The information contained in this course outline reflects an accurate picture of the course at the time of development. However, conditions can and do change. Thus, the college must, as in the past, reserve the right to make any necessary changes in the course description, objectives, prerequisites, texts and references, course content, methods of instruction, methods of evaluation, credits, hours and times of offerings or any other matters discussed herein.

**Principles of Chemistry**

<table>
<thead>
<tr>
<th>Course Name</th>
<th>Clock Hrs</th>
<th>Per Week</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lecture</td>
<td>3 hours</td>
<td></td>
<td>33 hours</td>
</tr>
<tr>
<td>Laboratory</td>
<td>2 hours</td>
<td></td>
<td>22 hours</td>
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</tbody>
</table>

**Course Number**

- GS 105

**Course Offered By**

- Deron Carter & Bridgid Backus

**Date**


**Total**

- 5 hours
- 55 hours

**Math and Science**

<table>
<thead>
<tr>
<th>Physical Science</th>
<th>Number of Weeks</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
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<td>11</td>
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</tbody>
</table>

**Division**

<table>
<thead>
<tr>
<th>Department</th>
<th>Credits</th>
<th>Variable</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>

**Grading:**

- PNP
- OPT
- A-F

**Special Admission Procedures**

- Prerequisite
- Corequisite

**Please check the following area in which this course will be taught:**

- College Transfer
- Professional Technical
- Adult Supplemental
- Post-secondary Remedial
- Other Education (Reimbursable)
- Community Service (Non-Reimbursable)

**PREREQUISITE:**

- Math 065, Elementary Algebra

**CATALOG DESCRIPTION:**

Survey course providing non-science majors a broad background in the fundamentals of chemistry. No previous science background required. May not be taken for credit if six or more hours of college level chemistry have been completed. There is no restriction on the order in which the courses are taken.

**COURSE LEARNING OUTCOMES:**

- What should they be able to do as a result of taking this class?
- Have a broad understanding of how chemistry relates to everyday life and real-world issues.

**LEARNING ACTIVITIES:**

- What will your students be doing, i.e. listening to a lecture, attending a field trip, participating in group activities?
- Performing laboratory experiments, listening to lectures, participating in group activities, giving group presentations.

**ASSESSMENT TASKS:**

- How will the students show evidence of achieving the learning outcomes?
- Taking exams and quizzes, writing lab reports.
**COURSE CONTENT:**

| Themes: What themes, if any, are threaded throughout all learning experiences in this course? | Matter and its Properties as a Chemical Foundation  
Laboratory Skills  
Teamwork  
Problem Solving  
Scientific Literacy  
Chemistry and society |
|---|---|

| Concepts: What concepts do students need to understand to demonstrate course outcomes? | Measurement  
States of matter  
Conservation of energy and mass  
Science is observable  
Scientific models evolve  
Environmental chemistry  
Types of reactions  
Chemical nomenclature  
Gas Laws  
Atomic structure |
|---|---|

| Issues: What primary issues or problems must students understand to achieve course outcomes? | Quantifying processes that happen on a microscopic level  
Precision and accuracy in data recording  
Chemical and physical properties  
Chemical bonding |
|---|---|

| Skills: What skills do students need to master to demonstrate course outcomes? | - Balance chemical reactions.  
- Perform basic laboratory procedures safely.  
- Record and interpret measurements (should be specific items such as graphing, creating tables, etc)  
- Use various sources of information to research, analyze and evaluate chemical information.  
- Perform unit conversions.  
- Use and apply SI units.  
- Use appropriate chemical vocabulary  
- Be able to estimate. |
|---|---|

Approved by:  

<table>
<thead>
<tr>
<th>Dean/Director Date</th>
<th>Academic Affairs Office Date</th>
</tr>
</thead>
</table>

(Revised 6/20/06)