

SCHOOL OF ENGINEERING AND TECHNOLOGY
SRI PADMAVATI MAHILA VISVAIDYALAYAM
(WOMEN'S UNIVERSITY), TIRUPATI



Accredited by NAAC with 'A' Grade

List of Courses Offered (B.Tech(CSE), Minors, Honors) and prerequisites

Department of Computer Science and Engineering

Effective from 2020-21

List of Courses – Professional Core

S.No	Course Code	Course Title	Year/ Semester	Number of Credits	Prerequisites	Year/ Semester
1	20CST01	Programming for Problem Solving	I-II	3	---	---
2	20CST02	Discrete Mathematics	II -I	3	---	---
3	20CST03	Data Structures	II -I	3	20CST01 – Programming for Problem Solving	I-II
4	20CST04	Computer Architecture and Organization	II-II	3	20ECT45 – Digital Logic Design	II -I
5	20CST05	Object Oriented Programming	II-II	3	20CST01 – Programming for Problem Solving,	I -II
					20CST03 – Data Structures	II -I
6	20CST06	Database Management Systems	II-II	3	20CST01 – Programming for Problem Solving,	I -II
					20CST03 – Data Structures	II-I
7	20CST07	Theory of Computation	III-I	3	---	---
8	20CST08	Design and Analysis of Algorithms	III-I	3	20CST03 – Data Structures	II-I
9	20CST09	Operating Systems	III-I	3	---	---
10	20CST10	Software Engineering	III-I	3	---	---
11	20CST11	Compiler Design	IIII-II	3	20CST07 – Theory of Computation	III-I
12	20CST12	Computer Networks	IIII-II	3	---	---
13	20CST13	Machine Learning	IV-I	3	20BST07 - Probability and Statistics	II-II
14	20CST14	Internet and Web Programming	IV-I	3	20CST05 - Object Oriented Programming	II-II

List of Courses – Professional Electives

S.No	Course Code	Course Title	Year/ Semester	Number of Credits	Prerequisites	Year/ Semester
15	20CST15	Data Communication	II-II	3	---	---
16	20CST16	System Programming	II-II	3	---	---
17	20CST17	Software Project Management	II-II	3	---	---
18	20CST18	Data Mining	II-II	3	---	---
19	20CST19	Software Testing	III-I	3	---	---
20	20CST20	Wireless Networks	III-I	3	---	---
21	20CST21	Information Security	III-I	3	---	---
22	20CST22	Big Data Analytics	III-I	3	20CST06 – Database Management System	II-II
23	20CST23	Cryptography and Network Security	III-II	3	---	---
24	20CST24	Neural Networks	III-II	3	---	---
25	20CST25	Cloud Computing	III-II	3	20CST09– Operating Systems	III-I
26	20CST26	Distributed Computing	III-II	3	20CST09– Operating Systems	III-I
					20CST05 – Object Oriented Programming	II-II
27	20CST27	Artificial Intelligence	IV-I	3	---	---
28	20CST28	Deep Learning	IV-I	3	20CST24-Neural Networks	III-II
29	20CST29	Data Science	IV-I	3	20CST22– Big Data Analytics	III-I
30	20CST30	Speech and Natural Language Processing	IV-I	3	20CST07 - Theory of Computation	III-I
					20CST11 - Compiler Design	III-II

List of Courses – Open Electives

S.No	Course Code	Course Title	Year/ Semester	Number of Credits	Prerequisites	Year/ Semester
31	20CST31	Introduction to C++ Programming	III-II	3	20CST01 - Programming for Problem Solving	I-II
32	20CST32	Fundamentals of Computer Organization	III-II	3	---	---
33	20CST33	Basics of Computer Networks	III-II	3	---	---
34	20CST34	Introduction to Cyber Security	III-II	3	---	---
35	20CST35	Introduction to Cloud Computing	III-II	3	---	---
36	20CST36	Introduction to Artificial Intelligence	IV-I	3	---	---
37	20CST37	Introduction to Java Programming	IV-I	3	---	---
38	20CST38	Fundamentals of Internet of Things	IV-I	3	---	---

List of Practical Courses

S.No	Course Code	Course Title	Year/ Semester	Number of Credits	Prerequisites	Year/ Semester
1	20CSP01	Programming for Problem Solving Lab	I-II	2	---	---
2	20CSP02	Data structures Lab	II-I	1	20CSP01 – Programming for Problem Solving Lab	I-II
3	20CSP03	IT Workshop	II-I	1	---	---
4	20CSP04	Object Oriented Programming Lab	II-II	1	20CSP01 – Programming for Problem Solving Lab	I-II
5	20CSP05	Database Management Systems Lab	II-II	1	---	---
6	20CSP06	Mathematical Tool Kit Lab	II-II	1	---	---
7	209CSP07	Operating Systems Lab	III-I	1	---	---
8	20CSP08	Software Engineering and Object Oriented Analysis and Design Lab	III-I	1	---	---
9	20CSP09	Compiler design Lab	III-II	1	---	---
10	20CSP10	Computer Networks Lab	III-II	1	---	---
11	20CSP11	Machine Learning Lab	IV-I	1	---	---
12	20CSP12	Internet and Web Programming Lab	IV-I	1	---	---
13	20CSP13	Advanced Programming Lab	III-II	3	20CSP01 – Programming for Problem Solving Lab	I-II
					20CSP02- Data Structures	I-II
					20CSP04 - Object Oriented Programming,	I-II

List of Skill Oriented Courses

S.No	Course Code	Course Title	Year/ Semester	Number of Credits	Prerequisites	Year/ Semester
1	20CSS01	Learning Tableau	II-I	2	---	---
2	20CSS02	PHP: Hypertext Preprocessor	II-II	2	---	---
3	20CSS03	Visual Studio	III-II	2	20CST01 - Programming for Problem Solving	I-II
4	20CSS04	Source Code Management using Git and Github	IV-I	2	---	---
5	20CSS05	Android App Development	III-II	2	20CST05 - Object Oriented Programming	II-II
6	20CSS06	IoT App Development	IV-I	2	---	---
7	20CSS07	Mongo DB	III-II	2	20CST05 - Object Oriented Programming, 20CST06 - Database Management Systems	II-II
						II-II
8	20CSS08	Hadoop and Apache Spark	IV-I	2	20CST05 - Object Oriented Programming, 20CST06 - Database Management Systems	II-II
						II-II
9	20CSS09	Java Script	III-II	2	20CST05 - Object Oriented Programming	II-II
10	20CSS10	ASP:Active Server Pages	IV-I	2	20CST05 - Object Oriented Programming, 20CSS02 - PHP : Hypertext Preprocessor	II-II II-II
11	20CSS11	Animation for Beginners	III-II	2	20CST01 - Programming for Problem Solving	I-II
12	20CSS12	VFX:Visual Effects	IV-I	2	20CSS11 - Animation for Beginners	III-II

List of Courses in Minor Degree Programme

Theory

S.No	Course Code	Course Title	Year/ Semester	Number of Credits	Prerequisites	Year/ Semester
1	20CSTM01	Basics of Python	II-II	3	20CST01 - Programming for Problem Solving	I-II/I-I
2	20CSTM02	Fundamentals of Data Structures	III-I	3	20CST01 - Programming for Problem Solving	I-II/I-I
3	20CSTM03	Introduction to Data Base Management Systems	III-II	3	---	---
4	20CSTM04	Design and Analysis of Algorithms	III-II	3	20CSTM02 – Fundamentals of Data Structures	III-I
5	20CSTM05	Web Technologies	IV-I	3	---	---

Practicals

S.No	Course Code	Course Title	Year/ Semester	Number of Credits	Prerequisites	Year/ Semester
1	20CSPM01	Basics of Python Lab	II-II	1	20CSP01 - Programming for Problem Solving	I-II/I-I
2	20CSPM02	Fundamentals of Data Structures Lab	III-I	1	20CSP01 - Programming for Problem Solving	I-II/I-I
3	20CSPM03	Introduction to Data Base Management Systems Lab	III-II	1	---	---
4	20CSPM04	Design and Analysis of Algorithms Lab	III-II	1	20CSPM02 – Fundamentals of Data Structures Lab	III-I
5	20CSPM05	Web Technologies Lab	IV-I	1	---	---

List of Courses in Honors Degree Programme

S.No	Course Code	Course Title	Year/ Semester	Number of Credits	Prerequisites	Year/ Semester
1	20CSTH01	Information Security	II-II	4	---	---
2	20CSTH02	Block Chain Technologies	III-I	4	20CST06 - Database Management Systems	II-II
3	20CSTH03	Sentiment Analysis	III-II	3	20CST22 - Big Data Analytics	III-I
4	20CSTH04	Regression Modelling Strategies	IV-I	3	---	---
5	20CSTH05	Fuzzy Logic and Knowledge Based Systems	III-II	3	---	---
6	20CSTH06	Computer Vision	IV-I	3	20CST01 - Programming for Problem Solving	I-II
					20CST05 - Object Oriented Programming	II-II
7	20CSTH07	Software Quality Assurance	III-II	3	20CST10 - Software Engineering	III-I
8	20CSTH08	Agile Software Development	IV-I	3	20CST10 - Software Engineering	III-I