UNIVERSITY OF MIAMI
FACULTY SENATE

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MEMORANDUM

To: Julio Frenk
University President

From: JoNel Newman
Chair, Faculty Senate

Date: February 29, 2024

Subject: Faculty Senate Legislation #2023-34(B) – Curricular Changes to the Master of Science in Biomedical Engineering, College of Engineering

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The Faculty Senate, at its February 28, 2024 meeting, approved by consensus the proposed curricular changes to the Master of Science in Biomedical Engineering, College of Engineering.

This proposal is part of a larger reorganization of the College of Engineering's graduate programs. The College is closing the Medical Physics track in the Master of Science in Biomedical Engineering in favor of opening a new Master of Science in Medical Physics, based on recommendations from the CAMPEP accrediting agency.

The proposal is attached for your reference.

This legislation is now forwarded to you for your action.

JN/mtt

Attachment

cc: Guillermo "Willy" Prado, Interim Executive Vice President and Provost
Pratim Biswas, Dean, College of Engineering
Weizhao Zhao, Professor, College of Engineering

C**APSULE:** Faculty Senate Legislation #2023-34(B) – Curricular Changes to the Master of Science in Biomedical Engineering, College of Engineering

PRESIDENT'S RESPONSE

APPROVED: _____ DATE: 3/4/2024
(President's Signature)

OFFICE OR INDIVIDUAL TO IMPLEMENT: ___Dean Pratim Biswas_____

EFFECTIVE DATE OF LEGISLATION: _____IMMEDIATELY_____

NOT APPROVED AND REFERRED TO: _____

REMARKS (IF NOT APPROVED):_____

Program Change Request

Date Submitted: 10/05/23 5:47 pm

Viewing: M.S. in Biomedical Engineering : BMER_MSBE

Last approved: 04/14/23 3:45 pm

Last edit: 10/05/23 5:47 pm

Changes proposed by: Patty Murphy (pxm491)

Catalog Pages Using this Program

MS in Biomedical Engineering

In Workflow

1. **PG Initial Review**
2. **PG BME Chair**
3. **PG EN College Council Chair**
4. **PG EN Dean**
5. **PG University Accreditation**
6. **PG GR School**
7. **PG Graduate Council**
8. **PG GR Dean**
9. **PG FS Office for GWC**
10. PG FS GWC
11. PG Faculty Senate
12. PG FS President Approval
13. PG Registrar

Approval Path

1. 10/05/23 5:48 pm Patty Murphy (pxm491): Approved for PG Initial Review
2. 10/07/23 3:30 pm Fabrice Manns (fmanns): Approved for PG BME Chair
3. 10/08/23 2:49 pm Francesco Travascio (f.travascio): Approved for PG

EN College Council Chair
4. 10/11/23 2:14 pm Noel Ziebarth (nziebarth): Approved for PG EN Dean
5. 10/13/23 3:37 pm Patty Murphy (pxm491): Rollback to PG BME Chair for PG University Accreditation
6. 11/09/23 10:01 am Fabrice Manns (fmanns): Approved for PG BME Chair
7. 11/24/23 2:06 am Ramin Moghaddass (rxm991): Approved for PG EN College Council Chair
8. 11/27/23 10:44 am Noel Ziebarth (nziebarth): Approved for PG EN Dean
9. 12/12/23 4:08 pm Patty Murphy (pxm491): Approved for PG University Accreditation
10. 01/09/24 12:37 pm Sabrina Mendoza (srembold):

Approved for PG GR School
11. 01/16/24 4:07 pm Sabrina Mendoza (srembold): Approved for PG Graduate Council
12. 01/16/24 4:10 pm Patricia Abril (pabril): Approved for PG GR Dean

History

1. May 11, 2020 by Christine Vignolio (cxv340)
2. Aug 18, 2020 by a.delllano
3. May 17, 2021 by Patty Murphy (pxm491)
4. Jul 27, 2021 by Patty Murphy (pxm491)
5. Apr 7, 2022 by a.delllano
6. Apr 14, 2023 by Diana Vergara (dmv75)

Please list the authors of this proposal including name, rank/title, program/department, and school.

Proposer(s)
Name
Weizhao Zhao, Ph.D.
Professor, Department of Biomedical Engineering
Director of Medical Physics Graduate Program (CAMPEP)
College of Engineering

Effective Term Fall 2024

First Term Valid Spring 2024

Change Type All Other Changes

Provide a brief summary of the change

We are closing the Medical Physics track in the MS in Biomedical Engineering program in order to make it a separate degree, MS in Medical Physics (being proposed in a separate proposal) based on a recommendation from the Medical Physics program accrediting agency, CAMPEP.

Career Graduate

Academic Structure

School/ College	Department
College of Engineering	Biomedical Engineering

Plan Type Major and/or Degree

Degree Type Master's

Degree Name Master of Science in Biomedical Engineering

Proposed Plan Code

Proposed CIP Code

Plan Name M.S. in Biomedical Engineering

Will there be any subcomponents within the program such as concentrations, specializations, thesis/non-thesis options, or tracks?

Yes

Subcomponents

Subcomponent Type	Subcomponent Name
Non-Thesis Option	Non-Thesis MS Program
Thesis Option	MS Thesis Program
~~Specialization~~	~~MS in Biomedical Engineering:Medical Physics~~

Program Instruction Mode In Person

Where is the program offered?

Location	Please provide the % of instruction at each location.
Coral Gables Campus	100

Program Length (Years) 2

Total Credits 30

To Be Published in the Academic Bulletin

Program Overview

Masters Program Objectives

The goal of the MS program in Biomedical Engineering at the University of Miami is to prepare students for successful careers in the biomedical industry, academia, or government (FDA, US Patent Office), or for further study in doctoral or health-related programs.
The educational objective of the program is to provide students with the technical and intellectual skills required to solve complex technical or scientific problems at the interface of engineering and medicine or biology.

Program Mission and Goals

Mission

The mission of the Biomedical Engineering Program is to prepare future leaders in biomedical engineering who are motivated to create a positive impact on human health, medicine, and industry.

Goals

The educational objective of the program is to provide students with the technical and intellectual skills required to solve complex technical or scientific problems at the interface of engineering and medicine or biology.

Student Learning Outcomes

Student Learning Outcomes

High level ability to apply knowledge of mathematics, science and engineering to formulate and solve relevant biomedical engineering problems.
Ability to communicate the scientific and technical research effectively in writing and oral presentations.
Ability to conduct supervised research and development.

Curriculum Requirements

Curriculum Requirements

The curriculum combines advanced coursework which provides depth in a specific area of concentration and advanced problem-solving skills, with supervised research or design in one of the laboratories of the faculty from the Department of Biomedical Engineering or the School of Medicine, or in the local biomedical industry.
There ~~Except for the Medical Physics program, there~~ are no formalized graduate curricular tracks in the MS program. Master's students select a course of study together with the graduate advisor and/or with their mentor and the thesis committee (for the thesis option) based on their own needs or interests. Students can choose from any of the graduate course offerings, as long as they satisfy the general course requirements and the course prerequisites.

Required Core Courses

All students enrolled in the MS program in Biomedical Engineering are required to complete the following core graduate courses:
Human Physiology Courses (BME 601/BME 602/BME 603, 3 credits each). Students enrolled in the BS/MS program must take exactly two of these three courses, no more and no less. Other students must take a minimum of two of these courses and they can choose to complete all three.
Regulatory Control of Biomedical Devices (BME 612, 3 credits)
The three human physiology courses are designed to provide a basic understanding of organ-level physiology and anatomy, neurophysiology, and cellular and molecular biology. Students with an MD from a medical school accredited by the World Health Organization are exempted from taking these courses. Students holding advanced degrees in the life sciences, or equivalent experience in the field, may also be exempt. Each such exception requires the approval of the Department Chairperson and Faculty member responsible for the course of concern. Students who receive an exemption, must replace the exempted course(s) with another 3-credit graduate course(s) that meets the degree requirements.
Students with a background in an engineering or scientific field with no prior exposure to biology/medicine are required to complete all three Unified Medical Sciences courses.

Non-Thesis MS Program

The MS non-thesis option is intended for students with an undergraduate degree in biomedical engineering or related disciplines who seek advanced training or specialization in a specific area of biomedical engineering; for professional engineers with undergraduate degrees in other disciplines who want to enter the field of biomedical engineering; and for students who want to prepare for admission to advanced health-related or other professional programs.

Graduation Requirements

Graduation requirements for the MS Non-Thesis Option include:

24 Graduate-Level Course Credits Including: †		**24**
BME 612	Regulatory Control of Biomedical Devices	3
At least 2 of the following 3:		
BME 601	Biochemistry and Cellular Physiology for Engineers - COURSE PROPOSAL IN PROGRESS	
BME 602	Human Physiology for Engineers	
BME 603	Neurophysiology for Engineers - COURSE PROPOSAL IN PROGRESS	
MS Project		**3**
BME 707	Master's Project I	
BME 708	Master's Project II	
Total Credit Hours		30

†
Graduate-level courses are courses that are 600 and above.

Non-Thesis MS Project

General description

All students enrolled in the MS non-thesis program must complete a two-semester 3 credit Master's project (BME 707 and BME 708), under the supervision of a project mentor and departmental project coordinator. The project must demonstrate the candidate's ability to solve complex scientific or technical problems at the interface of engineering and medicine or biology.

The MS project can be a research or design project. The project must include a significant research or design component contributed by the M.S. student, including, but not limited to, the design of an experiment or process; the development of a device, instrument, or system; the development of a computer program; the analysis of experimental data. Projects cannot be limited solely to the review of literature, the development of research or design proposals, or the collection of experimental data.

At the completion of their project, students must submit a written project report and complete a public oral defense of their project.

Project Mentor

Students who select the MS non-thesis track must identify a project mentor and select a project before they register for their second semester of full-time study. The project mentor is generally a primary faculty member of the Department of Biomedical Engineering. The role of the project mentor is to help the student identify a suitable project, to monitor the progress of the student, to provide guidance and training in the relevant topics, and to review the final report and presentation.
Students may complete their project under the supervision of a faculty member from another Department at the University of Miami, or from the local biomedical industry, under the following conditions:
The student must receive the approval of the Department Chairman and Graduate Program Director.
The student must identify a co-mentor who must be a primary faculty member of the Department of Biomedical Engineering. The co-mentor must be familiar with the topic of the proposed project. The role of the co-mentor will be to monitor the student progress and ensure that the Master's project report and presentation satisfy all of the relevant requirements.

Project Coordinator

The project coordinator is a member of the primary faculty of the Department of Biomedical Engineering who is responsible for teaching the BME 707/BME 708 course. The role of the project coordinator is to:
Help students identify a project and mentor.
Ensure that the projects satisfy the program objectives.
Provide general guidance and graduate scholarship training.
Ensure that the students are making suitable progress towards the project goals.

Project Abstract

Non-Thesis MS students must submit a one-page project abstract to the Department Chairman or Graduate Program Director and to the MS Project Coordinator at the time when they register for BME 707/BME 708. The abstract must include the name of the project mentor (and co-mentor, if any), the title of the proposed project, and a brief description of the goals of the project and proposed methods. The abstract must be approved by the mentor, MS Project Coordinator, and Department Chairman or Graduate Program Director before the student can start work on the project. (Project Abstract Template)

Project Report

Non-thesis MS students must submit a detailed report describing the work completed during the project. The report must describe the objectives and significance of the work, and summarize the activities completed by the student as part of the MS project. The report must demonstrate that the work performed by the student satisfies the general project criteria. The typical length of non-thesis M.S. project reports is 20 to 30 pages. If the project resulted in the submission of a full-length peer-reviewed scientific article, the article can be submitted in lieu of a report, as long as the following conditions are satisfied:
The student must be the first author of the article.
The article must reflect the work performed by the student as part of the project.
The article must be submitted for publication in a peer-reviewed journal or conference proceedings volume.
A one to two page introduction must be submitted to summarize the project goals and main outcomes.
The report must be reviewed and approved by the project mentor (and co-mentor, if any). Once the report is approved by the mentor(s), one printed copy and one electronic version in PDF format must be submitted to the Project Coordinator by the specified deadline. The final report must be approved and signed by the

Project Mentor(s), Project Coordinator and Graduate Program Director or Department Chairman. (Signature Page Template)

Project presentation

Non-thesis MS students must give an oral presentation of their project. The oral presentation is generally scheduled during the scheduled final examination time of BME 707/BME 708 in the semester of graduation.

Project grade

The final grade for the project is given by the Project Coordinator. The final grade is a combination of a grade submitted by the Project Mentor(s) assessing the overall performance of the student on the project, and a grade given by the Project Coordinator assessing the quality of the oral presentation and report.

MS Thesis Program

The thesis option is typically selected by students who are oriented towards a career in academic or industrial research and development, or students who want to acquire an initial independent biomedical research experience before seeking admission to doctoral programs.

Graduation Requirements

Graduation requirements for the MS Thesis Option include:

21 Graduate-Level Course Credits Including: †		**21**
BME 612	Regulatory Control of Biomedical Devices	3
At least 2 of the following 3:		
BME 601	Biochemistry and Cellular Physiology for Engineers - COURSE PROPOSAL IN PROGRESS	
BME 602	Human Physiology for Engineers	
BME 603	Neurophysiology for Engineers - COURSE PROPOSAL IN PROGRESS	
Thesis Work		**6**
BME 810	Master's Thesis	
Total Credit Hours		30

† Graduate-level courses are courses that are 600 and above.

MS Thesis

General Description

The Master's thesis is a research monograph which describes the significance of the research and summarizes the research activities completed as part of the MS degree requirements. The objective of the thesis is to evaluate the candidate’s competence in the area of the MS research. The thesis must

demonstrate that the research is original and that the candidate has the ability to solve complex scientific and/or technical problems at the interface of engineering and medicine or biology.

Thesis Mentor

Students who select the MS thesis track must identify a thesis mentor before they register for their second semester of full-time study. The thesis mentor must hold a primary or secondary faculty appointment in the Department of Biomedical Engineering. Exceptions can be made only with approval of the Graduate Program Director and Department Chairman.

The thesis mentor supervises the research work of the student and provides training and guidance in the relevant research topics, including design of experiments, experimental techniques, and scholarship activities. The mentor helps the student select a thesis topic and develop a plan, and chairs or co-chairs the thesis committee. The mentor works closely with the student to ensure that there is satisfactory progress towards the thesis goals.

Thesis Committee

The thesis must be approved by a thesis committee. The duties of the thesis committee are:

to consult with and to advise students on their research;

to meet, at intervals, to review progress and expected results;

to read and comment upon the draft thesis;

to meet, when the thesis is completed, to conduct the final oral examination and to satisfy itself that the thesis work is original; that it demonstrates the candidate's ability to solve complex scientific and/or technical problems at the interface of engineering and medicine or biology; that it is written in lucid and correct English; and that it is submitted in approved format.

The thesis committee will consist of not less than three members, with the following requirements:

The committee chair shall be a Primary Faculty member of the Department of Biomedical Engineering, as well as a regular member of the Graduate Faculty. The Committee Chair is generally also the thesis mentor.

A thesis mentor who is not a member of the Primary Faculty of the Department of Biomedical Engineering, can serve as Co-Chair of the Thesis Committee, together with a second Co-Chair who shall be a member of the primary faculty of the Department of Biomedical Engineering.

It is an additional requirement of the Department of Biomedical Engineering that at least two committee members should be primary Faculty members from the Department.

One committee member must be from outside the Department. Outside members of the thesis committee can include part-time faculty that teach within the Department.

At least one committee member must be a regular member of the Graduate Faculty of the University of Miami.

The committee is nominated by the Graduate Program Director. Usually, the student consults with his/her research mentor and with the Chairperson or Graduate Program Director to select the Committee members.

Thesis Format and Deadlines

It is the duty of the student to ensure that the thesis defense is scheduled and that a final version of the thesis approved by the Dissertation Editor is submitted to the Dissertation Editor by the required deadlines set by the Graduate School. All information pertaining to the formatting and electronic guidelines for electronic thesis submission can be found on the Graduate School website.

Each thesis must be accompanied by a Certificate of Defense Approval for Master's Thesis signed by all members of the Committee. Forms can be downloaded from the Graduate School website.

Evaluation Forms

The student is responsible for distributing dissertation evaluation forms to the members of the Thesis Committee for the final oral examination. The evaluation forms are used to assess the overall quality of the graduate program at the Department, College, and University level. The evaluation forms are available on the Graduate School and Department of Biomedical Engineering websites. The completed forms must be collected by the Thesis Mentor and forwarded to the Office Manager at the Department of Biomedical Engineering.

Transfer to MS Non-Thesis Program

Students enrolled in the MS thesis program who do not wish to complete their thesis can transfer to the MS non-thesis program and graduate from the MS program under the following conditions:
The transfer must be approved by the Department Chair or Graduate Program Director.
All requirements of the MS non-thesis option must be satisfied, including completion of a two-semester 3 credit Master's project (BME 707 and BME 708), submission of a project report, and oral defense of project. Completed thesis credits may count towards the three credit MS project requirement.
~~MS in BiomedicalEngineering:Medical Physics The MS in Biomedical Engineering offers a special track in MedicalPhysics.The objective of the Medical Physics program is to provide advanced knowledge in the field of therapeutic medical physics, and to provide the training required for students to become licensed medicalphysicists.This program is coordinated by the Department of Biomedical Engineering and the Department of Radiation Oncology at the School ofMedicine.The program is opened to students enrolled in the regular MS program, as well as the dual degree (BS/MS)program.Candidates are required to have completed the course work of a physics minor, that must include Modern Physics (PHY 360 or equivalent), before they start their course work in the Medical Physics program. Students in the Medical Physics specialization must complete Human Physiology for Engineers (BME 602) and one of the remaining two courses from the human physiology (BME 601or BME 603) course series, and 23 credits in the core curriculum in the area of medicalphysics: Any remaining credits required to complete the degree must satisfy the general requirements of the MSprogram.Students enrolled in the MS program in Medical Physics may require a total of 32 credits (non-thesis option) or 35 credits (BS/MS and thesis option) to complete the programrequirements.The topic of the non-thesis MS project (BME 707/ BME 708), or MS thesis must be related to medicalphysics.In general, the project is co-supervised by Faculty from the Department of Biomedical Engineering and the Department of RadiationOncology.~~

~~BME 601~~	~~Biochemistry and Cellular Physiology for Engineers - COURSE PROPOSAL IN PROGRESS~~	~~3~~
~~or BME 603~~	~~Neurophysiology for Engineers - COURSE PROPOSAL IN PROGRESS~~	
~~BME 602~~	~~Human Physiology for Engineers~~	~~3~~
~~BME 620~~	~~Medical Imaging Systems: X-ray and CT~~	~~3~~
~~BME 621~~	~~Medical Imaging Systems: MRI, NMI and Ultrasound~~	~~3~~
~~BME 681~~	~~Radiation Biology and Physics~~	~~3~~

~~BME 682~~	~~Radiation Therapy Physics~~	~~3~~
~~BME 683~~	~~Radiation Protection~~	~~3~~
~~BME 701~~	~~Professionalism and Ethics for Engineers and Medical Physicists~~	~~1~~
~~BME 781~~	~~Radiation Dosimetry and Physics~~	~~3~~
~~BME 783~~	~~Radiation Therapy Physics Clinical Rotation~~	~~3~~
~~BME 784~~	~~Medical Physics Journal Club~~	~~1~~
~~Thesis or project~~		~~3-6~~
~~BME 707 & BME 708~~	~~Master's Project I and Master's Project II~~	
~~or BME 810~~	~~Master's Thesis~~	
~~Total Credit Hours~~		~~0~~

Sample Plan of Study

Non-Thesis MS Program

A typical curriculum for the MS non-thesis option is shown in the following table. The course sequence and timeline can be adjusted based on individual needs. The minimum residence requirement for the MS degree is two semesters in full-time study or the equivalent in part-time work.

Plan of Study Grid		
First Semester		Credit Hours
Course Credits		12
Identify Mentor		
Submit Project Abstract		
	Credit Hours	12
Second Semester		
Course Credits		9
BME 707	Master's Project I	1
	Credit Hours	10
Third Semester		
Course Credits		6
BME 708	Master's Project II	2
	Credit Hours	8
	Total Credit Hours	30

Sample Plan of Study

MS Thesis Program

A typical curriculum for the MS thesis option is shown in the following table. The course sequence and timeline can be adjusted based on individual needs. The minimum residence requirement for the MS degree is two semesters in full-time study or the equivalent in part-time work.

Plan of Study Grid		
First Semester		Credit Hours
Course Credits		12
Identify Mentor & Project		
	Credit Hours	12
Second Semester		
Course Credits		9
BME 810	Master's Thesis	3
	Credit Hours	12

	Credit Hours	12

Third Semester

Course Credits		3
BME 810	Master's Thesis	3
	Credit Hours	6
	Total Credit Hours	30

Students who are not able to complete their thesis during the 3rd semester and have completed all 30 required credits of graduate work, must enroll in 0 credits of Research in Residence (BME 820) to maintain full-time student status.

~~Sample Plan of Study MS Program in Medical Physics Typical curricula for each option of the MS program in Medical Physics are shown in the followingtables.The course sequence and timeline can be adjusted based on individualneeds.The minimum residence requirement for the MS degree is two semesters in full-time study or the equivalent in part-time work. Students can also complete the BS/MS program in MedicalPhysics.MS without Thesis MS with Thesis* *Students who are not able to complete their thesis during the 3rd semester and have completed all 30 required credits of graduate work, must enroll in 0 credits of Research in Residence (BME 820) to maintain full-time studentstatus.~~

~~Plan of Study Grid~~

~~Year One~~

~~First Semester~~		~~Credit Hours~~
~~BME 620~~	~~Medical Imaging Systems: X-ray and CT~~	~~3~~
~~BME 681~~	~~Radiation Biology and Physics~~	~~3~~
~~BME 682~~	~~Radiation Therapy Physics~~	~~3~~
~~-~~	~~Credit Hours~~	~~0~~

~~Second Semester~~

~~BME 621~~	~~Medical Imaging Systems: MRI, NMI and Ultrasound~~	~~3~~
~~BME 683~~	~~Radiation Protection~~	~~3~~
~~BME 781~~	~~Radiation Dosimetry and Physics~~	~~3~~
~~-~~	~~Credit Hours~~	~~0~~

~~Year Two~~

~~First Semester~~

~~BME 602~~	~~Human Physiology for Engineers~~	~~3~~
~~BME 603~~	~~Neurophysiology for Engineers~~	~~3~~
~~BME 701~~	~~Professionalism and Ethics for Engineers and Medical Physicists~~	~~1~~
~~BME 784~~	~~Medical Physics Journal Club~~	~~1~~
~~BME 810~~	~~Master's Thesis~~	~~3~~
~~-~~	~~Credit Hours~~	~~0~~

~~Second Semester~~

~~BME 783~~	~~Radiation Therapy Physics Clinical Rotation~~	~~3~~
~~BME 810~~	~~Master's Thesis~~	~~3~~
~~-~~	~~Credit Hours~~	~~0~~
~~-~~	~~Total Credit Hours~~	~~0~~

~~Plan of Study Grid~~

~~Year One~~

Year One		
First Semester		Credit Hours
BME 620	Medical Imaging Systems: X-ray and CT	3
BME 681	Radiation Biology and Physics	3
BME 682	Radiation Therapy Physics	3
-	Credit Hours	0
Second Semester		
BME 621	Medical Imaging Systems: MRI, NMI and Ultrasound	3
BME 683	Radiation Protection	3
BME 781	Radiation Dosimetry and Physics	3
Identify Co-Mentors		-
Submit Project Abstract		-
-	Credit Hours	0
Year Two		
First Semester		
BME 602	Human Physiology for Engineers	3
BME 603	Neurophysiology for Engineers	3
BME 701	Professionalism and Ethics for Engineers and Medical Physicists	1
BME 707	Master's Project I	1
BME 784	Medical Physics Journal Club	1
-	Credit Hours	0
Second Semester		
BME 708	Master's Project II	2
BME 783	Radiation Therapy Physics Clinical Rotation	3
-	Credit Hours	0
-	Total Credit Hours	0

Admission Requirements

The qualifications and documentation required for admission to the MS program in Biomedical Engineering are the same as for the College of Engineering.
The Department of Biomedical Engineering generally admits four types of students to its MS program:
Students with undergraduate degrees in biomedical engineering and other engineering disciplines who seek advanced professional training or specialization in a particular area of biomedical engineering
Professional engineers with degrees in other engineering disciplines who plan to enter the field of biomedical engineering
Students with an undergraduate degree in Physics, Mathematics, Computer Science, Chemistry, Biology or other fields of natural or health science who seek to diversify their career opportunities by acquiring an engineering degree
Students who are preparing for admission to advanced health-related or other professional programs such as medical school
Students in the last two groups are generally given conditional admission and required to take additional undergraduate courses in engineering, physics, and/or mathematics depending on their previous course work, as specified in the admission letter. The requisite courses will be prescribed by the Department Chair or Graduate Program Director during the first advising session.

Rationale

Rationale

The Department of Biomedical Engineering currently offers a medical physics track within its M.S. in Biomedical Engineering program but is proposing closing the track and proposing a new degree (MS in Medical Physics) in response to a recommendation from its recent accreditation review by the Commission on Accreditation of Medical Physics Education Programs, Inc. (CAMPEP). In the accreditation evaluation report, CAMPEP states that “The program could consider making itself more visible by changing the wording on the degree from 'Biomedical Engineering –Medical Physics' to 'Medical Physics', which could have a positive impact on new student recruitment.”

Job Market Demand and Outlook

Relationship to Other UM Academic Programs

Library, Facilities, Equipment and Other Resources Available and Needed to Support the Program

Curriculum

Program Curriculum

Upload Syllabi for Any New Courses

Proposed Schedule of Course Offerings for the First Three Years

Faculty

Program Directors

Upload CV(s)

Program Faculty

Upload Fac CV(s)

Students

Applicant Pool

Enrollment Projections

Teaching or Research Assistants

Administration

Program Administration

Comparison

Peer Comparisons

Documents

Attach Supporting Documentation

Reviewer
Comments

Fabrice Manns (fmanns) (11/09/23 10:00 am): I support and approve the proposed changes. The changes were approved unanimously in the BME Department Faculty meeting on February 24, 2023. The proposal was then submitted to the College Council and approved during the April 24, 2023 meeting of the College Council. Fabrice Manns

Ramin Moghaddass (rxm991) (11/24/23 2:06 am): The proposal was submitted to the College Council and approved during the April 24, 2023 meeting of the College Council (CC Chair: Dr. Francesco Travascio)

Noel Ziebarth (nziebarth) (11/27/23 10:44 am): Dean Biswas supports this proposal.

Patty Murphy (pxm491) (12/12/23 4:08 pm): The proposed changes do not constitute a substantive change, therefore notification to or approval from SACSCOC is not required.

Sabrina Mendoza (srembold) (01/16/24 4:06 pm): Graduate Council reviewed and unanimously approved program change.

Key: 351