

Washington State University
MAJOR CURRICULAR CHANGE FORM -- COURSE REVISION

- ☐ Please attach rationale for your request, a complete syllabus, and explain how this impacts other units in Pullman and other campuses (if applicable).
- ☐ Obtain all required signatures with dates.
- ☐ Provide original stapled packet of signed form/rationale statement/syllabus PLUS 10 stapled copies of complete packet to the Registrar's Office, campus mail code 1035.
- ☐ Submit one electronic copy of complete packet to wsu.curriculum@wsu.edu.

Requested Future Effective Date: Fall 2016 (term/year) Course Typically Offered: Fall

DEADLINES: For fall term effective date: **October 1st**; for spring or summer term effective date: **February 1st**. See instructions.

NOTE: Items received after deadlines may be put to the back of the line or forwarded to the following year. Please submit on time.

Current course [List course as it currently appears in the catalog]:

PharmSci	577	Introduction to Research
course subject/crosslist	course no.	title
3	(3 - 0)	Admission to the College of Pharmacy graduate program
Credit hrs	lecture hrs per week	lab or studio hrs per week
		prerequisite

Requested Change(s): Check all that apply and list proposed change.

- ☐ Change subject: _____
 ☐ Change course number: _____
 ☐ Change credit to: _____
- ☐ Change lecture-lab ratio to: (_____ - _____)
 ☐ Variable credit: _____
 ☐ Repeat credit (cum. max. hrs): _____
- ☐ New/change crosslisting*: _____
 ☐ Conjoint listing (400/500): _____

Special Grading: ☐ S, F; ☐ A, S, F (PEACT only); ☐ S, M, F (VET MED only); ☐ H, S, F (PHARMACY, PHARDSCI only)

☒ Other (please list request): Change title, prerequisite, and description; update course content

NOTE: If only requesting a change to title, prerequisite, and/or description, please use a **Minor Curriculum Change** form.

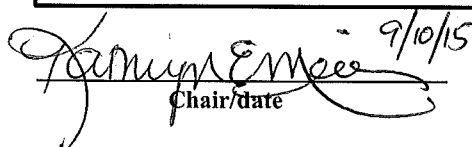
☒ Title change: Responsible Conduct of Biomedical Research
☒ Prerequisite change: Graduate standing or permission of instructor

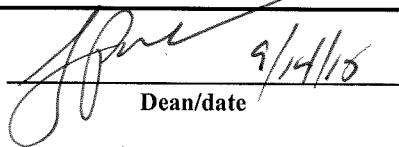
☐ Change catalog description to: Training in biomedical research ethics consistent with NIH requirements; introduction to literature searching and analysis, scientific writing, and oral presentations

The following items require prior submission to other committees/depts. (SEE INSTRUCTIONS.)

- ☐ Request to meet Writing in the Major [M] requirement (Must have All-University Writing Committee Approval.)
- ☐ Request to meet UCORE in _____ (Must have UCORE Committee Approval >> See instructions.)
- ☐ Special Course Fee _____ (Must submit request to University Receivables)

Contact: Kathryn Meier, PhD Phone number: (509) 358-7631 Campus mail code: 1495
 Email: kmeier@wsu.edu Instructor, if different: Sayed Daoud, PhD

 9/10/15
 Chair/date

 9/14/15
 Dean/date

 All-University Writing Com / date

Chair (if crosslisted/interdisciplinary)*

Dean (if crosslisted/interdisciplinary)*

UCORE Committee Approval Date

 Catalog Subcommittee Approval Date

 GSC or AAC Approval Date

 Faculty Senate Approval Date

***If the proposed change impacts or involves collaboration with other units, use the additional signature lines provided for each impacted unit and college.**

Rationale for revised course (PharmSci 577)

The proposed course is the first course at WSU that meets all “responsible conduct of research” requirements for NIH trainees. The NIH requires that such course material must be offered in person (not online) to all students on NIH training grants, at least once every four years; it does not have to be part of a course taken for credit. However, since our previous version of PharmSci 577 included most of the required material, only about half of the course content needed to be changed to meet NIH requirements and in the interests of updating. This course will continue to be *required for all graduate students* in the Pharmaceutical Sciences graduate program. To our knowledge, there is no overall duplication between this course and other WSU graduate courses, although undoubtedly some of the individual topics are addressed in other courses. Students on NIH training grants who have already taken PharmSci 577 for credit, or who need a 4-year refresher, will be allowed to sit in on the NIH-required modules in the course to meet NIH requirements.

We are happy to be able to meet the needs of potential NIH trainees by offering this course, and are also pleased that the course will continue to serve as “boot camp” for our first year PhD students, providing them with essential skills needed in graduate school. The changes submitted in this application fall between a minor revision and a major revision; we opted for the latter so that the reviewers could view the entire content of the revised course.

Rationale for new course (PharmSci 560)

The graduate program in Pharmaceutical Sciences continues to develop new coursework to meet the needs of the PhD students being trained in Spokane. The overall goal is to offer sufficient coursework on the Spokane campus so that students can take all of their required courses and electives on site. Students can still opt to take Pullman-based courses as electives, by telecommunication or online, but we intend to offer all of the required courses, including electives, in Spokane.

The proposed course is the first methods-based course in molecular and cellular biology taught on the Spokane campus. It is being offered under the course number PharmSci 512 (Topics in Pharmacology) for Fall 2015. The course has proven to be very popular, with 9 students currently enrolled. This course has been attracting the interest of PhD students working on the Spokane campus who are enrolled in other degree programs (e.g., Molecular Biosciences). In this course, Dr. Wang is carefully explaining both theory and practice for methods commonly used in basic science laboratories. Dr. Wang and her co-instructors are personally very familiar with these techniques, and manage instrumentation core facilities on the Spokane campus. To our knowledge, there is no overall duplication between this course and other WSU graduate courses, although undoubtedly some of the individual topics are addressed in other courses.

Given the very positive roll-out of this course on a provisional basis, we are requesting that it be added to the catalog as a new course under the designation PharmSci 560.

Washington State University Health Sciences Pharmaceutical Sciences Graduate Program

Course Title: Introduction to Research (Fall 2015)

Course Number: PharmSci 577

Credits: 3

Pre-requisites: Admission to the Pharmaceutical Sciences Graduate Program

Instructors of Record:

Sayed Daoud, PhD
Pharmaceutical Sciences
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Ph: 509-368-6572
Email: daoud@wsu.edu
Office hours: by appointment

Andrea Lazarus, Ph.D.
Experimental and Systems Pharmacology
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Participating Instructors:

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Asst Lab Operations Manager
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Kathryn Meier, Ph.D.
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Office of Commercialization
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Course Communication:

The College of Pharmacy makes use of Blackboard as the primary Learning Management System. If you have not used it before, you can log on to Blackboard at: <https://learn.wsu.edu/webapps/login/>. Click on the "WSU Authentication" and type in your WSU Network ID and password to access Blackboard. Your courses should be automatically pre-loaded based on enrollment. If you have difficulty finding one of your courses within Blackboard, please call Pharmacy IT at 509-358-7609.

You can also become familiar with Blackboard by viewing a short student orientation video at: <https://www.youtube.com/watch?v=36kDE4lvRml&index=1&list=PLontYaReEU1seUE3ACG3sEc3zR7Br7URU>. There is also an "On Demand Help" feature you can utilize located on the bottom of the web page after you log on to the Blackboard site.

Course Objectives:

This course is designed to introduce entering graduate students to Responsible Conduct of Research concepts and issues for biomedical research. The course will provide a practical overview of rules, regulations, attitudes and professional practices that contribute to successful practice of research.

Student Learning Outcomes	The following weeks will address this outcome:	This outcome will be evaluated primarily by:
Understand the expectations for graduate students both in terms of academic output and personal conduct, and the responsibilities of graduate mentors in the Department of Pharmaceutical Sciences	Weeks 1,3	Exam 1
Understand how to conduct experiments safely and in accordance with all federal, state, and university regulations, and maintain comprehensive, secure laboratory notebooks	Week 2	Exam 1
Understand how to use online research tools to search and cite the scientific literature and identify funding opportunities	Week 4	Exam 1 and oral presentations
Understand ethical principles pertaining to the conduct of research involving human or animal subjects	Weeks 5, 6	Exam 2
Critically evaluate primary research literature and develop graduate-level writing and oral presentation skills	Weeks 4, 8, 9-13	Writing assignment 1 and oral presentations
Understand the peer review process involved in both manuscript preparation and grant submission	Week 9	Exam 2
Understand the fundamental processes involved in writing a research grant proposal	Week 10	Exam 2
Understand the processes designed to protect intellectual property	Week 13	Exam 2
Understand principles of scientific integrity pertaining to the conduct of research and subsequent publication of its results	Weeks 11,12	Writing assignment 2

Required and Optional Textbooks, References and other resources

Reading materials will be assigned as needed to support the learning objectives for individual lectures and will be posted on Blackboard prior to the class session. Powerpoint slides will be posted as background material to study for exams.

Class Format and Schedule

Course time and location: Tuesday, 1.00 – 3.30 pm, SAC 45

Instruction in this course will be largely discussion based and therefore relies heavily on class participation. Students are expected to be prepared for discussion of cases presented by the instructor and bring their reading to bear upon discussion.

Week	Date	Content	Instructor	Assignment/ Assessment
1	Aug 25	Course Overview Basics in the Responsible Conduct of Research	Daoud Daoud	
2	Sept 01	Laboratory Safety Data Management	Myers Watson	
3	Sept 08	Mentor and Trainee Responsibilities/Lab Etiquette	Meier/Daoud	
4	Sept 15	Library Resources Databases for Search Strategies & Data Analysis	Potter Ashmore	<u>Assignment:</u> identify papers for presentation (due September 29 th)
5	Sept 22	Human Subjects Protection	A. Lazarus	
6	Sept 29	Welfare of Laboratory Animals	Russell	Submission of 3 articles for presentation to IORs
7	Oct 06	Authorship, Publication and Peer Review	Meier	
8	Oct 13	Writing a Research abstract/Preparing an Oral Presentation	A. Lazarus	Exam #1 <u>Assignment:</u> Write abstract and title for assigned publication (due October 27 th)
9	Oct 20	Writing an NIH Grant Proposal	A. Lazarus	
10	Oct 27	NIH, Funding Mechanisms, and the Study Section Review Process Student Presentation #1	P. Lazarus	Abstract and title assignment
11	Nov 03	Research Ethics and Conflict of Interest Student Presentation #2	A. Lazarus	<u>Assignment:</u> Case study reflections (due November 17 th)
12	Nov 10	Scientific Misconduct Student Presentation #3	Glaesman	
13	Nov 17	Intellectual Property, Patents, Copyright and Commercialization	Malik-Kale/Ebinger	Case study reflections
	Nov 24	Thanksgiving vacation	No classes	
14	Dec 01	Student Presentation #4 Self Study	Daoud/ A. Lazarus	
15	Dec 08	Course wrap-up Student Presentation # 5	Daoud/ A. Lazarus	Exam #2

Course Expectations

- There may be assigned readings for most classes and these will be posted on Blackboard. Students are expected to complete the readings prior to each class.
- Class attendance is expected and the instructor reserves the right to monitor class attendance.
- Professional behavior is expected of all students at all times.
- Students may consult with classmates on assignments; however, students are reminded that assignments are assessed on an individual basis and each student must turn in his/her original work. No copying will be accepted.
- Assignments and presentations must be completed by the scheduled day and time.

Course Grading Distribution and Grading Scale

Three writing assignments and one oral presentation will be assessed for this course. The due dates and contributions of each piece of assessment to the final grade are as follows:

Assessment	Percent	Due dates
Exam 1	15%	October 13
Abstract writing	20%	October 27
Case study reflection	20%	November 17
Exam 2	15%	December 1
Oral presentation	30%	Weeks 9-15
Total	100%	

All writing assignments must be submitted via the appropriate Assignment dropbox in Blackboard. Note that the submission window for Blackboard will expire at 5pm sharp on the due date. Students are advised to plan ahead and familiarize themselves with Blackboard and the Assignment requirements well in advance of the due date and time. No late assignments will be accepted without significant penalty unless the student (1) provides a written medical note to the instructor of record from either a physician, physician's assistant, or nurse in the case of sickness, surgery, or other significant medical procedures, or (2) obtains prior approval by the instructor of record, approval which will only be granted for instances such as a death in the family or other major events, as deemed appropriate by the instructor of record. Failure to finalize the upload of the assignment prior to the expiration of the respective site on Blackboard or to deliver the oral presentation at the scheduled day and time will result in an automatic grade reduction of 50% of what is earned on that assignment if turned in within 1 week of the due date; a zero grade will be assessed if not received within 1 week of the due date.

Grading Scale:

A = 93-100%	C = 73-76%
A- = 90-92%	C- = 70-72%
B+ = 87-89%	D+ = 67-69%
B = 83-86%	D = 63-66%
B- = 80-82%	F = < 62%
C+ = 77-79%	

In calculating the final grades, percentages will be rounded to the nearest whole number.

Methods of Assessment

All writing assignments must be uploaded to Blackboard no later than 5pm on the specified due date. Students should ensure that their name appears in the file name. Each piece of written assessment will be electronically returned to students complete with comments, grade and grading rubric. The preferred file formats for the submitted documents are .doc, .docx, .pages or .rtf.

Grading rubrics for each of the assignments will be uploaded to Blackboard by the instructor well in advance of the submission deadlines.

1. Abstract Writing: 20% (Due date: October 27)

Students will receive an original research article from a peer-reviewed journal with the abstract and title redacted. Students must read the research article and write a title and abstract for the articles, based on the guidelines discussed in the lecture. The title and abstract should adhere to the following format:

Title of Article (200 characters or less)

Background: Explain why this project is important, and the rationale for doing this study. (2-4 sentences)

Methods: Describe how the study was done (2-3 sentences)

Results: Describe the main findings of the study (4-5 sentences)

Conclusions: Put the findings in perspective and explain the implications of the findings. (3-5 sentences)

The entire abstract should not exceed 350 words and should use Arial 11 point font. If your project cannot be described using these headings, you may write an unstructured abstract, but it must still be within the word limit.

The abstract will be judged according to a rubric based on the key qualities of a good title and abstract as outlined in class. This rubric will be provided at the same time as the article to be reviewed.

2. Exams: 15% each

Students will take two exams with multiple choice, true/false, matching questions or short -answers based on material presented in class, using Powerpoint slides posted on Blackboard as background material. Material covered on each exam is shown below. Students will not be questioned on material covered in student presentations.

Exam 1 (October 13): Lectures 1-7

Exam 2 (December 1): Lectures 8-13

3. Case Study Reflections: 20% (Due date: Nov 17th)

Students will be provided with 3-4 ethical dilemmas. Students must identify the potential ethical concerns, and provide strategies for dealing with the situation, providing a rationale for their strategy and potential outcomes. Student reflections will be judged according to a rubric, which will be provided along with the case studies.

4. Oral Presentation of Research Papers: 30% (Weeks 9-15)

Using the search strategies outlined in the Week 4 lecture, students will identify 3 scientific articles of interest from peer-reviewed journals. Copies of these articles will be provided to the IORs, who will make a final determination regarding which article is most appropriate for presentation. Using the

guidelines discussed in the Week 8 lecture, students will prepare and give an oral presentation (30 min) based on the selected article. Presentations will be judged according to a rubric provided along with the article to be presented.

Academic Honesty, Conduct, and Behavior

Students are reminded that they must adhere to the policies agreed to in writing when entering the Pharmaceutical Sciences Graduate Program. Departures from these policies may have serious consequences for academic standing in the class and/or continued enrollment in the Graduate Program. Sanctions for violation of the policies will depend upon the seriousness of the infraction. Furthermore, depending on the nature of the policy violation, students will be referred to the Graduate Program Committee, Director of the Graduate Program, or the WSU Office of Student Conduct. Any policy violations that constitute an alleged violation in Washington State University's academic integrity standards will be handled directly by the Office of Student Conduct as set forth in "*Procedure for Academic Integrity Violations*" (WAC 504-26-404). Cheating is defined in the Standards for Student Conduct (WAC 504-26-010).

Detailed information on Academic Dishonesty can be found on the Office of Student Standards and Accountability web site at: <https://conduct.wsu.edu/academic-integrity/>

For information on what might be considered plagiarism, see: <http://www.wsulibs.wsu.edu/plagiarism>

Students are encouraged to work with classmates on assignments; however, each student must turn in original work. No copying will be accepted. Students who violate WSU's Policy on Academic Integrity will receive an F as a final grade in this course and be immediately referred to the Director of Student Services and/or the Office of Student Conduct.

Students with Disabilities Statement

Reasonable accommodations are available for students with a documented disability. If you have a disability and may need accommodations to fully participate in this class, please contact Liz West, Assistant Director of Student Affairs, in Academic Center 130 (liz.west@wsu.edu, 509-358-7534).

All accommodations must be approved. Additional information can be found at:

<http://spokane.wsu.edu/students2/student-affairs/disability-resources.html>

Campus Safety and Emergency Notification

The WSU Spokane Campus Safety Plan contains a comprehensive listing of university policies, procedures, statistics, and information relating to campus safety, emergency management, and the health and welfare of the campus community. The Campus Safety Plan can be found at: <http://spokane.wsu.edu/services2/facility-services/safety-security/safety-plan/>. Please visit this site to become familiar with the campus safety and emergency information provided. A link to the WSU Pullman Safety Plan is also available on this web site.

All faculty, staff, and students should go to the zzusis portal at <http://zzusis.wsu.edu> and register their emergency contact information for the Crisis Communication System (CCS). Enter your network ID and password and you will be taken to the zzusis portal page. Look for the "*Spokane Emergency*

Information” box on the left side of the page and click the update link to be taken to the registration page where you can enter your cell, landline, and email contact information as well as arrange for emergency text messages to be sent to your cell phone.

Course Evaluations

Student evaluations of courses/course modules and faculty effectiveness are a valuable and important component of the College’s commitment to provide quality-learning experiences and contribute to our efforts to assure that students achieve the objectives of our professional degree program. Thus, all evaluations are given serious consideration as part of the assessment process and are reviewed by faculty and department chairs before they are processed, analyzed, and given to the faculty. Because the most effective way to impact positive changes is through **constructive comments**, students are encouraged to provide feedback as they would wish to receive it. This will allow the faculty member to focus on improvements or affirm students’ perspective on effective elements of the course.