

Chemical Biology – CHM 6036 Syllabus

CHM 6036-0700, Fall 2016

Mondays – Period 7 in Leigh 242, Wednesdays – Periods 8-9, in MAT 4

Prof. Rebecca A. Butcher, butcher@chem.ufl.edu, Office LEI 340

Course Description. We will cover topics in chemical biology.

Prerequisites. CHM3218/5305, its equivalent, or permission of professor.

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

Textbook: Principles of Biochemistry by David Nelson and Michael Cox, 5th (or 6th) 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).

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.

Assigned reading and discussion questions. Required reading will be assigned at the beginning of each lecture. For each assigned article, you will need to answer questions regarding the reading. Both the questions and their due dates will be posted on E-learning.

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 (21% each), as well as a literature presentation (21%) and a participation grade (16%). Your participation grade will depend on your assignments regarding the required reading, participation in discussions, and on your asking of questions during the presentation portion of the class.

Office Hours. Proposed office hours will be Fridays 3-3:50 pm in Leigh Hall 340 and by appointment (schedule by email).
