

# COURSE SCHEDULE - CHEM 125 - SUMMER 2009

## TEXTBOOK ABBREVIATIONS

**RGM**- Reger, Goode, & Mercer, Chemistry Principles & Practice, 2nd Edition

**SSM** - Shakhshiri, Schreiner, & Meyer, Workbook for General Chemistry Audio-Tape Lessons, 2nd Edition

**DW** - Davis & Witten, Study Guide/Workbook for Chemistry Principles & Practice, 2nd Ed. (**Optional, highly recommended**)

**JD** - John DeKorte, Student Solution Manual, (**Optional, highly recommended**)

**M** - Molecular Structure Models, Type C (for Organic Chemistry), made by MARUZEN

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<b>TOPIC #</b>	<b>LECTURE and RECITATION TOPICS</b>	<b>CHAPTER HW PROBLEMS</b>	<b>AUDIO-TAPE LESSON</b>
<b>TOPIC 1</b>	RGM Chapter 1; Chapter 2; and Appendices A,C; much of this will be reading material	1.32 ,1.48 ,1.54 ,1.64 , 1.68 ,1.72 ,1.76 ,1.86 , 1.88 ,1.90 ,1.102,1.104	SSM Lesson #33, Significant Figures & Exponential Notation
<b>TOPIC 2</b>	RGM Chapter 2; Chapter 3 Atoms, Molecules, and Ions; Stoichiometry I: Equations, the Mole	2.22 ,2.28 ,2.38 ,2.44 , 2.48 ,2.50 ,2.58 ,2.68 , 2.74 ,2.96 ,2.102,2.104	Same Lesson as Week 1 - You have 2 weeks to complete SSM Lesson #33
<b>TOPIC 3</b>	RGM Chapter 3; Chapter 4 Stoichiometry I: Chemical Formulas Stoichiometry II	3.18 ,3.36 ,3.50 ,3.58 , 3.76 ,3.94 ,3.104,3.112, 3.120,3.133,3.135,3.140	SSM Lesson #1, Chemical Symbols & Formulas; AW & FW calc.
<b>TOPIC 4</b>	RGM Chapter 4; Chapter 5 Stoichiometry II: Chemical Reactions in Solution; Thermochemistry	4.18 ,4.20 ,4.22 ,4.44 , 4.48 ,4.66 ,4.78 ,4.86 , 4.90 ,4.106,4.107,4.110	SSM Lessons #2 and #3, Writing & Balancing Chem. Eq's; Mole Concept
<b>TOPIC 5</b>	RGM Chapter 5; Chapter 6 Thermochemistry; The Gaseous State	5.32 ,5.36 ,5.48 ,5.52 , 5.56 ,5.60 ,5.68 ,5.74 , 5.80 ,5.92 ,5.98 ,5.102	SSM Lessons #4 and #5 Mole Concept II; Writing Net Ionic Eq's
<b>COMMON EXAM. #1 - Covers RGM Chapters 1, 2, 3, part of 4</b>			
<b>TOPIC 6</b>	Chapter 6; Chapter 7 The Gaseous State; Electrons in Atoms	6.26 ,6.30 ,6.52 ,6.56 , 6.64 ,6.72 ,6.82 ,6.92 , 6.106,6.108,6.110,6.116	SSM Lesson #8, Using the Ideal Gas Law
<b>TOPIC 7</b>	RGM Chapter 7 Electrons in Atoms	7.26 ,7.30 ,7.36 ,7.38 , 7.40 ,7.46 ,7.54 ,7.58 , 7.68 ,7.72 ,7.94 ,7.104	SSM Lesson #9, Electronic Structure of Atoms

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<b>TOPIC 8</b>	RGM Chapter 8; Periodic Trends of the Elements	8.48 ,8.60 ,8.68 ,8.84 , 8.86 ,8.94 ,8.98 ,8.108, 8.116,8.122,8.126,8.128	SSM Lesson #10, Periodic Properties
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<b>TOPIC 9</b>	RGM Chapter 9; Chemical Bonds	9.32 ,9.42 ,9.46 ,9.54 , 9.60 ,9.64 ,9.74 ,9.82 , 9.90 ,9.94 ,9.98 ,9.100	SSM Lesson #12, Lewis Structure and the Octet Rule
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**COMMON EXAM. #2 - Covers RGM Chapter part of 4, 5, 6, and 7**

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<b>TOPIC 10</b>	RGM Chapter 9; Chapter 10 Chemical Bonds; Molecular Structure and Bonding Theories		SSM Lesson #13, Molecular Geometry
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<b>TOPIC 11</b>	RGM Chapter 10: Molecular Structure and Bonding Theories	10.26 ,10.28 ,10.36 ,10.46 , 10.60 ,10.72 ,10.82 ,10.94 , 10.100,10.108,10.114,10.124	SSM Lesson #14, Valence Bond Theory and Hybridization
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<b>TOPIC 12</b>	RGM Chapter 11; Liquids and Solids	11.24 ,11.34 ,11.44 ,11.46 , 11.50 ,11.54 ,11.64 ,11.70 , 11.76 ,11.84 ,11.86 ,11.90	No Scheduled Assignment
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**COMMON EXAM. #3 - Covers RGM Chapters 8, 9, and 10**

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<b>TOPIC 13</b>	RGM Chapter 12; Solutions	12.32 ,12.42 ,12.54 ,12.60 , 12.68 ,12.70 ,12.76 ,12.84 , 12.86 ,12.94 ,12.96 ,12.98	SSM Lesson #16 Colligative Properties of Solutions
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<b>TOPIC 14</b>	Review Unfinished Work "Bit's 'n Pieces"		No Scheduled Assignment
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**NOTE WELL:** No Student may be enrolled in CHEM 125 unless 42% has been achieved on the Toledo Chemistry Placement Exam, available in the NJIT Counseling Center.

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## IMPORTANT INFORMATION - PLEASE READ CAREFULLY

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You will be held accountable for both knowing the information and for following the instructions given in the following pages

**CLASS SCHEDULE** To be announced in class.

**LECTURES, RECITATION** Students are expected to read the specified textbook material *before* coming to class. See below for attendance policy. Instructors may spend more or less time on the topics listed; they may be one or two topics ahead or behind. During Week #1, your instructor will explain the structure of the course. New material is introduced and discussed in lecture. During recitation: (a) the subject matter is repeated and reinforced, (b) questions are answered, (c) homework problems are discussed and solved, (d) quizzes may be given, and (e) new material may be introduced, taught, and discussed.

**ATTENDANCE POLICY** Attendance is required at all meetings of this course. Three unexcused absences are tolerated - these include undocumented illness and absences due to personal difficulties. For an excused absence, you must submit documentation to your instructor and obtain his or her approval. Attendance is worth 70 points; 10 points are lost for each unexcused absence beyond three (*see end of next page for course grading*).

**HOMEWORK** Your recitation instructor may assign homework problems different from those listed in this course schedule. All homework assignments must be worked out and submitted according to the specific directions and requirements of your recitation instructor. Late homeworks usually receive a grade of zero. Solutions to the listed homework problems will be posted on the CHEM 125 bulletin board. Please bring to the attention of Dr. Bob Conley (Room 352T; Ext 3277) any mistakes found in these posted solutions.

**AUDIO-TAPE LESSONS** Unless specifically exempted, all students are required to work each scheduled audio-tape lesson in the CHEM LEARNING CENTER CLC (Room 110T) during the week specified in the course outline. Only half credit will be given if the scheduled lesson is completed one week late; thereafter, no credit will be given. Students scoring 60 or above on the Toledo Chemistry Placement Test are exempted from the audio-tape lessons scheduled *only up to common exam #1*. Unless you are specifically exempted from CLC work, it is required; however, even if you are exempted you may still work them. Those who receive a grade of 60% or greater on a *common exam* are exempted from the lessons scheduled between that exam and the next exam only. The names of these students will be posted on the CHEM 125 bulletin board. The hours that the CLC is scheduled to be open are posted on the door. If the CLC is not open when it is supposed to be, contact either Dr. Bob Conley (352T) or the department administrative assistant (Gayle Katz) in the Chemistry Office (Room 384T). Dr. Bob or the department administrative assistant will then decide if you need more time to complete that weeks lesson. The CLC monitors will examine your workbook and give any further instructions. When you are finished with the lesson, show your completed assignment in the workbook to the CLC monitor. You will then be credited for the lesson.

Your CHEM 125 instructor may substitute other activities to replace the audio-tape lessons.

**WHERE TO GO FOR HELP** Tutoring is available on both a walk-in and appointment basis at the University Learning Center located in Room 200 in Kupfrian Hall. or more information call (973) 596-2992 between 8:30 am to 7:30 pm (Mon-Thu) Fridays 8:30 to 4:00 pm. Tutoring opportunities are usually announced in the Advertisement section of the University newspaper (the VECTOR). Do not wait until it is too late to seek help. If you continue to have academic difficulty with CHEM 125, you are encouraged to make an appointment to talk with your instructor. Instructors usually announce their office hours during the first week of the semester and these office hours are also posted on their office door. Students are also reminded that the office of the Dean of Freshman Studies, 306 Campbell Hall (x2981), may be of some assistance.

**COMMON EXAMINATIONS** Three common examinations will be administered throughout the semester. No books, notes, tables, or scrap paper will be allowed. ***Calculators but not hand held computers are permitted.*** Calculators with battery operation only are permitted. Students must bring ***two #2 pencils*** to all exams, and four #2 pencils to the Final Exam. Students must know their social security numbers for every examination.

Information describing the format of the common exams will be given by your Lecture Instructor. The Final Exam will be the American Chemical Society First Term examination for General Chemistry. This exam is 110 minutes long and will consist of machine graded multiple choice questions and problems only.

One ***make-up examination*** will be permitted if there is an acceptable and substantial reason, but a \$5.00 fee is required - see section on SPECIAL EXAM FEE in your catalog. A grade of zero will be given for a second missed examination independent of reason. Additional details concerning all exams will be given by your Lecture Instructor.

Students are reminded that violations of the NJIT student Honor Code are serious and that the Chemistry Division will make an extraordinary effort to prevent ***CHEATING*** on all examinations and will vigorously prosecute cases of cheating, if any, in accordance with NJIT policy and procedures. Students are hereby notified that computer crosschecking and statistical analytical methods are used, in addition to the more traditional methods, to detect and deter cheating.

**COURSE GRADING** ***Common Exams #1, #2, and #3*** total 300 points maximum; ***Final Exam*** is 250 points maximum. ***Recitation*** scores (homework and quizzes) will be statistically adjusted to an average of  $85 \pm 20$  with a maximum of 125 points; ***Learning Center*** (audio-tape lessons) scores total to 80 points maximum; ***Class Attendance*** maximum is 70 points. The total maximum score is 825 points. A minimum passing score such as 488 points will be established. The Chemistry Division reserves the right to change this minimum passing score at the close of the semester. Because of the weakness in the statistical significance of just a few points out of 825, borderline cases will be considered subjectively by all faculty and staff members involved in **CHEM 125**. Please be advised that conduct, attitude, and a student's apparent effort will be among factors employed in judging borderline cases.