

# CHEM 4410: Organic Medicinal Chemistry

**Spring 2020**

**Instructor:** Dr Anne Gaquere-Parker, [agaquere@westga.edu](mailto:agaquere@westga.edu), TLC 2-119, Ph: 678-839-6026

**Class time:** M, W: 12:30 pm – 1:45 pm, TLC 2-105

**Office Hours:** M: 2.00pm – 3.00pm, W: 9.00am – 12.30pm, 1.45pm - 3.15pm, R: 10.45am–2.45pm

## Course Outline

This course will discuss topics in medicinal chemistry. It will help students understand a professional medicinal chemistry lecture as presented in conferences such as the ones of the American Chemical Society. It will also inform students about the field in order to prepare them for medical or pharmaceutical or veterinarian school. Content knowledge will be acquired using power point notes, assigned readings, case studies, student presentations and short videos. Participation is crucial and students will be asked on a very regular basis (almost every class time) to briefly present a topic on medicinal chemistry to the rest of the class.

## Learning Outcomes

After successful completion of the course, the student will be able to:

- describe the history of drug discovery and the modern drug discovery process and the regulations mandated by FDA
- describe the relevant biochemical facts related to drug targets (enzymes, receptors and oligonucleotides)
- evaluate drug activity based on pharmacology, pharmacodynamics and pharmacokinetics
- examine metabolic pathways for drugs and the role of molecular structure in lead discovery

- present to an audience medicinal chemistry case studies and summaries of reading assignments
- critically evaluate the different lead optimization methods

### **Materials and requirements**

Pdf on Courseden of: Medicinal chemistry: the modern discovery process, Erland Stevens, Pearson, ISBN-13: 978-0-321-71048-2, 2014

Documents will be uploaded on D2L/courseden. Check on a regular basis for updates.

### **Grading**

The final grade will be based on: meaningful participation/daily discussions/short presentations/homework (20%), 3 in-class exams plus the final comprehensive exam (15% each for a total of 60%), final oral presentation (20%, divided as 10% final presentation and 5% for rough draft (5%) with annotated bibliography (5%) due Monday March 1<sup>st</sup>, 5pm on Courseden).

➤ 90%: A, 80 – 89%: B, 70 – 79%: C, 60 – 69%: D, < 60%: F

*Late submission:* Unless an extension is granted under very special circumstances and well in advance, 10 points per day will be deducted by day an assignment is turned in after the due date.

*Exams:* Students will take 4 in-class proctored exams (3+final) covering the materials studied in the course either with the reading assignments, power point, case studies or videos. The final exam is comprehensive.

*Final Presentation:* All students are required to attend other students presentations as questions on the final exam may include topics covered during the presentations. The topic chosen by the student has to be approved by the instructor.

### **Policy on Cheating/ Plagiarism**

Cheating and/or plagiarism will not be tolerated in this course and will result in a failing grade for

the assignment, exam and/or the class. No electronic device will be allowed during the proctored exams (cell phone, text messenger...). Blatant examples of cheating include using books, notes, or other sources not expressly allowed during exams; copying on homework, assignments; using any form of assistance if instructed to produce work individually; and knowingly assisting another student to engage in any of these behaviors. Examples of plagiarism include failing to cite written material that is directly quoted or paraphrased from another source, or failing to give credit for use of other's ideas, pictures, graphs, diagrams, or figures. Plagiarism can be avoided by following the rules for citation.

**Tentative schedule:**

1<sup>st</sup> exam: chapters 1, 2, 3 and 4: Wednesday February 5<sup>th</sup>

2<sup>nd</sup> exam: chapters: 5, 6, 7, 8: Monday March 9<sup>th</sup>

3<sup>rd</sup> exam: chapters: 9, 10, 11, 12, 13: Monday April 13<sup>th</sup>

Final comprehensive exam: Wednesday, April 29<sup>th</sup>, 11:00 am-1:00 pm

Oral presentations: starting Wednesday April 15<sup>th</sup> until Monday April 27<sup>th</sup>: attendance mandatory

**Extra credit:** There is no extra credit for this class.

**Communication:** The official communication method will be through campus e-mail (MyUWG or D2L), no other form of communication will be accepted as this system only verifies the identity of the interlocutor.

**Policy on withdrawals:** Undergraduate students may withdraw from courses with a grade of “W” (Withdraw Passing) a maximum of six times during their entire undergraduate enrollment at the University of West Georgia. Students must withdraw from courses during the Withdrawal “W” Period, as noted on the Registrar’s Calendar in The Scoop. Retroactive withdrawals for

prior terms are not permitted. The Withdrawal “W” Period typically begins after Drop/Add and closes at mid-term. Grades of “W” do not count toward the grade point average. For complete policy information, please visit the registrar’s website.

**University policy**

[http://www.westga.edu/assetsDept/vpaa/Common\\_Language\\_for\\_Course\\_Syllabi.pdf](http://www.westga.edu/assetsDept/vpaa/Common_Language_for_Course_Syllabi.pdf)