**FLORIDA ATLANTIC UNIVERSITY**

Graduate Programs—NEW COURSE PROPOSAL

<table>
<thead>
<tr>
<th>DEPARTMENT</th>
<th>PHYSICS</th>
<th>COLLEGE</th>
<th>CESCOS</th>
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<tbody>
<tr>
<td>RECOMMENDED COURSE IDENTIFICATION</td>
<td>(TO OBTAIN A COURSE NUMBER, CONTACT <a href="mailto:HMALDONADO@FAU.EDU">HMALDONADO@FAU.EDU</a>)</td>
<td>TEXTBOOK INFORMATION: RADIATION PROTECTION &amp; DOSIMETRY, MICHAEL G. STABIN, SPRINGER 2007</td>
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<tr>
<td>PREFIX</td>
<td>RAT</td>
<td>COURSE NUMBER 6888</td>
<td>COMPLETE COURSE TITLE: RADIATION PROTECTION AND SAFETY</td>
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<tr>
<td>EFFECTIVE DATE</td>
<td>(FIRST TERM COURSE WILL BE OFFERED)</td>
<td>FALL 2016</td>
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<tr>
<td>CREDITS</td>
<td>3</td>
<td>READINGS: MRI SAFETY</td>
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<td><a href="http://www.ucsf.edu/patient-care/patient-safety/mri">http://www.ucsf.edu/patient-care/patient-safety/mri</a> Ultrasound safety</td>
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<td><a href="http://www.ncponline.org/Publications/Reports/Misc">http://www.ncponline.org/Publications/Reports/Misc</a>. PDFs/Ultrasound%20Summary–NCRP.pdf</td>
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<td><a href="http://www.ncbi.nlm.nih.gov/pmd/articles/PMC3810427/">http://www.ncbi.nlm.nih.gov/pmd/articles/PMC3810427/</a></td>
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<tr>
<td>GRADING (SELECT ONLY ONE GRADING OPTION):</td>
<td>REGULAR X SATISFACTORY/UNSATISFACTORY</td>
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<td>COURSE DESCRIPTION, NO MORE THAN THREE LINES: THIS COURSE WILL PROVIDE THE STUDENTS THE KNOWLEDGE AND TECHNICAL BACKGROUND TO UNDERSTAND THE CALCULATION METHODOLOGY, COMPLIANCE WITH THE SAFETY STANDARDS, AND USE OF QUANTITATIVE RISK ASSESSMENT FOR RADIATION PROTECTION &amp; SAFETY.</td>
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<tr>
<td>PREREQUISITES*</td>
<td>NONE</td>
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<td>PERMISSION OF INSTRUCTOR</td>
<td>LEVEL 0xxx</td>
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<tr>
<td>COREQUISITES*</td>
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<td>* PREREQUISITES, COREQUISITES AND REGISTRATION CONTROLS WILL BE ENFORCED FOR ALL COURSE SECTIONS.</td>
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<td>MINIMUM QUALIFICATIONS NEEDED TO TEACH THIS COURSE: MEDICAL PHYSICIST, MD, PhD IN MEDICAL PHYSICS, PHYSICS, (OR A CLOSELY RELATED FIELD).</td>
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<td>MEMBER OF THE GRADUATE FACULTY OF FAU AND HAS A TERMINAL DEGREE IN THE SUBJECT AREA (OR A CLOSELY RELATED FIELD).</td>
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<tr>
<td>Faculty contact, email and complete phone number: Theodora Leventouri <a href="mailto:leventouri@fau.edu">leventouri@fau.edu</a> 561-297-2695</td>
<td>Please consult and list departments that might be affected by the new course and attach comments:* The proposed course is not offered at FAU. It is a required course recommended by the Commission on Accreditation of Medical Physics Education Programs (CAMPEP).</td>
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**Approved by:**

Department Chair: ___________________________ Date: 9/29/15

College Curriculum Chair: ___________________________ 1. Syllabus must be attached; see guidelines for requirements: www.fau.edu/provost/files/course_syllabus_901.pdf


UGPC Chair: ___________________________ 3. Consent from affected departments (attach if necessary)

Graduate College Dean: ___________________________ Provost: ________________

UGPC@fau.edu one week before the University Graduate Programs Committee meeting.

*FAUnewsGrad—Revised July 2015*
Professional Science Master in Medical Physics (PSMMP)

RAT 6888 Radiation Protection and Safety

Course Syllabus

1. Course title/number, credit hours: RAT 6888 Radiation Protection and Safety, 3 credit hours.

2. Prereq/coreq: Permission of the Instructor

3. Course logistics
   a. Fall Term 2016
   b. Notation if online course: N/A
   c. Class location and time: SE 101, Friday 4:00-6:50

4. Instructor contact information
   a. Instructor’s name: Zoubir Ouhib DAMP, FACP/ Adjunct/Research Affiliate Associate Professor and Dr. Theodora Leventouri
   b. Office address: Science Bldg. 43, Rooms 318, 112
   c. Office hours: Mo, We 1-2, Fri 3-4 SE 112, by appointment, and open door policy.
   d. Contact telephone number: office (561) 297-2695 fax (561) 297-2662
   e. E-mail address: zouhib@brrh.com, leventou@fau.edu

5. TA contact information N/A

6. Course description
This course will provide the students the knowledge and technical background to understand the calculation methodology, compliance with the safety standards, and use of quantitative risk assessment for radiation protection & safety.

7. Course objectives/student learning outcomes
At the end of this course the students are expected to have a good understanding of safety calculation methodology, compliance with the safety standards, and use of quantitative risk assessment for radiation protection & safety.

8. Required texts/readings

9. Supplementary/recommended readings
MRI SAFETY
Ultrasound safety

Exam Dates          Quiz Dates
E1                  Q1
E2                  Q2
E3                  Q3
FINAL               Q4

10. Course topical outline (15 weeks)
W1: Introduction and historical perspective
W2: Interaction physics applied to radiation protection  HW1: Readings
W3: Protection principles (time, distance, shielding)  HW2: Reading and Problems
W4: Handling radiation and radioactive sources        HW3: Questions and Problems
W5: Radiation survey/contamination equipment         HW4: Questions and Problems
W6: Personnel monitoring                             HW5: Questions and Problems
W7: Radiation dose limits                             HW6: Questions and Problems
W8: Protection regulations                           HW7: Questions and Problems
W9: Shielding Principles: Beams and sources           HW8: Questions and Problems
W10: Application of statistics                       HW9: Questions and Problems
W11: External exposure, Internal Exposure            HW10: Questions and Problems
W12 Environmental Dispersion, Radioactive waste:     HW11: Questions and Problems
W13: Safety of MRI                                    HW12: Questions and Problems
W14: Safety of ultrasound                            HW13: Questions and Problems
W15: Protection regulations                          HW14: Readings and Questions

11. Course evaluation method
The letter grade is decided from four exams (15/100 each) including the final, and 4 quizzes (10/100 each). Class participation and literature research are important in determining the letter grade from the grading scale. Additional point will be given to raise the grade to the higher letter grade. Further explanation will be discussed in class.

12. Grading scale
FAU Standard Grading Scale

13. Policy on makeup tests, late work, and incompletes
Student meets with the Instructor for arrangements.

14. Special course requirements N/A

15. Classroom etiquette policy (if applicable)
University policy on the use of electronic devices states: “In order to enhance and maintain a productive atmosphere for education, personal communication devices, such as cellular telephones and pagers, are to be disabled in class sessions.”

16. Disability policy statement
In compliance with the Americans with Disabilities Act (ADA), students who require special accommodation due to a disability to properly execute coursework must register with the Office for Students with Disabilities (OSD) -- in Boca Raton, SU 133 (561-297-3880); in
Davie, MOD 1 (954-236-1222); in Jupiter, SR 117 (561-799-8585); or at the Treasure Coast, CO 128 (772-873-3305) – and follow all OSD procedures. 

17. Honor Code policy statement
Students at Florida Atlantic University are expected to maintain the highest ethical standards. Academic dishonesty, including cheating and plagiarism, is considered a serious breach of these ethical standards, because it interferes with the University mission to provide a high quality education in which no student enjoys an unfair advantage over any other. Academic dishonesty is also destructive of the University community, which is grounded in a system of mutual trust and places high value on personal integrity and individual responsibility. Harsh penalties are associated with academic dishonesty. For more information, see University Regulation 4.001 at http://www.fau.edu/regulations/chapter4/4.001 , Honor_Code.pdf.