SREE VIDYANIKETHAN Engineering College

SREE VIDYANIKETHAN ENGINEERING COLLEGE

(AUTONOMOUS)

SREE SAINATH NAGAR, A. RANGAMPET-517102

Agenda for 13th Meeting of Board of Studies for B. Tech. (Computer Science and Systems Engineering) on 10.07.2021 at 10:30 AM

- 1. Action taken report on minutes/resolutions of 12th BOS meeting.
- 2. Report on implementation of Autonomy with respect to syllabi & academic regulations for II-B.Tech (under SVEC19) and I B.Tech (under SVEC-20 regulations).
- 3. (Course Structure, Syllabi with Course Objectives, Course Outcomes, for the Courses of III & IV B.Tech including Minor & Honors Degrees (Under SVEC-19).)
- 4. (Course Structure, Syllabi with Course Objectives, Course Outcomes, for the Courses of II, III & IV B.Tech (Under SVEC-20) and Course structure of Minor & Honors (Degrees (Under SVEC-20).)
- 5. Regulation-wise, list of courses in which the content of the syllabus is changed more than 20%.
- 6. List of new courses introduced in SVEC-19 and SVEC-20.
- 7. Panel of Examiners for Question paper setting.
- 8. Substitute Courses.
- 9. Amendments to B. Tech academic regulations under SVEC-19 and SVEC-20 Regulations.
- 10. Appraisal on research, teaching, extension and other academic activities, achievements of the Department.
- 11. Any other item.

Dr. P.Dhana Lakshmi

Chairperson, BOS (CSSE)



SREE VIDYANIKETHAN ENGINEERING COLLEGE (AUTONOMOUS)

YANIKETHAN

Engineering College
(Autonomous)

SreeSainath Nagar, Tirupati - 517102

Department of Computer Science and Systems Engineering

13th Board of Studies Meeting held on 10-07-2021

13th Board of Studies Meeting of the department of CSSE was held on 10-07-2021 at 10:30AM in Zoom Platform.

MEMBERS PRESENT:

S.No	Name	Designation	Phone Numbers	Mail IDs
1	Dr.P.Dhana Lakshmi Associate Professor Dept. of CSSE, SVEC	Chairperson	9440101946	bos_csse@vidyanikethan.edu
2	Dr.S.VASUNDARA Professor, Dept. of CSE JNTUA, College of Engineering, JNTU Anantapur, Ananthapuramu- 515002 Extern Memb Nomina by Vic Chance JNTU		9440505837	vasundaras.cse@jntua.ac.in
3	Dr. B.K. TRIPATHY Senior Professor & Dean, School of Computing Science and Engineering, VIT University, Vellore-632014, Tamil Nadu	External Member Nominated by Vice Chancellor, JNTUA	09489343018	tripathybk@rediffmail.com
4	Dr. P. VARALAKSHMI Associate Professor of Computer Technology, Madras Institute of Technology, MIT Road, Radha Nagar,Chromepet, Chennai – 600044	External Member Nominated by Vice Chancellor, JNTUA	9444485594	varanip@gmail.com, varanip@annauniv.edu
5	Mr. V.K. SATHYAMOORTHY CHELLACHAMY Project Manager, Motion Control, Siemens Technology and Services Pvt.Ltd.43, Valakani Drive, Doddathoguru, Hosur Road, Electronic City Phase1, Bengaluru-560100	Industry	08971129000	sathyamoorthy.vkc@gmail.com

S.No	Name	Designation	Phone Numbers	Mail IDs
6	Mr. PAVAN YARA Vice President Technology, First Walkin Technologies #736 4th Floor, Gupta House, 7th Cross Koramangala, Bengaluru-560034 Karnataka	Alumni	8971100449	yarapavan@gmail.com
7	Prof. C. Madhusudhana Rao Professor &HoD Dept. of CSSE, SVEC	Internal Member	9959990001	hod_csse@vidyanikethan.edu
8	Prof.A.Balasubramani Professor Dept. of CSSE, SVEC	Internal Member	9440379324	balasubramani.a@vidyanikethan.edu
9	Dr.C.Sushama Associate Professor Dept. of CSSE, SVEC	Internal Member	9848307199	sushama.c@vidyanikethan.edu
10	Mr. A. Chandra Assistant Professor Dept. of CSSE, SVEC	Internal Member	7799666819	chandra.adhimulam@vidyanikethan.edu
11	Mr.M.Ramu Assistant Professor Dept. of CSSE, SVEC	Internal Member	7780680227	ramu.m@vidyanikethan.edu
12	Mr.S.ShivaPraksh Assistant Professor Dept. of CSSE, SVEC	Internal Member	9440656515	shivaprakash.s@vidyanikethan.edu
13	Dr.E.Sophiya Assistant Professor Dept. of CSSE, SVEC	Internal Member	9566903378	Sophiya.e@vidyanikethan.edu

The external members Mr. V. K. SATHYAMOORTHY CHELLACHAMY, Dr. B.K. TRIPATHY and internal member Mr. A. Chandra could not attend the meeting.

13th Meeting of Board of Studies of Computer Science and Systems Engineering (CSSE) was conducted **through online video conferencing** using ZOOM platform. The screenshots taken during the meeting are shown below



Minutes:

 Action Taken Report on minutes of 12th BOS meeting held on 09th January 2021

The Chairperson BOS appraised the members the action taken report on the minutes/ resolutions of 12th BOS meeting held on 09th January 2021. After deliberations the members ratified the report.

2. Report on implementation of Autonomy

The Chairperson BOS presented a report on implementation of autonomy pertaining to

syllabi & academic regulations for II B.Tech(under SVEC19) and I B.Tech (under SVEC-20) regulations to the members. The feedback of students and faculty on the courses of IIB.Tech.-CSSE (under SVEC19) and I B.Tech.-CSSE are apprised.

3. Course Structure, Syllabi with Course Objectives, Course Outcomes, for the Courses of III & IV B.Tech including Minor & Honors Degrees (Under SVEC-19).

The chairperson BOS presented the Course Structure of III & IV B.Tech (CSSE), Minor Degree in Cyber Security, Honors Degree in Cyber Security under SVEC-19 Regulations. The draft syllabi of courses prepared by CSSE department was presented for discussion along with Course Objectives, Course Outcomes for the Courses of III & IV B.Tech (CSSE) Program. The Chairperson BOS appraised the members with the procedure followed in articulation of CEOs, COs and mapping of COs with POs & PSOs. After deliberations and discussions the board members suggested modifications and then approved the course structure and syllabi of III & IV B.Tech (CSSE), Minor Degree in Cyber Security under SVEC-19 Regulations.

The following suggestions are given by the board members on the syllabi and course structure proposed by the department:

In CSSE Course structure:

- Recommended to rename the open Elective-3 as Inter Disciplinary Elective-1
- Recommended to introduce Software Architecture , Design Patterns in SVEC-19 Course structures
- 3. Suggested to move the course soft computing course to Data science Track.
- Introduce Zulia open source software in Machine Learning or in Data Mining Lab.
- Recommended to rename the course Information security privacy as Information Security.

The course structure of III & IV B. Tech CSSE, Minor Degree in Cyber Security and Honor Degree in Cyber Security under SVEC-19 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 CSSE, Minor Degree in Cyber Security and Honor Degree in Cyber Security prepared by CSSE 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 Chairperson BOS to adapt the improvements suggested and submit to the Chairman (Academic council) for further processing.

 Course Structure, Syllabi with Course Objectives, Course Outcomes, for the Courses of II, III & IV B.Tech (Under SVEC-20) Course structure of Minor & Honors Degrees (Under SVEC-20) Course structure.

The chairperson BOS presented the Course Structure, syllabi with Course Objectives, Course Outcomes for the Courses of II, III& IV B.Tech (CSSE) Program prepared by the CSSE department. The Chairperson BOS appraised the members with the procedure followed in articulation of CEOs, COs and mapping of COs with POs & PSOs. The members suggested modifications and then approved the course structures, syllabus of II, III & IV B.Tech (CSSE) after thorough discussion.

The following suggestions are given by the board members on the syllabi and course structure proposed by the department:

In CSSE Course structure

- Recommended to introduce Artificial Intelligence in SVEC-20 Course structure.
- Recommended to divide the subject Numerical Methods and Probability statistics into two separate subjects as Numerical Methods and Probability statistics.
- 3. Suggested to change the title for the skill oriented course Workshop in computer systems engineering as Open source tools lab.

The course structure of II, III & IV B. Tech CSSE under SVEC-20 regulations was approved subject to the modifications that may arise due to suggestions made by the board (Appendix C).

The syllabi of II, III & IV B. Tech CSSE under SVEC-20 regulations was approved subject to the modifications that may arise due to suggestions made by the board (Appendix D).

The chairperson BOS also presented the syllabi with Course Objectives, Course Outcomes for the Course Internet of Things Lab prepared exclusively for the department . The Chairperson BOS appraised the members with the procedure followed in articulation of CEOs, COs and mapping of COs with POs & PSOs and they agreed for the same.

It is resolved to authorize the BOS chairperson to adopt improvements suggested by the board members and submit to the chairman (Academic Council) for further processing.

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

Regulation-wise, list of courses in which the content of the syllabus is changed more than 20% was appraised to the members and they agreed for the same.

- List of new courses introduced in SVEC-19 and SVEC-20
 List of new courses introduced in SVEC-19 and SVEC-20 were apprised to the members and they appreciated for including industry demand oriented courses in curriculum.
- Panel of Examiners for Question paper setting for III & IV B.Tech courses
 of CSSE Program(Under SVEC-19) ,II,III & IV B.Tech courses of CSSE
 Program (Under SVEC-20)
 The board authorizes the Chairperson, BoS to prepare and submit the model

question papers and panel of examiners for question paper setting for III & IV B.Tech courses of CSSE Program (UnderSVEC-19),II,III & IVB.Tech courses of CSSE Program(Under SVEC-20) theory courses as and when requested by the Chairman, Academic Council or Chief Controller of Exams.

8. Substitute courses

The board authorized Head of the Department and BOS chairperson to identify substitute courses for students who rejoin B.Tech program under other regulations and submit to the Chairman (Academic council) for further processing.

 Amendments to B. Tech academic regulations under SVEC-19 and SVEC-20 regulations.

The BOS Chairperson presented the amendments proposed to the SVEC-19 and SVEC-20 Academic Regulations of B. Tech Board members ratified the same after discussions.

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

The BoS Chairperson apprised the board about the research, teaching, extension and other academic activities, achievements of the Department. The members have appreciated the efforts of the department and suggested to continue the same.

11. Any other item:

The Board members have suggested to the faculty for extensive use of ICT tools for improving teaching and learning process.

Meeting concluded with thanks to the Chair.

Chairperson BOS, CSSE Ur. P. DHANA LAKSHMI

ASSOCIATE PROFESSOR,
Department of C.S.S.E.

SREE VIDYANIKETHAN ENGINEERING COLLEGE
(AUTONOMOUS)
Sree Sainath Nagar, A. RANGAMPET

Sree Sainath Nagar, A. RANGAMPET Chittoor (Dist.) - 517 102, A.P., INDIA.



SREE VIDYANIKETHAN ENGINEERING COLLEGE (AUTONOMOUS)

SreeSainath Nagar, Tirupati - 517102

Department of Computer Science and Systems Engineering Board of Studies in Computer Science and Systems Engineering (2021-22)

MEMBERS PRESENT:

S.No	Name	Signature
Exteri	nal Members	
1.	Dr.S.VASUNDARA Professor, Dept. of CSE JNTUA, College of Engineering, JNTU Anantapur, Ananthapuramu-515002 Mobile No. 9440505837	
2.	Mail ID.vasundaras.cse@jntua.ac.in Dr. B.K. TRIPATHY Senior Professor & Dean, School of Computing Science and Engineering, VIT University, Vellore-632014, Tamil Nadu Mobile No. 09489343018 Email ID.tripathybk@rediffmail.com	
3.	Dr. P. VARALAKSHMI Associate Professor of Computer Technology, Madras Institute of Technology, MIT Road, Radha Nagar, Chromepet, Chennai – 600044 Mobile No. 9444485594 Email ID.varanip@gmail.com, varanip@annauniv.edu	Road
Indus	trial Member	
4.	Mr. V.K. SATHYAMOORTHY CHELLACHAMY Project Manager, Motion Control, Siemens Technology and Services Pvt.Ltd. 43, Valakani Drive, Doddathoguru, Hosur Road, Electronic City Phase-1, Bengaluru-560100 Mobile No. 08971129000 Email ID. sathyamoorthy.vkc@gmail.com	
Alumi	ni	
5.	Mr. PAVAN YARA Vice President Technology, First Walkin Technologies #736 4th Floor, Gupta House, 7th Cross Koramangala, Bengaluru-560034 Karnataka	Pavanyara
Inter	nal Members	
6.	Dr.P.Dhana Lakshmi Associate Professor& BOSChairperson Dept. of CSSE, SVEC Mobile No. 9440101946 Email ID. bos_csse@vidyanikethan.edu	Shava

Prof. C.MadhusudhanaRao Professor &HoD	Signature
Professor & HoD	
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	Dr. A. Balasubramani Professor, Dept. of CSSE, SVEC Mobile No. 9440379324 Email ID. balasubramani.a@vidyanikethan.edu Dr.C.Sushama Associate Professor, Dept. of CSSE, SVEC Mobile No. 9848307199 Email ID. sushama.c@vidyanikethan.edu Mr. A. Chandra Assistant Professor Dept. of CSSE, SVEC Mobile No. 7799666819 Email ID. chandra.adhimulam@vidyanikethan.edu Mr.S.ShivaPraksh Assistant Professor Dept. of CSSE, SVEC Mobile No. 9440656515 Email ID. shivaprakash.s@vidyanikethan.edu Mr.M.Ramu Assistant Professor Dept. of CSSE, SVEC Mobile No. 7780680227 Email ID. ramu.m@vidyanikethan.edu Dr. E. Sophiya Assistant Professor Dept. of CSSE, SVEC Mobile No. 9566903378

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

Approved Course Structure

Program: B. Tech.- Computer Science and Systems Engineering

Regulations: SVEC-19

SVEC-19 CURRICULUM

Course Structure for B.Tech Program (Effective from the Academic year 2019-20 onwards)

COMPUTER SCIENCE AND SYSTEMS ENGINEERING

Mandatory Induction Program	03 weeks duration
	Physical activity
	Creative Arts
	Universal Human Values
Induction program offered	Literary
before commencement of the I-Semester course work	Proficiency Modules
1 Semester course work	Lectures by Eminent People
	Visits to local Areas
	Familiarization to Department/Branch and Innovations

COURSE STRUCTURE COMPUTER SCIENCE AND SYSTEMS ENGINEERING I B.Tech.-I Semester

SI.	Course Code	Course Title	Co		ct Pe	riods ek		Scheme of Examination Max. Marks			
No.			L	т	Р	Total	С	Int. Marks	Ext. Marks	Total Marks	
1	19BT1BS01	Differential Equations and Multivariable Calculus	3	1	•	4	4	40	60	100	
2	19BT1BS04	Engineering Chemistry	3	-		3	3	40	60	100	
3	19BT1HS01	Communicative English	3	-	-	3	3	40	60	100	
4	19BT10501	Programming for Problem Solving	3	1		4	4	40	60	100	
5	19BT1BS32	Engineering Chemistry Lab	-	-	2	2	1	50	50	100	
6	19BT1HS31	Communicative English Lab	-	-	2	2	1	50	50	100	
7	19BT10331	Computer Aided Engineering Drawing	-	1	2	3	2	50	50	100	
8	19BT10531	Programming for Problem Solving Lab	-	-	2	2	1	50	50	100	
		Total:	12	3	8	23	19	360	440	800	

I B.Tech. - II Semester

SI.	Course Code	Course Title	Cor		Perio veek	ods per		Scheme of Examination Max. Marks				
No.			L	Т	P	Total	С	Int. Marks	Ext. Marks	Total Marks		
1	19BT2BS01	Transformation Techniques and Linear Algebra	3	1	-	4	4	40	60	100		
2	19BT1BS02	Biology for Engineers	2	-	-	2	2	40	60	100		
3	19BT1BS03	Engineering Physics	3	-	-	3	3	40	60	100		
4	19BT10201	Basic Electrical and Electronics Engineering	3	-	-	3	3	40	60	100		
5	19BT20501	Digital Logic Design	3	-	-	3	3	40	60	100		
6	19BT21501	Object Oriented Programming through Java	3	-	-	3	3	40	60	100		
7	19BT1BS31	Engineering Physics Lab	-	-	2	2	1	50	50	100		
8	19BT10231	Basic Electrical and Electronics Engineering Lab	-	-	2	2	1	50	50	100		
9	19BT20331	Engineering Workshop	-	-	2	2	1	50	50	100		
10	19BT21531	Object Oriented Programming through Java Lab	-	1	2	3	2	50	50	100		
		Total:	17	2	8	27	23	440	560	1000		
11	19BT1AC01	Spoken English	2	-	-	2	-	_	-	_		

II B.Tech. - I Semester

SI.	Course Code	Course Title	Con		Perio reek	ods per	C	Scheme of Examination Max. Marks			
No.		Coulse Title	L	т	Р	Total		Int. Marks	Ext. Marks	Total Marks	
1	19BT3BS01	Numerical Methods, Probability and Statistics	3	1	-	4	4	40	60	100	
2	19BT30502	Computer Organization	3	-	-	3	3	40	60	100	
3	19BT31201	Discrete Mathematical Structures	3	-	-	3	3	40	60	100	
4	19BT31501	Data Structures and Algorithms	3	1	-	4	4	40	60	100	
5	19BT31502	Operating Systems	3	-	-	3	3	40	60	100	
6	19BT31503	System Programming	3	-	-	3	3	40	60	100	
7	19BT31531	Data Structures and Algorithms Lab	-	-	2	2	1	50	50	100	
8	19BT31532	Operating Systems Lab	-	-	2	2	1	50	50	100	
9	19BT31533	Workshop in Computer Science and Systems Engineering	-	-	2	2	1	50	50	100	
	Tota	al:	18	2	6	26	23	390	510	900	
10	19BT315AC	Design Thinking	2	-	-	2	-	-		-	

II B.Tech. - II Semester

SI.	Course Code	de Course Title	•	onta per	t Per	A STATE OF THE PARTY OF THE PAR		Scheme of Examination Max. Marks			
No.	Course Code		L	Т	Р	Total	С	Int. Marks	Ext. Marks	Total Marks	
1	19BT40502	Database Management Systems	3	1	-	4	4	40	60	100	
2	19BT40503	Design and Analysis of algorithms	3	-	-	3	3	40	60	100	
3	19BT31202	Software Engineering	3	-	-	3	3	40	60	100	
4	19BT41501	Theory of Computation	3	-	-	3	3	40	60	100	
5	Open	Elective-2	3	-	-	3	3	40	60	100	
6	19BT3HS31	Soft Skills Lab	-	-	2	2	1	50	50	100	
7	19BT40532	Database Management Systems Lab		-	2	2	1	50	50	100	
8	19BT31232	Software Engineering Lab	-	-	2	2	1	50	50	100	
9	19BT41531	Design and Analysis of Algorithms Lab	-	-	2	2	1	50	50	100	
		Total:	15	1	8	24	20	400	500	900	
10	19BT3MC01	Environmental Science	2	-	-	2		40		40	

III B. Tech. - I Semester

SI.	Course Code	Course Title		ntac		riods			e of Exam lax. Mark	
No.			L T		P	P Total		Int. Marks	Ext. Marks	Total Marks
1	19BT40501	Computer Networks	3	-	-	3	3	40	60	100
2	19BT50502	Artificial Intelligence	3	-	-	3	3	40	60	100
3	19BT51202	Web Technologies	3	-	-	3	3	40	60	100
	Profess	ional Elective-1								
	19BT51501	Modern Cryptography								
	19BT51502	Natural Language Processing								
4	19BT51503	Parallel Computer Architectures	3	-	-	3	3	40	60	100
	19BT51504	Performance Evaluation of Computer Systems								
	19BT51505	Software Testing	Software Testing							
5	C	pen Elective-1	3	-	-	3	3	40	60	100
	Inter Disciplinary Elective-1									
	19BT60314	Optimization Techniques								
6	19BT60402	Micro Controllers	3	-	-	3	3	40	60	100
	19BT60407	Image Processing								. 10
	19BT51208	IoT Architecture and Protocols								
7	19BT40531	Computer Networks Lab	-	-	2	2	1	50	50	100
8	19BT51232	Web Technologies Lab	-	-	2	2	1	50	50	100
9	19BT51531	Socially Relevant Project-1	-			-	1	50	50	100
		Total:	18	-	4	22	21	390	510	900
10	19BT5MC01	Universal Human Values	2	-	-	2	-	40		40

III B. Tech. - II Semester

SI.		Course Title	C		ct Pe	eriods ek			e of Exam Max. Mark	
No.	Course Code	Course Title	L	т	Р	Total	С	Int. Marks	Ext. Marks	Total Marks
1	19BT6HS02	Organizational Behaviour	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
	Profe	ssional Elective-2								
	19BT60505	Soft Computing								
4	19BT61501	Data Visualization Techniques								
7	19BT61502	Information Security	3	-	-	3	3	40	60	100
	19BT61503	Parallel and Distributed Systems								
	19BT61504	Systems Engineering								
	Professional Elective-3									
	19BT51203	Advanced Databases								
5	19BT71203	Big Data Technologies	,			_	_	40	60	100
	19BT60541	Ad Hoc and Wireless Sensor networks	3		-	3	3	40	00	100
	19BT61505	Systems Reliability								
	19BT61506	User Interface Design								
	Inter Disc	ciplinary Elective-2				-1				
	19BT60318	Industrial Internet of Things								
6	19BT70412	Pattern Recognition	3	-	-	3	3	40	60	100
	19BT70401	Embedded Systems								
	19BT61041	Sensors and Applications								السالة
7	19BT60531	Machine Learning Lab	-	-	2	2	1	50	50	100
8	19BT61531	Internet of Things Lab	-	1	2	3	2	50	50	100
9	19BT61532	Socially Relevant Project-2	-	-	-	-	1	50	50	100
		Total:	18	1	4	23	22	390	510	900
10	19BT503AC	Foundations of Entrepreneurship	2	-	-	2	7			

IV B. Tech.-I Semester

SI.	Course Code	Course Title	Co		t Pe	eriods ek		Ex	cheme d aminati ax. Marl	on
NO.			L	Т	P	Total	С	Int. Marks	Ext. Marks	Total Marks
1	19BT6HS01	Principles of Business Economics and Accountancy	3	-	-	3	3	40	60	100
2	19BT51201	Data Warehousing and Data Mining	3	-	-	3	3	40	60	100
3	19BT71501	System Simulation and Modeling	3	-	-	3	3	40	60	100
	Professional Elective-4									
	19BT50503	Cyber Security								
4	19BT71205	Decision Support and Intelligent Systems	3	-	-	3	3	40	60	100
	19BT71201	Data Analytics								100
	19BT61201	Cloud Computing								
	19BT71502	Computational Statistics								
	Professional Elective-5									
	19BT70503	Blockchain Technologies							60	
5	19BT70501	Augmented Reality and Virtual Reality	3		-	3	3	40		100
3	19BT70502	Data Science			-		3	40		100
	19BT71503	Deep Learning								
	19BT71504	High Performance Computing								
6	19BT7MOOC	моос	-	-	-	-	3	-	100	100
7	19BT51231	Data Warehousing and Data Mining Lab	-	-	2	2	1	50	50	100
8	19BT71531	System Simulation and Modeling Lab	-	-	2	2	1	50	50	100
9	19BT71532	Internship	-	-	-	-	2		100	100
		Total:	15	-	4	19	22	300	600	900
10	19BT715AC	Kernel Programming	2	-	-	2	-	-	-	-

IV B.Tech. - II Semester

SI. No.	Course Code	Course Title	Cor		Perio	ods per		Scheme of Examinatio Max. Marks			
	Course Code	Course Title	L	т	Р	Total	С	Int. Marks	Ext. Marks	Total Marks	
1	19BT81531	Project Work	-	-	-	-	10	100	100	200	
		Total:	-	-	-	-	10	100	100	200	

LIST OF COURSES FOR OPEN ELECTIVE-1 & OPEN ELECTIVE-2

Course Code	Open Elective -1	Course Code	Open Elective -2
19BT4BS01	Material Science	19BT4HS01	Banking and Insurance
19BT4HS02	Business Communication and Career Skills	19BT4HS03	Cost Accounting and Financial Management
19BT4HS04	Entrepreneurship for Micro, Small and Medium Enterprises	19BT4HS05	Gender and Environment
19BT4HS06	German Language	19BT4HS07	Indian Economy
19BT4HS08	Indian History	19BT4HS09	Life Skills
19BT4HS10	Personality Development	19BT4HS11	Professional Ethics
19BT4HS12	Women Empowerment	19BT4HS13	Indian Tradition and Culture
19BT4HS14	Constitution of India	19BT40106	Disaster Mitigation and Management
19BT40205	Reliability and Safety Engineering	19BT40107	Sustainable Engineering
19BT50107	Environmental Pollution and Control	19BT40108	Contract Laws and Regulations
19BT50108	Planning for Sustainable Development	19BT40306	Global Strategy and Technology
19BT50109	Rural Technology	19BT40307	Management Science
19BT50505	Ethical Hacking	19BT40504	Cyber Laws and Security
19BT51207	AI in Healthcare	19BT50208	Intellectual Property Rights
19BT51506	Bioinformatics	19BT50409	Green Technologies

Honors Degree: Honors degree is awarded to the students who has undergone additional learning for 18 credits in the same discipline.

HONORS DEGREE IN COMPUTER SCIENCE AND SYSTEMS ENGINEERING

Semester	Course Code	Course Title	Co	ntaci per	Per weel	Achaba Lagran		Scheme of Examination Max. Marks		
Semester	Course Code	Course Title	L	т	Р	Total	С	Int. Marks	60 60 60 60 60 60 60 60 60	Total Marks
III B.Tech.	19BT51507	Digital Forensics	3	-	-	3	3	40	60	100
I Semester (2 Theory +	19BT51508	Malware and Risk Analysis	3	-	-	3	3	40	60	100
1 Lab)	19BT51532	Digital ForensicsLab	-	-	2	2	1	50	50	100
	19BT61507	Cloud security	3	-	-	3	3	40	60	100
III B.Tech. II Semester	19BT61508	Network Anomaly Detection Systems	3	-		3	3	40	60	100
(2 Theory + 1 Lab)	19BT61509	IoT Security	3	-	-	3	3	40	60	100
	19BT61533	Network Anomaly Detection SystemsLab	-	-	2	2	1	50	50	100
IV B.Tech.	19BT71505	Software Security	3	-	-	3	3	40	60	100
I Semester (1 Theory +	19BT71506	Database and Web Security	3	-	-	3	3	40	60	100
1 Lab)	19BT71533	Database and Web Security Lab	-	-	2	2	1	50	50	100

Note: If any student has chosen a course from the above list in their regular curriculum then, he/she is not eligible to opt the same course/s for the Honors degree. It is the responsibility of the student to acquire/complete prerequisite before taking the respective course.

MINORS IN CYBER SECURITY

Semester	Course Code	Course Title	Co	ntact	Peri week	TENERS OF THE PARTY OF THE PART		Scheme of Examination Max. Marks			
examester .	course code	course Title	L	Т	Р	Total	С	Int. Marks	Max. Mark Ext.	Total Marks	
	19BT40501	Computer Networks	3	-	-	3	3	40	60	100	
III B.Tech. I Semester	19BT60541	Ad hoc wireless Networks	3	-	-	3	3	40	60	100	
(2 Theory + 1 Lab)	19BT31502	Operating Systems	3	-	-	3	3	40	60	100	
	19BT40531	Computer Networks Lab	-	-	2	2	1	50	50	100	
	19BT61201	Cloud Computing	3	-	-	3	3	40	60	100	
III B.Tech. II Semester	19BT51501	Modern Cryptography	3	-	-	3	3	40	60	100	
(2 Theory + 1 Lab)	19BT50503	Cyber security	3	-	-	3	3	40	60	100	
1 Luby	19BT61534	Modern Cryptography Lab		-	2	2	1	50	50	100	
IV B.Tech.	19BT61509	IoT Security	3	-	-	3	3	40	60	100	
I Semester (1 Theory +	19BT61502	Information Security	3	-	-	3	3	40	60	100	
1 Lab)	19BT71534	Information Security Lab	-	-	2	2	1	50	50	100	

Chairperson, BOS (CSSE)

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Approved Course Structure

Program: B. Tech.- Computer Science and Systems Engineering

Regulations: SVEC-20

Mandatory Induction Program	03 weeks duration
	Physical activity
	Creative Arts
	Universal Human Values
Induction program offered	Literary
before commencement of the I-Semester course work	Proficiency Modules
1-Semester course work	Lectures by Eminent People
	Visits to local Areas
	Familiarization to Department/Branch and Innovations

I B. Tech. - I Semester

SI.	Course Code	Course Title	Co		Perio week		С	Scheme of Examination Max. Marks		
No.			L	т	Р	Total		Int. Marks	Ext. Marks	Total Marks
1	20BT1BS01	Differential Equations and Multivariable Calculus	3	-	-	3	3	30	70	100
2	20BT1BS02	Engineering Chemistry	3	-	-	3	3	30	70	100
3	20BT1HS01	Communicative English	3	-	-	3	3	30	70	100
4	20BT11201	Programming for Problem Solving	3	-	-	3	3	30	70	100
5	20BT10201	Basic Electrical and Electronics Engineering	3	1	¥	3	3	30	70	100
6	20BT1BS31	Engineering Chemistry Lab	-	-	3	3	1.5	30	70	100
7	20BT1HS31	Communicative English Lab	-	-	3	3	1.5	30	70	100
8	20BT11231	Programming for Problem Solving Lab		-	3	3	1.5	30	70	100
9	20BT1MC01	Universal Human Values (Mandatory Course)	2	-	-	2	-	30	16-	30
		Total:	17	-	09	26	19.5	270	560	830

I B. Tech. - II Semester

SI,	Course Code	Course Title	Co		Perio week		С	Scheme of Examination Max. Marks		
No.			L	Т	P	Total		Int. Marks	Ext. Marks	Total Marks
1	20BT2BS01	Transformation Techniques and Linear Algebra	3	-	-	3	3	30	70	100
2	20BT1BS03	Engineering Physics	3	-	1-	3	3	30	70	100
3	20BT20501	Digital Logic Design	3	-	-	3	3	30	70	100
4	20BT21501	Object Oriented Programming through Java	3	-	_	3	3	30	70	100
5	20BT10331	Computer Aided Engineering Drawing	-	1	4	5	3	30	70	100
6	20BT1BS32	Engineering Physics Lab	-	-	3	3	1.5	30	70	100
7	20BT10332	Engineering Workshop	-	-	3	3	1.5	30	70	100
8	20BT21531	Object Oriented Programming through Java Lab	-	-	3	3	1.5	30	70	100
9	20BT1HSAC	Spoken English (Audit Course)	2	4-	-	2	-	-	-	-
		Total:	14	1	13	28	19.5	240	560	800

II B.Tech I-Semester

s.	Course Code	Course Title	Con		Perio Week	ods per	Credits (c)	Scheme of Examination Max. Marks			
No.			L	т	Р	Total		Int. Marks	Ext. Marks	Total Marks	
1.	20BT3BS01	Numerical Methods, Probability and Statistics	3	-	-	3	3	30	70	100	
2.	20BT30501	Computer Organization	3	-	-	3	3	30	70	100	
3.	20BT31201	Software Engineering	3	-	-	3	3	30	70	100	
4.	20BT22901	Data Structures and Algorithms	3	-	-	3	3	30	70	100	
5.	20BT31501	Operating Systems	3	-	-	3	3	30	70	100	
6.	20BT31231	Software Engineering Lab	-	-	3	3	1.5	30	70	100	
7.	20BT22931	Data Structures and Algorithms Lab	-	-	3	3	1.5	30	70	100	
8.	20BT31531	Operating Systems Lab	-	-	3	3	1.5	30	70	100	
9.	20BT31232	Programming with Python Lab	-	1	2	3	2	30	70	100	
		Total	15	1	11	27	21.5	270	630	900	
10.	20BT315AC	Design Thinking	2	-	-	2	-	-	-	-	

II B.Tech II-Semester

s.	Course	Course Title	C		ct Pe r Wee	riods ek	Credits	Scheme of Examination Max. Marks			
No.	Code		L	Т	Р	Total	(C)	Int. Marks	Ext. Marks	Total Marks	
1.	20BT40501	Database Management Systems	3	-	-	3	3	30	70	100	
2.	20BT50502	Design and Analysis of algorithms	3	-	-	3	3	30	70	100	
3.	20BT12901	Discrete Mathematical Structures	3	-	-	3	3	30	70	100	
4.	20BT41501	Theory of Computation	3	-	=	3	3	30	70	100	
5.	Open Electiv	e-2	3	-		3	3	30	70	100	
6.	20BT40531	Database Management Systems Lab	-	-	3	3	1.5	30	70	100	
7.	20BT41531	Design and Analysis of Algorithms Lab	-	-	3	3	1.5	30	70	100	
8.	20BT41532	Workshop in Open source tools	-	-	3	3	1.5	30	70	100	
9.	20BT3HS31	Soft Skills Lab	-	1	2	3	2	30	70	100	
10.	20BT4N201	NCC/NSS Activities	-	-	-	-	-	-	-	-	
		Total	15	1	11	27	21.5	270	630	900	
11.	20BT3MC01	Environmental Science	2	-	-	2	-	30	- 1-	30	

III B.Tech I-Semester

S. No.	Course Code	rse Code Course Title	Co		t Pe	eriods ek	Credits	Scheme of Examination Max. Marks		
5, No.	Course Code	course ritte	L	Т	Р	Total	(c)	Int. Marks	Ext. Marks	Total Marks
1.	20BT5HS01	Organizational Behaviour	3	-	-	3	3	30	70	100
2.	20BT50501	Computer Networks	3	-	-	3	3	30	70	100
3.	20BT51201	Data Warehousing and Data Mining	3	-	-	3	3	30	70	100
4.	Open Elective	-1	3	-	-	3	3	30	70	100
	Professional	Elective- 1								
	20BT51502	Performance Evaluation of Computer Systems							34.	
5.	20BT51503	Natural Language Processing	3	-	-	3	3	30	70	100
	20BT51504	Modern Cryptography								
	20BT51505	Parallel Computer Architectures								
	20BT51506	Software Testing								H
6.	20BT50531	Computer Networks Lab	-	-	3	3	1.5	30	70	100
7.	20BT51231	Data Warehousing and Data Mining Lab	-	-	3	3	1.5	30	70	100
8.	20BT51531	Linux Programming Lab	-	1	2	3	2	30	70	100
9.	20BT51532	Summer Internship-1	-	-	-	-	1.5	-	100	100
		Total	15	1	8	24	21.5	240	660	900
10.	20BT5MC01	Professional Ethics	2	-	-	2	-	30	-	30

III B.Tech II-Semester

C N-	Course Code	Course Title	Cor		t Peri Weel	ods per	Credits	Scheme of Examination Max. Marks			
S. No.	Course Code	Course litte	L	т	Р	Total	(C)	Int. Marks	Ext. Marks	Total Marks	
1.	20BT5HS02	Principles of Business Economics and Accountancy	3	-	-	3	3	30	70	100	
2.	20BT60501	Machine Learning	3	-	-	3	3	30	70	100	
3.	20BT51202	Web Technologies	3	-	-	3	3	30	70	100	
	Professional E	lective-2									
	20BT61501	Systems Engineering									
	20BT61502	Data Visualization Techniques									
4.	20BT61503	Information Security	3	-	-	3	3	30	70	100	
	20BT61504	Parallel and Distributed Systems							1		
	20BT60503	Soft Computing									
	Professional E	lective-3									
	20BT61505	Systems Reliability						100			
	20BT71203	Big Data Technologies									
5.	20BT60541	Ad Hoc and Wireless Sensor networks	3	-	-	3	3	30	70	100	
	20BT51203	Advanced Databases									
	20BT61506	User Interface Design									
	Inter disciplin	ary Elective-1									
	20BT40201	Control Systems									
	20BT60314	Optimization Techniques	_						70	100	
6.	20BT61241	IoT Architecture and Protocols	3	-	-	3	3	30	70	100	
	20BT61041	Sensors and Applications									
7.	20BT60531	Machine Learning Lab	-	12	3	3	1.5	30	70	100	
8.	20BT51232	Web Technologies Lab		-	3	3	1.5	30	70	100	
9.	20BT61531	Handheld computing: design and Application Development Lab	-	1	2	3	2	30	70	100	
		Total	18	1	8	27	23	270	630	900	
10.	20BT503AC	Foundations of Entrepreneurship	2	-	-	2	-	-	-	-	

IV B.Tech I-Semester

S. No.	Course Code	Course Title	Con		erio eek	ds per	Credits	Scheme of Examination Max. Marks			
3. NO.	course code		L	Т	P	Total	(C)	Int. Marks	Ext. Marks	Total Marks	
1.	20BT71202	Data Analytics	3	-	-	3	3	30	70	100	
2.	20BT71501	System Simulation and Modeling	3	-	-	3	3	30	70	100	
	Professional E	lective-4									
	20BT71207	Decision Support and Intelligent Systems									
	20BT43101	Artificial Intelligence							Mile		
3.	20BT70505	Blockchain Technologies	3	-	-	3	3	30	70	100	
	20BT61201	Cloud Computing									
	20BT71502	Computational Statistics									
	Professional E	lective-5						1 m			
	20BT70504	Augmented Reality and Virtual Reality									
4.	20BT70503	Data Science	3			3	3	30	70	100	
4.	20BT50504	Cyber Security	٦		-	3	3	30	70	100	
	20BT71503	High Performance Computing									
	20BT71504	Deep Learning								4 4	
5.	Inter disciplina	ary Elective-2									
	20BT70315	Industrial Internet of Things									
	20BT60406	Image Processing	3	-	-	3	3	30	70	100	
	20BT70441	Pattern Recognition									
	20BT70401	Embedded Systems									
6.	20BT71232	Data Analytics Lab	-	-	3	3	1.5	30	70	100	
7.	20BT71531	System Simulation and Modeling Lab	-	-	3	3	1.5	30	70	100	
8.	20BT71532	Data Science using R Lab	-	1	2	3	2	30	70	100	
9.	20BT71533	Summer Internship-2					1.5	-	100	100	
	The second	Total	15	1	8	24	21.5	240	660	900	
10.	20BT715AC	Kernel Programming	2	-	-	2	-	-	-	-	

IV B.Tech II-Semester

S. No.	Course Code	Course Title	Contact Periods per Week				Credits	Scheme of Examination Max. Marks		
			L	Т	Р	Total	(C)	Int. Marks	Ext. Marks	Total Marks
1.	20BT81531	Project Work	-	-	-	-	12	100	100	200
2.	20BT81532	Internship	-	-	-	-	-	-	-	-
		Total	-	-	-	-	12	100	100	200

LIST OF COURSES FOR OPEN ELECTIVE-1 & 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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Department of Computer Science and Systems Engineering

LIST OF NEW COURSES INTRODUCED

Program: B.Tech.- Computer Science and Systems Engineering

Regulations: SVEC-19

S. No.	Course Code	Name of the course
1.	19BT21501	Object Oriented Programming Through Java
2.	19BT21531	Object Oriented Programming Through Java Lab
3.	19BT31501	Data Structures And Algorithms
4.	19BT31503	System Programming
5.	19BT31531	Data Structures And Algorithms Lab
6.	19BT31532	Operating Systems Lab
7.	19BT3 1533	Workshop In Computer Science And Systems Engineering
8.	19BT315AC	Design Thinking
9.	19BT41531	Design And Analysis Of Algorithms Lab
10.	19BT1AC01	Spoken English
11.	19BT1BS02	Biology For Engineers
12.	19BT1HS01	Communicative English
13.	19BT1SS03	Engineering Physics
14.	19BT1BS31	Engineering Physics Lab
15.	19BT1BS04	Engineering Chemistry
16.	19BT1BS32	Engineering Chemistry Lab
17.	19BT2BS01	Transformation Techniques And Linear Algebra
18.	19BT4BS01	Material Science
19.	19BT4HS05	Gender &. Environment

20.	19BT4HS09	Life Skills
21.	19BT4HS11	Professional Ethics
22.	19BT4HS12	Women Empowerment
23.	19BT40107	Sustainable Engineering
24.	19BT10501	Programming For Problem Solving
25.	19BT10531	Programming For Problem Solving Lab
26.	19BT40532	Database Management Systems Lab
27.	19BT31202	Software Engineering
28.	19BT31232	Software Engineering Lab
29.	19BT10201	Basic Electrical And Electronics Engineering
30.	19BT10231	Basic Electrical And Electronics Engineering
31.	19BT50409	Green Technologies
32.	19BT50502	Artificial Intelligence
33.	19BT50503	Cyber Security
34.	19BT60502	Machine Learning
35.	19BT60531	Machine Learning Lab
36.	19BT70501	Augmented Reality And Virtual Reality
37.	19BT70502	Data Science
38.	19BT70503	Blockchain Technologies
39.	19BT60505	Soft Computing
40.	19BT31202	Software Engineering
41.	19BT61201	Cloud Computing
42.	19BT71201	Data Analytics
43.	19BT51203	Advanced Databases Databases
44.		

45.	19BT51208	IoT Architecture and Protocols
46.	19BT60402	Micro Controllers
47.	19BT70412	Pattern Recognition
48.	19BT60318	Industrial Internet of Things
49.	19BT60314	Optimization Techniques
50.	19BT61041	Sensors and Applications
51.	19BT51501	Modern Cryptography
52.	19BT51502	Natural Language Processing
53.	19BT51503	Parallel Computer Architectures
54.	19BT51504	Performance Evaluation of Computer Systems
55.	19BT51505	Software Testing
56.	19BT61501	Data Visualization Techniques
57.	19BT61502	Information Security
58.	19BT61503	Parallel and Distributed Systems
59.	19BT61505	Systems Reliability
60.	19BT61506	User Interface Design
61.	19BT71501	System Simulation and Modeling
62.	19BT71502	Computational Statistics
63.	19BT71503	Deep Learning
64.	19BT71504	High Performance Computing
65.	19BT715AC	Kernel Programming

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LIST OF NEW COURSES INTRODUCED

Program: Minor Degree in Cyber Security

Regulations: SVEC-19

S. No.	Course Code	Name of the course
1.	19BT60541	Adhoc wireless Networks
2.	19BT61201	Cloud Computing
3.	19BT51501	Modern Cryptography
4.	19BT61534	Modern Cryptography Lab
5.	19BT50503	Cyber security
6.	19BT61534	Modern Cryptography Lab
7.	19BT61509	IoT Security
8.	19BT61502	Information Security
9.	19BT71534	Information Security Lab

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Department of Computer Science and Systems Engineering

LIST OF NEW COURSES INTRODUCED

Program: Honors in Cyber Security

Regulations: SVEC-19

S. No. Course Code		Name of the course		
1.	19BT51507	Digital Forensics		
2.	19BT51508	Malware and Risk Analysis		
3.	19BT51532	Digital Forensics Lab		
4.	19BT61507	Cloud security		
5.	19BT61508	Network Anomaly Detection Systems		
6.	19BT61509	IoT Security		
7.	19BT61533	Network Anomaly Detection Systems Lab		
8.	19BT71505	Software Security		
9.	19BT71506	Database and Web Security		
10. 19BT71533 Database an		Database and Web Security Lab		

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Department of Computer Science and Systems Engineering

LIST OF NEW COURSES INTRODUCED

Program: B.Tech.- Computer Science and Systems Engineering

Regulations: SVEC-20

S. No.	Code	Name of the course
1.	20BT31232	Programming with Python Lab
2.	20BT41532	Workshop in Open source tools
3.	20BT51531	Linux Programming Lab
4.	20BT61531	Handheld computing: design and Application Development Lab
5.	20BT71532	Data Science using R Lab

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