

**Agenda for 13th Meeting of Board of Studies for
B. Tech. (Computer Science and Engineering)
on 08-07-2021 at 10:00 AM**

1. Action taken report on minutes/resolutions of 11th and 12th BOS meetings.
2. Report on implementation of autonomy with respect to syllabi & academic regulations for II B.Tech. CSE (under SVEC19 regulations) and I B.Tech. CSE (under SVEC20 regulations)
3. Vision and Mission of the Department, PEOs, POs & PSOs for B.Tech. CSE Program (under SVEC20 regulations)
4. Course Structure, Syllabi with Course Objectives, Course Outcomes for the Courses of III & IV B. Tech. CSE including Minor & Honors Degrees (Under SVEC19 regulations)
5. Course Structure, Syllabi with Course Objectives, Course Outcomes for the Courses of II, III & IV B.Tech. CSE (Under SVEC20 regulations) and Course structure of Minor Degree (Under SVEC20 regulations)
6. Regulation-wise, list of courses in which the content of the syllabus is changed more than 20%
7. List of new courses introduced in SVEC19 and SVEC20
8. Panel of Examiners for Question paper setting
9. Substitute Courses
10. Amendments to B.Tech. Academic Regulations under SVEC19 & SVEC20 regulations
11. Appraisal on research, teaching, extension and other academic activities, achievements of the Department.
12. Any other item

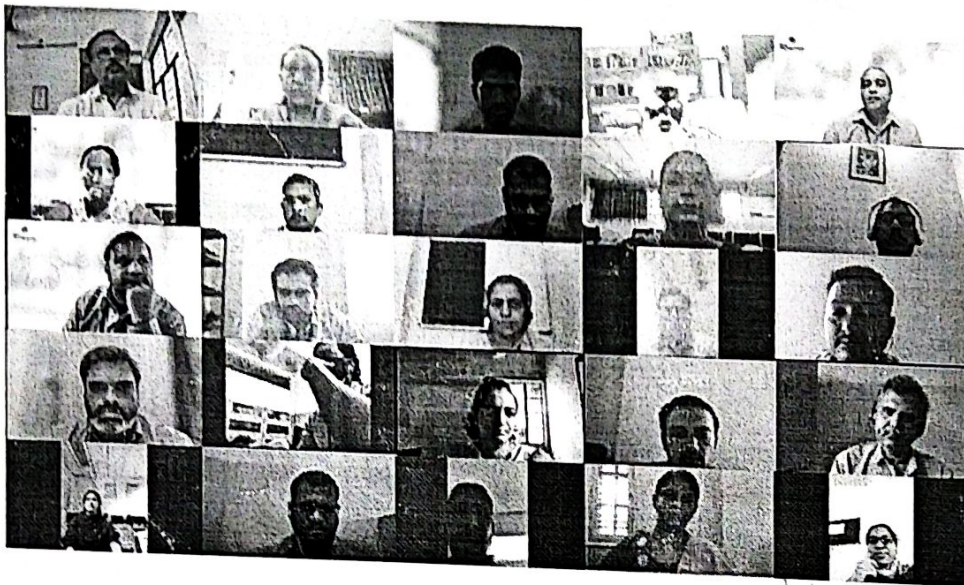


Dr. G. Sunitha
Chairperson, BOS (CSE)

COMPUTER SCIENCE & ENGINEERING
SREE VIDYANIKETHAN ENGINEERING COLLEGE
Sree Sainath Nagar, A. Rangampet
Near TIRUPATI - 517 102. A.P.

**Minutes of the 13th Meeting of CSE Board of Studies for the UG Program
B.Tech. CSE conducted on 08.07.2021 at 10:00 AM**

Members Present:



S. No	Name	Designation
1.	Dr. G. Sunitha Professor, Dept. of CSE, Sree Vidyanikethan Engineering College	Chairperson
2.	Dr. P. Chenna Reddy Professor of CSE, JNTUA College of Engineering, JNTU Ananthapuramu, Ananthapuramu	External Member (Nominated by Vice- Chancellor, JNTUA)
3.	Dr. D.V.V. Prasad Professor of CSE, SSN College of Engineering, Chennai	External Member (Nominated by Academic Council)
4.	Dr. T. Chitrakleha Professor & Dean, School of Engineering & Technology, Pondicherry University, Puducherry	External Member (Nominated by Academic Council)
5.	Ms. Annie Joyce. V Joint Director, RTS-IoT Group, C-DAC, Bengaluru	External Member (Industry)

(Signature)
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S. No	Name	Designation
6.	Mr. B. Kiran Automation Tech. Lead, Tyfone CDI Pvt. Ltd, Bengaluru	External Member (Alumni)
7.	Dr. V.V. Rama Prasad Professor, Department of CSE, Sree Vidyanikethan Engineering College	Internal Member
8.	Dr. B. Narendra Kumar Rao Professor & Head, Department of CSE, Sree Vidyanikethan Engineering College	Internal Member
9.	Dr. A.V. Sriharsha Professor, Department of CSE, Sree Vidyanikethan Engineering College	Internal Member
10.	Dr. M. Sunil Kumar Professor, Department of CSE, Sree Vidyanikethan Engineering College	Internal Member
11.	Dr. J. Aswini Professor, Department of CSE, Sree Vidyanikethan Engineering College	Internal Member
12.	Mr. Shaik Salam Associate Professor, Department of CSE, Sree Vidyanikethan Engineering College	Internal Member
13.	Dr. M. Sakthivel Associate Professor, Department of CSE, Sree Vidyanikethan Engineering College	Internal Member
14.	Dr. J. Avanija Associate Professor, Department of CSE, Sree Vidyanikethan Engineering College	Internal Member
15.	Dr. K. Reddy Madhavi Associate Professor, Department of CSE, Sree Vidyanikethan Engineering College	Internal Member
16.	Dr. V. Anantha Natarajan Associate Professor, Department of CSE, Sree Vidyanikethan Engineering College	Internal Member
17.	Dr. K. Suresh Associate Professor, Department of CSE, Sree Vidyanikethan Engineering College	Internal Member
18.	Dr. S. Srinivasa Chakravarthi Associate Professor, Department of CSE, Sree Vidyanikethan Engineering College	Internal Member

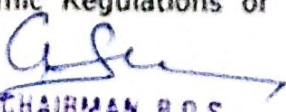
Minutes:

1. Action Taken Report on Minutes/resolutions of 11th & 12th BOS Meetings

The BOS Chairperson presented the Action Taken Report on Minutes/Resolutions of the 11th & 12th BOS Meetings. After deliberations the members ratified the report.

2. Report on implementation of autonomy with respect to syllabi and regulations

The BOS Chairperson presented the Report on the Implementation of Autonomy with respect to Syllabi and Academic Regulations of II B.Tech. CSE under SVEC19


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regulations and I B.Tech. CSE under SVEC20 regulations. The feedback of students and faculty on the courses of II B.Tech. CSE under SVEC19 regulations and I B.Tech. CSE under SVEC20 regulations is appraised. The BOS Chairperson also briefed about the B.Tech. classes handled by faculty through online mode. The board appreciated and ratified the report.

3. PEOs, POs and PSOs of B.Tech. CSE under SVEC20 Regulations

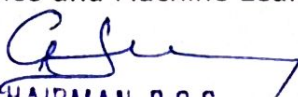
The BOS Chairperson appraised the members about the Program Educational Objectives, Program Outcomes and Program Specific Outcomes of B.Tech. CSE under SVEC20 regulations. The members perused and approved the same.

4. Course Structure, Syllabi of III, IV B.Tech. CSE including Minor & Honors Degrees under SVEC19 Regulations

The BOS Chairperson presented the course structure of III & IV B.Tech. CSE, Minor Degree in Artificial Intelligence and Machine Learning, Honors Degree in Artificial Intelligence and Machine Learning under SVEC19 regulations. The draft syllabi of the courses prepared by CSE department was presented for discussion along with course objectives, course outcomes, lesson plans, model question papers for each course. The BOS Chairperson appraised the members with the procedure followed for articulation of COs, and for correlation mapping of COs with POs & PSOs. The Chairperson BOS also appraised the members that the model question papers of the courses are in-line with the AICTE Examination Reform Policy 2018.

After deliberations and discussions, the board members have made following suggestions on the course structure and syllabi of III & IV B.Tech. CSE, Minor Degree in Artificial Intelligence and Machine Learning, Honors Degree in Artificial Intelligence and Machine Learning proposed by the department under SVEC19 regulations:

- Few exercises on cyber security tools may be included in "Linux Programming Lab" course.
- "Organizational Behavior" course may be removed from the course structure or it may be offered as an audit course.
- "Artificial Intelligence" course may be offered as a core course instead of as an elective course.
- "Atul Kahate, Cryptography and Network Security, 3rd Edition, McGraw Hill, 2017" may be considered as one of the reference books for the course "Cryptography and Network Security".
- The title "Speech Signal Processing" may be appropriate for the course "Speech Processing" to reflect the nature of the syllabi proposed under the course.
- The topics DK2, DK3 may be removed from the "Augmented Reality and Virtual Reality" course and more content may be included on application development.
- The course structure of Minor Degree in Artificial Intelligence and Machine Learning shall be modified to offer only five courses and three laboratory courses (two theory & one lab in III B.Tech. I semester, two theory & one lab in III B.Tech. II semester, one theory & one lab in IV B.Tech. I Semester). All the offered courses must be pursued by the student to be eligible for the award of Minor Degree in Artificial Intelligence and Machine Learning.


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- Few exercises on d3.js may be included in "Data Visualization Lab" course.
- In "Computer Vision Lab", few exercises may be included on MATLAB.
- Courses under Professional Elective-4 and Professional Elective-5 may be rearranged.

The course structure of III & IV B.Tech. CSE, Minor Degree in Artificial Intelligence and Machine Learning, Honors Degree in Artificial Intelligence and Machine Learning under SVEC20 regulations was approved subject to the modifications that may arise due to suggestions made by the board (Appendix A).

The syllabi of the courses of III & IV B.Tech., Minor Degree in Artificial Intelligence and Machine Learning, Honors Degree in Artificial Intelligence and Machine Learning prepared by CSE department was approved subject to the modifications that may arise due to suggestions made by the board (Appendix B).

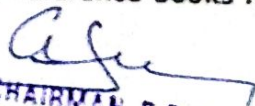
It is resolved to authorize the BOS Chairperson to adapt improvements suggested by the board members and submit to the Chairman (Academic Council) for further processing.

5. **Course Structure, Syllabi of II, III, IV B.Tech. CSE and Course Structure of Minor Degree under SVEC20 Regulations**

The BOS Chairperson presented the course structure of II, III & IV B.Tech. CSE, Minor Degree in Computer Science and Engineering under SVEC20 regulations. The draft syllabi of the courses prepared by CSE department was presented for discussion along with course objectives, course outcomes, lesson plans, model question papers for each course. The BOS Chairperson apprised the members with the procedure followed for articulation of COs, and for correlation mapping of COs with POs & PSOs. The Chairperson BOS also apprised the members that the model question papers of the courses are in-line with the AICTE Examination Reform Policy 2018.

After deliberations and discussions, the board members have made following suggestions on the course structure and syllabi of II, III & IV B.Tech. CSE proposed by the department under SVEC20 regulations:

- Topics "Lambda Functions", "Generators" may be included in the "Python Programming" Course.
- "Steven Halim, Felix Halim, Competitive Programming 3: The New Lower Bound of Programming Contests, 2013" may be considered as one of the reference books for the course "Programming through C++ lab".
- "Organizational Behavior" course may be removed from the course structure or it may be offered as an audit course.
- "Artificial Intelligence" course may be offered as a core course instead of as an elective course.
- In the "Software Project Management" course, topics on "Managing Contracts" may be removed. Instead, topics on "Process Models" may be included.
- "Atul Kahate, Cryptography and Network Security, 3rd Edition, McGraw Hill, 2017" may be considered as one of the reference books for the course "Cryptography and Network Security".


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- The title "Speech Signal Processing" may be appropriate for the course "Speech Processing" to reflect the nature of the syllabi proposed under the course.
- The topics DK2, DK3 may be removed from the "Augmented Reality and Virtual Reality" course and more content may be included on application development.
- In "Computer Vision Lab", few exercises may be included on MATLAB.
- Courses under Professional Elective-4 and Professional Elective-5 may be rearranged.

The course structure of II, III & IV B.Tech. CSE under SVEC20 regulations was approved subject to the modifications that may arise due to suggestions made by the board (Appendix C).

The syllabi of the II, III & IV B.Tech. courses prepared by CSE department was approved subject to the modifications that may arise due to suggestions made by the board (Appendix D).

It is resolved to authorize the BOS Chairperson to adapt improvements suggested by the board members and submit to the Chairman (Academic Council) for further processing. However, the board unanimously agreed to view the course structure of Minor Degree in Computer Science and Engineering under SVEC20 regulations as tentative and suggested for presenting the same with detailed syllabi in the ensuing BOS meeting to be held on April/May 2022.

6. Regulation-wise, list of courses in which the content of the syllabus is changed more than 20%.

The BOS Chairperson presented the list of courses under SVEC19 and SVEC20 regulations in which the content of the syllabus is changed more than 20%. The members perused and approved the same (Appendix E).

7. List of new courses introduced in SVEC19 and SVEC20

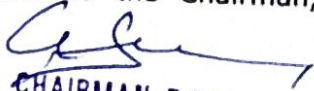
The BOS Chairperson presented the list of new courses introduced into curriculum under SVEC19 and SVEC20 regulations. The members perused and approved the same (Appendix F).

8. Panel of Examiners for question paper setting

Regarding Panels of Question Paper setters for courses of III, IV B.Tech. CSE, Minor Degree in Artificial Intelligence and Machine Learning, Honors Degree in Artificial Intelligence and Machine Learning under SVEC19 regulations, it is resolved to authorize the BOS Chairperson to approve panel of question paper setters for theory subjects. Also, it is resolved to authorize the BOS Chairperson to approve panel of question paper setters for theory subjects of II, III, IV B.Tech. CSE under SVEC20 regulations. Board suggested to submit the panel of question paper setters and model question papers, to the Principal well in advance of the commencement of class work.

9. Substitute Courses

The board authorized the Head of the Department and the BOS Chairperson to identify substitute courses for students who rejoin the B.Tech. CSE program under other regulations and submit to the Chairman, Academic Council for further processing.


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10. Amendments to B.Tech. Academic Regulations under SVEC19 and SVEC20 Regulations

The BOS Chairperson presented the amendments proposed to the SVEC19 and SVEC20 Academic Regulations of B.Tech. Board members ratified the same after discussions.

11. Appraisal on research, teaching, extension and other academic activities, achievements of the Department

The BOS Chairperson presented the teaching, learning and evaluation practices followed in the department. The members of BOS appreciated the good practices being followed by the department in terms of conducting diagnostic test, formative tests and the mid exams. The members were apprised of the student feedback on faculty and student examination results. Members noted and appreciated the same.

The Chairperson, BOS has briefed the members about the ongoing research activities in the department made by the faculty (Thrust Areas of Research, Research Activities, Research Proposals submitted by Faculty for Research Funding, In-house Seed Funding by SVET, Achievements of Faculty). The members appreciated the efforts made by the faculty and the department. The members suggested to motivate faculty members to publish research papers in SCI/SCIE/Scopus/Web of Science journals.

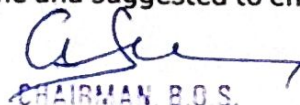
The BOS Chairperson apprised the board about the faculty incentives, FDPs attended, events attended by faculty on online platforms, FDPs/SDPs organized, paper publications/presentations, books published, patents filed and faculty qualification upgradation. The members have appreciated the efforts of the department and suggested to continue the same. The members suggested that faculty to submit proposals to AICTE/DST etc for grants to conduct online FDPs/Workshops etc.

The board is apprised about staff development activities carried out by the department. The members have suggested to organize SDPs to train staff members.

The members perused and noted the information provided on the student development activities organized by the department (Remedial/Reinforcement classes, Awards/Medals, Guest and Expert Lectures organized, Papers published by students, Add-on/Workshop/Training courses conducted, Student Association Activities, Internships, Extra-curricular activities). The members appreciated the student centric activities of the department and suggested to continue the same.

The members noted the information on good practices such as Counseling Mechanism, On Campus Training for Higher Studies, Placement Training, Training Activities by Companies, Campus Placements, Innovation Cell Activities, Entrepreneurship Activities and IIIC activities for all round growth and development of students. The members of BOS have appreciated the proactive approach of the institution in organizing the activities for supporting the students for increased employability.

The members have perused, noted and appreciated the efforts of department/college in organizing professional, technical and community development activities. The BOS members have suggested to continue the same and suggested to encourage students to take up community-based projects.


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12. Any other item:

Board members have made following suggestions:

- Appreciated the institution for taking initiative towards having MoUs with industry & foreign universities. Members further suggested that activities such as certification courses, internships, research may be taken up under MoU.
- Associate with industry for providing summer internships to students to provide exposure to live industry environment and software development. The board also suggested to consider online internships, on-campus internships under internship evaluation procedure.
- Encourage faculty for extensive use of ICT tools for improving teaching-learning process.
- Encourage faculty to conduct laboratory courses with Virtual Labs.

The BOS members appreciated the pro-active approach of college management and efforts taken by department for the growth of the department. The meeting concluded with thanks to the BOS Chairperson.



(Dr. G. Sunitha)

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Near TIRUPATI - 517 102, A.P.



(Dr. B. Narendra Kumar Rao)

PROFESSOR & HEAD
Dept. of Computer Science & Engineering
SREE VIDYANIKETHAN ENGINEERING COLLEGE
Sree Sainath Nagar, A. Rangampet
Chittoor (Dt.) - 517 102, A.P.

**Approved Course Structure of III & IV B. Tech. CSE
(Under SVEC19 Regulations)**

III B. Tech. – I Semester

Sl. No.	Course Code	Course Title	Contact Periods per week				C	Scheme of Examination Max. Marks		
			L	T	P	Total		Int. Marks	Ext. Marks	Total Marks
1.	19BT51202	Web Technologies	3	-	-	3	3	40	60	100
2.	19BT41501	Theory of Computation	3	-	-	3	3	40	60	100
3.	19BT51204	Linux Programming	3	-	-	3	3	40	60	100
Professional Elective-1										
4.	19BT71202	Mobile Application Development	3	-	-	3	3	40	60	100
	19BT50501	Advanced Computer Architecture								
	19BT50502	Artificial Intelligence								
	19BT50503	Cyber Security								
5.	Open Elective-1		3	-	-	3	3	40	60	100
Interdisciplinary Elective-1										
6.	19BT60314	Optimization Techniques	3	-	-	3	3	40	60	100
	19BT50342	Robotics and Automation								
	19BT50441	Microprocessors and Interfacing								
	19BT70405	Speech Processing								
7.	19BT51232	Web Technologies Lab	-	-	2	2	1	50	50	100
8.	19BT50531	Linux Programming Lab	-	-	2	2	1	50	50	100
9.	19BT50532	Socially Relevant Project-1	-	-	-	-	1	50	50	100
Total:			18	-	04	22	21	390	510	900
10.	19BT5MC01	Universal Human Values	2	-	-	2	-	40	-	40

III B. Tech. – II Semester

Sl. No.	Course Code	Course Title	Contact Periods per week				C	Scheme of Examination Max. Marks		
			L	T	P	Total		Int. Marks	Ext. Marks	Total Marks
1.	19BT6HS02	Organizational Behavior	3	-	-	3	3	40	60	100
2.	19BT60501	Compiler Design	3	-	-	3	3	40	60	100
3.	19BT60502	Machine Learning	3	-	-	3	3	40	60	100
Professional Elective-2										
4.	19BT51203	Advanced Databases	3	-	-	3	3	40	60	100
	19BT51205	Mobile Computing								
	19BT51502	Natural Language Processing								
	19BT51505	Software Testing								
Professional Elective-3										
5.	19BT61503	Parallel and Distributed Systems	3	-	-	3	3	40	60	100
	19BT60503	Cryptography and Network Security								
	19BT60504	Full Stack Development								
	19BT60505	Soft Computing								
Interdisciplinary Elective-2										
6.	19BT70401	Embedded Systems	3	-	-	3	3	40	60	100
	19BT60407	Image Processing								
	19BT60318	Industrial Internet of Things								
	19BT71501	System Simulation and Modeling								
7.	19BT61531	Internet of Things Lab	-	1	2	3	2	50	50	100
8.	19BT60531	Machine Learning Lab	-	-	2	2	1	50	50	100
9.	19BT60532	Socially Relevant Project-2	-	-	-	-	1	50	50	100
Total:			18	01	04	23	22	390	510	900
10.	19BT503AC	Foundations of Entrepreneurship	2	-	-	2	-	-	-	-

IV B. Tech. – I Semester

Sl. No.	Course Code	Course Title	Contact Periods per week				C	Scheme of Examination Max. Marks		
			L	T	P	Total		Int. Marks	Ext. Marks	Total Marks
1.	19BT6HS01	Principles of Business Economics and Accountancy	3	-	-	3	3	40	60	100
2.	19BT61201	Cloud Computing	3	-	-	3	3	40	60	100
3.	19BT51201	Data Warehousing and Data Mining	3	-	-	3	3	40	60	100
Professional Elective-4										
4.	19BT51209	IoT Architecture and Protocols	3	-	-	3	3	40	60	100
	19BT71504	High Performance Computing								
	19BT70501	Augmented Reality and Virtual Reality								
	19BT70502	Data Science								
Professional Elective-5										
5.	19BT71203	Big Data Technologies	3	-	-	3	3	40	60	100
	19BT61506	User Interface Design								
	19BT71503	Deep Learning								
	19BT70503	Blockchain Technologies								
6.	19BT7MOOC	MOOC	-	-	-	-	3	-	100	100
7.	19BT61231	Cloud Computing Lab	-	-	2	2	1	50	50	100
8.	19BT51231	Data Warehousing and Data Mining Lab	-	-	2	2	1	50	50	100
9.	19BT70531	Internship	-	-	-	-	2	-	100	100
Total:			15	-	04	19	22	300	600	900
10.	19BT705AC	Free and Open Source Software	2	-	-	2	-	-	-	-

IV B. Tech. – II Semester

Sl. No.	Course Code	Course Title	Contact Periods per week				C	Scheme of Examination Max. Marks		
			L	T	P	Total		Int. Marks	Ext. Marks	Total Marks
1.	19BT80531	Project Work	-	-	-	-	10	100	100	200
Total:			-	-	-	-	10	100	100	200


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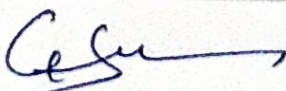
Approved Course Structure of II, III & IV B. Tech. CSE
Under SVEC20 Regulations

II B. Tech. – I Semester

Sl. No.	Course Code	Course Title	Contact Periods per week				C	Scheme of Examination Max. Marks		
			L	T	P	Total		Int. Marks	Ext. Marks	Total Marks
1.	20BT3BS01	Numerical Methods, Probability and Statistics	3	-	-	3	3	30	70	100
2.	20BT12901	Discrete Mathematical Structures	3	-	-	3	3	30	70	100
3.	20BT30501	Computer Organization	3	-	-	3	3	30	70	100
4.	20BT30502	Data Structures	3	-	-	3	3	30	70	100
5.	20BT30503	Python Programming	3	-	-	3	3	30	70	100
6.	20BT30531	Data Structures Lab	-	-	3	3	1.5	30	70	100
7.	20BT30532	Python Programming Lab	-	-	3	3	1.5	30	70	100
8.	20BT30533	Workshop in Computer Science	-	-	3	3	1.5	30	70	100
9.	20BT30534	Programming through C++ Lab	-	1	2	3	2	30	70	100
10.	20BT315AC	Design Thinking	2	-	-	2	-	-	-	-
Total:			17	01	11	29	21.5	270	630	900

II B. Tech. – II Semester

Sl. No.	Course Code	Course Title	Contact Periods per week				C	Scheme of Examination Max. Marks		
			L	T	P	Total		Int. Marks	Ext. Marks	Total Marks
1.	20BT31501	Operating Systems	3	-	-	3	3	30	70	100
2.	20BT31201	Software Engineering	3	-	-	3	3	30	70	100
3.	20BT41501	Theory of Computation	3	-	-	3	3	30	70	100
4.	20BT40501	Database Management Systems	3	-	-	3	3	30	70	100
5.	Open Elective-2		3	-	-	3	3	30	70	100
6.	20BT31231	Software Engineering Lab	-	-	3	3	1.5	30	70	100
7.	20BT31531	Operating Systems Lab	-	-	3	3	1.5	30	70	100
8.	20BT40531	Database Management Systems Lab	-	-	3	3	1.5	30	70	100
9.	20BT3HS31	Soft Skills Lab	-	1	2	3	2	30	70	100
10.	20BT3MC01	Environmental Science	2	-	-	2	-	30	-	30
Total:			17	01	11	29	21.5	300	630	930


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III B. Tech. – I Semester

Sl. No.	Course Code	Course Title	Contact Periods per week				C	Scheme of Examination Max. Marks		
			L	T	P	Total		Int. Marks	Ext. Marks	Total Marks
1.	20BT5HS01	Organizational Behavior	3	-	-	3	3	30	70	100
2.	20BT50501	Computer Networks	3	-	-	3	3	30	70	100
3.	20BT50502	Design and Analysis of Algorithms	3	-	-	3	3	30	70	100
4.	Open Elective-1		3	-	-	3	3	30	70	100
5.	Professional Elective-1		3	-	-	3	3	30	70	100
	20BT51204	Linux Programming								
	20BT43101	Artificial Intelligence								
	20BT50503	Advanced Computer Architecture								
	20BT50504	Cyber Security								
	20BT50505	Software Project Management								
6.	20BT41531	Design and Analysis of Algorithms Lab	-	-	3	3	1.5	30	70	100
7.	20BT50531	Computer Networks Lab	-	-	3	3	1.5	30	70	100
8.	20BT50532	Python for Data Science Lab	-	1	2	3	2	30	70	100
9.	20BT50533	Summer Internship-1	-	-	-	-	1.5	-	100	100
10.	20BT5MC01	Professional Ethics	2	-	-	2	-	30	-	30
Total:			17	01	08	26	21.5	270	660	930

III B. Tech. – II Semester

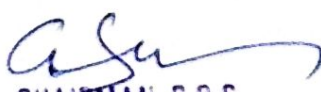
Sl. No.	Course Code	Course Title	Contact Periods per week				C	Scheme of Examination Max. Marks		
			L	T	P	Total		Int. Marks	Ext. Marks	Total Marks
1.	20BT5HS02	Principles of Business Economics and Accountancy	3	-	-	3	3	30	70	100
2.	20BT51202	Web Technologies	3	-	-	3	3	30	70	100
3.	20BT60501	Machine Learning	3	-	-	3	3	30	70	100
4.	Professional Elective-2		3	-	-	3	3	30	70	100
	20BT71201	Mobile Application Development								
	20BT51503	Natural Language Processing								
	20BT51203	Advanced Databases								
	20BT61206	Mobile Computing								
	20BT51506	Software Testing								
5.	Professional Elective-3		3	-	-	3	3	30	70	100
	20BT60502	Compiler Design								
	20BT60503	Soft Computing								
	20BT51201	Data Warehousing and Data Mining								
	20BT60504	Cryptography and Network Security								
	20BT61506	User Interface Design								
6.	Interdisciplinary Elective-1		3	-	-	3	3	30	70	100
	20BT60441	Microprocessors and Interfacing								
	20BT60314	Optimization Techniques								
	20BT60343	Robotics and Automation								
	20BT60406	Image Processing								
7.	20BT51232	Web Technologies Lab	-	-	3	3	1.5	30	70	100
8.	20BT60531	Machine Learning Lab	-	-	3	3	1.5	30	70	100
9.	20BT51551	Internet of Things Lab	-	1	2	3	2	30	70	100
10.	20BT503AC	Foundations of Entrepreneurship	2	-	-	2	-	-	-	-
Total:			20	01	08	29	23	270	630	900

IV B. Tech. – I Semester

Sl. No	Course Code	Course Title	Contact Periods per week				C	Scheme of Examination Max. Marks		
			L	T	P	Total		Int. Marks	Ext. Marks	Total Marks
1.	20BT61201	Cloud Computing	3	-	-	3	3	30	70	100
2.	20BT70501	Computer Vision	3	-	-	3	3	30	70	100
Professional Elective-4										
3.	20BT70502	Full Stack Development	3	-	-	3	3	30	70	100
	20BT70503	Data Science								
	20BT71503	High Performance Computing								
	20BT61241	IoT Architecture and Protocols								
	20BT70504	Augmented Reality and Virtual Reality								
Professional Elective-5										
4.	20BT71206	Game Development	3	-	-	3	3	30	70	100
	20BT71504	Deep Learning								
	20BT71203	Big Data Technologies								
	20BT70505	Blockchain Technologies								
	20BT70506	Service Oriented Architecture and Microservices Architecture								
Interdisciplinary Elective-2										
5.	20BT70401	Embedded Systems	3	-	-	3	3	30	70	100
	20BT70507	Nature Inspired Algorithms								
	20BT70315	Industrial Internet of Things								
	20BT70406	Speech Processing								
6.	20BT61231	Cloud Computing Lab	-	-	3	3	1.5	30	70	100
7.	20BT70531	Computer Vision Lab	-	-	3	3	1.5	30	70	100
8.	20BT70532	R Programming Lab	-	1	2	3	2	30	70	100
9.	20BT70533	Summer Internship-2	-	-	-	-	1.5	-	100	100
10.	20BT705AC	Free and Open Source Software	2	-	-	2	-	-	-	-
Total:			17	01	08	26	21.5	240	660	900

IV B.Tech. – II Semester

S. No	Course Code	Course Title	Contact Periods per Week				C	Scheme of Examination Max. Marks		
			L	T	P	Total		Int. Marks	Ext. Marks	Total Marks
1.	20BT80531	Project Work	-	-	-	-	12	100	100	200
2.	20BT80532	Internship	-	-	-	-	-	-	-	-
Total			-	-	-	-	12	100	100	200


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**LIST OF COURSES FOR
OPEN ELECTIVE-1 AND OPEN ELECTIVE-2**


Course Code	Open Elective -1	Course Code	Open Elective -2
20BT4BS01	Material Science	20BT4HS01	Banking and Insurance
20BT4HS02	Business Communication and Career Skills	20BT4HS03	Cost Accounting and Financial Management
20BT4HS04	Entrepreneurship for Micro, Small and Medium Enterprises	20BT4HS05	Gender and Environment
20BT4HS06	German Language	20BT4HS07	Indian Economy
20BT4HS08	Indian History	20BT4HS09	Life Skills
20BT4HS10	Personality Development	20BT4HS11	Indian Tradition and Culture
20BT4HS12	Women Empowerment	20BT4HS13	Constitution of India
20BT40205	Reliability and Safety Engineering	20BT50106	Disaster Mitigation and Management
20BT40105	Environmental Pollution and Control	20BT50107	Sustainable Engineering
20BT40106	Planning for Sustainable Development	20BT50108	Contract Laws and Regulations
20BT40107	Rural Technology	20BT50310	Global Strategy and Technology
20BT40305	Human Resource Management	20BT50311	Management Science
20BT50506	Ethical Hacking	20BT40502	Cyber Laws and Security
20BT51205	AI in Healthcare	20BT50206	Intellectual Property Rights
20BT51501	Bioinformatics	20BT50406	Green Technologies



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**List of Courses for which Syllabi is Approved by CSE BOS
Under SVEC20 Regulations**

S. No.	Name of the Course
II, III, IV B.Tech.	
1.	Computer Organization
2.	Data Structures
3.	Data Structures Lab
4.	Python Programming
5.	Python Programming Lab
6.	Workshop in Computer Science
7.	Programming through C++ Lab
8.	Database Management Systems
9.	Database Management Systems Lab
10.	Ethical Hacking
11.	Cyber Laws and Security
12.	Computer Networks
13.	Computer Networks Lab
14.	Design and Analysis of Algorithms
15.	Advanced Computer Architecture
16.	Cyber Security
17.	Software Project Management
18.	Python for Data Science Lab
19.	Machine Learning
20.	Machine Learning Lab
21.	Compiler Design
22.	Cryptography and Network Security
23.	Soft Computing
24.	Computer Vision
25.	Computer Vision Lab
26.	Augmented Reality and Virtual Reality
27.	Data Science
28.	Full Stack Development
29.	Blockchain Technologies
30.	Service Oriented Architecture and Microservices Architecture
31.	Nature Inspired Algorithms
32.	R Programming Lab
33.	Free and Open Source Software
34.	Ad Hoc Wireless Sensor Networks
35.	Wireless Sensor Networks


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Regulation-wise List of Courses in which the Content of the Syllabus is changed more than 20% under SVEC19 Regulations

S. No.	Course Code	Name of the course	Percentage of Content changed
1.	19BT10501	Programming for Problem Solving	37.7
2.	19BT10531	Programming for Problem Solving Lab	50
3.	19BT30503	Data Structures	22.2
4.	19BT30531	Data Structures Lab	30.5
5.	19BT30532	Workshop in Computer Science	41.6
6.	19BT40503	Design and Analysis of Algorithms	25.5
7.	19BT40504	Cyber Laws and Security	77.7
8.	19BT40531	Computer Networks Lab	100
9.	19BT40532	Database Management Systems Lab	41
10.	19BT50505	Ethical Hacking	55.5
11.	19BT1AC01	Spoken English	100
12.	19BT1BS02	Biology for Engineers	100
13.	19BT1HS01	Communicative English	20
14.	19BT1BS03	Engineering Physics	40
15.	19BT1BS31	Engineering Physics Lab	30
16.	19BT1BS04	Engineering Chemistry	50
17.	19BT1BS32	Engineering Chemistry Laboratory	25
18.	19BT2BS01	Transformation Techniques and Linear Algebra	20
19.	19BT4BS01	Material Science	100
20.	19BT4HS05	Gender & Environment	100
21.	19BT4HS09	Life Skills	100
22.	19BT4HS11	Professional Ethics	100
23.	19BT4HS12	Women Empowerment	100
24.	19BT40107	Sustainable Engineering	100
25.	19BT10201	Basic Electrical and Electronics Engineering	100
26.	19BT10231	Basic Electrical and Electronics Engineering Lab	100
27.	19BT31202	Software Engineering	20
28.	19BT31232	Software Engineering Lab	100
29.	19BT21501	Object Oriented Programming through Java	30
30.	19BT21531	Object Oriented Programming through Java Lab	70
31.	19BT31532	Operating Systems Lab	30
32.	19BT315AC	Design Thinking	100
33.	19BT50409	Green Technologies	35
34.	19BT60314	Optimization Techniques	26.6

S. No.	Course Code	Name of the course	Percentage of Content changed
35.	19BT51205	Mobile Computing	62.2
36.	19BT51505	Software Testing	25
37.	19BT60503	Cryptography and Network Security	42.2
38.	19BT60505	Soft Computing	40
39.	19BT70401	Embedded Systems	35.5
40.	19BT71501	System Simulation and Modeling	31.1
41.	19BT61201	Cloud Computing	60
42.	19BT71504	High Performance Computing	100
43.	19BT71203	Big Data Technologies	71.1
44.	19BT61231	Cloud Computing Lab	80
45.	19BT51231	Data Warehousing and Data Mining Lab	60

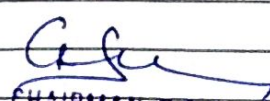
Regulation-wise List of Courses in which the Content of the Syllabus is changed more than 20% under SVEC20 Regulations

S. No.	Course Code	Name of the course	Percentage of Content changed
1.	20BT30503	Python Programming	33.3
2.	20BT30532	Python Programming Lab	59
3.	20BT31231	Software Engineering Lab	20


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**List of New Courses Introduced in B.Tech. CSE
under SVEC19 Regulations**


S. No.	Course Code	Name of the course
1.	19BT1BS02	Biology for Engineers
2.	19BT10201	Basic Electrical and Electronics Engineering
3.	19BT10231	Basic Electrical and Electronics Engineering Lab
4.	19BT1AC01	Spoken English
5.	19BT315AC	Design Thinking
6.	19BT4BS01	Material Science
7.	19BT4HS05	Gender & Environment
8.	19BT4HS09	Life Skills
9.	19BT4HS11	Professional Ethics
10.	19BT4HS12	Women Empowerment
11.	19BT40107	Sustainable Engineering
12.	19BT31232	Software Engineering Lab
13.	19BT40531	Computer Networks Lab
14.	19BT50501	Advanced Computer Architecture
15.	19BT50502	Artificial Intelligence
16.	19BT50503	Cyber Security
17.	19BT50342	Robotics and Automation
18.	19BT70405	Speech Processing
19.	19BT5MC01	Universal Human Values
20.	19BT6HS02	Organizational Behavior
21.	19BT60502	Machine Learning
22.	19BT60531	Machine Learning Lab
23.	19BT51203	Advanced Databases
24.	19BT51502	Natural Language Processing
25.	19BT61503	Parallel and Distributed Systems
26.	19BT60504	Full Stack Development
27.	19BT60407	Image Processing
28.	19BT60318	Industrial Internet of Things
29.	19BT61531	Internet of Things Lab
30.	19BT503AC	Foundations of Entrepreneurship
31.	19BT51209	IoT Architecture and Protocols
32.	19BT70501	Augmented Reality and Virtual Reality
33.	19BT70502	Data Science
34.	19BT61506	User Interface Design
35.	19BT71503	Deep Learning
36.	19BT70503	Blockchain Technologies
37.	19BT705AC	Free and Open Source Software


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S. No.	Course Code	Name of the course
Minor Degree in Artificial Intelligence and Machine Learning		
38.	19BT50507	Python for Data Science
39.	19BT50534	Python for Data Science Lab
40.	19BT70533	Deep Learning Lab
Honors Degree in Computer Science and Engineering		
41.	19BT50504	Data Visualization
42.	19BT50506	Feature Engineering for Machine Learning
43.	19BT50533	Data Visualization Lab
44.	19BT60506	Computer Vision
45.	19BT60507	Nature Inspired Algorithms
46.	19BT60533	Computer Vision Lab
47.	19BT70504	Applied Text Analytics
48.	19BT70532	Applied Text Analytics Lab

**List of New Courses Introduced in B.Tech. CSE
under SVEC20 Regulations**

S. No.	Course Code	Name of the course
1.	20BT30534	Programming through C++ Lab
2.	20BT50505	Software Project Management
3.	20BT41531	Design and Analysis of Algorithms Lab
4.	20BT50532	Python for Data Science Lab
5.	20BT5MC01	Professional Ethics
6.	20BT70501	Computer Vision
7.	20BT70531	Computer Vision Lab
8.	20BT71206	Game Development
9.	20BT70506	Service Oriented Architecture and Microservices Architecture
10.	20BT70507	Nature Inspired Algorithms
11.	20BT70532	R Programming Lab
12.	20BT40305	Human Resource Management


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