



PHARM. 790. SPECIAL TOPICS IN PHARMACOLOGY AND TOXICOLOGY

Course Description: This course may cover any area of interest to at least one student and one faculty member.

Credit Hours: Class and credit hours are to be arranged

Course Prerequisites: The expectations of both the student and the faculty must be discussed and mutually accepted prior to any agreement to registration for this course. In addition to the approval of the identified faculty, approval by either the Graduate Director of the program in which the student is enrolled or the student's faculty advisor is required.

Course Dates: Spring Semester (January 10 – May 13, 2011)

Course Times: Specific times will be arranged between the student and the identified faculty.

Course Location: Arrangements for a classroom will be made as needed.

Instructor: Any graduate faculty within the Pharmacology and Toxicology program may direct a student in a Special Topics course. General information about eligible faculty and their respective research interests can be obtained from the Graduate Director.

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Alternatively, information about prospective faculty can be obtained from the Pharmacology & Toxicology website <http://pharmacology.umc.edu/> under research. Students also may speak with individual faculty about the possibility of offering a Special Topics course.

Required Text and Other Learning Resources: The specific text and other resource material required for this course will be dependent on the topic agreed upon between the student (or students) and the faculty. Most likely, the primary resource will be reviews and other relevant articles in the scientific literature.

Course Overview: A combination of 'lecture', assigned readings of relevant articles from the primary scientific literature, one-on-one (or group) discussion, student presentation and writing assignments will be used to develop an in depth description/analysis of the topic stipulated by the participating student(s) and faculty.

This description will include the general biochemistry and physiology of the "topic" system at the appropriate whole animal, system, organ, cellular and/or molecular levels. In addition, the pharmacokinetic and pharmacodynamic aspects of drugs that either are used experimentally to define the system or have significant clinical impact will be defined.

Course Objectives: Upon completion of this course, students will be able to (in relation to the

stipulated topic):

- (1) describe or otherwise relate major physiological functions and regulatory mechanisms.
- (2) identify sites within the relevant system or systems at which drugs act, from both an experimental and a therapeutic perspective.
- (3) define the mechanisms of action of those drugs and describe the impact of their actions on the basic biochemical processes and physiological functions identified above (1).
- (4) identify or otherwise enumerate the experimental evidence that supports (or refutes) the presumed mechanisms of drug action or regulatory process being studied.
- (5) discuss the evidence cited above (4) and offer reasoned conclusions concerning the validity of currently accepted models related to the specified topic.

Grading Policy and Rubric. The final grade in this course will be based on active participation, written assignment(s) and oral presentation(s). Although the specifics might vary from instance to instance, a general grading scheme might be as follows:

| Component of Grade | Percentage of Grade |
|--|---------------------|
| Participation | |
| a. contributed to discussion (yes/no) | 10 |
| b. apparent depth of knowledge, analysis, critical thinking | 50 |
| Presentation (clarity, knowledge, ability to answer questions) | 20 |
| Written Assignments (clarity, depth, analysis, interpretation) | 20 |
| Total: | 100 |

The extent to which a student satisfies each of these determinants will be determined by the student's mastery of the relevant competencies enumerated in one or more of the evaluation templates *Evaluation of a Student's Critique of Scientific Paper*, *Evaluation of a Student Research Presentation* and *Evaluation of a Student Research Paper*.

Course Policies:

Attendance at scheduled classes, active participation in discussion, and timely completion of reading and other assignments are required. More specific requirements for successful completion of this course should be identified prior to registration.

Written assignments must be typed and comply with the format of appropriate scientific publications¹ or as otherwise stipulated in the assignment. Completed written assignments should be submitted electronically through Groupwise.

Information related to this course will be relayed verbally, as written documents or electronically through Groupwise.

1. As examples, a general review of the scientific literature on a specified topic might follow the format of a review published in *Annual Review of Pharmacology*, whereas an experimental design- or problem-based assignment might follow the format of an article in *The Journal of Pharmacology and Experimental Therapeutics*.

University Policies:

Students with disabilities (ADA) statement Refer to UMC policy
Academic honesty statement Refer to UMC policy