Fall 2021 Syllabus

CHEM 231L - Organic Chemistry I Laboratory (6 hours/week, 2.0 Units)

Catalog Course Description:
This laboratory course is designed to illustrate the principles presented in the first semester of organic chemistry. Emphasis is placed on the determination of physical properties and the separation, purification and identification of organic compounds. This course acquaints students with the equipment, glassware, techniques and safe practices specific to the organic chemistry laboratory. Techniques, such as measurement of physical constants, recrystallization, extraction, distillation and chromatography are used in the synthesis and/or characterization of selected classes of organic compounds, such as alkanes, alkenes, alkynes, alkyl halides, and alcohols. The organic chemistry literature and spectral interpretation using techniques, such as infrared and nuclear spectroscopies, are introduced to support the above topics. This course is designed for students pursuing a degree in the chemical sciences or training in chemical technology, as well as other transfer students who need organic chemistry as part of preparation for majors, such as molecular biology, premedical, predental, and pharmacy.

mySDCCD: Our gateway to all things SDCCD at MySDCCD.
Instructor: Dr. Dwayne Gergens
Email: Thank you for your patience. We do our timely best responding to emails within 48 hours during weekdays sent to dgergens@sdccd.edu having CHEM231L as our course identifier in its subject heading. Emails received on weekends and holidays can have a much longer response time when we are away from our computer. We filter spam emails, and an email without an appropriate subject heading is deleted.
Phone: For prompt replies, emailing directions are shown above.
Address: 7250 Mesa College Drive, MS415V, San Diego, CA 92111
Office Hours: My office-visiting hours (remote) availability and appointment procedure are linked in/through Canvas. These visiting hours are times for conversation about our course and student work, answering questions, offering feedback, or listening as a student explores a line of reasoning. We can also provide student resources to help in meeting the challenges outside of class.
Course Period: Wearing a face mask is required on-campus. We remain committed in providing a high-quality learning experience for every student while keeping the health and safety of our community in mind. Our Covid-19 Information for Students can help students to be better informed and engaged in following our District return to Campus protocols. We meet twice a week on the day our section is scheduled to be offered in MS 407, and supplement our time together by having students complete related work in various ways outside of these class meetings as needed.
Canvas: Our course is supported by Canvas; additional details are available in Canvas: Course Nrb (CRN 70386) – Tue/Th 7:05 pm–10:05 pm
Questions about Canvas are best handled by Canvas Support or (1-844-612-7421) email: support@instructure.com. We are here to help with technical questions; however, students are responsible for their own use of technology, working from a reliable computer of their choice computer having the correct computer settings in our course, and for knowing the mechanics and use of Canvas.
Textbooks: For more details on textbooks, Mesa bookstore.
(1) Pavia, D., A Small Scale Approach to Organic Laboratory Techniques or equivalent.
(2) Gergens, D., Supplemental Laboratory Packet for Chemistry 231L
Campus Wi-Fi: Mesa Campus Parking Lot Wi-Fi Information  password: mesafall2021
Additional Supplies: Access to reliable computer, Internet and printer; a current email registered with SDCCD; ear buds; lab notebook (duplicate carbonless); and scientific calculator Personal protective equipment (PPE) to be worn in laboratory:
- face mask & safety goggles (ANSI:Z87 or Z87 approved & worn at all times)
- lab coat (length to extend below the knees & closes in front)
- closed-toe shoes (must cover entire foot)
- long socks and long pants (no skin can be visible)
- nitrile laboratory gloves (as needed)
- soap & matches, striker and/or lighter, stapler & refills
- MASTER V-629 lock (behind the cash register in our bookstore)

Computer Skills Advisory:
Entry-level computer skills are needed to complete types of course activities requiring computer skills; a basic familiarity with computer terms and use, word processing, document manipulation, spreadsheets, email, online services and successfully navigating through online material, technology requirements and troubleshooting are expected.

Prerequisite: MATH 092 (Applied Beginning & Intermediate Algebra) or MATH 096 (Intermediate Algebra and Geometry) or with a grade of "C" or better, or equivalent, or Assessment Skill Level/Milestone M40/M50.

Course Objectives (CIC Approval: 05/14/2015):
Upon successful completion of this course, students will be able to:
1. Employ safe practices in the organic chemistry laboratory, including the identification and handling of hazardous chemicals and the disposal of organic wastes.
2. Use standard-taper organic glassware (and a variety of support apparatus, such as a melting point apparatus, heating mantle, polarimeter, and refractometer) and correctly operate electronic instruments (such as chromatographs and spectrophotometers) in a safe manner and for their intended purpose.
3. Analyze a laboratory protocol and select and perform the necessary procedures (such as determination of physical constants, recrystallization, extraction, distillation, and chromatography) required to isolate, purify, and/or identify various types of organic compounds, including, but not limited to, alkanes, alkenes, alkynes, alkyl halides, and alcohols.
4. Use chromatographic, spectroscopic (such as infrared and nuclear magnetic resonance) and special distillation techniques, and computer simulations to isolate, purify, and/or identify various types of organic compounds, including, but not limited to, alkanes, alkenes, alkynes, alkyl halides, and alcohols.
5. Assemble the appropriate apparatus and perform macroscale, miniscale and/or microscale synthesis reactions for the various types of organic compounds listed above.
6. Interpret information from print and electronic media as well as basic spectroscopic information to assist in the identification of the various types of organic compounds listed above.
7. Using an accepted standard for keeping a scientific notebook, record data and perform calculations, report and interpret observations, describe procedures, discuss and interpret results, and formulate conclusions for each experiment that is performed in the laboratory.
8. Discuss and/or write about the theoretical foundations of all experimental protocols in the course.

Course Learning Outcomes (Lecture Courses, DOC & Department Approval: January 2017)
I. Measurements and Calculations
II. Atom/Matter
III. Nomenclature
IV. Structure and Properties
V. Chemical Reactions
Course Overview – What is this course all about???

Prior knowledge of general chemistry I & II is needed for our course.
We’ll be on a journey together:
- Focusing on becoming better Citizens of Science, by
- Learning the FUNdamentals of Organic Chemistry, while
- Going back to ELEMENTary School.

Is this right Organic Chemistry Laboratory course on our pathway for learning???
- This course is designed for students pursuing a degree in the chemical sciences or training in chemical technology, as well as other transfer students who need organic chemistry as part of preparation for majors, such as molecular biology, premedical, predental, and pharmacy.
- More information about transferability for this course try ASSIST, and our College Catalog.

Methods of Evaluation, Course Activities & Assessment:
As we progress through our weekly Laboratory Schedule of Course Activities, student success will be evaluated based on a number of course activities relevant to our course objectives in the course outline of record (COR). Proper time management of in- and outside-of-classroom preparatory study time (i.e., reading the textbook, completion of Canvas module content, pre- and post-lecture work and homework, computer assisted instruction, etc.) is needed per week as we journey through our schedule to satisfactorily meet our course objectives.

Weekly Laboratory Schedule of Course Activities:
Our weekly schedule shown on syllabus page 10 and due dates are set but can change depending on student need and pace as we adjust instruction to improve student learning, success and performance in mastering the material. Any changes to our schedule are announced in Canvas.

Course Activities & Assessments:
Communications and details for our course activities—availability period and due date—are announced, and listed under Course Summary in Canvas/Syllabus. Selected laboratory course activities will be graded with feedback and/or marked as GLP (Good Laboratory Practice) completed.

Overall Percentage Grade Calculation:
Points earned for course activities count toward a final Overall Percentage Grade Calculation of Achievement, which is calculated from the weighted percentages (parts of a student’s overall grade) combined and applied to the Grading Scale: A ≥ 89% B ≥ 78% C ≥ 65% D ≥ 50% F < 50%
The point earned for each course activity in each category is to be recorded onto our grade sheet. We can schedule a meeting to review grades. Bringing to our meeting the student laboratory notebook, graded work & grade sheet filled in with grades are required before we can have a meaningful student discussion regarding a grade calculation.

Instructor Communication - Regular Effective Contact:
I am looking forward to working with students closely this semester, and students can expect me to play an active role as we journey through our course together. This is a face-to-face course having weekly course announcements and course (laboratory) activities. I will make announcements weekly, teach course material through laboratory lecture, join students in class discussions during class schedule published times to help students to understand course concepts, and provide detailed feedback on major course activities. Additional details for course activities and for keeping a laboratory notebook are provided in Canvas. This is extremely important - safety first. There is no substitute for preparing to work safely in a laboratory course supported by Canvas, and there are consequences when a student does not. Learning about each course activity with its directions and guidelines, availability period and due date is equally important and course activities are listed as Course Summary items under Canvas/Syllabus.
Methods of Instruction & Classwork Expectations:
Our course period is a mixture of lectures, problem solving, presentation of solutions, writing laboratory reports and of course, experiencing laboratory work, equipment set-ups and use, data collection and analysis, and viewing instruction by short videos (flipped classroom) in and outside of class and spend class time having discussions. At various times students are asked to present problems, reflect on the reading and generate questions for classmates, take summative post-assessments, all which offers students the opportunity to measure their growth and check for understanding. It is essential students are being pro-active in their work by coming to class prepared to do the day's laboratory work performed on the dates listed on our laboratory schedule. In particular, every laboratory course activity follows the same pre-laboratory format:

- Reading our laboratory manual and attempting homework before coming to class for course.
- Preparing our laboratory notebook with a purpose, background, safeties, diagrams & set-ups.

In addition to following our directions and guidelines provided in our syllabus, students who enroll in our course do so knowing our course is supported by Canvas, and with the understanding they are accepting responsibility for:

- Engaging in reading their laboratory manual and companion co-requisite lecture textbook as needed as a student prepares their study guide over aspects of content highlighted on our laboratory schedule of topics and their laboratory notebook prior coming to our course period.
- Viewing instruction on short videos at outside of class and spend class time having discussions.
- Creating a study guide by topic, and emailing me questions if additional help is needed making it easier for students to be more engaged in performing well on this overall laboratory material and graded course activities.
- Practicing on their own, at their own pace, to develop their ability to reliably perform and demonstrate the target knowledge and skills by being engaged in supplemental materials (Canvas module course materials, tutorials and handouts, drill & practices and assessments) covered in our course in support of our course activities and optional content. For example, like looking up further resources while pursuing their own self-directed study.
- Raising our hand if we don't understand; we are here to help.
- Logging our learning experience in laboratory by signing in-and-out by use of a time card.

Pre-Laboratory & In-Class Laboratory Work:
Apply our Au’n Rule, “Write it as if you were the person who would have to grade it” in completing our laboratory notebook documentation (duplicate carbonless) and laboratory manual pages. Write only in blue or black permanent ink. At any time during our course period, pre-laboratory and in-class original laboratory notebook pages can be checked, initialized, collected and graded. Periodically this occurs at the beginning of class. Students are encouraged to discuss laboratory work and problems with others. However, ultimately students are to take ownership of their worked problems and write-up knowing only selected pages are graded.

Post-Laboratory Work:
Let our ‘Au’n Rule' be our guide in preparing a bundled packet of completed work for grading: complete bundled submissions are divided between notebook pages, report summary sheets, analysis of unknowns, post-laboratory manual questions, and its laboratory report as needed. All laboratory notebook documentation (original pages) and laboratory manual pages are bundled, stapled together and turned in for final grading. Prepare a bundle for submission as if you were the person who would have to grade keeping in mind, neatness and completeness counts. Each bundle is generally due in one week after the completion of a course laboratory activity and is listed under Course Summary in Canvas/Syllabus. Each course activity (bundle submission or assessment) is graded for neatness and completeness and is counted towards a student's final Overall Percentage Grade Calculation of Achievement.
Citizens of Science:
We are here to help each other in becoming better “Citizens of Science.” Having as our intention “mastering chemistry by coming prepared, doing laboratory work and asking questions to ensure a concept is understood” will have an impact on student performance & achievement which is used in deriving your overall grade.

The Laboratory Experience & Course (Laboratory) Activities:
Safety first. This is extremely important. There is no substitute for coming prepared to work safely in our laboratory and there are consequences for not doing so in our course. Our laboratory provides the student with a hands-on experience in learning chemistry skills and techniques while conducting experiments to complement and reinforce concepts learned in lecture. Communications and details for our course activities—availability period and due date—are announced, and listed under Course Summary in Canvas/Syllabus. All laboratory course activities have pre-laboratory work to be completed before starting laboratory work, in-classroom experimentation and follow-up post-laboratory activities following our General Overview guidelines:
• General Overview for Course (Laboratory) Activities & Laboratory Work

Our Laboratory Notebook & Grade Sheet
A laboratory notebook is the most useful resource students can create for themselves in the laboratory keeping in mind its high importance; to be engaged in our learning through good record keeping practices as evidence to support objectively our claims for discovery and results. Keeping a laboratory notebook and grade sheet counts toward as a student’s overall grade, serves as a progress report, study guide, and proof of completion for this course, and is needed before we can have any discussion regarding your grade calculation.
• Keep laboratory records (duplicate notebook) in a centralized location.
• Laboratory notebook documentation of student work for each course (laboratory) activity shows records, results and drawn conclusions based on our experimental outcomes. These records are required and are to be provided/handed in at any time in our course, as proof of course completion, and are graded.

Cooperative Learning & Reading Schedule:
Be engaged. Active, not passive learning is essential in our course. Preparatory reading of our laboratory manual, Canvas Module content as needed, and working in groups is especially recommended for preparing for course work. Asking questions face-to-face during our course period, through email and office visiting hours are important parts in making the learning experience more participatory.

Level of Student Ownership of Learning Summary for Our Course
• Actively engage in class activities keeping in mind our classwork expectations.
• Arrive on time and attend regularly.
• Complete assigned readings and tasks before coming to class and turn in our course activity bundled as a neat and complete submission of pre-, in-class and post-laboratory work.
• Work collaboratively.
• Implement instructor feedback.
• Review our Do’s & Don’ts for our course.
Performance/Attendance:
Key performance indicators show our students making the grade when they are in regular attendance, and are participating in creating a positive course environment. Attendance in our course is determined by participation in academically related course activities. Students are considered present if there is evidence of one’s participation in course activities including, but not limited to, submitting a course activity, taking a test, participating in an online discussion, and working in a group. A student is considered to be in nonattendance (absent) if there is no evidence of their participation in the academic activities of our course, and there are consequences:

District policy says students in nonattendance are to be dropped from a course. Criteria for being in nonattendance (absent) are:

- A student does not attend within 24 hours of our course becoming available.
- A student has two or more missing course activities.
- A student has two or more absences in our course (details regarding absences below).

Absences:
Staying in contact with me by email during any absence is very important. During an absence, a student is responsible for all missing course content & activities (announcements, lectures, assessments, handouts, work, etc.). Not emailing me in making arrangements to make-up a missing course activity on the day of or prior a student absence forfeits a student's eligibility in making-up any missing activity. Absences and missing course activities are considered nonattendance and our limit are two. There are two types of absences—excused and unexcused.

- **Excused absence.** An absence is marked ‘excused’ if a student emails me advance notification prior to or on the day of their nonattendance.
- **Unexcused absence.** Not completing a course activity during its availability period is considered nonattendance and is marked as an ‘unexcused absence.’ Any activities missed during an ‘unexcused absence’ cannot be made-up. Missing activities receive zero credit.

Procedures for Make-ups:
We are not obligated in allowing make-ups for missing course activities due to nonattendance. Making up course activities missed during an ‘excused absence’ is only considered if it is appropriate & fair to all in doing so and is within the construct and safety of our course schedule and setting. PLEASE NOTE: We are not obligated to consider other absences as excused and can require a student to provide documentation for ‘excused absences.’ Missing activities during an ‘unexcused absence’ cannot be made-up.

**A Warning About Turning Course Activities in Late:**
Unexpected circumstances can happen leading to late work. Please reach out to me immediately to discuss a plan for success if this occurs. Course activities not submitted when asked to do so by their instructor, or when prompted to do so by Canvas, receive a grade reduction; one-percent grade reduction per every one-minute late. Any course activity mailed to me receives a 10% grade reduction per every day late past the submission and postmark date.

**Withdrawing from Our Course:**
It is a student’s responsibility for withdrawing (dropping) from our course by the published deadlines. A student’s intension should be discussed with their instructor before withdrawing from any course, keeping in mind, if a student is in nonattendance the student will be dropped from our course. Important dates for course activities and major course events are shown on our Weekly Laboratory Schedule of Course Activities shown on syllabus page 10.
Aloha, Need Extra Help? 😊

Feedback is a Gift. From my perspective, feedback on what students know, what students don't know, and how to improve our course is very much appreciated. We are here to help each other in becoming better “Citizens of Science.” Having as our intention “mastering chemistry by coming prepared, doing preparatory work and asking questions to ensure a concept is understood” will have an impact on student performance & achievement which is used in deriving an overall grade. Are we open to the learning process and helping each other on this journey? If something is not working or if there are questions, please reach out to me by email, and let me know how it is going as we master the fundamentals of chemistry in our course. Mahalo nui loa. Sincerely, Dr.Gergens

Errors in grading:

Errors—hopefully none—can be made in grading. Please reach out to me to discuss the matter if credit is not given where credit is due. I'll be happy to help.

Accommodation for Disability:

If a student is in need of academic accommodations due to a learning disability, physical disability, or any other circumstance needing special accommodations our college’s Disabled Students Programs and Services (DSPS) department recommends that students with disabilities or specific learning needs contact their professors during the first two weeks of class to discuss academic accommodations. If a student believes that they may have a disability and would like more information, or have questions about DSPS services at Mesa, contact a DSPS counselor (619) 388-2780 or email mesadspsp@sdccd.edu.

Special Needs & Student Support Services:

If a student is in need of food, clothing, a textbook, we are here to listen and assist in meeting their basic needs on our pathway toward a successful education at Mesa. Student Health Services provides physical and mental health services having nurse practitioners available daily. Also, many additional Student Support Services shown on the next page for our syllabus are available.

Respectful Conduct, College Culture and the Learning Process:

The learning process in our course is based on the belief that everyone has the capacity to broaden one's knowledge and their understanding of methods of gaining knowledge in chemistry and to develop one’s abilities in critical thinking, in oral and written communication, and in mathematics. Experiencing these things and developing an awareness of college culture through the lens of other cultures can be the key to accomplishing our goals successfully. With this in mind, treat our time with respect and intention by ‘adopting incredible elemental steps for incremental success’ (That’s Increddimental), by acknowledging student productivity and our classmates with kindness and encouragement with simple positive affirmations—like “I am awesome and we have awesome chemistry”—thus keeping the motivation and momentum which develops our capacity for self-understanding as life long learners. Additional tips & strategies for improving motivation and momentum in our learning process are linked in the Canvas Module titled COR.

As we tell stories about the lives of others, we learn how to imagine what another creature might feel in response to various events. At the same time, we identify with the other creature and learn something about ourselves.

Dr. Martha C. Nussbaum 2016 Kyoto Prize Laureate

Knowledge makes a man unfit to be a slave.

Frederick Douglass

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Academic Integrity Policies / Procedures & Student Support Services

In joining the academic community, the student enjoys the right and shares the responsibility of exercising the freedom to learn.

**Plagiarism:**
Academic dishonesty of any type by a student provides grounds for disciplinary action by the instructor or college. In written work, no material may be copied from another without proper quotation marks, footnotes, or appropriate documentation. Academic dishonesty of any type such as cheating and plagiarism can result in one or all of the following: a failing grade on the assignment, a failing grade in the class, and/or formal disciplinary action by the college. By enrolling in a distance education course, a student agrees they are the person accessing and completing the work for the course and will not share one’s username or password with others.

**Student Code of Conduct and Student Behavior:**
Each student’s conduct is expected to be in accordance with the standards of the college that are designed to promote its educational purposes as expressed in our student code of conduct available at the Dean of Student Affairs. Charges of misconduct and disciplinary sanctions will be imposed on students who violate these standards of conduct or provisions of college regulations.

**Contentious behavior and the inability to follow directions and/or directives:**
Contentious behavior and/or the inability to follow directions and/or directives during any activity, or having any course activity—reports, assessments, homework, etc.—prepared in a manner in violation the college’s student code of conduct will not be tolerated, and as a consequence for the misconduct, zero credit will be given for that course activity and the student will be reported to our college administrators.

**Netiquette:**
These Netiquette Guidelines are suggestions for success in our online learning environment.

**Add, Drop and Withdrawal Policy:**
It is the student’s responsibility to add, drop and withdrawal from classes before the deadlines stated in the class schedule. If a student stops attending our course and fails to withdraw by the deadline stated in the class schedule, a final grade must be assigned to the student.

**Audio & Video Recording of My Lectures:**
Audio and video recording of my lectures is not permitted in our course unless 1) a student is given permission, 2) the student uses the audio/video of lecture with the understanding that the recorded information is restricted for personal use and not to be distributed to the general public, and 3) the student agrees to providing me with the audio and video recording with its written transcript as email attachments within 48 hours of its recording so it can be shared with the rest of our class. Please reach-out to me if there are questions regarding this or if additional help is needed.

**Student Support Services, Veterans Affairs, Academic Tutoring, Library & Scholarship:**
- A wide range of student supportive services serving the needs of our students and their well-being, along with Veterans Affairs for support materials and services are available. Check them out by visiting our Student Services and Campus Resources webpage for a complete list of services, including tutoring, and counseling, and our Library.
- Free online tutoring is available through our Mesa Tutoring Computing Center (MTC2).
- When there are questions about Canvas and online learning, the Online Learning Pathway is ready to assist students, and Mesa College Scholarships are available for students.
Practicing Self-Advocacy by Raising Our Hand to Gain More Insight & Clearer Focus:

**Asking questions from a student perspective:**

Get the benefit of further explanation, or become engaged in an interesting discussion by asking questions from a student perspective. Since the material presented in our course is cumulative and comprehensive, the questions students ask of their instructors and peers provide information about how carefully our students have been listening, possible areas of confusion, and, most importantly, how an instructor might adjust their style of teaching in meeting the needs of everyone in our class in better providing a ‘home court advantage.’ When a question is asked, a student becomes a participant rather than a spectator in an academic dialogue. Feedback is a gift. So, please reach out to me for help when something is not understood and when given the opportunity to do so.

**Vulnerability is our most accurate measurement of courage (Brene’ Brown):**

- Please "Raise our hand if don’t we understand."
- Here are some safe-zone questions one can easily ask in practicing self-advocacy.
- "Where do you feel most students have difficulties in understanding this material?"
- "What do you find most interesting or intriguing about the material just presented to us?"
- "From your experience, what are common mistakes students make in solving this type of problem?"
- "What questions should we be asking that we are not?"
- AND most importantly, "Can you please help me?"

**SAFETY QUIZ (this one of two safety quizzes) – Response are to be inputted in to Canvas:**

We urge students to follow all safety guidelines, and be to be kind to yourself and others.

1. Mesa College Coronavirus Updates
2. CORONAVIRUS.GOV

0. In preventing the spread of Covid-19 in this pandemic, we should (list at least four intentions).
1. Can a student wear contact lenses in the lab? If not, why not?
2. Explain the expression "STOP, DROP, AND ROLL"?
3. Explain our immediate actions are to be taken if a chemical solution splashed in our face while we are wearing safety goggles.
4. Describe the proper procedure for mixing concentrated acid and water.
5. What is our immediate action if we receive a minor burn?
6. What are our immediate actions if our lab partner’s clothing catches fire?
7. Describe our immediate actions if acid is spilled on our clothing.
8. Describe our immediate actions we would take during a moderate earthquake and a severe earthquake.
9. Describe where the following are located: fire extinguisher; eye wash; safety shower; closest stairwell exit; emergency telephone; closest fire alarm.

**Our Course Syllabus:**

This syllabus is intended to help students plan their studies in our course. It is subject to change at any time should a change be in the best interest of our course. If a student withdraws and/or are in nonattendance, the student’s materials are immediately discarded unless the student contacts me explaining their circumstances. All other student materials are discarded one month after a student overall final grade is posted.
**Weekly Laboratory Schedule of Course Activities – Organic Chemistry I**

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<th>WEEK</th>
<th>August</th>
<th>September</th>
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<td>Sun</td>
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<tr>
<th>Week</th>
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<tr>
<td>1</td>
<td>SL = Safety &amp; Lewis Dot Review</td>
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<td>2</td>
<td>RES = Resonance Problems</td>
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<tr>
<td>3</td>
<td>SB = Structure &amp; Bonding</td>
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<td>4</td>
<td>Drw = ISIS Drawing Exercise</td>
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<td>5</td>
<td>IO = Isomers of Octane</td>
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<td>6</td>
<td>FOR = Nonbonding Forces</td>
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<td>7</td>
<td>IR = Infrared Spectroscopy</td>
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<td>8</td>
<td>SLC = Solubility &amp; Locker Check-In</td>
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<td>9</td>
<td>MB = Melting &amp; Boiling Point</td>
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<td>10</td>
<td>TLC = Thin Layer Chromatography</td>
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<td>11</td>
<td>GC = Gas Chromatography</td>
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<td>12</td>
<td>MT = Mid-Term Celebration</td>
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<td>13</td>
<td>Distillation</td>
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<td>14</td>
<td>Rec = Recrystallization</td>
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<td>Ex = Extraction</td>
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<td>16</td>
<td>Asp = Aspirin Synthesis</td>
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<td>17</td>
<td>NMR = Nuclear Magnetic Resonance</td>
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<td>18</td>
<td>SQ = Syn/Qualitative Analysis</td>
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<td>19</td>
<td>REV = Review</td>
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<td>20</td>
<td>F = Final</td>
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<td>21</td>
<td>NS = Holiday</td>
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</tbody>
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**Course Activity Legend**

- **SL**: Safety & Lewis Dot Review
- **RES**: Resonance Problems
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- **TLC**: Thin Layer Chromatography
- **GC**: Gas Chromatography
- **MT**: Mid-Term Celebration
- **Rec**: Recrystallization
- **Ex**: Extraction
- **Asp**: Aspirin Synthesis
- **NMR**: Nuclear Magnetic Resonance
- **SQ**: Syn/Qualitative Analysis
- **REV**: Review
- **F**: Final
- **NS**: Holiday

**Add Deadline**: 09-03-2021
Deadline to add class with Permission Number and pay Enrollment Fee & all applicable fees.

**Dp1 Drop Deadline**: 09-03-2021
Deadline to drop class with no "W" recorded.

**Refund Deadline**: 09-03-2021
Deadline to drop class and be eligible for refund of Enrollment Fee & all applicable fees.

**PNP Pass/No Pass Deadline**: 11-30-2021
Deadline to select Pass/No Pass option for classes with "Student Option" grading basis. (Click on the Class Number to find the grading basis for each class.)

**Dp2 Withdrawal Deadline**: 10-29-2021
Deadline to drop and receive a "W". After this date, a student must receive a grade for the class.

**Ellison Onizuka**
First Asian American In space

Died when the Space Shuttle Challenger exploded shortly after lift-off, January 28, 1986

Awarded the Congressional Space Medal of Honor

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