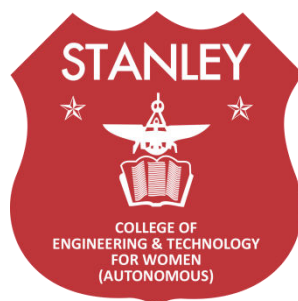# FACULTY OF ENGINEERING

Scheme of Instruction & Examination

For
Four Year Degree Programme of

Bachelor of Engineering (B.E)

in

Information Technology
(Accredited by NBA)

(With effect from the academic year 2021–22)

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.

BE (INFORMATION TECHNOLOGY)
I.   Induction Program

SMC900XX**Induction Program (Mandatory)**	**3 weeks duration**
I Induction program for students to be offered right at the start of the first year	• Physical Activity • Creative Arts • Universal Human Values • Literary • Proficiency Modules • Lectures by Eminent People • Visits to local Areas • Familiarization to Dept./Branch & Innovations

IT: SEMESTER –I

S.No.	Course Code	Course Title	Scheme of Instruction				Scheme of Examination			Credits
			L	T	P/D	Contact Hours/ 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	SES 101CS	Programming for Problem Solving	3	-	-	3	40	60	3	3
4	SES901EC	Basic Electrical and Electronics Circuits	3	-	-	3	40	60	3	3
5	SMC905CE	Environmental Science	2	0	-	2	40	60	3	0
6	SAC901IT	Design Thinking	2	0	-	2	40	-	0	0
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	SES911EC	Basic Electrical and Electronics Circuits Lab	-	-	4	4	40	60	3	2
10	SES111CS	Programming for Problem Solving Lab	-	-	4	4	40	60	3	2
Credits			17	01	16	34	400	540	-	22

Stanley College of Engineering and Technology for Women (Autonomous)

IT: SEMESTER– II

S.No.	Course Code	Course Title	Scheme of Instruction				Scheme of Examination			Credits
			L	T	P/D	Contact Hours/Wk	CIE	SEE	SEE Duration	
Theory Courses										
1	SHS901EG	English	2	-	-	2	40	60	3	2
2	SBS902PH	Applied Physics	3	-	-	3	40	60	3	3
3	SBS201MT	Mathematics-II	3	1	-	4	40	60	3	4
4	SPC201IT	Data Structures with C	3	-	-	3	40	60	3	3
5	SMC907PY	Essence of Indian Traditional Knowledge	2	-	-	2	40	60	-	-
6	SMC906PO	Indian Constitution	2	-	-	2	40	60	-	-
Practical/Laboratory Courses										
7	SHS911EG	English lab	-	-	2	-	40	60	3	1
8	SBS912PH	Physics Lab			4	4	40	60	3	2
9	SES914ME	Workshop	-	-	6	6	40	60	3	3
10	SPC211IT	Data Structures with C Programming lab			2	-	40	60	3	1
11	SPW211IT	Field Work	The students have to undergo a Field work of 2 week duration after II- Semester SEE				50	-	-	1
	Total		15	01	14	26	450	600	21	20

IT: SEMESTER– III

S. No.	Course Code	Course Title	Scheme of Instruction				Scheme of Examination			
			L	T	P/D	Contact Hours/	CIE	SEE	SEE Duration in Hours	Credits
		Theory Courses								
1	SBS301MT	Probability and statistics	3	-	-	3	40	60	3	3
2	SPC301IT	OOPS using JAVA	3	-	-	3	40	60	3	3
3	SES302EC	Digital Electronics & Logic Design	3	-	-	3	40	60	3	3
4	SPC301IT	Database Management Systems	3	-	-	3	40	60	3	3
5	SPC302IT	Discrete Mathematics	3	-	-	3	40	60	3	3
6	SAC902EE	Electrical Technology	2	-	-	2	40	-	-	-
		Practical/Laboratory Courses								
6	SPC311IT	OOPS using JAVA Lab	-	-	3	3	40	60	3	1.5
7	SPC311IT	Database Management Systems Lab	-	-	3	3	40	60	3	1.5
8	SHS902EG	Soft Skills Lab	1	-	2	3	40	60	3	2
		Total	18	-	6	24	320	480		20

IT: SEMESTER–IV

S.No.	Course Code	Course Title	Scheme of Instruction				Scheme of Examination			
			L	T	P/D	Contact Hrs/ Wk	CIE	SEE	SEE Duration in Hours	Credits
		Theory Courses								
1	SES401EC	Techniques on Signals and Systems	3	-	-	3	40	60	3	3
2	SPC401IT	Theory of Automata	3	-	-	3	40	60	3	3
3	SPC402IT	Operating Systems	3	-	-	3	40	60	3	3
4	SES402EC	Fundamentals of Digital Image Processing	3	-	-	3	40	60	3	3
5	SPC404IT	Computer Organization and Microprocessor	3	-	-	3	40	60	3	3
		Practical/Laboratory Courses								
6	SPC414IT	Python Lab	1		2	5	40	60	3	2
7	SPC412IT	Operating Systems Lab	-	-	3	3	40	60	3	1.5
8	SPC413IT	Microprocessor Lab	-	-	3	3	40	60	3	1.5
9	SPW511IT	Internship- 1	The students have to undergo a Internship of 4 week duration after IV-Semester SEE				50	-		1
		Total	15	-	10	25	370	540		21

S.No.	Course Code	Course Title	L	T	D/P	Contact Hrs/Wk	CIE	SEE	SEE Duration in Hours	Credits
			Scheme of Instruction				**Scheme of Examination**			
		Theory Courses								
1	SHS501BM	Finance & Accounting	3	-	-	4	40	60	3	3
2	SPC501IT	Compiler Construction	3	1	-	4	40	60	3	4
3	SPC502IT	Data Communications& Computer Networks	3	1	-	4	40	60	3	4
4	SPC503IT	Design and Analysis of Algorithms	3	-	-	3	40	60	3	3
5	SPE1501IT	PE-1	3	-	-	3	40	60	3	3
		Practical/Laboratory Courses								
6	SPC511IT	Compiler Construction Lab	-	-	2	2	40	60	3	1
7	SPC512IT	Web Application Development Lab	1	-	3	4	40	60	3	2.5
8	SPC513 IT	Data Communications& Computer Networks Lab	-	-	3	3	40	60	3	1.5
	Total		16	2	8	27	320	480		22

IT: SEMESTER –VI

S.No	Course Code	Course Title	L	T	D/P	Contact Hrs/Wk	CIE	SEE	SEE Duration in Hrs	Credits
			Scheme of Instruction				**Scheme of Examination**			
		Theory Courses								
1	SPC601IT	Embedded Systems	3	-	-	3	40	60	3	3
2	SPC602IT	Software Engineering	3	-	-	3	40	60	3	3
3	SPC603IT	Artificial Intelligence & Machine Learning	3	1	-	4	40	60	3	3
4	SPE-II	PE-II	3	-	-	3	40	60	3	3
5	SOE-I	OE-I	3	-	-	3	40	60	3	3
		Practical/Laboratory Courses								
6	SPC611IT	Embedded Systems Lab	-	-	3	3	40	60	3	1.5
7	SPC612IT	Artificial Intelligence & Machine Learning Lab	-	-	3	3	40	60	3	1.5
8	SPW613IT	Mini Project Lab (Software Engineering)	-	-	4	4	40	60	3	2
9	SPW614IT	Technical Seminar	-	-	2	2	50	-	3	1
10	SPW611IT	Internship- 2	The students have to undergo a Internship of 4 week duration after VI- Semester SEE				50	-		1
	Total		15	1	12	28	420	480		22

S. No.	Course Code	Course Title	Scheme of Instruction			Contact tHrs/	Scheme of Examination		SEE Durationi nHrs	Credits
			L	T	P/D		CIE	SEE		
Theory Courses										
1	SPC701IT	Internet of Things	3	-	-	3	40	60	3	3
2	SPE-III	PE-3	3	-	-	3	40	60	3	3
3	SPE-IV	PE-4	3	-	-	3	40	60	3	3
4	SPE-V	PE-5	3	-	-	3	40	60	3	3
5	SOE-II	OE-2	3	-	-	3	40	60	3	3
Practical/Laboratory Courses										
6	SPC711IT	Internet of Things LAB	-	-	4	4	40	60	3	2
7	SPE-III711IT	PE-III LAB	-	-	2	2	40	60	3	1
8	SPE-IV712IT	PE-IV LAB	-	-	2	2	40	60	3	1
9	SPW711IT	Project Work -1	-	-	6	6	50	-	-	3
Total			15	-	14	29	370	480		22

IT-SEMESTER-VIII

S. No.	Course Code	Course Title	Scheme of Instruction			Contact tHrs/	Scheme of Examination		SEE Duration in Hrs	Credits
			L	T	P/D		CIE	SEE		
Theory Courses										
1	SOE-III	**Open Elective –III**	3	-	-	3	40	60	3	3
Practical/Laboratory Courses										
2	SPW811IT	Project Work- 2	-	-	4	8	40	120	-	8
Total			3	-	4	11	80	180		11

Professional Elective - I	
SPE 521 IT	Network security & cryptography
SPE 522 IT	Computational Intelligence
SPE 523 IT	Advanced databases
SPE 524 IT	Wireless mobile communications
SPE 525 IT	Principles of Programming

Professional Elective - II	
SPE 621 IT	Information Security
SPE 623 IT	Natural Language Processing.
SPE 624 IT	Information retrieval systems
SPE 625 IT	Ad-hoc and Sensor Networks
SPE 626 IT	Parallel Algorithms

Professional Elective- III	
SPE 721 IT	Database Security
SPE 722 IT	Deep learning
SPE 723 IT	Data mining and Data ware housing
SPE 724 IT	Cloud computing
SPE 725 IT	PHP

Professional Elective -IV	
SPE 731 IT	IOT Security
SPE 732 IT	Big Data Analytics
SPE 733 IT	Data Science using R
SPE 734 IT	VLSI Design
SPE 735 IT	Agile Software Development

Professional Elective -V	
SPE 741 IT	Computer Forensics
SPE 742 IT	Semantic Web
SPE 743 IT	Data Science & Virtualization
SPE 744 IT	Block chain Technology
SPE 745 IT	Software Quality Assurance and Testing

SNO	Mandatory course and Code	Mandatory Course -Subject Name
1	MC 904	Induction Program
2	MC 905 CE	Environmental Science
3	MC 906 PO	Indian Constitution
4	MC 907 PY	Essence of Indian Traditional Knowledge

SNO	Audit course and Code	Audit Course -Subject Name
1	S AC901IT	Design Thinking
2	S AC902EE	Electrical Technology

SNO	Course Code	Course Name	Course Offered By the Department
1	SOE601 IT	Database Management Systems	IT
2	SOE 602EE	Reliability Engineering	EEE
3	SOE 603EC	Telecommunication Network Management	ECE
4	SOE 604CS	Open Source Technologies	CSE/CME/AIDS
5	SOE 605 HS	Industrial Safety & Disaster Management	
6	SOE 606 HS	Project and Proposal Writing	H&S

List of Open Electives

Open Elective – I

Open Elective – II

SNO	Course Code	Course Name	Course Offered By the Department
1	SOE701 IT	Software Engineering	IT
2	SOE702EE	Introduction to Renewable Energy Systems	EEE
3	SOE703EC	Medical Electronics	ECE
4	SOE 704CS	Quantum Computing	CSE/CME/AIDS
5	SOE705HS	Quantitative Analysis for Business Decisions [OR]	H & S
6	SOE706LW	Intellectual Property Rights	

Open Elective – III

SNO	Course Code	Course Name	Course Offered By the Department
1	SOE801 IT	Python Programming	IT
2	SOE 802EE	Energy Conservation and Management	EEE
3	SOE 803EC	Consumer Electronics	ECE
4	SOE804CS	Basics Of 3-D Printing	CSE/CME/AIDS
5	SOE805 HS	Basics of Entrepreneurship	
6	SOE 806CE	Industrial Pollution Prevention and Control	H & S