Contact Information  
Matt (Doc) Bowman  
262-2519  
Chemistry 5232  
bowman@chem.wisc.edu  
(Please include Chem 342 in the subject line).  
1 credit  

Matt Bowman’s Office Hours  
Scheduled  
Mondays 2:30-5:00 PM in Noland 379  
Tuesdays 9:30-11:30 AM in Chem 1371  
Wednesdays 2:30-5:00 PM in Noland 379  
(or by appointment)  

How Credit Hours are Met: The University defines one credit as the learning that takes place in at least 45 hours of learning activities, which include time in lectures or class meetings, in person or online, labs, exams, presentations, tutorials, reading, writing, studying, preparation for any of these activities, and any other learning activities. The course meets 12 times (approximately once per week) for at most 4 hours. There is a final exam that takes 2 hours. Students are expected to spend at least 90 min in preparation outside of class for the laboratory. Bringing the estimated time to 68 hours.  

Course Description: Chemistry 342 introduces organic laboratory techniques in synthesis, purification and spectral interpretation. The course is designed to accompany Chemistry 341 and topics closely follow Chemistry 341. Enroll Info: Completion of or concurrent enrollment in Chem 341. For students who expect to take only one semester of organic chemistry and need only a single laboratory credit. Enrollment not permitted for students who have completed Chem 344  

Prerequisite: CHEM 341 or concurrent enrollment; not open to students who have completed CHEM 344  
Course Designations: Intermediate level; physical science breadth; counts as L&S credit  
Instructional Mode: face-to-face
Course Meeting Times and Locations:

Section 301:
TA: Caitlin Utt cutt@wisc.edu
Tuesdays 5:40-9:45 Start in Chem 2381
First Day: September 11
Canvas URL: https://canvas.wisc.edu/courses/105403
TA Office Hours: Thursdays 8:50-10:50 AM Chem B317

Section 302:
TA: Jess Roberts jroberts24@wisc.edu
Thursdays 5:40-9:45 Start in Chem 2381
First Day: September 13
Canvas URL: https://canvas.wisc.edu/courses/105402
TA Office Hours:

Section 303:
TA: Sam Krerowicz krerowicz@wisc.edu
Mondays 5:40-9:45 Start in Chem 2381
First Day: September 10
Canvas URL: https://canvas.wisc.edu/courses/105404
TA Office Hours: Wed and Fri 12:05-12:55 pm Chem B317

Chemistry 342 Learning Outcomes
Students will understand the role of spectroscopy and spectrometry in organic structure elucidation and be able to use spectral data to analyze pure samples and product mixtures.

Students will understand and be proficient in the safe use of basic apparatus, glassware, and techniques for the synthesis, isolation, and purification of organic molecules.

Students will be able to adapt literature examples to make target products.

Students will be able to understand basic fundamental properties of organic molecules from their structure.
McBurney Accommodations
If you have McBurney accommodations, please request a Faculty Notification Letter through McBurney Connect. You are encouraged to email Dr. Matt Bowman and your TA if you would like to arrange an individual meeting. Please do this as close to the start of the semester as possible to allow us to better accommodate your needs. Accommodations for exams and quizzes will be coordinated with the chemistry undergraduate office.

McBurney Disability Resource Center syllabus statement
The University of Wisconsin-Madison supports the right of all enrolled students to a full and equal educational opportunity. The Americans with Disabilities Act (ADA), Wisconsin State Statute (36.12), and UW-Madison policy (Faculty Document 1071) require that students with disabilities be reasonably accommodated in instruction and campus life. Reasonable accommodations for students with disabilities is a shared faculty and student responsibility.

Students are expected to inform the course instructors and their TA of their need for instructional accommodations by the end of the third week of the semester, or as soon as possible after a disability has been incurred or recognized. Instructors and TAs will work either directly with you or in coordination with the McBurney Center to identify and provide reasonable instructional accommodations. Disability information, including instructional accommodations as part of a student's educational record, is confidential and protected under FERPA.

http://mcburney.wisc.edu/facstaffother/faculty/syllabus.php

Health-related Accommodations
If you have health-related issues (such as severe allergies, chemical sensitivity, respiratory illnesses, etc.) that may impact your participation in
the lab course, please contact Dr. Matt Bowman to arrange a meeting. Students who are pregnant or are trying to become pregnant should contact a laboratory director immediately. Please contact us as soon as possible prior to the start of lab work.

**Institutional statement on diversity**

Diversity is a source of strength, creativity, and innovation for UW-Madison. We value the contributions of each person and respect the profound ways their identity, culture, background, experience, status, abilities, and opinion enrich the university community. We commit ourselves to the pursuit of excellence in teaching, research, outreach, and diversity as inextricably linked goals.

The University of Wisconsin-Madison fulfills its public mission by creating a welcoming and inclusive community for people from every background – people who as students, faculty, and staff serve Wisconsin and the world.

[https://diversity.wisc.edu/](https://diversity.wisc.edu/)
CHEM 342 Evening Section Exam Policy
Instructors of daytime courses often schedule evening exams that conflict with a scheduled CHEM 342 meeting time (5:40 pm – 9:45 pm).
According to the timetable and Faculty Document 1585a:

"Instructors who schedule evening exams should make every possible effort to accommodate students with unavoidable conflicts. It is the instructor's responsibility to assure that all students with conflicts between daytime courses with evening exams and evening courses are treated fairly and without penalty.

If a scheduling conflict exists between the evening exam of a daytime course and a regularly scheduled evening course, then the evening course takes precedence over the exam."

It is your responsibility to check for any evening exam conflict(s) and contact the instructor of the daytime course as soon as possible so an accommodation can be made.
CHEM 342 Lab Safety Policies

You are required to follow the rules and guidelines discussed in the lab safety presentation at the start of the semester.

In summary:

Place book bags, coats etc. in the hanger area at the side of the lab

You must wear long pants and a lab coat.

No sandals, flip-flops, open-toed/heeled shoes!

Your entire foot must be covered by shoes or a combination of shoes and socks

Gloves, goggles, and lab coats must be worn at all times in the lab

The only exposed skin can be your arms, neck, and part of your face.

Gloves must be removed and discarded before leaving the lab

Don’t wear anything that you care about – someone or something will ruin it! Do not eat/drink/chew in the lab

Do not inhale chemicals

No smoking or open flames

Laptops, iPods (and similar) and cell phones are not allowed in the lab

Follow all safety instructions given by your TA! Access to the lab

The only times that you are allowed access to the organic teaching labs are during the scheduled meeting times for the lab session in which you enrolled. You may not work in the lab at any other time. Unless you are enrolled in the scheduled lab session you are not allowed in the lab. There are no visitors allowed.

Required Materials:
Laboratory notebook
Safety goggles (not safety glasses)
Fall 2018 Chem 342 Laboratory Manual
Lab Coat
Grades

Each section will be treated independently. At the end of the semester, the total points values will be listed out and the grade cutoffs will be placed where there are significant gaps in points. The course will be curved so the GPA of all the sections will be close to 3.2.

C’s will be awarded to students with scores more than two standard deviations below the average. D’s will be awarded to students that fail to submit lab reports. F’s will be awarded to students that miss multiple lab sessions.

Points will be earned based on your conduct in lab, prelab exercises (at the end of each chapter in the lab notebook), post lab exercises (handed out in lab), product quality, quizzes, and the final exam).

Quizzes
There are 3 quizzes given during CHEM 342. Each quiz will be worth 30 points. The quizzes will mainly focus on the most recent subjects, but organic chemistry is cumulative, so questions regarding concepts/techniques taught in earlier experiments are fair game. The quizzes will be held during the weeks of Oct. 8, Oct. 22, and Nov. 25.

Lab Practical
During the week of December 3, there will be a lab practical. Essentially, you will be asked to repeat one of the experiments you have done this semester with minor alterations. You will not know which experiment you will be doing until that day. Also, you will not be able to use the lab manual. You can only use your lab notebook, calculator, and a periodic table.

Final Exam
There will be a final exam on December 20 from 7:25-9:25 PM. This date was set by the registrar. It will be worth 100 points.
Grading Guide for CHEM 342 Lab Reports

<table>
<thead>
<tr>
<th>Experiment</th>
<th>PreLab</th>
<th>Lab</th>
<th>PostLab</th>
<th>Product</th>
</tr>
</thead>
<tbody>
<tr>
<td>NMR</td>
<td></td>
<td></td>
<td>37</td>
<td>--</td>
</tr>
<tr>
<td>PC</td>
<td>15</td>
<td>--</td>
<td>15</td>
<td>--</td>
</tr>
<tr>
<td>Distillation</td>
<td>15</td>
<td>3</td>
<td>15</td>
<td>--</td>
</tr>
<tr>
<td>Extraction</td>
<td>15</td>
<td>6</td>
<td>15</td>
<td>--</td>
</tr>
<tr>
<td>Lab Skills</td>
<td>15</td>
<td>3</td>
<td>15</td>
<td>--</td>
</tr>
<tr>
<td>Substitution</td>
<td>15</td>
<td>3</td>
<td>15</td>
<td>--</td>
</tr>
<tr>
<td>Elimination</td>
<td>15</td>
<td>3</td>
<td>15</td>
<td>--</td>
</tr>
<tr>
<td>Reduction</td>
<td>15</td>
<td>3</td>
<td>15</td>
<td>5</td>
</tr>
<tr>
<td>Grignard</td>
<td>15</td>
<td>3</td>
<td>15</td>
<td>5</td>
</tr>
<tr>
<td>Ester</td>
<td>15</td>
<td>3</td>
<td>15</td>
<td>5</td>
</tr>
<tr>
<td>Amide/Aldol</td>
<td>15</td>
<td>3</td>
<td>15</td>
<td>5</td>
</tr>
<tr>
<td>Lab Practical</td>
<td>--</td>
<td>25</td>
<td>--</td>
<td>5</td>
</tr>
<tr>
<td><strong>Total points</strong></td>
<td><strong>150</strong></td>
<td><strong>55</strong></td>
<td><strong>187</strong></td>
<td><strong>25</strong></td>
</tr>
</tbody>
</table>

A Pre-Lab sheet for each experiment can be found in the lab manual. These sheets must be filled out and turned into the TA at the start of the discussion. It is vital that you work through these sheets as you will need the information for the lab experiment itself. The experiment that you will be performing may not be the one in the lab manual. As a result, you will need to run some calculations before you begin the experiment.

The Lab points are based on your performance during the lab period. Most of the time you will receive these 3 points. However, if you come to lab without your goggles, wear inappropriate footwear, do not write in your notebook during the lab, or fail to recap reagent bottles these points will be forfeit. Also, if you endanger yourself or others, it is entirely possible for you to lose more than 3 points.

The postlab worksheet will be posted on Canvas. Your TA will have hardcopies of this worksheet for you to fill out. On it will be several questions for you to answer on your own regarding the experiment. This will be due on the indicated date along with the spectra from your submitted samples and a copy of your notebook pages.

Product points will be assigned by Matt on experiments where everyone makes the same product. These will be assigned based on the quality of the spectra, so be extra diligent in preparing samples.
CHEM 342 Fall 2018 Lab Schedule

<table>
<thead>
<tr>
<th>Week</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Thursday</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sep. 3</td>
<td>No Class</td>
<td>No Class</td>
<td>No Class</td>
</tr>
<tr>
<td>10</td>
<td>Lab Check-in/NMR</td>
<td>Lab Check-in/NMR</td>
<td>Lab Check-in/NMR</td>
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<tr>
<td>17</td>
<td>Part. Coeff/Distillation</td>
<td>Part. Coeff/Distillation</td>
<td>Part. Coeff/Distillation</td>
</tr>
<tr>
<td>24</td>
<td>Extraction</td>
<td>Extraction</td>
<td>Extraction</td>
</tr>
<tr>
<td>Oct. 1</td>
<td>Extraction</td>
<td>Extraction</td>
<td>Extraction</td>
</tr>
<tr>
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<td>Lab Skills</td>
<td>Lab Skills</td>
</tr>
<tr>
<td>15</td>
<td>Substitution</td>
<td>Substitution</td>
<td>Substitution</td>
</tr>
<tr>
<td>22</td>
<td>Elimination</td>
<td>Elimination</td>
<td>Elimination</td>
</tr>
<tr>
<td>29</td>
<td>Reduction</td>
<td>Reduction</td>
<td>Reduction</td>
</tr>
<tr>
<td>Nov. 5</td>
<td>Grignard</td>
<td>Grignard</td>
<td>Grignard</td>
</tr>
<tr>
<td>12</td>
<td>Ester</td>
<td>Ester</td>
<td>Ester</td>
</tr>
<tr>
<td>19</td>
<td>No Class</td>
<td>No Class</td>
<td>No Class</td>
</tr>
<tr>
<td>26</td>
<td>Amide or Aldol</td>
<td>Amide or Aldol</td>
<td>Amide or Aldol</td>
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<tr>
<td>Dec. 3</td>
<td>Lab Practical</td>
<td>Lab Practical</td>
<td>Lab Practical</td>
</tr>
<tr>
<td>Dec. 10</td>
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</tr>
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CHEM 342 Fall 2018 Lab Report Due Dates

<table>
<thead>
<tr>
<th>Lab Report</th>
<th>Mon Section</th>
<th>Tue Section</th>
<th>Thurs Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>NMR</td>
<td>Tues Sep 18</td>
<td>Wed Sep 20</td>
<td>Fri Sep 22</td>
</tr>
<tr>
<td>Distillation</td>
<td>Tues Sep 25</td>
<td>Wed Sep 27</td>
<td>Wed Sep 29</td>
</tr>
<tr>
<td>Extraction</td>
<td>Tues Oct 9</td>
<td>Wed Oct 10</td>
<td>Fri Oct 12</td>
</tr>
<tr>
<td>Lab Skills</td>
<td>Tues Oct 16</td>
<td>Wed Oct 17</td>
<td>Fri Oct 19</td>
</tr>
<tr>
<td>Substitution</td>
<td>Tues Oct 23</td>
<td>Wed Oct 24</td>
<td>Fri Oct 26</td>
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<tr>
<td>Elimination</td>
<td>Tues Oct 30</td>
<td>Wed Oct 31</td>
<td>Fri Nov 2</td>
</tr>
<tr>
<td>Reduction</td>
<td>Tues Nov 6</td>
<td>Wed Nov 7</td>
<td>Fri Nov 9</td>
</tr>
<tr>
<td>Grignard</td>
<td>Tues Nov 13</td>
<td>Wed Nov 14</td>
<td>Fri Nov 16</td>
</tr>
<tr>
<td>Ester</td>
<td>Tues Nov 27</td>
<td>Wed Nov 28</td>
<td>Fri Nov 30</td>
</tr>
<tr>
<td>Amide/Aldol</td>
<td>Tues Dec 4</td>
<td>Wed Dec 5</td>
<td>Fri Dec 6</td>
</tr>
</tbody>
</table>

Reports are due in your TA’s mailbox by 5 pm on the day indicated. Late work penalties will be applied to reports turned in after this deadline.

CHEM 342 Late Work Policy

Work submitted up to one day after the stated submission deadline will receive a maximum of 50% of the total points available. Work submitted over one day late will not be graded. It is your responsibility to be aware of all deadlines for submission of work to your TA.
**CHEM 342 Academic Misconduct Policy**

All work submitted by a student for grading in CHEM 342 is required to be the product of that student alone. This will be assumed to be the case unless the work is clearly labeled otherwise. In the laboratory, this means that all lab work is carried out by the student and the data obtained is recorded directly into the notebook. The data recorded must pertain to actual measurements and observations made by the student on their own experiment (even when working in pairs or as a group). Calculations, assignment of spectroscopic data, answers to pre- and post-lab questions and all other items submitted for grading must be the original work of the student.

Submission of work copied directly from a textbook, website, journal article, from a current or previous lab report, or any other source without citation or reference is considered to be plagiarism and will be dealt with according to University guidelines.

Information as to what constitutes academic misconduct is available on the website of the Office of the Dean of Students (www.wisc.edu/students/). It is your responsibility to understand and be familiar with these guidelines.
**Mental Health Resources:**

I realize you are under a lot of pressure. Some of that pressure is internal and some of that is external. Regardless of the source of the pressure, the pressure is very real. Students have a tendency to equate grades with future happiness. It is an understandable connection, but not really a true one. I have quite a few C’s on my undergraduate transcript (a few in chemistry) and I still ended up with my dream job. I have had a student that received an F in organic chemistry and had to retake the class. She went on to medical school. So, a low grade is not the end of the world.

**If disaster happens or at anytime you feel that you cannot cope with something, or just need to vent, there are resources available on campus for you. Take advantage of them.**

*University Health Services (UHS):*
Offers group, individual, couple/partner therapy stress management, and disordered eating assessments and treatment at no cost. It also provides massage therapy, yoga, and other wellness services.
Student Activity Center 7th floor  608-265-5600
[www.uhs.wisc.edu/mentalhealth/getting-started](http://www.uhs.wisc.edu/mentalhealth/getting-started)

*Ask.Listen.Save:*
Ask.Listen.Save. is a student org that aims to prevent suicide by reducing the stigma of mental illness. Through educating the student body, they aim to increase the awareness and create a safe environment in which students know they are not alone and can feel free to ask for help.
Student Activity Center Suite 3196  [www.Asklistensave.org](http://www.Asklistensave.org)

*Badgerspill:*
BadgerSpill is a peer-to-peer support network of and for UW-Madison students. You can write in online to “spill” or vent privately about whatever you are going through and get unbiased feedback, empathy, and resources from other students who have dealt with similar situations. Both parties are anonymous to one another and the spiller gets multiple responses within 24 hours.
[www.badgerspill.com](http://www.badgerspill.com)

Please look on the canvas page for the mental health resource sheet for more resources.