

CHEM 3360 (CRN 10569)
Intermediate Inorganic Chemistry
Fall – 2019

Lecture: TR 8:00 – 9:15 am (Laney-Manion 103)

Lab Session: none... ☹

Instructor: Dr. Marsha D. Massey

Office: Laney-Manion 203D

Phone: (501) 450-5961

Email: marsham@uca.edu

Office Hours: by appointment sign-up online here:

<https://tinyurl.com/MeetingMasseyFall2019>

Materials Required:

- Textbook: “Descriptive Inorganic Chemistry” by G. Rayner-Canham & T. Overton. 5th edition. ISBN: 978-1-429-21814-6 (Dr. Massey will abbreviate it as “RC&O”)
- Google Classroom (for assignments, in-class work, etc)*
- Blackboard (for grade tracking & calculation)
- Use of WebMO – free! <https://www.webmo.net/demoserver/cgi-bin/webmo/login.cgi>
- Internet-capable device: laptop, cellphone, or tablet (for during class)*
- Calculator

*The university and its affiliates are not responsible for any damage to your technology (ex: laptops, tablets, cellphones) used in lab or class.

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| Course Description | Extension of principles of chemical structure, periodicity, and applications of inorganic systems to industrial, environmental, and biochemical processes. Three hours of lecture per week. Counts towards the non-ACS chemistry major or a general science major; counts as core inorganic in the ACS-certified biochemistry major. Elective option for the ACS-certified chemistry BS degree: Standard Track, the environmental science-chemistry track, and the minor in chemistry. The course will include lecture and group work. Although not required before Advanced Inorganic Chemistry (CHEM 4380), it can help prepare for it. |
| Prerequisite | Students must have taken and passed CHEM 1451 with a C or better. Students must have a <u>strong</u> foundation in general chemistry to succeed. |
| Course Objectives | Students will be able to apply inorganic chemistry concepts to industrial, environmental, and biochemical applications. Students will become confident in evaluating and discussing chemical structure, periodic trends, chemical reactivity, and thermodynamics for elements across the periodic table. |
| Office Hours | Take advantage of office hours early in the semester. Come to see me the moment you are concerned about understanding course material. This time is most effective if you come prepared with specific questions. If the times listed do not work for your schedule, email me for an appointment. |

Recommended Additional Text: “Inorganic Chemistry” by Shriver & Atkins. 4th ed. *Although not required this text may be helpful to develop understanding of concepts in the course.*

Overall Course Grade:

| Assignment | Total Assigned | Percent |
|-----------------------------|----------------|------------|
| Class Preparatory Questions | 18 – 21 | 10 |
| Warm-up Questions | TBD | 5 |
| Problem Sets | 4 | 15 |
| Presentation Project | 1 | 10 |
| Exams | 4 | 40 |
| Final Exam | 1 | 20 |
| Total | | 100 |

A: 100 – 90% **B:** 89 – 80% **C:** 79 – 70% **D:** 69 – 59% **F:** <59%

Course Policies:

Late assignments will receive 50% credit of the assigned grade, if turned in no later than two (2) days late (except CPs). Assignments turned in later than two days (48 hours) after deadline can be submitted for evaluation but will receive a grade of zero (0).

Assignment extensions *may* be granted in the case of unavoidable circumstances (medical or family emergencies). If so, and you do not adhere to the new deadline zero points will be given for the assignment.

Regrade Policy: You have one (1) week after assignments are returned **to the class** to request grade adjustments.

Attendance for this course is mandatory. You are permitted three (3) lecture absences. In the case of illness, have your medical provider send a note the day you return to class.

Classroom Etiquette: You are expected to be *engaged* and respectful of everyone's time in class. Electronics can only be used for taking class notes or working problems. Checking email, reviewing social media, browsing the web, and any other non-class related activity is **unacceptable**. Consequences for using technology inappropriately or disrupting the class will be loss of points on Warm-up Questions grade.

Note that ONLY calculators can be used for exams and/or quizzes. Cellphones, tablets, laptops, smartwatches, and other electronics cannot be used in place of calculators. Calculators cannot be shared between students.

E-mail Policy: I will reply to your email promptly as possible. Please keep in mind like yourselves I have a schedule full of classes, meetings, and additional life matters to address daily. Thus, please allow for **24 hours** after your e-mail has been sent for me to send a reply. Holidays and weekends I may require more time, but I will endeavor to reply that your message has been received. I will only reply to UCA email addresses.

Academic Accommodations: The University of Central Arkansas adheres to the requirements of the Americans with Disabilities Act. If you need an accommodation under this Act due to a disability, please contact the UCA Disability Resource Center, 501-450-3613.

Assignment Details:

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|----------------------------------|---|
| Class Preparation Questions (CP) | <p>Before each lecture session you will be required to complete questions to prepare you for class. To receive full credit these assignments must be completed at least 10 minutes before the start of the class session.</p> <p>18 - 21 CPs will be assigned via Google Classroom, only 12 will count towards your final grade. Complete these at any time before the deadline. You must complete these independently as described for Problem Sets.</p> |
| Problem Sets | <p>These assignments will be designed to aid you in integrating content across chapters and applying problem solving skills to interdisciplinary material.</p> <p>You must complete these assignments independently. Collaboration with classmates, tutors, or anyone other than the instructor is a violation of the Honor Code and against the academic integrity statement. You are encouraged to use your textbook or resources on this course's Google Classroom site. No other resources may be used.</p> <p>You will have four (4) total problem sets designed by Dr. Massey.</p> |
| Presentation Project | <p>You will work in a small group to design a course module over topics in chapters 10 – 18 of the textbook. Your course module will include:</p> <ul style="list-style-type: none"> • 20 minute lecture including 6 – 12 PowerPoint slides • 6 Blackboard CP style questions + key/answers • 3 problem solving questions + key/answers <p>**see Blackboard for full instructions and details**</p> <p>Deadlines: Draft lecture outline due electronically before 5 pm Fri Oct 4th Final work due electronically before 5 pm CT on Wednesday Nov 11th</p> |
| Homework | <p>A list of recommended homework is on Google Classroom. Homework is not collected for grading, but you need to do problems daily to pass.</p> |
| Warm-up Questions | <p>Throughout the semester you will have in-class questions using Kahoot! Or Google Classroom. You will receive 2 points for each correct response and 1 point for each incorrect response. Your final grade will be the average percentage correct +5% (up to a maximum grade of 100%).</p> |
| Exams | <p>There will be four (4) exams throughout the semester as outlined in the tentative course calendar. There will be no make-up exams. In case of an emergency, you will have an opportunity to drop a single (1) exam grade.</p> |
| Final Exam | <p>The final exam is on Thursday, December 12th from 8:00 am – 10:00 am in our normal classroom location.</p> |

Extra Credit:

There will be at least two extra credit options:

1. You can do two (2) surveys for ½% each.
2. You can submit two (2) multiple choice review questions. Each question can earn up to 1%.
You must complete the instructions on Blackboard for how to design a final exam multiple choice review question. Submissions which do not follow the guidelines on Blackboard will **NOT** receive credit.

A maximum boost of 2% to your final course grade is possible using these opportunities.

**COURSE SCHEDULE posted on Google Classroom under Course Info.
Also review the Syllabus Supplement on Google Classroom**

Technology Instructions:

Google Classroom – contains class slides, handouts, homework problems, announcements, syllabus, evaluation forms, etc.

You will receive an invitation to your UCA email account to access it.

Blackboard – will be used for tracking grades and grade calculations.

Log into your MyUCA account

Click on the “Essentials” tab at the top, then select “Current Students”

Click on the “Blackboard” box, at the top select “Courses”

Click on “INTERMEDIATE INORGANIC CHEM”

Warm-up – Questions will occur daily. You **must attend class on time** to receive credit.

WebMO – You will use this online portal to conduct computational calculations which will aid in applying and understanding core concepts in the course.

You are encouraged to attend office hours to learn more or if you are uncertain about the program after following directions in course assignments.

See Course Schedule document on Blackboard for more details.

Syllabus highlights:

- **Attendance is mandatory** for lecture.
- Need internet-capable device daily for class.
- Late assignments only graded 2 days after due date and will earn **at most** 50% credit.
 - Can **NOT** submit CP assignments for late credit, so do these 10 min before class!
- **No** make-up exams/assignments offered. Keep deadlines in mind.
- Use office hours effectively: come see me early in the course and come prepared.
- Start working on your Presentation Project at the latest Thurs Sept 12th
 - This will give you approximately 1 month to finish before the deadline
- Presentation Project deadlines:
 - Draft outline for presentation due electronically before 5 pm Fri Oct 11th
 - Final work due electronically before 5 pm CT on Wednesday Nov 6th, 2019
- **Exam times:**
 - Exam 1 – Tuesday, Sept 17th
 - Exam 2 – Tuesday, Oct 8th
 - Exam 3 – Tuesday, Nov 5th
 - Exam 4 – Tuesday, Nov 26th
- **Final exam:** Thursday, Dec 12th, 2018 at 8:00 am – 10:00 am