

## The University Of Toledo

JAN 16 2013

## New Graduate Course Proposal

COLLEGE OF  
GRADUATE STUDIES

\* denotes required fields

1. College\*: College of Pharmacy

Department\*: Pharmacology

2. Contact Person\*: William Messer Phone: 383-1958 (xxx - xxxx) Email:

william.messer@utoledo.edu

3. Alpha/Numeric Code (Subject area - number)\*: PHCL - 7100

4. Proposed title\*: Experimental Therape

Proposed effective term\*: 201340 ( e.g. 201140 for 2011 Fall)

5. Is the course cross-listed with another academic unit?

☐

Yes

☒

No

Approval of other academic unit (signature and title)

Is the course offered at more than one level?

☐

Yes

☒

No

If yes, an undergraduate course proposal form must also be submitted. If the undergraduate course is new, complete the New Undergraduate Course Proposal; if the undergraduate course is existing, submit an Undergraduate Course Modification Proposal.

6. Credit hours\*: Fixed: 3 or Variable:   
to

7. Delivery Mode:

Primary\*

Secondary

Tertiary

a. Activity Type \*

Lecture

Web Assisted Instru

--SelectType--

b. Minimum Credit  
Hours \*

3

Maximum Credit  
Hours \*

3

c. Weekly Contact

3

Hours \*

8.

Terms offered:

☒

Fall

☐

Spring

☐

Summer

Years offered:

☒

Every Year

☐

Alternate Years

9.

Are students permitted to register for more than one section during a term?

☒

No

☐

Yes

May the courses be repeated for credit?

☒

No

☐

Yes

Maximum Hours

10.

Grading  
System\*:☒

Normal Grading (A-F, PS/NC, PR, I)

☐

Passing Grade/No Credit (A-C, NC)

☐

Credit/No Credit

☐

Grade Only (A-F, PR, I)

☐

Audit Only

☐

No Grade

11. Prerequisites (must be taken **before**): i.e. C or higher in (BIOE 4500 or BIOE 5500) and C or higher in MATH 4200☒

PIN (Permission From Instructor)

☐

PDP (Permission From Department)

Co-requisites (must be taken **together**):

12.

Catalog Description\* (75 words Maximum)

The course will cover the application of basic principles of pharmacology to the development of new therapies for human disease. A primary focus will be the translation of laboratory discoveries into clinical applications.

Hours \*

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☒

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☐

Spring

☐

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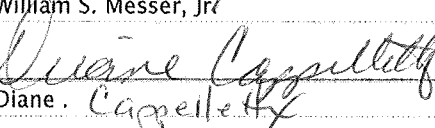



Catalog Description\* (75 words Maximum)

The course will cover the application of basic principles of pharmacology to the development of new therapies for human disease. A primary focus will be the translation of laboratory discoveries into clinical applications.


13. Attach a syllabus and an electronic copy of a complete outline of the major topics covered. Click [here](#) for template.

File Type	View File
Syllabus	<a href="#">View</a>

### Course Approval:

Department Curriculum Authority:	 Ezdihar Hassoun	Date	2012/10/26
Department Chairperson:	 William S. Messer, Jr.	Date	2012/10/26
College Curriculum Authority or Chair:	 Diane Cappelletty	Date	
College Dean:	 Wayne Hoss	Date	2012/10/26
Graduate Council:		Date	2-5-2013
Dean of Graduate Studies:		Date	2-5-2013
Office of the Provost :		Date	

### Administrative Use Only

Effective Date:	<input type="text"/>  (YYYY/MM/DD)
CIP Code:	<input type="text"/>
Subsidy Taxonomy:	<input type="text"/>
Program Code:	<input type="text"/>
Instructional Level:	<input type="text"/>

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**The following requirements will be differentiated for courses that are co-listed for Masters (5000 or 6000) and Ph.D. (7000 or 8000) levels:**

Masters students will need to complete successfully all course requirements as indicated in the syllabus. They should be able to achieve and demonstrate comprehensive understanding of course topics through class discussion, assignments, quizzes and exams.

To complete the course requirements, Ph.D. students will need to demonstrate an extended expertise in the course topics. They also should demonstrate independent scholarly activity and creativity to the class instructor. The ability of the Ph.D. level students to synthesize scientific data/information, develop original ideas/hypotheses and Formulate independent research studies/proposals will be evaluated through additional assignments and readings, or by demonstrating leadership roles in class discussion or other collaborative settings."

**PHCL 7100**  
**Experimental Therapeutics I**  
**Course Syllabus Fall 2013**

**Instructor(s):** Dr. William S. Messer, Jr.  
**Office/Office Hours:** HEB 274C, M-W, 3:00 to 5:00 p.m.  
**Phone:** 419-383-1958  
**Email:** william.messer@utoledo.edu

**Class Time and Location:** MWF, 8:00 to 8:50 a.m.

**Primary Communication Method:** Lecture

**Course Description:** The course will cover the application of basic principles of pharmacology to the development of new therapies for human disease. A primary focus will be the translation of laboratory discoveries into clinical applications.

**Course Objectives:**

- 1) By the end of the semester, students will be able to identify the mechanisms of action and important pharmacokinetic characteristics of drugs.
- 2) Students will be able to describe the major signal transduction pathways involved in normal cellular function and those implicated in human disease.
- 3) Students will also be able to develop strategies for the treatment of human disorders.
- 4) Students will be able to apply the basic principles of pharmacology to the development of new therapeutics by writing a research paper that outlines a prospective drug development project.

**Required/Recommended Texts:** Goodman & Gilman's The Pharmacological Basis of Therapeutics, 12<sup>th</sup> edition, edited by Laurence L. Brunton, Bruce A. Chabner and Björn C. Knollmann, The McGraw-Hill Companies, Inc., Chicago, IL, 2011. ISBN 978-0-07-162442-8

**Course Policies:**

**General-** Students are expected to attend classes, although attendance is not routinely taken. In the event of absence from class, students will be responsible for completing all assignments.

**Exams-** Two exams will be given during the semester. Each exam will be worth 100 points.

**Research paper-** A research paper (worth 100 points) will be due by Friday of the 15<sup>th</sup> week of class.

**Make-Up Exams-** Make-up examinations will be given only to those students who obtain an excused absence from the instructor prior to the examination or during the first class session following the examination. Late excuses will not be accepted. Make-up examinations will be scheduled only during the final examination period and may be administered in essay format.



**Academic Dishonesty Statement-** Cheating on exams and other forms of academic dishonesty will not be tolerated. Students guilty of cheating or plagiarism will be prosecuted according to College and University policies.

**Students with Disabilities** - The University of Toledo abides by the Americans with Disabilities Act and Section 504 of the Rehabilitation Act of 1973. If you have a disability and are in need of academic accommodations but have not yet registered with the Office of Accessibility (Rocket Hall 1820; 419.530.4981; [officeofaccessibility@utoledo.edu](mailto:officeofaccessibility@utoledo.edu)) please contact the office as soon as possible to initiate the process. Students with disabilities receiving accommodations through OA are encouraged to discuss these with course instructors, after class or during office hours, so that we may be better informed on how to assist you during the semester.

**Course Grade:** Final course grades will be determined as a percentage of the total accumulated points of the two examinations administered during the semester and the research paper (300 possible points).

**Grading Scale:** The following grading scale will be used:

Letter Grade	Numerical average (%)	Quality points
A	90.0-100	4.0
A-	88.5-89.9	3.67
B+	86.5-88.4	3.33
B	80.0-86.4	3.0
B-	78.5-79.9	2.67
C+	76.5-78.4	2.33
C	68.5-76.4	2.0
D+	66.5-68.4	1.33
D	60.0-66.4	1.0
D-	58.5-59.9	0.67
F	0-58.4	0

**Lecture Topic and Exams Schedule:**

Week 1	History of Pharmacology/Routes of administration
Week 2	Membranes and drug action
Weeks 3-4	ADME
Weeks 5-6	Pharmacokinetic modeling
Week 7-8	Receptor-ligand interaction and target response (Exam 1)
Week 9	Ion channels and drug action

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C+	76.5-78.4	2.33
C	68.5-76.4	2.0
D+	66.5-68.4	1.33
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F	0-58.4	0

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Week 10	Adverse drug reactions
Week 11	Risk assessment
Week 12	Drug resistance
Week 13	Signal transduction in drug action
Week 14	Mechanisms of cell death
Week 15	Hormesis