Washington State University
MAJOR CURRICULAR CHANGE FORM -- COURSE
(Submit original signed form and ten copies to the Registrar's Office, zip 1035.)

Future Effective Date: 08/01/2013
(effective date cannot be retroactive)
☐ New course      ☐ Temporary course      ☐ Drop service course
☐ There is a course fee associated with this course (see instructions)

☐ Variable credit
☐ Increase credit (former credit ________)
☐ Number (former number ________)
☐ Crosslisting (between WSU departments)
  (Must have both departmental signatures)
☐ Conjoint listing (400/500)
☐ Request to meet Writing in the Major [M] requirement (Must have All-University Writing Committee Approval)
☐ Request to meet GER in ________ (Must have GenEd Committee Approval)
☐ Professional course (Pharmacy & Vet Med only)
☐ Graduate credit (professional programs only)
☐ Other (please list request)

PharmSci/NEP  577  Introduction to Research
course prefix  course no.  title

3  3  0  0  Admittance to the Graduate Programs
credit  lecture hrs  lab hrs  studio hrs  prerequisite
per week  per week  per week

Description (20 words or less)  SEE ATTACHED

Instructor: Dr. William Fassett
Contact: Deb Howe
Campus Zip Code: 6510

Phone number: 335-2227
Email: fassett@wsu.edu
Email: drhowe@wsu.edu

- Please attach rationale for your request, a current and complete syllabus, and explain how this impacts other units in Pullman and other branches (if applicable).
- Secure all required signatures and provide 10 copies to the Registrar's Office.

March 03/28/12
Chair/date
Mary Howe 3/30/12
Dean/date

Chair (if crosslisted/interdisciplinary)  Dean (if crosslisted/interdisciplinary)  Graduate Studies Com/date

All-University Writing Com/date  Academic Affairs Com/date  Senate/date

*If the proposed change impacts or involves collaboration with other units, use the additional signature lines provided for each impacted unit and college.
Washington State University College of Pharmacy
Graduate Program
SUBJECT TO CHANGE TO ACCOMMODATE GUEST LECTURERS
LAST REVISED 8/22/11

Course Logistics

Course Title: INTRODUCTION TO RESEARCH

Course Number: PHARS 577
Credits: 3

Pre-requisites: Admission to the Graduate Program

Instructor of Record (include contact information and office hours):
William E. Fassett, PhD, Professor of Pharmacotherapy; fassett@wsu.edu; 8-7666; by appointment

Participating Instructors:
Gary Meadows, PhD, Professor of Pharmaceutical Sciences, Associate Dean for Research &
Graduate Education
David Koh, PhD, Assistant Professor, Pharmaceutical Sciences
Kay Meier, PhD, Professor and Director, NEP
Raymond Quock, PhD, Professor and Chair, Pharmaceutical Sciences
David Sciar, PhD, Professor of Pharmacotherapy, Marketing, Statistics

Course Communication:
WSU Spokane and Pullman use the Angel LMS (Learning Management System). If you have not used Angel before, please take a few minutes to become familiar with the system prior to the start of the semester. There is a short student orientation video on Angel at http://angel.wsu.edu/Tutorials/STudentOrientation/STudentOrientation.html

How do I access Angel?
1. Go to lms.wsu.edu
2. Log in with your WSU Network ID and Password

Where can I find more information on Angel?
- Inside Angel, look for the question mark button on the left hand edge “powerstrip.”
- Visit http://angel.wsu.edu/ for additional help.

Course Time and Location: T, Th, 8:30 – 9:45, WEG G70. Spokane-based faculty will often meet with students during the scheduled course time via PolyCom from Spokane.

Course Objective:

This course introduces entering graduate students to the philosophy, standards, and practices of scientific inquiry and scholarship appropriate to basic, clinical, and social and administrative sciences in healthcare, and the performance expectations for researchers and scholars.

Learning Outcomes:

At the conclusion of the course, students should be able to:
- Identify the purposes of research and scholarship
• Describe the components of a good research question. Develop a primary research question and a set of subsidiary questions needed to answer the primary question
• Describe appropriate methods for answering primary and subsidiary research questions
• Assess whether a given research question is appropriately addressed by qualitative or quantitative methods, or by a mixture of methods
• Understand the role of inductive and deductive reasoning in modern scientific research
• Describe and apply ethical principles to the conduct of research involving human or animal subjects
• Describe and apply principles of scientific integrity to the conduct of research and subsequent publication of its results
• Demonstrate the ability to develop a research proposal following the guidelines of a granting agency
• Demonstrate the ability to prepare an abstract from the body of a research report
• Conduct or participate in the conduct of research in a manner that protects the safety of research subjects and research personnel
• Understand and describe the processes designed to protect intellectual property

**Required and Optional Textbooks, References and other resources**

• Recommended: “Arteology” website - http://www2.uiah.fi/projects/metodi/e00.htm

**Class Format and Schedule**

• We shall follow a lecture/discussion format. The class will normally meet on Tuesday and Thursday mornings from 8:30 to 9:45. Spokane-based faculty will frequently meet with the class via Polycom.
• Course Modules will cover the following general topics:
  o Module I – Research & Inquiry
    ▪ Purpose of research
    ▪ Developing research questions
    ▪ Dimensions of research
      • Qualitative ↔ Quantitative
      • Inductive ↔ Deductive
      • Intensive ↔ Extensive
      • Descriptive vs. Normative vs. Developmental
    ▪ Research as a contribution to the “ongoing global conversation” of the discipline
    ▪ Expectations of publication or dissemination of results to peers
    ▪ Academic Inquiry
      • Discovery
      • Synthesis
      • Application
      • Scholarship of Teaching
  o Module II – Conduct of Research
    ▪ Ethics
    ▪ Safety
    ▪ Documentation
      • Research records & notebooks
        o Documentation of work
        o Support for intellectual property claims
        o Support for grant audits
- Security of research records
- Importance of English language records
  - Documentation of resources
  - Human subjects records
  - Research records and data retention
- Module III – Research Literature and Resources
- Module IV – Intellectual Property
  - Patents
  - Copyrights
  - Fair use
  - Non-disclosure agreements
- Module V – Obtaining Support for Research & Scholarship (Grantsmanship)
- Module VI – Communication of results
  - Podium presentations
  - Posters
  - Abstracts
  - The Scientific Paper
  - Books/Dissertations
  - Credit for work done, authorship order

- Course Schedule (Tentative)

<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Module</th>
<th>Topic</th>
<th>Assignment/Reading</th>
<th>Presenter</th>
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<tbody>
<tr>
<td>1</td>
<td>23-Aug</td>
<td>I - Research &amp; Inquiry</td>
<td>Course Intro</td>
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<td>Fassett, Meadows</td>
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<td></td>
<td>25-Aug</td>
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<td>Purpose(s) of research</td>
<td>Valiela 3-18</td>
<td>Fassett</td>
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<td>2</td>
<td>30-Aug</td>
<td></td>
<td>Research Questions</td>
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<tr>
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<td>1-Sep</td>
<td></td>
<td>Dimensions of research</td>
<td>Valiela 19-31</td>
<td>Fassett</td>
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<tr>
<td>3</td>
<td>6-Sep</td>
<td></td>
<td>No Class – will meet with Dr.</td>
<td>Naik G. Mistakes in scientific</td>
<td>Fassett</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Sclar on 12 Sep instead</td>
<td>studies surge. WSJ 2011 Aug 10;</td>
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<tr>
<td></td>
<td>8-Sep</td>
<td></td>
<td>Peer review</td>
<td>Retraction Watch website</td>
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<tr>
<td>4</td>
<td>12-Sep</td>
<td></td>
<td>Design Principles</td>
<td>Valiela 32-51; 84-105</td>
<td>Sclar</td>
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This discussion will occur in Dr. Sclar's Monday session.
<table>
<thead>
<tr>
<th>Date</th>
<th>Date Range</th>
<th>Section</th>
<th>Topic</th>
<th>Location</th>
<th>Instructor</th>
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<tbody>
<tr>
<td>13-Sep</td>
<td></td>
<td>I</td>
<td>The Ongoing Conversation</td>
<td>Valiela 291-321</td>
<td>Fassett</td>
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<tr>
<td>15-Sep</td>
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<td>I</td>
<td>Academic Researchers</td>
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<td>Fassett</td>
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<tr>
<td>5</td>
<td>20-Sep</td>
<td>II - Conduct of Research</td>
<td>Research Ethics - Human</td>
<td>Valiela 275-290;</td>
<td>David Clark, Director, Office of Research Assurances</td>
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<td></td>
<td>22-Sep</td>
<td></td>
<td>Research Ethics - Animal</td>
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<td>Steven Russell, DVM, WSU Campus Vet</td>
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<td>6</td>
<td>27-Sep</td>
<td></td>
<td>Research Safety - Chemical Safety in the Laboratory</td>
<td></td>
<td>Sarah Greer, WSU EHS</td>
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<td>29-Sep</td>
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<td>Biosafety</td>
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<td>Mike Kluzik, WSU Biosafety Officer</td>
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<td>7</td>
<td>4-Oct</td>
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<td>Research Safety</td>
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<td>TBD</td>
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<td>6-Oct</td>
<td></td>
<td>Documentation &amp; Integrity of Records</td>
<td>Safety Quiz (9:30 – 10:00)</td>
<td>TBD</td>
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<td>8</td>
<td>11-Oct</td>
<td>III - Literature &amp; Resources</td>
<td>Organization of the scientific literature/WSU resources</td>
<td>Valiela 107-137</td>
<td>Linda Crook, WSU Libraries</td>
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<td></td>
<td>13-Oct</td>
<td></td>
<td>Effective use of PubMed &amp; similar databases</td>
<td></td>
<td>Koh</td>
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<td>9</td>
<td>18-Oct</td>
<td></td>
<td>Cochrane/Web of Science</td>
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<td>TBD</td>
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<td>10</td>
<td>20-Oct</td>
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<td>Evaluation &amp; Verification of sources</td>
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<td>10</td>
<td>25-Oct</td>
<td></td>
<td>Midterm</td>
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<td>11</td>
<td>27-Oct</td>
<td>IV - Intellectual Property</td>
<td>Copyrights</td>
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<tr>
<td>11</td>
<td>1-Nov</td>
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<td>Research agreements &amp; conflicts of interests</td>
<td></td>
<td>David Clark</td>
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<tr>
<td>Date</td>
<td>Topic</td>
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<td>3-Nov</td>
<td>Fair use</td>
<td>Fassett</td>
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<td>12</td>
<td>8-Nov</td>
<td>Keith Jones, PhD, WSURF</td>
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<td>10-Nov</td>
<td>V - Support for Research</td>
<td>Meadows</td>
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<td>13</td>
<td>15-Nov</td>
<td>Meadows</td>
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<td>14</td>
<td>22-Nov 24-Nov</td>
<td>Meier</td>
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<tr>
<td>17-Nov</td>
<td>Elements of grant proposals</td>
<td>Valiela 174-186</td>
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<td>15</td>
<td>NO CLASS – THANKSGIVING VACATION</td>
<td>Valiela 139-161</td>
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<td>15</td>
<td>VI - Communication of Results</td>
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<td>15</td>
<td>The research report/paper</td>
<td>Meier</td>
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<td>15</td>
<td>Posters &amp; podium presentations</td>
<td>Quock</td>
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<td>16</td>
<td>1-Dec</td>
<td>Fassett</td>
<td></td>
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<tr>
<td>16</td>
<td>Abstracts</td>
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<td>16</td>
<td>6-Dec</td>
<td>Meier</td>
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<td>16</td>
<td>Editorial and peer review processes</td>
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<td>8-Dec</td>
<td>Course Evaluation</td>
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<td>8-Dec</td>
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<td>13-Dec</td>
<td>Abstract Due</td>
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**Course Expectations**

- Assigned readings should be completed PRIOR to the class session for which they are assigned.

- **INDIVIDUAL AND GROUP WORK** guidelines:

  UNLESS otherwise stated in the instructions for the individual assignment or examination, ALL assigned work will be INDIVIDUAL work.

"Individual work" means that the student may not obtain assistance from any other person in completion of the assignment or examination. Individual assignments or examinations will specify the types of resources that may be used. The following descriptors may be used by instructors in specifying those resources allowable for completing an assignment or examination.

- "Writing Center assistance allowed" means that an individual written assignment may be taken to the WSU Writing Center for guidance in improving the student's writing skills. The Writing
Center: staff will not assist the student in researching the paper, but may provide feedback to the student on areas needing improvement.

- "Closed book" means that the student may only use the resources made available to the student by the instructor within that assignment, and includes a prohibition against use of computers, PDAs, internet access, notes, or other sources.
- "Open book" means that the student may use the assigned textbook, notes taken in class, class handouts, and similar resources in completing the assignment or examination. "Open book" does not include use of e-resources.
- "e-resources allowed" means that students may use computers, PDAs, internet access or other forms of electronic resources, but does not include consulting with another person in the completion of the work.

"Group Work" means that the student is expected to complete the specified portion of the assignment or examination in collaboration with other members of his or her assigned group. It is expected that all students will participate fully in the group activities. Assessment of group work may, as the instructor's prerogative, include assessment of the degree of each member's contribution to the total group effort, which may be made by the instructor and/or peers.

- Describe specific major projects, presentations or performance requirements (examples follow)
  - Research papers (independent or collaborative or co-authored)
  - Student led discussion topics
  - Collaborative projects
  - Formal presentations

### Methods of Assessment

Two knowledge-based assessments will be given during the course and two performance-based written assignments will be utilized.

### Academic Honesty, Conduct, and Behavior

Students are reminded that they must adhere to the policies agreed to in writing when entering the College of Pharmacy. These are detailed in the Pharmacy Student Handbook under PHARMACY CODE OF PROFESSIONALISM. Departures from this CODE may have serious consequences for academic standing in the class and/or continued enrollment in the College of Pharmacy. Sanctions for violation of the CODE will depend upon the seriousness of the infraction. Furthermore, depending on the nature of the CODE violation, students will be referred to the Student Progress Committee, Associate Dean of Student Services or the WSU Office of Student Conduct (www.conduct.wsu.edu). Any CODE 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). For detailed information on Academic Dishonesty definitions and procedures, see: http://www.conduct.wsu.edu/default.asp?PageID=343. To learn more about what might be considered plagiarism please see: http://www.wsulibs.wsu.edu/plagiarism/main.html

It is the responsibility of students and faculty to promote academic integrity and intellectual honesty. All assignments should demonstrate independent effort and thought unless otherwise instructed. Evidence of cheating, copying of homework, working as a group on an independent assignment, plagiarism or not citing references properly will result in a conference with the instructor. The possible consequences of breaching academic integrity include the following: failing grade on the quiz or assignment, a full letter grade drop for the course or a failing grade in the course.
The student will also be referred immediately to the office of the Associate Dean and/or the WSU Office of Student Conduct.

**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 read first by the Department Chair before they are processed, analyzed, and given to the faculty. Because the most effective way to impact positive changes is through constructive comments, we encourage you to provide feedback as you 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.

**Students with Disabilities Statement**

All students requesting reasonable accommodation must meet with the instructor prior to or during the first week of the course to review all proposed accommodations in relation to course content and requirements. Please note that written evaluations can be accommodated but performance evaluations are considered analogous to job skill performance, therefore expectations will not be adjusted.

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 visit the Disability Resource Center (DRC). All accommodations MUST be approved through the DRC (Washington Bldg. 217). Please stop by or call 509-335-3417 to make an appointment with a disability specialist.

**Campus Safety**

The WSU Campus Safety Plan, which can be found at [http://safetyplan.wsu.edu](http://safetyplan.wsu.edu), 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. Please visit this web site as well as the University emergency management web site at [http://oem.wsu.edu/Emergencies](http://oem.wsu.edu/Emergencies) to become familiar with the campus safety and emergency information provided. Everyone should also become familiar with the WSU ALERT site ([http://alert.wsu.edu](http://alert.wsu.edu)) where information about emergencies and other issues affecting WSU will be found. This site also provides information on the communication resources WSU will use to provide warning and notification during emergencies. It should be bookmarked on computers. **Finally, all faculty, staff, and students should go to the zzusis portal at [http://zzusis.wsu.edu](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 Pullman Emergency Information box on the left side of the page and click on Update Now 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 Grading Criteria and Grading Scale**

This course is graded according to the following scale:
- 90 – 100 = A
- 80 – 89 = B
- 70 – 79 = C
- 65 – 69 = D
- < 65 = F

<table>
<thead>
<tr>
<th>Assessment Tool/Assignment</th>
<th>Contribution to Course Grade</th>
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</thead>
<tbody>
<tr>
<td>Quiz on laboratory safety topics</td>
<td>20%</td>
</tr>
<tr>
<td>Midterm examination on knowledge-based items related to Modules I and II</td>
<td>50%</td>
</tr>
<tr>
<td>Abstract of a research report</td>
<td>10%</td>
</tr>
<tr>
<td>Research proposal</td>
<td>20%</td>
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</tbody>
</table>
This course will be made available to the Nutrition and Exercise Physiology and Pharmaceutical Sciences graduate students and introduce graduate students to the philosophy, standards, and practices of scientific inquiry and scholarship appropriate to basic, clinical, social and administrative sciences in health care, and the performance expectations of researchers and scholars.
Barb,

I am no longer at the College of Pharmacy, but I am happy to answer your questions. I have copied Gary Meadows and Nic Burnham (my replacement) so that they are aware of the questions.

1. PharmSci/NEP 597. Yes, the seminar name should also be changed to College of Pharmacy Graduate Programs Seminar.
2. Dr. Meadows is the Signature Authority and Associate Dean for both the NEP and PharmSci Graduate Programs and therefore signed for both programs.

If you have any further questions I can answer them for you if Dr. Meadows or Nic are not able to.

Regards,

Deb

Deb Howe
Program Support Supervisor
Washington State University | Global Learning
509-335-6199 | dhowe@wsu.edu | www.ip.wsu.edu