



# The Chemistry and Biology of Nucleic Acids

## CHM 6302, Section 4039

### Fall 2011

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## General information

**Course news** 8/17/11 **The first lecture will be held on Monday, August 22 in 121 Flint Hall. The first papers that will be discussed can be found on the [Reading Materials](#) page.**

**Instructor** [Jon D. Stewart](#), 102 Leigh Hall, [jds2@chem.ufl.edu](mailto:jds2@chem.ufl.edu)

**Lectures** **Monday, Wednesday and Friday, 2<sup>nd</sup> period (8:30 a.m. - 9:20 a.m.), 121 Flint Hall**

**Office hours** **Monday, 3<sup>rd</sup> period (9:35 a.m. - 10:25 a.m.)**

**Wednesday, 4<sup>th</sup> period (10:40 a.m. - 11:30 a.m.)**

**Friday, 3<sup>rd</sup> period (9:35 a.m. - 10:25 a.m.)  
and other mutually convenient times**

**Objectives** This class will utilize 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.

**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.

**Classroom 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.

**Reading materials** In general, lectures will be based on one or two key references. 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.** In addition to papers in the literature, students may also find the following general references useful:

- [\*Nucleic Acids in Chemistry and Biology\*, 3<sup>rd</sup> Edition. Blackburn, G.M.; Gait, M.J; Loakes, D.; Williams, D.M.](#) Royal Society of Chemistry, 2006.
- [\*Biochemistry\*, 5<sup>th</sup> Edition. Berg, J.M.; Tymoczko, J.L.; Stryer, L.](#) New York: W.H. Freeman and Company, 2002.
- [\*Lehninger Principles of Biochemistry\*, 5<sup>th</sup> Edition. Nelson, D. L.; Cox, M. M.](#) New York: Worth Publishers, 2008.
- [\*DNA Replication\*, 2nd Edition. Kornberg, A.; Baker, T. A.](#) New York: W.H. Freeman and Company, 1992.

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