CHEM 531: Advanced Inorganic Chemistry
Spring 2015

Course: CHEM 531will meet every Tuesday and Thursday from 8:30-9:45 p.m. in room Science 313.

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Office Hours: Mon-Fri 2:00 – 3:00 pm or by appointment.

Required Textbook: "Inorganic Chemistry", Catherine E. Housecroft and Alan G. Sharpe (4th Edition, ISBN 978-0-273-74275-3)

Additional Book for your study of this course:

"Inorganic Chemistry", 5th Edition, Shriver & Atkins, ISBN: 1-4292-1820-7.

Course description: This course covers descriptive chemistry of more interesting elements and compounds and the standard topics in coordination, organometallic, solid-state chemistry, and catalysis and some industrial processes. Perquisites are sound knowledge of general chemistry and familiarity with organic, physical and analytical chemistry. Regular attendance and active learning are expected. Students' questions and comments are welcome.

Student learning outcomes: At the end of the course, the student will be able; (1) to describe and explain the coordination compounds containing metal as central atom which surrounded by ligands; (2) to understand the stereochemistry of coordination compounds; (3) to classify the type and mechanism involve in coordination compounds reactions; (4) to study the characterization of coordination compounds and its application.

GRADING

Your performance and final grade in the course will be evaluated on the basis of total points earned. The distribution of points will be based on the following: Quiz and homework (30 points), which will be assigned and discussion throughout the semester. Two portion exams and final exam will carry 40 points and 30 points, respectively, with total 70 points. The exams will be taken on Commerce campus. The final letter grade will be based on a standard scale 90-100% A, 80-89% B, 70-79% C, 60-69% D, and below 60% F. The grades may be curved, if warranted.

There will be absolutely no make-ups for exams except extraordinary circumstance (notes required). If you miss an examination, you will be assigned a zero for that assignment. Quiz and homework not submitted on time may receive a grade of zero.

Academic Integrity Code:

Ethical behavior is expected in all work. Any material submitted in Inorganic Chemistry must represent your own work and follow the Academic Integrity Code. Students supplying materials for others to "look at" (*e.g.* exams) may be charged with academic misconduct. The use of 'cheat sheets', stored text, constants, or formulas in calculators may be regarded as a violation of academic standards. A zero tolerance policy will be in effect. If you haven't already done so, you should familiarize yourself with TAMU-C's academic policies and regulations, especially those dealing with academic integrity.

Tentative Schedule

The tentative schedule is subject to change.

Week of	***Lecture Topic***	***Reading***
1 Jan 20-25	An introduction to molecular symmetry	Ch. 4
2 Jan 26-Feb. 1	Acids and bases	Ch. 7
3 Feb. 2-Feb 8	Reduction and oxidation	Ch. 8
4 Feb 9-15	Reduction and oxidation	Ch. 8
5 Feb 16-22	Exam 1(Feb. 17), and the group 1 metals	Ch. 11
6 Feb 23-28	The group 2 metals and The group 13 elements	Ch. 12&13
7 Mar 2-8	The group 14 elements	Ch. 14
8 Mar 9-15	The group 15 elements	Ch. 15
SB Mar 16-22	Spring break	
9 Mar 23-29	The group 16 elements	Ch. 16
10 Mar 30-Apr 5	The group 17 elements	Ch. 17
11 Apr 6-12	(Exam 2, Apr 7) d-Block metal chemistry: general consideration	Ch. 20
12 Apr 13-19	d-Block metal chemistry: coordination complex	Ch. 21
13 Apr 20-26	Organometallic compounds of d-block elements	Ch. 24
14 Apr 27-May 3	d-Block metal complexes: reaction mechanisms	Ch. 26
15 May 4-May 8	Catalysis and some industrial processes	Ch. 27
May 12	Final exam (comprehensive exam)	

ADA ELIGIBLE STUDENTS: *The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you have a disability requiring an accommodation, please contact: Office of Student Disability Resources and Services*

Texas A&M University-Commerce, Gee Library, Room 132, Phone (903) 886-5150 or (903) 886-5835, Fax (903) 468-8148

StudentDisabilityServices@tamu-commerce.edu

A&M-Commerce will comply in the classroom, and in online courses, with all federal and state laws prohibiting discrimination and related retaliation on the basis of race, color, religion, sex, national origin, disability, age, genetic information or veteran status. Further, an environment free from discrimination on the basis of sexual orientation, gender identity, or gender expression will be maintained

* Please note that this schedule and topics are subject to change