



SOLAPUR UNIVERSITY, SOLAPUR

FACULTY OF ENGINEERING & TECHNOLOGY

ELECTRICAL & ELECTRONICS ENGINEERING

Syllabus Structure for

S.E. (Electrical & Electronics Engineering) w.e.f. Academic Year 2013-14

T.E. (Electrical & Electronics Engineering) w.e.f. Academic Year 2014-15

B.E. (Electrical & Electronics Engineering) w.e.f. Academic Year 2015-16



SOLAPUR UNIVERSITY, SOLAPUR
FACULTY OF ENGINEERING & TECHNOLOGY
Electrical & Electronics Engineering
Program Educational Objectives and Outcomes

A. Program Educational Objectives

1. To prepare students to succeed in industry/ technical profession and for postgraduate programs.
2. To make students capable for design & control of electrical machines and power systems.
3. To train students with soft skills and core engineering knowledge to understand, analyze and design electrical and electronics products and solutions for the real life applications.
4. To instill students professional and ethical attitude, teamwork skills, leadership, multidisciplinary approach.
5. To provide students an impressive academic environment, needed for a successful professional career.
6. To provide special attention to students to improve oral & written communication skills.

B. Program Outcomes

Students attain the following outcomes:

- a. an ability to apply knowledge of mathematics, science, and engineering
- b. an ability to design and conduct experiments, as well as to analyze and interpret data,
- c. an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
- d. an ability to function on multidisciplinary teams
- e. an ability to identify, formulate, and solve engineering problems
- f. an understanding of professional and ethical responsibility
- g. an ability to communicate effectively
- h. the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context
- i. a recognition of the need for, and an ability to engage in life-long learning,
- j. a knowledge of contemporary issues
- k. an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.



SOLAPUR UNIVERSITY, SOLAPUR
FACULTY OF ENGINEERING & TECHNOLOGY

Structure of SE (Electrical and Electronics Engineering)

W.E.F. 2013-14.

Semester- I

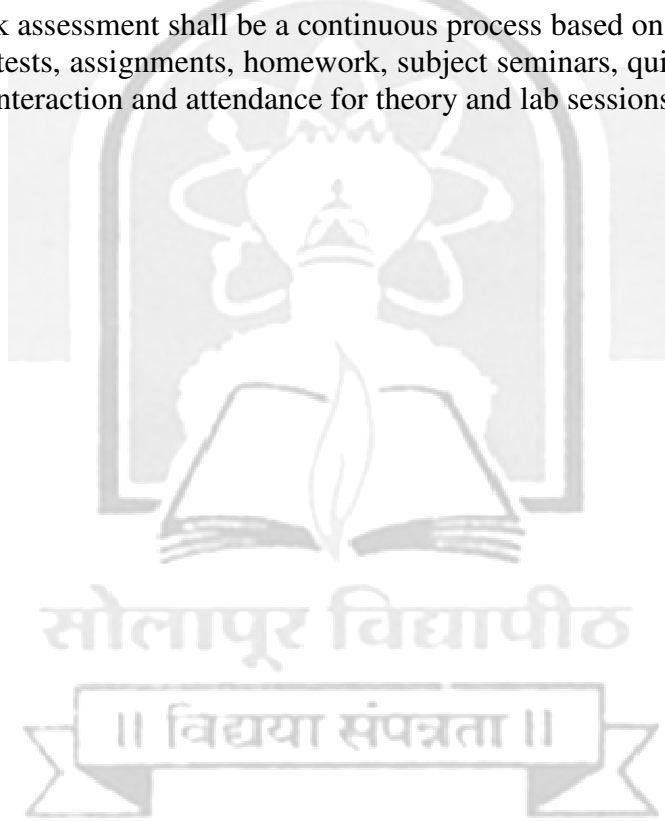
Sr No	Subject	Teaching Scheme			Examination Scheme\				
		L	P	T	TH	TW	POE	OE	Total
1	Engineering Maths III	3	--	1	100	25	--	--	125
2	D.C. Machines and Transformers	3	2	--	100	25	50	--	175
3	Electrical Networks	4	2	1	100	25	---	25	150
4	Analog Electronics	3	2	--	100	25	50	--	175
5	Electrical power Generation	3	--	--	100	25	--	--	125
6	Computer Programming	2	2	--	--	25	--	--	25
7	Electrical & Electronics workshop-I	--	2	--	--	25	--	--	25
	Total	18	10	2	500	175	100	25	800
8	Environmental Science	1	--	1		--	--	--	--

Semester- II

Sr No	Subject	Teaching Scheme			Examination Scheme				
		L	P	T	TH	TW	POE	OE	Total
1	Linear Algebra	3	--	1	100	25	--	--	125
2	A.C. Machines	4	2	--	100	25	50	--	175
3	Electrical & Electronic Measurements	4	2	--	100	25	--	25	150
4	Signals and Systems	4	--	1	100	25	--	--	125
5	Digital Techniques	4	2	--	100	25	50	--	175
6	Electrical & Electronics workshop-II	1	2	--	--	50	--	--	50
	Total	20	8	2	500	175	100	25	800
7	Environmental Science	1	--	1		--	--	--	--

Note –

- Batch size for the practical /tutorial shall be of 20 students. On forming the batches, if the strength of remaining students exceeds 9, then a new batch shall be formed.
- Vocational Training (evaluated at B.E. Part-I) of minimum 15 days shall be completed in any vacation after S.E. Part-II but before B.E. Part-I & the report shall be submitted and evaluated in B.E. Part-I
- Appropriate Elective I & II Subjects may be added when required.
- Student shall select one Self Learning Module at T.E. Part I and T.E. Part II each from Technical and Humanities and Social Sciences Group with at least one Self Learning Module from the Humanities and Social Sciences Group
- Curriculum for Humanities and Social Sciences Self Learning Modules is common for all under graduate programmes of faculty of Engineering and Technology
- Term work assessment shall be a continuous process based on student's performance in – class tests, assignments, homework, subject seminars, quizzes, laboratory books and their interaction and attendance for theory and lab sessions as applicable





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Structure of TE (Electrical and Electronics Engineering)

W.E.F. 2014-15

Semester- I

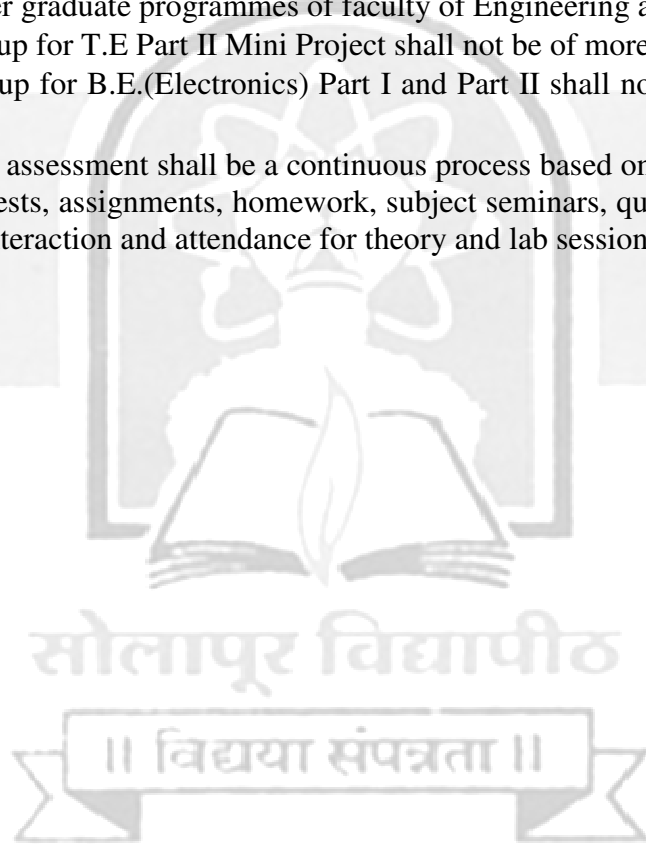
Sr No	Subject	Teaching Scheme			Examination Scheme\				
		L	P	T	TH	TW	POE	OE	Total
1	Electromagnetic Engineering	4	--	1	100	25	--	--	125
2	Instrumentation Techniques	4	2	--	100	25	----	25	150
3	Micro Processor & its applications	4	2	--	100	25	50	--	175
4	Elements of power system	4	--	1	100	25	--	--	125
5	Control system-I	4	2	--	100	25	50	--	175
6	Computer Lab	----	2	--	--	50	--	--	50
7	Self Learning Module I	--	--	--	50	--	--	--	50
	Total	20	08	02	550	175	100	25	850

Semester- II

Sr No	Subject	Teaching Scheme			Examination Scheme				
		L	P	T	TH	TW	POE	OE	Total
1	Power Electronics	4	2	--	100	25	50	--	175
2	Electronic Communication Engineering	4	--	--	100	25	--	--	125
3	Power system analysis	4	2	--	100	25	--	25	150
4	Control system-II	4	2	--	100	25	--	--	125
5	Microcontroller & Its Applications	4	2	--	100	25	50	--	175
6	Mini hardware Project	--	2	--	--	50	--	--	50
7	Self Learning Module II	--	--	--	50	--	--	--	50
	Total	20	10	--	550	175	100	25	850

Note –

- Batch size for the practical /tutorial shall be of 15 students. On forming the batches, if the strength of remaining students exceeds 7, then a new batch shall be formed.
- Vocational Training (evaluated at B.E. Part-I) of minimum 15 days shall be completed in any vacation after S.E. Part-II but before B.E. Part-I & the report shall be submitted and evaluated in B.E. Part-I
- Appropriate Elective I & II Subjects may be added when required.
- Student shall select one Self Learning Module at T.E. Part I and T.E. Part II each from Technical and Humanities and Social Sciences Group with at least one Self Learning Module from the Humanities and Social Sciences Group
- Curriculum for Humanities and Social Sciences Self Learning Modules is common for all under graduate programmes of faculty of Engineering and Technology
- Project group for T.E Part II Mini Project shall not be of more than **three** students
- Project group for B.E.(Electronics) Part I and Part II shall not be of more than **four** students.
- Term work assessment shall be a continuous process based on student's performance in – class tests, assignments, homework, subject seminars, quizzes, laboratory books and their interaction and attendance for theory and lab sessions as applicable





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Structure of BE (Electrical and Electronics Engineering)

W.E.F. 2015-16

Semester- I

Sr No	Subject	Teaching Scheme			Examination Scheme				
		L	P	T	TH	TW	POE	OE	Total
1	Industrial drives and control	4	2	--	100	25	50	--	175
2	Electrical energy Utilization and Traction	4	--	--	100	25	--		125
3	Electrical Installation, testing & maintenance	4	2	---	100	25	--	--	125
4	Switchgear & Protection	4	2	--	100	25	--	50	175
5	Elective-I	4	--	--	100	25	--	--	125
6	Industrial Training Evaluation	--	--	--	--	25	--	--	25
7	Project& Seminar	--	4	--	--	50	--	--	50
	Total	20	10	--	500	200	50	50	800

Semester- II

Sr No	Subject	Teaching Scheme			Examination Scheme				
		L	P	T	TH	TW	POE	OE	Total
1	HVDC & FACTS	4	2	---	100	25	--	50	175
2	Electrical Machine Design	4	2	1	100	25	---	50	175
3	Engineering Economics & Industrial Management	4	--	--	100	25	--		125
4	Elective –II	4	--	1	100	25	--	--	125
5	Project	---	8	---	---	100	---	100	200
	Total	16	12	2	400	200	--	200	800

Elective-I	Elective-II
1.High Voltage Engineering	1. EHVAC
2. Renewable Energy Sources	2.Energy conservation & Auditing
3.Digital Signal Processing	3.Data communication & Networking
4. PLC & Applications.	4. Power Quality
5. VLSI Design	5. Embedded System
6. Power System Dynamics &Stability	6. Modeling of electrical System

Note –

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- Appropriate Elective I & II Subjects may be added when required.
- Project group for B.E Part I and Part II shall not be of more than **four** students.
- Term work assessment shall be a continuous process based on student's performance in – class tests, assignments, homework, subject seminars, quizzes, laboratory books and their interaction and attendance for theory and lab sessions as applicable

