

**William Woods University
Course Syllabus**

**Course #
Course Name
Term**

Instructor:
Office:
Office Hours:

Phone:
email:

Textbook: *include copyright date of the text(s)*

Course Description:

Class Objectives:

Students will be able to do the following:
Refer to “Bloom’s Taxonomy: Question Ques” for assistance with appropriate objective design.

Degree/Major Objectives:

This course meets the following objectives for the _____ Degree

Use your department’s official objective list and the common studies objectives (if appropriate) to cut and paste the appropriate objects here. This will aid the accrediting board in the assessment of your degree.

Note: For those classes that meet objectives for multiple majors, state the objectives of the most relevant major and cite the website for additional majors.

Degree/Major Requirements:

This course fulfills the following requirements:

Please fill in what specific degree requirements this course fulfills, including prerequisite and common studies requirements.

Assessment Procedures:

Refer to “Best Practices” as modified from Succeeding With Standards: Linking Curriculum, Assessment, and Action Planning, Carr. J.F and Harris, D.E. for assistance in developing assessment techniques.

Attendance Policy:

This is only necessary for those who have set up a definite punishment/reward system for attendance.

ADA Guidelines : Students who choose to disclose a disability are responsible for notifying the university of their disability on a timely basis. Questions about disability services should be directed to Carrie McCray, the university's coordinator for disability services. She may be reached at 592-1194 or cmccray@williamwoods.edu. Her office is on the first floor of the Academic Building.

Honor and Community Codes: It is the expectation of the University that all of its members will uphold the Honor Code and the Community Code in adherence to high ethical standards. Details of the Honor Code and the Community Code can be found at the following web addresses:

<http://www.wmwoods.edu/2002catalog/polpro.asp>

http://www.wmwoods.edu/Student_Life/handbook/community.html

**William Woods University
Course Syllabus**

**CHM 121
General Chemistry 1
Fall 2003**

Instructor: Joseph J. Pavelites, Ph.D.

Phone: 573-592-1197

Office: 306 Science and Languages

email: jpavelit@williamwoods.edu

Office Hours: T, Th- 3:00-5:00pm or by appointment

Textbook: *Chemistry*, 7th ed. Chang R. 2001 McGraw-Hill ISBN 0-07-365601-1

Course Description: This course is a combined lecture and laboratory class. It is intended to cultivate the student's ability to visualize molecular events, to develop a logical approach to solving problems of chemical interest and to apply chemical principles to real-world processes. Principles introduced in lecture will be illustrated in a minimum of 10 laboratory exercises.

Class Objectives:

Students will be able to do the following:

- Name ionic and covalent compounds according to IUPAC rules
- Describe the nature of chemical bonding
- Classify chemical reactions and list their main features
- Describe periodic trends
- Calculate thermodynamic properties of selected chemical systems
- Solve stoichiometric problems using the factor-label method
- Explain chemical properties using electronic structure theory
- Summarize the properties of solids, liquids, gases and their mixtures
- Apply the scientific method to the collection, analysis and interpretation of experimental data

Degree/Major Objectives:

This course meets the following objectives for the BS Degree in Unified Science:

1. Students will be able to demonstrate the processes of scientific inquiry while relating the historical development of theories and knowledge in science.
2. Students will be able to analyze the relationship and interaction between science, technology and society.
3. Students will demonstrate knowledge of the properties of matter and forces of nature.

This course meets the following Common Studies objectives:

5. Recognize errors in reasoning and demonstrate correct reasoning
7. Apply scientific methodology in examining and interpreting the natural environment.

Degree/Major Requirements:

This course fulfills the following:

1. Requirement of one semester of chemistry for the Athletic Training major.
2. The first (of two semesters) of required general chemistry for the Unified Science Major
3. Is a prerequisite for all subsequent chemistry and all upper-level biology courses.
4. 4 credit hours of the Natural Science Common Studies requirement.
5. The first (of two semesters) of required general chemistry for application to most medical/dental/veterinary school programs.

Assessment Procedures:

Homework questions	100 pts.
Examinations	400 pts.
Laboratory Reports	200 pts.
Experimental Design	50 pts.
In-class Discussion	50 pts.
Cumulative Final Examination	200 pts.

Attendance Policy: All students are expected to attend every lecture and laboratory session. Absences may be excused with timely presentation of appropriate documentation (doctor's excuse, sports schedules, etc.). Unexcused absences from the laboratory class will result in a grade of "0" for that lab without benefit of making up the missed laboratory exercise and its points. Assignments for excused absences are not waived and must be made up within a period of time determined by the instructor based upon the circumstances of the absence.

ADA Guidelines : Students who choose to disclose a disability are responsible for notifying the university of their disability on a timely basis. Questions about disability services should be directed to Carrie McCray, the university's coordinator for disability services. She may be reached at 592-1194 or cmccray@williamwoods.edu. Her office is on the first floor of the Academic Building.

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Bloom's Taxonomy:

Question Ques

Knowledge: list, define, tell, describe, identify, show, label, collect, examine, tabulate, quote, name.

Comprehension: summarize, describe, interpret, contrast, predict, associate, distinguish, estimate, differentiate, discuss, extend.

Application: apply, demonstrate, calculate, complete, illustrate, show, solve, examine, modify, relate, change, classify, experiment, discover.

Analysis: analyze, separate, order, explain, connect, classify, arrange, divide, compare, select, explain, infer.

Synthesis: combine, integrate, modify, rearrange, substitute, plan, create, design, invent, compose, formulate, prepare, generalize, rewrite.

Evaluation: assess, decide, rank, grade, test, measure, recommend, convince, select, judge, explain, discriminate, support, conclude, compare, summarize.

Best Practices

Arts, Languages and Literature

- Emphasis on multiple artistic forms and techniques.
- Emphasis on multiple reading strategies and comprehension.
- Mini-lessons and individual student conferences based on students' Diverse literacy needs.
- Writing used as a tool for learning across the curriculum.
- Opportunities to pursue literacy through personal interests.
- Respect and support for languages and dialects used in the students' homes.
- Examples set by instructors as they model reading, writing, and discussing their thoughts with others.

History and Social Sciences

- Opportunities to participate in democratic processes in the college and community.
- Partnerships and internships within the community.
- Opportunities to collaborate with people of various cultures and social classes.
- Access to national and international organizations with social science resources.
- Opportunities to report on research in various forms.

Science, Mathematics and Technology

- Use of manipulatives and scientific tools (e.g. graphing calculators, microscopes, telescopes, handheld sensors, etc.).
- Frequent interactions with the natural world.
- Inquiry, investigation and experimentation as a regular part of the science program.
- Frequent opportunities to use appropriate tools including the senses for observation and subsequent collection of data, including data that may not have been anticipated.
- Frequent oral and written interactions between instructors and students, as well as amongst students to develop mathematical and scientific thinking.
- Flexible grouping for investigations, problem-solving tasks, research and experimentation.
- Instructors that display the scientists' habits of minds (skepticism, rigor in data collection and peer review).
- Open-ended tasks that allow students to explore and analyze scientific, mathematical and technological questions.

- Assessment approaches that are embedded in instruction and that require appropriate manipulatives and scientific and technological tools.
- Basic Skills (measuring, recording and computing) that are integrated with analysis, synthesis and evaluation.
- Opportunities for students to present the results of their investigations to peers for review and critique.