

MINOR IN BIOENGINEERING

- To satisfy the Minor in Bioengineering, the students are required to read six (6) minor modules and fulfill at least 24 MCs. These 6 minor modules must be a graded module. Students are to read at least ONE module from each of the following 3 options. No more than 3 level-1000 modules should be read.
- Departments may grant double-counting (up to a maximum of 8 MCs) from the major requirements towards the MC requirements in the Minor Programme.

(a)	Bioengineering Option	
	Module Code	Module Title
1	BN2101	Principles of Bioengineering (Compulsory)
2	BN3401	Biomedical Electronics & Systems
3	BN3402	Bio-Analytical Methods in Bioengineering
4	BN4201	Musculoskeletal Biomechanics
5	BN4202	Biofluids Dynamics
6	BN4203	Rehabilitation Engineering
7	BN4301	Principles of Tissue Engineering
8	BN4402	Electrophysiology
9	BN4403	Cellular Bioengineering
10	BN4404	Biomicroelectromechanics Systems – BioMEMs
11	BN4406	Biophotonics and Bioimaging

(b)	Life Science Option	
(No. of Level 1000 modules taken should not be more than 3)		
	Module Code	Module Title
1	LSM1102	Molecular Genetics
2	LSM1104	General Physiology
3	LSM1202	Human Anatomy
4	LSM1401	Fundamentals of Biochemistry
5	LSM2101	Metabolism and Regulation
6	LSM2102	Molecular Biology
7	LSM2103	Cell Biology
8	LSM2241	Introductory Bioinformatics
9	LSM2202A	Experimental Molecular and Cell Biology
10	LSM3241	Bioinformatics and Biocomputing
11	PY1105	Physiology 1
12	PY1106	Physiology 2

Note: Waiver of pre-requisite for LSM modules are NOT allowed.

(c)	Engineering Electives Option	
	Module Code	Module Title
1	CE3143	Wastewater Microbiology
2	CE4257	Linear Finite Element Analysis
3	CN5172	Biochemical Engineering
4	CN5251	Membrane Science and Engineering
5	CN4241R	Engineering Principles for Drug Delivery
6	EE3101	Digital Signal Processing
7	EE3206	Intro to Computer Vision & Image Processing
8	EE4605	Bio-Instrumentation and Signal Analysis
9	EE4601	Sensors for Biomedical Applications
10	EE4602	Bioelectronics
11	EE4603	Biomedical Imaging Systems
12	ME4233	Computational Methods in Fluid Mechanics
13	ME4253	Biomaterials Engineering
14	ME4291	Finite Elements Analysis

Wef AY2009/2010, the following changes are effected:

- i) LSM1201 General Physiology is recoded to LSM1104.
- ii) LSM2104 Essential Bioinformatics and Biocomputing is recoded and renamed to LSM2241 Introductory Bioinformatics.
- iii) 6 MC LSM2202 has been revised to a 4MC LSM2202A.
- iv) LSM3401A Bioanalytical Instrumentation is no longer applicable under the Engineering Electives Option as it is discontinued.