

General Chemistry Day Lecture Syllabus Fall, 2016
 Textbook: Chemistry, Structure and Properties by Nivaldo Tro

Date	Topic	Textbook	Suggested Problems
1 W Sept 7	Course intro. Model of the atom, classification of matter	1.1-1.7	Chapter 1: 35,41,45,49,53,59,61
2 Th Sept 8	Isotopes, Unit conversion, Accuracy and Precision	1.8-1.10 2.1-2.5	Chapter 1: 65,69,73,75,77,91 Chapter 2: 17,19,23,27,29,37,65
3 M Sept 12	Dimensional analysis, SI system of units, significant figures	2.5-2.7 App. I App. II	Chapter 2: 71,75 Appendix I: 3,7,9,15 Appendix II: 1,3,5,9,11,13
4 W Sept 14	Mole concept, electromagnetic radiation	2.8 3.1-3.2	Chapter 2: 49,53,55,57,59,85,89 Chapter 3: 37,39
5 Th Sept 15	Photons, photoelectric effect, Bohr model of the atom	3.2-3.3	Chapter 3: 41,43,69,71,73,78,85,
6 M Sept 19	Wave-particle duality, quantum numbers, orbitals	3.4-3.6	Chapter 3: 51,53,57,59,61,81
7 W Sept 21	Periodic table, electron configurations	4.1-4.4	Chapter 4: 45,49,51,53,55,57
8 Th Sept 22	Electron configurations, periodic trends-atomic radius	4.4-4.6	Chapter 4: 59,61,63,65,71,73,75
9 M Sept 26	Periodic trends-ionization energy, electron affinity, metallic character	4.7-4.8	Chapter 4: 83,85,87,89,91,93
10 W Sept 28	Ionic and covalent bonding, polyatomic ions	5.1-5.6	Chapter 5: 29,39,41,45,47,49,51,53,55,57
11 Th Sept 29	Polyatomic ions, molar mass, percent composition,	5.6-5.10	Chapter 5: 59,65,67,69,83,85,87,95
12 M Oct 3	Empirical formula, combustion	5.11-5.12	Chapter 5: 97,99,103,105,107,109,113,

		analysis, hydrocarbon structure		121, 123
W Oct 5		Exam I 9:40 PM to 11:00 PM		Exam Review During Lecture Period
13	Th Oct 6	Electronegativity, bond polarity, Lewis structures	6.1-6.3	Chapter 6: 23,27,29,31,33,
14	M Oct 10	Formal charge, resonance	6.3-6.4	Chapter 6: 35,37,39,41,43
15	W Oct 12	Exceptions to octet rule, bond energy/bond length	6.5-6.6	Chapter 6: 45,47,49,51,75,77,81,83,85,97
16	Th Oct 13	VSEPR	6.7-6.9	Chapter 6: 53,55,57,59,61,63,67
17	M Oct 17	Polarity of molecules, Alkane structure, nomenclature	6.10 22.1-22.3	Chapter 6: 69,71,73 Chapter 22: 37,39,43,45
18	W Oct 19	Hydrocarbons, functional groups	22.3-22.5 22.8	Chapter 22: 51,53,55,95,99
19	Th Oct 20	Hybridization, sigma and pi bonds	7.1-7.3	Chapter 7: 31,37,39,41,43,45
20	M Oct 24	Chemical equations, stoichiometry	8.1-8.5	Chapter 8: 15,17,25,27,29,31,33,35,37,39
21	W Oct 26	Limiting reactant, percent yield, chemical reactions examples	8.5-8.6	Chapter 8: 41,43,45,47,49,51,59,61,63,65,67,71
22	Th Oct 27	Solutions, electrolytes, molarity, dilution problems	9.1-9.3	Chapter 9: 21,23,27,29,31,33,35
23	M Oct 31	Net ionic equations, precipitation reactions, acid-base reactions	9.4-9.7	Chapter 9: 37,39,45,47,51,53,55,57,59
	W Nov 2	Exam II 9:40-11:00 PM		Exam Review During Lecture Period
24	Th Nov 3	Gas evolution reactions, redox reactions	9.7-9.9	Chapter 9: 61,65,67,69
25	M Nov 7	First Law of Thermodynamics, Calorimetry	10.1-10.5	Chapter 10: 33,35,37,41,43,45,47,49,51,53,55
26	W Nov 9	Calorimetry, Hess's Law	10.5-10.8	Chapter 10: 61,63,67,69,71,73,75

27	Th Nov 10	Bond energies, heat of formation	10.9-10.10	Chapter 10: 77,79,81,83,85,89
28	M Nov 14	Born-Haber Cycle	10.11	Chapter 10: 91,93,95,96
29	W Nov 16	Nature of gases, measurement of pressure	11.1-11.2	Chapter 11: 25,27,29
30	Th Nov 17	Gas Laws, ideal gas equation	11.3-11.4	Chapter 11: 31,33,35,37,39,41,43,51
31	M Nov 21	Ideal Gas Equation, partial pressure	11.4-11.6	Chapter 11: 55,57,59,63,65,69
32	T Nov 22	Kinetic molecular theory, relative diffusion rate	11.7-11.9	Chapter 11: 71,73,75,77,79
33	M Nov 28	Stoichiometry involving gases, real gases	11.10-11.11	Chapter 11: 81,83,85,91,92
34	W Nov 30	States of matter, intermolecular forces	12.1-12.3	Chapter 12: 33,35,37,39,
35	Th Dec 1	Intermolecular forces, vapor pressure, phase changes	12.3-12.6	Chapter 12: 41,45,47,51,53,55,57
36	M Dec 5	Heating curves, Phase diagrams	12.7, 13.1,13.2	Chapter 12: 63,65,67 Chapter 13: 19
	W Dec 7	Exam III 9:40 PM - 11:00 PM		Review During Lecture Period
37	Th Dec 8	Unit cells	13.4	Chapter 13: 27,29,31,35
38	M Dec 12	Types of solids	13.5-13.7	Chapter 13: 37,39,41,45,47
39	W Dec 14	Review for Final Exam		
	F Dec 16	Final Exam 12 noon – 3:00 PM		