no college curriculum committee)  
 Graduate Council Chair [Signature] Date 4/29/19

NOTE: please complete information required on the following pages before obtaining signatures above.

## **Request for Graduate Non-Curricular Changes – Page 2**

1. **Current Catalog Description (if applicable):** Please insert the catalog description from the current catalog for entries you would like to change.

Please see attached pdf titled "CurrentCatalogDescription." I could not save a version where I copied and pasted here.

### **Request for Graduate Non-Curricular Changes – Page 3**

2. **Edits to current description:** Attach or insert a PDF copy of the current catalog description prepared in MS WORD with strikethroughs to mark proposed deletions and use the highlight function to indicate proposed new text.

Please see attached pdf titled "NewCatalogDescription\_Tracked Changes".

## **Request for Graduate Non-Curricular Changes – Page 4**

- 3. New Catalog Description:** Provide a "clean" copy of your proposed description without strikethroughs or highlighting. This should be what you are proposing for the new description.

See attached pdf titled "NewCatalogDescription\_ChabgesWithoutMarkup."

## **Request for Graduate Non-Curricular Changes – Page 5**

Please insert below your proposed change information for the Graduate Council agenda.

Type of change request: **Removal of GRE requirement for admission into program; removal of Anthropology**

Department: **Sociology and Anthropology**

Degree program: **MA, Sociology**

Effective date (fall/spring/summer, year): **Spring 2019**

## SOCIOLOGY,

M.A. Area of Emphasis Anthropology

Minor in Anthropology

Minor in Sociology

Accelerated Master's Degree in Sociology

### Program Orientation

The Department of Sociology and Anthropology at Marshall University offers a supportive environment for students who wish to pursue advanced training in sociology or anthropology as well as those for whom the Master's level is the final degree. The curriculum is designed to provide our students with a wide range of options in pursuit of their academic and professional goals and interests, while also providing solid training in core foundational aspects of the two disciplines. Students learn both qualitative and quantitative research methods and are exposed to a variety of subfields and theoretical perspectives. Faculty core strengths include: theory, social movements and social change, inequality, stratification, deviance, cultural diversity, social interaction and group processes, world systems/globalization, social institutions (religion, family, work and occupations, health care, sports, politics and the economy), criminology, gerontology, leisure and recreation, qualitative and quantitative research methods, and advanced statistical analysis.

### Admission Requirements

Interested students may seek admission to the program for full-time or part-time studies, with preferred entrance in the fall semester of each year. To receive full consideration all application materials must be received by the Graduate Admissions Office by April 15 for the Fall semester and by November 15 for the Spring semester. Students should plan to take the GRE as early in the year as possible. Applicants should follow the admission process outlined in the Graduate Catalog or at the Graduate College website at [www.marshall.edu/graduate/admissions/how-to-apply-for-admission](http://www.marshall.edu/graduate/admissions/how-to-apply-for-admission).

In addition to the materials described in the Catalog and on the Web site, applicants for regular admission to the Master of Arts in Sociology must submit to the Graduate Admissions Office:

- A personal statement describing interests in the program and future plans;
- International students must provide evidence of English language proficiency such as the TOEFL;
- Evidence of a minimum of 12 credit hours of undergraduate sociology coursework;
- Undergraduate grade point average (GPA), overall and in sociology;
- A writing sample: a copy of one paper (10-25 pages) from an undergraduate course, preferably a sociology or anthropology course; and
- Two letters of recommendation from persons familiar with the applicant's academic or professional competence.

Admission to the program is offered to a limited number of qualified students demonstrating academic excellence and professional promise. There is no minimum GRE score required for evaluation of your application by the committee. Scores are reviewed in the context of the applicant's entire file. Applicants who have submitted a complete application and fulfill the requirements stated above will be considered for full admission. The Sociology program may admit applicants provisionally, on a limited basis, at the discretion of the program. The Sociology program may admit applicants on a conditional basis.

### Requirements

In addition to regular courses and seminars, students are expected to contribute to their professional growth through interaction with the faculty and other graduate students as well as from independent study and reading. A student must earn at least a 3.0 GPA in all Sociology and Anthropology classes as a requirement for graduation. A student who receives a second grade of C or below while pursuing the MA in Sociology must review her/his academic plans with the department's Director of Graduate Studies; this review may result in the student being dismissed from the program.

The Sociology Master of Arts degree requires the completion of 33 hours of coursework plus SOC 681 thesis hours for the Thesis Option, or completion of 36 hours of coursework plus SOC 679 for the Non-Thesis Option. The curriculum is structured around a set of core requirements and a set of disciplinary focus areas that together provide a strong foundation in sociological theory, research methods and data analysis. At least half of the minimum required hours for the student's master's degree must be earned in classes numbered 600 or above. Students, in consultation with their advisor, must complete an official "Plan of Study" during their first semester or before completion of 12 credit hours. The Plan of Study must be approved by the Director of Graduate Programs in the department before submission for approval to the Office of the Graduate College. All students must successfully pass comprehensive exams to demonstrate broad comprehension and synthesis of sociology (and, in case the Anthropology Area of Emphasis is chosen, also anthropology); the comprehensive exam will be in conjunction with the defense of the thesis for students choosing that option or will be an examination in an appropriate form after the approval of a problem report.

### Core Requirements

All students are required to complete 15 hours of core courses:

SOC 600 Classical Sociological Theory

SOC 601 Contemporary Sociological Theory

SOC 605 Qualitative Research Methods and Analysis

SOC 606 Quantitative Research Methods and Analysis

SOC 609 Professional Development

SOC 605 and SOC 606 is a two-course research methods sequence that should be completed by all students during the first academic year in the graduate program if possible (or within the first 12

graduate credit hours for part-time students). Exceptions are made for students who must take prerequisite courses before enrolling in this sequence.

Electives (18 hours for thesis option and 21 hours for non-thesis option; for the specific requirements for the Anthropology Area of Emphasis see following section)

The department offers a variety of electives which are bundled in four disciplinary focus areas and an area of emphasis in anthropology. Graduate level courses from other departments may be taken with approval from the Director of Graduate Studies and the course instructor. To guarantee breadth of education, courses from more than one focus area have to be taken. Note that some classes contribute to more than one focus area; a student can count such classes in more than one focus area for this requirement, but must of course still meet the requirement for the total number of credit hours. To guarantee depth, students also have to take more courses of a particular focus area, declare a minor, or opt for the area of emphasis in anthropology as described below:

Breadth: Non-thesis option: One course from each focus area 1 thru 4 (12 hrs.) Thesis option: Thesis related to one focus, one course from each of the three remaining focus areas (9 hrs.)

Depth: Additional courses from one focus area or a Minor (9 hrs.)

#### Focus area 1: Organizations and Institutions

SOC 508 The Family

SOC 533 Sociology of Work

SOC 550 Sociology of Religion

SOC 564 Complex Organizations

SOC 580 Special Topic (dependent on content)

SOC 668 Seminar (dependent on content)

#### Focus area 2: Stratification and diversity

SOC 523 Social Class, Power and Conflict

SOC 525 Race and Ethnicity

SOC 532 Sociology of Appalachia

SOC 555 Sociology of Sex and Gender

SOC 655 Feminist Social Theory

SOC 580 Special Topic (dependent on content)

SOC 668 Seminar (dependent on content)

**Focus area 3: Demography, health, and human environments**

**SOC 501 Population and Human Ecology**

**SOC 528 Medical Sociology**

**SOC 532 Sociology of Appalachia**

**SOC 540 Introduction to Sociology of Aging**

**SOC 542 Urban Sociology**

**SOC 552 Sociology of Death and Dying**

**SOC 640 Problems and Prospects for an Aging Society**

**SOC 580 Special Topic (dependent on content)**

**SOC 668 Seminar (dependent on content)**

**Focus area 4: Social problems and collective behavior**

**SOC 513 Social Movements and Social Change**

**SOC 520 Criminology**

**SOC 535 Juvenile Delinquency**

**SOC 560 The Holocaust and Genocide**

**SOC 602 Contemporary Social Change**

**SOC 620 Criminology**

**SOC 640 Problems and Prospects for an Aging Society**

**SOC 580 Special Topic (dependent on content)**

**SOC 668 Seminar (dependent on content)**

**Anthropology Area of Emphasis (12 credit hours)**

The requirements for the Area of Emphasis include: ANT 600 Ethnographic Methods ANT 567 Culture through Ethnography OR ANT 591 Theory in Ethnology An additional two classes (6 credit hours) of courses at the 500- or 600-level in Anthropology as approved by the student's advisor and the Graduate Program Director in the Department of Sociology and Anthropology and included in the Plan of Study mentioned above. Students who opt for the Anthropology Area of Emphasis have to choose courses from two out of the four sociology focus areas if they write a thesis or from three out of the four

sociology focus areas if they write a problem report to comply with the breadth requirements discussed above.

#### **Anthropology Minor**

A minor in anthropology is earned by taking at least 6 credit hours in courses at the 500- or 600- level in Anthropology as approved by the student's advisor and the Graduate Program Director in the Department of Sociology and Anthropology.

#### **Sociology Minor**

A minor in sociology is earned by taking at least 6 credit hours in courses at the 500- or 600- level in Sociology as approved by the student's advisor and the Graduate Program Director in the Department of Sociology and Anthropology.

#### **Accelerated Master's Degree in Sociology**

An Accelerated Master's Degree is available for qualified undergraduate sociology majors. See the Accelerated Master's Degree section in this catalog for details.

## SOCIOLOGY,

### M.A. Area of Emphasis Anthropology

#### Minor in Anthropology

#### Minor in Sociology

#### Accelerated Master's Degree in Sociology

#### Program Orientation

The Department of Sociology and Anthropology at Marshall University offers a supportive environment for students who wish to pursue advanced training in sociology or anthropology as well as those for whom the Master's level is the final degree. The curriculum is designed to provide our students with a wide range of options in pursuit of their academic and professional goals and interests, while also providing solid training in core foundational aspects of the two disciplines. Students learn both qualitative and quantitative research methods and are exposed to a variety of subfields and theoretical perspectives. Faculty core strengths include: theory, social movements and social change, inequality, stratification, deviance, cultural diversity, social interaction and group processes, migration, world systems/globalization, social institutions (religion, family, work and occupations, health care, sports, politics and the economy), criminology, gerontology, leisure and recreation, qualitative and quantitative research methods, and advanced statistical analysis.

#### Admission Requirements

Interested students may seek admission to the program for full-time or part-time studies, with preferred entrance in the fall semester of each year. To receive full consideration all application materials must be received by the Graduate Admissions Office by April 15 for the Fall semester and by November 15 for the Spring semester. Students should plan to take the GRE as early in the year as possible. Please note that while the GRE is not required for admission into our program students are strongly encouraged to take the exam for their professionalization and future graduate studies. Applicants should follow the admission process outlined in the Graduate Catalog or at the Graduate College website at [www.marshall.edu/graduate/admissions/how-to-apply-for-admission](http://www.marshall.edu/graduate/admissions/how-to-apply-for-admission).

In addition to the materials described in the Catalog and on the Web site, applicants for regular admission to the Master of Arts in Sociology must submit to the Graduate Admissions Office:

- A personal statement describing interests in the program and future plans;
- International students must provide evidence of English language proficiency such as the TOEFL;
- Evidence of a minimum of 12 credit hours of undergraduate sociology coursework;
- Undergraduate grade point average (GPA), overall and in sociology;
- A writing sample: a copy of one paper (10-25 pages) from an undergraduate course, preferably a sociology or anthropology course; and
- Two letters of recommendation from persons familiar with the applicant's academic or professional competence.

Field Code Changed

proposed  
changes

Admission to the program is offered to a limited number of qualified students demonstrating academic excellence and professional promise. ~~There is no minimum GRE score required for evaluation of your application by the committee. Scores are reviewed in the context of the applicant's entire file.~~

Applicants who have submitted a complete application and fulfill the requirements stated above will be considered for full admission. The Sociology program may admit applicants provisionally, on a limited basis, at the discretion of the program. The Sociology program may admit applicants on a conditional basis.

#### Requirements

In addition to regular courses and seminars, students are expected to contribute to their professional growth through interaction with the faculty and other graduate students as well as from independent study and reading. A student must earn at least a 3.0 GPA in all Sociology and Anthropology classes as a requirement for graduation. A student who receives a second grade of C or below while pursuing the MA in Sociology must review her/his academic plans with the department's ~~Director of Graduate Studies~~ Graduate Program Director; this review may result in the student being dismissed from the program.

The Sociology Master of Arts degree requires the completion of 33 hours of coursework plus SOC 681 ~~(Thesis hours)~~ for the Thesis Option, or completion of 36 hours of coursework plus SOC 679 ~~(Problem Report)~~ for the Non-Thesis Option. The curriculum is structured around a set of core requirements and a set of disciplinary focus areas that together provide a strong foundation in sociological theory, research methods, and data analysis. At least half of the minimum required hours for the student's master's degree must be earned in classes numbered 600 or above. Students, in consultation with their advisor, must complete an official "Plan of Study" during their first semester or before completion of 12 credit hours. The Plan of Study must be approved by the ~~Director of Graduate Programs~~ Graduate Program Director in the department before submission for approval to the Office of the Graduate College. All students must successfully pass comprehensive exams to demonstrate broad comprehension and synthesis of sociology. The comprehensive exam will be scheduled twice a year, once in the fall and once in the spring. On the first attempt at an exam, if a student fails any one question, he or she will be asked to consult readings, re-write, and re-submit a new answer to the Graduate Program Director within 7 days of receiving the committee's evaluation. If the student fails a second attempt on this question, he or she must wait until the following semester to retake that portion. If a student fails two or more questions of the comprehensive exam on the first attempt, he or she will re-take the exam the following semester. Students who fail all or any one portion of the comprehensive exam in the second semester will not be permitted to continue in the program. (and, in case the Anthropology Area of Emphasis is chosen, also anthropology); the comprehensive exam will be in conjunction with the defense of the thesis for students choosing that option or will be an examination in an appropriate form after the approval of a problem report.

#### Core Requirements

All students are required to complete 15 hours of core courses:

SOC 600 Classical Sociological Theory

SOC 601 Contemporary Sociological Theory

SOC 605 Qualitative Research Methods and Analysis

SOC 606 Quantitative Research Methods and Analysis

SOC 609 Professional Development

SOC 605 and SOC 606 is a two-course research methods sequence that should be completed by all students during the first academic year in the graduate program if possible (or within the first 12 graduate credit hours for part-time students). Exceptions are made for students who must take prerequisite courses before enrolling in this sequence.

Electives (18 hours for thesis option and 21 hours for non-thesis option; ~~for the specific requirements for the Anthropology Area of Emphasis see following section~~)

The department offers a variety of electives which are bundled in four disciplinary focus areas ~~and an area of emphasis in anthropology~~. Graduate level courses from other departments may be taken with approval from the ~~Director of Graduate Studies~~ Graduate Program Director and the course instructor. To guarantee breadth of education, ~~courses from more than one focus area have to be taken~~ all students must take courses from more than one focus area. Note that some classes contribute to more than one focus area; a student can count such classes in more than one focus area for this requirement, but must ~~of course~~ still meet the requirement for the total number of credit hours. To guarantee depth, students also have to take more courses of a particular focus area ~~or, declare a minor, or opt for the area of emphasis in anthropology as described below:~~

~~Breadth: Non-thesis option: One course from each focus area 1 thru 4 (12 hrs.) Thesis option: Thesis related to one focus, one course from each of the three remaining focus areas (9 hrs.)~~

~~Depth: Additional courses from one focus area or a Minor (9 hrs.)~~ Thesis option: Thesis related to one primary focus area (9 hours), and one course from each of the three remaining focus areas (9 hours)

**Non-thesis option:** One course from each focus area 1 through 4 (12 hours), and additional courses from one primary focus area or declare a Minor (9hrs)

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-Focus area 1: Organizations and Institutions

SOC 508 The Family

SOC 533 Sociology of Work

SOC 550 Sociology of Religion

SOC 564 Complex Organizations

SOC 580 Special Topic (dependent on content)

SOC 668 Seminar (dependent on content)

**Focus area 2: Stratification and dDiversity**

**SOC 523 Social Class, Power and Conflict**

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SOCIOLOGY,

Minor in Anthropology

Minor in Sociology

Accelerated Master's Degree in Sociology

Program Orientation

new  
w/out  
markup

The Department of Sociology and Anthropology at Marshall University offers a supportive environment for students who wish to pursue advanced training in sociology or anthropology as well as those for whom the Master's level is the final degree. The curriculum is designed to provide our students with a wide range of options in pursuit of their academic and professional goals and interests, while also providing solid training in core foundational aspects of the two disciplines. Students learn both qualitative and quantitative research methods and are exposed to a variety of subfields and theoretical perspectives. Faculty core strengths include: theory, social movements and social change, inequality, stratification, deviance, cultural diversity, social interaction and group processes, migration, world systems/globalization, social institutions (religion, family, work and occupations, health care, sports, politics and the economy), criminology, gerontology, leisure and recreation, qualitative and quantitative research methods, and advanced statistical analysis.

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Electives (18 hours for thesis option and 21 hours for non-thesis option)

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***Thesis option:*** Thesis related to one primary focus area (9 hours), and one course from each of the three remaining focus areas (9 hours)

***Non-thesis option:*** One course from each focus area 1 through 4 (12 hours), and additional courses from one primary focus area or declare a Minor (9hrs)

Focus area 1: Organizations and Institutions

SOC 508 The Family

SOC 533 Sociology of Work

SOC 550 Sociology of Religion

SOC 564 Complex Organizations

SOC 580 Special Topic (dependent on content)

SOC 668 Seminar (dependent on content)

Focus area 2: Stratification and Diversity

SOC 523 Social Class, Power and Conflict

SOC 525 Race and Ethnicity

SOC 532 Sociology of Appalachia

SOC 555 Sociology of Sex and Gender

SOC 655 Feminist Social Theory

SOC 580 Special Topic (dependent on content)

SOC 668 Seminar (dependent on content)

**Focus area 3: Demography, Health, and Human Environments**

SOC 501 Population and Human Ecology

SOC 528 Medical Sociology

SOC 532 Sociology of Appalachia

SOC 540 Introduction to Sociology of Aging

SOC 542 Urban Sociology

SOC 552 Sociology of Death and Dying

SOC 640 Problems and Prospects for an Aging Society

SOC 580 Special Topic (dependent on content)

SOC 668 Seminar (dependent on content)

**Focus area 4: Social Problems and Collective Behavior**

SOC 513 Social Movements and Social Change

SOC 520 Criminology

SOC 535 Juvenile Delinquency

SOC 560 The Holocaust and Genocide

SOC 602 Contemporary Social Change

SOC 620 Criminology

SOC 640 Problems and Prospects for an Aging Society

SOC 580 Special Topic (dependent on content)

SOC 668 Seminar (dependent on content)

**Anthropology Minor**

A minor in anthropology is earned by taking at least 9 credit hours in courses at the 500- or 600- level in Anthropology as approved by the student's advisor and the Graduate Program Director in the Department of Sociology and Anthropology.

**Sociology Minor**

A minor in sociology is earned by taking at least 9 credit hours in courses at the 500- or 600- level in Sociology as approved by the student's advisor and the Graduate Program Director in the Department of Sociology and Anthropology.

### **Accelerated Master's Degree in Sociology**

**An Accelerated Master's Degree is available for qualified undergraduate sociology majors. See the Accelerated Master's Degree section in this catalog for details.**

## Request for Graduate Addition, Deletion, or Change of a Major or Degree

NOTE: Before you submit a request for a new Major or Degree, you must submit an INTENT TO PLAN form. Only after the INTENT TO PLAN goes through the approval process are you ready to submit this request for a new Major or Degree. For detailed information on new programs please see: <http://wvhepcdoc.wvnet.edu/resources/133-11.pdf>.

1. Prepare one paper copy with all signatures and supporting material and forward to the Graduate Council Chair.
2. E-mail one PDF copy without signatures to the Graduate Council Chair.
3. **The Graduate Council cannot process this application until it has received both the PDF copy and the signed hard copy.**

College: College of ScienceDept/Division: Department of Physics/Division of Physical ScienceContact Person: Huong Nguyen, Ralph OberlyPhone: x6-2756Degree Program Master of Science in Physical and Applied ScienceCheck action requested: ☐ Addition ☐ Deletion ☒ ChangeEffective Term/Year      Fall 20 19      Spring 20 ☐      Summer 20 ☐

**Information on the following pages must be completed before signatures are obtained.**

Signatures: if disapproved at any level, do not sign. Return to previous signer with recommendation attached.

|   |                          |
|---|--------------------------|
| Dept. Chair/Division Head <u>Ralph E Oberly</u>               | Date <u>Mar 27, 2019</u> |
| College Curriculum Chair <u>[Signature]</u>                   | Date <u>4-1-2019</u>     |
| College Dean <u>Enidyn Pupples - Cody for Dean Somerville</u> | Date <u>4/1/2019</u>     |
| Graduate Council Chair <u>Lou Zhan</u>                        | Date <u>4/29/19</u>      |
| Provost/VP Academic Affairs _____                             | Date _____               |
| Presidential Approval _____                                   | Date _____               |
| Board of Governors Approval _____                             | Date _____               |

## Request for Graduate Addition, Deletion, or Change of a Major or Degree-Page 2

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Please provide a rationale for addition, deletion, change: (May attach separate page if needed)

We request a change in the name of the degree program from Master of Science in Physical and Applied Science to Master of Science in Physics and Applied Sciences. This degree program contains two separate majors: Major in Physics and Major in Physical and Applied Sciences. By including the name of the Physics major in the name of the degree program, we accomplish two things: (1) we avoid confusions between the name of the program and the name of one of the majors, and (2) the name of the program will include the names of both majors, which is desirable for accreditation purposes.

Please describe any changes in curriculum:

List course number, title, credit hours. Note whether each course is required or optional. Enter NONE if no change. (May attach separate page if needed)

NONE

**1. ADDITIONAL RESOURCE REQUIREMENTS:** If your program requires additional faculty, equipment or specialized materials to ADD or CHANGE this major or degree, attach an estimate of the time and money required to secure these items.

NOTE: Approval of this form does not imply approval for additional resources. Enter NONE if not applicable.

NONE

**2. NON-DUPLICATION:** If a question of possible duplication occurs, attach a copy of the correspondence sent to the appropriate department(s) describing the request and any response received from them. Enter NONE if not applicable.

NONE

*For catalog changes as a result of the above actions, please fill in the following pages.*

## **Request for Graduate Addition, Deletion, or Change of a Major or Degree-Page 3**

### **3. Current Catalog Description**

Insert the *Current* Catalog Description and page number from the latest catalog for entries you would like to change.  
(May attach separate page if needed)

Master of Science in Physical and Applied Science

### **4. Edits to the Current Description**

Attach a PDF copy of the current catalog description prepared in MS WORD with strikethroughs to mark proposed deletions and use the highlight function to indicate proposed new text.

## **Request for Graduate Addition, Deletion, or Change of a Major or Degree-Page 4**

### **5. New Catalog Description**

Insert a 'clean' copy of your proposed description, i.e., no strikethroughs or highlighting included. This should be what you are proposing for the new description. (May attach separate page if needed)

Master of Science in Physics and Applied Sciences

## **Request for Graduate Addition, Deletion, or Change of a Major or Degree-Page 5**

Please insert in the text box below your change summary information for the Graduate Council agenda. Please enter the information exactly in this way (including headings):

Department:

Major or Degree:

Type of Change: *(addition, deletion, change)*

Rationale:

We request a change in the name of the degree program from Master of Science in Physical and Applied Science to Master of Science in Physics and Applied Sciences. This degree program contains two separate majors: Major in Physics and Major in Physical and Applied Sciences. By including the name of the Physics major in the name of the degree program, we accomplish two things: (1) we avoid confusions between the name of the program and the name of one of the majors, and (2) the name of the program will include the names of both majors, which is desirable for accreditation purposes.

## Request for Graduate Addition, Deletion, or Change of a Certificate

1. Prepare one paper copy with all signatures and supporting material and forward to the Graduate Council Chair.
2. E-mail one identical PDF copy to the Graduate Council Chair. If attachments included, please merge into a single file.
3. **The Graduate Council cannot process this application until it has received both the PDF copy and the signed hard copy.**

**NOTE:** If proposing a new certificate, please read this first: [www.marshall.edu/graduate/graduatecouncil/certificatespolicy/certificatepolicy.pdf](http://www.marshall.edu/graduate/graduatecouncil/certificatespolicy/certificatepolicy.pdf)

College: LCOB

Dept/Division: MBA Program / Management

Contact Person: Dr. Marc Sollosy

Phone: 304-696-2614

Name of Certificate Graduate Certificate in Management Foundations

Check action requested: ☐ Addition ☒ Deletion ☐ Change

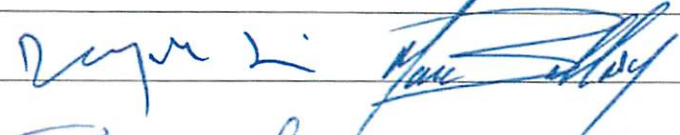

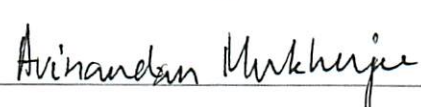

Effective Term/Year

Fall 19

☒Spring 20 ☐Summer 20 ☐

**Information on the following pages must be completed before signatures are obtained.**

Signatures: if disapproved at any level, do not sign. Return to previous signer with recommendation attached.

|  |                      |
|--|----------------------|
| Dept. Chair/Division Head  | Date <u>2/12/19</u>  |
| College Curriculum Chair    | Date <u>3-1-19</u>   |
| College Dean                | Date <u>4/5/2019</u> |
| Graduate Council Chair      | Date <u>4/29/19</u>  |
| Provost/VP Academic Affairs _____  | Date _____           |
| Presidential Approval _____  | Date _____           |

## Request for Graduate Addition, Deletion, or Change of a Certificate-Page 2

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Please provide a rationale for addition, deletion, change:

The MBA program is changing its requirements regarding foundation courses. In lieu of the current 500 level courses, students requiring foundation course will take the undergraduate level equivalent courses. This change coupled with the small enrollment in the certificate program justifies the suspension of the Graduate Certificate in Management Foundations option.

Please describe any changes in curriculum:

List course number, title, credit hours. Note whether each course is required or optional. Enter NONE if no change.

**1. ADDITIONAL RESOURCE REQUIREMENTS:** If your program requires additional faculty, equipment or specialized materials to ADD or CHANGE this certificate, attach an estimate of the time and money required to secure these items.

NOTE: Approval of this form does not imply approval for additional resources. Enter NONE if not applicable.

NONE

**2. NON-DUPLICATION:** If a question of possible duplication occurs, attach a copy of the correspondence sent to the appropriate department(s) describing the request and any response received from them. Enter NONE if not applicable.

NONE

***For catalog changes as a result of the above actions, please fill in the following pages.***

## **Request for Graduate Addition, Deletion, or Change of a Certificate-Page 3**

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### **3. Current Catalog Description**

Insert the *Current* Catalog Description and page number from the latest catalog for entries you would like to change.  
(May attach separate page if needed)

Graduate Certificate in Management Foundations - Page 97 of Catalog

This certificate is designed for students with non-business undergraduate degrees. It is envisioned as a generalist overview of graduate business topics. Students desiring a fully developed master's degree in business should enroll in the MBA program. The Graduate Certificate in Management Foundations will help students to improve their depth of knowledge, remain competitive in the job market, learn new skills, advance their careers, or pursue personal enrichment.

#### **Admission**

A prospective certificate-only student should apply for admission to Marshall University as a Certificate/Professional Development student and select on the application form the Certificate in Management Foundations.

#### **Requirements**

The Graduate Certificate in Management Foundations requires 18 graduate credit hours. Students must complete the series of courses with a minimum 3.0 GPA and cannot have more than two grades of



### **4. Edits to the Current Description**

Attach a PDF copy of the current catalog description prepared in MS WORD with strikethroughs to mark proposed deletions and use the highlight function to indicate proposed new text.

### **5. New Catalog Description**

Insert a 'clean' copy of your proposed description, i.e., no strikethroughs or highlighting included. This should be what you are proposing for the new description. (May attach separate page if needed).

There is no new section in so much as the certificate program is not to be listed in future catalogs.

## **Request for Graduate Addition, Deletion, or Change of a Certificate-Page 4**

---

Please insert in the text box below your change summary information for the Graduate Council agenda. Please enter the information exactly in this way (including headings):

**Department:**

**Name of Certificate:**

**Credit Hours:**

**Type of Change:** *(addition, deletion, change)*

**Rationale:**

**Department:** Management

**Name of Certificate:** Graduate Certificate in Management Foundations

**Credit Hours:** 18

**Type of Change:** (addition, deletion, change) Deletion

**Rationale:** The MBA program is changing its requirements regarding foundation courses. In lieu of the current 500 level courses, students requiring foundation course will take the undergraduate level equivalent courses. This change coupled with the small enrollment in the certificate program justifies the suspension of the Graduate Certificate in Management Foundations option.

## Graduate Certificate in Management Foundations

This certificate is designed for students with non-business undergraduate degrees. It is envisioned as a generalist overview of graduate business topics. Students desiring a fully developed master's degree in business should enroll in the MBA program. The Graduate Certificate in Management Foundations will help students to improve their depth of knowledge, remain competitive in the job market, learn new skills, advance their careers, or pursue personal enrichment.

### Admission

A prospective certificate-only student should apply for admission to Marshall University as a Certificate/Professional

Development student and select on the application form the Certificate in Management Foundations.

### Requirements

The Graduate Certificate in Management Foundations requires 18 graduate credit hours. Students must complete the series of courses with a minimum 3.0 GPA and cannot have more than two grades of C

:

A student pursuing a certificate must complete the following courses:

ACC

510

Survey of Accounting

ECN

501

Economic Analysis

MKT

511

Marketing and Management

MGT

500

Analytical Methods and Techniques

FIN

510

Principles of Business Finance

Elective: HRM 600, HCA 600, MGT 620, ACC 613, MGT 601, LE 691, ECN 630, MIS 678,

or other course selected with advisor's approval

All six courses must be taken; no courses may be waived.

Anyone desiring to enroll in the Management Foundations Certificate program is encouraged to contact the Graduate

Academic Advisor for further information.

## Request for Graduate Addition, Deletion, or Change of a Major or Degree

NOTE: Before you submit a request for a new Major or Degree, you must submit an INTENT TO PLAN form. Only after the INTENT TO PLAN goes through the approval process are you ready to submit this request for a new Major or Degree. For detailed information on new programs please see: <http://wvhepcdoc.wvnet.edu/resources/133-11.pdf>.

1. Prepare one paper copy with all signatures and supporting material and forward to the Graduate Council Chair.
2. E-mail one PDF copy without signatures to the Graduate Council Chair.
3. **The Graduate Council cannot process this application until it has received both the PDF copy and the signed hard copy.**

College: LCOB

Dept/Division: Accountancy &amp; Legal Environment

Contact Person: Susan W. Lanham

Phone: 304-696-2666

Degree Program Master of Science in Accountancy

Check action requested: ☐ Addition ☐ Deletion ☒ Change

Effective Term/Year

Fall 20

19

Spring 20

Summer 20

Information on the following pages must be completed before signatures are obtained.

Signatures: if disapproved at any level, do not sign. Return to previous signer with recommendation attached.

|   |                       |
|---|-----------------------|
| Dept. Chair/Division Head <u>Nancy L. Zinner</u>            | Date <u>3/11/19</u>   |
| College Curriculum Chair <u>Susan Lanham, Interim Chair</u> | Date <u>3-20-19</u>   |
| College Dean <u>A. Murphy</u>                               | Date <u>3/20/2019</u> |
| Graduate Council Chair <u>Lori K. Hume</u>                  | Date <u>4/29/19</u>   |
| Provost/VP Academic Affairs _____                           | Date _____            |
| Presidential Approval _____                                 | Date _____            |
| Board of Governors Approval _____                           | Date _____            |

## Request for Graduate Addition, Deletion, or Change of a Major or Degree-Page 2

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Please provide a rationale for addition, deletion, change: (May attach separate page if needed)

MKT 686, IMC for Professional Services, (3credit hours), will no longer be a required course. Students will instead be able to choose from an approved list of electives to replace this three-hour course. MKT 686 will be included in the approved list of electives. This will create nine hours of electives within the MSA program allowing for concentrations such as accounting analytics or tax. This will also result in more flexibility within the program for taking online courses as MKT 686 is not offered online. This will also allow students to choose a course specific to their interests, needs, or professional goals.

Please describe any changes in curriculum:

List course number, title, credit hours. Note whether each course is required or optional. Enter NONE if no change. (May attach separate page if needed)

MKT 686 (3 credit hours) is currently required. We are changing MKT 686 to optional and allowing for a third elective for a total of 9 hours in electives within the MSA program.

**1. ADDITIONAL RESOURCE REQUIREMENTS:** If your program requires additional faculty, equipment or specialized materials to ADD or CHANGE this major or degree, attach an estimate of the time and money required to secure these items.

NOTE: Approval of this form does not imply approval for additional resources. Enter NONE if not applicable.

None

**2. NON-DUPLICATION:** If a question of possible duplication occurs, attach a copy of the correspondence sent to the appropriate department(s) describing the request and any response received from them. Enter NONE if not applicable.

None

***For catalog changes as a result of the above actions, please fill in the following pages.***

# **Request for Graduate Addition, Deletion, or Change of a Major or Degree-Page 3**

## **3. Current Catalog Description**

Insert the *Current* Catalog Description and page number from the latest catalog for entries you would like to change.  
(May attach separate page if needed)

### **CURRENT CATALOG DESCRIPTION**

Page 93 of Graduate Catalog 2018-2019

Program Requirements

The following courses must be completed:

Functional Studies

ACC 615 Auditing Theory and Practice

ACC 616 Advanced Income Tax Procedure

ACC 617 Advanced Controllershship

ACC 618 Accounting Research

ACC 632 Auditing Accounting Information Systems

ACC 698 Ethics and Professional Development in Accounting

LE 691 Government and Business Relationships

MKT 686 Integrated Marketing Communications for Professional Services

Accounting electives (any two courses)

ACC 512 Government and Not-for-Profit Accounting

ACC 544 Consulting for CPAs

ACC 580-583 Special Topics

ACC 614 Theory of Accounting

ACC 640 Forensic Accounting: Civil Litigation

ACC 650 Special Topics

ACC 660 Independent Study

## **4. Edits to the Current Description**

Attach a PDF copy of the current catalog description prepared in MS WORD with strikethroughs to mark proposed deletions and use the highlight function to indicate proposed new text.

# Request for Graduate Addition, Deletion, or Change of a Major or Degree-Page 4

## 5. New Catalog Description

Insert a 'clean' copy of your proposed description, i.e., no strikethroughs or highlighting included. This should be what you are proposing for the new description. (May attach separate page if needed)

### PROPOSED CATALOG DESCRIPTION

Page 93 of Graduate Catalog 2018-2019

#### Program Requirements

The following courses must be completed:

Functional Studies

ACC 615 Auditing Theory and Practice

ACC 616 Advanced Income Tax Procedure

ACC 617 Advanced Controllership

ACC 618 Accounting Research

ACC 632 Auditing Accounting Information Systems

ACC 698 Ethics and Professional Development in Accounting

LE 691 Government and Business Relationships

Accounting Electives (any two courses):

Six hours must come from graduate accounting courses

Other Electives (one course):

Your third elective can come from any graduate accounting course or one of the following courses:

ENT 680 Entrepreneurship

FIN 623 Investments

FIN 626 Security Analysis and Portfolio Management

FIN 630 Multinational Financial Management

MGT 601 Quantitative Methods for Business

MGT 620 Human Resources Management

MGT 677 Supply Chain Management

MGT 692 Ethics/Global Aspects of Business

MIS 685 Business Intelligence and Analytics

MKT 682 Advanced Marketing Management

MKT 684 Global Marketing

MKT 686 Integrated Marketing Communications for Professional Services

## Request for Graduate Addition, Deletion, or Change of a Major or Degree-Page 5

Please insert in the text box below your change summary information for the Graduate Council agenda. Please enter the information exactly in this way (including headings):

Department:

Major or Degree:

Type of Change: *(addition, deletion, change)*

Rationale:

Department: LCOB Division of Accountancy & Legal Environment

Major or Degree: Master of Science in Accountancy

Type of Change: Change

Rationale: MKT 686, IMC for Professional Services, (3credit hours), will no longer be a required course. Students will instead be able to choose from an approved list of electives to replace this three-hour course. MKT 686 will be included in the approved list of electives. This will create nine hours of electives within the MSA program allowing for concentrations such as accounting analytics or tax. This will also result in more flexibility within the program for taking online courses as MKT 686 is not offered online. This will also allow students to choose a course specific to their interests, needs, or professional goals.

#### 4. EDITS TO THE CURRENT CATALOG DESCRIPTION

Page 93 of Graduate Catalog 2018-2019

### Program Requirements

The following courses must be completed:

#### **Functional Studies**

ACC 615 Auditing Theory and Practice  
ACC 616 Advanced Income Tax Procedure  
ACC 617 Advanced Controllershship  
ACC 618 Accounting Research  
ACC 632 Auditing Accounting Information Systems  
ACC 698 Ethics and Professional Development in Accounting  
LE 691 Government and Business Relationships  
~~MKT 686 Integrated Marketing Communications for Professional Services~~

#### **Accounting Electives (any two courses):**

Six hours must come from graduate accounting courses

~~ACC 512 Government and Not-for-Profit Accounting~~  
~~ACC 544 Consulting for CPAs~~  
~~ACC 580-583 Special Topics~~  
~~ACC 614 Theory of Accounting~~  
~~ACC 640 Forensic Accounting: Civil Litigation~~  
~~ACC 650 Special Topics~~  
~~ACC 660 Independent Study~~

#### **Other Electives (one course):**

Your third elective can come from any graduate accounting course or one of the following courses:

ENT 680 Entrepreneurship  
FIN 623 Investments  
FIN 626 Security Analysis and Portfolio Management  
FIN 630 Multinational Financial Management  
MGT 601 Quantitative Methods for Business  
MGT 620 Human Resources Management  
MGT 677 Supply Chain Management  
MGT 692 Ethics/Global Aspects of Business  
MIS 685 Business Intelligence and Analytics  
MKT 682 Advanced Marketing Management  
MKT 684 Global Marketing  
MKT 686 Integrated Marketing Communications for Professional Services

**Request for Graduate Addition, Deletion, or Change of a Major or Degree**

NOTE: Before you submit a request for a new Major or Degree, you must submit an INTENT TO PLAN form. Only after the INTENT TO PLAN goes through the approval process are you ready to submit this request for a new Major or Degree. For detailed information on new programs please see: <http://wvhepcdoc.wvnet.edu/resources/133-11.pdf>.

1. Prepare one paper copy with all signatures and supporting material and forward to the Graduate Council Chair.
2. E-mail one PDF copy without signatures to the Graduate Council Chair.
3. **The Graduate Council cannot process this application until it has received both the PDF copy and the signed hard copy.**

College: LCOB

Dept/Division: MBA Program / Management

Contact Person: Dr. Marc Sollosy

Phone: 304-696-2614

Degree Program MBA ProgramCheck action requested: ☐ Addition ☐ Deletion ☒ Change

Effective Term/Year

Fall 20 ☒Spring 20 ☐Summer 20 ☐**Information on the following pages must be completed before signatures are obtained.**

Signatures: if disapproved at any level, do not sign. Return to previous signer with recommendation attached.

|  |                      |
|--|----------------------|
| Dept. Chair/Division Head <u>[Signature]</u> | Date <u>2/26/19</u>  |
| College Curriculum Chair <u>[Signature]</u>  | Date <u>3-1-19</u>   |
| College Dean <u>Avinandan Mukherjee</u>      | Date <u>4/5/2019</u> |
| Graduate Council Chair <u>[Signature]</u>    | Date <u>4/29/19</u>  |
| Provost/VP Academic Affairs _____            | Date _____           |
| Presidential Approval _____                  | Date _____           |
| Board of Governors Approval _____            | Date _____           |

## Request for Graduate Addition, Deletion, or Change of a Major or Degree-Page 2

---

Please provide a rationale for addition, deletion, change: (May attach separate page if needed)

Due to a desire to use our faculty resources more effeciently and be more in line with other graduate level program prerequisite requirements within the LCOB, the 500 level "foundation" courses will no longer be a prerequisite for the MBA program. The prerequisite courses will be equivalent courses at the undergraduate level. The MBA program was the only graduate program within the LCOB that had graduate level "foundation" prerequisites. In addition to improving effeciency, this will allow students more flexibility in scheduling given that multiple sections of the undergraduate equivalents are offered every semester.

Please describe any changes in curriculum:

List course number, title, credit hours. Note whether each course is required or optional. Enter NONE if no change. (May attach separate page if needed)

The 15 hours of "foundation courses that will no longer be required are as follows: ACC 510, Survey of Accounting (3hrs), ECN 501, Economic Analysis (3hrs), FIN 510, Principles of Business Finance (3hrs), MGT 500, Analytical Methods & Techniques (3hrs), and MKT 511, Marketing & Management (3hrs).

The 18 hours of undergraduate prerequisite courses that will be required are as follows: ACC 215 Accounting Principles (3hrs), ECN 250 Principles of Macroeconomics (3hrs), FIN 323, Principles of Finance (3hrs), MGT 218, Business Statistics (3hrs), MGT 320 Principles of Management (3hrs), and MKT 340 Principles of Marketing (3hrs).

\*All the prerequisite courses listed are optional depending on the direction of the GSM Academic Advisor

**1. ADDITIONAL RESOURCE REQUIREMENTS:** If your program requires additional faculty, equipment or specialized materials to ADD or CHANGE this major or degree, attach an estimate of the time and money required to secure these items.

NOTE: Approval of this form does not imply approval for additional resources. Enter NONE if not applicable.

NONE

**2. NON-DUPLICATION:** If a question of possible duplication occurs, attach a copy of the correspondence sent to the appropriate department(s) describing the request and any response received from them. Enter NONE if not applicable.

NONE

*For catalog changes as a result of the above actions, please fill in the following pages.*

## **Request for Graduate Addition, Deletion, or Change of a Major or Degree-Page 3**

### **3. Current Catalog Description**

Insert the *Current Catalog Description* and page number from the latest catalog for entries you would like to change.  
(May attach separate page if needed)

SEE ATTACHMENT

### **4. Edits to the Current Description**

Attach a PDF copy of the current catalog description prepared in MS WORD with strikethroughs to mark proposed deletions and use the highlight function to indicate proposed new text.

## **Request for Graduate Addition, Deletion, or Change of a Major or Degree-Page 4**

### **5. New Catalog Description**

Insert a 'clean' copy of your proposed description, i.e., no strikethroughs or highlighting included. This should be what you are proposing for the new description. (May attach separate page if needed)

SEE ATTACHMENT

## Request for Graduate Addition, Deletion, or Change of a Major or Degree-Page 5

Please insert in the text box below your change summary information for the Graduate Council agenda. Please enter the information exactly in this way (including headings):

Department:

Major or Degree:

Type of Change: *(addition, deletion, change)*

Rationale:

Department: MBA Program

Major or Degree: MBA

Type of Change: Program Change

Rationale: Due to a desire to use our faculty resources more effeciently and be more in line with other graduate level program prerequisite requirements within the LCOB, the 500 level "foundation" courses will no longer be a prerequisite for the MBA program. The prerequisite courses will be equivalent courses at the undergraduate level. The MBA program was the only graduate program within the LCOB that had graduate level "foundation" prerequisites. In addition to improving effeciency, this will allow students more flexibility in scheduling given that multiple sections of the undergraduate equivalents are offered every semester.

### 3. Current Catalog Description (pages 94-96 of Graduate Catalog)

#### BUSINESS ADMINISTRATION,

#### M.B.A. Business Administration, M.B.A. (36-Hour Curriculum)

##### Program Description

Qualified candidates are given an opportunity to earn the Master of Business Administration degree. In keeping with its purpose of providing professional preparation and foundation, the M.B.A. program gives emphasis to building a strong fundamental framework and to developing skills in managerial problem-solving and decision-making.

##### Program Design

Business policies and procedures, reflecting rapid advancement in technology, are subject to change over time. Methods and practices in current use may be totally inadequate for coming decades. For this reason, greater emphasis is placed on sound general principles and decision-making techniques which provide a base for continuous learning. To accomplish this purpose, the program involves:

1. A series of Business Foundation courses which enable the student to continue professional development. The foundation courses required will be determined by the M.B.A. Director and/or the Graduate School of Management Academic Advisor.
2. A broad study of functional areas of business and their interrelationships, with emphasis on application of knowledge, concepts, and analytical methods for problem-solving.

The program can be completed in 15-18 months, attending on a full-time basis, depending on the candidate's previous training.

The M.B.A. program includes:

|  | Hours        |
|--|--------------|
| Business Foundation courses, required as determined by the M.B.A. Director and/or the GSM Academic Advisor | 15           |
| M.B.A. Functional Studies courses  | 36           |
| <b>TOTAL</b>   | <b>36-54</b> |

The university and the College of Business reserve the right, even after the enrollment of students, to make individual curricular adjustments whenever serious deficiencies or needs are found. This may involve additional coursework in speech and/or English whenever necessary. Deficiencies will be determined by the M.B.A. program director. Students may be required to take such courses without credit toward the master's degree and at their own expense.

##### Admission Requirements

###### Full Admission

Applicants should follow the admissions process described in this catalog or at the Graduate Admissions website: [www.marshall.edu/graduate](http://www.marshall.edu/graduate).

Applicants must submit a copy of their resume, and must either have:

1. An undergraduate degree in business from a regionally accredited institution with an undergraduate Grade Point Average (GPA) of 3.0 or higher on a 4.0 scale for all previously completed undergraduate coursework.
- OR
2. An undergraduate degree from a regionally accredited institution with a minimum undergraduate GPA of 2.5 or higher on a 4.0 scale for all previously completed undergraduate university work, and, in addition to the resume, two letters of recommendation. Applicant may also submit additional documents such as statement of purpose, test scores, etc.
3. Have successfully completed the Management Foundations Certificate program with a 3.0 or higher.
- OR
4. Have a doctoral degree from a regionally accredited institution.

**Conditional Admission.**

Conditional Admission can be granted for one term if the applicant meets all program requirements for admission except they have not officially graduated with their bachelor's degree. Once the degree is granted the applicant would need to resubmit their official transcripts for full admission.

*Note:* Applicants may be asked to submit additional material if needed before an admission decision is made. Generally, more students apply to the M.B.A. program than are accepted each year; therefore, the selection process is competitive.

**Program Requirements****Plan of Study**

The student and his/her advisor shall prepare a Plan of Study which must be approved during the semester in which the student initially enrolls. A plan should be appropriate to meet the needs of the student in his/her chosen field. It shall include the specific courses the student is expected to complete; and shall also list all other requirements of the program or school. Courses listed on the Plan of Study shall be those judged appropriate by the faculty. Subsequent requests for changes in the plan must be formally approved by the M.B.A. Director or the Academic Advisor. Any deviation from the final Plan of Study and/or discrepancy between it and the student's official transcript will delay graduation. Any Plan of Study that was approved may become void if a student is inactive for one year (unless on an official leave of absence).

**Grade Point Average Requirement**

A student must have a 3.0 overall GPA in all program coursework, with no more than two C's in his or her 36 hours of Functional Studies courses. In addition, the student must maintain a cumulative 3.0 GPA in all courses completed after admission to the degree program, along with any previous Marshall University coursework to be counted toward the current degree. This standard must be met for the student to graduate. If the student falls below these standards, then that student shall be placed on academic probation and will be subject to dismissal from the program.

**Comprehensive Assessment**

Degree candidates are required to complete a comprehensive assessment prior to receipt of the master's degree. The timing and form of a student's comprehensive assessment shall be approved in advance by the Director of the Graduate School of Management. The comprehensive assessment is usually a written term paper required within the final, integrated capstone course, MGT 699, "Business Policy and Strategy."

**Course Enrollment Policy**

In order to take any 600-level course in the College of Business, students must be enrolled in a graduate program in the college. On an exception basis, a student not enrolled in an LCOB graduate program may take only one 600-level course with the written approval of the Academic Advisor or the MBA Director. Cooperative programs with other departments must be approved by the MBA Director. It is the responsibility of the student to obtain this approval before attempting to register. Additionally, the student must meet the specific course prerequisites. Students who violate this policy will be administratively withdrawn.

**Course Requirements**

All students are required to complete 36 hours of M.B.A. Functional Studies courses and 0-18 hours of Business Foundation courses, as determined by the M.B.A. Director and/or the GSM Academic Advisor. The 36-hour M.B.A. courses must be completed with a GPA of 3.0 (B or better) with no more than 2 C's. In addition, each candidate must pass a comprehensive assessment, which normally is a required written term paper within the final, integrated capstone course, MGT 699, "Business Policy and Strategy."

***Business Foundation Courses***

|         |                                 |
|---------|---------------------------------|
| MGT 500 | Analytic Methods and Techniques |
| ACC 510 | Survey of Accounting            |
| ECN 501 | Economic Analysis               |
| MKT 511 | Marketing and Management        |
| FIN 510 | Principles of Business Finance  |

***M.B.A. Functional Studies Courses***

|         |                                   |
|---------|-----------------------------------|
| MGT 601 | Quantitative Methods for Business |
| ACC 613 | Profit Planning and Controls      |
| FIN 620 | Financial Management              |
| MGT 672 | Organizational Behavior           |
| MKT 682 | Advanced Marketing Management     |
| MIS 678 | Management Information Systems    |

ECN 630 Managerial Economics  
MGT 674 Production/Operations Management  
MGT 699 Business Policy and Strategy  
Three elective courses

#### **Area of Concentration**

Students who choose to take two elective courses in either Accounting, Marketing, Finance, Management, Health Care Administration, or Human Resource Management in addition to the functional study courses can receive a concentration in that functional area.

#### **Business Foundations Program**

**NOTE:** The Business Foundations program is not a degree-granting program. Applicants who do not meet the standards for full admission into the 36-hour M.B.A. curriculum may still be admitted into the Business Foundations program. This program is open to those who have no undergraduate background in business. Participation in this program may be used to meet the requirements for admission into the 36-hour M.B.A. curriculum. There is no GMAT requirement or GPA requirement for admission into the Business Foundations program. Those wishing to complete the 36-hour M.B.A. curriculum, however, must meet the requirements for full admission to the M.B.A. Program. No grade below a C will be counted toward the requirements of the M.B.A. program.

#### **Admission Requirements**

Applicants should follow the admissions process described in this catalog or at the Graduate Admissions website: [www.marshall.edu/graduate/admissions/how-to-apply-for-admission](http://www.marshall.edu/graduate/admissions/how-to-apply-for-admission).

A student admitted to the Business Foundations program may not take a 600-level course without the approval of the GSM Academic Advisor.

All required Business Foundation courses or their equivalents must have been completed within seven years of application:

| <i>Courses</i>                    | <i>Undergraduate Equivalents</i>      |
|-----------------------------------|---------------------------------------|
| Survey of Accounting              | Principles of Accounting              |
| Accounting 510                    | 6 Hours                               |
| Economic Analysis                 | Principles of Economics (Micro/Macro) |
| Economics 501                     | 6 Hours                               |
| Principles of Business Finance    | Principles of Finance                 |
| Finance 510                       | 3 Hours                               |
| Analytical Methods and Techniques | Business Statistics                   |
| Management 500                    | 3 Hours                               |
| Marketing & Management            | Principles of Management              |
| Marketing 511                     | 3 Hours                               |
|                                   | Principles of Marketing               |
|                                   | 3 Hours                               |
| Computer literacy                 | Computer literacy                     |

#### 4. Edits to the Current Description

### BUSINESS ADMINISTRATION,

#### M.B.A. Business Administration, M.B.A. (36-Hour Curriculum)

##### Program Description

Qualified candidates are given an opportunity to earn the Master of Business Administration degree. In keeping with its purpose of providing professional preparation and foundation, the M.B.A. program gives emphasis to building a strong fundamental framework and to developing skills in managerial problem-solving and decision-making.

##### Program Design

Business policies and procedures, reflecting rapid advancement in technology, are subject to change over time. Methods and practices in current use may be totally inadequate for coming decades. For this reason, greater emphasis is placed on sound general principles and decision-making techniques which provide a base for continuous learning. To accomplish this purpose, the program involves:

1. A series of undergraduate prerequisite business courses ~~Business Foundation courses~~ which enable the student to continue professional development. The business foundation ~~business foundation~~ courses required will be determined by the M.B.A. Director and/or the Graduate School of Management Academic Advisor.
2. A broad study of functional areas of business and their interrelationships, with emphasis on application of knowledge, concepts, and analytical methods for problem-solving.

The program can be completed in 15-18 months, attending on a full-time basis, depending on the candidate's previous training.

The M.B.A. program includes:

|   | Hours        |
|---|--------------|
| <u>Undergraduate Prerequisite Business Courses</u> <del>Business Foundation courses</del> , required as determined by the M.B.A. Director and/or the GSM Academic Advisor | 0-15-18      |
| M.B.A. Functional Studies courses   | 36           |
| <b>TOTAL</b>  | <b>36-54</b> |

The university and the College of Business reserve the right, even after the enrollment of students, to make individual curricular adjustments whenever serious deficiencies or needs are found. This may involve additional coursework in speech and/or English whenever necessary. Deficiencies will be determined by the M.B.A. program director. Students may be required to take such courses without credit toward the master's degree and at their own expense.

##### Admission Requirements

###### Full Admission

Applicants should follow the admissions process described in this catalog or at the Graduate Admissions website: [www.marshall.edu/graduate](http://www.marshall.edu/graduate).

Applicants must submit a copy of their resume, and must either have:

1. An undergraduate degree in business from a regionally accredited institution with an undergraduate Grade Point Average (GPA) of 3.0 or higher on a 4.0 scale for all previously completed undergraduate coursework.
- OR
2. An undergraduate degree from a regionally accredited institution with a minimum undergraduate GPA of 2.5 or higher on a 4.0 scale for all previously completed undergraduate university work, and, in addition to the resume, two letters of recommendation. Applicant may also submit additional documents such as statement of purpose, test scores, etc.
3. Have successfully completed the undergraduate prerequisite business courses ~~Management Foundations Certificate program~~ with a 3.0 or higher.
- OR
4. Have a doctoral degree from a regionally accredited institution.

### Conditional Admission.

Conditional Admission can be granted for one term if the applicant meets all program requirements for admission except they have not officially graduated with their bachelor's degree. Once the degree is granted the applicant would need to resubmit their official transcripts for full admission.

*Note:* Applicants may be asked to submit additional material if needed before an admission decision is made. Generally, more students apply to the M.B.A. program than are accepted each year; therefore, the selection process is competitive.

### Program Requirements

#### Plan of Study

The student and his/her advisor shall prepare a Plan of Study which must be approved during the semester in which the student initially enrolls. A plan should be appropriate to meet the needs of the student in his/her chosen field. It shall include the specific courses the student is expected to complete; and shall also list all other requirements of the program or school. Courses listed on the Plan of Study shall be those judged appropriate by the faculty. Subsequent requests for changes in the plan must be formally approved by the M.B.A. Director or the Academic Advisor. Any deviation from the final Plan of Study and/or discrepancy between it and the student's official transcript will delay graduation. Any Plan of Study that was approved may become void if a student is inactive for one year (unless on an official leave of absence).

#### Grade Point Average Requirement

A student must have a 3.0 overall GPA in all program coursework, with no more than two C's in his or her 36 hours of Functional Studies courses. In addition, the student must maintain a cumulative 3.0 GPA in all courses completed after admission to the degree program, along with any previous Marshall University coursework to be counted toward the current degree. This standard must be met for the student to graduate. If the student falls below these standards, then that student shall be placed on academic probation and will be subject to dismissal from the program.

#### Comprehensive Assessment

Degree candidates are required to complete a comprehensive assessment prior to receipt of the master's degree. The timing and form of a student's comprehensive assessment shall be approved in advance by the Director of the Graduate School of Management. The comprehensive assessment is usually a written term paper required within the final, integrated capstone course, MGT 699, "Business Policy and Strategy."

#### Course Enrollment Policy

In order to take any 600-level course in the College of Business, students must be enrolled in a graduate program in the college. On an exception basis, a student not enrolled in an LCOB graduate program may take only one 600-level course with the written approval of the Academic Advisor or the MBA Director. Cooperative programs with other departments must be approved by the MBA Director. It is the responsibility of the student to obtain this approval before attempting to register. Additionally, the student must meet the specific course prerequisites. Students who violate this policy will be administratively withdrawn.

#### Course Requirements

All students are required to complete 36 hours of M.B.A. Functional Studies courses and 0-18 hours of undergraduate prerequisite business courses ~~Business Foundation courses~~, as determined by the M.B.A. Director and/or the GSM Academic Advisor. The 36-hour M.B.A. courses must be completed with a GPA of 3.0 (B or better) with no more than 2 C's. In addition, each candidate must pass a comprehensive assessment, which normally is a required written term paper within the final, integrated capstone course, MGT 699, "Business Policy and Strategy."

#### Undergraduate Prerequisite Business Courses ~~Business Foundation Courses~~

|         |                                 |
|---------|---------------------------------|
| MGT 500 | Analytic Methods and Techniques |
| ACC 510 | Survey of Accounting            |
| ECN 501 | Economic Analysis               |
| MKT 511 | Marketing and Management        |
| FIN 510 | Principles of Business Finance  |
| ACC 215 | Accounting Principles           |
| ECN 250 | Principles of Microeconomics    |
| FIN 323 | Principles of Finance           |
| MGT 218 | Business Statistics             |
| MGT 320 | Principles of Management        |
| MKT 340 | Principles of Marketing         |

#### M.B.A. Functional Studies Courses

|         |                                   |
|---------|-----------------------------------|
| MGT 601 | Quantitative Methods for Business |
|---------|-----------------------------------|

|                        |                                  |
|------------------------|----------------------------------|
| ACC 613                | Profit Planning and Controls     |
| FIN 620                | Financial Management             |
| MGT 672                | Organizational Behavior          |
| MKT 682                | Advanced Marketing Management    |
| MIS 678                | Management Information Systems   |
| ECN 630                | Managerial Economics             |
| MGT 674                | Production/Operations Management |
| MGT 699                | Business Policy and Strategy     |
| Three elective courses |                                  |

### Area of Concentration

Students who choose to take two elective courses in either Accounting, Marketing, Finance, Management, Health Care Administration, or Human Resource Management in addition to the functional study courses can receive a concentration in that functional area.

### Business Foundations Program

*NOTE:* The Business Foundations program is not a degree-granting program. Applicants who do not meet the standards for full admission into the 36-hour M.B.A. curriculum may still be admitted into the Business Foundations program. This program is open to those who have no undergraduate background in business. Participation in this program may be used to meet the requirements for admission into the 36-hour M.B.A. curriculum. There is no GMAT requirement or GPA requirement for admission into the Business Foundations program. Those wishing to complete the 36-hour M.B.A. curriculum, however, must meet the requirements for full admission to the M.B.A. Program. No grade below a C will be counted toward the requirements of the M.B.A. program.

### Admission Requirements

Applicants should follow the admissions process described in this catalog or at the Graduate Admissions website: [www.marshall.edu/graduate/admissions/how-to-apply-for-admission](http://www.marshall.edu/graduate/admissions/how-to-apply-for-admission).

A student admitted required to the take undergraduate prerequisite business courses Business Foundations program courses may not take a 600-level course without the approval of the GSM Academic Advisor.

All required Business Foundation courses or their equivalents must have been completed within seven years of application:

| <i>Courses</i>                    | <i>Undergraduate Equivalents</i>      |
|-----------------------------------|---------------------------------------|
| Survey of Accounting              | Principles of Accounting              |
| Accounting 510                    | 6 Hours                               |
| Economic Analysis                 | Principles of Economics (Micro/Macro) |
| Economics 501                     | 6 Hours                               |
| Principles of Business Finance    | Principles of Finance                 |
| Finance 510                       | 3 Hours                               |
| Analytical Methods and Techniques | Business Statistics                   |
| Management 500                    | 3 Hours                               |
| Marketing & Management            | Principles of Management              |
| Marketing 511                     | 3 Hours                               |
|                                   | Principles of Marketing               |
|                                   | 3 Hours                               |
| Computer literacy                 | Computer literacy                     |

## 4. New Catalog Description

### BUSINESS ADMINISTRATION,

#### M.B.A. Business Administration, M.B.A. (36-Hour Curriculum)

##### Program Description

Qualified candidates are given an opportunity to earn the Master of Business Administration degree. In keeping with its purpose of providing professional preparation and foundation, the M.B.A. program gives emphasis to building a strong fundamental framework and to developing skills in managerial problem-solving and decision-making.

##### Program Design

Business policies and procedures, reflecting rapid advancement in technology, are subject to change over time. Methods and practices in current use may be totally inadequate for coming decades. For this reason, greater emphasis is placed on sound general principles and decision-making techniques which provide a base for continuous learning. To accomplish this purpose, the program involves:

1. A series of undergraduate prerequisite business courses which enable the student to continue professional development. The business courses required will be determined by the M.B.A. Director and/or the Graduate School of Management Academic Advisor.
2. A broad study of functional areas of business and their interrelationships, with emphasis on application of knowledge, concepts, and analytical methods for problem-solving.

The program can be completed in 15-18 months, attending on a full-time basis, depending on the candidate's previous training.

The M.B.A. program includes:

|  | Hours        |
|--|--------------|
| Undergraduate Prerequisite Business Courses as determined by the M.B.A. Director and/or the GSM Academic Advisor | 0-18         |
| M.B.A. Functional Studies courses  | 36           |
| <b>TOTAL</b>   | <b>36-54</b> |

The university and the College of Business reserve the right, even after the enrollment of students, to make individual curricular adjustments whenever serious deficiencies or needs are found. This may involve additional coursework in speech and/or English whenever necessary. Deficiencies will be determined by the M.B.A. program director. Students may be required to take such courses without credit toward the master's degree and at their own expense.

##### Admission Requirements

###### Full Admission

Applicants should follow the admissions process described in this catalog or at the Graduate Admissions website: [www.marshall.edu/graduate](http://www.marshall.edu/graduate).

Applicants must submit a copy of their resume, and must either have:

1. An undergraduate degree in business from a regionally accredited institution with an undergraduate Grade Point Average (GPA) of 3.0 or higher on a 4.0 scale for all previously completed undergraduate coursework.
- OR
2. An undergraduate degree from a regionally accredited institution with a minimum undergraduate GPA of 2.5 or higher on a 4.0 scale for all previously completed undergraduate university work, and, in addition to the resume, two letters of recommendation. Applicant may also submit additional documents such as statement of purpose, test scores, etc.
3. Have successfully completed the undergraduate prerequisite business courses with a 3.0 or higher.
- OR
4. Have a doctoral degree from a regionally accredited institution.

### **Conditional Admission.**

Conditional Admission can be granted for one term if the applicant meets all program requirements for admission except they have not officially graduated with their bachelor's degree. Once the degree is granted the applicant would need to resubmit their official transcripts for full admission.

*Note:* Applicants may be asked to submit additional material if needed before an admission decision is made. Generally, more students apply to the M.B.A. program than are accepted each year; therefore, the selection process is competitive.

### **Program Requirements**

#### **Plan of Study**

The student and his/her advisor shall prepare a Plan of Study which must be approved during the semester in which the student initially enrolls. A plan should be appropriate to meet the needs of the student in his/her chosen field. It shall include the specific courses the student is expected to complete; and shall also list all other requirements of the program or school. Courses listed on the Plan of Study shall be those judged appropriate by the faculty. Subsequent requests for changes in the plan must be formally approved by the M.B.A. Director or the Academic Advisor. Any deviation from the final Plan of Study and/or discrepancy between it and the student's official transcript will delay graduation. Any Plan of Study that was approved may become void if a student is inactive for one year (unless on an official leave of absence).

#### **Grade Point Average Requirement**

A student must have a 3.0 overall GPA in all program coursework, with no more than two C's in his or her 36 hours of Functional Studies courses. In addition, the student must maintain a cumulative 3.0 GPA in all courses completed after admission to the degree program, along with any previous Marshall University coursework to be counted toward the current degree. This standard must be met for the student to graduate. If the student falls below these standards, then that student shall be placed on academic probation and will be subject to dismissal from the program.

#### **Comprehensive Assessment**

Degree candidates are required to complete a comprehensive assessment prior to receipt of the master's degree. The timing and form of a student's comprehensive assessment shall be approved in advance by the Director of the Graduate School of Management. The comprehensive assessment is usually a written term paper required within the final, integrated capstone course, MGT 699, "Business Policy and Strategy."

#### **Course Enrollment Policy**

In order to take any 600-level course in the College of Business, students must be enrolled in a graduate program in the college. On an exception basis, a student not enrolled in an LCOB graduate program may take only one 600-level course with the written approval of the Academic Advisor or the MBA Director. Cooperative programs with other departments must be approved by the MBA Director. It is the responsibility of the student to obtain this approval before attempting to register. Additionally, the student must meet the specific course prerequisites. Students who violate this policy will be administratively withdrawn.

#### **Course Requirements**

All students are required to complete 36 hours of M.B.A. Functional Studies courses and 0-18 hours of undergraduate prerequisite business courses, as determined by the M.B.A. Director and/or the GSM Academic Advisor. The 36-hour M.B.A. courses must be completed with a GPA of 3.0 (B or better) with no more than 2 C's. In addition, each candidate must pass a comprehensive assessment, which normally is a required written term paper within the final, integrated capstone course, MGT 699, "Business Policy and Strategy."

#### *Undergraduate Prerequisite Business Courses*

|         |                              |
|---------|------------------------------|
| ACC215  | Accounting Principles        |
| ECN 250 | Principles of Microeconomics |
| FIN 323 | Principles of Finance        |
| MGT 218 | Business Statistics          |
| MGT 320 | Principles of Management     |
| MKT 340 | Principles of Marketing      |

#### *M.B.A. Functional Studies Courses*

|         |                                   |
|---------|-----------------------------------|
| MGT 601 | Quantitative Methods for Business |
| ACC 613 | Profit Planning and Controls      |
| FIN 620 | Financial Management              |
| MGT 672 | Organizational Behavior           |
| MKT 682 | Advanced Marketing Management     |
| MIS 678 | Management Information Systems    |

ECN 630 Managerial Economics  
MGT 674 Production/Operations Management  
MGT 699 Business Policy and Strategy  
Three elective courses

**Area of Concentration**

Students who choose to take two elective courses in either Accounting, Marketing, Finance, Management, Health Care Administration, or Human Resource Management in addition to the functional study courses can receive a concentration in that functional area.

**Admission Requirements**

Applicants should follow the admissions process described in this catalog or at the Graduate Admissions website: [www.marshall.edu/graduate/admissions/how-to-apply-for-admission](http://www.marshall.edu/graduate/admissions/how-to-apply-for-admission).

A student required to take undergraduate prerequisite business courses may not take a 600-level course without the approval of the GSM Academic Advisor.

## Request for Graduate Addition, Deletion, or Change of a Certificate

1. Prepare one paper copy with all signatures and supporting material and forward to the Graduate Council Chair.
2. E-mail one identical PDF copy to the Graduate Council Chair. If attachments included, please merge into a single file.
3. **The Graduate Council cannot process this application until it has received both the PDF copy and the signed hard copy.**

**NOTE:** If proposing a new certificate, please read this first: [www.marshall.edu/graduate/graduatecouncil/certificatespolicy/certificatepolicy.pdf](http://www.marshall.edu/graduate/graduatecouncil/certificatespolicy/certificatepolicy.pdf)

College: Pharmacy

Dept/Division: Academic Affairs

Contact Person: Brittany Riley

Phone: 304-696-7396

Name of Certificate PharmD Research Track Certificate

Check action requested: ☒ Addition ☐ Deletion ☐ ChangeEffective Term/Year      Fall 20       Spring 20       Summer 20 

**Information on the following pages must be completed before signatures are obtained.**

Signatures: if disapproved at any level, do not sign. Return to previous signer with recommendation attached.

|   |                       |
|---|-----------------------|
| Dept. Chair/Division Head <u>Ed Bry (Antonia)</u> | Date <u>3/20/19</u>   |
| College Curriculum Chair <u>Bill Pao</u>          | Date <u>3/21/19</u>   |
| College Dean <u>Gayle A. Beozar</u>               | Date <u>3/20/2019</u> |
| Graduate Council Chair <u>Lori Hunter</u>         | Date <u>4/29/19</u>   |
| Provost/VP Academic Affairs _____                 | Date _____            |
| Presidential Approval _____                       | Date _____            |

## Request for Graduate Addition, Deletion, or Change of a Certificate-Page 2

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Please provide a rationale for addition, deletion, change:

The Pharm.D. Research Track Certificate Program is designed to provide exceptional students in the School of Pharmacy with in-depth training and experience in research relevant to the Pharm.D. curriculum. This program is tailored to student participant interests and is highly student and faculty-directed. The program promotes independent thinking and scholarly inquiry for student participants.

Please describe any changes in curriculum:

List course number, title, credit hours. Note whether each course is required or optional. Enter NONE if no change.

PHAR 801-Special Topics in Research- 6 Credit hours- 3 credits hours in Fall, 3 credit hours in Spring

PHAR 887-APPE 7-Elective

**1. ADDITIONAL RESOURCE REQUIREMENTS:** If your program requires additional faculty, equipment or specialized materials to ADD or CHANGE this certificate, attach an estimate of the time and money required to secure these items.

NOTE: Approval of this form does not imply approval for additional resources. Enter NONE if not applicable.

None

**2. NON-DUPLICATION:** If a question of possible duplication occurs, attach a copy of the correspondence sent to the appropriate department(s) describing the request and any response received from them. Enter NONE if not applicable.

None

*For catalog changes as a result of the above actions, please fill in the following pages.*

## Request for Graduate Addition, Deletion, or Change of a Certificate-Page 3

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### 3. *Current Catalog Description*

Insert the *Current* Catalog Description and page number from the latest catalog for entries you would like to change.

May attach separate page if needed)

None

### 4. *Edits to the Current Description*

Attach a PDF copy of the current catalog description prepared in MS WORD with strikethroughs to mark proposed deletions and use the highlight function to indicate proposed new text.

### 5. *New Catalog Description*

Insert a 'clean' copy of your proposed description, i.e., no strikethroughs or highlighting included. This should be what you are proposing for the new description. (May attach separate page if needed).

See attached document.

## **Request for Graduate Addition, Deletion, or Change of a Certificate-Page 4**

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Please insert in the text box below your change summary information for the Graduate Council agenda. Please enter the information exactly in this way (including headings):

Department:

Name of Certificate:

Credit Hours:

Type of Change: *(addition, deletion, change)*

Rationale:

Department: Pharmacy

Name of Certificate: PharmD Research Track Certificate

Credit Hours: 14

Type of Change: addition

Rationale: The Pharm.D. Research Track Certificate Program is designed to provide exceptional students in the School of Pharmacy with in-depth training and experience in research relevant to the Pharm.D. curriculum. This program is tailored to student participant interests and is highly student and faculty-directed. The program promotes independent thinking and scholarly inquiry for student participants.