

**Minor Revision of Syllabus
of
Degree Module of NERIST**

Approved by 9th AC Meeting held on 16.04.2010

(1) Programme: B.Sc. Forestry (4 year programme)

First Year

Semester I

FR	3101	Concepts of Forestry	3	0	2	4
FR	3102	Wildlife Biology	2	0	2	3
CE	3103	Surveying-I	2	0	2	3
CS	3101	Basics of Computers	2	0	2	3
CY	3102	Environmental Chemistry	3	0	2	4
HS	3102	Personality and Society	3	0	0	3
MA	3102	Comprehensive Mathematics- IA	3	1	0	4
PH	3103	Atmospheric Physics & Climate Change	3	0	0	3

			21	1	5	27

Semester II

FR	3201	Microbiology and Forest Pathology	3	0	2	4
FR	3202	Horticulture	3	0	2	4
FR	3203	Principles of Silviculture	2	0	2	3
FR	3204	Techniques in Forestry	3	1	2	5
CE	3202	Surveying II	3	0	2	4
CY	3203	Biochemistry	3	0	2	4
MA	3203	Applied Mathematics	3	1	0	4

			20	2	6	28

Second Year

Semester I

FR	4101	Agroforestry	3	0	2	4
FR	4102	Forest Nursery Management	3	0	2	4
FR	4103	Aromatic & Medicinal plants	2	0	2	3
FR	4104	Concepts of Ecology	3	0	2	4
FR	4105	Dendrology	3	0	2	4
FR	4106	Forest Protection	3	1	0	4
MA	4101	Biostatistics & Experimental Design	4	0	0	4

			21	1	5	27

Semester II

FR	4201	Wild life Management	3	0	2	4
FR	4202	Forest Ecology	3	0	2	4
FR	4203	Silvicultural Systems	3	0	0	3
FR	4204	Tribal Studies & Ethnobotany	3	0	2	4
FR	4205	Biotechnology	3	0	2	4
HS	4202	Forest Economics	3	0	0	3
CS	4400	Programming with C/C++ (with application)	3	0	2	4

			21	0	5	26

Third Year

Semester I

FR	5101	Forest Seed Technology	2	0	2	3
FR	5102	Silviculture of Indian Trees	3	1	0	4
FR	5103	Wood Anatomy	3	0	2	4
FR	5104	Forest Entomology & IPM	3	0	2	4
FR	5105	Principles & Application of Remote Sensing & GIS	3	0	2	4
FR	5106	Forest Mensuration	3	0	2	4

			17	1	5	23

Semester II

FR	5201	Plant Breeding & Tree Improvement	3	0	2	4
FR	5202	Wood Science & Technology	3	0	2	4
FR	5203	Timber & Non-Timber Forest Products	3	0	2	4
FR	5204	Forest Policies & Planning	2	1	0	3
CE	5207	Forest Engineering	3	0	0	3
AE	5205	Forest Hydrology and Soil Water Conservation	3	0	2	4

			17	1	4	22

Fourth Year

Semester I

FR	6101	Forest Management & Working Plan	4	0	0	4
FR	6102	Conservation Biology	3	1	0	4
FR	6103	Soil Science & Management	3	0	2	4
FR	6104	Rangeland Management	2	1	2	4
FR	6105	Logging & Ergonomics	2	1	0	3
HS	6101	Trade & Marking of Forest Products	3	0	0	3

			17	3	2	22

Semester II

FR	6251	Field Practice & Extension Forestry ***	0	0	30	15
FR	6252	Technical Report	0	0	8	4
FR	6253	Seminar & Viva-voce	0	0	8	4

			0	0	23	23

***Students shall be attached with the Forest Department & Allied Departments for Field Work & Experience for a minimum period of 60 days.

Field Trips: As per course requirement in all semesters.

(2) Programme: Degree in Agricultural Engineering

Year Bridge Lateral Entrants (10+3 Diploma) to Degree Module

Semester I

S No.	Course Code	Course Title	L	T	P	Credit
1	HS-4301	Elements of Economics	3	0	0	03
2	CY-4301	Comprehensive Chemistry	4	0	2	05
3	MA-4301	Comprehensive Mathematics-I	3	1	0	04
4	PH-4301	Comprehensive Physics	4	0	2	05
5	ES-4377	Comprehensive programme in C/C ++ (Audit)	2	0	4	04
6	AE-4301	Mechanics of Granular Materials	3	0	2	04
		Total	16+2	2+0	6+4	21+4

Semester II

S No.	Course code	Course Title	L	T	P	Credit
1	HS-4401	Comprehensive Communication Skill	2	0	2	03
2	MA-4401	Comprehensive Mathematics-II	3	1	0	04
3	AE-4401	Comprehensive Fluid Mechanics	3	0	2	04
4	AE-4402	Basics of Thermodynamics & IC Engines	3	1	0	04
5	AE-4403	Post Harvest Enlkgineering	3	0	2	04
6	AE-4404	Farm Power & Machinery	3	0	2	04
7	AE-4405	Elementary Soil & Water Conservation Engg.	3	0	2	04
		Total	20	2	10	27

First Year

Semester I

S No.	Course Code	Course Title	L	T	P	Credit
1	CY-5101	Applied Chemistry 0 IA (AE)	2	0	2	03
2	MA-5101	Engineering Mathematics-III(AE)	3	1	0	04
3	ME-5121	Machines Theory	3	1	0	04
4	AE-5101	Transfer Processes in Food Engineering	3	1	0	04
5	AE-5102	Water Well & Pump Engineering	3	1	0	04
6	AE-5103	Renewable sources of Energy	3	0	2	04
7	AE-5104	Agricultural Meteorology & Climate Change	3	0	0	03
		Total	19	5	4	26

Semester II

S No.	Course Code	Course Title	L	T	P	Credit
1	MA-5202	Probability & Statistics (AE/ECE/CS/EE)	3	1	0	04
2	AE-5201	Machine Design	3	1	0	04
3	AE-5202	Unit Operations in DFE	3	0	2	04
4	AE-5203	Farm Machinery-II	3	0	2	04
5	AE-5204	Hydrology & Watershed Management	3	1	0	04
6	EE-5220	Elements of Instrumentation & Process Control	3	0	2	04
		Total	18	3	6	24

1	AE-5205*	Forest Hydrology and Soil & Water Conservation Engg.	3	0	2	04
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*Course will be offered to Forestry students of Degree Third Year.

Second Year

Semester I

S. No.	Course Code	Course Title	L	T	P	Credit
1.	ME-6121	Theory of Refrigeration & Air conditioning	2	0	0	02
2.	AE-6101	Farm Power-II	3	0	2	04
3.	AE-6102	Food Process Technology	3	0	2	04
4.	AE-6103	RS & GIS for Land and Water Management	3	1	0	04
5.	AE-60**	Elective-I	3	1	0	04
6.	*****	Open Elective	3	0	0	03
7.	AE-6199	Project Part – I	0	0	4	02
8.	AE-6179	Industrial Training (Audit)	0	0	0	02
		Total	18	2	8	23+2

Semester II

S. No.	Course Code	Course Title	L	T	P	Credit
1.	HS-6203	Agri Business Management	2	1	0	03
2.	AE-6201	Irrigation & Drainage Engineering-II	3	1	0	04
3.	AE-6202	Farm Produce & Storage Engineering	3	0	2	04
4.	AE-60**	Elective-II	3	1	0	04
5.	AE-60**	Elective-III	3	1	0	04
6.	AE-6299	Project Part-II	0	0	8	04
7.	AE-6288	Extra Curricular Activities & Discipline	0	0	0	02
		Total	15	3	10	23+2

Elective-I

AE-6001	Command Area Development
AE-6002	Water Resources Engineering
AE-6003	Bioprocess Engineering
AE-6004	Food Plant Utilities and Sanitation
AE-6005	Testing of Tractors and Farm Equipment
AE-6006	Research Methods
AE-6007	Environmental Engineering

Elective-II & III

AE-6008	Design of Soil Conservation Structures
AE-6009	Watershed Management
AE-6010	Food Processing Equipment Design
AE-6011	Dynamics of Tillage and Traction
AE-6012	Tea Plantation Machinery
AE-6013	Principles of Ergonomics

Open Elective

(To be offered by other departments)

(3) Programme :: Degree in Civil Engineering

First Year

Semester I

Year I	Semester I	L	T	P	C
CY-5102	Applied Chemistry I-B	3	0	0	3
MA-5102	Engineering Mathematics III-A	3	1	0	4
CE-5101	Structural Analysis-II	3	1	0	4
CE-5102	Engineering Geology	3	0	2	4
CE-5103	Fluid Mechanics-II	3	0	2	4
CE-5104	Transportation Engineering-II	3	0	2	4
Total		18	2	3	23

Semester II

CE	5201	Water Resources Engineering - II	3	1	0	4
CE	5202	Geotechnical Engineering - II	3	0	2	4
CE	5203	Introductory Finite Element Method	2	1	0	3
CE	5204	Design of Steel Structures - II	3	1	0	4
CE	5205	Design of RCC Structures - II	3	1	0	4
MA	5201	Numerical Methods	3	0	2	4

			17	4	2	23

Second Year

Semester I

HS	60**	Open Elective	3	0	0	3
CE	6101	Environmental Engineering - II	3	1	2	5
CE	6102	Geodetic Surveying	3	0	2	4

CE	6103	Structural Dynamics	3	1	0	4
CE	6104	Advanced Mechanics of Solids	3	0	0	3
CE	6105	Computational Methods in Civil Engineering	2	0	4	4
CE	6179	Industrial Training (AUDIT)	--	--	--	2
CE	6199	Oroject Part-1 (AUDIT)	0	0	4	2

			17	2	4	23+4

Semester II

CE	6201	Planning, Estimation and Valuation	3	0	0	3
CE	60**	Elective - I	3	1	0	4
CE	60**	Elective - II	3	1	0	4
CE	60**	Elective – III	3	1	0	4
HS	6201	Human Resource Management	3	0	2	4
CE	6299	Project	0	0	8	4
ED	6200	Extra Curricular Activities and Discipline	0	0	0	2

			15	3	5	23+2

Bridge Courses for lateral Entrans (10+3 Diploma) to Degree Module

Semester I

HS	4301	Elements of Economics	3	0	0	3
CY	4301	Comprehensive Chemistry	4	0	2	5
MA	4301	Comprehensive Mathematics-I	3	1	0	4
PH	4301	Comprehensive Physics	4	0	2	5
ES	4377	Programming in C/C++ (Audit)	2	0	4	4
CE	4301	Geotechnical & Transportation Engineering	4	0	2	5

			18	1	3	22+4

Semester II

HS	4401	Comprehensive Communication Skill	2	0	2	3
MA	4401	Comprehensive Mathematics-II	3	1	0	4
CE	4401	Hydralics & Water Resources Engineering	3	1	2	5
CE	4402	Concrete Technology & RCC Structures	3	1	2	5
CE	4403	Structural Analysis & Steel Structures	4	0	2	5
CE	4404	Building Planning & Environmental Engg.	4	0	2	5

			19	3	5	27

List of Electives for Degree Module

CE 6001	Ground Water Hydrology
CE 6002	Flood Cpontrol and river Training works
CE 6003	Bridge Engineering
CE 6004	Matrix Methods of Structural Analysis
CE 6005	Earthquake Resistant Structures
CE 6006	Advanced Soil Mechanics and Foundations

CE 6007	Machine Foundations
CE 6008	Hydro-Power Development
CE 6009	Design of Pre stressed concrete structures
CE 6010	Pavement Design
CE 6011	Earth and earth retaining structures
CE 6012	Mathematical modeling in environmental engineering
CE 6013	Advanced waste water treatment techniques
CE 6014	Environmental Impact Assessment and Audit
CE 6015	Solid waste management
CE 6016	Industrial pollution and control
CE 6017	Principles and practices in Geotechnical engineering
CE 6018	Open channel hydraulics
CE 6019	Water resources systems
CE 6020	Element of earthquake engineering
CE 6021	Ground improvement technique
CE 6022	Systems Approach in Civil Engineering

List of open Electives for Degree Module

CE 6023	Urban Planning and Design
CE 6024	Theory of Elasticity
CE 6025	Finite Element Methods
CE 6026	Public Transport and Traffic Management

Courses to be offered by the Department to students of other Department

Module	Course code	Course Title	Contact Hours	L	T	P	C	To be offered to students of
Base	ES-1151	Engineering Drawing	0	0	6	3		AE,CE,EE,EC & ME
	ES-3200	Environment and Ecology	3	0	0	3		AE,CE,EE,EC,CS,ME,FO (Environment part to be taught by faculty from CE, Ecology by faculty from FO, CC may be from CE/FO on rotation basis/convenience)
Diploma	CE-3102	Surveying-I	2	0	2	3		CE (L) and FO (to be run simultaneously with CE 2103 for Base students)
	CE-3151	Engineering Graphics	0	0	4	2		CE(L),EE,EC,CS
	CE-4226	Basics of Civil Engineering	3	0	2	4		ME
	CE-4227	Building Materials and Construction	3	0	2	4		AE

(4) Programme: Degree in Computer Science & Engineering

Bridge Courses for Lateral Entrants (10+3 Diploma) to Degree Module

Semester I		L	T	P	C
HS 4301	Elements of Economics	3	0	0	3
CY 4301	Comprehensive Chemistry	4	0	2	5
MA 4301	Comprehensive Mathematics-I	3	1	0	4

PH	4301	Comprehensive Physics	4	0	2	5
CS	4301	Object Oriented Programming in C++	3	0	2	4
CS	4302	Computer Organization & Architecture	3	0	2	4
						25

Semester II

HS	4401	Comprehensive Communication Skill	2	0	2	3
MA	4401	Comprehensive Mathematics-II	3	1	0	4
CS	4401	Programming in Java	3	0	2	4
CS	4402	Operating Systems	3	0	0	3
CS	4403	Microprocessors	3	0	2	4
CS	4404	Data Structures	3	1	2	5
						23

First Year

Semester I

MA	5103	Engineering Mathematics IIIB	3	1	0	4
MA	5107	Discrete Mathematics	3	1	0	4
CS	5100	Design and Analysis of Algorithms	3	1	2	5
CS	5101	Data Communication	3	1	0	4
CS	5102	<i>Software Engineering</i>	3	0	2	4
						21

Semester II

MA	5202	Applied Probability & Statistics	3	1	0	4
CS	5200	Database Management Systems	3	1	2	5
CS	5201	Computer Graphics	3	0	2	4
CS	5202	Theory of Computation	3	1	0	4
CS	5203	Computer Networks	3	1	2	5
CS	5204	Computer Architecture	3	1	0	4
						26

Second Year

Semester I

**	60**	Open Elective	3	0	0	3
CS	6101	Compiler Design	3	1	2	5
CS	6102	Computer Network Security	3	1	0	4
CS	60**	Elective - I	3/3	0/1	2/0	4
CS	60**	Elective - II	3/3	0/1	2/0	4
CS	6179	Industrial Training (Audit)	0	0	2	1
CS	6199	Project-I	0	0	4	2
						23

Semester II

CS	6200	Microprocessors and Micro-Controllers	3	0	2	4
CS	6201	Mobile Computing	3	1	0	4
CS	60**	Elective -III	3/3	0/1	2/0	4
CS	6202	Comprehensive Viva	0	0	8	4
CS	6299	Project-II	0	0	8	4
ED	6288	Extra Curricular Activities & Discipline	-	-	-	2
HS	6201	Human Recourse Management	3	0	2	4
						26

(5) Programme: Degree in Electrical Engineering Department**Bridge Courses for Lateral Entrants (10+3 Diploma) to Degree Module****Semester 1**

S. No.	CODE	Name of Course	L	T	P	Cr
1.	HS 4301	Elements of Economics	3	0	0	3
2.	CY 4301	Comprehensive Chemistry	4	0	2	5
3.	MA 4301	Comprehensive Mathematics -1	3	1	0	4
4.	PH 4301	Comprehensive Physics	4	0	2	5
5.	ES 4377	Comprehensive Programming in C/C++ (Audit)	2	0	4	4
6.	EE 4301	Electrical Engineering Materials	3	0	0	3
7.	EE 4302	Introduction to Digital Electronics	3	0	2	4

25+3**Semester II**

S. No.	CODE	Name of Course	L	T	P	Cr
1.	HS 4401	Comprehensive Communication Skill	2	0	2	3
2.	MA 4401	Comprehensive Mathematics -II	3	1	0	4
3.	EE 4401	Electrical Circuits	3	1	2	5
4.	ES 4402	Electric Power Utilization	3	0	2	4
5.	EE 4403	Computer Applications in EE	3	0	2	4
6.	EE 4404	Power Electronics - I	3	0	2	4

24**First Year****Semester I**

S. No.	CODE	Name of Course	L	T	P	Cr
1.	PH 5101	Modern Physics	3	0	2	4
2.	MA 5105	Engineering Mathematics – III D	3	1	0	4
3.	EE 5101	Network Analysis	3	1	0	4
4.	EE 5102	Power System-I	3	0	2	4
5.	EE 5103	Power Electronics –II	3	0	2	4
6.	EE 5104	Electromagnetic Fields	3	1	0	4

24

Semester II

S. No.	CODE	Name of Course	L	T	P	Cr
1.	MA 5201	Numerical Methods	3	0	2	4
2.	MA 5202	Probability and Statistics	3	1	0	4
3.	EE 5201	Microprocessor and Its Applications	3	0	2	4
4.	EE 5202	Control System Engineering	3	0	2	4
5.	EE 5203	Advanced Electrical Machine	3	0	2	4
6.	EE 5204	Power System -II	3	0	2	4

24

**Second Year
Semester I**

S. No.	CODE	Name of Course	L	T	P	Cr
1.	EC 6120	Introduction to Digital Signal Processing	3	0	2	4
2.	EE 6101	Electrical Energy Management	3	0	2	4
3.	EE 6102	Modern Control Engineering	3	0	2	4
4.	EE 6103	Elective-I	3	1/0	0/2	4
5.	** 60**	Open Elective	3	0	0	3
6.	EE 6199	Project Part -I	0	0	4	2
7.	EE 6199	Industrial Training and Seminar (Audit)	0	0	4	2

21+2

Semester II

S. No.	CODE	Name of Course	L	T	P	Cr
1.	EE 6201	High Voltage Engineering	3	0	2	4
2.	EE 6202	Instrumentation and Process Control	3	0	2	4
3.	HS 6201	Human Resource Management	3	0	2	4
4.	EE 60**	Elective- II	3	1/0	0/2	4
5.	EE 60**	Elective- III	3	1/0	0/2	4
6.	EE 6299	Project Part -2	0	0	8	4
7.	EE 6289	Seminar	0	0	2	1
8.	ED 6200	Extracurricular Activities and Discipline	0	0	0	2

25+2

List of Elective Courses**Elective- I**

S. No.	CODE	Name of Course	L	T	P	Cr
1.	EE 6010	Computer Aided Design of Electrical Machines	3	1/0	0/2	4
2.	EE 6011	Power System Economics	3	1/0	0/2	4
3.	EE 6012	Computer Application in Power System	2	0	4	4
4.	EE 6013	Extra High Voltage DC/AC Transmission	3	1/0	0/2	4
5.	EE 6014	Optimization Techniques and Engineering Applications	3	1/0	0/2	4
6.	EE 6015	Operation Research	3	1/0	0/2	4
7.	EE 6016	Electrical Machine Design	3	1/0	0/2	4
8.	EE 6017	Basic Communication Engineering	3	1/0	0/2	4
9.	EE 6018	Flexible AC Transmission System	3	1/0	0/2	4
10.	EE 6019	Artificial Intelligence	3	1/0	0/2	4

Elective –II

S. No.	CODE	Name of Course	L	T	P	Cr
1.	EE 6020	Electrical and Electronic Measuring Systems	3	1/0	0/2	4
2.	EE 6021	Power System Instrumentation & Control	3	1/0	0/2	4
3.	EE 6022	Advanced Microprocessors and Applications	3	1/0	0/2	4
4.	EE 6023	Network Synthesis	3	1/0	0/2	4
5.	EE 6024	Special Electromechanical System	3	1/0	0/2	4
6.	EE 6025	Power Electronics based Industrial Drives	3	1/0	0/2	4
	EE 6026	Bio-medical Instrumentation	3	1/0	0/2	4

Elective-III

S. No.	CODE	Name of Course	L	T	P	Cr
1.	EE 6030	Safety and Reliability Engineering	3	1	0	4
2.	EE 6031	Microprocessor Based Industrial Drives	3	1/0	0/2	4
3.	EE 6032	Power System Stability	3	1/0	0/2	4
4.	EE 6033	Signals and Systems	3	1	0	4
5.	EE 6034	Generalized Machine Theory	3	1	0	4
6.	EE 6035	Time Series Analysis and Forecasting	3	1/0	0/2	4
7.	EE 6036	Power System Reliability	3	1	0	4

Courses for other Department

S. No.	CODE	Name of Course	Offered to	L	T	P	Cr
1.	EE 5220	Elements of Instrumentation and Process Control	AE	3	0	2	4

(6) Programme: Degree in Mechanical Engineering

Bridge Year [For Lateral Entrants (10+3 Diploma) to Degree Module]

Semester I

			L	T	P	C
HS	4301	Elements of Economics	3	0	0	3
PH	4301	Comprehensive Physics	4	0	2	5
CY	4301	Comprehensive Chemistry	4	0	2	5
MA	4301	Comprehensive Mathematics-I	3	1	0	4
ME	4301	Strength of Materials & Machine Theory	3	1	0	4
ME	4302	Fluid Mechanics & Machines	3	1	0	4
			20	3	4	25

Semester II

			L	T	P	C
HS	4401	Comprehensive Communication Skill	2	0	2	3
MA	4401	Comprehensive Mathematics-II	3	1	0	4
ME	4401	Mechanical Component Design & drawing	3	1	2	5
ME	4402	Thermal Engineering	4	0	0	4
ME	4403	Production Technology	4	0	2	5
ME	4451	Comprehensive Mechanical Lab	0	0	4	2
ME	4477*	Computer Application in Mechanical Engineering	1*	0	4	3*
			16+1*	2	10+4*	23+3*

*Audit Course

For Lateral & Vertical Entrants

First Year

Semester I

			L	T	P	C
MA	5106	Engineering Mathematics III E	4	0	2	5
ME	5101	Operations Research	3	1	0	4
ME	5102	Fluid Mechanics	4	0	2	5
ME	5103	Mechanics of Solids	4	0	0	4
ME	5104	Dynamics of Machines	4	0	0	4
ME	5105	Heat and Mass Transfer	4	0	0	4
			23	1	4	26

Semester II

ME	5201	Machine Design	4	0	2	5
ME	5202	Manufacturing Science	4	0	0	4
ME	5203	Industrial Engineering	3	0	0	3
ME	5204	Refrigeration and Air Conditioning	3	1	0	4
ME	5205	Instrumentation & Control Engineering	3	0	0	3
ME	5206	Elements of Mechatronics	3	0	0	3
ME	5251	Experimental Techniques	0	0	4	2
ME	5289	Seminar	0	0	4	2
			20	1	10	26

Second Year

Semester I

**	60**	Open Elective	3	0	0	3
ME	6101	Energy Conversion Techniques	4	0	0	4
ME	6102	Numerical Control and CAM	3	0	0	3
ME	6103	Power Plant Engineering	4	0	0	4
ME	6104	Product Design	2	0	2	3
ME	60**	Elective-I	3	0	0	3
ME	60**	Elective -II	3	0	0	3
ME	6199	Project – Part I	0	0	4	2
ME	6179	Industrial Training * 30 days compulsory	-	-	-	2*
			22	0	6	25+2*(Audit)

* Audit Course

Semester II

HS	6201	Human Resource Management	3	0	2	4
ME	60**	Elective-III	3	0	0	3
ME	60**	Elective-IV	3	0	0	3
ME	6251	Advanced Laboratory Practice	0	0	6	3
ME	6299	Project – Part II	0	0	8	4
ME	6290	Comprehensive Viva	-	-	-	2
ED	6288	Extra curricular activities & discipline	-	-	-	2
			9	0	16	19+2(ED)

List of Electives

Group-1 (For Elective–I & Elective–II)

ME 6001 Combustion Engineering
 ME 6003 Aerodynamics
 ME 6005 Compressible Flow
 ME 6007 Two Phase Flow and Heat Transfer
 ME 6009 Composite Materials
 ME 6011 Turbomachines
 ME 6013 Finite Element Methods
 ME 6015 Principles of Tribology

Group-II (For Elective–III & Elective–IV)

ME 6002 Computational Fluid Dynamics
 ME 6004 Prime mover design
 ME 6006 Process Equipment Design
 ME 6008 Fluid Power Control Systems
 ME 6010 I.C. Engines
 ME 6012 Computer Aided Design and Graphics
 ME 6014 Non-Conventional Energy
 ME 6016 Propulsion Engineering

ME 6018 Boundary Layer Theory
 ME 6017 Theory of Elasticity
 ME 6019 Management of Production System
 ME 6021 Non-Conventional Machining
 ME 6023 Energy Management
 ME 6025 Design of RAC systems
 ME 6027 Non Prime mover design
 ME 6029 Mechanical Handling of Materials
 ME 6020 Air and Noise Pollution Control
 ME 6022 Heat Exchanger Design
 ME 6024 Design of Thermal Systems
 ME 6026 Value Engineering
 ME 6028 Vibration Analysis
 ME 6030 Metal Casting Technology
 ME 6032 Tool Design
 ME 6034 Industrial Robotics
 ME 6036 Production Planning and Control

Courses Offered to other Branches only

Course Code	Course Name	L-T-P-Cr	Offered to	Remarks
ME 5121	Machine Theory	3 – 1 – 0 – 4	AE	
ME 6121	Theory of Refrigeration and Air Conditioning	2 – 0 – 0 – 2	AE	

(5) Programme: Degree in Electronics and Communication Engineering

First Year

Semester I		L	T	P	C
PH 5101	Modern Physics	3	0	2	4
MA 5104	Engineering Mathematics III C	3	1	0	4
EC 5100	Computer Architecture and Organization	3	1	0	4
EC 5101	Microelectronics	3	1	0	4
EC 5102	Digital Signal Processing	3	0	2	4
EC 5103	Network Analysis and Synthesis	3	1	0	4
				Total	24
Semester II					
MA 5201	Applied Probability and Statistics	3	1	0	4
EC 5200	Introduction to VLSI Design	3	1	0	4
EC 5201	Advanced Microprocessors	3	0	2	4
EC 5202	Electromagnetic Theory	3	1	0	4
EC 5203	Analog Communication Theory	3	1	0	4
EC 5204	Analog and Digital Control	3	1	0	4
				Total	24
Second Year					
Semester I					
XX 60XX	Open Elective	3	0	0	3

EC 6100	Linear Integrated Circuits	3	0	2	4
EC 6101	Digital Communication	3	0	2	4
EC 6102	Microwave Engineering	3	0	2	4
EC 601X	One elective from Group-I	3	0	0	3
EC 6179	Industrial Training (Audit)	0	0	0	2
EC 6199	Project Part I	0	0	4	2
		Total			20+2
EC 6120	Introduction to Digital Signal Processing (for EE Students)	3	0	2	4
Semester II					
HS 6201	Human Resource and Management	3	0	2	4
EC 6200	Antenna and Radar Engg	3	0	2	4
EC 6201	Mobile Communications	3	0	0	3
EC 601X	One elective from Group-I	3	0	0	3
EC 603X	One elective from Group-II	3	0	2	4
EC 6299	Project Part II	0	0	8	4
ED-6288	Extracurricular activities	0	0	0	2
		Total			24

List of Electives for Degree final year students:							
Group I		Semester I & II		L	T	P	C
EC 6010	Artificial Neural Networks and its Application	3	0	0	3		
EC 6011	System Programming	3	0	0	3		
EC 6012	Robotics	3	0	0	3		
EC 6013	Multimedia Applications	3	0	0	3		
EC 6014	Data Compression	3	0	0	3		
EC 6015	Telecommunication Switching	3	0	0	3		
EC 6016	Principles of Operating Systems	3	0	0	3		
EC 6017	Stripline, Microstrip line and circuits.	3	0	0	3		
EC 6018	Soft Computing	3	0	0	3		
EC 6019	Advanced Digital Signal Processing.	3	0	0	3		
Group II							
Group II		Semester II					
EC 6030	Optical Fiber Communication	3	0	2	4		
EC 6031	Advanced Digital System Design	3	0	2	4		
EC 6032	Computer Communication and Networks	3	0	2	4		
EC 6033	Wireless Communication and Networks	3	1	0	4		
EC 6034	Computer Aided Design of VLSI Circuits	3	1	0	4		
EC 6035	Digital Image Processing	3	0	2	4		
EC 6036	Microcontroller Applications and Embedded System Design	3	0	2	4		
EC 6037	Advanced Radar Engineering	3	1	0	4		
EC 6038	Modern Control Engg	3	1	0	4		
EC 6039	Microstrip Antennas Design	3	1	0	4		
List of Open Electives from the Department							
EC-6040	Artificial Neural Networks and its Application	3	0	0	3		
EC-6041	Data Compression	3	0	0	3		

EC-6042	Computer Communication and Networks	3	0	0	3
EC-6043	Digital Image Procession	3	0	0	3
EC-6044	Microprocessors and Microcontrollers	3	0	0	3
EC-6045	Fundamentals of VLSI design	3	0	0	3
EC-6046	Digital System Design	3	0	0	3
Bridge courses for Lateral Entrants (10+3 Diploma) to Degree Module					
Semester I					
HS 4301	Elements of Economics	3	0	0	3
PH 4301	Comprehensive Physics	4	0	2	5
CY 4301	Comprehensive Chemistry	4	0	2	5
MA 4301	Comprehensive Mathematics-I	3	1	0	4
EC 4301	Digital Circuits and Design	3	0	2	4
EC 4301	Electronics Circuits and Devices-III	3	0	2	4
		Total			25
Semester II					
HS 4401	Comprehensive Communication Skill	2	0	2	3
MA 4401	Comprehensive Mathematics-II	3	1	0	4
EC 4401	Signals and Systems	3	1	0	4
EC 4402	Communication Engineering	3	0	2	4
EC 4403	Microprocessor and Applications	3	0	2	4
EC 4404	Industrial Electronics	3	0	2	4
		Total			23

