

<b>Module Title:</b>	Biology 2: Biomolecules and Microbes
<b>Academic year:</b>	2009 2010
<b>Credit Value:</b>	7
<b>Pre- requisites:</b>	None
<b>Assessment:</b>	Final written exam 50% Practical assessment 35% Continuous assessment 15%
<b>Aims</b>	<p>This module aims to provide a foundation in two key areas of Biology; Biochemistry and Microbiology on which the students can build their skill sets in subsequent semesters.</p> <p>The laboratory course aims to provide students with the skills to perform basic biochemical and microbiological analyses.</p> <p>The module also aims to develop an appreciation for the scope of these areas of specialisation and an awareness of current developments in these fields.</p>
<b>Module Content</b>	<p>The Molecules of Life The scope of Biochemistry Biomolecules proteins, carbohydrates, lipids and nucleic acids Enzymes Basic Principles of Metabolism From DNA to Protein Topical issues in Biochemistry</p> <p>The Microbial World The Scope of Microbiology Procaryotic Cell Structure Microbial Nutrition and culturing techniques Microbial Growth Microbial Growth Control Microbial Diversity Topical issues in microbiology</p>

**Intended Learning Outcomes:**  
(September 2007)

Upon successful completion of this module the student will:-

- Explain the role of the biochemist and the microbiologist in the scientific community
- Be aware of the current topical issues within these fields
- Have demonstrated a knowledge and understanding of the basic structure and functions of key biomolecules,
- Be able to describe the basic elements of protein synthesis and expression.
- Be able to explain the basic principles of metabolism.
- Explain the basic concepts of microbiology,
- Be able to describe the main features of bacterial cells, their growth and methods of growth control.
- Be able to perform basic microbiological and biochemical tasks including simple biochemical analyses of key biomolecules, preparation and sterilization microbial culture media,
- Be competent in aseptic technique and pure culture preparation
- Be able to carry out various differential staining techniques on microbial cultures.