

Essentials of Chemistry – Fall 2006
Chem 101, section 001
Mon, Wed, and Fri 8:40-9:30am SN 155

Instructor information

Instructor: Darcy Thie
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Required materials

Text: *General, Organic, & Biological Chemistry, 4th edition* by H. Stephen Stoker

Materials: Large 3-ring binder
Scientific calculator (must be able to perform logarithms)
Regular access to a computer

Suggested study guide: *Study Guide with Solutions to Selected Problems for General, Organic, and Biological Chemistry, 4th edition* by Danny V. White and Joanne A. White

Course Objective

This introductory course is designed to give students who are planning a career in a health-related field a solid foundation in the principles of inorganic chemistry to be used in future work. After successful completion of the course, the student should be familiar with and competent in the following: 1) basic scientific skills, such as using scientific notation, significant figures, and metric conversions, 2) the properties of atoms and the periodic table, 3) characteristics of ionic and covalent bonding, 4) properties of inorganic chemical reactions and molar relationships, 5) physical states of matter, 6) the basic ideal gas law and associated laws, 7) properties of solutions, 8) concepts about equilibrium, 9) acid-base chemistry, and 10) general nuclear chemistry. This course also serves as a requirement in the BSU Core Curriculum. The goals that are applicable to this course from the core requirements are given below:

Critical Thinking/Problem Solving

- ✓ Clearly identify and analyze a problem; identify important information within the problem to construct correct solutions.
- ✓ Use both qualitative and quantitative methods of reasoning.

Communication Skills

- ✓ Read and interpret written discourse.
- ✓ Listen to and interpret spoken discourse.
- ✓ Use speaking, listening, and interpersonal skills in small groups to teach and learn from others.

Cultural Perspective

- ✓ This course does not address this core goal

Breadth of Knowledge and Intellectual Perspective

- ✓ Articulate basic assumptions, concepts, theories, and factual information appropriate to chemistry.
- ✓ Apply techniques and investigations relevant for solving chemistry problems.
- ✓ Apply appropriate critical thinking/problem solving skills and communication skills in the context of chemistry.

Prerequisite

In order to be successful in this course, all students must have successfully completed Math 025 or have received a satisfactory math placement score.

Course Website

The online website, Blackboard (Bb), will be used frequently. It is required that you access this website throughout the week and on weekends to view announcements and also to print relevant material for the next day in class. Relevant material includes class notes (recommended, but not required), homework assignments as pdf files, and other handouts.

Blackboard can be accessed at <http://blackboard.boisestate.edu>. The first time you log in, your ID is your complete student ID number (**not** your BroncoWeb login), and your password is the same as your student ID number. It is recommended that you change your password the first time you enter the site.

Attendance

Attendance in lecture is highly recommended; however, roll will not be taken. Attendance for exams is required on the day of the exam. Exceptions will be made **ONLY** for students with university excuses. Absolutely NO exceptions will be made for the final.

Laboratory

The required manual for the laboratory can be purchased in the bookstore. The laboratory associated with this lecture is mandatory. The syllabus will be passed out in lab.*

****Note: Attendance in lab is MANDATORY for the first week of class. Students that miss the first week of lab will be dropped from both lab and lecture.***

Lecture Assignments and Exams

There will be 9 homework assignments given throughout the semester. The homework grade will be calculated from the best 8 of 9 homework assignments that are given (for a total of 80 possible points—see point break down below). Because the best 8 of 9 scores are used, homework assignments **will not** be accepted late. There are no exceptions to this rule, including computer problems.

Homework will be available on the Bb website through a link to a pdf file. This file is easily downloadable and can be printed and written on. To turn the homework assignment in, students must take the homework as a "quiz" on blackboard. This "quiz" is an exact replica of the pdf file that is downloaded from the site. Taking the homework as a "quiz" enables the student to receive a score right after the "quiz" is submitted. All 9 homework assignments will be submitted in this way.

There will be 4 exams and one final exam. Each exam will cover only the material presented since the previous exam, but some "key" topics will carry throughout the entire semester. **No** exam scores will be dropped.

The final is cumulative. Everyone must take the final.

Point Break-down:

8 homework assignments @ 10 points each = 80 points

4 chapter exams @ 100 points each = 400 points

1 final exam @ 120 points = 120 points

Total lecture points = 600 points**

**Note: The 600 points listed above are only for the *lecture* portion of the class. This accounts for 75% of the final lecture grade.

Laboratory is worth 25% of the final lecture grade.* At the end of the semester, the total lab grade will be reported to the lecture instructor as a percentage and factored into the overall lecture grade. An example grade calculation can be seen below.

Example grade calculation: If you have an 82.3% from lecture and a 91.0% from lab, your overall grade would be:

$(75\% \times 82.3) + (25\% \times 91.0) = 84.5\%$, for a B in the course (see grade scale below).

Note: Students must obtain a minimum percentage of 70% in the lab portion of the course to be eligible for a passing grade (A-C) in Chem 101. Failure to achieve a 70% score in lab will result in a D or F in the entire course of Chem 101 (not just the lab portion).

Grading

The grade scale for this course is: 100-90% A (A+, A, A-); 89-80% B (B+, B, B-); 79-70% C (C+, C, C-); 69-60% D (D+, D, D-); ≤ 59% F

Please refer to pages 26-27 of the BSU 2006-2007 Undergraduate Catalog for questions regarding new grading policies.

Grades will be posted on Blackboard.

Academic Dishonesty

Academic dishonesty will not be tolerated in lecture or lab. It is expected that all students adhere to the Boise State University Code of Conduct, which can be found at:

<http://www2.boisestate.edu/studentconduct/avoidingacademicdishonesty.htm>

Students that violate the standards set by the university will be punished by the terms outlined in the Code of Conduct.

Common Courtesy

It is important to respect others during class time. Please silence your cell phones during class and limit conversations with other students during class to related material. Also, please refrain from packing up early. The lecture time is 50 minutes (until 9:30am) and students should not begin packing early unless class has ended.

Proposed schedule** Note: The schedule is subject to change

The week of...	Chapters covered...	Special dates to remember...
Aug 21 - 25	Syllabus and Chapter 1	
Aug 28 - Sept 1	Chapters 1 and 2	
Sept 4 - 8	Chapters 2 and 3	No class Mon, Sept 4 - Labor Day
Sept 11 - 15	Chapter 3	Fri, Sept 15: Exam 1
Sept 18 - 22	Chapter 4	
Sept 25 - 29	Chapter 5	
Oct 2 - 6	Chapter 6	
Oct 9 - 13	Chapter 7	Mon, Oct 9: Exam 2
Oct 16 - 20	Chapter 7 and 8	
Oct 23 - 27	Chapter 8	
Oct 30 - Nov 3	Chapter 9	Wed, Nov 1: Exam 3
Nov 6 - 10	Chapter 9	
Nov 13 - 17	Chapter 10	
Nov 20 - 24	Thanksgiving Break	No classes
Nov 27 - Dec 1	Chapter 10 and 11	Fri, Dec 1: Exam 4
Dec 4 - 8	Chapter 11	
Dec 11 - 14	Final's Week	Wed, Dec 13: 8 - 10am: Final Exam (held in the same room)