

	National University of Sciences and Technology	
	Course Description	
Course Title Selected Topics in Biomedical Sciences	Course Code BMS-822	Credit Hours 3 – 0

TEXT BOOK:

- LEWINS GENES X, Jocylyn EK, Elliott SG, Stephen TK, Jones and Bartlett Publishers 2010
- Cancer Biology, Raymond W Ruddon, (4th Edition), OXFORD University Press 2007 (latest edition).
- Guyton and Hall Textbook of Medical Physiology (14th Edition) 2020 (latest edition).

REFERENCE BOOK

- N/a

COURSE OBJECTIVES:

- Understand experimental knowledge, and skills required for biomedical research.
- Exposure to basic molecular biology techniques and their biomedical application.
- Understand and apply the scientific research to experimental design for underlying research hypotheses

COURSE OUTLINES

- Introduction to recent advances
- Standard operating procedures for experiments
- Basics of Cell Culture
- Preparation of Blood Components and their Uses
- Gene Therapy: An emerging Molecular Strategy
- MicroRNA Biogenesis, Mechanism, Expression in disease and their medical applications
- Nanotechnology and their medical applications
- Cancer Chemotherapy and Drug Resistance
- Genetics of Cancer
- Genetics of Diabetes
- Genetics of Neurological disorders

ASSESSMENTS

Description	Percentage Weightage (%)
Assignments	05-10%
Quizzes	10-15%
Mid Semester Exams	30-40%
End Semester Exam	40-50%