

COHORT 2013/2014

Bachelor of Engineering (Bioengineering)

Recommended Semester Schedule

The recommended schedules are given in Table c, d, e and f.

Table c: Recommended Semester Schedule for Bioengineering Students

Modules	MCs	Modules	MCs
Semester 1		Semester 2	
MA1505 Mathematics 1	4	CS1010E Programming Methodology	4
PC1431 Physics IE	4	EG1109 Statics and Mechanics of Materials	4
EG1108 Electrical Engineering	3	MA1506 Mathematics II	4
ES1531 Critical Thinking and Writing	4	PC1432 Physics IIE	4
Breadth Module 1 *	4	ES2331 Communicating Engineering # (Breadth Module 2 / UEM 1)	4
Sub-total	19	Sub-total	20
Semester 3		Semester 4	
BN2101 Principles of Bioengineering	4	BN2201 Quantitative Physiology for Bioengineers	4
BN2102 Bioengineering Data Analysis	4	BN2203 Introduction to Bioengineering Design	4
BN2202 Introduction to Biotransport	4	BN2401 Biosignals Processing	4
CM1121 Basic Organic Chemistry or CM1501 Organic Chemistry for Engineers	4	LSM2103 Cell Biology	4
LSM1401 Fundamentals of Biochemistry	4	GEM 1 / SS	4
Sub-total	20	Sub-total	20
Semester 5		Semester 6	
BN3101 Biomedical Engineering Design	6	BN3401 Biomedical Electronics and Systems	4
BN3201 Introduction to Biomechanics	4	BN3501 Equilibrium and Kinetic Bioprocesses	4
BN3301 Introduction to Biomaterials	4	HR2002 Human Capital in Organizations	3
EG2401 Engineering Professionalism	3	ES2331 Communicating Engineering # (Breadth Module 2 / UEM 1)	4
GEM 1 / SS	4	UEM 2 / GEM 2	4
Sub-total	21	Sub-total	19
Semester 7		Semester 8	
BN4101R B.Eng. Dissertation	6	BN4101R B.Eng. Dissertation	6
BN Elective 1	4	BN Elective 3	4
BN Elective 2	4	BN Elective 4	4
UEM 2 / GEM 2	4	UEM 4	4
UEM 3	2	UEM 5	4
	20		22

Students without the GCE 'A' Level Chemistry or equivalent are strongly recommended to read *CM1417 Fundamentals of Chemistry as their breadth modules in their first year.

ES2331 can be declared as Breadth Module or UEM.

The Department reserves the right to decide on the modules to be offered in any given semester.

Table d: Recommended Semester Schedule for Bioengineering Students with Industrial Attachment

Modules	MCs	Modules	MCs
Semester 1		Semester 2	
MA1505 Mathematics 1	4	CS1010E Programming Methodology	4
PC1431 Physics IE	4	EG1109 Statics and Mechanics of Materials	4
EG1108 Electrical Engineering	3	MA1506 Mathematics II	4
ES1531 Critical Thinking and Writing	4	PC1432 Physics IIE	4
Breadth Module 1 *	4	ES2331 Communicating Engineering (Breadth Module 2)	4
Sub-total	19	Sub-total	20
Semester 3		Semester 4	
BN2101 Principles of Bioengineering	4	BN2201 Quantitative Physiology for Bioengineers	4
BN2102 Bioengineering Data Analysis	4	BN2203 Introduction to Bioengineering Design	4
BN2202 Introduction to Biotransport	4	BN2401 Biosignals Processing	4
CM1121 Basic Organic Chemistry or CM1501 Organic Chemistry for Engineers	4	LSM2103 Cell Biology	4
LSM1401 Fundamentals of Biochemistry	4	GEM 1 / SS	4
Sub-total	20	Sub-total	20
Semester 5		Semester 6	
BN3101 Biomedical Engineering Design	6	GEM 1 / SS	4
BN3201 Introduction to Biomechanics	4	HR2002+ Human Capital in Organizations	3
BN3301 Introduction to Biomaterials	4	UEM 1 / GEM 2	4
EG2401 Engineering Professionalism	3	UEM 2	4
UEM 1 / GEM 2	4	UEM 3	4
Sub-total	21	Sub-total	19
Semester 7		Semester 8	
BN4101R B.Eng. Dissertation	6	BN4101R B.Eng. Dissertation	6
BN Elective 1	4	BN3401 Biomedical Electronics and Systems	4
BN Elective 2	4	BN3501 Equilibrium and Kinetic Bioprocesses	4
UEM 4	4	BN Elective 3	4
UEM 5	2	BN Elective 4	4
	20		22

+Students are allowed to take up to two (2) modules in the evening, subject to approval.

Students without the GCE 'A' Level Chemistry or equivalent are strongly recommended to read *CM1417 Fundamentals of Chemistry as their breadth modules in their first year.

The Department reserves the right to decide on the modules to be offered in any given semester.

Table e: Recommended Semester Schedule for Bioengineering Students (Accelerated)

Modules	MCs	Modules	MCs
Semester 1		Semester 2	
MA1505 Mathematics 1	4	CS1010E Programming Methodology	4
PC1431 Physics IE	4	EG1109 Statics and Mechanics of Materials	4
EG1108 Electrical Engineering	3	MA1506 Mathematics II	4
ES1531 Critical Thinking and Writing	4	PC1432 Physics IIE	4
Breadth Module 1 *	4	ES2331 Communicating Engineering # (Breadth Module 2 / UEM 1)	4
SS / GEM 1	4	SS / GEM 1	4
Sub-total	23	Sub-total	24
Semester 3		Semester 4	
BN2101 Principles of Bioengineering	4	BN2201 Quantitative Physiology for Bioengineers	4
BN2102 Bioengineering Data Analysis	4	BN2203 Introduction to Bioengineering Design	4
BN2202 Introduction to Biotransport	4	BN2401 Biosignals Processing	4
CM1121 Basic Organic Chemistry or CM1501 Organic Chemistry for Engineers	4	LSM2103 Cell Biology	4
LSM1401 Fundamentals of Biochemistry	4	BN3401 Biomedical Electronics and Systems	4
ES2331 Communicating Engineering # (Breadth Module 2 / UEM 1)	4	GEM 2	4
Sub-total	24	Sub-total	24
Semester 5		Semester 6	
BN3101 Biomedical Engineering Design	6	BN3501 Equilibrium and Kinetic Bioprocesses	4
BN3201 Introduction to Biomechanics	4	BN4101R B.Eng. Dissertation	6
BN3301 Introduction to Biomaterials	4	BN Elective 1	4
EG2401 Engineering Professionalism	3	UEM 4	2
UEM 2	4	HR2002 Human Capital in Organizations	3
UEM 3	4	-	
Sub-total	25	Sub-total	19
Semester 7		Semester 8	
BN4101R B.Eng. Dissertation	6		
BN Elective 2	4		
BN Elective 3	4		
BN Elective 4	4		
UEM 5	4		
	22		0

Students without the GCE 'A' Level Chemistry or equivalent are strongly recommended to read *CM1417 Fundamentals of Chemistry as their breadth modules in their first year.

ES2331 can be declared as Breadth Module or UEM.

The Department reserves the right to decide on the modules to be offered in any given semester.

Table f: Recommended Semester Schedule for Bioengineering Students without A level Physics

Modules	MCs	Modules	MCs
Semester 1		Semester 2	
MA1505 Mathematics 1	4	CS1010E Programming Methodology	4
EG1108 Electrical Engineering	3	EG1109 Statics and Mechanics of Materials	4
ES1531 Critical Thinking and Writing	4	MA1506 Mathematics II	4
PC1221 Fundamentals of Physics I (Breadth Module 1)	4	PC1431 Physics IE	4
PC1222 Fundamentals of Physics II (Breadth Module 2)	4	PC1432 Physics IIE	4
		ES2331 Communicating Engineering (UEM 1)	4
Sub-total	19	Sub-total	24
Semester 3		Semester 4	
BN2101 Principles of Bioengineering	4	BN2201 Quantitative Physiology for Bioengineers	4
BN2102 Bioengineering Data Analysis	4	BN2203 Introduction to Bioengineering Design	4
BN2202 Introduction to Biotransport	4	BN2401 Biosignals Processing	4
CM1121 Basic Organic Chemistry or CM1501 Organic Chemistry for Engineers	4	LSM2103 Cell Biology	4
LSM1401 Fundamentals of Biochemistry	4	SS	4
Sub-total	20	Sub-total	20
Semester 5		Semester 6	
BN3101 Biomedical Engineering Design	6	BN3401 Biomedical Electronics and Systems	4
BN3201 Introduction to Biomechanics	4	BN3501 Equilibrium and Kinetic Bioprocesses	4
BN3301 Introduction to Biomaterials	4	HR2002 Human Capital in Organizations	3
EG2401 Engineering Professionalism	3	UEM 2	4
GEM 1	4	UEM 3	4
-		GEM 2	4
Sub-total	21	Sub-total	23
Semester 7		Semester 8	
BN4101R B.Eng. Dissertation	6	BN4101R B.Eng. Dissertation	6
BN Elective 1	4	BN Elective 3	4
BN Elective 2	4	BN Elective 4	4
UEM 4	2	UEM 5	4
	16		18

Students without the GCE 'A' Level Chemistry or equivalent are strongly recommended to read *CM1417 Fundamentals of Chemistry as their breadth modules in their first year.

The Department reserves the right to decide on the modules to be offered in any given semester.