

Chemistry 102
General Chemistry II (3.3 ; 4 cr.)

- ◆ **Textbook:** R. Chang, "Chemistry", 6th Edition, McGraw Hill, 1998.
+ Student solution manual

- ◆ **Course Description:**
This course is a continuation of an introductory survey of chemistry which you began with Chem 101. We will discuss topics in solutions, chemical equilibrium, acids and bases, acid-base and solubility equilibria, thermodynamics, electrochemistry, nuclear and organic chemistry, with some interesting applications. You will also improve your skills in analyzing problems, critical thinking and increase your understanding and awareness of the role of chemistry in everyday life.

- ◆ **Grading:**

2 Quizzes	35% (higher grade 20%, lower 15%)
Presentation	10%
Final Examination	30%
Laboratory Work	25%

- ◆ **Course Outline:**

<u>Chapter</u>	<u>Title</u>	<u>Sections</u>
11.	Intermolecular Forces, Liquids	11.1-11.3; 11.8-11.9
12.	Physical Properties of Solutions	12.1-12.7
14.	Chemical Equilibrium	14.1-14.2; 14.4-14.5
15.	Acids and Bases: General Properties	15.1-15.7; 15.10-15.12
16.	Acid-Base Equilibria & Solubility Equilibria	16.1-16.8
18.	Entropy, Free Energy and Equilibrium	18.1-18.5
19.	Electrochemistry	19.1-19.5; 19.8
20.	The Chemistry of Metals	20.1; 20.3-20.4
21.	Nonmetallic Elements & Their Compounds	21.1-21.2
23.	Nuclear Chemistry	23.1-23.6
24.	Organic Chemistry	24.1-24.3

- ◆ **Attendance and Participation:** Students are expected to attend all lectures. If you miss more than 1/5 of the lectures, you may be asked to withdraw from the course. In addition students are expected to participate in class discussions, problem solving sessions and collaborative group work (details will be given later in class)

- ◆ **Make-ups:** **NO MAKE-UP QUIZZES WILL BE GIVEN.** . If you miss one quiz, you will receive **A ZERO** unless a valid medical excuse is presented (only from AUB)

infirmary). In this case the % for the missed quiz will be added to the final exam.

- ◆ **Final Examination:** In the case of absence from the final examination with **valid reasons**, the student will be entitled to a make-up final **only with the approval of the instructor and the Arts and Sciences Dean's Office.**
- ◆ **Problem solving:** Problem solving constitutes an essential part of this course, in order to fully understand the material, you should solve all the practice exercises included within the chapters as well as the assigned problems at the end of each chapter. Any additional problems are helpful and encouraged.
- ◆ **Assigned Problems:**

<u>Chapter</u>	<u>Numbers</u>
11.	7-10, 12-14, 16-20,31,32,78,80,82,84,86,88,94 (p. 457-460)
12.	1,5,7-10,12,15-24,28,36,38,40,41-43,51-57,65,68,73, 76,77,80,81 (p. 497-501)
14.	2,7-9,13,14,16,18,19,22,28,30,38,40,41,42,44,46,52, 56,57,68,70 (p. 588-592)
15.	4-6, 8,12,16,18,20,21,24,26,31,32,34,36,42,43,46,51, 52,54,70,76,78,80,90,92 (p. 636-639)
16.	2-4,6, 8-10,16,18,21-24,26,28,31-33,34,42,44,46,48, 49,50,54,56,58 (p. 684-686)
18.	5,8,10,12,14,16,18,20,24,26,28,30,32 (p. 750-751)
19.	1-4,6,10,12-14,16,18,22,24,26,30,32,34,46,48,50,52, 56 (p. 792-794)
20.	12,21,22,28,30,33,34,36,38,40 (p. 827)
21.	12,18,21,24,28,30-32,40,51,52,54,56,60,68,78 (p. 865)
23.	5,6,14,16,18,20,26,28,30,34 (p.932)
24.	12,14,16,20,22-26,28,31,32 (p.965-966)