

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING
BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
Proposed Course Structure of ME (Electrical Engineering) Programme
(Effective from M0/2011 Session, July, 2011)

A. Control System Specialization

I Semester

Sr. No.	CODE	Subject	L	T	P	C
1.	MEE 1103	Advanced Digital Signal Processing	3	-	-	3
2.	MEE 1101	Modern Control Theory	3	1	-	4
3.	MEE 1119	Control System Design	3	-	-	3
4.	MEE 1105	Optimization in Engineering Design (<i>Applied Sciences Paper</i>)	3	-	-	3
5.		Elective – I	3	-	-	3
6.	MEE 1104	Digital Signal Processing Laboratory	-	-	3	2
7.	MEE 1102	Control System Laboratory	-	-	3	2

Total Credit : 20

II Semester

Sr. No.		Subject	L	T	P	C
1.	MEE 2101	Soft Computing Techniques *	3	1	-	4
2.	MEE 2123	Nonlinear Control Systems	3	-	-	3
3.	MEE 2125	Stochastic Processes	3	-	-	3
4.		Appropriate Free Electives from other Departments	3			3
5.		Elective - II	3	-	-	3
6.	MEE 2124	Advanced Control System Laboratory	-	-	3	2
7.	MEE 2158	Power Electronics and Drives Laboratory	-	-	3	2

Total Credit : 20

III Semester

Sr. No.		Subject	L	T	P	C
1.	MEE 3101	Thesis	-	-	-	15

IV Semester

Sr. No.		Subject	L	T	P	C
1.	MEE 3101	Thesis	-	-	-	20

Total Credits - 75

List of Elective - I

Sr. No.	CODE	Subject	L	T	P	C
1.	MEE 1117	Optimal Control Theory	3	-	-	3
2.	MEE 1109	Robust Control Systems	3	-	-	3
3.	MEE 1107	Pattern Recognition	3	-	-	3
4.	MEE 1111	Estimation and Identification Techniques	3	-	-	3
5.	MEE 1113	Robotics and Artificial Intelligence	3	-	-	3

* *Advanced Engineering Science*

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING
BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
Proposed Course Structure of ME (Electrical Engineering) Programme
(Effective from M0/2011 Session, July, 2011)

List of Elective -II

Sr. No.	CODE	Subject	L	T	P	C
1.	MEE 2121	Systems Biology	3	-	-	3
2.	MEE 2117	Microprocessor Application	3	-	-	3
3.	MEE 2115	Embedded System and Applications	3	-	-	3

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING
BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
Proposed Course Structure of ME (Electrical Engineering) Programme
(Effective from M0/2011 Session, July, 2011)

B. Power System Specialization

I Semester

Sr. No.	CODE	Subject	L	T	P	C
1.	MEE 1103	Advanced Digital Signal Processing	3	-	-	3
2.	MEE 1101	Modern Control Theory	3	1	-	4
3.	MEE 1131	Advanced Power System Analysis	3	-	-	3
4.	MEE 1105	Optimization in Engineering Design (<i>Applied Sciences Paper</i>)	3	-	-	3
5.		Elective I	3			3
6.	MEE 1104	Digital Signal Processing Laboratory	-	-	3	2
7.	MEE 1158	Control and Power Electronics Laboratory	-	-	3	2

Total Credit : 20

II Semester

Sr. No.	CODE	Subject	L	T	P	C
1.	MEE 2101	Soft Computing Techniques *	3	1	-	4
2.	MEE 2131	Power System Operation and Control	3	-	-	3
3.	MEE 2137	Power System Dynamics	3	-	-	3
4.		Appropriate Free Electives from other Departments	3	-	-	3
5.		Elective II	3	-	-	3
6.	MEE 2136	Power System Laboratory	-	-	3	2
7.	MEE 2142	Power System Simulation Lab.	-	-	3	2

Total Credit : 20

III Semester

Sr. No.	Subject	L	T	P	C
1.	MEE 3101 Thesis	-	-	-	15

IV Semester

Sr. No.	Subject	L	T	P	C
1.	MEE 3101 Thesis	-	-	-	20

Total Credits - 75

List of Elective -I

Sr. No.	CODE	Subject	L	T	P	C
1.	MEE 1133	EHV AC Power Transmission	3	-	-	3
2.	MEE 1135	Power System Planning and Reliability	3	-	-	3
3.	MEE 1139	Modern Power System Planning	3	-	-	3
4.	MEE 1121	HVDC Power Transmission	3	-	-	3

* Advanced Engineering Science

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING
BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
Proposed Course Structure of ME (Electrical Engineering) Programme
(Effective from M0/2011 Session, July, 2011)

5.	MEE 1115	Power System Reliability	3	-	-	3
----	----------	--------------------------	---	---	---	---

List of Elective - II

Sr. No.	CODE	Subject	L	T	P	C
1.	MEE 2139	Power System Deregulation	3	-	-	3
2.	MEE 2157	Renewable Sources of Electrical Energy	3	-	-	3
3.	MEE 2135	Advanced Power System Protection	3	-	-	3
4.	MEE 2159	Application of Power Electronics in Power System	3	-	-	3
5.	MEE 2115	Embedded System and Applications	3	-	-	3

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING
BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
Proposed Course Structure of ME (Electrical Engineering) Programme
(Effective from M0/2011 Session, July, 2011)

C. Power Electronics Specialization

I Semester

Sr. No.	CODE	Subject	L	T	P	C
1.	MEE 1103	Advanced Digital Signal Processing	3	-	-	3
2.	MEE 1101	Modern Control Theory	3	1	-	4
3.	MEE 1151	Advanced Power Electronics	3	-	-	3
4.	MEE 1105	Optimization in Engineering Design (<i>Applied Sciences Paper</i>)	3	-	-	3
5.		Elective – I	3	-	-	3
6.	MEE 1104	Digital Signal Processing Laboratory	-	-	3	2
7.	MEE 1152	Power Electronics Laboratory	-	-	3	2

Total Credit : 20

II Semester

Sr. No.	CODE	Subject	L	T	P	C
1.	MEE 2101	Soft Computing Techniques*	3	1	-	4
2.	MEE 2155	Power Electronics Applications	3	-	-	3
3.	MEE 2153	Control of Electrical Drives	3	-	-	3
4.		Appropriate Free Electives from other Departments	3	-	-	3
5.		Elective II	3	-	-	3
6.	MEE 2156	Power Electronics Simulation Lab.	-	-	3	2
7.	MEE 2154	Electrical Drives Laboratory	-	-	3	2

Total Credit : 20

III Semester

Sr. No.	Subject	L	T	P	C
1.	MEE 3101 Thesis	-	-	-	15

IV Semester

Sr. No.	Subject	L	T	P	C
1.	MEE 3101 Thesis	-	-	-	20

Total Credits - 75

List of Elective -I

Sr. No.	CODE	Subject	L	T	P	C
1.	MEE 1155	Dynamic Analysis of Electrical Machines	3	-	-	3
2.	MEE 1159	Chaos, Fractals and Dynamical Systems	3	-	-	3
3.	MEE 1137	Modeling and Simulation of Power Electronics Systems	3	-	-	3

* Advanced Engineering Science

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING
BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
Proposed Course Structure of ME (Electrical Engineering) Programme
(Effective from M0/2011 Session, July, 2011)

List of Elective - II

Sr. No.	CODE	Subject	L	T	P	C
1.	MEE 2151	Advanced DSP Architecture and Programming	3	-	-	3
2.	MEE 2157	Renewable Source of Electrical Energy	3	-	-	3
3.	MEE 2115	Embedded System and Applications				
4.	MEE 2133	Power Electronics System Design	2	1	-	3

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING
BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
Proposed Course Structure of ME (Electrical Engineering) Programme
(Effective from M0/2011 Session, July, 2011)

Free Electives to be offered by EEE department for ME/M.Tech Students

Sr. No.	CODE	Subject	L	T	P	C
1.	MEE 2101	Soft Computing Techniques	3	1	-	4
2.	MEE 2161	Biomedical Equipments and Devices	3	-	-	3
3.	MEE 2121	Systems Biology	3	-	-	3

Breadth papers offered by 'Center of Biomedical Instrumentation' for M.Sc. students

List of the breadth papers

1. SMI 1101 Human Anatomy and Physiology for Biomedical Engineers
2. SMI 1103 Biosignal Acquisition and Conditioning Systems
3. SMI 3101 Biomedical Imaging Devices and Concept