INSTRUCTOR: Dr. Crystal Young  
OFFICE: Robertson Hall, Room B108  
OFFICE HOURS: 11:00 a.m. – 12:00 p.m. on MWF and 10:00 a.m. – 12:00 p.m. Tuesday and Thursday. Other times by appointment.  
OFFICE PHONE: (713)-525-2135  
EMAIL ADDRESS: cyoung1@stthom.edu  
CLASS HOURS: 10:10 a.m. – 11:00 a.m. Monday/Wednesday/Friday (Malloy 012).

A. Course Description:
A study of why and how organic reactions occur by applications of physical principals of organic chemistry, including study of reaction mechanisms, structure determination, and design in synthesis with a particular focus on mechanisms of polymerization reactions of monomers and molecular weight distributions of products; principles, limitations and advantages of most important methods of molecular weight determination; relationship of physical properties to structure and composition; correlations of applications with chemical constitution.

B. Learning Outcomes
• Gaining factual knowledge (terminology, classifications, methods, trends)
  o Students will recognize and identify new reactions
• Learning fundamental principles, generalizations, or theories
  o Students will examine fundamental principals of organic chemistry
• Learning to apply course materials (to improve rational thinking, problem solving, and decisions)
  o Students will use new reactions and principles to solve problems
• Acquiring an interest in learning more by asking questions and seeking answers
  o Students will participate by developing questions about course materials and will be encouraged to use multiple resources to find answers

C. Text and Supplies
Optional: Molecular model kits.

D. Grading

<table>
<thead>
<tr>
<th></th>
<th>Total Weight of Final Grade (%)</th>
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<tbody>
<tr>
<td>Attendance &amp; Participation</td>
<td>10</td>
</tr>
<tr>
<td>Quizzes</td>
<td>15</td>
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<tr>
<td>Homework</td>
<td>15</td>
</tr>
<tr>
<td>Exams (best 3 of 4 exams)</td>
<td>45</td>
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<tr>
<td>Final Exam</td>
<td>15</td>
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<tr>
<td>TOTAL</td>
<td>100</td>
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A 100–87; B 86–75; C 74–65; D 64–55; F <55
Quizzes: A quiz will be given every week. **No make-up quizzes will be given.**

Attendance & Participation: 2 Preview questions are due on the Blackboard Discussion Page before each class. Preview questions should cover material from the material being discussed. The answers to your preview questions are due by 12PM the following day. If your question is not answered and you do not choose to ask in lecture you must e-mail me or come to my office hours for participation credit.

Homework Assignments: Homework assignments are designed to improve your understanding of the concepts covered in lecture. They will be graded based on completion. **Assignments turned in late will be assessed a late penalty of 10% every two days.**

Exams: Four exams will be given during regular class sessions. Your three best exam grades will be used to determine your overall grade in the course. All exams must be taken at the scheduled time. **No make-up exams will be given.** Exams will include problems on spectroscopy and structure identification.

**EXAM SCHEDULE:**
- Friday, September 18
- Friday, October 16
- Friday, November 13
- Monday, December 7

Final Exam: The final exam will be comprehensive and will be announced pending the release of the finale exam schedule.

E. **Other Items**
1. Silence or disable cell phones in class.
2. Attendance is required in lecture.

ChemDraw: The Chemistry & Physics department has purchased a site/user license for the ChemDraw software program. To load this software on your personal computer go to the link below and enter your University of St. Thomas email address. You will receive an activation code for the software by email. [http://sitelicense.cambridgesoft.com/sitelicense.cfm?sid=736](http://sitelicense.cambridgesoft.com/sitelicense.cfm?sid=736)

Academic Honesty
Leaders of faith and character demonstrate integrity in all of their activities, both professional and personal. All work in this course is subject to the University’s policy on Academic Dishonesty and the guidelines found in the UST Student Handbook. If you have any questions about appropriate citation, plagiarism, and other issues related to academic honesty, please speak with your instructor as soon as possible.

Blackboard
The course will be supported by Blackboard (http://blackboard.stthom.edu). Please make sure that you have access to the Blackboard site at the beginning of the semester and check it often for updates. All tech questions/problems (e.g., your account, password, browser problems, etc.) should go to the university Help Desk: ithelpdesk@stthom.edu; 713-525-6900.

Accessibility and Accommodations
Any student with a disability requiring accommodations in this course is encouraged to contact Counseling and Disability Services in Crooker Center. Their offices can be reached at (713) 525-6953 or 2169.
**F. Tentative Schedule**

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Homework Due</th>
<th>Text Section</th>
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</thead>
<tbody>
<tr>
<td>Aug. 24,26</td>
<td>Review OCHEM I &amp; II</td>
<td></td>
<td>1.1-21.16</td>
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<tr>
<td>Aug. 28</td>
<td><strong>REVIEW EXAM</strong></td>
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<tr>
<td>Aug. 31</td>
<td>Metacognition &amp; Learning Strategies</td>
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<tr>
<td>Sept 2,4</td>
<td>Chapter 22: Carbonyl Condensations</td>
<td></td>
<td>22.1-22.5, 22.6-22.9</td>
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<tr>
<td>Sept. 7</td>
<td>Labor Day Holiday</td>
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<tr>
<td>Sept. 9</td>
<td>Chapter 22: Carbonyl Condensations</td>
<td></td>
<td>22.10-22.14</td>
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<tr>
<td>Sept. 11</td>
<td>Research Day MEET IN DOHERTY 008</td>
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<td>Tutorial</td>
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<tr>
<td>Sept. 14, 16</td>
<td>Chapter 22: Carbonyl Condensations</td>
<td>9/18 (You may turn it in early for feedback before the exam)</td>
<td>22.15-22.19</td>
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<tr>
<td>Sept. 18</td>
<td><strong>EXAM 1: Chapter 22</strong></td>
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<tr>
<td>Sept. 21, 23, 25</td>
<td>Chapter 23: Carbohydrates</td>
<td>9/28</td>
<td>23.1-23.5, 23.6-23.10, 23.11-23.16</td>
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<tr>
<td>Oct. 5,7,9</td>
<td>Chapter 25: Lipids</td>
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<td>25.1-25.5, 25.4-25.8</td>
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<td>Oct. 12</td>
<td>Fall Break Holiday</td>
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<tr>
<td>Oct. 14</td>
<td>Chapter 25: Lipids</td>
<td>10/16</td>
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<tr>
<td>Oct. 16</td>
<td><strong>EXAM 2: Chapter 23–25</strong></td>
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<tr>
<td>Oct. 26, 28, 30</td>
<td>Step-growth/condensation polymerizations</td>
<td>11/2</td>
<td>See Blackboard</td>
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<td>Nov. 2, 4, 6</td>
<td>Polymer Characterization</td>
<td>11/9</td>
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<tr>
<td>Nov. 9, 11</td>
<td>Chain-growth Polymerizations</td>
<td>11/13</td>
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<td>Nov. 13</td>
<td><strong>EXAM 3: Chapter 26–Chain-growth</strong></td>
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<tr>
<td>Nov. 16, 18, 20, 23</td>
<td>Chain-growth Polymerizations</td>
<td>11/30</td>
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<tr>
<td>Nov. 25, 27</td>
<td>Thanksgiving Holiday</td>
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<td>No Class</td>
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<tr>
<td>Nov. 30, Dec. 2, 4</td>
<td>Transition metal-mediated polymerizations</td>
<td>12/7</td>
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<td>Dec. 7</td>
<td><strong>EXAM 4:</strong></td>
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<td>Dec. 9-17</td>
<td><strong>Final Exam TBA</strong></td>
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