CHEM 5710 – Advanced Inorganic Chemistry

Instructor: Tom Cundari (t@unt.edu)
Class time: 9:30 – 10:50 AM, TR, CHEM 105

Course Description:
This course is designed to introduce students to various topics in inorganic chemistry. Emphasis will be placed on fundamental concepts and recent progress in the field. Topics to be covered are given below.

Topics
A. Transition Metal Chemistry
   a. Coordination Chemistry
   b. Electronic Spectroscopy
   c. Experimental Characterization
B. Organometallics
   a. Synthesis
   b. Structure and Reactivity
C. Main Group Chemistry
   a. Light versus Heavy Main Group Elements
   b. Multiple Bonding in the Main Group
   c. Inert Pair Effect
D. Acid-Base Chemistry
   a. HSAB Theory
   b. E&C Theory

Course Objectives:
By the end of the course, you should be able to:
• Apply key theories in inorganic chemistry
• Critically evaluate papers in inorganic chemistry
• Develop and defend (i.e., orally and written) research ideas in inorganic chemistry, succinctly and clearly
• Have an increased awareness of the potential applications of inorganic chemistry principles to your graduate research area

Course Requirements:
Attendance – Attendance is mandatory.

Exams:
• There will be either one (1) or two (2) {depending on class progress and thus available time} hour-long exams at dates to be determined. Class exams will be announced well in advance.
• There will also be a comprehensive final exam. You must take the final to pass the class.
• There will not be any makeup exams.
• If the University cancels classes on the day of a scheduled exam, then the test is automatically scheduled for the next class lecture period.

Course Grading:
A typical grading scale is used: A - 90%    B - 80%    C - 65%    D - 50%

Disabilities Accommodation:
The University of North Texas complies with Section 504 of the 1973 Rehabilitation Act and with the Americans with Disabilities Act of 1990. The University of North Texas provides academic adjustments and auxiliary aids to individuals with disabilities, as defined under the law. 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 believe you have a disability requiring accommodation, please see the instructor and/or contact the Office of Disability Accommodation at 940-565-4323 during the first week of class.

Additional Policies and Procedures:
Tardiness: If you arrive late, please enter quietly and sit down. Do not walk in front of speakers or disrupt the class in any other way.

DISCLAIMER: The professor of this course reserves the right to alter at any time any of the information presented on this syllabus at his discretion.