



Course	CHEM 3341: Inorganic Chemistry I
Professors	Gregg R. Dieckmann (Dr. D) and John W. Sibert
Term	Fall 2008
Meetings	MWF 9:30–10:20 am, FN 2.106

Professor's Contact Information

Office Phones	Dr. D: 972-883-2903; Dr. Sibert: 972-883-2918
Office Locations	Dr. D: BE 2.522; Dr. Sibert: BE 3.520
Email Addresses	dieckgr@utdallas.edu and sibertj@utdallas.edu
Office Hours	Dr. D: Mon 3:00 to 4:00 pm; Thurs 9:00 to 10:00 am Dr. Sibert: Tues 11:00 am to noon; Wed 3:00 to 4:00 pm For both: PLEASE feel free to stop by "when our doors are open"
Other Information	Best way to contact us: email listed above or stop by our offices; we don't read WebCT email

General Course Information

Course Description	Survey of inorganic chemistry with emphasis on the modern concepts and theories of inorganic chemistry, including electronic and geometric structure of inorganic compounds. Topics address contemporary physical and descriptive inorganic chemistry.
Learning Outcomes	<p><u>Objectives</u></p> <p>The goal of this course is to provide students with a thorough foundation in atomic structure, periodicity, bonding and symmetry with subsequent extension of these basic principles to acid/base, solid state and coordination chemistry. Students will develop an understanding of the elements and the ability to predict the structures, certain properties and reactivities of a range of representative ionic and covalent compounds.</p> <p><u>Expected Learning Outcomes</u></p> <p>Upon successful completion of this course, students will therefore:</p> <ol style="list-style-type: none">1. be able to explain atomic structure and bonding using currently accepted theories.2. be able to use group theory to describe molecular orbital diagrams and molecular properties.3. be able to integrate knowledge of atomic structure with the structure and properties of ionic and molecular compounds.4. be able to explain the history, bonding and properties of representative main group elements and coordination compounds.
Required Texts & Materials	<ol style="list-style-type: none">1. Textbook: <i>Inorganic Chemistry, 3rd edition</i> by Gary L. Miessler and Donald A. Tarr2. class materials located on WebCT at http://webct6.utdallas.edu/
Supplemental Texts, Readings, & Materials	<i>Molecular Symmetry and Group Theory, 2nd Edition</i> by Alan Vincent

Schedule & Academic Calendar

Section	Dates*	Topic	Chapter
1	Aug 25 thru Oct 3	Atomic structure	2
		Simple bonding theory	3
		Symmetry and group theory	4
		Molecular Orbitals	5
	<i>Sept 3</i>	<i>Labor Day</i>	
2	Oct 6 thru Oct 31	The crystalline solid state	7
		Coordination chemistry I: structures and isomers	9
		Coordination chemistry II: bonding/electronic spectra	10
		Coordination chemistry III: electronic spectra	11.1–11.3
3	Nov 3 thru Dec 8	Coordination chemistry IV: reactions and mechanisms	12
		Organometallic chemistry	13
		Organometallic reactions and catalysis	14
	<i>Nov 27–28</i>	<i>Thanksgiving Holiday</i>	
	<i>Dec 9–10</i>	<i>Reading days</i>	
	Wed, Dec 17	Cumulative Final Exam (8:00 am to 10:45 am)	

* dates approximate and subject to adjustment

Course Policies

Grading (credit) Criteria	<p><u>Course Evaluation:</u></p> <table> <tr> <td>(i) Quizzes</td> <td>20%</td> </tr> <tr> <td>(ii) Midterm Exams (3 x 20%)</td> <td>60%</td> </tr> <tr> <td>(iii) Final Exam</td> <td>20%</td> </tr> </table> <p>(i) Quizzes: There will be no makeup quizzes given (you will receive a “zero” for any quiz you miss). Your quiz scores will be averaged together to give your quiz average. The quizzes will come in two forms:</p> <ul style="list-style-type: none"> • in-class quizzes: these will be short exercises that cover current material in class and will be announced the previous class period • Foundation quizzes: these will be online exercises in ARIS. Each foundation quiz will cover background material of direct relevance to this class that you have seen in previous chemistry courses. You will be able to take these as many times as you want (top score counts) anywhere that you wish (at home, at the Success Center in the Conference Center (CN building), etc.) <p>(ii) Midterm exams: ALL 3 MIDTERM EXAMS MUST BE TAKEN, at the scheduled time and on the scheduled day. The date for each exam will be announced at least one week in advance. There will be no makeup exams given. If you have an acceptable, documented reason for missing an exam (e.g., participation in UTD-sponsored event, observance of religious holiday, etc.), we will arrange to offer you a comparable exam IN ADVANCE OF THE EXAM DATE. Otherwise, you will receive a “zero” for that exam, and that zero will be included in the calculation of your final class grade. You may arrive late for an exam up until the first student finishes and leaves (only penalty being that you will have proportionally less time to finish the exam). After this grace period you will not be allowed to take the exam and will receive a score of “zero”.</p> <p>(iii) Final Exam: The final exam must be taken, will be comprehensive and cannot be replaced by any other grade, so don't miss it. No makeup final will be given. <u>NOTE THE DAY AND TIME OF THE FINAL!</u></p>	(i) Quizzes	20%	(ii) Midterm Exams (3 x 20%)	60%	(iii) Final Exam	20%
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(ii) Midterm Exams (3 x 20%)	60%						
(iii) Final Exam	20%						
Make-up Exams	There are no make-up exams (see above).						
Extra Credit	There is no extra credit .						
Class Attendance	Your attendance and class participation will have an impact on your final grade. Taking an active role in your learning will help you perform better.						

<p>Student Conduct and Discipline</p>	<p>The University of Texas System and The University of Texas at Dallas have rules and regulations for the orderly and efficient conduct of their business. It is the responsibility of each student and each student organization to be knowledgeable about the rules and regulations which govern student conduct and activities. General information on student conduct and discipline is contained in the UTD publication, <i>A to Z Guide</i>, which is provided to all registered students each academic year.</p> <p>The University of Texas at Dallas administers student discipline within the procedures of recognized and established due process. Procedures are defined and described in the <i>Rules and Regulations, Series 50000, Board of Regents, The University of Texas System</i>, and in Title V, Rules on Student Services and Activities of the university's <i>Handbook of Operating Procedures</i>. Copies of these rules and regulations are available to students in the Office of the Dean of Students, where staff members are available to assist students in interpreting the rules and regulations (SU 1.602, 972/883-6391) and online at:</p> <p style="text-align: center;">http://www.utdallas.edu/judicialaffairs/UTDJudicialAffairs-HOPV.html</p> <p>A student at the university neither loses the rights nor escapes the responsibilities of citizenship. He or she is expected to obey federal, state, and local laws as well as the Regents' Rules, university regulations, and administrative rules. Students are subject to discipline for violating the standards of conduct whether such conduct takes place on or off campus, or whether civil or criminal penalties are also imposed for such conduct.</p>
<p>Academic Integrity</p>	<p>The faculty expects from its students a high level of responsibility and academic honesty. Because the value of an academic degree depends upon the absolute integrity of the work done by the student for that degree, it is imperative that a student demonstrate a high standard of individual honor in his or her scholastic work.</p> <p>Any student who commits an act of scholastic dishonesty is subject to discipline. Scholastic dishonesty includes, but is not limited to, cheating, plagiarism, collusion, the submission for credit of any work or materials that are attributable in whole or in part to another person, taking an examination for another person, any act designed to give unfair advantage to a student or the attempt to commit such acts.</p> <p>Plagiarism, especially from the web, from portions of papers for other classes, and from any other source is unacceptable and will be dealt with under the university's policy on plagiarism (see general catalog for details). This course will use the resources of turnitin.com, which searches the web for possible plagiarism and is over 90% effective.</p>
<p>Copyright Notice</p>	<p>The copyright law of the United States (Title 17, United States Code) governs the making of photocopies or other reproductions of copyrighted materials, including music and software. Copying, displaying, reproducing, or distributing copyrighted works may infringe the copyright owner's rights and such infringement is subject to appropriate disciplinary action as well as criminal penalties provide by federal law. Usage of such material is only appropriate when that usage constitutes "fair use" under the Copyright Act. As a UTD student, you are required to follow the institution's copyright policy (Policy Memorandum 84-1.3-46). For more information about the fair use exemption, see:</p> <p style="text-align: center;">http://www.utsystem.edu/ogc/intellectualproperty/copypol2.htm</p>
<p>Email Use</p>	<p>The University of Texas at Dallas recognizes the value and efficiency of communication between faculty/staff and students through electronic mail. At the same time, email raises some issues concerning security and the identity of each individual in an email exchange. The university encourages all official student email correspondence be sent only to a student's UTD email address and that faculty and staff consider email from students official only if it originates from a UTD student account. This allows the university to maintain a high degree of confidence in the identity of all individual corresponding and the security of the transmitted information. UTD furnishes each student with a free email account that is to be used in all communication with university personnel. The Department of Information Resources at UTD provides a method for students to have their UTD mail forwarded to other accounts.</p>

	<p><i>Our policy is to not communicate any details regarding your grade through email. We will only discuss these details in person with a student.</i></p>
Technical Support	<p>If you experience any problems with your UTD account, you may send an email to: assist@utdallas.edu or call the UTD Computer Helpdesk at 972-883-2911.</p>
Withdrawal from Class	<p>The administration of this institution has set deadlines for withdrawal of any college-level courses. These dates and times are published in that semester's course catalog. Administration procedures must be followed. It is the student's responsibility to handle withdrawal requirements from any class. In other words, I cannot drop or withdraw any student. You must do the proper paperwork to ensure that you will not receive a final grade of "F" in a course if you choose not to attend the class once you are enrolled.</p> <p><i>Undergraduates last day to withdraw with WP/WF: Thursday, Oct 23</i></p>
Student Grievance Procedures	<p>Procedures for student grievances are found in Title V, Rules on Student Services and Activities, of the university's <i>Handbook of Operating Procedures</i>.</p> <p>In attempting to resolve any student grievance regarding grades, evaluations, or other fulfillments of academic responsibility, it is the obligation of the student first to make a serious effort to resolve the matter with the instructor, supervisor, administrator, or committee with whom the grievance originates (hereafter called "the respondent"). Individual faculty members retain primary responsibility for assigning grades and evaluations. If the matter cannot be resolved at that level, the grievance must be submitted in writing to the respondent with a copy of the respondent's School Dean. If the matter is not resolved by the written response provided by the respondent, the student may submit a written appeal to the School Dean. If the grievance is not resolved by the School Dean's decision, the student may make a written appeal to the Dean of Graduate or Undergraduate Education, and the dean will appoint and convene an Academic Appeals Panel. The decision of the Academic Appeals Panel is final. The results of the academic appeals process will be distributed to all involved parties.</p> <p>Copies of these rules and regulations are available to students in the Office of the Dean of Students, where staff members are available to assist students in interpreting the rules and regulations.</p>
Incomplete Grades	<p>As per university policy, incomplete grades will be granted only for work unavoidably missed at the semester's end and only if 70% of the course work has been completed. An incomplete grade must be resolved within eight (8) weeks from the first day of the subsequent long semester. If the required work to complete the course and to remove the incomplete grade is not submitted by the specified deadline, the incomplete grade is changed automatically to a grade of E.</p>
Disability Services	<p>The goal of Disability Services is to provide students with disabilities educational opportunities equal to those of their non-disabled peers. Disability Services is located in room 1.610 in the Student Union. Office hours are Monday and Thursday, 8:30 a.m. to 6:30 p.m.; Tuesday and Wednesday, 8:30 a.m. to 7:30 p.m.; and Friday, 8:30 a.m. to 5:30 p.m.</p> <p>The contact information for the Office of Disability Services is: The University of Texas at Dallas, SU 22 PO Box 830688 Richardson, Texas 75083-0688 (972) 883-2098 (voice or TTY) disabilityservice@utdallas.edu</p> <p>If you anticipate issues related to the format or requirements of this course, please meet with the Coordinator of Disability Services. The Coordinator is available to discuss ways to ensure your full participation in the course. If you determine that formal, disability-related accommodations are necessary, it is very important that you be registered with Disability Services to notify them of your eligibility for reasonable accommodations. Disability Services can then plan how best to coordinate your</p>

	<p>accommodations.</p> <p><i>It is the student's responsibility to notify his or her professors of the need for such an accommodation.</i> Disability Services provides students with letters to present to faculty members to verify that the student has a disability and needs accommodations. <i>Individuals requiring special accommodation should contact the professor ASAP after class or during office hours.</i></p>
<p>Religious Holy Days</p>	<p>The University of Texas at Dallas will excuse a student from class or other required activities for the travel to and observance of a religious holy day for a religion whose places of worship are exempt from property tax under Section 11.20, Tax Code, Texas Code Annotated.</p> <p><i>The student is encouraged to notify the instructor or activity sponsor as soon as possible regarding the absence, in advance of the assignment.</i> The student, so excused, will be allowed to take the exam or complete the assignment within a reasonable time after the absence: a period equal to the length of the absence, up to a maximum of one week. A student who notifies the instructor and completes any missed exam or assignment may not be penalized for the absence. A student who fails to complete the exam or assignment within the prescribed period may receive a failing grade for that exam or assignment.</p> <p>If a student or an instructor disagrees about the nature of the absence [i.e., for the purpose of observing a religious holy day] or if there is similar disagreement about whether the student has been given a reasonable time to complete any missed assignments or examinations, either the student or the instructor may request a ruling from the chief executive officer of the institution, or his or her designee. The chief executive officer or designee must take into account the legislative intent of TEC 51.911(b), and the student and instructor will abide by the decision of the chief executive officer or designee.</p>

These descriptions and timelines are subject to change at the discretion of the Professor.