Syllabus subject to revision as circumstance warrants. Students will be apprised of such revisions.

Meeting Times & Locations

<table>
<thead>
<tr>
<th>Day</th>
<th>Time</th>
<th>Duluth Room</th>
<th>Twin Cities Room</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mondays, August 25 – December 8, 2014</td>
<td>3:35 – 5:30 PM</td>
<td>Per Course Schedule</td>
<td>WDH 7-135</td>
</tr>
<tr>
<td>(Class will NOT meet all weeks.)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Course Web Site: [https://moodle2.umn.edu/](https://moodle2.umn.edu/)

Course Instructional Team

Course Coordinator: Works in conjunction with course faculty, department staff, and teaching assistants for successful implementation of course.

Name: **PD2 Course Coordinator**
Phone:
Email:

Course Co-Directors:

**Ling Li, DVM, PhD**
Professor and VFW Endowed Chair
Department of Experimental and Clinical Pharmacology
Office location: 4-208 McGuire Translational Research Facility, UMTC
Phone: 612-626-2359
Email: lil@umn.edu
Preferred method of contact: [email, phone, other.]
Office Hours: By appointment [For online/blended courses, consider possibility of virtual/online office hours.]

**Derek Jennings, MEd, PhD**
Assistant Professor
Department of Pharmacy Practice and Pharmaceutical Sciences
Office location: 109 Life Science, UMD
Phone: 218-726-6063
Email: drj@umn.edu
Preferred method of contact: [email, phone, other.]
Office Hours: By appointment
Instructors
Shannon L. Reidt, Pharm.D., MPH, BCPS
Assistant Professor
Department of Pharmaceutical Care & Health Systems
Office location: 7-103 WDH, **At HCMC Tues, Wed, Thurs**
Phone: 612-220-4799; Fax: 612-625-9931
Email: reid0113@umn.edu
Preferred method of contact: [email, phone, other.]
Office Hours: By appointment.

Tim Stratton, Ph.D., BCPS, FAPhA
Professor of Pharmacy Practice
Department of Pharmacy Practice and Pharmaceutical Sciences
Office location: 209 Life Science, UMD
Phone: 218-726-6018
Email: tstratto@d.umn.edu
Preferred method of contact: email
Office Hours: When the office door is open or by appointment

Administrative Support
Amanda Behnke
Email: ambehnke@umn.edu

Teaching Assistants:
Malek Okour
Email: okour001@umn.edu

Overview of the course

Course content:
This is a 0.8 credit (42-hour), hybrid course (face-to-face and online) where second-year Pharm.D. students will obtain and practice the skills necessary to research, prepare and present a scholarly paper and seminar. This course builds on the Biostatistics & Drug Literature Evaluation material from PHAR 6700-Becoming a Pharmacist, PHAR 6704-Foundations of Social & Administrative Pharmacy (SAPh) and PHAR 6706-Foundations of Pharmaceutical Care. The course relies heavily on group work. Groups of four to five students will be used, these groups being formed from the groups of nine used for assignments in other courses (e.g., Pharmacotherapy, PCLC Lab)
Colloquium Sequence of Courses and Timeline

<table>
<thead>
<tr>
<th>PD 2 Fall</th>
<th>PD2 Spring</th>
<th>PD3 Fall</th>
<th>PD3 Spring</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Colloquium I: Scholarly Presentation Skills</strong>&lt;br&gt;PHAR 6742</td>
<td><strong>Student meetings with faculty mentors</strong>&lt;br&gt;Students identify areas of interest&lt;br&gt;Students investigate areas of interest to determine research possibilities&lt;br&gt;Each student develops their research question&lt;br&gt;Students begin literature search on their research question&lt;br&gt;Students present refined research topic to teammates for peer review&lt;br&gt;Each student meets with their faculty mentor prior to Week 6&lt;br&gt;Each student completes a research proposal on their topic to be investigated, posts the proposal to Moodle and presents proposal to teammates</td>
<td><strong>Student meetings with faculty mentors</strong>&lt;br&gt;Student prepares a monthly summary of progress on their project (e.g., update on literature reviewed, preparation of IRB submission, data collected/generated, etc.) and posts summary to the Colloquium II Moodle site. Where the project is a Literature Review, summary contents will include an overall brief write up of new literature reviewed from the time of the last report, reports, critical gaps in the literature report. Moodle notifies faculty mentor when student posts summary, who reviews summary and provides student with written feedback via the Moodle site.&lt;br&gt;Student meets with faculty mentor prior to Spring Break for face-to-face discussion of progress on project, based on monthly summary reports to date&lt;br&gt;Student meets with faculty mentor prior to Final Exam week for face-to-face discussion of progress on project, based on monthly summary reports to date</td>
<td><strong>Colloquium II: Research Paper &amp; Presentation [Course #TBA]</strong>&lt;br&gt;Student completes research paper, citing references, using tables and scientific writing style.&lt;br&gt;Student submits completed paper to Moodle site for review and written comment from teammates and faculty mentor prior to March 1.&lt;br&gt;Students review and submit written comments on teammates' completed papers.&lt;br&gt;Student develops a 15-minute presentation based their research paper prior to Spring Break&lt;br&gt;Student reviews presentations of teammates and provides feedback&lt;br&gt;Student meets with faculty mentor prior to Research Day to discuss upcoming presentation, and tips on fielding questions during the presentation&lt;br&gt;Student presents research paper to classmates and faculty mentor during Professional Development &amp; Assessment Days (Research Day). Faculty mentor attends to provide written feedback regarding presentation.&lt;br&gt;Student presents Research-in-Progress “Walking Presentation” during Research Day</td>
</tr>
</tbody>
</table>
Course format
Colloquium I is the first of a two-semester, two-course sequence. In Colloquium I students will learn how to form an answerable research question and be introduced to, and practice the skills needed to develop a scholarly presentation. In Colloquium II during the PD3 Spring semester, students will complete their research papers and orally present their scholarly projects to classmates and faculty during Professional Development & Assessment Days. During the intervening period between Colloquium I and Colloquium II, each student will work on a scholarly project that they will present in Colloquium II.

In the Face-to-Face Component of Colloquium I, students will meet face-to-face during nine class periods with faculty and classmates of up to 120-minutes per session. Not all 120 minutes will be utilized every class period (see detailed course outline below). It is expected that students will come to class prepared to fully participate in class discussions by reading assigned articles and viewing assigned presentations prior to class sessions.

Out-of-Class Component of Colloquium I: Much of the work for this course will occur outside of class, and students can expect to devote 3-4 hours of work outside of class for every hour they are in class. Students will identify three potential research questions they would be interested in learning about, will conduct a brief literature review of related to those topics, and will develop an annotated bibliography for each topic based on their review of the literature.

Online Component (Weeks 4, 5, 7, 9, 11, 13): Each of these “Out of Class” weeks you will see listed several items on the Moodle course site, e.g., an introduction to the weekly topic (This Week In Class); content material (lectures, assigned readings, resources, etc.), a forum (on-line discussion); and icons to upload assignments.

For “Out of Class” weeks, the content is self-directed (although student are still expected to adhere to necessary deadlines for posting assignments). Students can complete the week’s work anytime during that week; however, they must have the requisite course materials completed for specific assignment and forum deadlines. For the online forums, students will make their initial post for their assignments by the due date. This gives everyone ample time to respond. Students will post on at least two additional days during that week (comments, follow-up questions, responses to questions asked by groupmates, etc.). Students will not be able to see groupmates’ responses until the student posts their initial response. This will allow everyone to formulate their own thoughts without influence from the group.

Class Readings: All required and recommended readings for the course are posted on our course site in Moodle. The readings are meant to acquaint students with key issues surrounding conducting and using research. When reading the material, rather than focusing memorizing facts, students should focus instead on synthesizing and reflecting on the material. As students peruse the material, they should contemplate the following: What do I already know about this topic? What more do I want to know about this topic? What did I learn about this topic from the online materials? How do the online materials relate my project? What are my reactions to the online material?

Communication and the Effective Pharmacist: Pharmacists must communicate clearly, accurately and persuasively with various audiences using a variety of methods and media. Communication is of utmost importance in providing optimal patient care, and plays a pivotal role in intercultural interactions. An explicit goal of this course is to provide the student with opportunities to enhance their written and oral communications skills. Faculty want students to become practitioners who write effectively and concisely, and who present ideas eloquently and professionally. In this course, students will complete informal and formal writing assignments and present a research proposal online.

Communication between Campuses via ITV:
When you are called upon in class to give a response or ask a question, please speak loud enough so that you may be heard by students on both campuses. Do not talk out of turn, wait to be recognized before speaking and do not try to dominate a discussion with your questions or comments – give others a fair opportunity to participate. Keep questions on the topic at hand. If you have questions off the current topic, address these outside of class at office hours or by email with the instructor.
Prerequisites

Students in Colloquium I will apply the drug literature search and evaluation skills they learned and developed in Biostatistics & Drug Literature Evaluation section of PHAR 6700-Becoming a Pharmacist, PHAR 6704- Foundations of Social & Administrative Pharmacy (SAPh) and PHAR 6706-Foundations of Pharmaceutical Care. They will also apply the research design skills to which they were introduced in PHAR 6704- Foundations of Social & Administrative Pharmacy (SAPh) and PHAR 6706-Foundations of Pharmaceutical Care. Depending upon the nature of the scholarly project ultimately selected by the student, the student may apply the statistics skills they developed in PHAR 6704- Foundations of Social & Administrative Pharmacy (SAPh), and/or the drug or patient care-related knowledge they obtained in their pharmacy courses prior to this course. Finally, students will apply writing skills - including punctuation and grammar - that they learned in their pre-pharmacy and earlier pharmacy courses, and apply the skills they learned in these earlier courses to organize a scholarly or scientific paper.

Computer/Technology Requirements

The University of Minnesota computer requirements are listed here:

- [http://www1.umn.edu/moodle/start/technical.html](http://www1.umn.edu/moodle/start/technical.html)
- Students are required to bring laptop computers or electronic tablets to class each day to conduct Internet searches of course-related topics as required during class.
- Each day, students are required to bring a device to class that is capable of interacting with the classroom’s audience response system.

Course Goals & Objectives

<table>
<thead>
<tr>
<th>Learning Goal</th>
<th>Applicable domain &amp; competency</th>
<th>Scientific Foundation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Explain how developing research skills can help pharmacists improve patient care.</td>
<td>1.1, 1.4, 1.8, 1.2-2.3, 2.5, 2.7, 2.8, 3.0, 3.3, 3.5, 3.7, 3.8, 4.5, 4.6, 5.3-5.6, 6.1-6.4</td>
<td>1-6</td>
</tr>
<tr>
<td>2. Identify a problem in clinical or scientific practice, and formulate a research question and develop a process to respond to or investigate that question.</td>
<td>2.1, 2.7, 2.3, 3.3, 3.5, 3.6 - 3.9, 4.0-4.3, 4.6, 5.3, 5.5, 6.0-6.4</td>
<td>1 - 5.8.7, 5.8.9 - 5.8.12, 5.9, 5.10, 6</td>
</tr>
<tr>
<td>3. Identify appropriate resources to investigate and research questions and issues.</td>
<td>1.1, 2.0, 3.7, 6.1</td>
<td>6.6</td>
</tr>
<tr>
<td>4. Develop and execute effective scholarly writing knowledge and skill.</td>
<td>CAPE 3.6</td>
<td>5.8.12</td>
</tr>
<tr>
<td>5. Evaluate sources for efficacy, and evaluate appropriate research methods for validity and reliability.</td>
<td>6.0</td>
<td>6.6.4</td>
</tr>
<tr>
<td>6. Demonstrate an ability to effectively present and/or convey information to a group of people (i.e. public speaking skills).</td>
<td>CAPE 3.6</td>
<td>5.8.8, 5.8.12</td>
</tr>
</tbody>
</table>
Domains below provided for reference*

Competency Domains

<table>
<thead>
<tr>
<th>Domain 1: Patient-Centered Care</th>
</tr>
</thead>
<tbody>
<tr>
<td>As a provider of care, the pharmacist is ethical, benevolent, empathetic, competent, open-minded, prudent in making judgments, and devoted to serving others. The pharmacist applies knowledge, experience, and skills to protect the welfare of humanity. The pharmacist willingly and respectfully cares for patients to assure optimal therapeutic outcomes.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Domain 2: Population Health &amp; Vulnerable Communities</th>
</tr>
</thead>
<tbody>
<tr>
<td>As a promoter of public health, the pharmacist uses his/her expertise to partner with others to improve care for vulnerable communities or at risk populations. The pharmacist recognizes the differences between populations of individuals and seeks to alleviate disparities that exist.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Domain 3: Health Systems Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>As a manager of health system resources, the pharmacist examines critical issues, assumptions, and limitations to produce and validate ways to deliver medications safely, effectively, and in a timely manner. The pharmacist demonstrates imagination, inventiveness, and courage by undertaking new endeavors to produce improved quality, productivity, efficiency, effectiveness, and innovation.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Domain 4: Leadership &amp; Engagement</th>
</tr>
</thead>
<tbody>
<tr>
<td>In leading, the pharmacist demonstrates integrity and is habitually resolute, focused on excellence, knowledgeable about the “big picture,” strategic, focused, persuasive, open to feedback, decisive, visionary, empowering, and service-oriented.</td>
</tr>
</tbody>
</table>

<table>
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<tr>
<th>Domain 5: Professional &amp; Interprofessional Development</th>
</tr>
</thead>
<tbody>
<tr>
<td>When collaborating, the pharmacist demonstrates critical thinking, excellent communication and leadership, and is goal-oriented, cooperative, assertive, respectful, enthusiastic, and reliable. The pharmacist consistently and consciously demonstrates high ethical and moral standards by considering how and when to act, acting in a manner that is clearly consistent with those standards and exercising accountability for those actions.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Domain 6: Knowledge, Scientific Inquiry, and Scholarly Thinking</th>
</tr>
</thead>
<tbody>
<tr>
<td>In making use of scientific knowledge, the pharmacist explains with thoroughly researched, evidence based accounts of facts and data, and provides interpretations based on analysis of the importance, meaning, and significance. The pharmacist applies knowledge fluently, flexibly, and efficiently in diverse contexts.</td>
</tr>
</tbody>
</table>

* refer to College of Pharmacy Competency Domains for Section descriptions. Link to full competency domain document.

Attendance Policy

Students are expected to attend every class for which they are registered. Students are expected to attend classes on the campus where they are enrolled. Full attendance is expected for the face-to-face class sessions. However, reasonable issues such as illness, natural disasters, or acts of Nature are sufficient to warrant an absence. Attendance will be taken via the classroom audience response system at the beginning of class. Students who miss a class period (whether an excused absence or not) will be required to demonstrate to the course directors that the student meets the learning objectives for the missed class session. Students are responsible for arranging such demonstrations of competency with the course director on their respective campus.

Course Materials

Required (or Optional) Text, eReserve, or Materials

There are no required texts. Students are encouraged to have access to a grammar textbook or online grammar guide. A recommended grammar reference book is the *Little, Brown Compact Handbook* (available through textbook retailers). A recommended online grammar guide is Capital Community College Foundation’s *Guide to Grammar & Writing* (http://grammar.ccc.commnet.edu/grammar/).
This course employs “green practices.” Course readings and assignments can be found on our course site in Moodle (https://ay13.moodle.umn.edu).

To successfully complete the two online presentations (introduction and research proposal presentation), students will need internet access, a microphone and speakers for your computer. Students can also check out microphones and use computer resources at the Smart Learning Commons in Walter Library on the Twin Cities campus (http://smart.umn.edu/) and the Multimedia Hub on the Duluth campus (http://www.d.umn.edu/itss/mediahub/).

Assessments and Grading

Graded Assessments

There will be five online, timed, non-cumulative multiple-choice/true-false type quizzes during the course, covering the following topics:

- Developing research questions
- Research methodology (Survey Research, Quality Improvement Projects, Literature Review)
- Conducting an effective literature search
- Institutional Review Board (IRB) topics.
- NIH Human Subjects or CITI Training

Each quiz will be completed online outside of class, and each quiz will contribute equally toward your final grade in the course.

The following graded assessments will count toward your final grade for this course in the following amounts:

<table>
<thead>
<tr>
<th>#</th>
<th>Date Due</th>
<th>Title Brief description</th>
<th>Assessment Goal (required to link to domain)</th>
<th>Points</th>
<th>% of final grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>September 14, 11:55 PM</td>
<td>Online quiz on literature searching</td>
<td>Learning Goals 3: Identify appropriate resources to investigate and research questions and issues. (Domains 1.1, 2.0, 3.7, 6.1) Learning Goal 5: Evaluate sources for efficacy, and evaluate appropriate research methods for validity and reliability. (Domain 6)</td>
<td>5</td>
<td>5%</td>
</tr>
<tr>
<td>2</td>
<td>September 21, 11:55 PM</td>
<td>Online quiz on research question formulation</td>
<td>Learning Goal 2: Identify a problem in clinical or scientific practice, and formulate a research question and develop a process to respond to or investigate that question. (Domains 2.1, 2.7, 3.2, 3.3, 3.5, 3.6 - 3.9, 4.0-4.3, 4.6, 5.3, 5.5, 6.0-6.4)</td>
<td>5</td>
<td>5%</td>
</tr>
<tr>
<td></td>
<td>Date</td>
<td>Time</td>
<td>Activity Description</td>
<td>Learning Goals</td>
<td>Notes</td>
</tr>
<tr>
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<td>--------------------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------------------------------</td>
<td>------------------------</td>
</tr>
<tr>
<td>3</td>
<td>September 29, 11:55 PM</td>
<td>Post research questions to Moodle site for peer review by group mates.</td>
<td>Learning Goal 2: Identify a problem in clinical or scientific practice, and formulate a research question and develop a process to respond to or investigate that question. (Domains 2.1, 2.7, 3.2, 3.3, 3.5, 3.6-3.9, 4.0-4.3, 4.6, 5.3, 5.5, 6.0-6.4)</td>
<td>Peer-reviewed, non-graded</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td>October 3, 11:55 PM</td>
<td>Meet with faculty mentor to review research questions and determine what question should be pursued with research proposal.</td>
<td>Learning Goal 2: Identify a problem in clinical or scientific practice, and formulate a research question and develop a process to respond to or investigate that question. (Domains 2.1, 2.7, 3.2, 3.3, 3.5, 3.6-3.9, 4.0-4.3, 4.6, 5.3, 5.5, 6.0-6.4)</td>
<td></td>
<td>5%</td>
</tr>
<tr>
<td>5</td>
<td>October 12, 11:55 PM</td>
<td>Online quiz on types of research projects (survey research, lit review, QI projects)</td>
<td>Learning Goal 4: Develop and execute effective scholarly writing knowledge and skill. (CAPE 3.6)</td>
<td></td>
<td>5%</td>
</tr>
</tbody>
</table>
| 6 | October 20, 3:35 PM | Online quiz on IRB | Learning Goal 2: Identify a problem in clinical or scientific practice, and formulate a research question and develop a process to respond to or investigate that question. (Domains 2.1, 2.7, 3.2, 3.3, 3.5, 3.6-3.9, 4.0-4.3, 4.6, 5.3, 5.5, 6.0-6.4)  
Learning Goals 3: Identify appropriate resources to investigate and research questions and issues. (Domains 1.1, 2.0, 3.7, 6.1) |                                                        | 5%        |
<p>| 7 | October 20, 3:35 PM | NIH Human Subjects training OR CITI Training (post certificate of passing training) | Learning Goal 2: Identify a problem in clinical or scientific practice, and formulate a research question and develop a process to respond to or investigate that question. (Domains 2.1, 2.7, 3.2, 3.3, 3.5, 3.6-3.9, 4.0-4.3, 4.6, 5.3, 5.5, 6.0-6.4) |                                                        | 5%        |</p>
<table>
<thead>
<tr>
<th>Week</th>
<th>Due Date</th>
<th>Assignment</th>
<th>Description</th>
<th>Points</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>October 20, 3:35 PM</td>
<td>Project presentation</td>
<td>Learning Goal 6: Demonstrate an ability to effectively present and/or convey information to a group of people (i.e. public speaking skills). (Domains CAPE 3.6)</td>
<td>20</td>
<td>20%</td>
</tr>
<tr>
<td>9</td>
<td>October 26, 3:35 PM</td>
<td>Project Proposal</td>
<td>Related to all Learning Goals</td>
<td>20</td>
<td>20%</td>
</tr>
<tr>
<td>10</td>
<td>November 10, 11:55 PM</td>
<td>Peer review: Points assigned based on degree of usefulness of review (&quot;star ratings&quot;) by proposal author and by other reviewers (4 graded @ 5% each) encounters: Weeks 4, 8, 9-10, 11-12)</td>
<td>Learning Goal 4: Develop and execute effective scholarly writing knowledge and skill. (Domain CAPE 3.6) Learning Goal 5: Evaluate sources for efficacy, and evaluate appropriate research methods for validity and reliability. (Domain 6.0) Learning Goal 6: Demonstrate an ability to effectively present and/or convey information to a group of people (i.e. public speaking skills). (Domain CAPE 3.6)</td>
<td>20</td>
<td>Up to 20%</td>
</tr>
</tbody>
</table>

Total 100

Assignments (Asterisked assignments are graded)

**Introduction Presentation** (DUE September 7, 11:59 PM): This intro assignment is designed to have you become familiar with online presentation technology early in the semester so that potential issues can be resolved prior to your final online research proposal presentation. For the assignment, you will make an audio/visual presentation introducing yourself to your online group members by using VoiceThread (www.voicethread.com) or any other audio/visual technology to which you may prefer/have access that can be embedded in our site. You can embed the actual presentation or hyperlink the url in your discussion post. (See VoiceThread tutorial on Moodle). The 5- minute (or less) presentation will include the following components: your name, your level of interest and experience in conducting research, and your interest in completing the Colloquium Project. List two areas of pharmacy in which you are interested that may serve as the basis for your project. You may include pictures, symbols or other visual images as a backdrop to your audio presentation. This assignment is required for the course but it is not awarded any points toward the final grade.
Annotated Bibliography (DUE September 14, 11:59 PM): using learned search techniques, compile annotated bibliography of at least three (3) primary literature references related to the student's identified area(s) of interest (1-3 areas of interest). The minimum number of references is the same whether a student identifies one, two or three areas of interest. The purpose of this assignment is for the student to refine their literature retrieval skills and gain an understanding of the problems related to their area of interest. Familiarity with the problems existing in an area of interest will result in a more well-informed research question being constructed. This assignment is required for the course but it is not awarded any points toward the final grade.

Development of Research Questions: (DUE September 29, 11:59 PM). Develop three research questions based on your areas of interests. These three questions may address one area of interest, or up to three areas of interest (i.e., one research question for each of three areas of interest.) This is required for the course but it is not awarded any points toward the final grade. MSHP (Minnesota Society of Health System Pharmacists) has a “bulletin board” of projects that could be used for research question development.

*NIH Human Subject Research Participants (DUE October 20, 3:35 PM): Complete the NIH Human Subject Research Participants training at http://phrp.nihtraining.com/users/login.php. This course takes approximately 3 hours to complete. You do not have to finish the entire training in one sitting (so, you can start early)!. Upload your certificate of completion to the course site. You can copy/paste certificate into a Word document or convert the certificate into a .pdf document. Keep a copy for your records as you may need this in the future. You have the option of submitting the CITI certification instead of the NIH, if you have already completed the training module. If you have already completed either of these trainings, simply upload the certificate of completion. Completion of either of these programs is worth 5% of the final grade.

Research Proposal Presentation (Live) (DUE October 20, 3:35 PM) Students will be provided an assessment rubric on the course Moodle site for evaluating research proposals. Using this rubric, students will prepare a 5-minute live presentation describing their research proposal to be delivered to their group members for peer review. Presentation should include: research question & possible methods to answer question. This is required for the course but it is not awarded any points toward the final grade.

*Research Proposal (Written) (First draft DUE Nov 2, 11:59 PM. Final draft DUE November 23, 11:59 PM). Write a 5-page research proposal that contains a problem statement, literature review, methodology, bibliography and timeline. The bibliography and timeline are NOT included in the page requirements. The proposal should be uploaded on the Moodle course site, as well as emailed to your faculty mentor. Page lengths refer to double-spaced pages, 1 inch margins, with a font size no larger than 12. Save document as Microsoft Word.doc file. In addition, you will be expected to have your reference citations conform to the International Committee of Medical Journal Editors format (http://www.nlm.nih.gov/bsd/uniform_requirements.html) or the format preferred by your advisor. When you submit your final draft of the proposal, you must also submit how you will or will not incorporate peer feedback received during the Final Research Proposal Presentation which you will upload to the Moodle site during Week 13. The Research Proposal is worth 20% of the final grade.

*Final Research Proposal Presentation (online) (DUE November 23, 11:59 PM): Using Voicethread (or other technology), record a final research proposal presentation. You will discuss the following REQUIRED components in your presentation: purpose, objectives, the review of the literature, explicitly stated research questions and hypothesis statement, and methodology of your research proposal. The presentation should be 10 minutes (or less) in length. The time constraints are purposefully restrictive so that you will have practice reducing your paper into a short, coherent presentation. The Presentation is worth 20% of the final grade.

Reviews of Group Members’ Proposal Presentations (online) (DUE December 1, 3:35 PM): Each student will view their group members’ posted online presentations and prepare meaningful written feedback which they will post to the course Moodle site, and present orally for 1-2 minutes during the December 1 class session.
Responses to Feedback & Written Plan (online) (DUE December 8, 3:35 PM): Each student will post written responses to the feedback about their Research Proposal Presentation received from their group mates, and outline a written plan for changes they will make to their presentations before their Research-in-Progress “Walking Poster Presentation” during Research Day in the Spring semester. This assignment is designed to help the student commit to refining their proposal presentation prior to Research Day. The assignment is required for the course but it is not awarded any points toward the final grade.

Statement on Penalties for Late Work
University Make-up Assignment Policy
As a rule, we will not accept late assignments for full credit! However, late assignments may be excused under the following conditions: illness (verified by note from a physician); a family emergency (verified by note from a professional in attendance); a University sponsored event (verified by a University official or a note from the leader of the sponsoring organization); and military duties (verified by a note from a commander).

Exam Policy
See the Central Syllabus.
https://docs.google.com/a/umn.edu/document/d/1njXUaCO1RoFB5zq71hypXdB0wCFZN1dveX9wLcPM/edit

Grading Information
http://www.policy.umn.edu/Policies/Education/Education/GRADINGTRANSCRIPTS.html

Course Letter Grades
A (93-100% of possible points)
A- (90-92%)
B+ (87-89%)
B (83-86%)
B- (80-82%)
C+ (77-79%)
C (73-76%)
C- (70-72%)
D (60-69%)
F (< 60% of possible points)

Statement on Extra Credit
Extra credit is not available in this course.

Minimum Passing Level
Per University and College Policy, students who receive a grade below D in this course must successfully repeat the course before advancing to courses which require this course as a prerequisite.
<table>
<thead>
<tr>
<th>Class</th>
<th>Agenda/Topics</th>
<th>Competency/ Learning Objective</th>
<th>Activities / Assignments / Assessments</th>
<th>Total estimated hours</th>
</tr>
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</table>
| Week 1 (Aug 25)  
**Duluth in LSci 163** | IN CLASS Colloquium I & II Overview (Stratton)  
Outline this course & Milestones to be achieved between this course and Colloquium II (Stratton)  
Provide context for Project: How do pharmacists, pharmacy students, or faculty use research skills to do their jobs? (Reidt)  
Instruct students to explore personal interests related to pharmacy - ID area of interest. (Integrated with previous courses). (Li, Jennings, Reidt, Stratton)  
Distribute Faculty Mentor Assignments. (Behnke, faculty) | (Obj #1) Explain how developing research skills can help pharmacists improve patient care | Faculty presentation on overview of Colloquium I  
Colloquium II course sequence  
In-class, peruse course Moodle site to view  
Activity: Panel discussion: How front-line pharmacists utilize research skills.  
Assignment: Identify at least two content areas related to Pharmacy, Pharmacy Practice or the Pharmaceutical Sciences. Outline these interests (using VoiceThread) as part of “Introduction Presentation” to be posted on Moodle by next class period. (Non-graded)  
Students receive faculty mentor assignment. | 2 in/1 out |
| Week 2 (Sep 8)  
**Duluth in Lib 410** | IN CLASS Refining lit search skills. Students will research areas of personal interest. (TC: Dr. L’Aurelle Johnson; Duluth: Dr. Tim Stratton – Duluth)  
Resources to be covered: PubMed/Medline | (Obj #2) Identify a problem in clinical or scientific practice, and formulate a research question and develop a process to respond to or investigate that question. | Live faculty presentation on Literature Searching.  
Students will use class time to apply search techniques to find literature exploring their stated areas of interest.  
Assignment: Prior to Week 3, view group members’ Introduction Presentations, post comments/suggestions. (Non-graded) | 2 in/2 out |
<table>
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<tr>
<th>ClinicalTrials.gov Cochrane Reviews, DynaMed, etc. (Librarian)</th>
<th>Assignment: Annotated bibliography for each defined area of interest. Due Week 3. (Non-graded) Assessment: Complete online quiz on Literature Searching (Graded)</th>
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<tr>
<td><strong>Week 3 (Sep 15) Duluth in Lib 410</strong></td>
<td><strong>Obj #2</strong> Identify a problem in clinical or scientific practice, and formulate a research question and develop a process to respond to or investigate that question. Use class time to start formulating research questions for each area of interest. Assignment: Contact Faculty Mentors to schedule meeting for prior to Week 6 (Graded) Assignment: Develop 3 research questions for next class (regularly scheduled Week 4 class period) (Non-graded) Assessment: Complete online quiz after class on Research Question Formulation (Graded)</td>
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<td><strong>Week 4 (Sep 22)</strong> OUTSIDE OF CLASS Peer review of research questions (per rubric provided to students by faculty). Meet with faculty mentor to select research topic for proposal. <strong>Obj #3</strong> Identify appropriate resources to investigate and research questions and issues. Review Conducting an Effective Literature Search (Loftus) if needed Work with group members to peer review research questions using rubric. Peer review research questions PRIOR to meeting with faculty mentor (Non-graded)</td>
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<tr>
<td><strong>Week 5 (Sep 29)</strong> OUTSIDE OF CLASS Continue working on research question formation. Get feedback from peers &amp; mentor <strong>Obj #3</strong> Identify appropriate resources to investigate and research questions and issues. Work with group members to peer review research questions using rubric. Peer review research questions PRIOR to meeting with faculty mentor (Non-graded) Meet with faculty mentor to review research questions and determine what question should be pursued with research proposal. (Graded)</td>
<td>1 in/2 out 0 in/1.5 out 0 in/1.0 out</td>
</tr>
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</table>
| Week 6  
(Oct 6)  
Duluth in Lib 410 | IN CLASS  
How to construct a research proposal. Template provided. (Dr. Catherine St. Hill)  
1) Research question  
2) Brief statement on the relevance/significance of the proposed research question. (i.e. how answering this question is important.)  
3) Brief outline for researching the question  
4) Suggested resources to researching the question  
5) One sentence evaluation of each suggested resource  
Academic/Clinical Writing – (Dr. Jeannine Conway) | (Obj #3) Identify appropriate resources to investigate and research questions and issues.  
(Obj #4) Develop and execute effective scholarly writing knowledge and skill. | Students report out to their groups the research question they have chosen to pursue for the remainder of this course. Begin brainstorming with group members how research question might be answered. Receive template and start working on research proposal. (Non-graded)  
View online presentations:  
1. Survey research (Worley)  
2. Quality Improvement methods (PQA site)  
3. Literature Review (To be created: Lepp) (Non-graded)  
Assignment: Complete online quiz on: survey research, QI methods, Lit Review after viewing presentations (Graded) | 2 in/2 out |
|---|---|---|---|---|
| Week 7  
(Oct 13) | OUTSIDE OF CLASS  
Work on proposals. prep 5 min presentation to be reviewed by peers. | (Obj #3) Identify appropriate resources to investigate and research questions and issues.  
(Obj #5) Evaluate sources for efficacy, and evaluate appropriate research methods for validity and reliability. | Activity: Students will be provided an assessment rubric on the course Moodle site for evaluating research proposals. Using this rubric, students will prepare 5 minute live presentation of research their proposal to be delivered to group members for peer review. Presentation should include: research question & possible methods to answer question. DUE WEEK 8. (Graded in Week 8) | 0 in/2 out |
| Week 8  
(Oct 20)  
Duluth in Lib 410 | IN CLASS  
Presentations and peer evaluations | (Obj #3) Identify appropriate resources to investigate and research questions and issues. | Assignment: Prior to class, view online presentations regarding History of IRBs, Virtual Tour of the UM IRB. Assessment: Complete online quiz on IRB after | 1.5 in/3 out |
| Week 9  (Oct 27) | **OUTSIDE OF CLASS**  
Use peer feedback to refine proposal. | (Obj #5) Evaluate sources for efficacy, and evaluate appropriate research methods for validity and reliability. | viewing presentation.  
(Graded)  
Assignment: Prior to class, complete online NIH Human Subjects or CITI Training.  
Assessment: These trainings include quiz. Post completion certificate of NIH Human Subjects or CITI Training.  
(Grade for completion)  
Activity: In class, each student presents proposal to teammates in 5-minute presentation (groups of 4 or 5). Teammates use evaluation rubric to assess and provide presenter real time feedback.  
(Reviewers are graded) |
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<td><strong>PDAD Days Oct 27-28</strong></td>
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| **Week 9 (Oct 27)** | **OUTSIDE OF CLASS**  
Use peer feedback to refine proposal. | (Obj #4) Develop and execute effective scholarly writing knowledge and skill. | Assignment: Using peer feedback, refine written proposal. Written research proposal draft must be uploaded to Moodle by regularly scheduled class time on Week 10.  
(Graded)  
Assignment: Students have one week to review teammates’ proposals. Feedback will be discussed at next class.  
(Reviewers are graded for feedback given during weeks 9 & 10.)  
Assignment: Review ONLINE presentations Academic/Clinical Writing & Style & Common Mistakes.  
(not graded) |
| **Week 10 (Nov 3)**  
**Duluth in Lib 410** | **IN CLASS**  
Review written proposals with peers. | (Obj #2) Identify a problem in clinical or scientific practice, and formulate a research question and develop a process to respond to or investigate that | Activity: Each proposal author discusses the written feedback with peer reviewers using rubric provided.  
(Reviewers are graded for feedback given during weeks 9 & 10) |
| | | | 2 in/3 out |

0 in/2 out
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<tr>
<th>Week 11  (Nov 10)</th>
<th>OUTSIDE OF CLASS</th>
<th>(Obj #2). Identify a problem in clinical or scientific practice, and formulate a research question and develop a process to respond to or investigate that question.</th>
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<td>Research Proposal Draft Peer Review [Course Directors]</td>
<td>(Obj #3) Identify appropriate resources to investigate and research questions and issues.</td>
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<td>(Obj #4) Develop and execute effective scholarly writing knowledge and skill.</td>
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<td>(Obj #5) Evaluate sources for efficacy, and evaluate appropriate research methods for validity and reliability.</td>
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<td>Assignment: Authors post revised written draft by Week 12.</td>
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<tr>
<th>Week 12  (Nov 17)</th>
<th>IN CLASS Duluth in Lib 410</th>
<th>(Obj #6) Demonstrate an ability to effectively present and/or convey information to a group of people (i.e. public)</th>
</tr>
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<tr>
<td></td>
<td>Oral Presentation Tips Dr. Uden</td>
<td>Assignment: Begin participation in online peer review forum by reviewing groupmates’ draft proposals and posting comments and</td>
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<td>1 in/2 out</td>
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| Week 13  
(Nov 24) | OUTSIDE OF CLASS | (Obj #2) Identify a problem in clinical or scientific practice, and formulate a research question and develop a process to respond to or investigate that question.  
(Obj #3) Identify appropriate resources to investigate and research questions and issues.  
(Obj #4) Develop and execute effective scholarly writing knowledge and skill.  
(Obj #5) Evaluate sources for efficacy, and evaluate appropriate research methods for validity and reliability. | Assignment: Authors use peer reviews to finalize proposal and post by Week 13. (Not directly graded.) | 0 in/3 out |
|----------------|-----------------|-------------------------------------------------------------------------------------------------|------------|
| Week 14  
(Dec 1)  
Duluth in Lib 410 | IN CLASS | (Obj #6) Demonstrate an ability to effectively present and/or convey information to a group of people (i.e. public speaking skills). | 2 in/1 out |
| Week 15  
(Dec 8)  
Duluth in Lib 410 | IN CLASS Colloquium II Overview-Scholarly Paper & Presentation [Colloquium II Course Directors] | (Obj #6) Demonstrate an ability to effectively present and/or convey information to a group of people (i.e. public speaking skills). | 1 in/0 out |
Activity: Review next steps and milestones due between Colloquium I and Colloquium II

| TOTAL HOURS | | | 42 (13.5 in/28.5 out) |

* Subject to change at course instructor’s discretion.

**University of Minnesota and College of Pharmacy Policy Reference** *(Centralized Syllabus)*

This page includes all required UMN and CoP policies, e.g., Academic Freedom; Copyright; Course Evaluations; Disability Accommodations; FERPA, etc.
Appendix: Responsibilities of Faculty Mentors

Faculty Mentors

(Estimated minimum faculty effort: 10 hours for literature review; 20 hours for original research)

Each faculty member will be assigned a faculty mentor to advise the student on the student’s Colloquium project and presentation. A student who is already working with a faculty member on a faculty research project may request that faculty member as a mentor for Colloquium I and II; however, in no instance will a faculty member mentor more than three (3) students from the same class. It is the student’s responsibility to notify the Course Director and the staff support person of any changes regarding faculty mentor. The following describes the roles and responsibilities of faculty mentors.

Assignment to Students

All College of Pharmacy faculty holding more than an adjunct faculty appointment in the College will serve as faculty mentors in Colloquium I and II. Generally, faculty mentors are randomly assigned to students, and are required to mentor that student during Colloquium I (Fall term of the PD2 year) and Colloquium II (Spring term of the PD3 year) and during the months between these two courses while a student pursues their project. The mentor is responsible for helping the student identify a topic or topic area and providing guidance in directing students to other people who might serve as appropriate content-specific resources. The mentor must participate in both Colloquium I (evaluating the project proposal) and Colloquium II (evaluating the student’s paper and the student’s seminar based on the paper) and submit grades for both.

Responsibilities of Faculty Mentors:

- Assist student in identifying people who might who might act as content resources for the paper.
- Guide student in paper preparation (between Colloquium I and Colloquium II).
  - Monitor student progress to insure timely completion of paper. Monitor due dates and return the drafts within 2 weeks (between Colloquium I and Colloquium II).
- Evaluate the student’s paper per standard evaluation form and determine the acceptability of the student’s work (between Colloquium I and Colloquium II).
- Submit a grade for the final paper. Final paper is due to advisor on during the Colloquium II course in the PD3 spring semester.
- Participate in Colloquium II (the Pharm.D. Seminar), and provide written feedback and submit a presentation grade for the assigned student mentee.

Responsibilities of Student:

- Remind mentor of draft deadlines and final deadline you must meet.
- Provide mentor with evaluation forms for draft and final paper.
- If you have any questions or problems contact the Course Co-Directors.