

COURSE OUTLINE

PHY115

Prepared: The Mathematics Department Approved: Sherri Smith

Course Code: Title	PHY115: CONCEPTS OF PHYSICS								
Program Number: Name									
Department:	MATHEMATICS								
Semester/Term:	18W								
Course Description:	This course provides students with an introduction to many of the concepts of applied physics. It involves lectures, class demonstrations and laboratory work. Topics covered include safe lab practices, units of measurements, forces, accelerated motion, Newton's laws of motion, work energy and power, simple machines , properties of solids, liquids and gases, temperature, heat and heat transfer, basic electricity and magnetism.								
Total Credits:	5								
Hours/Week:	5								
Total Hours:	75								
Essential Employability Skills (EES):	#3. Execute mathematical operations accurately. #4. Apply a systematic approach to solve problems. #5. Use a variety of thinking skills to anticipate and solve problems. #10. Manage the use of time and other resources to complete projects.								
Course Evaluation:	Passing Grade: 50%, D								
Evaluation Process and Grading System:	<table border="1"> <thead> <tr> <th>Evaluation Type</th><th>Evaluation Weight</th></tr> </thead> <tbody> <tr> <td>Labs and Assignments</td><td>45%</td></tr> <tr> <td>Quizzes</td><td>10%</td></tr> <tr> <td>Tests</td><td>45%</td></tr> </tbody> </table>	Evaluation Type	Evaluation Weight	Labs and Assignments	45%	Quizzes	10%	Tests	45%
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Books and Required Resources:	<p>Conceptual Physics by Paul G. Hewitt Publisher: Pearson Edition: 12th ISBN: 978-0-321-56809-0</p> <p>Conceptual Physics by Paul G. Hewitt Publisher: Addison Wesley Edition: 12th ISBN: 978-0-321-56809-5</p>								

**Course Outcomes and
Learning Objectives:**

Course Outcome 1.

Measurement and the Metric System

Learning Objectives 1.

Describe and define base units of measure

Convert units of measure within the various systems of measure

Course Outcome 2.

Motion

Learning Objectives 2.

Describe and define distance, speed, velocity, and acceleration

Work with equations describing free fall and projectile motion

Course Outcome 3.

Forces, Work, Energy, Power and Simple Machines

Learning Objectives 3.

Awareness and quantification of various types of forces

and quantify units of Work, Energy and Power

Define, describe and quantify mechanisms and forces of Simple Machines

Course Outcome 4.

Properties of Matter: Solids, Liquids and Gases

Learning Objectives 4.

Awareness of the various physical properties of matter in liquid, solid and gaseous states

Course Outcome 5.

Temperature and Heat

Learning Objectives 5.

Define and describe heat

Awareness of the various temperature scales

Course Outcome 6.

Basic Electricity and Magnetism

Learning Objectives 6.

Understand and quantify the various attributes of electricity
Differentiate between alternating and direct current
Differentiate between series and parallel circuits
Describe the characteristics of Magnetism

Date:

Thursday, January 25, 2018

Please refer to the course outline addendum on the Learning Management System for further information.