

Chemistry 401: Modern Inorganic Chemistry
Fall 2012
MWF 10:10-11:00 Fulmer 225
Syllabus

Instructor: Prof. Scot Wherland, Fulmer 151, 335-3360, scot_wherland@wsu.edu
Office hours Tu 9-10, W 4-5, by email, and by arrangement

Website: The course website and gradebook will be maintained in Blackboard (<https://learn.wsu.edu>) or through MyWSU .

Text: "Inorganic Chemistry" by Shriver & Atkins, 6th Edition, 2014 (Required) ISBN-13: 978-1-4292-9906-0 Earlier editions are not much different.

Course Goals: The goal of this course is to present the basic physical principles and models inorganic chemists have found especially useful and use them to discuss the chemistry of the main group and especially transition elements. The presentation will also emphasize the limitations and strengths of various theories and models, especially those that were first presented in general chemistry. In addition, some of the areas of research of current interest to inorganic chemists will be briefly discussed.

Homework and Worksheets: The assignments are given as study aids and to indicate areas of emphasis. They will not be graded, but quite similar questions will appear on the quizzes and exams. There will be an opportunity to ask questions about the homework before each quiz. Short answers to the self-tests in the chapter and the exercises at the end of the chapter are available on Blackboard and at the book companion site <http://global.oup.com/uk/orc/chemistry/ichem6e/> . We will also do worksheets in class as a study aid.

Quizzes: There will be about 12 short quizzes, usually given on Wednesday. These are intended to help you to keep up with the material and to give you an idea of what exam questions will be like. The ten best scores will be counted toward the course grade. The first quiz will be on September 2.

Exam Dates: Midterms are tentatively scheduled for Friday October 9 and Friday December 4, and the final is scheduled for Tuesday, December 15 from 8 to 10 am.

Grading:	2 Hour Exams	2 X 100	200 points
	10 Best Quizzes	10 X 10	100
	<u>Final</u>	<u>200</u>	<u>200</u>
	Total		500

Grades are based on the total points and will be no lower than an A for 90-100%, a B for 80-90%, a C for 70-80% and a D for 60-70%. There will also be + and - grades.

Disability Accommodation: Reasonable accommodations are available for students with a documented disability. If you have a disability and need accommodations to fully participate in this class, please either visit the Access Center (Washington Building 217; 509-335-3417) to schedule an appointment with an Access Advisor. All accommodations **MUST** be approved through the Access Center.

Academic Integrity: A student will be failed, either on the particular exam or for the entire course, at the discretion of the instructor, if caught cheating. Cheating includes plagiarism and having access to written or oral help during an exam, or otherwise attempting to gain or give unfair advantage.

Safety: The campus safety plan is at <http://safetyplan.wsu.edu/> . Go to <http://oem.wsu.edu/> to prepare for emergencies. The campus-wide alert system is at <http://alert.wsu.edu/> .

Date	Topic	Suggested Homework Exercises	Quizzes and Exams
August 24 - 28	Ch. 1: Atomic structure and properties	1, 2 (a,b), 4, 9, 12, 13, 15, 18 (Slater's Rules), 19, 20, 24, 28, 29	
August 31 – Sept. 4	Ch. 2 Bonding theories		Quiz 1
Sept. 9 -11 Sept. 7 Labor Day	Ch. 2 Bonding theories		Quiz 2
Sept. 14 – 18	Ch. 3 Solids and Crystal Structures		Quiz 3
Sept. 21 – 25	Ch. 4 Acids and Bases (Generalized)		Quiz 4
Sept 28 – Oct. 2	Ch. 4 Acids and Bases (Generalized)		Quiz 5
Oct. 5 - 9	Ch. 5 Redox		Exam 1
Oct. 12 – 16	Ch. 5 Redox		Quiz 6
Oct. 19 - 23	Ch. 6 Point Groups		Quiz 7
Oct. 26. - 30	Ch. 9 Periodic Trends		Quiz 8
Nov. 2 – 6	Ch. 20 Transition Metal Complexes		Quiz 9
Nov. 9 – 13 Nov. 11 Veteran's Day	Ch. 20 Transition Metal Complexes		Quiz 10 (Friday)
Nov. 16 – 20	Ch. 22 Organometallic Compounds		Quiz 11
Nov. 23 – 27	Thanksgiving Break		
Nov. 30 – Dec. 4	Ch. 22 Organometallic Compounds		Exam 2
Dec. 7 – 11	Ch. 25 Catalysis		Quiz 12 (optional)
Dec. 14 – 18	Finals Week		Final Dec. 15 8 – 10 AM