EAU
FLORIDA

ATLANTIC UNIVERSITY

## NEW/CHANGE PROGRAM REQUEST **Graduate Programs**

Department PHYSICS

College CHARLES E. SCHMIDT COLLEGE OF SCIENCE

**UGPC** Approval UFS Approval Banner Posted Catalog

Program Name: PSM in Medical Physics Medical Physics Certificate for PhD holders

New Program X Change Program Effective Date (TERM & YEAR)

**FALL 2019** 

Please explain the requested change(s) and offer rationale below or on an attachment Under Admission Requirements, Prerequisite Course for the PSMMP the Medical Physics program is the course PCB 3703 Human Morphology and Function 1 (3 credits). Starting 2018 the same course content is offered under BSC 5931. Under Prerequisites for entering the program Medical Physics Graduate Certificate Program for PhD holders ... Applicants are also required to have successfully completed or must be enrolled in an independent course in anatomy/physiology when they begin the Certificate program. BSC 2085 Anatomy and Physiology 1 (3 credits). Proposed changes:

1) Remove the Prerequisite/Co-requisite course from the Admission Requirements.

Combined BS in Physics/PSM in Medical Physics

- 2) Place BSC 5931 Human Morphology and Function 1 under core courses of all Medical Physics programs.
- 3) Add BSC 5932 Human Morphology and Function 2 in the core courses of all Medical Physics programs.
- 4) Remove the PHY 6918 Graduate Research from all Medical Physics programs.
- 5) Remove BSC 2085 Anatomy and Physiology 1 (3 credits) from the Medical Physics Certificate for PhD holders. 6) Reduce the Master Thesis' Research (RAT 6975) in PSM from 7 credits to 4 credits.

The PSM in Medical Physics and the Medical Physics Certificate for Ph.D. holders are Nationally accredited programs by the Commission on Accreditation of Medical Physics Education Programs (CAMPEP). The rationale for changes # 1, 2, 3 and 5 is to comply with CAMPEP requirements addressed when the program was re-accredited in December 2018 till end of 2021. Dr. H.J. Lyons is supporting the proposed changes. Changes # 4 and 6 are proposed to avoid increase of the total PSM credit hours and cost that could lead to lower productivity.

Please apply the proposed changes to: PSM in Medical Physics, Medical Physics Certificate for PhD holders. Combined BS in Physics/PSM in Medical Physics.

Faculty Contact/Email/Phone

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Consult and list departments that may be affected by the change(s) and attach documentation

No effect

Approved by

Department Chair

College Curriculum Chair

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College Dean

UGPC Chair

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UGC Chair

DN: cn=Robert W. Stack

Graduate College Dean

**UFS President** 

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Email this form and attachments to UGPC@fau.edu one week before the UGPC meeting so that materials may be viewed on the UGPC website prior to the meeting.

FAUnewcourseGrad, created Summer 2017

Proposed changes in the preliminary catalog 2019-20 are shown in green. Changes apply also to Combined Bachelor of Science with Major in Physics

Professional Science Master with Major in Medical Physics (Change below effective fall 2018.)

The Professional Science Master with major in Medical Physics degree is an interdisciplinary program that develops advanced scientific knowledge and professional skills. The program provides hands-on learning through on-site training. It aims to engage students with professional goals and help them become scientists uniquely suited to the 21st-century workplace.

Medical physics is an applied branch of physics devoted to the application of concepts and methods from physics to the diagnosis and treatment of human disease. A qualified medical physicist is competent to practice independently in one or more of the subfields (tracks) of medical physics.

The program requires 41 credits. (plus the 3-credit prerequisite course, PCB 3703). It provides professional training in partnership with area hospitals and concentrates on the medical physics radiation therapy track, which employs approximately 75 percent of the medical physicists.

## Admission Requirements

In addition to meeting all of the University and College admission requirements for graduate study, applicants for the Medical Physics program must meet all of the following departmental requirements:

- 1. A B.S. or B.A. in Physics. Candidates with a B.S. in Biology, Chemistry, Computer Science or Engineering with a minor in Physics are considered;
- 2. At least a 3.0 (of a 4.0 maximum) GPA in science and mathematics courses;
- 3. Have taken the physics portion of the GRE. No minimum score is required. (GRE scores more than five years old will not be accepted);
- 4.Successful completion of the prerequisite course PCB-3703, Human Morphology and Function 1;

**GRADUATE COLLEGE** 

4. Approval from the Department of Physics. Degree Requirements

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Core Courses (18 credits) (Change ef	ffective fall 2019.)		
Radiation Biology	RAT 6204	3	
Radiation Physics	RAT 6686	3	
Introduction to Radiation Biology	BSC-6834	3	

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Radiation Therapy Physics	RAT 6628	3
Medical Imaging Physics	RAT 6616	3
Introduction to Nuclear Physics	RAT 6687	3
Radiation Protection and Safety	RAT 6310	3
Additional Required Courses (20 credits)		
Advanced Photon Beam Radiation	RAT 6629	3
Therapy		0
Radiation Therapy: Clinical Practicum	RAT 6947	3
and Shadowing		
Shielding and Commissioning	RAT 6376	3
Seminar in Medical Physics	RAT 6932	1
Graduate Research	PHY 6918	3
Human Morphology and Function 1	BSC 5931	3
Human Morphology and Function 2	BSC 5932	3
Master's Thesis	RAT 6975	4
Elective Course (3 credits)		
Choose one course from the following wi	th advisor's app	oroval:
Biostatistics	STA 5195	3
Computational Physics	PHZ 5156	3
Bioinformatics: Bioengineering	BME 6762	3
Perspectives		S
Nonlinear Dynamic Systems	ISC 5453	3
Advanced Cell Physiology	PCB 6207	3
Tumor Immunology	PCB 6239	3
Special Topics	BSC 6936	3
(including Cell Structure and Function)	D3C 0930	3
Introduction to Biophysics	PHZ 5715	3
Total	41	