

FACULTY OF ENGINEERING
Scheme of Instruction & Examination

For
Four Year Degree Programme of
Bachelor of Engineering (B.E)
in

Electrical and Electronics Engineering
(Accredited by NBA)
(With effect from the academic year 2021-22)



Estd. 2008

**STANLEY COLLEGE OF ENGINEERING
AND TECHNOLOGY FOR WOMEN
(AUTONOMOUS)**

(Affiliated to Osmania University)

(Accredited by NAAC with "A" Grade)

ABIDS, HYDERABAD-500001, Telangana.

Abbreviation	Meaning
HS	Humanities, Social Sciences and Management
BS	Basic Sciences including Mathematics, Physics and Chemistry
ES	Engineering Sciences including Workshop, Drawing, Basic Electrical / Electronics
PC	Professional Core Courses
PE	Professional Elective Courses
OE	Open Elective Courses
PW	Project Work
MC	Mandatory Courses
AC	Audit Courses
PY	Philosophy
EC	Electronics and Communication Engineering.
CE	Civil Engineering,
MP	Mechanical / Production Engineering
IT	Information Technology
CS	Computer Science Engineering
EE	Electrical and Electronics Engineering
CM	Computer Engineering
AD	Artificial Intelligence and Data Science
L	Lecture
T	Tutorial
P	Practical
G	Grade
D	Drawing
CIE	Continuous Internal Evaluation
SEE	Semester End Evaluation
	Each contact hour is a clock hour
	The duration of the Practical class is two hours; however, it can be extended wherever necessary, to enable the student to complete the experiment.

Keywords	Definition
HS	Courses offered in the area of humanities and social sciences like communication & managerial skills.
BS	Courses of foundational nature in the areas of Mathematics, Physics, Chemistry, Biology etc.
ES	Courses belonging to the basic evolutionary aspects of a Particular Engineering from all other branches of Engineering.
PC	Courses that are fundamental and compulsory constituents of the respective engineering discipline.
PE	Courses those are discipline-specific to stream line the graduates to different emerging fields as per their choice.
OE	Courses of interdisciplinary nature offered to all the students of various programmes across the Institute.
PW	To make a perfect, Hands-on experienced Professionals.
MC	Compulsory non-credit courses that a student need to study to become a responsible citizen, as per supreme court guidelines.
AC	An audit course (Non-credit) facilitates the student to get awareness of different issues which enhance their skill sets to improve their employability.

Induction Program

SMC900XX Induction Program (Mandatory)	3 weeks' duration
Induction program for students to be offered right at the start of the first year	<ul style="list-style-type: none"> • Physical Activity • Creative Arts • Universal Human Values • Literary • Proficiency Modules • Lectures by Eminent People • Visits to local Areas • Familiarization to Dept./Branch & Innovations

I Semester

S.No.	Course Code	Course Title	Scheme of Instruction				Scheme of Examination			Credits
			L	T	P/D	Contact Hours per week	CIE	SEE	SEE Duration in Hours	
Theory Courses										
Three Week Induction Program										
1	SBS101MT	Mathematics – I	3	1	-	4	40	60	3	4
2	SBS903CH	Chemistry	3	-	-	3	40	60	3	3
3	SES101CS	Programming for Problem Solving	3	-	-	3	40	60	3	3
4	SES102EE	Fundamentals of Electrical Engineering	3	-	-	3	40	60	3	3
5	SMC905CE	Environmental Science	2	-	-	2	40	60	3	-
6	SAC901EE	Design Thinking	2	-	-	2	40	60	3	-
Practical/Laboratory Courses										
7	SBS913CH	Chemistry Lab	-	-	4	4	40	60	3	2
8	SES915ME	Engineering Graphics & Design	1	-	4	5	40	60	3	3
9	SES111CS	Programming for Problem Solving Lab	-	-	4	4	40	60	3	2
10	SES112EE	Fundamentals of Electrical Engineering Lab	-	-	4	4	40	60	3	2
TOTAL			17	1	16	34	400	600	30	22

II Semester

S.No.	Course Code	Course Title	Scheme of Instruction				Scheme of Examination			Credits
			L	T	P/D	Contact Hours per week	CIE	SEE	SEE Duration in Hours	
Theory Courses										
1	SHS901EG	English	2	-	-	2	40	60	3	2
2	SBS909PH	Engineering Physics	3	-	-	3	40	60	3	3
3	SBS201MT	Mathematics – II	3	1	-	4	40	60	3	4
4	SES201ME	Engineering Mechanics	3	-	-	3	40	60	3	3
5	SMC906PO	Indian Constitution	2	-	-	2	40	60	3	-
6	SMC907PY	Essence of Indian Traditional Knowledge	2	-	-	2	40	60	3	-
Practical/Laboratory Courses										
7	SHS911EG	English Lab	-	-	2	2	40	60	3	1
8	SBS919PH	Physics Lab	-	-	4	4	40	60	3	2
9	SES914ME	Workshop	-	-	6	6	40	60	3	3
10	SES212EE	Simulation of Basic Electrical Concepts Lab	-	-	2	2	40	60	3	1
11	SPW211EE	Field Work	The students have to undergo a Field work of 2-week duration after II-Semester SEE				50	-	-	1
TOTAL			15	1	14	30	450	600	30	20

III Semester

S.No.	Course Code	Course Title	Scheme of Instruction				Scheme of Examination			Credits
			L	T	P/D	Contact Hours per week	CIE	SEE	SEE Duration in Hours	
Theory Courses										
1	SBS301MT	Probability Theory and Stochastic Process	3	1	-	4	40	60	3	4
2	SPC301EE	Electrical Circuit Analysis	3	-	-	3	40	60	3	3
3	SPC302EE	Electromagnetic Fields	3	-	-	3	40	60	3	3
4	SPC303EE	Signals and Systems Analysis	3	-	-	3	40	60	3	3
5	SPC304EC	Analog Electronics	3	-	-	3	40	60	3	3
6	SAC904CS	Fundamentals of Computer Science	3	-	-	3	-	-	-	-
Practical/Laboratory Courses										
7	SES311CS	Data Structures Lab	2	-	2	4	40	60	3	3
8	SPC311EE	Circuits & Simulation Lab	-	-	4	4	40	60	3	2
9	SPC312EC	Analog Electronics Lab	-	-	3	3	40	60	3	1.5
TOTAL			20	1	9	30	320	480	24	22.5

IV Semester

S.No.	Course Code	Course Title	Scheme of Instruction				Scheme of Examination			Credits
			L	T	P/D	Contact Hours per week	CIE	SEE	SEE Duration in Hours	
Theory Courses										
1	SHS401EG	Effective Technical Communication	3	-	-	3	40	60	3	3
2	SPC401EE	Electrical Machines – I	3	-	-	3	40	60	3	3
3	SPC402EE	Control Systems	3	-	-	3	40	60	3	3
4	SPC403EC	Switching Theory and Logic Design	3	-	-	3	40	60	3	3
5	SOE4xxxx	Open Elective – I	3	-	-	3	40	60	3	3
Practical/Laboratory Courses										
6	SPC411EE	Electrical Machines – I Lab	-	-	4	4	40	60	3	2
7	SPC412EE	Control Systems Lab	-	-	3	3	40	60	3	1.5
8	SPC413EC	Switching Theory and Logic Design Lab	-	-	3	3	40	60	3	1.5
9	SPW511EE	Internship- 1	The students have to undergo an Internship of 2 week duration after IV-Semester SEE				50	-	-	1
TOTAL			15	-	10	25	370	480	24	21

V Semester

S.No.	Course Code	Course Title	Scheme of Instruction				Scheme of Examination			Credits
			L	T	P/D	Contact Hours per week	CIE	SEE	SEE Duration in Hours	
Theory Courses										
1	SPC501EE	Electrical Machines – II	3	-	-	3	40	60	3	3
2	SPC502EE	Power Electronics	3	-	-	3	40	60	3	3
3	SPC503EE	Measurements & Instrumentation	3	-	-	3	40	60	3	3
4	SPC504EE	Power Systems – I	3	-	-	3	40	60	3	3
5	SOE5xxxx	Open Elective – II	3	-	-	3	40	60	3	3
Practical/Laboratory Courses										
6	SPC511EE	Electrical Machines – II Lab	-	-	4	4	40	60	3	2
7	SPC512EE	Power Electronics Lab	-	-	3	3	40	60	3	1.5
8	SPC513EE	Measurements & Instrumentation Lab	-	-	3	3	40	60	3	1.5
9	SPW511EE	Industrial Visit			2	2	50	-	-	1
TOTAL			15	-	12	27	370	480	24	21

VI Semester

S.No.	Course Code	Course Title	Scheme of Instruction				Scheme of Examination			Credits
			L	T	P/D	Contact Hours per week	CIE	SEE	SEE Duration in Hours	
Theory Courses										
1	SHS601BM	Finance & Accounting	3	-	-	3	40	60	3	3
2	SPC601EE	Power Systems–II	3	-	-	3	40	60	3	3
3	SPC602EC	Microprocessors and Micro Controllers	3	-	-	3	40	60	3	3
4	SPC603EE	Digital Signal Processing	3	-	-	3	40	60	3	3
5	SPE6xxEE	Professional Elective – I	3	-	-	3	40	60	3	3
Practical/Laboratory Courses										
6	SPC611EE	Digital Signal Processing Lab	-	-	3	3	40	60	3	1.5
7	SPC612EC	Microprocessors and Micro Controllers Lab	-	-	4	4	40	60	3	2
8	SPW611EE	Mini Project	-	-	2	2	50	-	-	1
9	SPW612EE	Internship- 2	The students have to undergo an Internship of 2 week duration after VI- Semester SEE				50	-	-	1
TOTAL			15	-	9	24	380	420	21	20.5

VII Semester

S.No.	Course Code	Course Title	Scheme of Instruction				Scheme of Examination			Credits
			L	T	P/D	Contact Hours per week	CIE	SEE	SEE Duration in Hours	
Theory Courses										
1	SPC701EE	Power Systems – III	3	-	-	3	40	60	3	3
2	SPC702EE	Control of Electric Drives	3	-	-	3	40	60	3	3
3	SPE7xxEE	Professional Elective – II	3	-	-	3	40	60	3	3
4	SPE7xxEE	Professional Elective – III	3	-	-	3	40	60	3	3
5	SPE7xxEE	Professional Elective – IV	3	-	-	3	40	60	3	3
Practical/Laboratory Courses										
6	SPC711EE	Power Systems Lab	-	-	4	4	40	60	3	2
7	SPC712EE	Electrical Simulation Lab	-	-	4	4	40	60	3	2
8	SPW711EE	Project – I	-	-	6	6	40	-	-	3
TOTAL			15	-	14	29	320	420	21	22

VIII Semester

S.No.	Course Code	Course Title	Scheme of Instruction				Scheme of Examination			Credits
			L	T	P/D	Contact Hours per week	CIE	SEE	SEE Duration in Hours	
Theory Courses										
1	SOE8xxxx	Open Elective – III (Online Course)	3	-	-	3	40	60	3	3
Practical/Laboratory Courses										
2	SPW811EE	Project – II	-	-	16	16	40	120	-	8
TOTAL			3	-	16	19	80	180	03	11

List of Professional Electives and Open Electives

Professional Elective – I	
Course Code	Course Title
SPE601EE	Linear Integrated Circuits
SPE602EE	Renewable Energy Sources
SPE603EE	Special Electrical Machines
SPE604EE	High Voltage Engineering

Professional Elective – II	
Course Code	Course Title
SPE701EE	Utilization of Electric Energy
SPE702EE	Digital Control Systems
SPE703EE	Electrical Distribution Systems
SPE704EE	Advanced Power Electronics

Professional Elective – III	
Course Code	Course Title
SPE705EE	Flexible AC Transmission Systems
SPE706EE	Power Quality
SPE707EE	Introduction to Smart Grid
SPE708EE	HVDC Transmission and Control

Professional Elective – IV	
Course Code	Course Title
SPE709EE	AI Techniques in Electrical Engineering
SPE710EE	Advanced Power System Analysis
SPE711EE	Hybrid Electrical Vehicles
SPE712EE	Electrical Machine Design

Open Elective – I		
Course Code	Course Title	Course Offered by the Department
SOE401EC	Principles of Electronic Communication	ECE
SOE401CS	OOPs using Java	CSE
SOE401IT	Operating Systems	IT
SOE401CE	Disaster Mitigation	CE

Open Elective – II		
Course Code	Course Title	Course Offered by the Department
SOE501EC	Fundamentals of IoT	ECE
SOE501CS	Software Engineering	CSE
SOE501IT	Cyber Security	IT
SOE501ME	Industrial Robotics	ME
SOE501EG	Soft Skills and Interpersonal Skills	HS

Open Elective – III (Online Course)

Mandatory Courses		
Course Code	Course Title	Course Offered by the Department
SMC905CE	Environmental Science	HS
SMC906PO	Indian Constitution	HS
SMC907PY	Essence of Indian Traditional Knowledge	HS

Audit Courses		
Course Code	Course Title	Course Offered by the Department
SAC901EE	Design Thinking	EE
SAC904CS	Fundamentals of Computer Science	CS

List of open electives offered to other departments

Open Electives I, II, III, IV	
Course Code	Course Title
SOExxxEE	Illumination and Electric Traction Systems
SOExxxEE	Non-Conventional Energy Sources
SOExxxEE	Electrical Energy Conservation and Safety
SOExxxEE	Programmable Logic Controllers
SOExxxEE	Reliability Engineering
SOExxxEE	Basis of Power Electronics
SOExxxEE	Transducers and Sensors
SOExxxEE	Industrial Instrumentation
SOExxxEE	Smart Building Systems
SOExxxEE	Introduction to Electric Vehicles