

University of Maryland Baltimore County

Chem 435/ 635 – Biochemistry of Complex Carbohydrates:
Sugars at the Chemistry-Biology Interface

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Fall, 2013

Tues., Thurs. 11:30-12:45 – Room 272 Chemistry.

The textbook for the course will be

”Introduction to Glycobiology” Third edition (2011)

by M.E. Taylor and K. Drickamer

Oxford Univ. Press ISBN-978-0-19-956911-3

Additional material for the course will be available in books on reserve in the UMBC Library and on the course website which will be found on Blackboard. Lecture notes and slides will be posted on the Blackboard website. Let me know if you have any difficulty accessing them so I can correct problems.

General Structure of the Course–

- This is an advanced biochemistry course suitable for graduate students (Chem 635) and advanced undergraduates (Chem 435). Prerequisite is an introductory biochemistry course such as Chem 437 or equivalent. This is important so if you lack this, please discuss it with me.
- Emphasis will be on chemical structure and biological function of complex carbohydrates such as glycoproteins, glycolipids, proteoglycans, bacterial polysaccharides and their interactions with proteins. We will discuss their role in control of cell growth and differentiation as well as cancer immunology and microbial pathogenesis. For details, see the Syllabus.
- There will be both a **midterm exam** and a **final exam** which will be at a level above an introductory biochemistry course.
- Graduate students should learn to explore seriously the biochemistry of complex carbohydrates by learning in more depth a topic of your choice. Each student registered for CHEM 635 will give a brief mini-seminar (15-20 mins) on a topic to be picked from a list I will prepare.