Inorganic Chemistry
CHE 241
Fall 2017
MWF 11:00 – 11:50am.
CHEMISTRY BUILDING 106

Instructor: Xiaozhen(Jenny) Han, Ph.D.
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Phone: 936-468-2384
E-mail: hanx1@sfasu.edu
Office Hours: M 1:30 pm to 3:00 pm
T 9:00 pm to 10:30 pm; 7:00 pm to 8:00 pm
W 1:00 pm to 2:30 pm
R 9:00 am to 10:30 am

In addition to the posted office hours, feel free to stop by my office anytime to chat with me. I am generally moving in between my office and research lab (Chemistry 205), so you can also e-mail me to set up an appointment time outside of my posted office hours.

Prerequisites & Corequisite:
Prerequisite: CHE 133, CHE 133L and CHE 134, CHE 134L.

Required Textbook:

Inorganic Chemistry by Catherine E. Housecroft and Alan G. Sharpe, 4th Edition


Course Description:

This course is mainly about the chemistry of elements, to examine various aspects of the Periodic Table. Bear in mind that the periodic table is the main tool of the inorganic chemist. This will be done by first looking at the Table as a whole, and then by examining each element or group of elements in more detail. The main group elements will be first, followed by the transition and inner transition elements. In addition to this, there will be a few selected topics to help in the understanding of roles of transition metals in organometallic chemistry and bioinorganic chemistry, as time permits.
Our goal in this course is to go through the learning and teaching process as a community to provide students with an explanation of descriptive inorganic chemistry and to apply these concepts to problem solving involving critical thinking. Of course, I want you all to become proficient in the basics of Inorganic Chemistry, so you can move on to higher level chemistry courses, but just as importantly, I want you to learn how to get the most benefit out of a classroom experience. To me, this means we leave our class with a better understanding of the physical world around us and of how we can use chemistry as a language in which to discuss what we observe in our world.

**Student Learning Outcomes:**

- Explain the position of elements in the Periodic Table and the relation of the elements’ physical and chemical properties based on electronic structure.
- Predict the formulation of main group inorganic molecules, their electronic and molecular structures, and their geometries. Predict reactivity properties based on structure and reactive centers, including some redox reactions.
- Account for extended structures, both ionic and molecular interactions between molecules.
- Be familiar with first row transition metals, their coordination complexes and a few applications to bioinorganic and catalytic chemistry.

In other words, I want you to **think**, to **reason**, to **evaluate**, to **question**, and to be able to tell me and others **what** you understand, through **writing** and **discussion**.

**Grading Policies:**

The final course grade will be based on points earned from exams, quizzes, homework assignments, and class participation. The points will be weighted as follows:

- Exams (4) – 60%
- Quizzes (5) – 20%
- Homework – 20%

*Late Work* – Late homework assignments will be accepted; however, you penalize yourself 10% of the total per day that the assignment is late (the day ends at 5:00 pm), up to 50% off.

*Make-up Work* – There will not be make-ups offered for homework and exams. The lowest quiz grade will be dropped.

**Grading Scale:**
93.50% or better    A   73.50 to 75.49%    C
89.50 to 93.49%    A-   69.50 to 73.49%    C-
86.50 to 89.49%    B+   66.50 to 69.49%    D+
83.50 to 86.49%    B    63.50 to 66.49%    D
79.50% to 83.49%    B-   59.50% to 63.49%    D-
75.50 to 79.49%    C+   59.49% and below    F

Other Policies:

Attendance - “In order to earn course credit in the College of Arts and Sciences, a student must attend at least 75% of all scheduled class meetings. Any student who does not meet this minimal standard will automatically receive a grade of “F” in the course. Any University-related activity necessitating an absence from class shall count as an absence when determining whether a student has attended the required 75% of class meetings.” (CAS Attendance Policy)

For a MWF class, if you miss more than TEN classes, you will receive an F.

For a TR class, if you miss more than SEVEN classes, you will receive an F.

Classroom Behavior - Everyone should be treated with respect. While class is in progress, cell phone use is NOT allowed. If you want to use a laptop, a notebook or tablet for note taking, please sit in the back of the class or close to a wall so as not to distract other students. Talking with each other and reading of newspaper or books (other than relevant chemistry books) during class is disrespectful and should not be practiced.

Food and drinks (other than water) are not allowed inside classrooms. Late arrivals are disruptive, and those students should enter the room as quietly as possible to avoid distraction.

Academic Integrity (A-9.1):

Academic integrity is a responsibility of all university faculty and students. Faculty members promote academic integrity in multiple ways including instruction on the components of academic honesty, as well as abiding by university policy on penalties for cheating and plagiarism.

Definition of Academic Dishonesty: Academic dishonesty includes both cheating and plagiarism. Cheating includes but is not limited to (1) using or attempting to use unauthorized materials to aid in achieving a better grade on a component of a class; (2) the falsification or invention of any information, including citations, on an assigned exercise; and/or (3) helping or attempting to help another in an act of cheating or plagiarism. Plagiarism is presenting the words or ideas of another person as if they were your own. Examples of plagiarism are (1) submitting
an assignment as if it were one's own work when, in fact, it is at least partly the work of another; (2) submitting a work that has been purchased or otherwise obtained from an Internet source or another source; and (3) incorporating the words or ideas of an author into one's paper without giving the author due credit.

Please read the complete policy at http://www.sfasu.edu/policies/academic_integrity.asp

Any student found cheating will be subject to the penalties as stated in the Student Code of Conduct handbook; including but not limited to a score of zero on exam, expulsion from the class or expulsion from the University.

Students with Disabilities:

To obtain disability related accommodations, alternate formats and/or auxiliary aids, students with disabilities must contact the Office of Disability Services (ODS), Human Services Building, and Room 325, 468-3004 / 468-1004 (TDD) as early as possible in the semester. Once verified, ODS will notify the course instructor and outline the accommodation and/or auxiliary aids to be provided. Failure to request services in a timely manner may delay your accommodations. For additional information, go to http://www.sfasu.edu/disabilityservices/.

Schedule

The following is an approximate schedule of when we will cover the material as text chapters and exam dates. Reading the chapters beforehand is extremely helpful in increasing your understanding of the material before we discuss it in lecture; THIS IS HIGHLY RECOMMENDED. Our course calendar will be posted on D2L and updated as we move along. A REMINDER! Assignment due dates for homework are on D2L. It is your responsibility to keep up with assignment due dates.

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<td>1, 2</td>
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<td>September 4</td>
<td>3-5</td>
<td>Hydrogen, Alkali Metals, Alkaline Metals</td>
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<td>September 11</td>
<td>6-8</td>
<td>Boron Family, Carbon Family, Nitrogen Family</td>
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<td>October 2</td>
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<td>Experimental techniques; Aqueous Solution; Reduction and Oxidation</td>
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<td>October 9</td>
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<td>Nobel Gas</td>
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<td>Date</td>
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<td>October 13</td>
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