

CORE 6100 Introduction/Announcements

Course Directors:

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Course Web Page:

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Check the announcements, important deadlines, deep thoughts, etc. daily!

Other Course Faculty:

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Prerequisites:

MGS requirements of two years of college chemistry (including organic chemistry), one year of biology, one year of physics,

and one year of calculus are sufficient prerequisites for this course. An undergraduate course in biochemistry is highly recommended.

- Lectures:** Lectures are at 9-10 AM on Mondays, Wednesdays, and Fridays in Goldstein Hall (Guggenheim 2), beginning **September 24 (Monday)** and ending **December 10, (Monday), with final exam options on Thursday, December 13 or Friday December 14.**
- Discussion Hour:** This optional extra hour on Fridays from 4-5 PM (RST time) in Gugg. 1093 is for discussion of questions on lectures and deep thoughts. Lecturer(s) of the week will attend.
- Streaming Video:** All lectures are recorded, and streaming video will be available via the web and windows media player under Core 6100 at:
<http://webcast.mayo.edu/nw/article/archive/63/?Limit=100&tf=articlelist-display.tpl>
Mac users should Google Windows Media Player for Mac download to install a free copy of the Flip4Mac converter to view Mayo archived streaming video. Sorry: you must be connected the the Mayo intranet to view.
- Teleconferencing:** It is the intention of the course directors that all lectures and Friday discussions be teleconferenced. Check for local teleconference information. Email the course TAs if you have problems obtaining course materials from the web. FAX problem sets to 4-2384 or e-mail to TA.
- Grade:** The course grade (A-F scale, 3 credits) is based on the pretest (5%), problem sets (70%), and in-class final (25%).
- Pretest:** The in-class pretest will take place on **Wednesday, October 3**. It will cover the structure, nomenclature and basic properties of lipids, proteins and nucleic acids and consist of 12 short answer or multiple choice questions. See sample questions in the course binder. A review session with the TAs is planned. Successful preparation for this pretest will provide an appropriate review of structures and properties of important biomolecules. Suggested reading from "Lehninger" and Voet & Voet are listed below.

Amino acids/proteins:

- "Lehninger"
 - o 2000: Ch. 5 (pp. 115-126) and Ch. 6 (pp. 159-169)
 - o 2005: Ch. 3 (pp. 75-85) and Ch. 4 (pp. 116-124)
- Voet & Voet
 - o 1995: Ch. 4 (pp. 56-69) and Ch. 7 (pp. 141-153)
 - o 2004: Ch. 4 (pp. 65-78) and Ch. 8 (pp. 219-231)

Lipids/lipid structures:

- "Lehninger"
 - o 2000: Ch. 11 (pp. 363-373)
 - o 2005: Ch. 10 (pp. 343-353)
- Voet & Voet
 - o 1995: Ch. 11 (pp. 277-284)
 - o 2004: Ch. 12 (pp. 382-389)

Nucleic acids:

- "Lehninger"
 - o 2000: Ch. 10 (pp. 325-332)
 - o 2005: Ch. 8 (pp. 273-279)
- Voet & Voet
 - o 1995: Ch. 26 (pp. 795-797), Ch. 27 (pp. 844-846) and Ch. 28 (pp. 848-851)
 - o 2004: Ch. 5 (pp. 80-86)

Problem Sets: Posted on the online course bulletin board, problem sets must be typed and given to the TA either before/after class or during office hours. The deadline will be strictly enforced! Teamwork among students is encouraged, but each student must show his/her own *individual work*. Copying **will not** be tolerated and will be penalized. Students are on their honor.

Final Exam: The open-book (*individual work*), in-class comprehensive test is scheduled for **Thursday, December 13**, or **Friday, December 14** (whichever option works better for you, not both) from 8 AM to 1 PM, in **GU 1598**. Thursday students may not discuss the exam with Friday students.

Resources: No textbook is required for this course. All Mayo graduate students are encouraged to own an excellent biochemistry text for current and future reference. Particularly recommended is Lehninger 3rd edition or later.

The following books can be found in two places: A) the MGS-designated area of Plummer 12 and B) with a TA.

- D.L. Nelson and M.M. Cox, "Lehninger Principles of Biochemistry", 4th edition, W.H. Freeman: New York, 2005.
- D. Voet and J.G. Voet, "Biochemistry", 3rd edition, J. Wiley & Sons: New York, 2004.
- W. Saenger, "Principles of Nucleic Acid Structure", Springer, New York, 1984.
- R.R. Sinden, "DNA Structure and Function", Academic Press, San Diego, 1994.
- C. Branden and J. Tooze, "Introduction to Protein Structure", 2nd edition, Garland Publishers Inc., New York, 1999.
- T.E. Creighton, "Proteins: Structures and Molecular Properties", 2nd edition, W.H. Freeman and Co., New York, 1993.
- R.B. Gennis, "Biomembranes: Molecular Structure and Function", Springer, New York, 1989.
- P.W. Kuchel and G.B. Ralston, "Schaum's Outline of Theory and Problems of Biochemistry", 2nd edition, McGraw-Hill, New York, 1998.

Additional reading material may be specified by instructors.

Online journals and the Mayo library can be accessed at <http://library.mayo.edu>.

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Accommodations: Any student who feels s/he may need an accommodation for a disability should contact a course director.

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Attendance, Incompletes and Honesty:

Good attendance, keeping up with the assigned reading and homework, and setting aside the appropriate amount of time to go over class notes are necessary for success in this course.

If you miss a class period, it is your responsibility to obtain the missed assignments and handouts. Late homework assignments will have 10% of the score deducted for each day they are late. All assignments must be turned in to have a chance of receiving an "A" or "B" in the course.

Although you are encouraged to work together in discussing approaches to problem sets, you are individually responsible for knowing the material and submitting your own work in your own words.

For the final exam, which you are required to solve entirely on your own, you will be on your honor and must sign a form stating that the work is entirely your own.

Incompletes will be allowed only for students who are doing passing work, and who miss problem sets and/or the final exam due to a valid medical reason or personal emergency. Late problem sets will be penalized unless prior arrangements have been made with one of the Course Directors or the specific TA for that assignment.

<u>Grade Scale:</u>	93 to 100% = A
	89 to 92.9% = A-
	85 to 88.9% = B+
	80 to 84.9% = B
	75 to 79.9% = B-
	70 to 74.9% = C+
	65 to 69.9% = C
	Below 65% = F

Withdraw: The last date to withdraw from CORE 6100 is **Wednesday, October 31, 2012**. Withdrawal after this date will result in an INCOMPLETE as the course grade. Employees pay pro-rated tuition regardless of when they drop a class.