Curriculum for B.Sc. Engineering Honours Degree Programme

Electronic and Telecommunication Engineering Specialization
Department of Electronic and Telecommunication Engineering

Module Code	Module Name	Category	Lectures hrs/week	Lab/ Assignments hrs/weeks	Credits		Norm		Evaluation (%)	
					GPA	NGPA	GPA	NGPA	CA	WE
Semester 3										
MA2013	Differential Equations	C	2	-	2.0				30	70
MA2023	Calculus	C	2	-	2.0				30	70
EN2013	Electronics – II	C	3	-	3.0				40	60
EN2040	Random Signals and Processes	C	2	-	2.0				30	70
EN2053	Communication Systems and Networks	C	3	-	3.0				40	60
EN2030	Fundamentals of Computer Organization and Design	C	3	-	3.0				50	50
EN2090	Laboratory Practice – II	C	-	9/1	3.0				100	-
EE2093	Theory of Electricity	C	2	-	2.0		20.0		30	70
EN2532	Robot Design and Competition	E	1.5	3/1	2.5				60	40
ME1822	Basic Engineering Thermodynamics	E	1.5	3/2	2.0				30	70
ME1090	Engineering Drawing and Computer Aided Modelling	E	2.0	3/1	3.0		2.0		100	-
MN1030	Entrepreneurship Skill Development (continued from S2)	O	0.5	3/1		1.0			70	30
				Total for Semester 3			22.0			

Curriculum for B.Sc. Engineering Honours Degree Programme

Electronic and Telecommunication Engineering Specialization
Department of Electronic and Telecommunication Engineering

Module Code	Module Name	Category	Lectures hrs/week	Lab/ Assignments hrs/weeks	Credits GPA	Credits NGPA	Norm GPA	Norm NGPA	Evaluation (%) CA	Evaluation (%) WE
Semester 4										
MA2033	Linear Algebra	C	2	-	2.0				30	70
EN2110	Electronics – III	C	3	3/1	4.0				40	60
EN2073	Analog and Digital Communications	C	3	3/1	4.0				40	60
EN2083	Electromagnetics	C	3	3/1	4.0				40	60
EN2570	Digital Signal Processing	C	2	3/1	3.0		17.0		40	60
EN2550	Fundamentals of Image Processing and Machine Vision	E	2	3/1	3.0				40	60
EN2560	Internet of Things Design and Competition	E	1	3/1	2.0				70	30
BM2800	Introduction to Biomedical Engineering	E	2	-	2.0				40	60
CS2022	Data Structures and Algorithms	E	2.0	3/2	2.5				40	60
CS2832	Modular Software Development	E	2.0	3/2	2.5				50	50
EE2023	Electrical Machines and Drives I	E	2.0	-	2.0				30	70
MA2053	Graph Theory	E	2.0	-	2.0		4.0		30	70
MN2010	Entrepreneurial Leadership	O	1.5	3/2	2.0				50	50
	Total for Semester 4						21.0			

Undergraduate Studies Division

2 0 JUL 2020

Faculty of Engineering
University of Moratuwa

Curriculum for B.Sc. Engineering Honours Degree Programme

Electronic and Telecommunication Engineering Specialization
Department of Electronic and Telecommunication Engineering

Module Code	Module Name	Category	Lectures hrs/week	Lab/ Assignments hrs/weeks	Credits		Norm		Evaluation (%)	
					GPA	NGPA	GPA	NGPA	CA	WE
Semester 5										
EN3023	Electronic Design Realization	C	2	3/1	3.0				40	60
EN3030	Circuits and Systems Design	C	3	3/1	4.0				50	50
EN3053	Digital Communications – I	C	3	3/1	4.0				40	60
EN3143	Electronic Control Systems	C	2	3/1	3.0				40	60
CS3032	Computer Networks	C	2	3/1	3.0		17.0		40	60
MA3013	Applied Statistics	E	2	-	2.0				30	70
MA3023	Numerical Methods	E	2	-	2.0		2.0		30	70
MN3042	Business Economics & Financial Accounting	E	3	-	3.0				30	70
MN3052	Industrial Management & Marketing	E	2.5	3/2	3.0		3.0		30	70
MN3010	Multidisciplinary Design, Innovation and Venture Creation	O	1.5	3/2	2.0				50	50
				Total for Semester 5			22.0			
Industrial Training										
EN3992	Industrial Training	C	-	-		6.0		6.0	100	-
				Total for Industrial Training				6.0		
Semester 6										
EN3900	Seminar	C	2	-		2.0		2.0	100	-
DE1XXX	Humanities Electives I	E	2	-	2.0					
DE2XXX	Humanities Elective II	E	2	-	2.0		4.0			
EN3110	Electronic Devices	E	2	3/1	3.0				40	60
EN3223	Electronic Manufacturing Systems	E	2	3/1	3.0				50	50
EN3240	Embedded Systems Engineering	E	2	3/1	3.0				100	-
EN3250	Internet of Things	E	2	3/1	3.0		3.0		50	50
EN3370	Traffic Engineering	E	2	3/1	3.0				50	50
EN3532	Electronic Instrumentation	E	2	3/1	3.0				50	50
EN3210	Self Initiated Innovation	E	-	-	3.0				100	-
				Total for Semester 6			7.0	2.0		

Curriculum for B.Sc. Engineering Honours Degree Programme

Electronic and Telecommunication Engineering Specialization
Department of Electronic and Telecommunication Engineering

Module Code	Module Name	Category	Lectures hrs/week	Lab/ Assignments hrs/weeks	Credits GPA	Credits NGPA	Norm GPA	Norm NGPA	Evaluation (%) CA	Evaluation (%) WE
Semester 7										
EN4202	Project*	C	-	-	4.0		4.0		100	-
EN4820	Ethics and Legal Fundamentals	C	1	-	1.0		1.0		40	60
EN4932	Technical & Scientific Writing	C	1/2	3/2	-	1.0		1.0	100	-
EN3370	Traffic Engineering	E	2	3/1	3.0				50	50
EN4020	Advanced Digital Systems	E	2	3/1	3.0				100	-
EN4603	Digital IC Design	E	2	3/1	3.0				50	50
EN4213	Power Electronics	E	2	3/1	3.0				50	50
EN4053	Digital Communications II	E	2	3/1	3.0				50	50
EN4313	Telecommunication Core Networks	E	2	3/1	3.0				50	50
EN4363	Microwave Communication	E	2	3/1	3.0				50	50
EN4553	Machine Vision	E	2	3/1	3.0				50	50
EN4563	Robotics	E	2	3/1	3.0				50	50
EN4922	Research Project**	E	-	-	2.5				100	-
BM4111	Medical Electronics and Instrumentation	E	2	3/1	3.0				50	50
BM4301	Medical Image Processing	E	2	3/1	3.0				50	50
BM4321	Genomic Signal Processing	E	2	3/1	3.0		$A^{\dagger}$		50	50
MA4013	Linear Models and Multivariate Statistics	E	3	-	3.0				30	70
MA4033	Time Series and Stochastic Processes	E	3	-	3.0				30	70
MA4023	Operational Research	E	3	-	3.0				30	70
MA4043	Neural Network and Fuzzy Logic	E	3	-	3.0		3.0		30	70
MN4150	Project Management	E	2	-	2.0				50	50
MN4062	Organizational Behaviour and Management	E	2	-	2.0				30	70
MN4132	Consumer and Industrial Marketing	E	2	-	2.0				30	70
MN4122	Human Resource Management and Industrial Relations	E	2	-	2.0				30	70
MN4042	Technology Management	E	2	-	2.0				30	70
MN4022	Engineering Economics	E	2	-	2.0				30	70
MN4030	Strategic Enterprise Management	E	1.5	3/2	2.0		2.0		40	60

Recommended by Senate Curriculum and Evaluation Committee held on 12th August, 2020. | Effective for 2017 Intake onwards – February 2020

Page 5 of 8 - EN

Curriculum for B.Sc. Engineering Honours Degree Programme

Electronic and Telecommunication Engineering Specialization
Department of Electronic and Telecommunication Engineering

Module Code	Module Name	Category	Lectures hrs/week	Lab/Assignments hrs/weeks	Credits		Norm		Evaluation (%)	
					GPA	NGPA	GPA	NGPA	CA	WE
MN3020	Entrepreneurship Business Basics	E	2	3/1	3.0				50	50

Module Code	Module Name	Category	Lectures hrs/week	Lab/Assignments hrs/weeks	Credits		Norm		Evaluation (%)	
					GPA	NGPA	GPA	NGPA	CA	WE
Semester 8										
EN4202	Project*	C	-	-	6.0		6.0		100	-
EN4233	Industrial Electronics and Automation	E	2	3/1	3.0				50	50
EN4283	Electronics Application in Renewable Energy	E	2	3/1	3.0				50	50
EN4430	Analog IC Design	E	2	3/1	3.0				50	50
EN4323	Optical Fibre Communications	E	2	3/1	3.0				50	50
EN4333	Microwave Engineering	E	2	3/1	3.0				50	50
EN4353	Radar and Navigation	E	2	3/1	3.0				50	50
EN4383	Wireless and Mobile Communications	E	2	3/1	3.0				50	50
EN4393	Information Theory	E	2	3/1	3.0				40	60
EN4403	Mobile Computing	E	2	3/1	3.0				70	30
EN4420	Advanced Signal Processing	E	2	3/1	3.0				50	50
EN4573	Pattern Recognition and Machine Intelligence	E	2	3/1	3.0				50	50
EN4583	Advances in Machine Vision	E	2	3/1	3.0				50	50
EN4593	Autonomous Systems	E	2	3/1	3.0				40	60
EN4922	Research Project**	E	-	-	2.5		$B^\dagger$		100	-

Recommended by Senate Curriculum and Evaluation Committee held on 12th August, 2020.

Effective for 2017 Intake onwards – February 2020

Curriculum for B.Sc. Engineering Honours Degree Programme

Electronic and Telecommunication Engineering Specialization
Department of Electronic and Telecommunication Engineering

Module Code	Module Name	Category	Lectures hrs/week	Lab/ Assignments hrs/weeks	Credits		Norm		Evaluation (%)	
					GPA	NGPA	GPA	NGPA	CA	WE
Semester 8 (Cont..)										
MA4013	Linear Models and Multivariate Statistics	E	3.0	-	3.0				30	70
MA4033	Time Series and Stochastic Processes	E	3.0	-	3.0				30	70
MA4023	Operational Research	E	3.0	-	3.0				30	70
MA4053	Numerical Analysis for Scientific Computing	E	3.0	-	3.0		3.0		30	70
MN4122	Human Resource Management and Industrial Relations	E	2.0	-	2.0				30	70
MN4042	Technology Management	E	2.0	-	2.0				30	70
MN4072	Small Business Management and Entrepreneurship	E	2.0	-	2.0				30	70
MN4022	Engineering Economics	E	2.0	-	2.0				30	70
MN4150	Project Management	E	2.0	-	2.0				50	50
MN4092	Management Skills Development	E	2.0	-	2.0				30	70
MN4112	Production and Operations Management	E	2.0	-	2.0				30	70
MN4010	Business Plan Development	E	1.5	3/2	2.0				70	30
MN4170	Global Entrepreneurship	E	1.5	3/2	2.0		2.0		40	60
Total for Semester 7 and Semester 8							33.0	1.0		
Total for the Programme							137	13		

*   - A total of 10 credits for Project over Semester 7 and Semester 8.

**   - A total of 5 credits for Research Project over Semester 7 and Semester 8.

†   - A total of 12.0 credit over Semester 7 and Semester 8 from technical electives $(A+B = 12.0)$

Recommended by Senate Curriculum and Evaluation Committee held on 12th August, 2020.

Effective for 2017 Intake onwards – February 2020

Electronic and Telecommunication Engineering Specialization
Department of Electronic and Telecommunication Engineering

Module Lineup for Entrepreneurship Minor

Module Code	Module Name	Category	Lectures hrs/week	Lab/ Assignments hrs/weeks	Credits GPA	Credits NGPA	Norm GPA	Norm NGPA	Evaluation (%) CA	Evaluation (%) WE
MN1030	Entrepreneurship Skill Development	C	1.0	3/1		2.0		2.0	70	30
MN2010	Entrepreneurial Leadership	C	1.5	3/2	2.0		2.0		50	50
MN3010	Multidisciplinary Design, Innovation and Venture Creation	C	1.5	3/2	2.0		2.0		50	50
MN3020	Entrepreneurship Business Basics	C	2.0	3/1	3.0		3.0		50	50
MN4010	Business Plan Development	C	1.5	3/2	2.0		2.0		70	30
MN4022	Engineering Economics	E	2.0	-	2.0				30	70
MN4042	Technology Management	E	2.0	-	2.0				30	70
MN4112	Production and Operations Management	E	2.0	-	2.0				30	70
MN4030	Strategic Enterprise Management	E	1.5	3/2	2.0				40	60
MN4170	Global Entrepreneurship	E	1.5	3/2	2.0		2.0		40	60
	Total for all Semesters						11.0	2.0		

Modules Offered to Other Fields of Specialization

Module Code	Module Name	Category	Lectures hrs/week	Lab/ Assignments hrs/weeks	Credits GPA	Credits NGPA	Evaluation (%) CA	Evaluation (%) WE
Semester 2								
EN1012	Electronic Devices and Circuits	-	2.0	-	2.0		40	60
EN1052	Introduction to Telecommunications	-	2.0	-	2.0		40	60
EN1802	Basic Electronics	-	2.0	3/4	2.0		40	60
Semester 3								
EN2012	Analog Electronics	-	2.0	3/2	2.5		30	70
EN2022	Digital Electronics	-	2.0	3/2	2.5		30	70
EN2852	Applied Electronics	-	1.5	3/2	2.0		40	60
Semester 4								
EN2062	Signals and Systems	-	2.0	3/2	2.5		30	70

Recommended by Senate Curriculum and Evaluation Committee held on 12th August, 2020.   Effective for 2017 Intake onwards - February 2020

Page 8 of 8 - EN