Required Readings: Foye's Principles of Medicinal Chemistry—7th edition (Lemke, Williams, Roche, and Zito). In addition, you are expected to engage in reading outside of the required text to further your understanding of the topics discussed in lecture. Extensive reading of journal articles, relevant to topics discussed in class, is expected and required for success. Exam questions will often be pulled directly from current literature. Example journals to follow during this course include:

- Nat. Rev. Drug Discovery
- ChemMedChem

Frequently journal articles will be chosen as required reading assignments. Reading the weekly assigned articles will be critical to class discussion, as examples from the articles will be referenced during class. Exam questions will often originate from the assigned readings.

Course Overview and format: This course is designed to expose students to the concepts, techniques and applications of medicinal chemistry. The class will include lectures, group discussions, current literature, student presentations, and exams. Your grade will be determined based upon individual performance in the categories outlined below. Any homework other than presentations will not be graded, but your effort on them will contribute to success in the course.

Topics that will be covered (not necessarily in this order):

- Drug development
- Pharmacology
- Metabolism
- Design approaches
- Common classes of therapeutic targets
- CNS drugs
- Anti-cancer agents
- Antimicrobial agents
- Immunomodulators
- Cardiovascular agents
- Natural products in medicinal chemistry
- Special topics and current events in medicinal chemistry

Performance and expectations: In addition to understanding the topics covered in class, students are expected to develop critical skills necessary to apply techniques and interpret data. Success in learning and applying medicinal chemistry concepts and techniques to research is directly related to the time invested in practicing these methods. Numerous practice problems can be found in textbooks and students are encouraged to use these resources fully. It is up to the student to apply themselves to the study of the topics covered in class as needed.

Grading: ALL exams will be comprehensive of material previously covered in class, but will focus mainly on topics covered since the previous exam. Point breakdown (600 total) is as follows:

- 3 – tests x 100 pts = 300
- final exam = 200
- capstone presentation = 50
- participation = 50
No make-up exams will be given, except under extraordinary circumstances that are documented and accepted by the instructor and The University of Oklahoma. Examples of excused absences include emergency military duty, medical trauma (to the student), and death of an immediate family member. In these cases, the student must contact the instructor by email, which must be time stamped and received prior to the start of the missed exam. Excuses falling outside the realm of acceptability will not be considered. All decisions regarding the acceptability of an absence will be made by the instructor and will be final. Once an assignment/exam has been graded and returned, the student will have 5 days to petition for a grade change. No exceptions will be made.

<table>
<thead>
<tr>
<th>Percent of total (600) points</th>
<th>Grade</th>
</tr>
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<tbody>
<tr>
<td>≥ 80%</td>
<td>A</td>
</tr>
<tr>
<td>70 – 79%</td>
<td>B</td>
</tr>
<tr>
<td>60 – 69%</td>
<td>C</td>
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<tr>
<td>50 – 59%</td>
<td>D</td>
</tr>
<tr>
<td>&lt; 50%</td>
<td>F</td>
</tr>
</tbody>
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All points earned will be expressed as a percentage of the total points possible in the course and a grade assigned according to the preceding table. All grades will be rounded appropriately (for example 86.5% = 87% while 86.4% = 86%). There are no exceptions. At the end of the course the instructor reserves the right to adjust student grades as a whole (i.e. apply a “curve”).

**Story of Presentation:** Each student is responsible for presenting a 15-20-minute “story of…” The topics of these presentations are flexible and can include serendipitous discoveries, historical accounts, discovery stories, etc. More information for this assignment will be provided separately.

**Attendance:** Attendance will not be recorded for lectures. However, you are strongly advised to attend all lectures since items will be discussed and announcements made that could influence your likelihood of success in the course.

**Email communication:** In order to aid in communication, the university has established email as an acceptable means of official communication. All university students are assigned an official university email account. Your instructor will be communicating with you through this account periodically. It is expected that you will read email sent to this account in a timely fashion. Failure to receive or read, in timely manner, the communications sent to you via your official email account does not absolve you from knowing the information sent. The instructor will make all possible efforts to respond to any email inquiry within 48 hours after it was received.

**Academic misconduct:** Students engaging in academic misconduct (including cheating, plagiarism, and any other action that may improperly affect evaluation) will be subject to sanctions in accordance with the Norman Campus Academic Misconduct Code. You should understand that your instructor takes these matters seriously.

**Use of electronic devices:** No electronic device can be used for the purposes of recording (audio or video) any class content without the prior consent of the instructor. No electronic devices are allowed during exams and infraction will result in a “0” grade.

**Extra credit, bonus points:** none available

**University policies and disability accommodation:** Students should acquaint themselves with campus wide codes, policies and procedures involving academic misconduct, grievances, sexual and ethnic harassment, and discrimination. The instructor is obligated to inform the necessary university office upon infringement of any university policy/code. The university is committed to providing reasonable accommodation for all students with disabilities and students with disabilities are requested to speak with the instructor as early as possible in the semester so accommodations can be implemented. The Office of Disability Services is located in Goddard Health Center, suite 166, phone (405) 325-3852 or TDD only (405) 325-4173. For more information please refer to: www.ou.edu/drc/home.html

**As the course develops, it might be desirable/necessary to make appropriate changes in aspects of this syllabus. The instructor reserves the right to make changes if desirable or necessary.**
CHEM 5470
Tentative Schedule**

Aug 24: Overview Drug Development
Aug 29: Overview/Basic Pharmacology
Aug 31: Basic Pharmacology
Sept 5: LABOR DAY
Sept 7: Basic Pharmacology
Sept 12: Metabolism
Sept 14: Metabolism
Sept 19: **Exam #1**
Sept 21: Receptors/Signaling Mechanisms
Sept 26: Receptors/Signaling Mechanisms
Sept 28: Screening/Computational Methods
Oct 3: Screening/Computational Methods
Oct 5: Tricks of the Trade
Oct 10: Tricks of the Trade
Oct 12: Tricks of the Trade
Oct 17: **Exam #2**
Oct 19: Anti-cancer Agents
Oct 24: Anti-cancer Agents
Oct 26: Anti-cancer Agents
Oct 31: Antibacterials
Nov 2: Antibacterials
Nov 7: Antibacterials
Nov 9: CNS Active Agents
Nov 14: CNS Active Agents
Nov 16: **Story of… Presentations**
Nov 21: **Exam #3**
Nov 23: THANKSGIVING BREAK
Nov 28: CV Agents OR Catch-up Day
Dec 5: Immunomod. OR Catch-up Day
Dec. 7: **Story of… Presentations**
Dec. 13: **Final Exam (4:30–6:30 pm)**

**Schedule is subject to change**