DEPARTMENT: Academic Programs

CURRICULUM: Applied Academics

COURSE TITLE: General Physics I

COURSE NUMBER: PHYS& 121

TYPE OF COURSE: Academic Transfer

Special Requirement Met: Mathematics/Quantitative Reasoning

AREA(S) OF KNOWLEDGE: The Physical Universe

COURSE LENGTH: 1 quarter

CREDIT HOURS: 5

LECTURE HOURS: 44

LAB HOURS: 22

CLASS SIZE: 30

PREREQUISITES: MATH 098 (Intermediate Algebra)

COURSE DESCRIPTION:

First of three non-calculus based courses covering the field of Physics. Includes kinematics, vectors, forces, dynamics, work, energy, momentum, torque and gravitation. Lab included.
PHYS& 121 General Physics I
February 2008

STUDENT LEARNING OUTCOMES ADDRESS ED:

1. Communication - Read and listen actively to learn and communicate. Write lab reports to communicate the results of experimental tests.
2. Computation - Use arithmetic and other basic mathematical operations to solve physics problems.
3. Human Relations - Use social interactive skills to work in groups effectively.

GENERAL COURSE OBJECTIVES:

At the end of the course the student will:

1. Have an understanding of the basic principles, analytical methods and terminology of physics dealing with mechanics.
2. Develop competence in problem analysis and solution by experimental as well as theoretical methods.

TOPICAL OUTLINE:

I. Measurement
   A. SI Units
   B. Significant Digits
   C. Unit conversion
II. Mechanics
   A. Description of Motion
   B. Force and motion
   C. Work, energy and power
   D. Momentum
   E. Rotational Motion

Total 66

REVISED BY: Mike Steffancin
DATE: February 2008
### Course Prefix and Number: PHYS&121
### Course Title: Technical Physics I

<table>
<thead>
<tr>
<th>SLO #</th>
<th>Included in Course Objective Number</th>
<th>SSCC Student Learning Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLO 1.1</td>
<td>1</td>
<td>Communication - Read and listen actively</td>
</tr>
<tr>
<td>SLO 1.2</td>
<td></td>
<td>Communication - Speak and write effectively</td>
</tr>
<tr>
<td>SLO 2.1</td>
<td>1, 2</td>
<td>Computation - Use mathematical operations</td>
</tr>
<tr>
<td>SLO 2.2</td>
<td>1, 2</td>
<td>Computation - Apply quantitative skills</td>
</tr>
<tr>
<td>SLO 2.3</td>
<td>1, 2</td>
<td>Computation - Identify, interpret, and utilize higher level mathematical and cognitive skills</td>
</tr>
<tr>
<td>SLO 3.1</td>
<td></td>
<td>Human Relations - Use social interactive skills to work in groups effectively</td>
</tr>
<tr>
<td>SLO 3.2</td>
<td></td>
<td>Human Relations - Recognize the diversity of cultural influences and values</td>
</tr>
<tr>
<td>SLO 4.1</td>
<td>1, 2</td>
<td>Critical Thinking and Problem Solving -</td>
</tr>
<tr>
<td>SLO 5.1</td>
<td>1, 2</td>
<td>Technology - Select and use appropriate technological tools</td>
</tr>
<tr>
<td>SLO 6.1</td>
<td></td>
<td>Personal Responsibility - Be motivated and able to continue learning and adapt to change</td>
</tr>
<tr>
<td>SLO 6.2</td>
<td></td>
<td>Personal Responsibility - Value one's own skills, abilities, ideas and art</td>
</tr>
<tr>
<td>SLO 6.3</td>
<td></td>
<td>Personal Responsibility - Take pride in one's work</td>
</tr>
<tr>
<td>SLO 6.4</td>
<td></td>
<td>Personal Responsibility - Manage personal health and safety</td>
</tr>
<tr>
<td>SLO 6.5</td>
<td></td>
<td>Personal Responsibility - Be aware of civic and environmental issues</td>
</tr>
<tr>
<td>SLO 7.1</td>
<td>1</td>
<td>Information Literacy - Access and evaluate information</td>
</tr>
<tr>
<td>SLO 7.2</td>
<td>1</td>
<td>Information Literacy - Use information to achieve personal, academic, and career goals, as well as to participate in a democratic society</td>
</tr>
</tbody>
</table>

PREPARED BY: Mike Steffancin  
DATE: August 2008