SREE VIDYANIKETHAN ENGINEERING COLLEGE

SREE
VIDYANIKETHAN
Engineering College (Autonomous)
Accredited by NAAC with 'A' Grade

(AUTONOMOUS)

SREE SAINATH NAGAR, A. RANGAMPET-517 102

Agenda for 11th Meeting of Board of Studies for B. Tech. (Electronics and Instrumentation Engineering) on 15-07-2020 at 10 AM

1. Action taken report on minutes/ resolutions of 10th BOS meeting.

2. Report on implementation of autonomy with respect to syllabi & academic regulations for IV B. Tech (under SVEC16) and I B.Tech under SVEC-19 regulations.

3. Academic Calendar for II, III and IV Year B.Tech. for 2020-2021.

4. Vision and Mission of the Department, PEOs, POs & PSOs for B. Tech. (EIE) Program.

5. Administrative set-up for B. Tech Program.

6. Syllabi with Course Objectives, Course Outcomes, Lesson Plans and Model Question Papers for the Courses of II B. Tech (Under SVEC-19).

7. Panel of Examiners for Question paper setting for II B.Tech. courses (Under SVEC-19).

8. Amendments to SVEC-19 B.Tech. Academic Regulations

9. Implementation of Teaching, Learning and Evaluation Process.

10. Substitute Courses.

11. Research Activities.

12. Faculty Development Activities.

13. Staff Development Activities.

14. Student Development Activities.

15. Student Support Systems.

16. Extension Activities.

17. Any other item.

Dr. N. Gireesh
Chairman, BOS (EIE)

SREE VIDYANIKETHAN ENGINEERING COLLEGE
(AUTONOMOUS)
Sree Sainath Nagar, Tirupati - 517102

SREE
VIDYANIKETHAN
Engineering College
(Autonomous)

Department of Electronics and Instrumentation Engineering

11th Board of Studies Meeting held on 15th July 2020 at 10.00 AM

Minutes

Members Present:

1	Dr. N. Gireesh	Chairman
2	Dr. G. Sreenivasulu	External Member (Academics)
3	Dr. S. Mourauga Pragash	External Member (Academics)
4	Dr. G. P. Ramesh	External Member (Academics)
5	Mr. Y. N. Siva Kumar	External Member (Industry)
6	Mr. S. Kumar Parichay	External Member (Alumni)
7	Dr. Y. Dileep Kumar	Internal Member
8	Mr. C. Ravindra murthy	Internal Member
9	Mr. M. Srikanth	Internal Member
10	Mr. K. Ayyappa Swamy	Internal Member

1. **Action taken report on minutes / resolutions of BOS Meeting held on 10-06-2019**
   The Chairman BOS apprised the members the action taken on the minutes/ resolutions of BOS meeting held on 10-06-2019. After deliberations the members ratified the report and the same is placed at Annexure – I.

2. **Report on implementation of autonomy**
   Chairman BOS presented a report on implementation of autonomy to the members. The board has congratulated the college authorities for successful implementation of SVEC16 and SVEC19 regulations syllabi. The report is accepted after discussions and the same is placed at Annexure-II.

3. **Academic Calendar**

   Members of B.O.S have been apprised that the Chairman, Academic Council is empowered to prepare the Academic calendar pertaining to I, II, III and IV B.Tech. program for the academic year 2020-21, in accordance with the A. P. State Government/APSCHE/JNTUA, Ananthapuramu directives.

4. **Vision and Mission of the Department, PEOs, POs & PSOs and Course Structure of B. Tech. Program under SVEC-19 Curriculum**

   a) Resolved to approve the Vision, Mission, PEOs, POs and PSOs of the B.Tech. EIE programme after thorough discussion. (Refer Annexure-III)

   b) Chairman BOS (EIE) presented the SVEC19 course structure of II, III and IV B.Tech. to the members. Members are accepted the course structure. (Refer Annexure-IV).

5. **Administrative setup for B.Tech. Program**

   Chairman, BOS(EIE) presented the administrative setup of the Department for framing the SVEC19 syllabus of II, III and IV B.Tech. courses to the members. Members have appreciated.

6. **Syllabi with Course Objectives, Course Outcomes, Lesson Plans and Model Question Papers for the Courses of II B. Tech (Under SVEC-19).**
   Chairman, BOS(EIE) presented the detailed syllabi of II B.Tech. courses to the members. Members have appreciated the CO-PO mapping and accepted the content in the syllabus. The detailed syllabus prepared by Department faculty is shown in Annexure-V.

7. **Panel of Examiners for Question paper setting for II B.Tech. courses (Under SVEC-19).**

   Resolved to authorize the Chairman, BOS(EIE) to finalize the panel of examiners for question paper setting well in advance and submit to the Chairman, Academic Council for approval.

8. **Amendments to SVEC-19 B.Tech. Academic Regulations**

   Chairman, BOS(EIE) presented the amendments to SVEC19 B.Tech. regulations. Members are accepted the amendments to SVEC19 B.Tech. regulations. (Refer Annexure-VI)

9. **Teaching, Learning and Evaluation**

   Chairman, BOS(EIE) presented the teaching, learning and evaluation practices followed in the department. The members of BOS have appreciated the good practices followed by the department in the conduct of diagnostic and formative tests, remedial and reinforcement classes as well as offering of the necessary add-on courses as desired. Members suggested continuing the same.

10. Substitute Courses

Resolved to authorize the Chairman, BOS(EIE) to finalize the substitute subjects as and when required and forward the same to the Chairman, Academic Council for further action.

11. Research Activities

Chairman, BOS(EIE) has briefed the members about the research activities such as technical talks, on-going research project and publications in the Department. The members have appreciated the efforts of faculty and students of the department.

12. Faculty Development Activities

Chairman, BOS(EIE) has presented the information on the research publications/ presentations/patents by the faculty, faculty incentives, FDPs attended and student feedback on faculty to the members. The members have appreciated the efforts of the department and suggested to continue the same.

13. Staff Development Activities

Chairman, BOS(EIE) has presented the staff development program activities to the members. The members suggested improving the staff development activities by conducting in-house events.

14. Student Development Activities

Chairman, BOS(EIE) submitted the details of student development activities such as guest/expert lectures organized, Add-on courses conducted, student paper presentations & publications and technical association activities. Members have expressed their satisfaction regarding the student development. The members have suggested the Chairman, BOS(EIE) to conduct more number of Guest/Expert lectures.

15. Student Support

Chairman, BOS(EIE) presented the student support activities such as training programs, placement activities, student counseling, etc. carried out in the academic year 2019-20. The members have appreciated the efforts and suggested to continue.

16. Outreach Activities

Chairman, BOS(EIE) presented the outreach activities conducted in the department during the academic year 2019-20. Members suggested continue the same.

17. Any other item

Resolved to authorize the Chairman, BOS(EIE) to prepare the detailed syllabi of III & IV B.Tech including electives and Honor Degree Courses.

Meeting concluded with thanks to the Chair.

S. No.	Name of the Member	Designation
1	Dr. N. Gireesh	Chairman
2	Dr. G. Sreenivasulu	External Member (Academics)
3	Dr. S. Mourauga Pragash	External Member (Academics)
4	Dr. G. P. Ramesh	External Member (Academics)
5	Mr. Y. N. Siva Kumar	External Member (Industry)
6	Mr. S. Kumar Parichay	External Member (Alumni)
7	Dr. Y. Dileep Kumar	Internal Member
8	Mr. C. Ravindra murthy	Internal Member
9	Mr. M. Srikanth	Internal Member
10	Mr. K. Ayyappa Swamy	Internal Member

Dr. N.Gireesh
Chairman
BOS in EIE

Department of Electronics and Instrumentation Engineering

Approved Course Structure

Program: B.Tech.- Electronics and Instrumentation Engineering

Regulations: SVEC-19

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

I 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.	19BT1BS01	Differential Equations and Multivariable Calculus	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.	19BT10341	Basic Civil and Mechanical Engineering	3	-	-	3	3	40	60	100
5.	19BT10201	Basic Electrical and Electronics Engineering	3	-	-	3	3	40	60	100
6.	19BT1BS31	Engineering Physics Lab	-	-	2	2	1	50	50	100
7.	19BT10231	Basic Electrical and Electronics Engineering Lab	-	-	2	2	1	50	50	100
8.	19BT20331	Engineering Workshop	-	-	2	2	1	50	50	100
		Total:	14	1	6	21	18	350	450	800
9.	19BT1AC01	Spoken English	2	-	-	2	-	-	-	-

I 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.	19BT2BS01	Transformation Techniques and Linear Algebra	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.	19BT20241	Network Analysis	3	1	-	4	4	40	60	100
6.	19BT1BS32	Engineering Chemistry Lab	-	-	2	2	1	50	50	100
7.	19BT1HS31	Communicative English Lab	-	-	2	2	1	50	50	100
8.	19BT10331	Computer Aided Engineering Drawing	-	1	2	3	2	50	50	100
9.	19BT10531	Programming for Problem Solving Lab	-	-	2	2	1	50	50	100
10.	19BT20251	Network Analysis Lab	-	-	2	2	1	50	50	100
		Total:	**15**	**4**	**10**	**29**	**24**	**450**	**550**	**1000**

II B.Tech. – I Semester

Sl. No.	Course Code	Course Title	L	T	P	Total	C	Int. Marks	Ext. Marks	Total Marks
1.	19BT3BS02	Special functions and Complex Analysis	3	1	-	4	4	40	60	100
2.	19BT30402	Electronic Devices and Circuits	3	-	-	3	3	40	60	100
3.	19BT30404	Switching Theory and Logic Design	3	-	-	3	3	40	60	100
4.	19BT31001	Electrical and Electronic Measurements	3	1	-	4	4	40	60	100
5.	19BT31002	Transducers in Instrumentation	3	-	-	3	3	40	60	100
6.	19BT3HS31	Soft Skills Lab	-	-	2	2	1	50	50	100
7.	19BT30432	Electronic Devices and Circuits Lab	-	-	2	2	1	50	50	100
8.	19BT31031	Instrumentation Workshop	-	-	2	2	1	50	50	100
9.	19BT31032	Measurements and Transducers Lab	-	-	2	2	1	50	50	100
		Total:	**15**	**2**	**8**	**25**	**21**	**400**	**500**	**900**
10.	19BT3MC01	Environmental Science	2	-	-	2	-	40	-	40

II B.Tech. – II Semester

Sl. No.	Course Code	Course Title	L	T	P	Total	C	Int. Marks	Ext. Marks	Total Marks
1.	19BT50201	Control Systems	3	-	-	3	3	40	60	100
2.	19BT30403	Signals and Systems	3	-	-	3	3	40	60	100
3.	19BT40402	Electronic Circuit Analysis and Design	3	1	-	4	4	40	60	100
4.	19BT40403	Linear and Digital IC Applications	3	-	-	3	3	40	60	100
5.	19BT41001	Industrial Instrumentation	3	-	-	3	3	40	60	100
6.		Open Elective – 1	3	-	-	3	3	40	60	100
7.	19BT40432	Electronic Circuit Analysis and Design Lab	-	-	2	2	1	50	50	100
8.	19BT40433	Linear and Digital IC Applications Lab	-	-	2	2	1	50	50	100
9.	19BT41031	Industrial Instrumentation Lab	-	-	2	2	1	50	50	100
		Total:	**18**	**1**	**6**	**25**	**22**	**390**	**510**	**900**
10.	19BT315AC	Design Thinking	2	-	-	2	-	-	-	-

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.	19BT50402	Digital Signal Processing	3	-	-	3	3	40	60	100
2.	19BT50442	Principles of Communications	3	-	-	3	3	40	60	100
3.	19BT30502	Computer Organization	3	-	-	3	3	40	60	100
4.		**Open Elective- 2**	3	-	-	3	3	40	60	100
5.		**Professional Elective–1**	3	-	-	3	3	40	60	100
	19BT50403	VLSI Design								
	19BT40501	Computer Networks								
	19BT51001	Optoelectronics and Laser Instrumentation								
	19BT51002	Intelligent Control								
6.		**Inter Disciplinary Elective- 1**	3	-	-	3	3	40	60	100
	19BT50341	Industrial Safety and Maintenance Engineering								
	19BT50344	Thermodynamics and Fluid Mechanics								
	19BT50503	Artificial Intelligence								
	19BT21501	Object Oriented Programming Through Java								
7.	19BT61531	Internet of Things Lab	-	1	2	3	2	50	50	100
8.	19BT51031	Signal Processing Lab	-	-	2	2	1	50	50	100
9.	19BT51032	Socially Relevant Project-1	-	-	-	-	1	50	50	100
		Total:	18	1	4	23	22	390	510	900
10.	19BT503AC	Foundations of Entrepreneurship	2	-	-	2	-	-	-	-

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.	19BT6HS01	Principles of Business Economics and Accountancy	3	-	-	3	3	40	60	100
2.	19BT60402	Microcontrollers	3	-	-	3	3	40	60	100
3.	19BT61001	Process Control	3	-	-	3	3	40	60	100
4.		**Professional Elective-2**	3	-	-	3	3	40	60	100
	19BT60203	Advanced Control Systems								
	19BT50406	FPGA Architectures and Applications								
	19BT61002	Analytical Instrumentation								
	19BT61003	Industrial Data Communications								
5.		**Professional Elective-3**	3	-	-	3	3	40	60	100
	19BT50343	Robotics and Automation								
	19BT60405	Digital IC Design								
	19BT60407	Image Processing								
	19BT61004	Power Plant Instrumentation								
6.		**Interdisciplinary Elective-2**	3	-	-	3	3	40	60	100
	19BT60201	Power Electronics								
	19BT60241	Renewable Energy Sources								
	19BT60341	Biomechanics								
	19BT50501	Machine Learning								
7.	19BT60432	Microcontrollers Lab	-	-	2	2	1	50	50	100
8.	19BT61031	Process Control Lab	-	-	2	2	1	50	50	100
9.	19BT61032	Socially Relevant Project-2	-	-	-	-	1	50	50	100
		Total:	18	0	4	22	21	390	510	900
10.	19BT5MC01	Universal Human Values	2	-	-	2	-	40	-	40

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.	19BT6HS02	Organizational Behavior	3	-	-	3	3	40	60	100
2.	19BT71001	Biomedical Instrumentation	3	-	-	3	3	40	60	100
3.	19BT71002	PLC and SCADA	3	-	-	3	3	40	60	100
4.		**Professional Elective-4**	3	-	-	3	3	40	60	100
	19BT70401	Embedded Systems								
	19BT70541	Wireless Sensor Networks								
	19BT71003	Aircraft Instrumentation								
	19BT71004	Computer Control of Process								
5.		**Professional Elective-5**	3	-	-	3	3	40	60	100
	19BT60403	Advanced Digital Signal Processing								
	19BT71005	Instrumentation in Process Industries								
	19BT71006	Process Modeling, Simulation and Control								
	19BT71007	System Design using Microcontrollers								
6.	19BT7MOOC	MOOC	-	-	-	-	3	-	100	100
7.	19BT71031	Biomedical Instrumentation Lab	-	-	2	2	1	50	50	100
8.	19BT71032	Industrial Automation Lab	-	-	2	2	1	50	50	100
9.	19BT71033	Internship	-	-	-	-	2	-	100	100
		Total:	**15**	**-**	**4**	**19**	**22**	**300**	**600**	**900**
10.	19BT710AC	Process Plant Layout and Piping Design	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.	19BT81031	Project Work	-	-	-	-	10	100	100	200
		Total	-	-	-	-	10	100	100	200

LIST OF COURSES FOR

OPEN ELECTIVE–1 and 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

MINOR/HONORS DEGREE

IN SENSORS and CONTROL SYSTEMS

Semester	Course Code	Course Title		Contact Periods per week					Scheme of Examination Max. Marks		
				L	T	P	Total	C	Int. Marks	Ext. Marks	Total Marks
III B. Tech. I Semester	19BT50201	Control Systems	Minor	3	-	-	3	3	40	60	100
	19BT51003	Advanced Sensors	Honor	3	-	-	3	3	40	60	100
	19BT51004	Fundamentals of Micro Electro Mechanical Systems	Honor	3	-	-	3	3	40	60	100
	19BT51005	Fundamentals of Actuators	Minor	3	-	-	3	3	40	60	100
	19BT51006	Sensors	Minor	2	-	-	2	2	40	60	100
	19BT51033	Sensors Lab	Minor	-	-	2	2	1	50	50	100
III B. Tech. II Semester	19BT60206	Advanced Control System	Minor/ Honor	3	-	-	3	3	40	60	100
	19BT61005	Digital Control System	Minor/ Honor	3	-	-	3	3	40	60	100
	19BT61006	SMART Sensors	Minor/ Honor	3	-	-	3	3	40	60	100
IV B. Tech. I Semester	19BT71008	Fractional Calculus and Control	Minor/ Honor	3	-	-	3	3	40	60	100
	19BT71009	Multi-Sensor Data Fusion	Minor/ Honor	3	-	-	3	3	40	60	100
	19BT71010	Robust & Optimal Control	Minor/ Honor	3	-	-	3	3	40	60	100

Note: If any of the student pursued a course from the above list in their curriculum then, he/she is not eligible to opt for the same in minor/honors degree.

Minor : 6T (17 Credits) + 1L (1 Credit)

Honor : 6T (18 Credits)

Dr. N.Gireesh
Chairman, BoS(EIE)

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

Department of Electronics and Instrumentation Engineering

LIST OF NEW COURSES INTRODUCED

Program: B.Tech.- Electronics and Instrumentation Engineering

Regulations : SVEC-19 (upto II B.Tech-II semester)

Course Code	Name of the Course
19BT31031	Instrumentation workshop
19BT40403	Linear and Digital IC Applications
19BT1AC01	Spoken English
19BT1BS02	Biology for Engineers
19BT4BS01	Material Science
19BT4HS05	Gender & Environment
19BT4HS09	Life Skills
19BT4HS11	Professional Ethics
19BT4HS12	Women Empowerment
19BT40107	Sustainable Engineering

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