De Anza College
Chemistry 25 (Preparation Course for General Chemistry)
Winter 2016

Course Syllabus

Instructor: Dr. David Feiler
E-mail: feilerdavid@fhda.edu
Office Hours: Tuesday and Thursday 12:20 to 12:45PM in room SC1102
Monday and Wednesday 9:00 to 9:25 PM via e-mail

1. Content and Goals:

An introduction to the core theory and problem-solving techniques of chemistry as preparation for Chemistry 1A and other science related fields. An introduction to gravimetric and volumetric analysis, rudimentary laboratory equipment and operations, and the preparation and maintenance of a laboratory notebook.

Student Learning Outcomes:

a. Assess the fundamental concepts of modern atomic and molecular theory.
b. Evaluate the standard classes of chemical reactions.
c. Demonstrate a fundamental understanding of mathematical concepts pertaining to chemical experimentation and calculations.

2. Prerequisites:

Mathematics 114 or equivalent.
Advisory: English Writing 1A or English as a Second Language 5.

3. Required Materials:

a. Corwin, Charles H. Introductory Chemistry, Concepts & Critical Thinking, 7th Edition, Prentice Hall (2014) ISBN 13: 978-0-321-80490-7, ISBN 10: 0-321-80490-2.
b. Corwin, Charles H. Introductory Chemistry, Concepts & Critical Thinking Laboratory Manual, 6th Edition, Prentice Hall (2013) ISBN-10: 0-321-75094-2; ISBN-13: 978-0-321-75094-5
c. Safety goggles (approved by OSHA) for working in the chemistry lab: available at the bookstore.
d. Scientific calculator.
e. Lab notebook (sewn; not spiral bound) for recording laboratory data
f. Laboratory apron or coat to protect yourself and your clothes (Optional)
g. Stapler (No unstapled assignments will be accepted)

4. Basis of Evaluation:

a. Midterm Exams:
Three midterm exams will be given during the lecture period. Exams will cover all lectures up to the time of exam including the homework assignments. No make-up exams shall be given. For the exam schedule, see the lecture schedule attached.

b. Final Exam:
A comprehensive final exam will be given during finals week.

c. Homework:
Homework for each chapter will be due the week after the lecture material is completed. No late homework will be accepted. Homework will be graded on a basis of completeness. You will not receive full credit by copying the answers. You are welcome to work with your classmates but you are required to do your own work. The homework assignments are designed to help you learn and retain course material; it would not be helpful to you to copy answers without investing any effort. Please see the attached homework assignment sheet for the assigned problems.

d. Lab Reports:
Lab reports are due one week after the completion of the experiment. Lab report "Format" will be discussed by your lab instructor at the beginning of the quarter. Lab reports will be graded on clarity, completion of work assigned, and accuracy and precision of your results. To get a perfect score on your lab report, you will have to meet ALL of the above criteria. No late lab reports will be accepted.

e. Lab Exam:
A final lab exam will be given at the end of the quarter testing the student on various aspects of the experiments.

5. Grading:

The course grade earned will depend on the sum total points earned in lecture and lab. The following weighting factors will be used:

Lecture		Laboratory	
3 Midterm Exams	45%	9 Lab Reports	25%
1 Final Exam	20%	1 Lab Exam	5%
15 Homeworks	5%		
Subtotal	70%		30%

Total = 100%

The grade, which you will earn, depends on your achievements in relation to the minimum performance standard. The following table provides an approximate guide to correlating an accumulated total point % with an earned course grade.

Letter Grade	Total Point (%)
A+	97% 100%
A	94% 96%
A-	89% 93%
B+	85% 88%
B	81% 84%
B-	77% 80%
C+	73% 76%

C	65% 72%
D+	60% 64%
D	55% 59%
D-	50% 54%
F	0% 49%

6. Academic Honesty:

The instructor deems academic honesty essential for personal integrity. Anyone caught cheating in quiz or exam or copying other's work in the lab will have his work voided and upon repeated violation, will fail the course. Conduct yourself accordingly to remove any suspicion in the instructor's eyes all together.

Best wishes for a successful quarter in chemistry.

Dr. Feiler

Chemistry 25 Lecture Schedule (Lecture meets in SC1102 @ 10:30AM) **Winter 2016 Lecture Schedule**

Week of	*Tuesday*	*Thursday*
Jan 4	Introduction to Chemistry (Ch. 1)	Prerequisite Science Skills (Ch. 1)
Jan 11	The Metric System (Ch. 2)	Matter and Energy (Ch. 3)
Jan 18	Models of the Atom (Ch. 4)	Review (Ch. 1,2,3,4)
Jan 25	**Exam #1 (Ch. 1,2,3,4)**	The Periodic Table (Ch. 5)
Feb 1	Language of Chemistry (Ch. 6)	Chemical Reactions (Ch. 7)
Feb 8	The Mole Concept (Ch. 8)	Review (Ch. 5,6,7,8)
Feb 15	**Exam #2 (Ch. 5,6,7,8)**	Chemical Equation Calculations (Ch. 9)
Feb 22	Gases (Ch.10)	Liquids and Solids (Ch.11)
Feb 29	Chemical Bonding (Ch. 12)	Review (Ch. 9,10,11,12)
Mar 7	**Exam #3 (Ch. 9,10,11,12)**	Solutions (Ch. 13)
Mar 14	Acids and Bases (Ch. 14)	Oxidation and Reduction (Ch. 17)
Mar 21		**Final Exam 9:15 to 11:15 AM (Chapters 1 to 14, and 17)**

Chemistry 25 Laboratory Schedule (Lab meets in SC2208 @ 7:30AM) **Winter 2016 Lab Schedule**

Week of	*Tuesday (33756)*	*Thursday (33760)*
Jan 4	**CHECK-IN**	**CHECK-IN**
Jan 11	**E2: INSTRUMENTAL MEASUREMENTS** **E3: DENSITY OF LIQUIDS & SOLIDS**	**E2: INSTRUMENTAL MEASUREMENTS** **E3: DENSITY OF LIQUIDS & SOLIDS**
Jan 18	**E5: PHYSICAL & CHEMICAL PROPERTIES**	**E5: PHYSICAL & CHEMICAL PROPERTIES**
Jan 25	**E7: FAMILIES OF ELEMENTS**	**E7: FAMILIES OF ELEMENTS**
Feb 1	**E13: ANALYSIS OF ALUM**	**E13: ANALYSIS OF ALUM**
Feb 8	**E10: ANALYSIS OF A PENNY**	**E10: ANALYSIS OF A PENNY**
Feb 15	**E14: DECOMPOSING BAKING SODA**	**E14: DECOMPOSING BAKING SODA**
Feb 22	**E21: ELECTRICAL CONDUCTIVITY OF AQUEOUS SOLUTIONS**	**E21: ELECTRICAL CONDUCTIVITY OF AQUEOUS SOLUTIONS**
Feb 29	**E20: ANALYSIS OF VINEGAR** **Part 1**	**E20: ANALYSIS OF VINEGAR** **Part1**
Mar 7	**E20: ANALYSIS OF VINEGAR** **Part 2**	**E20: ANALYSIS OF VINEGAR** **Part 2**
Mar 14	**LAB EXAM AND CHECK-OUT**	**LAB EXAM AND CHECK-OUT**
Mar 21		