

**Chem 503**  
**Modern Synthetic Organic Chemistry**  
**Fall 2022: Th 6:30 – 8:50 PM, Wright 260**

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**Texts:** *Advanced Organic Chemistry, Part B*, 5<sup>th</sup> Edition, F. A. Carey and R. J. Sundberg, 2008;  
*Strategic Application of Named Reactions*, L. Kurti and B. Czako, 2005

**Grading:** Hourly exam (50%) and final exam (50%) – (syllabus revised 7/12/2022)

Rutgers University takes academic dishonesty very seriously. By enrolling in this course, you assume responsibility for familiarizing yourself with the Academic Integrity Policy and the possible penalties (including suspension and expulsion) for violating the policy. As per the policy, all suspected violations will be reported to the Office of Student Conduct. Academic dishonesty includes (but is not limited to):

- cheating
- plagiarism
- aiding others in committing a violation
- allowing others to use your work
- failure to cite sources correctly
- fabrication
- using another person's ideas or words without attribution
- re-using a previous assignment
- unauthorized collaboration
- sabotaging another student's work

If in doubt or unfamiliar with anything on this list, please consult the instructor. Please review the Academic Integrity Policy at: <https://nbacademicintegrity.rutgers.edu/>.

<u>Week, day</u> <u>(lecture)</u>	<u>Topic</u>	<u>C&amp;S</u> <u>Readings,</u> <u>pp</u>	<u>Other info</u>
1/2 - Sept. 6 (A)	Retrosynthetic analysis, enolates		K&C readings (see handout)
3 - Sept. 8 (B)	Alkylation rxns, Baldwin's rules	C&S 1-55, 183-197	C&S Problems (see handout)
4 - Sept. 15 (C)	Aldol reactions	C&S 63-157	
5 - Sept. 22 (D)	Organometallic I	C&S 619-666	
6 - Sept. 29 (E)	Organometallic II	C&S 675-770	
7 - Oct. 6	<b>Exam I</b> , 3 hours	covers lectures A-E	6:30 – 9:30 PM Wright 260

<b>8</b> - Oct. 13 ( <b>F</b> )	Diels-Alder reaction	C&S 473-526	
<b>9</b> - Oct. 20 ( <b>G</b> )	Metathesis, C=C, rings		
<b>10</b> NOTE: Thursday, Oct. 27	<b>Princeton ACS Fall Organic Chem. Symposium</b>	registration required	10:00 AM – 4 PM <a href="http://www.pacsfocs.org/wordpress/2022-program/">http://www.pacsfocs.org/wordpress/2022-program/</a>
<b>11</b> - Nov. 3 ( <b>H</b> )	C=C functionalizations	C&S 289-357	
<b>12</b> - Nov. 10 ( <b>I</b> )	Oxidation reactions	C&S 1063-1145	
<b>13</b> - Nov. 17 ( <b>J</b> ); <i>Tuesday</i>	Reduction reactions, dehydration, amidation	C&S 215-223, 252-258, 367-461	
<i>Nov. 24 – Nov. 27</i>	<i>Thanksgiving Recess</i>		<i>Tentative: no lecture Nov. 22</i>
<b>14</b> – Dec. 1	Guest lecturer: Process Chemistry	handouts	Guest lecturer: Dr. William Gallagher (BMS)
<b>15</b> - Dec. 8	Guest lecturer: Process Chemistry	handouts	Guest lecturer: To be name
<i>Dec. 15 (tentative)</i>	<b>Final Exam,</b> 3 hours	Covers lectures <b>F– J</b>	<i>6:00 – 9:00 PM Wright 260 (tentative)</i>