

**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 2023-24)



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.**

<b>Abbreviation</b>	<b>Meaning</b>
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.

<b>Keywords</b>	<b>Definition</b>
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.



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**Induction Program**

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



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**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	
<b>Theory Courses</b>										
<b>Three Week Induction Program</b>										
1	SBS101MT	Mathematics – I	3	1	-	4	40	60	3	4
2	SBS901PH	Engineering Physics	3	1	-	4	40	60	3	4
3	SES101CS	Programming in C	3	-	-	3	40	60	3	3
4	SES101EE	Fundamentals of Electrical Engineering	3	1	-	4	40	60	3	4
<b>Practical/Laboratory Courses</b>										
5	SHS911EG	English Lab	-	-	2	2	40	60	3	1
6	SBS911PH	Engineering Physics Lab	-	-	2	2	40	60	3	1
7	SES111CS	Programming in C Lab	-	-	4	4	40	60	3	2
8	SES111EE	Fundamentals of Electrical Engineering Lab	-	-	2	2	40	60	3	1
9	SES914ME	Engineering Workshop	-	-	4	4	40	60	3	2
10	SHS916EE	Design Thinking	-	-	2	2	40	60	3	1
<b>TOTAL</b>			<b>12</b>	<b>3</b>	<b>16</b>	<b>31</b>	<b>400</b>	<b>600</b>	<b>30</b>	<b>23</b>



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**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	
<b>Theory Courses</b>										
1	SBS201MT	Mathematics – II	3	1	-	4	40	60	3	4
2	SBS903CH	Engineering Chemistry	3	1	-	4	40	60	3	4
3	SES201CS	Data Structures	3	-	-	3	40	60	3	3
4	SHS901EG	English	2	-	-	2	40	60	3	2
5	SHS902EG	Universal Human Values	2	-	-	2	40	60	3	2
<b>Practical/Laboratory Courses</b>										
6	SES211CS	Data Structures Lab	-	-	4	4	40	60	3	2
7	SBS913CH	Chemistry Lab	-	-	2	2	40	60	3	1
8	SES915ME	Engineering Graphics Lab	-	-	4	4	40	60	3	2
9	SPW211EE	IDEA Lab	-	-	2	2	40	60	3	1
<b>TOTAL</b>			<b>13</b>	<b>2</b>	<b>12</b>	<b>27</b>	<b>360</b>	<b>540</b>	<b>27</b>	<b>21</b>



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**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	
<b>Theory Courses</b>										
1	SBS401ME	Engineering Mechanics	3	-	-	3	40	60	3	3
2	SPC301EE	Electrical Circuit Analysis	3	1	-	4	40	60	3	4
3	SPC302EE	Electromagnetic Fields	3	-	-	3	40	60	3	3
4	SPC303EC	Analog Electronics	3	-	-	3	40	60	3	3
5	SOE3xxxx	Open Elective – I	3	-	-	3	40	60	3	3
6	SAC903CH	Environmental Science	2	-	-	2	50	-	-	-
<b>Practical/Laboratory Courses</b>										
7	SPC311EE	Electrical Circuits Lab	-	-	2	2	40	60	3	1
8	SPC312EC	Analog Electronics Lab	-	-	2	2	40	60	3	1
9	SOE3xxxx	Open Elective – I Lab	-	-	2	2	40	60	3	1
<b>TOTAL</b>			<b>17</b>	<b>1</b>	<b>6</b>	<b>24</b>	<b>370</b>	<b>480</b>	<b>24</b>	<b>19</b>



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**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	
<b>Theory Courses</b>										
1	SBS401MT	Mathematics – III	3	1	-	4	40	60	3	4
2	SPC401EE	Electrical Machines – I	3	1	-	4	40	60	3	4
3	SPC402EE	Switching Theory and Logic Design	3	-	-	3	40	60	3	3
4	SPC403EE	Power Systems – I	3	-	-	3	40	60	3	3
5	SES401CS	Python Programming	3	-	-	3	40	60	3	3
6	SMC901HS	Indian Constitution	2	-	-	2	40	60	3	-
<b>Practical/Laboratory Courses</b>										
6	SPC411EE	Electrical Machines – I Lab	-	-	2	2	40	60	3	1
7	SPC412EE	Switching Theory and Logic Design Lab	-	-	2	2	40	60	3	1
8	SES411CS	Python Programming Lab	-	-	2	2	40	60	3	1
9	SHS912EG	Advanced Communication Skills Lab	-	-	2	2	40	60	3	1
10	SPW411EE	Internship- 1	The students have to undergo an internship of 2-week duration after IV-Semester SEE				50	-	-	1
<b>TOTAL</b>			<b>17</b>	<b>2</b>	<b>8</b>	<b>27</b>	<b>450</b>	<b>600</b>	<b>30</b>	<b>22</b>





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**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	
<b>Theory Courses</b>										
1	SPC501EE	Electrical Machines – II	3	1	-	4	40	60	3	4
2	SPC502EE	Power Electronics	3	-	-	3	40	60	3	3
3	SPC503EE	Control Systems	3	1	-	4	40	60	3	4
4	SPC504EE	Power Systems – II	3	1	-	4	40	60	3	4
5	SOE5xxxx	Open Elective – II	3	-	-	3	40	60	3	3
<b>Practical/Laboratory Courses</b>										
6	SPC511EE	Electrical Machines – II Lab	-	-	2	2	40	60	3	1
7	SPC512EE	Power Electronics Lab	-	-	2	2	40	60	3	1
8	SPC513EE	Control Systems Lab	-	-	2	2	40	60	3	1
9	SPW511EE	Industrial Visit	-	-	-	-	50	-	-	1
<b>TOTAL</b>			<b>15</b>	<b>3</b>	<b>6</b>	<b>24</b>	<b>370</b>	<b>480</b>	<b>24</b>	<b>22</b>



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**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	
<b>Theory Courses</b>										
1	SHS901BM	Managerial Economics and Financial Accountancy	3	-	-	3	40	60	3	3
2	SPC601EC	Microprocessors and Micro Controllers	3	1	-	4	40	60	3	4
3	SPC602EE	Signals & Systems	3	1		4	40	60	3	4
4	SPE601EE	Professional Elective – I	3	-	-	3	40	60	3	3
5	SPE602EE	Professional Elective – II	3	-	-	3	40	60	3	3
<b>Practical/Laboratory Courses</b>										
6	SPC611EC	Microprocessors and Micro Controllers Lab	-	-	2	2	40	60	3	1
7	SPE611EE	Professional Elective – I Lab	-	-	2	2	40	60	3	1
8	SPW611EE	Mini Project	-	-	2	2	50	-	-	1
9	SPW612EE	Internship- 2	The students have to undergo an internship of 4-week duration after VI- Semester SEE				50	-	-	1
<b>TOTAL</b>			<b>15</b>	<b>2</b>	<b>6</b>	<b>23</b>	<b>380</b>	<b>420</b>	<b>21</b>	<b>21</b>



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**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	
<b>Theory Courses</b>										
1	SPC701EE	Switchgear and Protection	3	-	-	3	40	60	3	3
2	SPC702EE	Power System Operation & Control	3	1	-	4	40	60	3	4
3	SPE701EE	Professional Elective – III	3	-	-	3	40	60	3	3
4	SPE702EE	Professional Elective – IV	3	-	-	3	40	60	3	3
5	SPE703EE	Professional Elective – V	3	-	-	3	40	60	3	3
<b>Practical/Laboratory Courses</b>										
6	SPC711EE	Power Systems Lab	-	-	2	2	40	60	3	1
7	SPC712EE	Electrical Simulation Lab	-	-	2	2	40	60	3	1
8	SPW711EE	Project – Phase I	-	-	6	6	40	-	-	3
<b>TOTAL</b>			<b>15</b>	<b>1</b>	<b>10</b>	<b>26</b>	<b>320</b>	<b>420</b>	<b>21</b>	<b>21</b>



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**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	
<b>Theory Courses</b>										
1	SOE8xxxx	Open Elective – III	3	-	-	3	40	60	3	3
<b>Practical/Laboratory Courses</b>										
2	SPW811EE	Project – Phase II	-	-	16	16	40	120	3	8
<b>TOTAL</b>			<b>3</b>	<b>-</b>	<b>16</b>	<b>19</b>	<b>80</b>	<b>180</b>	<b>6</b>	<b>11</b>

**Credits Distribution – Semester Wise**

Subject	I	II	III	IV	V	VI	VII	VIII	Total
HS	2	4		1		3			10
BS	9	9	3	4					25
ES	12	7		4					23
PC			12	12	18	9	9		60
PE						7	9		16
OE			4		3			3	10
PW		1		1	1	2	3	8	16
<b>Total</b>	<b>23</b>	<b>21</b>	<b>19</b>	<b>22</b>	<b>22</b>	<b>21</b>	<b>21</b>	<b>11</b>	<b>160</b>



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**Credit Distribution Comparison**

Subject	AICTE		OSMANIA UNIVERSITY		PAST CURRICULLUM		PRESENT CURRICULLUM	
HS	12	7.59 %	8	4.90 %	9	5.62 %	10	6.25 %
BS	26	16.45 %	23	14.11 %	22	13.75 %	25	15.62 %
ES	20	12.65 %	21	12.88 %	23	14.37 %	23	14.37 %
PC	53	33.54 %	72	44.17 %	69	43.12 %	60	37.5 %
PE	18	11.39 %	18	11.04 %	12	7.5 %	16	10 %
OE	18	11.39 %	9	5.52 %	9	5.62 %	10	6.25 %
PW	11	6.96 %	12	7.36 %	16	10 %	16	10 %
<b>Total</b>	<b>158</b>	<b>100 %</b>	<b>163</b>	<b>100 %</b>	<b>160</b>	<b>100 %</b>	<b>160</b>	<b>100 %</b>

**EEE Open Electives offering to other departments**

S. No.	Subject Code	Subject Name	Associated Lab
1.	OE 1	Electrical Machines	Electrical Machines Lab
2.	OE 2	Basics of Power Electronics	Basics of Power Electronics Lab
3.	OE 3	Renewable Energy Systems	--- No Lab ---
4.	OE 4	Introduction to Electric Vehicles	--- No Lab ---
5.	OE 5	Illumination and Electric Traction Systems	--- No Lab ---



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**EEE Professional Electives**

S. No.	Subject Code	Subject Name	Associated Lab
1.	PE 1	Digital Signal Processing and Applications	DSP Lab
2.		Measurements & Instrumentation	M & I Lab
3.		Power Electronic Drives and Control	PEDC Lab
4.		Digital Control Systems	DCS Lab
1.	PE 2	Linear Integrated Circuits	
2.		Special Electrical Machines	
3.		High Voltage Engineering	
4.		Electrical Machine Design	
1.	PE 3	Utilization of Electric Energy	
2.		Distributed Generation and Micro Grid	
3.		Renewable Energy Systems	
4.		Electrical Distribution Systems	
1.	PE 4	Flexible AC Transmission Systems	
2.		Power Quality	
3.		HVDC Transmission and Distribution	
4.		Advanced Power System Analysis	
1.	PE 5	AI Techniques in Electrical Engineering	
2.		Role of Smart Grid in Integrating Renewable Energy	
3.		Electrical Vehicles	
4.		Power System Dynamics and Control	