

**Minor Revision of Syllabus
of
Diploma Module of NERIST**

Approved by 9th AC Meeting held on 16.04.2010

(1) Programme: Diploma in Agricultural Engineering

First Year Semester I

S No.	Course Code	Course Title	L	T	P	Credit
1.	PH-3102+	Physics – III B	2	0	2	03
2.	CY-3101+	Chemistry-III	3	0	2	04
3.	HS-3101+	Communication Skill	2	0	2	03
4.	ME-3151*	Comprehensive Workshop-I (AE/ME/CS)	0	0	6	03
5.	ME-3152*	Comprehensive Engineering Drawing	0	0	6	03
6.	ES-3101*	Applied Mechanics (EE/AE)	3	1	0	04
7.	AE-3101	Agricultural Surveying	3	0	2	04
8.	ES-3100	Object Oriented Programming with C++	2	0	4	04
9.	MA-3101	Engineering Mathematics-I	3	1	0	04
10.	FO-3121	Soil Science & Crop Production	3	0	2	04
		Total	18/14	½	14/20	26/26

Semester II

S No.	Course Code	Course Title	L	T	P	Credit
1.	PH-3202	Physics-IV B	2	0	2	03
2.	CY-3202	Engineering Chemistry-IA	3	0	2	04
3.	MA-3201	Engineering Mathematics-II	3	1	0	04
4.	AE-3201	Engineering Thermodynamics	3	1	0	04
5.	AE-3202	Strength of Materials	3	1	0	04
6.	AE-3203	Fluid Mechanics	3	0	2	04
7.	EC-3200	Environment and Ecology	3	0	0	03
		Total	20	3	6	26

Second Year Semester I

S No.	Course Code	Course Title	L	T	P	Credit
1.	EE-4123	Basic Electrical Engineering	4	0	2	05
2.	AE-4101	IC Engines	2	1	0	03
3.	AE-4102	Farm Machinery-I	3	0	2	04
4.	AE-4103	Soil Mechanics	3	0	2	04
5.	AE-4104	Agricultural Process Engineering-I	3	1	0	04
6.	AE-4105	Soil & Water Conservation Engineering	3	0	2	04
7.	AE-4151	Seminar	0	0	2	01
		Total	18	2	10	25

+ Bridge for 10+2 Vocational/NERIST Certificate

*Bridge for 10+2 (PCM)

Semester II

S No.	Course Code	Course Title	L	T	P	Credit
1.	AE-4201	Farm Power-I	3	0	2	04
2.	AE-4202	Agricultural Process Engineering-II	3	1	0	04
3.	AE-4203	Irrigation & Drainage Engineering	3	0	2	04
4.	CE-4227	Buildings Materials & Construction	3	0	2	04
5.	AE-40**	Elective	3	1	0	04
6.	HS-4203	Agricultural Economics & Farm Management	3	0	0	03
7.	AE-4299	Project	0	0	6	03
8.	ED-4288	Extra-Curricular Activities & Discipline	0	0	0	02
		Total	18	2	12	26+2

List of Electives

AE-4001	Food Science
AE-4002	Agro Industries
AE-4003	Seed Technology
AE-4004	Aqua cultural Engineering
AE-4005	Tea Science and Technology
AE-4006	Earth Moving Machinery
AE-4007	Waste Land Development
AE-4008	Processing of Plantation and horticultural crop
AE-4009	Seed Technology and Processing
AE-4010	Convenience Food and Beverage

(2) Programme: Diploma in Civil Engineering

First Year Semester I

S No.	Course Code	Course Title	L	T	P	Credit
1	PH-3102+	Physics-III-B	2	0	2	3
2	CY-3101+	Chemistry-III	3	0	2	4
3	HS-3101+	Communication Skills	2	0	2	3
4	MA-3101	Engineering Mathematics-I	3	1	0	4
5	ES-3100	Object Oriented Programming with C++	2	0	4	4
6	CE-3101	Fluid Mechanics-I	3	0	2	4
7	ME-3153*	Comprehensive Workshop II	0	0	4	2
8	CE-3103*	Surveying-I	2	0	2	3
9	CE-3104*	Principles of Civil Engineering	3	0	0	3
10	CE-3151*	Engineering Graphics	0	0	4	2
		Total	18	2	6	26

+ Bridge for 10+2 Vocational/NERIST Certificate

* Bridge for 10+2 PCM

Semester II

S No.	Course Code	Course Title	L	T	P	Credit
1	ES-3200	Environment and Ecology	3	0	0	3
2	PH-3202	Physics IV – B	2	0	2	3
3	CY-3202	Engineering Chemistry-IA	3	0	2	4
4	MA-3201	Engineering Mathematics-II	3	1	0	4
5	CE-3201	Mechanics of Solids	3	1	2	5
6	CE-3202	Surveying-II	3	0	2	4
		Total	17	2	4	23

Second Year Semester I

S No.	Course Code	Course Title	L	T	P	Credit
1	HS-4101	Principles of Economics	3	0	0	3
2	CE-4101	Structural Analysis-I	3	1	2	5
3	CE-4102	Water Resources Engineering-I	4	0	0	4
4	CE-4103	Geotechnical Engineering-I	3	0	2	4
5	CE-4104	Transportation Engineering-I	3	0	2	4
6	CE-4105	Concrete Technology	3	0	2	4
7	ME-4121	Principles of Mechanical Engineering	3	1	0	4
		Total	22	2	4	28

Semester II

S No.	Course Code	Course Title	L	T	P	Credit
1	CE-4201	Design of RCC structures-I	3	1	0	4
2	CE-4202	Design of Steel Structures-I	3	1	0	4
3	CE-4203	Environmental Engineering-I	3	0	2	4
4	CE-4204	Building Planning and Drawing	2	0	4	4
5	CE-4205	Construction Management and Accounts	2	0	0	2
6	CE-40**	Elective	3	1	0	4
7	CE-4299	Project	0	0	6	3
8	ED-4288	Extra-Curricular Activities and Discipline	0	0	0	2
		Total	16	3	6	25+2

(3) Programme: Diploma in Computer Science & Engineering

First Year Semester I

Course Code	Course Title	L	T	P	C
HS 3101+	Communication Skill	2.	0	2	3
CY 3101+	Chemistry III	3	0	2	4
PH 3102 +	Physics III-B	2	0	2	3
MA 3101	Engineering Mathematics - I	3	1	0	4
CS 3102	Object Oriented Programming with C++	3	0	4	5
CS 3103	Digital Circuits	3	1	2	5
ES 3151*	Engineering Graphics	0	0	4	2
EE 3101 *	Basics of Electrical and Electronics Engineering	4	0	2	5
ME 3151*	Comprehensive Workshop - I	0	0	6	3
CS 3177"	Principles of Computers (Audit)	2	0	2	3
				Total	24/(24+3*)

+ Bridge for 10+2 Vocational/NERIST Certificate

* Bridge for 10+2 (PCM)

Semester II

ES 3200	Environment & Ecology	3	0	0	3
MA 3201	Engineering Mathematics-II	3	1	0	4
PH 3201	Physics IV- A	2	0	2	3
CY 3201	Engineering Chemistry -I	3	0	2	4
EC 3221	Basic Electronics Circuit and Devices	3	0	2	4
CS 3201	Switching Theory & Logic Design	3	1	2	5
				Total	23

Second Year

Semester I

HS 4101	Principles of Economics	3	0	0	3
EC 4121	Electronics Circuits & Devices	3	0	2	4
CS 4100	Computer Networking Concepts & Devices	3	1	0	4
CS 4101	System Software	3	0	0	3
CS 4102	Application Software	3	0	4	5
CS 4103	Computer Organization & Architecture	3	1	2	5
CS 4104	Principles of Programming Languages	3	0	0	3
				Total	27

Semester II

CS 4200	Microprocessor	3	1	2	5
CS 4201	Operating Systems	3	0	0	3
CS 4202	Programming in Java	3	0	2	4
CS 4203	Data Structures	3	1	2	5
CS 4299	Project	0	0	6	3
CS 40**	Elective- I	3/3	0/1	2/0	4
CS 4204	Comprehensive Viva	0	0	6	3

ED 4288	Extra-Curricular Activities & Discipline	-	-	-	2
		Total	29(27+2)		

List of Electives

CS 4000	Data Processing and File System	3	0	2	4
CS 4001	Web Technology	3	0	2	4
CS 4002	Graphics Design and Modelling	3	0	2	4
CS 4003	Real Time Systems	3	1	0	4

Common Courses:

ES 2200	Basics of Computers and Programming (in C)	2	0	4	4
ES 3100	Object Oriented Programming with C++	2	0	4	4
ES 4377	Comprehensive Programming with C/C++	2	0	4	4

Courses offered to Forestry Department:

CS 3101	Basics of Computers (in FORTRAN)	2	0	2	3
CS 4400	Programming with C/C++(with application)	3	0	2	4

(4) Programme: Diploma in Electrical Engineering

First Year Semester I

S. No.	CODE	Name of Course	L	T	P	Cr
1.	HS 3101 ⁺	Communication Skill	2	0	2	3
2.	PH 3101 ⁺	Physics –III A	4	0	2	5
3.	CY 3101 ⁺	Chemistry-III	3	0	2	4
4.	ES 3101	Object Oriented Programming with C++	2	0	4	4
5.	MA 3101	Engineering Mathematics-I	3	1	0	4
6.	EE 3103	Electrical Engineering Materials	3	0	0	3
7.	EE 3101 [*]	Basics of Electrical Engineering	4	0	2	5
8.	EE 3102 [*]	Electrical Installation and Practice	3	0	2	4
9.	ES 3101 [*]	Applied Mechanics	3	1	0	4
10.	CE 3151 [*]	Engineering Graphics	0	0	4	2
11.	EE 3177 [*]	Application of Electronics in industry (Audit)	3	0	2	4

Total : 23/26 +4

+ for 10+2 Vocational/NERIST Certificates.

* Bridge for 10+2 PCM.

Semester II

S. No.	CODE	Name of Course	L	T	P	Cr
1.	ES 3200	Environment and Ecology	3	0	0	3
2.	CY 3201	Engineering Chemistry - I	3	0	2	4
3.	MA 3201	Engineering Mathematics-II	3	1	0	4
4.	EC 3221	Basic Electronic Circuits and Devices	3	0	2	4
5.	EE 3201	Electrical Circuits	3	1	2	5

6.	EE 3202	Generation Transmission and Distribution	3	1	2	5
7.	ME 3277*	Comprehensive Workshop -III (Audit)	0	0	6	3

Total : 25+3

**Second Year
Semester I**

S. No.	CODE	Name of Course	L	T	P	Cr
1.	HS 4101	Principle of Economics	3	0	0	3
2.	EC 4121	Electronic Circuits and Devices	3	0	2	4
3.	EE 4101	Electrical machine - I	3	0	2	4
4.	EE 4102	Power System Switchgear and Protection	3	1	2	5
5.	EE 4103	Electrical Estimating and Costing	3	0	2	4
6.	EE 4104	Introduction to Digital Electronics	3	0	2	4
7.	EE 4105	Electrical Measurements and Instruments	3	0	2	4

Total : 28

Courses for other Departments

S. No.	CODE	Name of Course	Offered to	L	T	P	Cr
1.	EE 4121	Electrical Engineering	ECE	3	0	2	4
2.	EE 4122	Fundamental of Electrical Engineering	ME	3	0	2	4
3.	EE 4123	Basic Electrical Engineering	AE	4	0	2	5

Semester II

S. No.	CODE	Name of Course	L	T	P	Cr
1.	EE 4201	Electrical Machine-II	3	1	2	5
2.	EE 4202	Industrial Drives	3	0	0	3
3.	EE 4203	Electrical Power Utilization	3	0	2	4
4.	EE 4204	Power Electronics-I	3	0	2	4
5.	EE 400*	Elective	2/3	0/1	4/0	4
6.	EE 4299	Project	0	0	6	3
7.	ED 2288	Extra-Curricular Activities and Discipline	0	0	0	2

Total : 25

List of Electives:

S. No.	CODE	Name of Course	L	T	P	Cr
1.	EE 4001	Computer Application in EE (Offered to other Departments)	3	0	2	4
2.	EE 4002	Instrumentation (Offered to other Departments)	3	0	2	4
3.	EE 4003	Fundamentals of Microprocessors (Offered to other Departments)	3	0	2	4
4.	EE 4004	Illumination Engineering	3	1	0	4
5.	EE 4005	Rural Electrification	3	0	2	4

(5) Programme: Diploma in Electronics and Communication Engineering

First Year		Semester I			
		L	T	P	C
PH-3101 ⁺	Physics-III	4	0	2	5
CY-3101 ⁺	Chemistry	3	0	2	4
HS-3101 ⁺	Communication Skills	2	0	2	3
MA-3101	Mathematics-III A	3	1	0	4
EC-3100	Networks, Filter and Transmission lines	3	0	2	4
ES-3100	Object Oriented Programming with C++	2	0	4	4
EC-3102*	Basics of Electronics Telecommunication and Workshop Practice	3	0	4	5
EC-3103*	Basic of Radio and TV Engineering	3	1	2	5
CE-3151*	Engineering Graphics	0	0	4	2
		Total 24			
		Semester II			
ES 3200	Environment and Ecology	3	0	0	3
CY-3201	Engineering Chemistry I	3	0	2	4
MA-3202	Engineering Mathematics-II A	3	1	0	4
EC-3200	Electronics Circuits & Devices-II	3	1	2	5
EC-3201	Principles of Digital Electronics	3	1	2	5
EC-3202	Electronic Engineering Materials	3	0	0	3
ME-3277*	Comprehensive Workshop –III (Audit)	0	0	6	3
		Total 24/24+3			
*	Bridge for 10+2 PCM				
+	Bridge for 10+2 Vocational/NERIST certificate				
EC 3221	Basic Electronic Circuit and Devices (for CS and EE Students)	3	0	2	4
EC 3277	Electronics Engineering (for ME students)	3	0	0	3
Second Year		Semester I			
HS-4101	Principles of Economics	3	0	0	3
EE-4121	Electrical Engineering	3	0	2	4
EC-4100	Digital Circuits & Design	3	1	2	5
EC- 4101	Electronic Circuits and Devices III	3	1	2	5
EC-4102	Telematics	3	1	2	5
EC-4103	Electronic Instrumentation and Measurements	3	1	2	5
		Total 27			
EC 4121	Electronic Circuit and Devices (for CS and EE Students)	3	0	2	4
		Semester II			
EC-4200	Communication Engineering	3	0	2	4
EC-4201	Microprocessor and Applications	3	0	2	4
EC-4202	Industrial Electronics	3	0	2	4
EC-4203	Signal and Systems	3	1	0	4
EC-40XX	Elective	3	1/0	0/2	4
EC-4251	Computer Hardware and Peripherals	1	0	4	3
EC-4299	Project	0	0	6	3
ED-4288	Extracurricular activities	0	0	0	2
		Total 28			
List of Electives					
EC 4001	Video and Advanced TV Engineering	3	1	0	4
EC-4002	Satellite Communication	3	1	0	4
EC-4003	Microcontrollers and Applications	3	0	2	4
EC-4004	Medical Electronics	3	1	0	4

(6) Programme: Diploma in Mechanical Engineering

First Year

Semester I

			L	T	P	C
HS	3101+	Communication Skill	2	0	2	3
PH	3102+	Physics-III B	2	0	2	3
CY	3101+	Chemistry-III	3	0	2	4
MA	3101	Engineering Mathematics-I	3	1	0	4
ES	3100	Object Oriented Programming with C++	2	0	4	4
ME	3101	Production Engineering-I	3	0	0	3
ME	3102	Thermodynamics	3	1	0	4
ME	3103*	Comprehensive Mechanics	3	1	0	4
ME	3151*	Comprehensive Workshop - I	0	0	6	3
ME	3152*	Comprehensive Mechanical Drawing	0	0	6	3
			18	2	10	25

10+2(Voc) / NERIST

14 3 16 25 10+2

PCM

+ Bridge for 10+2 Vocational/NERIST Certificate

* Bridge for 10+2 PCM.

Semester II

ES	3200	Environment and Ecology	3	0	0	3
PH	3202	Physics IV B	2	0	2	3
CY	3202	Engineering Chemistry IA	3	0	2	4
MA	3201	Engineering Mathematics-II	3	1	0	4
ME	3201	Fundamentals of Fluid Mechanics	3	1	0	4
ME	3202	Production Engineering - II	4	0	0	4
ME	3251	Workshop Practice	0	0	6	3
EC	3277**	Electronics Engineering	3*	0	0	3
			18+3*	2	10	25+3(Audit)

** Audit Course

Second Year

Semester I

EE	4122	Fundamentals of Electrical Engineering	3	0	2	4
ME	4101	Theory of Machines	4	0	0	4
ME	4102	Energy Conversion Principles	4	0	0	4
ME	4103	Strength of Materials	4	0	0	4
ME	4104	Fluid Machines	3	0	2	4
ME	4151	Machine Drawing	0	0	6	3
ME	4152	Experimental Methods and Measurements	2	0	4	4
			20	0	14	27

Semester II

HS	4201	Principles of Economics & Costing	4	0	0	4
CE	4226	Basics of Civil Engineering	3	0	2	4
ME	4201	Production Cost and Quality Management	4	0	0	4
ME	4202	Design of Machine Elements	3	1	0	4
ME	4203	Engineering Metallurgy	4	0	0	4
ME	40**	Elective	4	0	0	4
ME	4299	Project	0	0	6	3
ED	4288	Extra Curricular activities	-	-	-	2
			22	1	8	27+2(ED)

List of Electives

ME 4001 Automobile Engineering	ME 4004 Total Productivity Management	ME 4007 Material Management
ME 4002 Non Traditional Machining	ME 4005 Statistical quality Control	ME 4008 Solar Energy Engineering
ME 4003 Jigs and Fixtures	ME 4006 Control System	

Courses offered to branches other than ME only

ME	3153	Comprehensive Workshop - II	0	0	6	3	CE (L)
ME	3277*	Comprehensive Workshop - III	0	0	6	3	EC (L)+EE(L)
ME	4121	Principles of Mechanical Engineering	3	1	0	4	CE