

CHM 6302, SECTION 23H0
THE CHEMISTRY & BIOLOGY OF NUCLEIC ACIDS

FALL 2015

Professor	Jon D. Stewart Office: 102 Leigh Hall Phone: 352.846.0743 E-mail: jds2@chem.ufl.edu
Lectures	Monday, Wednesday and Friday, 4th period (10:40 – 11:30 a.m.), 242 Leigh Hall
Office hours	Monday, 5th period (11:45 a.m. – 12:35 p.m.) Tuesday, 3rd period (9:35 – 10:25 a.m.) Wednesday, 3rd period (9:35 – 10:25 a.m.)
Course Objectives	This class will utilize in-depth studies of specific examples to provide a general understanding of topics related to nucleic acids. In addition to discussions of DNA and RNA, lectures will also introduce students to biochemical mechanisms, the chemistry of phosphoryl transfer, protein-nucleic acid interactions and the use of kinetic studies to understand enzymes. Students will also learn to use the primary research literature, which will be their only source of instruction after completing their graduate coursework.
Prerequisites	There are no prerequisites for this course, apart from undergraduate organic chemistry (CHM 2210/2211, CHM 3217 or equivalent). An undergraduate biochemistry course will be helpful, but not essential.
Grading	Examinations will be given on the evenings of Wednesday, September 30 and Wednesday, November 4 (each will count for 33% of the final grade). A final exam on Monday, December 14 will account for the remaining 34% of the final grade. Exam coverage, practice exams and an answer key will be distributed prior to each exam. The course mean will be set at the B / B+ line. Current UF grading policies can be found at https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx .
Class Attendance	While attendance is voluntary, the lectures are an essential component of the experience for this class. All of the reading material is derived from review articles or the primary research literature and the classroom lectures will explain and expand upon this material.

Make-Up Work

No make-up exams will be scheduled. Students with a valid reason for being unable to take an exam at the scheduled time must consult with the instructor as early as practical to arrange alternate accommodations.

Required Textbook

There is no required textbook associated with this course. In general, lectures will be based on one or two key references taken from the primary research literature. Other papers that provide background material or interesting extensions of the primary material will also be given. The reading list will be posted on this web site approximately one week prior to the lecture and copies of the papers will also be available on-line. Exam questions will be based only on what was covered in the lectures or extensions of these ideas. In addition to papers in the literature, students may also find the following general references useful:

- *Nucleic Acids in Chemistry and Biology*, 3rd Edition. Blackburn, G.M.; Gait, M.J; Loakes, D.; Williams, D.M. Royal Society of Chemistry, 2006.
- *Biochemistry*, 7th Edition. Berg, J.M.; Tymoczko, J.L.; Stryer, L. New York: W.H. Freeman and Company, 2010.
- *Lehninger Principles of Biochemistry*, 6th Edition. Nelson, D. L.; Cox, M. M. New York: Worth Publishers, 2012.
- *DNA Replication*, 2nd Edition. Kornberg, A.; Baker, T. A. New York: W.H. Freeman and Company, 2005.

Lecture Schedule

A tentative schedule of lectures is available at the course e-Learning site in the Canvas system (<http://ufl.instructure.com>).

Academic Honesty

We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: "On my honor, I have neither given nor received unauthorized aid in doing this assignment."

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.