Chair: Tracy Christofero | **GC#4: Major or Degree**

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 Science

Dept/Division: Physics/Physical Science

Contact Person: Huong Nguen, Ralph Oberly

Phone: x6-2754

Degree Program: Master of Science in Physical and Applied Science

Check action requested: ☒ Addition ☐ Deletion ☐ Change

Effective Term/Year: Fall 20 18 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 [signature]	Date 02/15/2018
College Curriculum Chair [signature]	Date 2/26/18
College Dean Evelyn Pugsley-Cody	Date 2/26/2018
Graduate Council Chair	Date
Provost/VP Academic Affairs	Date
Presidential Approval	Date
Board of Governors Approval	Date

Form updated 3/2012

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)

Rationale: The Department of Physics requests the addition of a Major in Physics, within the Master of Science in Physical and Applied Science Program. The Department of Physics is one of the two departments in CoS that still don't have a M.S. Major. The M.S. Major in Physics will increases the recruitment, not only by bringing new students from other universities in in the region who don't have this program, but also by attracting more local undergraduate students interested in a physics career. Moreover, the M.S. Major will benefit the research of Physics faculty members, since the graduate students have more knowledge and more time to work on advanced problems with faculty members. The M.S. students would be able to serve as G.A.s for the Physics department since they have enough knowledge to teach the general physics labs, grade homework and help in setting up experiments. The problem of finding G.A.s has been an unsolvable one for the Physics Department, when there are no graduate students in Physics. The existence of graduate students in the department would also help to promote the interaction between students, between students and faculty, and promote learning and research.

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 proposed curriculum for the Master of Science in Physical and Applied Science: Major in Physics is the following:
Credit Hours: 32 with thesis, 36 without thesis
1. Required Courses (20 ch) : PHY 600 Electricity and Magnetism (4ch), PHY 608 Statistical Mechanics (4ch), PHY 630 Classical Mechanics (4ch), PHY 642 Advanced Quantum Mechanics (4ch), PHY 645 Methods of Mathematical Physics (4ch).
2. Elective courses (6 ch), among which one Advanced Lab is required
3. Thesis (6 ch) or Elective Courses (10 ch)
General Requirements: Students need to complete a minimum of 32 ch with thesis (36 ch without thesis) with a GPA of 3.0 or better. Participation in the Physics Department colloquia is required for all graduate students.

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)

Please see Attachment 1

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)

Please see Attachment 3

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: Physics
Major or Degree: Major in Physics, Master of Science in Physical and Applied Science
Type of Change: Addition of major
Rationale: The Department of Physics requests the addition of a Major in Physics, within the Master of Science in Physical and Applied Science Program. The Department of Physics is one of the two departments in CoS that still don't have a M.S. Major. The M.S. Major in Physics will increases the recruitment, not only by bringing new students from other universities in in the region who don't have this program, but also by attracting more local undergraduate students interested in a physics career. Moreover, the M.S. Major will benefit the research of Physics faculty members, since the graduate students have more knowledge and more time to work on advanced problems with faculty members. The M.S. students would be able to serve as G.A.s for the Physics department since they have enough knowledge to teach the general physics labs, grade homework and help in setting up experiments. The problem of finding G.A.s has been an unsolvable one for the Physics Department, when there are no graduate students in Physics. The existence of graduate students in the department would also help to promote the interaction between students, between students and faculty, and promote learning and research.

Old catalogue Description for the M.S. in Physical and Applied Science

PHYSICAL AND APPLIED SCIENCE, M.S.

Areas of Emphasis

Chemistry
Geobiophysical Modeling
Geology
Mathematics
Physics and Physical Science

Minor in Geobiophysical Science

The Master of Science in Physical and Applied Science, offered in cooperation with the Departments of Chemistry, Geology, Computer and Information Technology, and Mathematics, is intended to provide the opportunity for students with diverse qualifications to improve the depth and breadth of their knowledge in the Physical Sciences. The degree offered is a M.S. in Physical and Applied Science, with an Area of Emphasis in one of the following: Chemistry, Geobiophysical Modeling, Geology, Mathematics, Physics and Physical Science.

The area of emphasis in Geobiophysical Modeling is interdisciplinary, with core courses in Remote Sensing and GIS Modeling. Thereafter, students may choose from areas of concentration in Aquatic, Terrestrial or Biophysical Systems and Models.

Admission Requirements

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.*

In addition:

a. The applicant must have an undergraduate Grade Point Average (GPA) of 3.0 or higher on a 4.0 scale in their major;
b. Applicants external to the Marshall University geology department must arrange for THREE recommendation letters mailed (or e-mailed) to the department chair.
c. Applicants with a GPA between 2.5 and 3.0 in their major may be provisionally admitted to the Geology emphasis program with the unanimous approval of the Geology faculty;
d. Applicants who do not meet Marshall's requirements for a B.S. in Geology may be required to take additional courses (as determined by the Geology faculty), in addition to graduate coursework, to provide an adequate foundation in the area of emphasis. The foundation courses may be undergraduate courses.

Degree Requirements

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

Programs will be designed to meet individual needs. Students must consult with their advisors for specific requirements. The writing of a thesis is optional in all areas of emphasis.

If the thesis option is chosen, a minimum of 32 hours is required, including not more than 6 hours for the thesis. Without the thesis, 36 hours are required.

NOTE: These are general guidelines. Individual departments may have their own requirements.

Hours	
Minimum requirements	32-36
Area of Emphasis (Chemistry, Geobiophysical Modeling, Geology, Mathematics, Physics)	12-18
Minor area (Chemistry, Geobiophysical Modeling, Geology, Mathematics, Physics)	6
Electives	12-18

Requirements for Geology Area of Emphasis

1. Students must pass a qualifying examination during the first eight weeks of their first semester of graduate work. The exam will be administered orally by the Geology faculty and will be coordinated by the student's thesis advisor. Students will be allowed two attempts to pass the qualifying exam. If a student fails to pass the qualifying exam on the first or second attempt, the student must withdraw from the program at the end of their first semester and may not reapply the program until the following academic year.
2. Following successful completion of the qualifying exam, and prior to the end of the first semester of graduate work, students must submit to the Graduate College a Plan of Study approved by the Geology faculty. The plan must include a total of at least 32 hours, at least 16 of which must be earned in classes numbered 600 or above. In addition, the curriculum must include at least 12 hours of 500-600 level geology courses. A maximum of six hours may be taken as thesis credit.
3. Following approval of the Plan of Study, the student forms a thesis committee with the mutual consent of his/ her advisor and nominated faculty. The committee will consist of at least three faculty members with graduate status, at least two of whom are faculty members from the Geology Department.
4. Following successful passing of the qualifying exam, the student must submit a thesis proposal to his/her committee. The proposal must be approved by the committee no later than the end of the student's second semester of enrollment in the plan. Guidelines for writing the research proposal can be found on the departmental website.
5. Students will be evaluated by a letter grade in all graduate coursework with the exception of the 6 hours of thesis work, which will be evaluated by a CR/NC grade. No candidate will earn his/her degree unless he/she obtains a "CR" grade for the thesis.
6. Students should submit an application for graduation to the Graduate College at the beginning of the semester in which they plan to graduate.

7. Upon completion of his/her thesis work, the student will submit a draft of his/her thesis approved by his/her advisor to the thesis committee. Guidelines for scientific writing an be found on the departmental website.
8. The candidate must orally present and successfully defend his/her thesis before his/her thesis committee. The oral presentation will be open to the public. The subsequent question-and-answer session by the committee will focus solely on the student's research, and will be closed to the public. Upon completion of the Q & A session, the student will be asked to leave the room, while the committee members deliberate. The candidate's thesis advisor will communicate the results of deliberation to the student. Should the candidate not pass his/ her thesis defense, he/she will be allowed two more attempts at defending the thesis. Conference or meeting presentations will not substitute for the oral defense.
9. The student must submit a final copy of his/her thesis with all revisions requested by the committee members to the committee for final approval. Once the committee approves the student's thesis, the student will be given permission to upload a PDF version of the thesis on the Graduate College ETD Administrator website. The candidate's advisor is responsible for proofreading this version to ensure that it is identical to the version approved by his/her thesis committee.
10. Normal time for completion of the M.S. degree is 2.5 years. A student must complete all requirements for graduation within five calendar years from the date of successful completion of his/her qualifying exam. Otherwise, his/her thesis hours will no long count toward graduation.
11. A student who fails to satisfy criterion 10 above may petition his/her thesis committee explaining the circumstances behind this delay.

Minor in Geobiophysical Science

The Department of Physics and Physical Science also offers a minor field in Geobiophysical Science. Please contact the department chair for information about this minor.

ATTACHMENT 2:
Change Catalogue Description for the M.S. in Physical and Applied Science

PHYSICAL AND APPLIED SCIENCE, M.S.

Areas of Emphasis

Chemistry
Geobiophysical Modeling
Geology
Mathematics
Physics and Physical Science

Minor in Geobiophysical Science
Major in Physics

The Master of Science in Physical and Applied Science, offered in cooperation with the Departments of Chemistry, Geology, Computer and Information Technology, and Mathematics, is intended to provide the opportunity for students with diverse qualifications to improve the depth and breadth of their knowledge in the Physical Sciences. The degree offered is a M.S. in Physical and Applied Science, with an Area of Emphasis in one of the following: Chemistry, Geobiophysical Modeling, Geology, Mathematics, and Physics and Physical Science.

The area of emphasis in Geobiophysical Modeling is interdisciplinary, with core courses in Remote Sensing and GIS Modeling. Thereafter, students may choose from areas of concentration in Aquatic, Terrestrial or Biophysical Systems and Models.

Admission Requirements

Applicants should follow the admissions process described in the current catalogue or at the Graduate Admissions website at *www.marshall.edu/graduate/admissions/how-to-apply-for-admission.*

In addition:

a. The applicant must have an undergraduate Grade Point Average (GPA) of 3.0 or higher on a 4.0 scale in their major;
b. Applicants external to the Marshall University geology department must arrange for THREE recommendation letters mailed (or e-mailed) to the department chair.
c. Applicants with a GPA between 2.5 and 3.0 in their major may be provisionally admitted to the Geology emphasis program with the unanimous approval of the Geology faculty;
d. Applicants who do not meet Marshall's requirements for a B.S. in Geology may be required to take additional courses (as determined by the Geology faculty), in addition to graduate coursework, to provide an adequate foundation in the area of emphasis. The foundation courses may be undergraduate courses.

Degree Requirements

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

Programs will be designed to meet individual needs. Students must consult with their advisors for specific requirements. The writing of a thesis is optional in all areas of emphasis, except Geology.

If the thesis option is chosen, a minimum of 32 hours is required, including not more than 6 hours for the thesis. Without the thesis, 36 hours are required.

NOTE: These are general guidelines. Individual departments may have their own requirements.

Hours

Minimum requirements.....32-36

Area of Emphasis (Chemistry, Geobiophysical Modeling, Geology, Mathematics, Physics).....12-18

Minor area (Chemistry, Geobiophysical Modeling, Geology, Mathematics, Physics)..... 6

Electives.....12-18

Requirements for Geology Area of Emphasis

1. Students must pass a qualifying examination during the first eight weeks of their first semester of graduate work. The exam will be administered orally by the Geology faculty and will be coordinated by the student's thesis advisor. Students will be allowed two attempts to pass the qualifying exam. If a student fails to pass the qualifying exam on the first or second attempt, the student must withdraw from the program at the end of their first semester and may not reapply the program until the following academic year.
2. Following successful completion of the qualifying exam, and prior to the end of the first semester of graduate work, students must submit to the Graduate College a Plan of Study approved by the Geology faculty. The plan must include a total of at least 32 hours, at least 16 of which must be earned in classes numbered 600 or above. In addition, the curriculum must include at least 12 hours of 500-600 level geology courses. A maximum of six hours may be taken as thesis credit.
3. Following approval of the Plan of Study, the student forms a thesis committee with the mutual consent of his/ her advisor and nominated faculty. The committee will consist of at least three faculty members with graduate status, at least two of whom are faculty members from the Geology Department.
4. Following successful passing of the qualifying exam, the student must submit a thesis proposal to his/her committee. The proposal must be approved by the committee no later than the end of the student's second semester of enrollment in the plan. Guidelines for writing the research proposal can be found on the departmental website.
5. Students will be evaluated by a letter grade in all graduate coursework with the exception of the 6 hours of thesis work, which will be evaluated by a CR/NC grade. No candidate will earn his/her degree unless he/she obtains a "CR" grade for the thesis.

1. Required Courses (20 credit-hours)
PHY 600 Electricity and Magnetism.....4
PHY 608 Statistical Mechanics.....4
PHY 630 Classical Mechanics.....4
PHY 642 Advanced Quantum Mechanics.....4
PHY 645 Methods of Mathematical Physics.....4

2. Elective courses (6 credit-hours), among which one Advanced Lab is required

3. Thesis (6 ch) or Elective Courses (10 ch)

Students can choose between the Thesis option and Non-Thesis option to complete the requirements for the M.S. program.

Thesis Option: Research opportunities in the Physics Department are broad. Faculty members in the Physics Department are doing their research in theoretical and experimental condensed matter physics, nanoscience, solar cells, laser physics, optics, gravitational physics and astrophysics. Students can choose to work with one of the faculty members on a research direction the faculty and the students choose. A thesis must be submitted to a committee of 3 faculty members and presented after that in an oral exam.
Non-thesis Option: Students who already complete all required courses and labs and do not want to do a thesis can fulfill the requirement by taking elective courses from the graduate level courses offered by the Physics Department.

General Requirement: Students need to complete a minimum of 32 credits with thesis (36 without thesis) with a GPA of 3.0 or better.

6. Students should submit an application for graduation to the Graduate College at the beginning of the semester in which they plan to graduate.
7. Upon completion of his/her thesis work, the student will submit a draft of his/her thesis approved by his/her advisor to the thesis committee. Guidelines for scientific writing can be found on the departmental website.
8. The candidate must orally present and successfully defend his/her thesis before his/her thesis committee. The oral presentation will be open to the public. The subsequent question-and-answer session by the committee will focus solely on the student's research, and will be closed to the public. Upon completion of the Q & A session, the student will be asked to leave the room, while the committee members deliberate. The candidate's thesis advisor will communicate the results of deliberation to the student. Should the candidate not pass his/ her thesis defense, he/she will be allowed two more attempts at defending the thesis. Conference or meeting presentations will not substitute for the oral defense.
9. The student must submit a final copy of his/her thesis with all revisions requested by the committee members to the committee for final approval. Once the committee approves the student's thesis, the student will be given permission to upload a PDF version of the thesis on the Graduate College ETD Administrator website. The candidate's advisor is responsible for proofreading this version to ensure that it is identical to the version approved by his/her thesis committee.
10. Normal time for completion of the M.S. degree is 2.5 years. A student must complete all requirements for graduation within five calendar years from the date of successful completion of his/her qualifying exam. Otherwise, his/her thesis hours will no long count toward graduation.
11. A student who fails to satisfy criterion 10 above may petition his/her thesis committee explaining the circumstances behind this delay.

Minor in Geobiophysical Science

The Department of Physics ~~and Physical Science~~ also offers a minor field in Geobiophysical Science. Please contact the department chair for information about this minor.

Major in Physics

The Department of Physics at Marshall offers a Master of Science with Major in Physics, within the Physical and Applied Science Master Program. Students with an undergraduate degree in Physics or related fields are encouraged to apply to this Major to advance in their knowledge of Physics, and to pursue their career goals in industry, government or teaching. The Marshall Physics Master's Major has been designed to meet the needs of students who are either interested to obtain an M.S. in Physics as their terminal degree, or want to have further graduate study in physics, astronomy or other fields. A Master's serves as a bridge to a Ph.D. program. Moreover, graduates with an M.S. in Physics usually are hired into positions which require a high level of problem-solving or technical skills, in the federal or private sector.

Degree Requirements:

Rationale for a Major in Physics within the M.S. in Physical and Applied Science

The Marshall Physics Department is a strong Department with 10 faculty members, all holding a Ph.D. degree. However, the Physics Department is one of the two departments in CoS which still have no M.S. Major. At the last 5-year Program Review in March 2017, the Board of Governors Review Committee also encouraged us to have our new graduate program in Physics. A Master's Major in Physics is needed for many reasons.

Firstly, there is no M.S. degree in Physics in the region, and there is a big demand for it. The nearest university with such a program is WVU. While the M.S. in Physical Sciences does exist, and attracts students, it is a multi-discipline program which does not provide graduate courses in Physics, and students who want a graduate study in pure Physics still do not have the program and the courses they want. Many of our former students need an advanced degree in Physics, but want to stay in the regions. Many other would like to have the M.S. degree before going on to Ph.D. programs. Many foreign students would like to have their Master's degree before looking for jobs or other programs.

Secondly, the fact that there is no M.S. degree makes Marshall less appealing for undergraduates. While deciding their majors, students want to see how far they could go with the major. If we have an M.S. Major, students could continue with Physics until a graduate degree. With this Master's degree, we would have more undergraduate students for our B.S. program. Marshall undergraduates who are considering a Ph.D. in physics would be better prepared with an M.S. in physics than in physical science, and they would not have to go to another university for their Master's. This also provides them continuity and an easier transition from undergraduate to graduate school.

Thirdly, an M.S. degree is a major benefit to research of our faculty. Our faculty members are very active in different research areas. The department makes an effort to support and promote faculty and student involvement in research. While undergraduate research is going very well in our department, research in physics at the undergraduate level is hindered both because undergraduates are less prepared for advanced topics in physics, and by the smaller amount of time undergraduates can dedicate to research. A student pursuing a Master's degree in physics must complete a minimum of 30 credit hours in graduate physics courses, including at least 6 hours of research towards the Master's thesis. It is evident that this kind of student is more apt to be successful in research and would be of great help to our faculty. With the length of 2 years for the program, the graduate students would have more time to work on a long-term research project. Moreover, the M.S. students would most likely come from Marshall's undergraduate program, and their capstone project and graduate research could be in similar fields. This would allow them to build on the experience gained in their undergraduate work. As a consequence, the benefit will be in carrying out more complex and advanced projects that can be done in collaboration with the faculty advisors and it will be a big factor to promote the faculty research.

Fourthly, the department will benefit from the graduate students of the program. We try to retain and benefit from bright students interested in pursuing a graduate degree in physics.

While progressing through this program here at Marshall University, the students will be working as Graduate Teaching Assistants, where their duties consist of teaching lab classes, grading lab reports, and tutoring undergraduate students. Currently, the Department of Physics has a hard time finding qualified students for these needed jobs. We generally use graduate students from Math and Biology—they have usually taken undergraduate physics at Marshall and are familiar with our labs, but they may not have a physics major's understanding of the concepts. There are not many Chemistry graduate students available, and the Geophysics graduate students usually come from other undergraduate universities, often from other countries, and they are not familiar with our labs and cannot teach our lab classes. Sometimes we were lucky to have as GAs Math or Chemistry graduate students who were undergraduate Physics majors, but those chances are not many, and not stable.

There are other benefits to the department, the faculty and the students. By having Master's students, interaction between students and faculty in the departments will be multi-dimensional. Graduate students would be an important knowledge source for undergraduates; they would be able to work together and guide one another in research labs. A research lab with undergraduates, graduate students and faculty would be much more effective.

One of the most important points we would like to make here is that this program would result in no extra cost to the University. As the requirement of this degree, students need to complete a minimum of 30 credit hours, including 5 required 600-level graduate courses (4 credit-hours each), a graduate thesis or 2 elective courses, and an advanced lab. Given that the program is for 2 years, we would have to offer 2 graduate courses per semester. It would result in 8 faculty teaching hours per semester. Each teaching G.A. could teach 2 classes, so we just need 2 G.A.s to teach 4 general physics 2-hour labs to free 8 teaching hours for faculty to teach those 2 graduate courses. If we have more G.A.s, we would be able to offer more courses, but just with 2 G.A.s the program is already OK to run. So, by having graduate students serve as G.A.s to teach entry level labs, we would be able to offer graduate courses for the Master's program without any additional cost. This year we just built our important upper-division lab Photonics & Solid State Physics, with enough equipment to serve as an advanced lab for graduate students.

Subject: Re: Master Program in Physics
Date: Monday, February 12, 2018 at 11:27:58 AM Eastern Standard Time
From: Nguyen, Que Huong
To: McCunn-Jordan, Laura
CC: Hamilton, Maria
Attachments: CoSCC Minutes 1-26-18 (3).docx

Laura,

Thank you for your message.

Yes, I knew that you got a message from Tracy that no intent plan is required when a major is added to the program. And we also had the meeting with Sonja, Brian and Mary Beth to confirm that the major name will be printed on the diploma, not the name of the program. At the meeting we also adressed that no other accomodation is needed from the school because we have all the courses anyway and we are offering them.

The problem was while you were not in the last curriculum meeting probably the committee members were not fully informed and did not believe that the intent to plan is not needed. Maria sent me the Minutes from the meeting which said:

There is still a lot of confusion about whether this is the appropriate way to go about making the change and whether an intent to plan is required (committee members have been told it is not, but the graduate council website and the major addition form explicitly state that it is). We would like a clear statement from Tracy Christofero that the graduate council has changed this policy and no longer requires the intent to plan for a major. There was some concern that she may have been thinking of AoEs in a previous message that was sent.

It was why I had to write to Tracy, Sonja and Mary Beth again to ask their help, and it was great that Sherri confirmed that.

About other resources, we do not need any addition. All faculty labs are available for students to do research. Advance Lab and courses needed are existing labs and courses.

About other concerns:
· *The committee felt that a curricular change form needed to be completed to change the name of the physics AoE.*
and
· *It seems that the goal is to replace the AoE with a major, but this was not expressed in the document. There was confusion as to why there would need to be both an AoE and Major in physics in the same program.*

After Physics major is approved, we will cancel the Physics AoE.

After the major is created, the students who want to have Physics majors will be able to switch their majors.

· *There were some questions about how the required participation in the Physics Colloquia would*

be enforced, since this is not a course.
Physics Colloquia participation is required to make the students to be informed of what physicists are doing in the bigger picture so that they are more equipped before graduation. If we cannot make that request, let me know, we will do it in different way.

Our students are waiting for the major, so we really need it to be approved.We do not want it to be delayed for another semester. So if you have any other question that you think you need an answer, please let me know before the meeting.

Thanks,

huong

Dr. Que Huong Nguyen,
Professor and Chair,
Physics Department, Marshall University
Science #251
One John Marshall Drive
Huntington WV 25755
Tel 304-696-2756

From: McCunn-Jordan, Laura
Sent: Sunday, February 11, 2018 6:58 PM
To: Nguyen, Que Huong
Subject: Re: Master Program in Physics

Huong,

Thank you for sending this along. Tracy Christofero had informed me back in December that the provost confirmed the intent to plan was not necessary, but it is nice to see it in writing from Sherri Smith.

It is my understanding that the lack of the intent to plan form was not the only reason that your request was not approved by the COS curriculum committee. (I was at a funeral, so David Graefe shared this information with me.) There were some other questions about the paperwork and the plans to accommodate students who are currently in the master's program. If Maria did not inform you of the committee's discussion, I can look at my notes to see what David relayed to me when I am back in the office.

Laura

Laura R. McCunn
Associate Professor of Chemistry
Marshall University

From: Nguyen, Que Huong
Sent: Thursday, February 8, 2018 21:46
To: Christofero, Tracy
Cc: Smith, Sherri; Reynolds, Mary Beth; Cantrell, Sonja; DeBruin, Nat; Pittenger, David; McCunn-Jordan, Laura; Hamilton, Maria
Subject: Re: Master Program in Physics

Sherri, thank you very much for clarifying. Yes, it is correctly that the form should be split into 2 forms, one for degree which requires an intent to plan, and one for major which does not require it. It is great that the changes have been taken now.

Laura McCunn-Jordan is the chair of CoS Curriculum Committee, I am copying Laura and Maria (Physics representative in CoS curriculum committee) so that they are informed of this.

Thank you all for your help in this issue.

Huong

Sent from my iPhone

On Feb 8, 2018, at 7:16 PM, Christofero, Tracy <christofero@marshall.edu> wrote:

> Sherri... Nat is copied here so he and his committee can work with you to change the forms. It was my understanding that you were working on changing some of them already. Also, David, is copied, as he spoke to Gayle about this some time ago and Gayle confirmed that an Intent to Plan was not required.
>
> Sent from my iPad
>
> On Feb 8, 2018, at 6:47 PM, Smith, Sherri <smithsc@marshall.edu> wrote:
>
> > Hi folks,
> >
> > I can confirm that an Intent to Plan is not required in order to add a new major to an existing degree program. The URL included at the top of the "Graduate Intent to Plan—Major or Degree" form links to HEPC Series 11, which indicates that an Intent to Plan is required only for new degree programs.
> >
> > The problem here is that the form in question is not consistent with HEPC policy. That form should not be titled "Graduate Intent to Plan—Major or Degree." In fact, the fourth field in the form itself asks for the name of the "New Degree Program," not the name of a new major.
> >
> > The remedy:
> >
> > 1. The GC should amend this form by striking any references to "major." These references include:
> >   - The title of the form
> >   - The header on each of the following three pages (pp. 2-4)
> >   - The fourth line on p. 4 that asks for "New Major or Degree"
> > 2. The Addition, Deletion, or Change of Major or Degree form should be split into two forms, one for Major, one for Degree. This process is already underway. See attached email threads for details about splitting these forms. In particular, I draw your attention to the first email thread, item #2 in my email dated Nov 27, 2017.

3. The GEC website should be amended: http://www.marshall.edu/graduate-council/forms-2/graduate-curriculum-forms-gc-forms/
   - Form Names listed in chart should be changed:
     - GC#3: Intent to Plan—~~New Major or~~ New Degree
     - GC #4: split into a 4a and a 4b
       - GC #4a: Addition, Deletion or Change of ~~Major or~~ Degree
       - GC #4b: Addition, Deletion or Change of Major ~~or Degree~~
   - Additional Instructions in chart should be changed:
     - GC #3: Must be submitted first if planning new ~~major or~~ degree
     - GC #4a: If new ~~major or~~ degree, must submit GC #3 first.
     - GC #4b: [no additional instructions]

Tracy, should these additional issues in items 1 and 3 above be taken up by APC/Nat DeBruin since that body is already working on #2 above?

Huong, who is the Chair of the COS Curriculum Committee?

Thanks,

Sherri

From: "Reynolds, Mary Beth" <reynoldm@marshall.edu>
Date: Wednesday, February 7, 2018 at 6:02 PM
To: "Nguyen, Que Huong" <nguyenh@marshall.edu>
Cc: "Christofero, Tracy" <christofero@marshall.edu>, Sonja Cantrell <cantrel1@marshall.edu>, "Smith, Sherri" <smithsc@marshall.edu>
Subject: RE: Master Program in Physics

Huong:

I'm copying Sherri Smith.

Sherri – I'd appreciate it if you'd read the issues Huong is facing with adding a major of Physics to the graduate Physical and Applied Sciences Degree program. I know that an "Intent to Plan" is not require for a major addition; only for the addition of a degree program. However, the forms the Curriculum Committees are using seem to indicate that an "Intent to Plan" is needed for either a major or degree program addition. Can you provide any guidance here?

Mary Beth

From: Nguyen, Que Huong
Sent: Wednesday, February 07, 2018 4:23 PM
To: Reynolds, Mary Beth <reynoldm@marshall.edu>
Cc: Christofero, Tracy <christofero@marshall.edu>; Cantrell, Sonja <cantrel1@marshall.edu>
Subject: Re: Master Program in Physics

Thank you, Mary Beth, for responding to my question. The problem is still not resolved, the CoS curriculum committee still has not passed our paperwork for Physics major- they keep asking for an "Intent to plan". I refered to Tracy's response that Provost said the intent to plan is not required if we add the major to a degree. But since there is no "Addition of a major to a degee" form, so following Tracy's advice we used 2 forms : "Changes to a degree" (since adding a major to a degree is a change) and " Addition of a Major" form and put them together. But then, in the "Addition of a Major" form it says that an intent to plan is needed. Although we understand that the intent to plan is required for the case when a degree is created, not for the case a major is created within a degree. But still, because of that form, my paperwork is still hangging there.

What should I do now? Should I use only the "Changes to a degree" form?

Thanks,

Huong

Dr. Que Huong Nguyen,
Professor and Chair,
Physics Department, Marshall University
Science #251
One John Marshall Drive
Huntington WV 25755
Tel 304-696-2756

From: Reynolds, Mary Beth
Sent: Wednesday, February 7, 2018 2:59 PM
To: Nguyen, Que Huong
Cc: Christofero, Tracy; Cantrell, Sonja
Subject: RE: Master Program in Physics

Huong:

I wasn't sure if anyone had responded to you, but I seemed to recall asking Tracy for clarification regarding this issue last fall. Here was my question, followed by Tracy's response:

Sent in November: Tracy – the issue is that the Master of Science in Physical and Applied Science may want to add a major (Physics) within the existing Degree Program. How should they complete the form Huong referenced to make this addition – or is the addition of a major a *change* to an existing degree program?

Mary Beth

Tracy's November response: Thanks, Mary Beth... That would be a change to

the degree, as a major is being added... Tracy

Does this answer your question, Huong?

Mary Beth

From: Nguyen, Que Huong
Sent: Monday, February 05, 2018 5:03 PM
To: McCunn-Jordan, Laura <mccunn@marshall.edu>; Cantrell, Sonja <cantrel1@marshall.edu>; Christofero, Tracy <christofero@marshall.edu>
Cc: Reynolds, Mary Beth <reynoldm@marshall.edu>; Antonsen, Brian <antonsenb@marshall.edu>; Lawrence, Bonita <lawrence@marshall.edu>; Graefe, David <graefe@marshall.edu>; Hamilton, Maria <babiuc@marshall.edu>; Hubbard, AJ <hubbard36@marshall.edu>
Subject: Master Program in Physics

Dear Tracy, Sonja, Mary Beth and Laura,

We already have had many talks over email and had a very productive meeting last week and it seems that all problems have been resolved. But at the last week meeting of CoS Curriculum committee, there was still confusions and questions about the major we want to add, and a question to Tracy about the paperwork needed, so I would like to write about the whole situation one more time and would like to have opinions/confirmation from you so that we all are on the same page and have a clear picture about the problem.

1. In Physics Department, we have a Master *Degree* in Physical and Applied Sciences. At the presence, the degree has only one major with the same name, and 5 AoEs. From students' requests, we decided that there is a need to add a Physics major to the degree. After adding a Physics major, we will not need the Physics AoE.

Tracy, Mary Beth and Sonja confirmed that we could add a major to a graduate degree.

In the meeting with Sonja, AJ, Mary Beth and Brian, it was confirmed that the name of the major will appear on the diploma, not the name of the degree.

2. The main problem here is the question about which form we should use. Among curriculum form for graduate degree, the only form we could find is the"*Request for Graduate Addition, Deletion, or Change of a Major or Degree*" (attached). Since there is no form that allows us to add a major to an existing degree, we decided to fill the same form but in two copies: one is "change of degree" (since adding a major to a degree is a change) and another is "major addition" (to add a Physics major to "Physical and Applied Science" degree. We do not know if it is the correct way. If not, please let us know which form we should use?

Also, if we use that form, in the form it is written that an " INTENT TO PLAN" is needed, so CoS curriculum committee is still confusing if we need an "Intent to Plan". Since we just want to add a major to an *existing* degree, not a degree itself, so Tracy said on 12/11/2017 that "***An Intent to Plan is NOT required if you are adding to a degree. This came from the Provost.***" Tracy, could you please confirm that?

Please let us know if you have any question.

Thank you,

Huong

Dr. Que Huong Nguyen,
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Science #251
One John Marshall Drive
Huntington WV 25755
Tel 304-696-2756

From: McCunn-Jordan, Laura
Sent: Wednesday, January 24, 2018 2:10 PM
To: Cantrell, Sonja; Nguyen, Que Huong
Cc: Hubbard, AJ; Reynolds, Mary Beth; Antonsen, Brian
Subject: RE: name of a graduate degree

Hi Sonja,

Brian Antonsen, a member of the COS curriculum committee, will be taking my place at the meeting because I have a funeral to attend. He has been briefed on the situation and read the previous emails on this topic. His purpose in attending the meeting will be to learn definitively what will be printed on transcripts and diplomas for the proposed physics major. I appreciate your taking the time to meet with us to resolve the confusion!

Laura

Laura R. McCunn-Jordan, Ph.D.
Associate Professor of Chemistry
Marshall University
(304) 696-2319

From: Cantrell, Sonja
Sent: Friday, January 19, 2018 12:22 PM
To: Nguyen, Que Huong <nguyenh@marshall.edu>; McCunn-Jordan, Laura <mccunn@marshall.edu>
Cc: Hubbard, AJ <hubbard36@marshall.edu>; Reynolds, Mary Beth <reynoldm@marshall.edu>
Subject: RE: name of a graduate degree

Good afternoon,

I spoke with Mary Beth earlier today and we think it might be best to have a quick meeting to ensure that we are all on the same page. I will send out a meeting request for next week.

See you all soon!
Sonja

Sonja G. Cantrell, Ed.D.
University Registrar
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cantrel1@marshall.edu
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www.marshall.edu

From: Nguyen, Que Huong
Sent: Thursday, January 18, 2018 4:41 PM
To: McCunn-Jordan, Laura <mccunn@marshall.edu>; Hamilton, Maria <babiuc@marshall.edu>
Cc: Cantrell, Sonja <cantrel1@marshall.edu>; McCunn-Jordan, Laura <mccunn@marshall.edu>; Hubbard, AJ <hubbard36@marshall.edu>; Reynolds, Mary Beth <reynoldm@marshall.edu>
Subject: Re: name of a graduate degree

Dear all,

Thank you, Laura, for forwarding me this discussion. And thanks, everyone, for clarifying the problem. But I still do not see it clearly, because what in the example of AJ and Sonja still seems different from what Mary Beth said (what we also think it should be).

From what Mary Beth said " *It is my understanding that the name of the program NEVER APPEARS on either the diploma or the transcript UNLESS the names of the program and major are the same. What appears on the diploma is the name of the degree (Master of Science or Master of Arts) and the name of the major. What appears on the transcript is the name of the degree (Master of Science or Master of Arts), the name of the major, and the names of any areas of concentration/emphasis or minors the student completed.*"

If Sonja confirmed that Mary Beth is correct, that means *which appears in the Diploma should be the name of the dgree and the name of the major, NOT the name of the program.*

If I understand it correctly, it means, says, if it is the Master Degree, the program is Physical and Applied Sciences, and Major is Physics, then the Diploma should read:

Did I understand you correctly, Mary Beth?
Sonja and AJ, is it correct?

Thanks,

Huong

Dr. Que Huong Nguyen,
Professor and Chair,
Physics Department, Marshall University
Science #251
One John Marshall Drive
Huntington WV 25755
Tel 304-696-2756

From: McCunn-Jordan, Laura
Sent: Thursday, January 18, 2018 4:17 PM
To: Nguyen, Que Huong; Hamilton, Maria
Subject: FW: name of a graduate degree

Huong and Maria,

I have been conversing with the registrar this week and want to make sure you are aware of this information. Unless I hear from you, I will take the documents for the MS addition of major that you submitted in December and pass them along to the curriculum committee.

Laura

Laura R. McCunn-Jordan, Ph.D.
Associate Professor of Chemistry
Marshall University
(304) 696-2319

From: Cantrell, Sonja
Sent: Wednesday, January 17, 2018 12:49 PM
To: Reynolds, Mary Beth <reynoldm@marshall.edu>; McCunn-Jordan, Laura <mccunn@marshall.edu>; Hubbard, AJ <hubbard36@marshall.edu>
Subject: RE: name of a graduate degree

This is excellent, Mary Beth!

Sonja G. Cantrell, Ed.D.
University Registrar

Marshall University
cantrel1@marshall.edu
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From: Reynolds, Mary Beth
Sent: Wednesday, January 17, 2018 11:53 AM
To: Cantrell, Sonja <cantrel1@marshall.edu>; McCunn-Jordan, Laura <mccunn@marshall.edu>; Hubbard, AJ <hubbard36@marshall.edu>
Subject: RE: name of a graduate degree

Sonja and Laura:

I'd like to try to offer one additional clarification. Sonja – please correct me if I'm wrong.

It is my understanding that the name of the program NEVER APPEARS on either the diploma or the transcript UNLESS the names of the program and major are the same. What appears on the diploma is the name of the degree (Master of Science or Master of Arts) and the name of the major. What appears on the transcript is the name of the degree (Master of Science or Master of Arts), the name of the major, and the names of any areas of concentration/emphasis or minors the student completed. Am I correct? The chart below lists some graduate programs/majors in the College of Science. As you can see, at this point all program and major names in the COS at the graduate level are the same. Note: I did not include the Forensic Science Program in these examples.

However, this is not the case for many undergraduate programs in the COS. I list those examples after the graduate examples.

Degree	Program	Major	Area of Concentration/Emphasis
Master of Science	Physical and Applied Science	Physical and Applied Science	Geology
			Physics and Physical Science
			Geobiophysical Modeling
			No Area of Concentration
Master of Science	Biological Sciences	Biological Sciences	Watershed Resource Science
			Evolutionary Ecological Biology
			No Area of Concentration
Master of Arts	Biological Sciences	Biological Sciences	Watershed Resource Science
			Evolutionary Ecological Biology
			No Area of Concentration
Master of	Chemistry	Chemistry	No Area of Concentration

Science			
Master of Science	Criminal Justice	Criminal Justice	No Area of Concentration
Master of Arts	Mathematics	Mathematics	Statistics
			No Area of Concentration

Examples of selected undergraduate programs in the COS are given below.

Degree	**Program**	**Major**	**Area of Concentration/Emphasis**
Bachelor of Science	Biological Sciences	Biological Sciences	No Areas of Concentration
		Microbiology	
		Biomedical Sciences	
		Cellular/Molecular Biology	
		Ecology/Evolutionary Biology	
		Environmental Biology	
		Zoology	
		Botany	
		Cellular/Molecular Medical Biology	
Bachelor of Science	Chemistry	Chemistry	Pre-Dentistry
			Pre-Med
			Pre-Pharmacy
			Pre-Veterinary
			Multidisciplinary Studies
			No Area of Concentration
		Chemistry ACS Certified	No Area of Concentration
		Forensic Chemistry	Pre-Med
			No Area of Concentration
		Biochemistry	Pre-Dentistry
			Pre-Med
			Pre-Pharmacy
			Pre-Veterinary
			No Area of Concentration
		Environmental Chemistry	No Area of Emphasis
Bachelor of	Integrated	Integrated Science	Biotechnology

Science	Science and Technology	and Technology	Information Technology
			Environmental Access and Policy
			Computer Forensics
			No Area of Emphasis
		Computer and Information Technology	Information Technology
			Computer Forensics
			Computer Application and Development
			Web Application Development
			Game Development
			No Area of Concentration
		Biotechnology	Pre-Med
			No Area of Concentration

I hope this helps.

Mary Beth

From: Cantrell, Sonja
Sent: Wednesday, January 17, 2018 10:51 AM
To: McCunn-Jordan, Laura <mccunn@marshall.edu>; Reynolds, Mary Beth <reynoldm@marshall.edu>; Hubbard, AJ <hubbard36@marshall.edu>
Subject: RE: name of a graduate degree

Mary Beth is correct.

(on transcript)
MS, Physical and Applied Science

(on diploma)
Master of Science

Physical and Applied Science

The same would occur with MS, Physics (transcript) and the diploma would read as she lists it below.

Master of Science

Physics

They could do a concentration/AOE in physics but that wouldn't appear on the diploma. The diploma would still read as Mary Beth lists it but the transcript would say:

MS, Physical and Applied Science
Concentration: Physics

I hope this helps!

Sonja

Sonja G. Cantrell, Ed.D.
University Registrar
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From: McCunn-Jordan, Laura
Sent: Tuesday, January 16, 2018 5:04 PM
To: Reynolds, Mary Beth <reynoldm@marshall.edu>; Hubbard, AJ <hubbard36@marshall.edu>
Cc: Cantrell, Sonja <cantrel1@marshall.edu>
Subject: Re: name of a graduate degree

Yes, I am looking for confirmation that the diploma will read as Mary Beth described. (and also confirmation of what the transcript will say) Physics and the Graduate Council seem to have different impressions of this and I'd like to settle it so we don't have to waste time creating a major that won't achieve the intended purpose.

Thanks,
Laura

Laura R. McCunn
Associate Professor of Chemistry
Marshall University

From: Reynolds, Mary Beth

Sent: Tuesday, January 16, 2018 15:10
To: Hubbard, AJ; McCunn-Jordan, Laura
Cc: Cantrell, Sonja
Subject: RE: name of a graduate degree

A. J. and Sonja:

The attached example is good, but Exercise Science is a degree program as well as a major. I believe that Laura wants confirmation that, if a student has a *major* of Physics within the Degree Program *Physical and Applied Sciences* that this student's diploma will read:

Master of Science

Physics

My understanding is that the diploma lists the *degree*, (Bachelor of Science) and the *major* (Physics). It only lists the degree program when the degree program and major are synonymous.

Is this correct?

Mary Beth

From: Hubbard, AJ
Sent: Tuesday, January 16, 2018 2:09 PM
To: McCunn-Jordan, Laura <mccunn@marshall.edu>
Cc: Reynolds, Mary Beth <reynoldm@marshall.edu>; Cantrell, Sonja <cantrel1@marshall.edu>
Subject: RE: name of a graduate degree

Attached a document of one major with a transcript and diploma. In the example that I am attaching the student graduated with a bachelors in science in exercise science with a concentration in applied exercise physiology. You can see what information is printed on the transcript as compared to the diploma.

Only the degree and major appear on the diploma. As of right now students that major in applied and physical science at the graduate level have the following appear on their diploma:

Master of Science
Applied and Physical Science

For the diploma to read:

Master of Science in Applied and Physical Science
Physics

There would need to be a degree that is master of science in applied and physical science and a major that is physics.

Does that answer the question?

AJ Hubbard
Assistant Registrar
Marshall University
304-696-6632

From: Cantrell, Sonja
Sent: Tuesday, January 16, 2018 12:13 PM
To: McCunn-Jordan, Laura <mccunn@marshall.edu>
Cc: Hubbard, AJ <hubbard36@marshall.edu>; Reynolds, Mary Beth <reynoldm@marshall.edu>
Subject: Re: name of a graduate degree

Hi Laura,

I am out of the office today on scheduled leave but I will ask AJ, Asst registrar, to send some samples of the way degrees appear on the diploma vs the transcript. I have also included Mary Beth on this email as she has been involved in prior conversations as well.

In short, due to spacing, among other reasons, in the US, the diploma is considered more ceremonial in nature and the transcript is the official document/confirmation of degree. So, the degree and major print on the diploma and more info (major, minor, concentrations, certificates, etc) appear on the transcript.

Once you see what AJ sends, please let me know if you need additional information or confirmation.

Thanks!
Sonja

Sent from my iPad

On Jan 16, 2018, at 10:10 AM, McCunn-Jordan, Laura <mccunn@marshall.edu> wrote:

> Hello Sonja,
>
> I am the chair of the COS Curriculum Committee with a question about the official names for graduate degrees. I know that you have probably addressed this question before, regarding this very degree/program, but I really need to see the answer in writing straight from the registrar's office because I have gotten different

interpretations from various levels of administration.

The Department of Physics wishes to add a major, "Physics," to the "Master of Science in Physical and Applied Science". If they do add this major, what will the students' transcripts and diplomas say upon graduation from that major?

Thanks,
Laura

Laura R. McCunn
Associate Professor of Chemistry
Marshall University

<mime-attachment>

<mime-attachment>