College Chemistry, C112 Lecture SYLLABUS Dr. Bammel Spring 2006

COURSE DESCRIPTION; (Area III). This course is a continuation of CHEM 111 and includes a Required Lecture and a Required Laboratory. CHEM 111 is a prerequisite for this class.

REQUIRED MATERIALS: TEXT; Chemistry The Science in Context by T.R. Gilbert, R.V. Kirss, and G. Davies

Computer and internet access the Boise State University Black Board site. Students are expected to check their BSU email and the Blackboard site daily. You also need a calculator capable of scientific notation and logarithms (No laptops, No communications devices in class during test).

INSTRUCTOR; Dr. Brad Bammel Office: SN323
Phone: 426-3476 Email: bbammel@boisestate.edu

ATTENDANCE is required. I may give unannounced quizzes at anytime. You are responsible for learning the material provided in class, in the text, and on the internet.

OFFICE HOURS: MW 10:40 – 12:30, T 11:40 – 1:30.

ASSESSMENT: There will be 4 *cumulative* tests and in class work. There may be quizzes. Tests are worth 100 points each. The total of the inclass work will be 100 points. Your score on inclass work will be used to replace 1 test score (not the final). *I will not drop the final*. Your grades will be entered in the Blackboard grade book. You may replace the 1st 3 tests and the inclass work with the final.

CLASS STRUCTURE: This class will be 2 parts lecture and 1 part in class help session. I will spend Wednesdays and Fridays discussing material. We will spend most Mondays doing practice problems, and discussing questions. The Monday practice problems will be collected and graded.

The practice problems will come from the text and from my imagination. To get the greatest benefit from this class structure you need to come to class prepared. Study the material we have covered and the handouts before Monday so you know were you need help.

Additional homework problems are available in the textbook. Becoming successful at science is the same as becoming successful at music or athletics – the more you practice the better you are at the discipline.

Tests will be given on Monday. Tests will all be cumulative!

SCHEDULE: The schedule is approximate. The test dates are fixed, the material we cover before each test may vary.

Week of	Lecture topic	Gilbert	Lab
17-Jan no class Monday	Solids	10	Check in and safety discussion
23-Jan	Thermo	11 & 13	Bootcamp
30-Jan			% Cu in a penny
6-Feb	Organic Chemistry	12	Ksp
13-Feb	1st test Monday 2/13 covering Solids & Thermo		Aspirin
Feb-21 no class Monday	Kinetics	14	Ni & Cu
27-Feb			Enthalpy
6-Mar	2nd test Monday 3/13 covering solids, thermo, org and kinetics		Hess's law
13-Mar	Equilibrium	15 & 16	Synthesis of soap
20-Mar			Kinetics of dye
Mar-27 no class	SPRING BREAK		
3-Apr	Acid Base	16	Equilibrium
10-Apr			Titration Curve
17-Apr	3rd test Monday April 17 covering solids - acids		Phosphate Buffer
24-Apr	Electro	17	Electrolysis
1-May			Check out
8-May	4 th test **8:00** am Wednesday May 10 covering all topics		

GRADING; Your lab. and lecture scores will be combined to determine your grade. The score from your lecture will be 80% and the score from your lab will be 20% of your final grade.

LEARNING OBJECTIVES: At the successful conclusion of this course, a student should be able to demonstrate proficiency at a 70 % level in the following areas, as measured by written exams and graded homework.

- understand the nature of atomic and molecular structure and bonding including
- intermolecular forces.
- understand thermodynamic principles and their association with reaction
- spontaneity
- develop computational skills used in solving thermodynamic, stoichiometric, and
- solution calculations.
- understand and use principles of reactivity for chemical kinetics, chemical
- equilibrium, acid-base equilibrium, and precipitation reactions.
- understand principles of chemical analysis using concepts of acid-base,
- precipitation, and oxidation-reduction reactions.