



Sample Brief Course Description

Course title	Biochemistry and Molecular Biology
Course code	CHEM 352
College	Engineering
Department / Program	Biomedical Engineering
Year/ Level	3/7
Course Type	A. <input type="checkbox"/> University <input type="checkbox"/> College <input checked="" type="checkbox"/> Department <input type="checkbox"/> Others b. <input checked="" type="checkbox"/> Required <input type="checkbox"/> Elective
Credited Hours	4
Contact Hours	(LT:3,LB:2,TR:0)
Pre-requisites (if any)	CHEM 103 BIO 206
Co-requisites (if any)	---
Course description	The course introduces biomedical engineering students with little background in biology to fundamentals of biochemistry, molecular biology and genetics. Topics include Introduction to Biochemistry, Carbohydrate chemistry and its metabolism. Lipids, Protein structure, Enzymes, Hormones and Vitamins
Course Main Objectives	<ul style="list-style-type: none">• Study the water and remember the importance of water and living organisms and the physical chemical properties of water.• Recognize pH of solutions and strong and weak acids and bases.



	<ul style="list-style-type: none">• Know the carbohydrate and the vital importance of carbohydrate metabolism.• Recognize types of fat and lipid metabolism• Realize amino acids and different ways of classification, physical and chemical properties.• Understand the importance of carbohydrates, proteins and lipid function and its role in metabolism.• Distinguish between nucleic acids and nucleotide.• Compare between fat and water-soluble vitamins.
Learning Outcomes	Knowledge and Understanding: <ol style="list-style-type: none">1. Define the main principles of biochemistry
	Skills: <ol style="list-style-type: none">1. Developing higher order thinking skills and ability to use information, biochemical concepts and theories in determining the role and significance of biomolecules.2. Demonstrate an ability to use current modern techniques, skills and tools for practical applications
	Values: <ol style="list-style-type: none">1. Work independently and as part of a team and assume leadership responsibilities2. They must be able to develop a scientific attitude to use their knowledge for the purpose of research in the medical and other fields.