The mission of Motlow State Community College is to enrich and empower its students and the community it serves.

CHEM 2020 LXX Organic Chemistry II XXSemester/20XXYear

This Course Outline is subject to change with notice.

Credit Hours: 4

Prerequisites: Documented eligibility for collegiate level English; CHEM 2010.

Catalog Description: This course is a study of the preparations, properties, nomenclature, and reactions of the following classes of compounds: alkyl halides, alcohols, ethers, carboxylic acids, aldehydes, ketones, and amines.

Group for Whom the Class is Intended:
This course is intended for students pursuing the following degrees and programs of study:
Associate of Science/Arts Degree, Tennessee Transfer Pathways: Biology, Chemistry, Pre-Health Professions Tennessee Transfer Pathway A.S. (Dentistry, Medicine, Optometry, Pharmacy, Veterinary Medicine).

Instructor Information:
Title and Name
Office:
Office Hours:
   (others by appointment)
Academic Advising Office Hours: (2 hours/week; Full-time Faculty only)
Office Phone Number:   Email:

Required Texts:


3. Register for Sapling Learning homework system. Instructions for registering with Sapling Learning will be provided on the first day of class. bottom of last page of syllabus for more information.

Supplemental Materials:
2). Molecular model set for organic chemistry

Lab Requirements:
Chemical Splash Proof Safety Goggles
Program Learning Outcomes:
After completing the requirements of the natural Sciences Program, students will be able to . . .
1). Conduct an experiment, collect and analyze data, and interpret results in a laboratory setting.
2). Analyze, evaluate and test a scientific hypothesis.
3). Use basic scientific language and processes, and be able to distinguish between scientific and non-scientific explanations.
4). Identify unifying principles and repeatable patterns in nature, the values of natural diversity, and apply them to problems or issues of a scientific nature.
5). Analyze and discuss the impact of scientific discovery on human thought and behavior.

Student Learning Outcomes:
By the end of the course, students will be able to . . .
1). Interpret patterns of reactivity on the basis of mechanistic reasoning.
2). Employ in depth understanding of chemical structure and properties in understanding chemical reactivity of compounds such as aromatic compounds, amines, ethers, and carbonyl compounds (aldehydes, ketones, carboxylic acids and their derivatives).
3). Design syntheses of organic molecules of moderate complexity
4). Deduce molecular structures from spectroscopic data.
5). Apply IUPAC nomenclature system to a range of organic compounds to convert between structures and names.
6). Demonstrate laboratory skills with special reference to multi-step organic synthesis and structural determination.
7). Demonstrate proficiency in organic chemical laboratory techniques

Course Objectives:
Throughout the course, students will have the opportunity . . .
1). To use UV-vis and IR spectrophotometers to characterize functional group transformations.
2). To practice writing reasonable arrow pushing mechanisms.
3). To predict reaction outcomes utilizing molecular structure.
4). To practice laboratory techniques such as recrystallization, melting point determination, and extraction in the context of a multi-step organic synthesis.

Major Assignments and Method for Calculating the Final Grade:

<table>
<thead>
<tr>
<th>% of Final Grade</th>
<th>Item Description</th>
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</thead>
<tbody>
<tr>
<td>15%</td>
<td>1st Exam</td>
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<tr>
<td>15%</td>
<td>2nd Exam</td>
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<tr>
<td>20%</td>
<td>Final Exam (comprehensive)</td>
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<tr>
<td>10%</td>
<td>Quizzes</td>
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<tr>
<td>15%</td>
<td>Homework</td>
</tr>
<tr>
<td>25%</td>
<td>Lab (lab notebook and final-12.5% each)</td>
</tr>
</tbody>
</table>
Grading Policies:

Grading Scale:

A = 90-100%
B = 80-89%
C = 70-79%
D = 60-69%
F = 0-59%

Note: If your average is 89.5 or higher, your grade will be an A.
If your average is 79.5, or higher, your grade will be a B.
If your average is 69.5, or higher, your grade will be a C.
If your average is 59.5, or higher, your grade will be a D.

Lab Attendance:

Due to the nature of chemistry labs, no labs can be made up even if there is a documented personal emergency. No lab reports will be accepted for missed labs, but the lowest lab score will be dropped.

Missed Tests/Quizzes:

Midterms may only be made up with a valid documented excuse, provided within one week of missing the exam. No makeup quizzes will be given, however the lowest quiz grade will be dropped. There will be no make up for the final exam.

Homework:

Working homework problems is very important! Homework assignments are due approximately one week after the last lecture covering the chapter. The lowest homework score will be dropped.

Course Policies:

Academic Misconduct Policy:

Plagiarism, cheating, and other forms of academic dishonesty are prohibited. Students guilty of academic misconduct, either directly or indirectly, through participation or assistance, are immediately responsible to the instructor of the class. Based on their professional judgment, instructors have the authority to impose the following academic sanctions: (a) require the student to repeat the assignment for full or partial credit; (b) assign a zero, an F, or any other grade appropriate for the assignment or examination; (c) assign an F for the course. In addition, disciplinary sanctions may be imposed through the regular institutional procedures. For more information, see MSCC Policy 3:02:00:03.

Classroom Misconduct Policy:

The instructor has the primary responsibility for maintenance of academic integrity and
controlling classroom behavior, and can order temporary removal or exclusion from the classroom of any student engaged in disruptive conduct or conduct that violates the general rules and regulations of the institution for each class session during which the conduct occurs. Extended or permanent exclusion from the classroom, beyond the session in which the conduct occurred, or further disciplinary action can be effected only through appropriate procedures of the institution.

Disruptive behavior in the classroom may be defined as, but not limited to, behavior that obstructs or disrupts the learning environment (e.g., offensive language, harassment of students and professors, repeated outbursts from a student which disrupt the flow of instruction or prevent concentration on the subject taught, failure to cooperate in maintaining classroom decorum, etc.), text messaging, and the continued use of any electronic or other noise or light emitting device which disturbs others (e.g., disturbing noises from beepers, cell phones, palm pilots, lap-top computers, games, etc.). For more information, see MSCC Policy 3:02:00:03.

Class Cancelation Policy:
If class is cancelled for any reason, you will be notified via our D2L page and will be told there how to prepare for the next class period.

Emergency Procedures Policy:
In case of a medical emergency we will immediately dial 9-911 and report the nature of the medical emergency to emergency response personnel. We will try to stay with the person(s) in need and maintain a calm atmosphere. We will talk to the person as much as possible until response personnel arrive on campus, and we will have someone go outside to meet emergency personnel and direct them to the appropriate location. In the event of an emergency (drill or actual), a signal will be sent. Based on that signal, students will follow the procedures below for that specific type of emergency:

Loud warbling sound throughout Building (FIRE)
Collect purses and coats and proceed immediately out of your room and exit through the closest emergency exit. Proceed to the Designated Assembly Area closing windows and doors as you exit. Remain there until the "All Clear" Signal is given by an Emergency Management Team member. (Instructors- Provide your Designated Assembly Area, and its location to students)

Tornado Siren (SEVERE WEATHER):
Proceed to the closest designated severe weather shelter on the 1st floor and proceed all the way into the shelter. Crouch down on the floor with your head between your knees facing away from the outside walls. Remain there until the "All Clear" Signal is given. (Instructors- Provide the recommended room number or hallway location to students)

Air Horn (1 Long Blast) and Face to Face All Clear (INTRUDER/HOSTAGE):
Ensure door is closed, locked and lights turned off. If your door will not lock, move some tables and chairs in front of the door quickly. Move immediately to
the rear of the room away from the door and sit on the floor- out of sight if possible. Remain calm and quiet and do not respond to any inquiries at the door unless you have been given the "All Clear" and a member of law enforcement or your campus Emergency Management Team member makes face-to-face contact at your door.

Classroom Locked-door Policy:
In order to adhere to MSCC Emergency Preparedness Policy and to facilitate effective classroom management, the classroom door will remain closed and locked for the duration of the class period.

Educational Technology:
Accessing Campus Computers or the MSCC Library from off Campus:
Your Username format is your First Initial, Last Name and Month and Day Birthday in the Format of MMDD. Example: Marcia Smith born on April 11, 1992 - Username: msmith0411. Your Pin will be the numeric pin you created when you initially applied to Motlow College.

Using D2L:
For help with D2L including how to submit materials to a Dropbox, see this page: http://www.mscc.edu/techtube.aspx

Technical Support/Assistance:
Students having problems logging into a course, timing out of a course, using course web site tools, or any other technical problems, should contact the MSCC Technology Help Desk at 931-393-1510 or toll free 1-800-654-4877, Ext. #1510 (or d2lhelp@mscc.edu)

Disability Services/Accommodations:
Motlow College is committed to meeting the needs of qualified students with disabilities by providing equal access to educational opportunities, programs, and activities in the most integrated setting appropriate. This commitment is consistent with the College's obligations under Section 504 of the Rehabilitation Act of 1973 and the American with Disabilities Act of 1990 (ADA). Together, these laws prohibit discrimination against qualified persons with disabilities. To this end, the Director of Disability Services for Motlow College coordinates services and serves as an advocate and liaison for students with disabilities attending Motlow College. Contact the Director of Disability Services here: http://www.mscc.edu/disability/index.aspx.

Students with disabilities who would need assistance in an emergency evacuation should self-disclose that need to the instructor no later than the second day of class or second group meeting.

Confidentiality of Student Records:
The education records of current and former students at Motlow State Community College are maintained as confidential records pursuant to The Family Educational
Rights and Privacy Act (FERPA) of 1974 as amended. For further information, see MSCC Policy No. 3:02:03:00.

**Student Success:**
MSCC Instructors can guide students to specific resources regarding Advisement and Tutoring in their discipline. For additional help, see the Student Success and Advisement pages of the MSCC Homepage:
http://www.mscc.edu/student_success/index.aspx
http://www.mscc.edu/advisement/index.aspx

On-line tutoring is also available via SMARTHINKING here: http://www.mscc.edu/smarthinking.aspx

**Class and Laboratory Schedule:**
Textbook and lab manual readings are to be completed before the class period when they are scheduled to be discussed.

<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Chapter:Topic</th>
<th>lab</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>M 1/20</td>
<td>Course Intro-syllabus/Text Chapter 12</td>
<td>Lab: no lab</td>
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<tr>
<td></td>
<td>W 1/22</td>
<td></td>
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<tr>
<td>2</td>
<td>M 1/27</td>
<td>Text: Chapter 13</td>
<td>Lab: 24 4-methylcyclohexene</td>
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<tr>
<td></td>
<td>W 1/29</td>
<td></td>
<td>Set up lab 49A,B</td>
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<tr>
<td>3</td>
<td>M 2/3</td>
<td>Text: Chapter 13/14</td>
<td>Lab: 49A,B-photoreduction</td>
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<td></td>
<td>W 2/5</td>
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<tr>
<td>4</td>
<td>M 2/10</td>
<td>Text: Chapter 14/15</td>
<td>Lab: 33A</td>
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<td></td>
<td>W 2/12</td>
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<tr>
<td>5</td>
<td>M 2/17</td>
<td>Text: Chapter 15</td>
<td>Lab: 31 (part B only) Run IR of starting material and product</td>
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<td></td>
<td>W 2/19</td>
<td></td>
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<tr>
<td>6</td>
<td>M 2/24</td>
<td>Text: Chapter 16</td>
<td>Lab: 41 nitration of methyl benzoate</td>
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<tr>
<td></td>
<td>W 2/26</td>
<td></td>
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<tr>
<td>7</td>
<td>M 3/3</td>
<td><strong>Exam I (chapters 12-14)</strong></td>
<td>Lab: Mass spec, NMR, and IR spectra interpretation practice.</td>
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<tr>
<td></td>
<td>W 3/5</td>
<td>Text: Chapter 17</td>
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<td>Week</td>
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<td>8</td>
<td>M 3/10</td>
<td>W 3/12</td>
<td>Chapter 17/18</td>
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<td>M 3/17</td>
<td>W 3/19</td>
<td>Chapter 18</td>
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<td>M 3/24</td>
<td>W 3/26</td>
<td>Chapter 19</td>
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<td>M 3/31</td>
<td>W 4/2</td>
<td>Chapter 19/20</td>
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<td>M 4/7</td>
<td>W 4/9</td>
<td>Chapter 20/21</td>
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<td></td>
<td>M 4/14</td>
<td>W 4/16</td>
<td>Chapter 22</td>
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<tr>
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<td>M 4/21</td>
<td>W 4/23</td>
<td>Chapter 22/23</td>
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<td>M 4/28</td>
<td>W 4/30</td>
<td>Chapter 23</td>
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<td>W 5/7</td>
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