



Course Information

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| Semester & Year: | Spring 2023 |
| Course Title: | Fundamental Organic Chemistry Laboratory |
| Course Prefix & Number: | CHM230LL |
| Section Number: | 26105 |
| Credit Hours: | 1 Credit, 3 Period(s), 3 Load |
| Start Date: | January 19, 2023 |
| End Date: | May 12, 2023 |
| Room Number: | NS-312 |
| Meeting Days: | Lecture: Tuesday: 12:00PM–2:50PM Lab: Thursday 12:00PM–2:50PM |

Course Format

The course format for this course is Face-to-Face (In-Person) for lectures and labs. *If it is determined that the lectures and labs cannot be held in person for health and safety reasons, the class will move to a Live Online format using the same scheduled days and times.*

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| Instructor: | Dr. Relindis Mawo |
| Email: | relindis.mawo@scottsdalecc.edu |
| Phone: | (480) 425-6705 |
| Office Location: | Natural Science (NS) 124 |
| Office Hours: | Mon, Wed, Thu 10:30AM–11:30AM; Tue 4:00–5:00PM in person, NS 124 Friday by appointment only, virtual meetings through my WebEx personal room @ https://maricopa.webex.com/join/rmawo |

Course Description

Laboratory experience in support of CHM230.

Prerequisites

A grade of C or better in CHM130LL or CHM151LL or equivalent. Corequisites: CHM230.

Course Competencies

There are a total of 5 competencies that students should be able to perform by the end of CHM230LL. The Official Course Competencies can be found at the District Curriculum Site: navigate to <https://curriculum.maricopa.edu/> and enter "CHM230LL" in the Quick Course Search field.

MCCCD Official Course Competencies:

1. Record observations accurately, using appropriate chemical terminology.
 2. Use scientific measuring devices to obtain chemical data.
 3. Apply principles, concepts, and procedures of chemistry to lab experiments.
 4. Use the scientific method in interpreting chemical data to arrive at rational conclusions.
 5. Use lab equipment properly to perform a variety of chemical procedures and techniques.
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Texts and Course Materials

1. COURSE TEXTBOOK:

- i. Required: LAB TEXTBOOK: CHM 230 Experiments Manual (Provided at no additional cost by the Chemistry Stockroom).

2. GOGGLES: We will provide you with protective eyewear for use during the class. Safety goggles will be required for admission to the laboratory. No one will be permitted to work in a chemistry laboratory without eye protection. If you wear prescription glasses, you still must wear safety goggles that have side-shield protection.

3. LAB COAT: Students are required to have a lab coat with long sleeves and covers down to the knees at the very least. (No student will be permitted to work in the lab without a lab coat).

4. LAB NOTEBOOK: You are required to keep a notebook / learning log during this course (separate from your lecture binder or notebook). This notebook is a professional record of key safety data information for the chemicals involved in each experiment, your lab notes, experimental procedures and observations. This notebook needs to be a bound notebook such as a simple composition book or quad-ruled notebook (spiral notebooks and perforated notebooks will not be allowed). All work in the notebook must be your own handwriting, with the exception of printed graphs.

If you keep a dedicated lab notebook (separate from your lecture notebook), you may use the notebook when taking Lab Exams.

5. Molecular Models: Buy yours now. Molecular Modeling kits will be required for the Stereochemistry lab. Many students find a set of molecular models very helpful as a study aid.
6. Scientific Calculator.

Course Technologies

View the [Accessibility Statements & Privacy Policies](#) of technologies used in this course.

Maricopa Systems

This course uses key Maricopa systems for course management and communication.

- Canvas Learning Management System
- Student Maricopa Gmail Account
- Maricopa Open Educational Resource Learning System (MOER)

Synchronous Communication Tools

This course implements the use of web conferencing and/or other synchronous course tools.

- Webex
- Canvas Conferences

Student Assignment Tools

This course requires students to participate in or submit assignments using desktop or cloud-based applications.

- Google Products
- Microsoft Office 365
- Screencast-O-Matic
- Adobe Creative Cloud

Streaming Media/Audio/Video Tools

This course uses webcasting, lecture capture systems, YouTube, and/or other streaming media services.

- YouTube

Exam Proctoring Tool

Respondus LockDown Browser

Respondus LockDown Browser secures online exams by locking down the testing environment within Canvas. LockDown Browser prevents access to other applications, and many common functions on a computer while an assessment is active. Some of the exams in this course require the use of this software. A LockDown Browser download link will be provided within the Canvas course. For further information, see the [Student Resources](#) page provided. For your reference, read the [System Requirements for LockDown Browser](#) and [LockDown Browser Terms of Use](#).

Please note that Respondus LockDown Browser with Monitor requires a room scan prior to all testing sessions.

Plagiarism Checker Tool (Turnitin)

Turnitin is a plagiarism check tool that matches text to a vast database of sources including the internet, published works, commercial databases and student work submitted to Turnitin in institutions internationally. Students must submit designated papers to Turnitin when instructed. Information and instructions for Turnitin are provided in the course. For your reference, read the [Turnitin Terms of Service](#).

Course Policies

The following are policies specific to this course. Students are also responsible for the college policies included on the [Student Regulations](#) page of the Maricopa Community College District website.

Significant Time Demand: This course, without a doubt, will put significant demands on your time. In addition to 3 instructional hours, expect to spend about 6+ hours each week *outside of laboratory studying, preparing for that week's lab and interpreting the data collected in the lab*. For students who have Jobs and/or Families, and/or A Life Outside of School, this can be even more challenging. Make the time **NOW** in your schedule to review the topics and techniques that are relevant to each lab and to adequately complete pre-, during- and post-lab assignments and to seek out any help you will need. Chemistry is a cumulative subject, meaning that each new topic builds on the foundation of the previous topics. Do NOT let yourself get behind; it will be extremely difficult to catch up!!

A large part of **being a College Student** is learning how to solve problems independently and in a professional manner. This includes finding out how **you** learn and using this knowledge to *find the material and information that you need* to accomplish the task at hand. This will not be the same for every student.

Students have the option to use resources available to them through the course Learning Management System (Canvas), Office Hours, through the school (NS Tutor Center, etc.). ***It is the student's responsibility to determine what they need to complete the learning process for concepts and to actively seek it out.*** It is not the responsibility of the instructor to anticipate what every student may need for concepts covered in this course.

Which leads me to a discussion regarding:

Academic Entitlement: behavior which impedes student's academic success. Examples include, but are not limited to:

- Knowledge should be acquired with little to no effort
- Others will offer all the necessary information for learning
- Low grades result from problems associated with the instructor or the system
- Confrontational and/or disrespectful interactions with the instructor or others in the class are acceptable

COURSE STRUCTURE

Laboratory meets face-to-face once per week during scheduled times. Laboratory work seeks to a) introduce chemistry principles that will drive meaningful discussion in lecture and b) reinforce chemistry principles that have been taught in lecture. See [page 9](#) of this syllabus for the lab schedule.

INSTRUCTIONAL METHODS: The learning management system for this course will be Canvas, where students can review course related materials, and check their grades and announcements. Lab handouts and helpful video links will be posted on Canvas for students to study and get back to the instructor with questions on concepts they do not understand or wish to reinforce. There will be regular Pre- and Post-lab assignments, pre-lab quizzes and practical hands-on experience via weekly laboratory experiments and documentation and interpretation of findings in a lab notebook. The lab notebook reports will consist of pre-lab, during-lab (or procedure and observations), and post-lab sections. Traditional exams will be given as part of the graded lab work.

Lab Reports: A lab report will be submitted for each of the 11 experiments. Each lab will be worth 30 points (distributed between the pre-lab, during-lab, and post-lab work). You will document the pre- and during-lab work in your lab notebook. I will check your pre-lab notes at the beginning of lab and the during-lab (procedure and observations) notes before you exit the lab. These will be checked for completeness and not necessarily correctness. Students are therefore encouraged to ask questions if there is anything they are not sure about. The post-lab report/data sheet will be due at the beginning of the next lab period. Although you will work in pairs when conducting the experiments in the lab, individual reports will be required for each student. The fact that you work together does not mean you should submit the exact same report. It doesn't also mean you will earn the same grade. Your grade for each experiment will depend on how well you come prepared for the lab, how well you document your findings/data, the correct interpretation/analysis of the results obtained, and the conclusions drawn from them. Note that a student can get good data but not demonstrate understanding of the data obtained, which can lead to a poor data analysis grade, while another student might make a few mistakes during the experiment but still demonstrate understanding by explaining what was expected, why the results obtained are different from what was expected, what went wrong and what could have been done differently to get better results. Thus, good data can lead to a good during-lab grade but not necessarily a good post-lab report grade, while poor data may lead to a low during-lab grade but not necessarily a poor post-lab report grade.

Lab Exams: There will be one lab midterm exam (worth 100 points) and a comprehensive lab final exam worth 100 points. The midterm exam will be over labs 1–7, and related lecture material. The final lab exam is comprehensive and covers all the labs and related lecture content.

MAKE-UP POLICY: I do not give make-up work without strong and documented reason for missing the assessment. It is your responsibility to be prepared for labs, study the lab manual, watch the lab videos (if provided), attend labs, complete and submit lab assignments by the due dates found in the syllabus and on Canvas. If for a good reason you need an extension on a due date, you must contact me about the extension before the deadline. Late work will not receive full credit (**see the late work policy below**). If you are unavoidably absent from an exam, you should contact me as soon as you possibly can in order to discuss your situation. If you know at the beginning of the session that it will be impossible for you to take an exam on the day it will be administered according to the syllabus due to a previous, unavoidable, documented conflict, you must inform me within the first week of the semester so that alternative arrangements can be made.

You are expected to attend all laboratory sessions. Students must attend the laboratory section in which they are enrolled and complete all lab assignments. Laboratory results and reports will not be accepted for labs that you did not attend. Late assignments and lab reports will not receive full credit (see Late Work Policy below). Those who must miss a lab because of illness, family emergency etc. should contact me (relindis.mawo@scottsdalecc.edu) as soon as possible for make-up arrangements and upon return to class, must send me a signed paper stating the date and reason for the absence. Only one make-up lab is allowed for good and documented reason for missing the lab.

LATE WORK POLICY: Time management and meeting deadlines are some of many important workforce skills. Part of college is learning these skills. **You will lose 10% per day for every day an assignment** (homework, quiz, or lab report) **is late** until the answer key is available or the assignment has been graded and feedback released to students in the course. If you submit your assignment after the key has been published or corrected scripts have been returned to students in the course, you will receive a zero. Exams are not eligible for late submission.

A word about etiquette when contacting your instructor: Be sure to act as a professional on all correspondence. Part of college is learning skills that are important in the workforce and being able to communicate and resolve issues in a non-conflict manner is one of those skills. I understand the frustration and stress that comes from taking college level chemistry courses. If you have an issue, address it in an email in a respectful tone and state your thought process in a clear and concise manner.

Be aware: your instructor teaches several classes and subjects so may not know what you mean when you email and ask: “Do you know what’s due Tuesday?” or “Can you tell me what I did wrong on #15?” Before sending an email, check your other resources that have been provided.

If you send an email to your instructor, do so from your official Maricopa gmail. The email should include the **subject of your email, your course and section number, class days and time, and your name as it is found in the class roster**

Example, “Hello---, my name is _____. I am in your _____ class on _____.” before launching into your question. Background and context help. If I have to figure out what you are talking about

and which class you are from, it will take me longer to get back to you. It will be faster for you to check what has been provided before contacting me.

Grading Standards & Practices

Lab

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| Check-in and Lab Safety | 15 pts. |
| Experiments (30 pts x 11) | 330 pts |
| Lab Midterm Exam | 100 pts. |
| Final Lab Exam (Comprehensive) | 100 pts. |
| Total points | 545 pts. |

Letter Grade

Letter grades are assigned on the following scale (no curve!):

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| A | 88–100% |
| B | 78–87.9% |
| C | 65–77.9% |
| D | 50–64.9% |
| F | ≤ 49.9% |

There are multiple ways to avoid earning an F or a Y in this class: you can score higher than 50% in all graded categories, or you can drop the class by completing the necessary paperwork and obtaining signatures by the dates listed in the Course Outline Section on **page 9**. Also do not engage in academic dishonesty. Whichever way you choose, the RESPONSIBILITY IS ALL YOURS. **Know your responsibilities, handle your responsibilities.**

College withdrawal policy states:

- On or before **end of week 7**, withdrawal grade is a guaranteed “W” and no signature is required
- After week 7 but **two weeks before the last class period**, withdrawal grade is “W” if you are passing or “Y” if you are failing and *requires instructor signature*.
- **Later than two weeks before the last class period**, withdrawal with a “W” is discretionary and highly unlikely.

Academic Honesty:

Cheating and other forms of academic dishonesty run contrary to the purposes of higher education and will not be tolerated in this course. All forms of academic dishonesty will result in loss of all points for the graded material on which the transgression occurred. A second violation will result in an "F" grade for the course and a report filed with the Dean of Students and additional actions as outlined in the College Catalog.

Academic dishonesty includes (but is not limited to):

- Plagiarism (the act of presenting the words, ideas, images, sounds, or other creative expression of others as your own).
- Copying answers or work done by another student (either on an exam or on out-of-class assignments).
- Allowing another student to copy from you.
- Using unauthorized materials during an exam.
- Googling and copying answers from the web.
- Submitting test questions to and getting answers from sites like Chegg.com and similar sites.
- Phoning or chatting with someone (friend, classmate, tutor etc.) about and during a test.
- Navigating away from a test session to a different browser window, a different computer or mobile device.

*Canvas keeps a log of your activity during quizzes and exams. These activities will be reviewed by the instructor. **Any navigating away from a test session to a different browser window or your computer desktop will result in a zero for the test!!***

All forms of academic dishonesty will result in loss of all points for the graded material on which the transgression occurred.

a) **First offense:** a zero for the assignment that contains the plagiarized answer

b) **Second offense:** a zero for the assignment and a report filed with the Dean of Students with a recommendation of all penalties applicable, up to and including, expulsion and a note on the student's permanent record and the grade of F in the class.

LAB SCHEDULE (TENTATIVE – I will update if changes occur):
Section 26105 (Thursdays 12:00PM–2:50PM)

| Wk | Date | Experiment | Points | Post-lab Due |
|----|----------|---|--------|-------------------|
| 1 | Thu 1/19 | Lecture: Chapter 1 cont'd Lab #1– Orientation, Lab Check-in and Lab Safety | 15 | Lab Safety Videos |
| 2 | Thu 1/26 | Lab #2– Measuring Melting Points of Compounds and Mixtures | 30 | |
| 3 | Thu 2/2 | Lab #3– Purification of Benzoic Acid by Recrystallization | 30 | lab #2 |
| 4 | Thu 2/9 | Lab #4– Molecular Modeling of Organic Structures | 30 | Lab #3 |
| 5 | Thu 2/16 | Lab #5– Simple Distillation of an Unknown Liquid and Separating an Acetone-Acetic Acid Mixture by Fractional Distillation | 30 | Lab #4 |
| 6 | Thu 2/23 | Lab #6– Comparisons of Organic vs. Inorganic Compounds | 30 | Lab #5 |
| 7 | Thu 3/2 | Lab #7– Identification of Hydrocarbons & Alkyl Halides (Fri 3/3 , Last day for student withdrawal WITHOUT Instructor's Signature) | 30 | Lab #6 |
| 8 | Thu 3/9 | Lab Midterm Exam (Labs 1–7) Lecture: Ch6 cont'd | 100 | Lab #7 |
| 9 | Thu 3/16 | Spring Break, No Lab | - | - |
| 10 | Thu 3/23 | Lab #8– Acid-base Extraction | 30 | - |
| 11 | Thu 3/30 | Lab #8– Acid-base Extraction Cont'd | | - |
| 12 | Thu 4/6 | Lab #9– Synthesis of t-Butyl Chloride | 30 | Lab #8 |
| 13 | Thu 4/13 | Lab #10–Synthesis of Cyclohexene (Stock Room: Please prepare Br₂/H₂O & KMnO₄ test reagents) | 30 | Lab #9 |
| 14 | Thu 4/20 | Lab #11–Synthesis of p-Nitroaniline Last day to withdraw With instructor signature is Thu 4/20 | 30 | Lab #10 |
| 15 | Thu 4/27 | Lab #11– Synthesis of p-Nitroaniline Cont'd Lab Checkout | 30 | |
| 16 | Thu 5/4 | Lab Final Exam (Comprehensive, Labs 1–11) | 110 | Lab #11 |
| 17 | Tue 5/9 | Lecture Final (ACS, COMPREHENSIVE) 12:00PM–1:50PM | | |

Note: *** Pre-lab and Post-lab reports are due at the very beginning of the lab period.***
 During-lab reports are due at the end of the lab period before exiting the lab.

LABORATORY NOTEBOOK

A laboratory notebook is needed to record measurements and observations concerning an analysis. The book should be permanently bound with consecutively numbered pages (if necessary, the pages should be hand-numbered before any entries are made). Most notebooks have more than ample room; there is no need to crowd entries. The first few pages should be saved for a table of contents that is updated as entries are made.

RULES FOR THE MAINTENANCE OF A LABORATORY NOTEBOOK

1. Record all data and observations directly into the notebook in ink. Neatness is desirable, but you should not realize neatness by transcribing data from a sheet of paper to the notebook or from one notebook to another. The risk of misplacing-or incorrectly transcribing-crucial data and thereby ruining an experiment is unacceptable.
2. Supply each entry or series of entries with a heading or label. A series of weighing data for a set of empty crucibles should carry the heading "empty crucible mass" (or something similar), for example, and the mass of each crucible should be identified by the same number or letter used to label the crucible.
3. Date each page of the notebook as it is used.
4. Never attempt to erase or obliterate an incorrect entry. Instead, cross it out with a single horizontal line and locate the correct entry as nearby as possible. Do not write over incorrect numbers; with time, it may become impossible to distinguish the correct entry from the incorrect one.
5. Never remove a page from the notebook. Draw diagonal lines across any page that is to be disregarded. Provide a brief rationale for disregarding the page.

The format outlined below should be used for **all** of your laboratory reports this session. This format and point distribution are **NOT** set in stone and will vary for each experiment since some experiments are longer than others and balanced chemical equations, calculation of theoretical yield, post-lab questions etc. may not apply to some of the experiments. However, all **relevant** sections of the laboratory report, including the summaries, conclusions, answers to pre-lab and post-lab questions, should be neatly written in ballpoint pen in your laboratory notebook. Each experiment will be worth at least a total of 25 points. A tentative point distribution is shown below. **Please read the notes below carefully.**

NB: Start each section (Pre-lab, In-lab and Post-lab) on a new page.

1. PRE-LAB: 10 pts (*Due when you come to laboratory to perform an experiment. Submit the duplicate copy to your instructor and leave the original in your notebook.*) The purpose of the pre-lab is to ensure that adequate preparation has been made prior to the lab, such as reading and knowing what is to be done so that the 3 hours of lab will be well spent doing science and not a time to read. It is therefore pointless to come to the lab unprepared and try to write a pre-lab report after the experiment is done. Late pre-lab reports will not be accepted.

Title

(1 point)

- It is necessary to record the title of each experiment at the top of the first page. It is also appropriate to use the experiment title as a header for each page of the experimental write-up. To differentiate each page from the first page, place the abbreviation for continued in parenthesis after the title i.e. Experiment 2: Synthesis of Aspirin (cont.).

Purpose/Objective

(2 points)

- Give a clear, concise statement defining the scientific problem the experiment is designed to solve.
- A brief summary of the course of action to be followed in solving the problem.
- When appropriate, a working hypothesis regarding the outcome of the experiment.
- Describe the importance of the experiment.

References

(0.5 point)

- For books, write the authors, book title, edition, publisher, page numbers (e.g. Pavia, D. L.; Lampman, G. M.; Kriz, G. S.; Engel, R. G. Introduction to Organic Laboratory Techniques: A Small Scale Approach, 2nd ed., Brooks/Cole: Pacific Grove, CA, 2005, pp. 127-132.)
- For online materials, provide the website and the date it was accessed.

Balanced Chemical Equations (where applicable)

(1.5 points)

- For a synthesis, write balanced chemical equations for all significant reactions, including possible side reactions that might reduce the yield.

Table of Chemicals, Reagents, Products, & Physical Constants**List of other Supplies and Equipment**

(3 points)

- A table listing relevant physical properties or other information including the name of compound, its molecular formula, structure, molecular weight, mp if the compound is a solid, bp/concentration/density if the compound is a liquid, amounts required in g and/or mL, and potential hazards of all reactants, products, solvents and any other chemicals involved in the experiment.
- Give a list of other supplies and equipment needed for the experiment.

Calculated Theoretical Yield

(2 points)

- Show your calculations, using appropriate units, of the quantities of reactants required and the theoretical yield of product. Clearly identify the limiting reagent where applicable.

Experimental Procedure

- Outline what will be done. This can be done in the form of a checklist, flowchart or other kind of outline summarizing the experimental procedure. It should contain all the important/relevant information so that you or someone else can use it to complete the experiment without looking at the lab manual.

Include Answers to any assigned pre-lab questions.

2. DURING-LAB: 10pts (*This must be handed to the instructor at the end of the lab.*)

The **procedure and observations report** tests the level of honesty of the student since all that is written is supposed to be based on what was done and observed and **not** on what was read, heard or expected. In this section,

- Reference the appropriate pages from the lab manual, and note any changes made to the procedure.
- This section will include, but is not limited to: amounts of chemicals actually used, pictures of apparatus used, color changes, times used for reactions, masses recovered, qualitative test results, measured melting points and boiling points, IR spectra, gas chromatograms, HPLC results, TLC retention factors, etc.
- You are required to document the procedures and methods that were used; the mass and moles of reagents used; the reaction conditions used; the analytical methods that were employed as well as any observations made during the course of the experiment. It is essential that you provide a detailed description of the work performed in the lab. The standard used for documenting your work is best described as being detailed enough so that any chemist, provided with your laboratory notebook, could not only reproduce the experiment (with no other resource than your lab manual) but could also reproduce your results. ***The experimental section is not to be mistaken with a procedure write-up in your pre-lab, which only gives a set of instructions that are to be performed. An experimental section is describing what was done and MUST BE WRITTEN IN THE PAST, IMPERSONAL TENSE.***

Example: Benzoic acid, 3.00 g (24.6 mmol.), was treated with 20.0 mL of 3.0 M NaOH (60.0 mmol). The reaction mixture was stirred for several minutes until all of the Benzoic acid was dissolved. The resulting clear solution was gravity filtered to remove any residual solid impurities.

It is acceptable; in fact it is preferable that you describe a series of steps by stating that a specific technique was used. For example: The crude benzoic acid was recrystallized from hot deionized water. The statement above is sufficient to describe each individual step that was performed during the recrystallization process.

3. POST-LAB: 10 pts (*Due at the beginning of a new experiment*)

The post-lab report tests the sense of logical reasoning of the student. Results may be positive or negative but one must be able to provide a justification of whatever results obtained.

Results and Discussion

- This section is used to report the results of your experiment along with any analytical data or reports that were collected. **IT IS ESSENTIAL THAT THE DATA BE INTERPRETED, NOT JUST REPORTED.**
- It may include, but is not limited to the following items: product data—measured melting points and boiling points, IR spectra, gas chromatograms, HPLC results, TLC retention factors, masses recovered, actual yields in g and moles, percent yields, qualitative test results, interpretation of spectra and or analytical data.
- Compare/contrast your obtained experimental results with what was expected. Critically evaluate the experiment and formulate a logical explanation to account for any deviations between actual results and anticipated results.

Conclusions

- 1-2 paragraphs summarizing the results obtained from the experiment. Draw conclusions that are supported by the observations and data collected during the experiment.

Include Answers to any assigned post-lab questions.

PLEASE NOTE:

- 1) The lab report point distribution given above is just a typical example and may vary between reports.
- 2) Laboratory experience will consist of application of lecture content to related chemistry experiments. This statement also applies to lab exams.
- 3) All graded lab reports and lab exams must be submitted to your instructor on the day of the lab final for shredding. There will be five points deducted for every graded lab report or exam that is not returned.

Check-in: Students will be assigned a drawer on the first day of laboratory and provided a key to the drawer. Each student will account for his/her supplies at check-in and will vouch for the condition of the equipment, requesting replacements from the chemistry stockroom for damaged or unusable items. All missing, broken, or damaged items should be replaced by the chemistry stockroom at this time at no charge. During the semester, any equipment that is broken or damaged must be reported to both the lab instructor and the chemistry stockroom and the damage will be recorded on the check-in sheet.

Students will work in pairs in the lab and each group of two will be assigned an equipment drawer. It is imperative that each student accounts for their equipment at the end of every laboratory period. Students are held financially responsible for all equipment issued to them at check-in. The cost of replacement/repair for missing/damaged equipment will be billed to students through the bursar's office as a "breakage fee."

****Keep your equipment drawer locked. You will ultimately be responsible for equipment if it is damaged or missing.****

****Students may not leave their personal belongings in their Lab Drawer as their Instructor, the Chemistry Stockroom and the Physical Sciences Department will not be responsible for any missing or unclaimed personal items.****

Check-out: Students must properly clean all their glassware, lab equipment, and lab drawer and check out of their lab drawer on the last scheduled face-to-face lab of the semester (week 8) or within one week of withdrawing from the course. Students who withdraw from the course must attend the next regular laboratory session in order to check out of their drawer. Students will be charged a \$25 check-out fee if they fail to properly clean up and check out of their lab drawers. Students may not arrange a special time with their Laboratory Instructor in order to check-out either upon withdrawing from the course or at the end of the term. No early check-outs are allowed (see the course syllabus for Laboratory Checkout date). Any absences from the laboratory check-out due to valid reasons must be accompanied by written documentation or the \$25 check-out fee will be assessed. For any extenuating circumstances, contact your course instructor and copy the Chemistry Stockroom Coordinator (Claire Abbruscato, claire.abbruscato@scottsdalecc.edu).

Lab Drawer Key Policy: Each student is issued their drawer key and the key becomes the students' responsibility until turned in at check-out. Before leaving the lab, students must lock their drawer and return their key to the proper spot in Key Box for that lab section. If the lab drawer key is lost, the responsible student will be charged for the replacement key.

Response Time

Students can expect a response time of 24–72 hours, excluding weekends, for the instructor to respond to messages sent via the Canvas Learning Management System or email during business days. Students can expect assignments to be graded within one week of the assignment's due date.

Attendance Policy

Regular attendance and participation is required to learn the concepts of chemistry. It is in your best interest to attend all classes. If you miss class it is your responsibility to find out if any announcements were made. If you have more than 3 absences that are not considered “official absences,” I have the option to withdraw you (with grade of W or Y, depending). If you miss an exam and I don't hear from you by e-mail with a valid excuse within 24 hours after the exam ends, you may be given a 0% for that exam and I may withdraw you (with grade of W or Y, depending). I am not inclined to give make-ups on quizzes or exams, unless you have a valid excuse with written documentation and you have spoken with me beforehand. For all MCCCDC attendance policies, please consult Section 2.3.2 at: <https://district.maricopa.edu/stewardship/maricopa-governance/common-pages/student-regulations>. If you must withdraw from the course, see the Withdrawal Policy information located in the College Policies & Student Services page found in the First Steps module of your Canvas course.

Instructional Contact Hours (Seat Time)

This is a four (4) credit-hour course composed of both lecture and lab. Plan to spend at least seven hours per week on course content or seat time (direct instruction). This comprises of 3 hours of lecture time and four hours of hands-on laboratory activities. Chemistry experiments require a lot of time for safe and proper execution. Also reserve and additional 12–15 hours per week for study, homework and lab reports. These are approximations but rather realistic and do depend on your skill level. Accelerated courses will require additional time per week. If you cannot commit to this regimen of daily/weekly study then you will have difficulties.

Online Tutoring

SCC's tutors are available online to help with your courses. You may work with an SCC tutor remotely using Google Meet, your phone, or email. Visit the [SCC Tutoring & Learning Centers](#) page for detailed information on the five learning center's hours and procedures.

As much as possible, it is highly recommended that you utilize SCC tutors since they are more familiar with SCC coursework, instructor expectations, and assignments; however, if you need to work with a tutor outside regular hours, online and hybrid students now have access to a 24/7 online tutoring service called Brainfuse. Brainfuse provides online tutoring in a variety of academic subjects.

Each student may utilize up to 6 hours of online tutoring through Brainfuse per semester, and has the option of requesting additional time if needed.

To access Brainfuse and begin working with a tutor:

1. Visit the [SCC Online Tutoring Services Through Brainfuse](https://www.scottsdalecc.edu/students/tutoring/online-tutoring) page (https://www.scottsdalecc.edu/students/tutoring/online-tutoring)
2. Click the **Visit a tutor online** button
3. Enter your MEID and password
4. Choose your topic and subject
5. Click the **Connect** button

Please use your time effectively and be prepared with your questions before you connect to a tutor. Tutors and students communicate in real-time so whatever you type, draw, or share on the screen, the tutor sees, and vice versa. You may also want to have screenshots ready if applicable. All Brainfuse sessions are recorded for review later.

Learning Tools and Your Privacy and Security

SCC utilizes a variety of software applications and web-based tools operated by third party vendors to support student learning. To allow student access to the application, site or tool, certain identifiable information may be required to establish a username or password, and submit work and/or download information from these tools. Inherent with all internet-based tools, there is a risk that individuals assume when electing to use these tools, as they may place information at risk of disclosure.

To use learning tools responsibly, please observe all laws and the Maricopa Community College District [Student Conduct Code](#), such as copyright infringement, plagiarism, harassment or interference with the underlying technical code of the software. As a student using a learning tool, you have certain rights. Any original work that you produce belongs to you as a matter of copyright law. You also have a right to the privacy of your educational records. Your contributions to learning tools constitute an educational record. By using the tool, and not taking other options available to you in this course equivalent to this assignment that would not be posted publicly on the internet, you consent to the collaborative use of this material as well as to the disclosure of it in this course and potentially for the use of future courses.

College Policies

Students are responsible for the college policies included on [Student Regulations](#) page of the Maricopa Community College District website. Additional information about Scottsdale Community College can be found in [the SCC General Catalog & Student Handbook](#).

Academic Honesty

- Every student in this class is expected to produce his/her own original work.
- Plagiarism is unacceptable and is not tolerated.
- Plagiarism may result in being dropped from the course with a failing grade.

Plagiarism will result in actions as outlined in the Maricopa Community College District [Academic Misconduct Policy](#). Refer to the course policies section of the syllabus for additional course and department specific policies.

Accessibility

Scottsdale Community College is committed to providing a fully accessible learning experience to all students. See SCC's list of [Accessibility Statements and Privacy Policies](#) for technologies used for eLearning.

Addressing Incidents of Sexual Harassment/Assault, Dating/Domestic Violence, and Stalking

In accordance with Title IX of the Education Amendments of 1972, MCCCDC prohibits unlawful sex discrimination against any participant in its education programs or activities. The District also prohibits sexual harassment—including sexual violence—committed by or against students, District employees, and visitors to campus. As outlined in District policy, sexual harassment, dating violence, domestic violence, sexual assault, and stalking are considered forms of "Sexual Misconduct" prohibited by District policy.

District policy requires all college and District employees in a teaching, managerial, or supervisory role to report all incidents of Sexual Misconduct that come to their attention in any way, including but not limited to face-to-face conversations, a written class assignment or paper, class discussion, email, text, or social media post. Incidents of Sexual Misconduct should be reported to the college Title IX Coordinator. MCCCDC will provide on its [Title IX Coordinators web page](#), a link to all the [Title IX Coordinators](#) in the district. Reports may also be reported at: <https://district.maricopa.edu/consumer-information/reporting>.

Scottsdale Community College students should report any discrimination and/or harassment they experience and/or observe to the Vice President of Student Affairs (SCC's Title IX Coordinator); located in the Administration Building (AD), phone (480) 423-6300.

Classroom Accommodations for Students with Disabilities

In accordance with the Americans with Disabilities Act, the Maricopa County Community College District (MCCCDC) and its associated colleges are committed to providing equitable access to learning opportunities to students with documented disabilities (e.g. mental health, attentional, learning, chronic health, sensory, or physical). Each class/term/semester that a student is in need of academic

adjustments/accommodations, the qualified student is required to work with the Disability Resources & Services Office (DRS) at their individual college(s). Contact with the DRS should be made as soon as possible to ensure academic needs are met in a reasonable time. New and returning students must request accommodations each semester through DRS Connect online services. To learn more about this easy process, please contact your local DRS office.

If you have not yet established services through DRS, but have a temporary health condition or permanent disability that requires accommodations, you are welcome to contact DRS by using the information listed on the following webpage: <https://district.maricopa.edu/consumer-information/disability-resources/contacts>. The DRS offers resources and coordinates reasonable accommodations for students with disabilities and/or temporary health conditions qualifying for accommodations/academic adjustments. Reasonable accommodations are established through an interactive process between you, your faculty, and DRS; and only those academic adjustments/reasonable accommodations granted by the DRS are recognized by the college and District. It is the policy and practice of the MCCCD to create inclusive and accessible learning environments consistent with federal and state law.

The Scottsdale Community College [Disability Resources and Services](#) office is located in the SC Building, and can be reached by calling (480) 423-6517.

Code of Civility

Instructors are expected to be professional, courteous, respectful and empathic to students. They will:

- Begin and end class on time
- Be prepared for each class session
- Provide academic feedback and grade assignments in a timely manner
- Be available for individual consultation
- Clarify assignments and inform students of any adjustments to the class schedule

Students are expected to be reflective, courteous, respectful and empathic to classmates, instructor and other college staff assisting in their learning. Students are expected to arrive on time for class and remain until class has ended. The instructor should be notified in advance if there is a need to leave early. Students are expected to:

- Mute mobile phones before entering classroom
- Be in class and be on time
- Be prepared for class sessions
- Participate in class activities
- Follow instructions and complete assignments
- Keep up with and turn in assignments by due dates
- Put forth their best efforts

- Consider exchanging contact information with two classmates in order to keep current
- Ask questions when they don't understand
- Maintain knowledge of their grade status
- Contact instructor right away about concerns or situations that may interfere with their success in class

Diversity and a Safe Learning Environment

This classroom will be a safe learning environment for every individual as far as I am able to ensure that outcome. This means I will treat each student with respect, and in turn I expect respect to be given to the instructor and every individual in this course. Disagreement does not equal disrespect. We all bring different points of view, different personal values, different life experiences, and different personal preferences with us into the classroom. This diversity makes for great discussion, adds interesting dimensions to our interpersonal relationships, and is welcome in the academic arena. Though we celebrate our differences, I expect each student to respect the rights and needs of fellow classmates. Students cannot feel safe to express themselves without the assurance that their ideas, attitudes and beliefs will be treated with respect.

Last Date of Attendance Policy for Online Classes

At Maricopa Community College schools, students must be engaging in some type of academic activity each week of their online course. Faculty must report a student's last date of attendance and withdraw the student within fourteen (14) days of identifying the last date of academic attendance. Simply logging into an online class will not count as academic attendance. The following is a list of activities that constitute online class academic attendance:

- Submitting an academic assignment (assignment required in the course, regardless of whether it is graded or not), paper, or project.
- Taking an exam, quiz, computer-assisted instruction, or an interactive tutorial required by the course.
- Attending an online or in-person study group (where there is assigned attendance/participation as part of the course).
- Initiating contact with a faculty member to ask a question about the academic subject studied in the course.

Maricopa Learning Tool Disclaimer

Maricopa's Canvas Learning Management System employs Learning Tools Interoperability ("LTI") standards to enhance the learning experience. Examples of learning applications that use LTI specifications to connect to Canvas include simple communication apps (e.g. Conferences, Chat), learning environments for complex subjects like math or science (e.g., Pearson MyLabs), plagiarism detection apps (e.g., Turnitin), and other integration tools that may route users to another (vendor) website. MCCCDC provides links to these sites. Please be aware that when you use these links, you are leaving the Canvas environment and the protections MCCCDC has built in to assure compliance

with Maricopa's Data Privacy and Security Standards and other legal compliance. At present, MCCCDCD has been unable to verify that the vendors' software and systems conform to Maricopa standards in this or any other regard. Hence, there is some risk that instructors electing to use the products and services made available by these LTI vendors may place any student information shared with the vendor at a risk of disclosure.

SCC General Education Statement

General Education enhances students' abilities in critically analyzing and effectively communicating in Written, Oral, Visual, and Numerical form. General Education is WOVeN through the curriculum and co-curricular experiences at Scottsdale Community College.

Student Conduct Code

The classroom is an educational learning environment where students are expected to engage in behaviors which are conducive to their own learning and the learning of their peers. To facilitate this, respect for self and others is mandatory and necessary. Should a student exhibit disruptive behavior and/or use profane language to the extent that it interferes with the learning environment, an academic consequence may be imposed. Any student found by a faculty member to have committed academic misconduct may be subject to the following academic consequences:

- Warning – A notice in writing to the student that the student has violated the academic code.
- Grade Adjustment – Lowering of a score on a test or assignment.
- Discretionary Sanctions – Additional academic assignments determined by the faculty member.
- Course Failure – Failure of a student from a course where academic misconduct occurs.

Further information see the Maricopa Community College District [Student Conduct Code](#).

Withdrawal Policy

- Student may initiate an official withdrawal from any course by submitting a withdrawal form with required signatures to the A&R office within published deadlines.
- Failure to attend any classes is not a guarantee for a refund or an excuse of debt incurred through registration. See the Maricopa Community College District [Refund Policy](#) for detailed information.
- Official date of withdrawal is last date of attendance as determined by student's withdrawal or as reported by the instructor.
- The official date of withdrawal will determine degree of refund, if any.
- Failure to file official withdrawal form within published deadlines can result in a failing grade and may affect refund of course tuition and fees.

Additional information on withdrawals is outlined in the Maricopa Community College District [Withdrawal Procedures](#).

Student Support Services

A variety of student services are accessible online. Services are free of charge to all registered SCC students. Refer to the **First Steps: Helping You Succeed** module in any one of your Canvas courses for more detailed information.

Canvas

- Check out the [Canvas Student Guide](#) for self-help with Canvas, or call 1-888-994-4433 for 24/7 support.
- Visit the [Maricopa 24/7 help site](#) for a live chat with a support team member.

Note: It is essential that you set your notifications in Canvas before you get started with the course. This video will help you set your Canvas [notification preferences](#).

College Police Services

- SCC College Police Office Phone Number: (480) 423-6175
- SCC Emergency Number: (480) 784-0911

All Maricopa County Community College Police offices have a fully monitored, centralized dispatch center. This center is actively staffed 24 hours a day. Dispatchers will send officers to the location of the emergency activity. Non-emergency situations should be reported directly to the SCC College Police office by calling (480) 423-6175 or x36175 from a campus phone. The SCC College Police office provides the campus with AZPOST certified police officers and MCCCD board approved police service aides and is staffed 24 hours a day, providing services such as patrol (foot, bike, cart, or patrol car), safety shuttles (when resources allow), and camera surveillance. There are classroom intercom systems and outdoor call boxes that ring into the College Police office when activated.

Please remember, if you see something “out of place” or suspicious contact the College Police office. Helpful links to resources such as the **Active Shooter Response Guide**, **Emergency Response Quick-Reference Guide** and **Workplace Violence Overview** are available for download on the [Documents, Forms & Downloads page](#).

SCC Help Desk

Contact the SCC Help Desk at (480) 423-6274. Hours are Monday – Friday 8 a.m. to 8 p.m. and Saturday from 8 a.m. to 4 p.m. Summer hours vary.

Technology Skills & Computer Equipment

For this course, you will need a working email address, a Canvas account, and access to the internet. Internet access can be from school, home, or work. Additionally, experience and comfort using the internet and word processing tools is beneficial for course success.

- SCC's Student Tech Center provides free computers and internet access to all registered students.
- Maricopa Community Colleges provides all students with an email address. It is now the official way to receive communication from the college and district. Look up your email account at the [Maricopa Student Email](#)
- You will be able to log into the [Canvas Learning Management System](#) using your MEID and associated password.

Course materials are best accessed through either Chrome or FireFox browsers. To download these browsers visit:

- [Chrome Website](#)
- [FireFox Website](#)

Covid/Illness Protocols

Maricopa Community Colleges Mask and Social Distancing for Spring 2023

Masks

Masks are no longer required.

Student or Instructor Illness Considerations and Class Access

If your instructor is ill and cannot attend class, updates and announcements will be provided in Canvas, Maricopa email, or other class communication channel prior to class that day if possible.

Students who are not feeling well should not attend class. Notify your instructor prior to the start of class on a given day. Your instructor will connect with you if there is an option to attend class remotely or will provide information about how to stay current with assignments and lessons online.

- Monitor your health and stay home if you're not feeling well, especially if you have any COVID-19 symptoms (fever, cough, shortness of breath, fatigue, muscle aches, or new loss of taste or smell), believe you have been exposed to COVID-19, or received a positive diagnosis.
- Report a positive COVID diagnosis to your instructor and submit the online reporting form. Maricopa Coronavirus Website – Visit this site for the latest information on the Coronavirus (COVID-19) pandemic.

<https://www.maricopa.edu/coronavirus-covid-19>

FINAL THOUGHTS:

CHM230 is an intense course. We all need to work extremely hard for the duration of the course. I hope you will invest the time necessary to learn a lot from this course. Organic chemistry is an amazing subject. Like many good things, it will take some effort on your part to understand and appreciate it. I urge you to work on book problems and class exercises. Some of the material may be quite challenging to you, but do not give up! You have the ability to master the fundamentals of organic chemistry, and from there you can do just about anything! I will do everything I can to help to make the course interesting, enjoyable, and truly educational.

Students are responsible for the information contained in this syllabus, the Syllabus page in your Canvas course and the **College Policies & Student Services** page found in the First Steps module of your Canvas course. Students will be notified by the instructor of any changes in course requirements or policies.



Syllabus Agreement

CHM 230LL: Fundamental Organic Chemistry
Laboratory

Spring 2023 Section 26105

*Students are responsible for the information contained in this syllabus.

*The information in this syllabus is subject to change based on the discretion of the instructor.

*Please initial the following to signify your agreement:

_____ I have read the syllabus (in its entirety) and understand its policies and conditions for determining my grade and my expectations for this class.

_____ I understand that if this syllabus receipt is not on file with the instructor, I will be dropped as a “no show” from the class.

_____ I have reviewed and understand the Withdrawal Deadlines listed in the syllabus, and that if I must drop the course, it is my responsibility to initiate an official withdrawal by submitting a Withdrawal Form with required signatures to the Admissions & Records Office within the published deadlines. I understand that failure to file an official Withdrawal Form within published deadlines can result in a failing grade and may affect refund of course tuition and fees. I understand that withdrawal with a “Y” can affect my credit hours and academic standing.

Printed Name _____

Signature _____

Date: _____

(For your records)



Syllabus Agreement

CHM 230LL: Fundamental Organic Chemistry
Laboratory

Spring 2023 Section 26105

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Printed Name _____

Signature _____

Date: _____

(Submit this half)

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