

FLORIDA COMMUNITY COLLEGE AT JACKSONVILLE
COLLEGE CREDIT COURSE OUTLINE

COURSE NUMBER: CHM 1020
COURSE TITLE: Chemistry for Liberal Arts
PREREQUISITE(S): None
COREQUISITE(S): None
CREDIT HOURS: 3
CONTACT HOURS/WEEK: 3
CONTACT HOUR BREAKDOWN:
 Lecture/Discussion: 3
 Laboratory:
 Other _____:
FACULTY WORKLOAD POINTS: 3
STANDARDIZED CLASS SIZE
ALLOCATION: 36

CATALOG COURSE DESCRIPTION:

Students will benefit by taking high school algebra or MAT 0024 prior to enrolling in this course. This course, designed to meet the General Education Requirements for non-science majors, is designed especially for students who wish to gain an understanding of the fundamental nature of physical science from the chemical point of view. The treatment utilizes an approach to scientific concepts and methods, stressing and illustrating principles rather than merely listing phenomena.

SUGGESTED TEXT(S):

Hein Best and Arena
Sherman and Sherman. Basic Concepts of Chemistry.
Latest edition. Houghton-Mifflin Publishers.

Sherman et al. Chemistry and Our Changing World.
Latest edition. Prentice-Hall.

SUGGESTED TEXT(S): CONTINUED

Cracolice and Peters. Thomson Learning, World of Chemistry Essentials, Joesten and Wood. Saunders College Publishing, Latest edition.

Johl. Investigating Chemistry, A Forensic Approach, Latest Edition, Freeman Publishing

Stanitski, et al. Chemistry in Context, Latest Edition, McGraw-Hill Publishing

IMPLEMENTATION DATE:

November 14, 1987

REVIEW OR MODIFICATION DATE:

Fall Term, 2002 (20031)

Fall Term, 2006 (20071)

Fall Term, 2008 (20091) - Outline Review 2007

COURSE TOPICS	CONTACT HOURS <u>PER TOPIC</u>
I. Basic Mathematics	3
II. Energy, Classification, and States of Matter	3
III. Sub-atomic Particles and Electronic Configuration	5
IV. Chemical Bonding	6
V. Acids, Bases, Salts, and Basic Inorganic Nomenclature	3
VI. Mole Concept, Empirical Formulas and Percent Composition	4
VII. Classification of Chemical Reactions, Balancing of Equations, and Stoichiometry	5
VIII. Solids, Liquids and Gases	3
IX. Solutions	5
X. Nuclear Chemistry	3
XI. Special Topics (to meet general needs of class)	5



NOTE: Use either the Tab key or mouse click to move from field to field. The box will expand to accommodate your entry.

Section 1	
COURSE PREFIX AND NUMBER: <u>CHM 1020</u>	SEMESTER CREDIT HOURS: <u>3</u>
COURSE TITLE: <u>Chemistry for the Liberal Arts</u>	

Section 2
TYPE OF COURSE: (Click on the box to check all that apply)
<input type="checkbox"/> AA Elective <input type="checkbox"/> AS Required Professional Course <input type="checkbox"/> College Prep <input type="checkbox"/> AS Professional Elective <input type="checkbox"/> AAS Required Professional Course <input type="checkbox"/> Technical Certificate <input type="checkbox"/> Other _____ <input checked="" type="checkbox"/> General Education: (For General Education courses, you must also complete Section 3 and Section 7)

Section 3 (If applicable)
INDICATE BELOW THE DISCIPLINE AREA FOR GENERAL EDUCATION COURSES:
<input type="checkbox"/> Communications <input type="checkbox"/> Social & Behavioral Sciences <input type="checkbox"/> Mathematics <input checked="" type="checkbox"/> Natural Sciences <input type="checkbox"/> Humanities

Section 4
INTELLECTUAL COMPETENCIES:
<input checked="" type="checkbox"/> Reading <input checked="" type="checkbox"/> Speaking <input checked="" type="checkbox"/> Critical Analysis <input checked="" type="checkbox"/> Quantitative Skills <input checked="" type="checkbox"/> Scientific Method of Inquiry <input checked="" type="checkbox"/> Writing <input checked="" type="checkbox"/> Listening <input checked="" type="checkbox"/> Information Literacy <input checked="" type="checkbox"/> Ethical Judgment <input checked="" type="checkbox"/> Working Collaboratively

Section 5	LEARNING OUTCOMES	METHOD OF ASSESSMENT
•	Explain and apply major concepts in general chemistry.	Written tests, reports and/or use of equipment to demonstrate student competency in field.
•	Demonstrate knowledge of scientific method.	Formulate problem, make observations, derive and test hypothesis and make conclusions.
•	Communicate scientific ideas through oral or written assignments.	Students use analytical reasoning skills to solve problems on written tests and/or assignments.
•	Interpret scientific models such as formulas, graphs, tables and schematics, draw inferences from them and recognize their limitations.	Written reports of projects and/or written tests demonstrate student competency in the application of scientific knowledge.
•	Demonstrate problem solving methods in situations that are encountered outside of the classroom.	Students use demonstrations, group discussions, written tests, and/or research projects to illustrate competence in recognizing and evaluating various scientific processes.
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Section 6
Name of Person Completing This Form: _____ <u>Nancy Mullins</u> Date: _____ <u>10/10/2004</u>

SECTION 7 MUST BE COMPLETED FOR ALL GENERAL EDUCATION COURSES ONLY (exclude AA electives)

Section 7								
	KNOWLEDGE	<i>Primary</i>	<i>Secondary</i>	<i>N/A</i>	VALUE	<i>Primary</i>	<i>Secondary</i>	<i>N/A</i>
A.	Global and Historical Knowledge & Understanding				Intellectual honesty	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	• Comprehends a general knowledge of the nature, origins and contributions of major civilizations	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Curiosity and openness to new ideas	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	• Comprehends the workings and interrelations of personal, business and government economies	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Recognition of one's own creative potential	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	• Comprehends political, social and economic systems and their effects upon society	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Acceptance of and respect for differences among people and cultures	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
B.	Cultural and Aesthetic Knowledge and Understanding							
	• Comprehends the contributions of the arts and humanities to the human experience on a personal, national or global level	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Civic Engagement	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	• Comprehends the historical development of the arts and sciences	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Lifelong Learning	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	• Comprehends religious and cultural systems and their effects upon society	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>				
C.	Human Awareness and Understanding							
	• Comprehends the dynamics of human behavior and the process of increasing self-awareness, growth and development	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>				
	• Comprehends the stages of human development and the dynamics of human relationships in diverse cultures	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>				
	• Comprehends the factors that promote physical, mental and social well-being	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>				
D.	Mathematics, Science and Technology							
	• Comprehends the basic concepts and investigative processes of the natural sciences	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
	• Comprehends the breadth, significance and development of the mathematical sciences	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
	• Comprehends the ways science and technology have shaped and continue to reshape human cultures and the environment	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				

Section 8

Name of Person Completing This Form: _____ Nancy Mullins Date: _____ 12/10/2004