SREE VIDYANIKETHAN ENGINEERING COLLEGE
(AUTONOMOUS)
Sree Sainath Nagar, Tirupati

Department of Information Technology

Supporting Document for 1.1.2

Syllabus Revision carried out in 2019

Program: B.Tech.- Information Technology

Regulations: SVEC-19

This document details the following:

1. Courses where syllabus has been changed 20% and more.
2. Course-wise revised syllabus with changes highlighted.

Note: *For SVEC-19 revised syllabus, SVEC-16 (previous syllabus) is the reference.*

List of Courses where syllabus content has been changed (20% and more)

S. No	Course Code	Name of the course	Percentage of content changed	Page Number in which details are highlighted
1.	19BT31202	Software Engineering	20	04
2.	19BT31231	IT Workshop	70	08
3.	19BT31232	Software Engineering Lab	100	12
4.	19BT1AC01	Spoken English	100	14
5.	19BT1BS02	Biology for Engineers	100	16
6.	19BT1HS01	Communicative English	20	18
7.	19BT1BS03	Engineering Physics	40	22
8.	19BT1BS31	Engineering Physics Lab	30	26
9.	19BT1BS04	Engineering Chemistry	50	29
10.	19BT1BS32	Engineering Chemistry Lab	25	34
11.	19BT2BS01	Transformation Techniques and Linear Algebra	20	37
12.	19BT4BS01	Material Science	100	41
13.	19BT4HS05	Gender and Environment	100	43
14.	19BT4HS09	Life Skills	100	45
15.	19BT4HS11	Professional Ethics	100	47
16.	19BT4HS12	Women Empowerment	100	49
17.	19BT40107	Sustainable Engineering	100	51
18.	19BT10501	Programming for Problem Solving	37.7	53
19.	19BT10531	Programming for Problem Solving Lab	50	57
20.	19BT30503	Data Structures	22.2	62
21.	19BT30531	Data Structures Lab	30.5	66
22.	19BT40531	Computer Networks Lab	100	72
23.	19BT40532	Database Management Systems Lab	41	77
24.	19BT21501	Object Oriented Programming through Java	30	87
25.	19BT21531	Object Oriented Programming through Java Lab	70	91
26.	19BT315AC	Design Thinking	100	97
27.	19BT50409	Green Technologies	35	99
28.	19BT51207	AI in Healthcare	100	103
29.	19BT60503	Cryptography and Network Security	42.2	105
30.	19B551505	Software Testing	25	109
31.	19BT51203	Advanced Databases	20	113
32.	19BT51205	Mobile Computing	20	117
33.	19BT5MC01	Universal Human Values	100	121
34.	19BT61201	Cloud Computing	60	123
35.	19BT60505	Soft Computing	40	127
36.	19BT61203	Semantic Web and Social Networks	100	131
37.	19BT61506	User Interface Design	100	134
38.	19BT61204	Information Security and Management	100	136
39.	19BT61206	Intrusion Detection Systems	100	138
40.	19BT61205	.Net Technologies	32	140
41.	19BT61531	Internet of Things Lab	100	144
42.	19BT61231	Cloud Computing Lab	80	145

43.	19BT71201	Data Analytics	100	149
44.	19BT71503	Deep Learning	100	151
45.	19BT71204	Computer Forensics	100	153
46.	19BT71205	Decision Support and Intelligent Systems	100	155
47.	19BT71206	System and Network Administration	100	157
48.	19BT71504	High Performance Computing	100	159
49.	19BT71207	Game Development	100	163
50.	19BT71231	Data Analytics Lab	100	165
51.	19BT71232	Mobile Application Development Lab	23	166
52.	19BT7AC05	Data Science and Applications	100	170
		Average % **(A)**	69.87	-
		Total No. of courses in the Program **(T)**	124	
		No. of Courses where syllabus (more than 20% content) has been changed **(N)**	52	
		Percentage of syllabus content change in the courses **(C)** = **(A X N) / 100**	36.33	
		Percentage of syllabus content change in the program **(P)** = **(C / T)*100**	29.56	

DEAN (Academics)

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SREE VIDYANIKETHAN ENGINEERING COLLEGE
Sree Sainath Nagar, A. RANGAMPET
CHITTOOR (DT.)-517 102, A.P.

PRINCIPAL

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Chittoor (Dist.) - 517 102, A.P., INDIA.

II B. Tech. – I Semester

(19BT31202) SOFTWARE ENGINEERING

Int. Marks	Ext. Marks	Total Marks	L	T	P	C
40	60	100	3	-	-	3

PRE-REQUISITES: -

COURSE DESCRIPTION: Concepts of Software Engineering; Software Process Models; Conventional and Agile Process Models; Software Requirements Engineering Process; System Analysis; Architectural Design; User Interface Design and Re-engineering; Software Testing; Risk and Quality Management.

COURSE OUTCOMES: Aftersuccessful completion of the course, students will be able to:

CO1. Understand fundamental concepts of software engineering and analyze process models required to develop a software system.

CO2. Analyze software requirements and model requirements for the given scenario.

CO3. Apply design concepts and metrics for software development.

CO4. Apply testing strategies and techniques for quality software.

CO5. Analyze risks in software development life cycle and apply risk strategies to mitigate risks.

DETAILED SYLLABUS:

UNIT I: SOFTWARE ENGINEERING AND SOFTWARE PROCESS (11 periods)

A Generic view of process: The Nature of Software, Software Engineering- Software Engineering Layers; The Software Process, Software Engineering Practice, Software myths.

Process models: A Generic Process Model, Prescriptive Process Models-The Waterfall Model, Incremental Process Models, Specialized Process Models; The Unified Process, Agile Development-Agility, Agile Process, Extreme Programming (XP), Scrum, Dynamic System Development Method,Agile Modeling (AM), Agile Unified Process (AUP).

UNIT II: REQUIREMENTS ENGINEERING AND MODELING (07 periods)

Requirements Engineering: Functional and non-functional requirements, the software requirements document, Requirements specifications, Requirements engineering processes, Requirements elicitation and analysis, Requirements validation, Requirements management.

Requirements Modeling: Requirements Analysis, Data Modeling Concepts, Flow-Oriented Modeling,Scenario based Modeling, UML Models that supplement the Use Case, Case study on Requirements modeling for Web and MobileApps.

UNIT III: DESIGN ENGINEERING AND METRICS (09 periods)

Design using UML: Design concepts, Software Architecture, Architectural Styles, Class Diagram - Terms and concepts, Use case Diagram - Terms and concepts, Activity Diagrams - Terms and concepts, Interaction diagrams - Terms and concepts, Statemachine Diagram- Terms and concepts, Component Diagram- Terms and concepts, Deployment Diagram- Terms and concepts.