

UNIVERSITY OF PUERTO RICO
MEDICAL SCIENCES CAMPUS
SCHOOL OF MEDICINE

PHYSIOLOGY DEPARTMENT

COURSE DESCRIPTION

COURSE TITLE: **DOCTORAL THESIS INVESTIGATION**

COURSE CODE: **FISA 8599**

CREDIT HOURS: **15 CREDITS**

COURSE DURATION: **NA**

NUMBER OF STUDENTS: **MIN.: 1 MAX.: 15**

COORDINATOR NAME: **STAFF**

COORDINATOR OFFICE HOURS: **TO BE ARRANGED**

COORDINATOR OFFICE: **NA**

COURSE HOURS: **TO BE ARRANGED**

WHEN WILL BE OFFERED: ___ QUATERLY __X__ SEMESTER
 ___ YEAR ___ SUMMER

PREREQUISITE: **THESIS PROPOSAL AND COMPREHENSIVE
EXAMINATION**

COURSE JUSTIFICATION:

This course is a graduation requirement to obtain a Doctoral degree in Physiology. The purpose of the course is to train the student in all the areas of scientific research including experimental design, conducting the experiment, data analysis, statistical analysis and writing of a thesis. The student will develop these skills with the assistance of a mentor and

members of the thesis committee. The selected research problem must be original and never studied before.

DESCRIPTION: Laboratory work directed towards the completion of a doctoral thesis.

This course provides training in all aspects of the scientific investigation. The student, under the guidance of his mentor and the thesis committee formulates a hypothesis and then designs experiments to prove or disprove this hypothesis according to the scientific method. During this process the student is expected to become an expert in experimental design, laboratory techniques and data analysis. Effective communication and teaching skills are expected to be developed during this process.

COURSE OBJECTIVES AND EXPECTED RESULTS:

1. Development of skills to research the literature and access current scientific information.
2. To become proficient in multiple research techniques.
3. Development of critical thinking in the context of the scientific method.

The students should provide proficiency with the course objectives, that will be measured by analysis, integration and comparison of the above mentioned concepts, that will be evaluated through multiple choice questions, essay exams, term papers, presentations and/or publications.

COURSE TOPICS AND TIME DISTRIBUTION

NA.

TEACHING STRATEGIES

Use of laboratory equipment and research material, library, research presentation at local and national scientific meetings, thesis presentation, lectures, workshops and small groups discussions. The learning process will be guided and facilitated by the mentor, members of the thesis committee, faculty members and other members of the scientific staff.

ESSENTIAL REQUIREMENTS

Full time participation for at least two years

Initiative

Creative

Responsibility

Independent study

Laboratory notebook

Ability to work with others

EVALUATION STRATEGIES

**Oral and written reports
Quality of research work
Thesis presentation
Manuscript publication in peer-reviewed journals
Research presentation in local and national scientific meetings**

EVALUATION SYSTEM:

Approved or not approved

BIBLIOGAPHY

Recent research articles from the literature chosen by the student and his/her advisor.

REASONABLE ACCOMODATION STATEMENT:

Students with a health condition or situation that, according to the law, makes them eligible for reasonable accommodation have the right to submit a written application to the professor and the dean of their Faculty, according to the procedures established in the document Submittal Process for reasonable Accommodation of the Medical Sciences Campus. A free copy of this document may be obtained at the Office of the Dean for Student Affairs, second floor of the School of Pharmacy building; phone 787-758-2525 ext. 5203. A copy may also be obtained at the Office of the faculty Deans as well as in the MSC web page. The application does not exempt the student from complying with the academic requirements pertaining to the programs of the Medical Sciences Campus.

ACADEMIC INTEGRITY

The University of Puerto Rico promotes the highest standards of academic and scientific integrity. Article 6.2 of the UPR Student Bylaws (Certification JS 13 2009–2010) states that "academic dishonesty includes but is not limited to: fraudulent actions, obtaining grades or academic degrees using false or fraudulent simulations, copying totally or partially academic work from another person, plagiarizing totally or partially the work of another person, copying totally or partially responses from another person to examination questions, making another person to take any test, oral or written examination on his/hers behalf, as well as assisting or facilitating any person to incur in the aforementioned conduct". Fraudulent conduct refers to "behavior with the intent to defraud, including but not limited to, malicious alteration or falsification of grades, records, identification cards or other official documents of the UPR or any other institution." Any of these actions shall be subject to disciplinary sanctions in accordance with the disciplinary procedure, as stated in the existing UPR Student Bylaws.

DISCLAIMER: The above statement is an English translation, prepared at the Deanship of Academic Affairs of the Medical Sciences Campus, of certain parts of Article 6.2 of the UPR Student Bylaws “Reglamento General de Estudiantes de la Universidad de Puerto Rico”, (Certificación JS 13 2009-2010). It is in no way intended to be a legal substitute for the original document, written in Spanish.