# FLORIDA ATLANTIC UNIVERSITY

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CATALOG

### **Graduate Programs—PROGRAM CHANGE REQUEST**

COLLEGE: CHARLES E SCHMIDT COLLEGE OF SCIENCE DEPARTMENT: PHYSICS PROGRAM NAME: EFFECTIVE DATE PROFESSIONAL MASTER OF SCIENCE IN MEDICAL PHYSICS (MSMP) (PROVIDE TERM/YEAR) SPRING 2014 PLEASE EXPLAIN THE REQUESTED CHANGE(S) AND OFFER RATIONALE BELOW AND/OR ATTACHED: It is requested that the total number of credit hours of the Professional MS in Medical Physics program will be increased from 37 credit hours to 41. The Professional MS in Medical Physics program is under CAMPEP (Commission on Accreditation of Medical Physics Education Programs) accreditation since October 1, 2012. Following the CAMPEP recommendation, two new courses were added to the program (RAT 6376 Shielding and Commissioning 3 credits, and RAT 6932 Seminar in Medical Physics 1credit). This addition was discussed and approved by the Department of Physics last spring. Other program changes include renaming two of the required courses: FROM: PHZ 5304 Introduction to Nuclear Physics TO: RAT 6687 Nuclear Medical Physics TO: RAT 6616 Medical Imaging Physics FROM: PHZ 6245 Medical Imaging Physics Addition of one elective: PHZ 5715 Introduction to Biophysics 3 credit hours, offered by Dr. Andy Lau. The program changes are marked yellow in the attached catalog document. Consult and list departments that might be affected by the change and attach comments. Faculty contact, email and complete phone number: Dr. Theodora Leventouri, leventou@fau.edu N/A 561-296-2695 Date: Approved by: Department Chair: College Curriculum Chair. College Dean: UGPC Chair: Graduate College Dean: UFS President: Provost:

Email this form and syllabus to <u>UGPC@fau.edu</u> one week before the University Graduate Programs Committee meeting so that materials may be viewed on the UGPC website prior to the meeting.

#### Preliminary Catalog 2014-2015

# Professional Science Master with Major in Medical Physics

The Professional Science Master with major in Medical Physics degree is an innovative program that develops advanced scientific knowledge and professional skills. The program is interdisciplinary and 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 Medical Physics program requires 41 credits (plus the 3-credit prerequisite course, PCB 3703). It provides professional training in partnership with area hospitals focusing 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. B.S. 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 general 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;
- 5. Approval from the Department of Physics.

# Degree Requirements

| Core Courses (15 credits)                                     |                     |    |  |
|---|---------------------|----|--|
| Radiation Physics   | RAT 6686            | 3  |  |
| Introduction to Radiation Biology                             | BSC 6834            | 3  |  |
| Radiation Therapy Physics                                     | RAT 6628            | 3  |  |
| Tradiación Triolagy Luyere                                    | RAT                 |    |  |
| Medical Imaging Physics                                       | 6616 <del>PHZ</del> | 3  |  |
| (Course change is effective spring 2014.)                     | <del>6245</del>     |    |  |
| Nuclear Medical Physics                                       | RAT 6687            | 3  |  |
| (Course change is effective fall 2013.)                       | PHZ 5304            | 3  |  |
| Additional Required Courses (23 credits)                      |                     |    |  |
| Advanced Photon Beam Radiation                                | RAT 6629            | 3  |  |
| Therapy   | 10000               |    |  |
| Radiation Therapy: Clinical Practicum                         | RAT 6947            | 3  |  |
| and Shadowing   |                     |    |  |
| Bioinformatics: Bioengineering                                | BME 6762            | 3  |  |
| Perspectives  | DAT 0070            |    |  |
| Shielding and Commissioning                                   | RAT 6376            | 3  |  |
| Seminar in Medical Physics                                    | RAT 6932            | 1  |  |
| Graduate Research   | PHY 6918            | 3  |  |
| Master's Thesis   | RAT 6975            | 7  |  |
| Elective Course (3 credits)                                   |                     |    |  |
| Choose one course from the following with advisor's approval: |                     |    |  |
| Biostatistics   | STA 5195            | 3  |  |
| Introduction to Dynamical Systems                             | MAP 6211            | 3  |  |
| and Chaos 1   | MA 0211             |    |  |
| Advanced Cell Physiology                                      | PCB 6207            | 3  |  |
| Special Topics  | BSC 6936            | 3  |  |
| (including Cell Structure and Function)                       |                     |    |  |
| Introduction to Biophysics                                    | PHZ 5715            | 3  |  |
| Total   |                     | 41 |  |

Subject: Curricular changes to PSM in Medical Physics

Date: Wednesday, September 25, 2013 3:15:36 PM Eastern Daylight Time

From: Maria Jennings

To: Theodora Leventouri

CC: Nilce Maldonado

Hi Dr. Leventouri,

Nice speaking with you. The link to the Graduate Program Change request is below. To send it through committee review, please fill that form out and attach it to the catalog changes you would like to make.

http://www.fau.edu/graduate/facultyandstaff/programscommittee/docs/FAUprogramchangeGrad.doc

I am attaching a Word document for your convenience as well that you can use to make your changes and submit for committee approval. It is a copy of what currently appears in the catalog for Medical Physics. Make your changes in the document in red or highlight in yellow, print it out and attach it to the Graduate Program Change request. This should go to your College GPC. After approval there, it will go to the UGPC.

Thanks so much and let me know if you have any questions,

#### Maria

Maria Jennings
Assistant Registrar
Catalog/Course Inventory
Office of the Registrar
561.297.0236 (phone)
561.297.2756 (fax)

