

**Chemistry 239**  
**"Chemical Synthesis of Biological Molecules"**

**Time:** Spring 2005, TR 2–3:10 am; Phelps 1445

**Instructor:** Prof. Jeffrey Bode  
**Office:** Chem 21220 **Phone:** 805 893 3717  
**Email:** bode239@chem.ucsb.edu  
**Office Hours:** by appointment

**Website:** <http://www.chem.ucsb.edu/~bodegroup/239.php> or <http://www.bode239.notlong.com/>

The course web page will be frequently updated, and will contain references to key reviews and primary literature publications.

<i>Grading:</i>	<b>Points</b>	<b>Due Date(s)</b>
<b>Journal Abstracts (5 total)</b>	100 (20 each)	4/05; 4/26; 5/10; 5/24; 6/7
<b>Preproposal</b>	50	5/3
<b>Proposal</b>	250	5/31
<b>Proposal Presentation</b>	100	6/1-6/3 (tba)

*Journal Abstracts* are concise, one-page maximum summaries of recent (2001–present) COMMUNICATIONS (no full papers!) on the synthesis and application of biological molecules, or methods useful for their preparation. Your abstract should succinctly encapsulate exactly what has been accomplished and why it is important. You may have at most one small scheme, and 3-4 literature citations. A sample abstract is posted on the course web page.

*Proposal:* The primary assignment for this course is the crafting of an original research proposal describing the synthesis, study, or application of a biological molecule or methodology for their synthesis. A sample format, including appropriate sections will be posted on the web site. A one-page (maximum) preproposal should summarize the problem to be addressed and the proposed methods.

*Final Presentations:* Your proposal will be presented to the class in a short (15 minute) chalk talk. In addition to chalk, you may use up to 3 transparencies for clarity. These talks will be scheduled at the end of the semester, and will be graded.

*Tentative Schedule:*

<b>Week</b>	<b>Topic</b>
1-2	Biological Molecules; nitric oxide; chemical sensors
3-4	Peptides: Applications and synthesis
5	Peptide ligations
6	Glycopeptides
7-8	Carbohydrates and glycosylation reactions
9	Complex biomolecule synthesis
10	Nucleic acid analogues