

# Chemical Biology – CHM 6036 Syllabus

CHM 6036-054D, Spring 2014, MWF 1:55-2:45 PM (Period 7) in Leigh 104  
Prof. Rebecca A. Butcher, butcher@chem.ufl.edu, Office LEI 340

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**Course Description.** We will cover advanced topics in chemical biology.

**Prerequisites.** CHM 5305, its equivalent, or permission of professor.

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**Topics to be covered:** Using aptamers to control transcription and translation; Chemical synthesis of proteins; Incorporating unnatural amino acids into proteins *in vitro* and *in vivo*; Directed evolution of enzymes; Biosynthesis of Natural Products; Combinatorial and diversity-oriented synthesis; Chemical genetics; Small-molecule/drug discovery; Small-molecule target identification; Drug mechanism; Drug design

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**Textbook:** Principles of Biochemistry by David Nelson and Michael Cox, 5<sup>th</sup> (or 6<sup>th</sup>) Edition, WH Freeman and Company would be helpful for a review of basic background, but is not necessary. Required reading will come from review articles and research articles (references will be provided in class).

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**Problem Sets.** Before exams, I will provide you with problem sets to help you study for the exam. However, these problem sets will not be graded. We will go over the answers to these problems in class and in office hours.

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**Assigned reading and discussion questions.** Required reading will be assigned at the beginning of each lecture. For each article, you will need to submit to me via E-learning e-mail (not my regular e-mail) 3 questions on the article by 9 am on the day of discussion. I will announce when the questions are due for each article assigned in class.

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**Grading.** There will be 3 in-class exams and no final exam. The exams are not designed to be cumulative; but you may expect some natural amount of material from a previous midterm to be important and necessary. Your grade will be based on the 3 in-class exams (24% each), as well as a literature presentation (20%) and an in-class participation grade (8%). Your participation grade will depend on your timely submission of discussion questions, participation in discussions, and on your asking of questions during the presentation portion of the class.

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**Office Hours.** Proposed office hours will be Fridays 3-4 pm in Leigh Hall 340.

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**Accommodations for students with disabilities.** Students requesting classroom accommodation must first register with the Dean of Students Office. The Dean of Students Office will provide documentation to the student who must then provide this documentation to the Instructor when requesting accommodation.

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**UF Honor Code:** We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity.

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