

  
**AMOU UNIVERSITY**  
**“A Vehicle for Peace and Development”**  
**AMOU UNIVERSITY**



**FACULTY OF COMPUTING AND ICT**

**BACHELOR OF SCIENCE IN INFORMATION TECHNOLOGY PROGRAMME**

**ACADEMIC YEAR 2015/ 2016**

**COURSE DESCRIPTION**

<b>BIT 216</b>	<b>Physics for Information Technology</b>	
Contact Hours	39	
Pre-requisite	N/A	
Purpose/Aim	Students are introduced to a number of topics under the following broad subject areas: dynamics, statics, electricity, heat, materials, health and safety. The course introduces students to the various concepts and subject areas of physics.	
Course Objective (Indicative Learning Outcomes)	<ul style="list-style-type: none"> <li>• Introduction to Physics: Exploring basic concepts of physics: mechanics, heat, electricity, and waves.</li> <li>• Mechanics and Heat: statics and kinematics, vectors, equilibrium, kinematics and dynamics of a particle, force, energy, momentum, rotation, elasticity, stresses and strains, simple harmonic motion, and the behavior of fluids, Newton’s laws of motion, linear and angular momentum, work and energy, and properties of solids and fluids.</li> <li>• Electricity, Magnetism, and Light: classical electricity and magnetism include electric potential, current and resistance, dc circuits, magnetic forces and fields, and electromagnetic induction, the nature of light and the principles of geometrical and physical optics.</li> <li>• Modern Physics: alternating current, electromagnetic waves, kinetic theory of gases, thermodynamics, and modern physics -- special relativity, quantum mechanics, atomic and nuclear physics, nuclear radiation, and nuclear energy.</li> </ul>	
Course Content	<ul style="list-style-type: none"> <li>• Classical Mechanics</li> <li>• Kinematics in One-dimension</li> <li>• Kinematics in Two-dimensions</li> <li>• Dynamics: Work and Energy</li> <li>• Rotational and Harmonic Motion</li> <li>• Introduction to Fluids</li> <li>• Waves and Sounds</li> <li>• Wave Motion</li> <li>• Sounds</li> <li>• Thermodynamics:- Introduction to Thermodynamics, The Laws of</li> </ul>	



**AMOU UNIVERSITY**  
**“A Vehicle for Peace and Development”**

	Thermodynamics. <ul style="list-style-type: none"> <li>• Electricity and Electromagnetism:- Electricity and Electromagnetism-I, Electricity and Electromagnetism II</li> <li>• Light</li> <li>• Modern Physics I</li> <li>• Modern Physics II</li> <li>• Modern Physics III</li> </ul>		
Learning & Teaching Methodologies	Lectures, tutorials and communication exercises		
Instructional Materials/Equipment	Classroom with audio visual aids		
Course Assessment	<b>Type</b>		<b>Weighting (%)</b>
	Final Examination		60
	Mid Term Examination		20
	Assignment		10
	Attendance		10
	Total		100
Recommended Reading	<b>Title</b>	<b>Author</b>	<b>Publisher</b>
Additional Reading			
Other Support Material	A variety of multimedia systems and electronic information resources as prescribed by the lecturer. Various application manuals, URL search and journals.		