

# SYLLABUS

## CHE 411/611 Inorganic Chemistry (3 credits) Fall 2017

Time: 8:00 am – 9:20 am Tuesday and Thursday.

Location: CST 1-019

Prof. Ivan Korendovych

Office: 2-050 CST, Phone: 315-443-1661, E-mail: [ikorendo@syr.edu](mailto:ikorendo@syr.edu)

Office hours: by appointment.

Teaching Assistant: Pallavi Gosavi

Recitation: Tuesday 5:15-6:05 pm LSB 102,

Office Hours: Wednesday 9:30 am -11:30 am LSB 124.

### Textbook

CHE 411/611 Shriver & Atkins, "Inorganic Chemistry", 6<sup>th</sup> Edition, Freeman Press. Available at SU bookstore.

### Summary and Goals of the Class

This class assumes knowledge of general chemistry. Prerequisites for this class are CHE 116 and CHE 119. Inorganic chemistry is a core subdiscipline of chemistry. The topics covered in this class include periodic trends, foundations of bonding theory, basic coordination chemistry, solid state chemistry, as well as instrumentation and modern application basics. Even though the scope of the class is broad, the topics are interconnected. Having complete understanding of each chapter as the class progresses is essential for the big picture to emerge at the end of the semester. This will lay a solid foundation for the specialized study/research in the future.

### Exams and Grading

There will be a total of three midterm in-class exams (20% of the grade each) and a cumulative final exam (25% of the overall grade). Homework will account for 15% of the overall grade. **Graduate student exams and homework (CHE 611) will contain 1-2 additional advanced questions.**

Exams will cover topics discussed in lectures. Students are strongly encouraged to attend all lectures as some of them may contain information not covered in the textbook.

### Regrades and Missed Exams

Only written regrade requests will be accepted. Regrade requests will be only entertained if submitted within 48 hours after the exams have been returned. Briefly state your reason(s) for requesting the regrade. The regrade request will be considered carefully but the entire exam will be regraded regardless of whether additional points are awarded on the request. Only examinations that were **written in ink** will be accepted for regrades.

If an exam is missed, the default mechanism is a score of **0** for that exam. In some extraordinary cases (including but not limited to medical emergency, etc.) alternative arrangements can be made.

**All emergency excuses must be properly documented (a note from a physician or Dean's office).** An oral or written (as the circumstance may warrant, and at my discretion) make-up exam will be administered.

No late homework will be accepted under any circumstances, emergency situations will be dealt on a case-by-case basis.

### **Academic Integrity**

The Syracuse University Academic Integrity Policy holds students accountable for the integrity of the work they submit. Students should be familiar with the Policy and know that it is their responsibility to learn about instructor and general academic expectations with regard to proper citation of sources in written work. The policy also governs the integrity of work submitted in exams and assignments as well as the veracity of signatures on attendance sheets and other verifications of participation in class activities. Serious sanctions can result from academic dishonesty of any sort.

### **Religious Holidays observation.**

Students will have update access to the notification form through MySlice beginning the first day of classes. It will be available through the end of the second week of class. Students must notify the instructor by the end of the second week of classes when they will be observing their religious holiday(s) to make the appropriate arrangements.

### **Students with Disabilities.**

If you believe that you need accommodations for a disability, please contact the Office of Disability Services (ODS) at <http://disabilityservices.syr.edu>, located at 804 University Avenue, room 309, or call 315-443-4498 for an appointment to discuss your needs and the process for requesting accommodations. ODS is responsible for coordinating disability-related accommodations and will issue students with documented disabilities "Accommodation Authorization Letters", as appropriate. Since accommodations may require early planning and generally are not provided retroactively, please contact ODS as soon as possible.

Our community values diversity and seeks to promote meaningful access to educational opportunities for all students. Syracuse University and I are committed to your success and to supporting Section 504 of the Rehabilitation Act of 1973 as amended and the Americans with Disabilities Act (1990). This means that in general no individual who is otherwise qualified shall be excluded from participation in, be denied benefits of, or be subjected to discrimination under any program or activity, solely by reason of having a disability.

## **CHE 411/611 Inorganic Chemistry** **Tentative Schedule**

Tuesday, Aug 29	Chapter 1 <i>Atomic Structure</i>
Thursday, Aug 31	Chapter 2. <i>Molecular Structure and Bonding</i>
Tuesday, Sep 5	“
Thursday, Sep 7	Chapter 3. <i>Solid State Chemistry</i>
Tuesday, Sep 12	“
Thursday, Sep 14	“
Tuesday, Sep 19	Chapter 4. <i>Acids and Bases</i>
Thursday, Sep 21	“
Tuesday, Sep 26	Chapter 5. <i>Oxidation and Reduction</i>
Thursday, Sep 28	
Tuesday, Oct 3	Chapter 6. <i>Molecular Symmetry</i> “
<b>Thursday, Oct 5</b>	<b>EXAM 1. Covers Chapters 1-4</b>
Tuesday, Oct 10	“
Thursday, Oct 12	“
Tuesday, Oct 17	Chapter 7. <i>Intro to Coordination Compounds</i>
Thursday, Oct 19	Chapter 19. <i>d-block Elements</i> , Chapter 20. <i>d-metal Complexes</i>
Tuesday, Oct 24	“
<b>Thursday, Oct 26</b>	<b>EXAM 2. Covers Chapter 5-7, 19, 20</b> “
Tuesday, Oct 30	Chapter 21. <i>Coordination reactions</i>
Thursday, Nov 2	Chapter 22. <i>Organometallic chemistry</i>
Tuesday, Nov 7	“
Thursday, Nov 9	“
Tuesday, Nov 14	Chapter 8. <i>Physical Techniques of Analysis</i>
Thursday, Nov 16	“
Tuesday, Nov 28	Chapter 24. <i>Solid-State and Materials Chemistry</i> , Ch. 25. <i>Nanomaterials, Nanoscience &amp; Nanotechnology</i>
Thursday, Nov 30	Chapter 27. <i>Biological Inorganic Chemistry</i>
Tuesday, Dec 5	<b>EXAM 3. Covers Chapters 8, 20-22, few questions from the material covered in class from Ch. 24-25, 27</b>
Thursday, Dec 7	<i>Review and catch up.</i>
<b>Friday, Dec 15</b>	<b>FINAL EXAM, 12:45 PM-2:45 AM, CST 1-019. Covers ALL</b>