

CHEM 8400 MEDICINAL CHEMISTRY (19148, section 010), Spring 2015

By Professor Peng George Wang

Tuesday and Thursday from 9:00 to 11:45 am in 311PSC.

This course is designed for graduate students only with background in organic chemistry, analytical chemistry and biochemistry. The course is on Mini-semester 1 (from January 12 to February 25) of Spring 2015 with 3 credits. The course is on modern glycoscience with emphasis on synthesis and chemical biology of carbohydrates. The course consists of 13 lectures covering from basic concepts of carbohydrate chemistry to current developments of glycobiology. There will be a written final exam on February 26 and a short research proposal (less than 4 pages). This class should show case to students how to rely on basic chemistry and biochemistry to obtain a deeper understanding on a special topic in modern fields of chemistry and life science.

Instructor

Professor Peng George Wang: pwang11@gsu.edu

Office hour: Tuesday and Thursday, 2:00 to 3:00 pm, in PSC 787

Textbook

There is no formal textbook for this course. The course will give a sets of ppt slides, students should carefully read and understand the slides and related information.

Final Written Exam

Final exam with 100 credits will cover the basic concepts discussed in the 13 lectures.

Grading

The final grading for the course will combine final written exam (100 credits) and research proposal (50 credits) of total 150 credits.

Cutoffs: A+ >95%; A >90%; A- >85%; B+ >80%; B >75%; B- >70%; C+ >65%; C >60%

Detailed Class Schedule

Week 1:	1/13	Structures of amino acid and peptides (slide #1)
	1/15	Synthesis of peptides & peptide mimetics (slide #2)
Week 2:	1/20	Protein production and posttranslational modification (slide #3)
	1/22	Basic carbohydrate chemistry (slide #4)
Week 3:	1/27	Protecting groups in carbohydrate chemistry (slides #5)
	1/29	Chemical glycosylation (slides #6)
Week 4:	2/3	Glycosidases (slides #7)
	2/5	Glycotransferases (slides #8)
Week 5:	2/10	N- and O-glycans (slides #9)
	2/12	Glycolipids (slides #10)
Week 6:	2/17	Glycoanalysis (slides #11)
	2/19	Glycan-Recognizing Proteins (slides #12)
Week 7:	2/24	Glycosaminoglycans (slides #13)
Week 8:		Final exam on 2/26 and research proposal due on 2/27