

**Structure for M.E. (Electrical) Control Systems 2013 Course**

**SEMESTER I**

CODE	SUBJECT	TEACHING SCHEME	EXAMINATION SCHEME					CREDITS
		Lect./Pr	Paper		TW	Oral / presentation	Total	
			In Semester Assessment	End Semester Assessment				
503101	Computational Technique for Control System	4	50	50	-	-	100	4
503102	Process Control Management	4	50	50	-	-	100	4
503103	Non Linear Control System	4	50	50	-	-	100	4
503104	Research Methodology	4	50	50	-	-	100	4
503105	Elective I	5	50	50	-	-	100	5
503106	Lab Practice I	4			50	50	100	4
<b>Total</b>		<b>25</b>	<b>250</b>	<b>250</b>	<b>50</b>	<b>50</b>	<b>600</b>	<b>25</b>

**SEMESTER II**

CODE	SUBJECT	TEACHING SCHEME	EXAMINATION SCHEME					CREDITS
		Lect./Pr	Paper		TW	Oral/pr esentati on	Total	
			In Semester Assessment	End Semester Assessment				
503107	Multivariable and Optimal Control System	4	50	50	-	-	100	4
503108	System Identification and Adaptive Control	4	50	50	-	-	100	4
503109	Advanced Digital Control Techniques	4	50	50	-	-	100	4
503110	Elective II	5	50	50	-	-	100	5
503111	Lab Practice II	4	-	-	50	50	100	4
503112	Seminar I	4	-	-	50	50	100	4
<b>Total</b>		<b>25</b>	<b>200</b>	<b>200</b>	<b>100</b>	<b>100</b>	<b>600</b>	<b>25</b>

**SEMESTER III**

CODE	SUBJECT	TEACHING SCHEME	EXAMINATION SCHEME					CREDITS
		Lect./ Pr	Paper		TW	Oral/presentation	Total	
			In Semester Assessment	End Semester Assessment				
603101	Advanced Drives and Control	4	50	50	-	-	100	4
603102	Computer Aided Control System Design	4	50	50	-	-	100	4
603103	Elective III	5	50	50	-	-	100	5
603104	Seminar II	4	-	-	50	50	100	4
603105	Project Stage I	08	-	-	50	50	100	8
<b>Total</b>		<b>25</b>	<b>150</b>	<b>150</b>	<b>100</b>	<b>100</b>	<b>500</b>	<b>25</b>

**SEMESTER IV**

CODE	SUBJECT	TEACHING SCHEME	EXAMINATION SCHEME				CREDITS
		Lect./ Pr	Paper	TW	Oral/presentation	Total	
603106	Seminar III	5	-	50	50	100	5
603107	Project Work Stage II	20	-	150	50	200	20
<b>Total</b>		<b>25</b>	<b>-</b>	<b>200</b>	<b>100</b>	<b>300</b>	<b>25</b>

### List of Elective Subjects

**Note: Select any one subject from module I and one subject from module II for each Elective.**

Elective-I (5 credits)		Elective-II (5 credits)		Elective-III (5 credits)	
Module I (credits=4)	Module II (credit=1)	Module I (credits=4)	Module II (credit=1)	Module I (credits=4)	Module II (credit=1)
1) Automation and Robotics	1) Project Management	1) Robust Control Systems	1) Electric Vehicles	1) Intelligent Control	1) Artificial Intelligent tools
2) Modeling of Dynamic System	2) IPR and Patent Law	2) Large Scale Systems	2) Fundamentals of Cyber Security	2) SCADA Systems and Applications	2) Intelligent Sensors and instrumentation
3) Industrial Automation and control	3) Technical communication	-	3) Disaster management	-	3) Human Rights
-	4) Smart Grid Technologies	-	4) Communication protocols in SCADA System	-	4) Green building design
-	-	-	5) Mechatronics	-	5) MEMS and Applications

## EXAMINATION SCHEME GUIDELINES

### A) Compulsory subjects: Credits 4

Total marks: 100

To be done at Institute Level		University Exam	
In semester assessment Units 1 - 4		End semester assessment	
Class tests	30 Marks	Units 1- 4	18 Marks
Assignments / Mini Project	20 Marks	Unit 5	16 Marks
		Unit 6	16 Marks
Total	50 Marks	Total	50 Marks

### B) Elective subjects: Credits 5

Total marks: 100

Module 1 ( Credits – 4 )			
In semester assessment Units 1-4		End semester assessment	
Class tests	15 Marks	Units 1 & 2	12 Marks
Assignments/PPT presentation	10 Marks	Units 3 & 4	14 Marks
		Unit 5	12 Marks
		Unit 6	12 Marks
Total	25 Marks	Total	50 Marks

Module 2 ( Credit – 1 )	
In semester assessment	Units 1-2
Class tests / Assignments	25 Marks

**Chairman**  
**B.O.S.**  
**Electrical Engineering**