

Instructor: Rory Waterman
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Lecture: MWF 12:00–12:50, Innovation 430

Office hours: Mondays and Thursdays from 1:00–2:30 pm. That is your time, but if you have conflicts, feel free to make appointments.

Course description: Molecular symmetry and group theory with an emphasis on application to molecular orbital theory and bonding, basic transition-metal chemistry, introductions to bioinorganic, solids state, main group, and related special topics.

Inclusion in science: In the Department of Chemistry, we have agreed that sharing our thoughts on inclusive science is important as a part of our on-going commitment to equity in access and diversity throughout our field.

the concepts presented in class is more important than the grade on an individual assignment. Any additional in-class or outside work that is graded will be included in the homework score.

Proposal: The task here is to write a brief (2 page) proposal on a research area of interest to you, which may or may not include inorganic chemistry. The proposal format should follow the guidelines for the NSF GRFP (<https://www.nsfgrfp.org/>). We will discuss the activity in class. What a strong coincidence that you'll be done with that proposal prior to the chemistry submission deadline...

Exams: There will be two semester exams on content covered to date. I will make every effort to respect your time and timing, but I also think we can be flexible with the exact dates depending on the other demands on the group and our exact place with respect to course content. The final exam is cumulative in that ideas from the earliest days of the course impact the later content, but it will not be cumulative in asking very specific questions on content covered in the semester exams.

Academic Honesty: As students of the University of Vermont, you are expected to conduct yourself in this class in accordance with the Code of Academic Integrity (<http://www.uvm.edu/~uvmppg/ppg/student/acadintegrity.pdf>).

I encourage a high degree of collaboration on in-class work, and I recommend discussing your proposals with colleagues and faculty. Collaboration on homework is permitted, but you must indicate the collaborating partner or group members on your assignment.

Tentative weekly schedule

date	Topic/readings
8/30	Start of symmetry & group theory: <i>Chapter 4 (4.1 & 4.2)</i>
9/6	(no class on 9/6) Group theory/character tables: 4.2 3
9/13	Applied group theory spectroscopy & MO: 4.4, 5.1
9/20	MO & bonding: 5.2 3
9/27	Main group bonding & acid/base: 5.4, <i>Chapter 6</i>
10/3	(no class on 10/8) Exam 1 on 10/6 , wrap up acid/base
10/11	Solid state and band structure: 7.1 3
10/18	

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Technical support for students

Please read this technology checklist to make sure you are ready for classes.

<https://www.uvm.edu/it/kb/student-technologyresources/>

Our class does not use specialty software, but routine internet access on an updated browser and MS Teams are essential.

Students should contact the Helpline (802-262-2604) for support with technical issues.

Attendance Policy and Classroom Environment Expectations:

Students are active participants in class. Those who chose not to attend or participate suffer in their learning, which typically translates to lower performance in the course. Therefore, we do not measure active participation in class or attendance. However, if significant absence or non-participation occurs, those choices

Tips for Success

Coursespecificstudy/preparation tips

observe a religious holiday, please submit the dates of absence to me in writing by the end of the second full week of classes. You will be permitted to make up work within a mutually agreed upon time. <https://www.uvm.edu/registrar/religiousholidays>

Academic Integrity:

The policy addresses plagiarism, fabrication, collusion, and cheating.

<https://www.uvm.edu/policies/student/acadintegrity.pdf>

Grade Appeals:

If you would like to contest a grade, please follow the procedures outlined in this policy:

<https://www.uvm.edu/policies/student/gradeappeals.pdf>

Grading:

For information on grading and GPA calculation, goto <https://www.uvm.edu/registrar/grades>

Code of Student Conduct:

<http://www.uvm.edu/policies/student/studentcode.pdf>

FERPA Rights Disclosure:

The purpose of this policy is to communicate the rights of students regarding access to, and privacy of their student educational records as provided for in the Family Educational Rights and Privacy Act (FERPA) of 1974.

<http://catalogue.uvm.edu/undergraduate/academicinfo/ferparightsdisclosure/>

Promoting Health & Safety:

The University of Vermont's number one priority is to support a healthy and safe community:

Center for Health and Wellbeing:

<https://www.uvm.edu/health>

C.A.R.E. If you are concerned about a UVM community member or are concerned about a specific event, we encourage you to contact the Dean of Students Office (603-253-380). If you would like to remain anonymous, you can report your concerns online by visiting the Dean of Students website at <https://www.uvm.edu/studentaffairs>

Final Exam Policy:

The University final exam policy outlines expectations during final exams and explains timing and process of examination period. <https://www.uvm.edu/registrar/finalexams>

Alcohol and Cannabis Statement:

The Division of Student Affairs has offered the following statement on alcohol and cannabis use that faculty may choose to include, or modify for inclusion in, their syllabus or Blackboard site:

Statement on Alcohol and Cannabis in the Academic Environment

As a faculty member, I want you to get the most you can out of this course. You play a crucial role in your education and in your readiness to learn and fully engage with the course material.

It is important to note that alcohol and cannabis have no place in academic environment.

They can seriously impair your ability to learn and retain information not only in the moment you may be using, but up to 48 hours or more afterwards. In addition, alcohol and cannabis can:

- x Cause issues with attention, memory, and concentration
- x Negatively impact the quality of how information is processed and ultimately stored
- x Affect sleep patterns, which interferes with long-term memory formation

It is my expectation that you will do everything you can to optimize your learning and go fully participate in this course.