## FLORIDA ATLANTIC UNIVERSITY"

UGPC APPROVAL	
UFS APPROVAL	
SCNS SUBMITTAL	
CONFIRMED	
BANNER POSTED	
CATALOG	

Credit Hour Memo 2012.pdf

(attach if necessary)

3. Consent from affected departments

Graduate.	Programs—I	NEW C	OURSE PI	ROP	OSAL'	CATALOG	
DEPARTMENT PHY	SICS		COLLEGE CES	scos			
RECOMMENDED COURSE IDENTIFICATION (TO OBTAIN A COURSE NUMBER, CONTACT NMALD				LDONADO@FAU.EDU)	EFFECTIVE DATE		
PREFIX RAT COURSE NUMBER 6888 LAB CODE (L or C)			•		(first term course, will be offered)		
COMPLETE COURSE TITLE: RADIATION PROTECTION AND SAFETY			SAFETY			FAUS2016	
CREDITS <sup>2</sup> 3	TEXTBOOK INFORMATION: RADIATION PROTECTION & DOSIMETRY, MICHAEL G. STABIN, SPRINGER 2007 READINGS: MRI SAFETY						
						ents/documents/MRI-safety-quiz.pdf	
						c ct mri/mri report.pdf .	
	http://www.radiology.ucsf.edu/patient-care/patient-safety/mri Ultrasound safety http://www.ncrponline.org/Publications/Reports/Misc_PDFs/Ultrasound%20Summary—NCRP.pdf						
	http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3810427/						
GRADING (SELECT ONLY ONE GRADING OPTION): REGULAR X SATISFACTORY/UNSATISFACTORY							
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 & safety.							
Prerequisites* Corequi		COREQUIS	JISITES* REGISTRATION C		REGISTRATION C	ONTROLS (MAJOR, COLLEGE, LEVEL)*	
PERMISSION OF INSTRUCTOR NONE		LEVEL 6xxx					
* Prerequisites, corequisites and registration controls will be enforced for all course sections.							
MINIMUM QUALIFICATIONS NEEDED TO TEACH THIS COURSE: MEDICAL PHYSICST, MD, PHD IN MEDICAL PHYSICS, PHYSICS, (OR A CLOSELY RELATED FIELD).  MEMBER OF THE GRADUATE FACULTY OF FAU AND HAS A TERMINAL DEGREE IN THE SUBJECT AREA (OR A CLOSELY RELATED FIELD).							
	ail and complete pho					might be affected by the new course	
						ourse is not offered at FAU. It is a	
		required course recommended by the Commission on Accreditation of Medical					
561-297-2695			Physics Educati	ion Prog	rams (CAMPEP).		
Approved by:			•	Date:	-	1. Syllabus must be attached; see	
Department Chair:_	10		<u> </u>	9/	29/15	guidelines for requirements: www.fau.edu/provost/files/course	
College Curriculum	Chair:					syllabus.2011.pdf	
College Dean:				[		2. Review Provost Memorandum:  Definition of a Credit Hour	
UGPC Chair:					www.fau.edwprovost/files/Definition		

Email this form and syllabus to <u>UGPC@fau.edu</u> one week before the University Graduate Programs Committee meeting.

Provost:

Graduate College Dean: UFS President:



# Dr. Th. Leventouri Professor of Physics Director, Medical Physics Program Department of Physics Director, Center for Biomedical and Materials Physics Charles E. Schmidt College of Science

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### 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. Prereg/coreg: 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, FACR/ 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

Radiation protection & Dosimetry, Michael G. Stabin, Springer 2007.

#### 9. Supplementary/recommended readings

**MRI SAFETY** 

https://www.temple.edu/medicine/departments\_centers/clinical\_departments/document s/MRI-safety-quiz.pdf

http://www.health.gov.on.ca/en/common/ministry/publications/reports/disc\_ct\_mri/mri \_report.pdf , http://www.radiology.ucsf.edu/patient-care/patient-safety/mri

#### **Ultrasound safety**

http://www.ncrponline.org/Publications/Reports/Misc\_PDFs/Ultrasound%20Summary--NCRP.pdf http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3810427/

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

#### 10. Course topical outline (15 weeks)

W1: Introduction and historical perspective	HW1: Readings
W2: Interaction physics applied to radiation protection	HW2: Reading and Problems
W3: Protection principles (time, distance, shielding)	HW3: Questions and Problems
W4: Handling radiation and radioactive sources	HW4: Questions and Problems
W5: Radiation survey/contamination equipment	HW5: Questions and Problems
W6: Personnel monitoring	HW6: Questions and Problems
W7: Radiation dose limits	HW7: Questions and Problems
W8: Protection regulations	HW8: Questions and Problems
W9: Shielding Principles: Beams and sources	HW9: Questions and Problems
W10: Application of statistics	HW10: Questions and Problems
W11: External exposure, Internal Exposure	HW11: Questions and Problems
W12 Environmental Dispersion, Radioactive waste:	HW12: Questions and Problems
W13: Safety of MRI	HW13: Questions and Problems
W14: Safety of ultrasound	HW14: Readings and Questions
W15: Protection regulations	HW15: Readings

#### 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.

http://www.fau.edu/policies/files/1.13%20Disabilities%20and%20Accomodations%20FI NAL%209-18-12.pdf

#### 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.