

5th Meeting of Board of Studies in Mechanical Engineering

Agenda

1. Action taken report on minutes/resolutions of 4th BOS meeting.
2. Report on implementation of autonomy with respect to syllabi and regulations.
3. Academic Calendar for B.Tech program.
4. Vision and Mission of the Department, Program Educational Objectives, Program Objectives, and Course Structure of UG program (SVEC-16).
5. Course Objectives, Outcomes, Syllabi, lesson plans, and model question papers of courses of I B.Tech. (SVEC-16)
6. Administrative set-up for B.Tech program in Mechanical Engg.
7. Panel of paper setters and Model question papers for I B.Tech. (SVEC-16), III B.Tech. (SVEC-14) - I & II Semesters.
8. Teaching, Learning, and Evaluation procedures.
9. Research Activities.
10. Faculty and Staff Development activities.
11. Student Developmental activities.
12. Student Support Systems.
13. Extension Activities.
14. Any other item.



Dr.A.V.Satyanarayana

Chairman, BOS in ME

Dr. T. HARIPRASAD

Professor & BOS Chairman

Department of Mechanical Engineering

SREE VIDYANIKETHAN ENGINEERING COLLEGE

(Autonomous)

Sree Sainath Nagar TIRUPATI-517 102

Chittoor District Andhra Pradesh INDIA

22nd April, 2016

Minutes of the 5th Board of studies Meeting

Date: 22nd April, 2016

Time: 2:30 PM

Venue: Seminar Hall of Dept. of Mechanical Engineering

Dr.A.V.Satyanarayana, Chairman, Board of Studies chaired the meeting and welcomed all the members to the 5th Board of Studies meeting in the department of Mechanical Engineering. Prof. K.Hemachandra Reddy, Former Registrar, JNTUA, Anantapuramu and Dr.K.Ramesh Kumar, Scientist 'G', DRDL, Hyderabad have attended the meeting. The discussion on the items mentioned in the agenda was taken up by the Chairman, Board of Studies and the following resolutions mentioned in the subsequent paragraphs. Further, Dr.K.C.Varaprasad, Program Coordinator presented the various activities of Mechanical Engineering Department for the current academic year.

ITEM NO.1

Action taken report on minutes/ resolutions of 4th BOS meeting.

The action taken report on the suggestions made by the honorable members in the earlier BoS meeting was presented. The members agreed with the proceedings and the action taken against the suggestions made in the previous meeting.

ITEM NO.2

Report on implementation of autonomy with respect to syllabi and regulations (SVEC-14: II B. Tech.-I & II Semesters).

In executing SVEC-14 for II B.Tech, no difficulties were found in teaching and learning practice of theory and laboratory courses. The same is conveyed to the members.

ITEM NO.3

B. Tech. Academic Calendar for 2016-17.

Members of the board perused and approved the academic calendar for II, III & IV B.Tech(ME), I & II Semesters. The members of BOS felt that deliberate discussions or changes if any required may be submitted for discussion in next academic council or governing body meeting.

ITEM NO.4

Vision and Mission of the Department, PEOs, POs & PSOs and Course Structure of B. Tech. Program.

Members unanimously stated that the Vision and Mission of the Department were in line with the vision and mission of the Institute. After detailed deliberations, the board expressed their satisfaction over the statements of Program Educational Objectives, Program Outcomes & Program Specific Outcomes. Changes if any, may be brought to the notice of the Board members. Later, the board approved the proposed Specific Course Structure of B.Tech.(ME) Program for SVEC-16 subjected to the following minor amendments.

- Engineering Metrology: The title of the course should be as similar in SVEC-14 i.e., "Metrology and Measurements".
- Green Energy Conversion Technologies: Members felt that the title "Non-conventional Energy Sources" would be most appropriate.

As part of discussions, Chairman (BoS) presented the list of courses in the knowledge area of the Mechanical Engineering i.e. Thermal, Design, Manufacturing Sciences and Industrial Engineering.

Also, the course flow diagram indicating prerequisite details is shown by Chairman (BoS). Scenario of laboratories present in SVEC-14 and SVEC -16 and course wise comparison is demonstrated by Chairman (BoS).

Later, Chairman (BoS) presented the administrative set up for the syllabus preparation for SVEC-16. Hon'ble external members have impressed

on the presentation and appreciated the effort of internal members in proposing the specific course structure.

ITEM NO.5

Syllabi with Course Objectives & Outcomes, Lesson Plans and Question Banks of Courses of I B. Tech.

The Chairman presented proposed syllabi for four courses of I B.Tech. Mechanical Engineering Program under SVEC-16. Hon'ble members approved the syllabus after discussions subjected to the following changes. Members suggested a common advise to recheck matrix table for COs Vs POs and PSOs of all proposed courses.

- **Computer Aided Engineering Drawing:** Members approved the syllabus without any changes. Further, Members suggested to mention sketch book practice / computer drafting practice in the syllabus against each unit.
- **Engineering Workshop Practice:** Members approved the syllabus without any changes. Members appreciated for introducing 'Power Tools' as part of the syllabus.
- **Engineering Materials:** Members suggested to differentiate Materials and Metallurgy contents. Members recommended to introduce Ceramics, composite materials in the syllabus. Further, members recommended to include the phase diagrams and related concepts to Engineering Metallurgy in the higher semester.
- **Materials Science Lab:** Members approved the syllabus without any changes.

ITEM NO.6

Panel of paper setters for Courses of I B. Tech.

It was resolved to authorize the chairman (BOS) to prepare model question papers and panel of examiners for setting question papers and furnish the same to the Chairman, academic council for further action.

ITEM NO.7

Teaching, Learning and Evaluation Procedures.

The members expressed satisfaction over the teaching, learning, and evaluation procedures. The concept of add-on courses was appreciated and board enquired about the modalities of conducting add-on courses. The BOS Members suggested Industry Oriented Add-on Courses to enrich students.

ITEM NO.8

Research Activities.

The members appreciated the idea of the formation of three research clusters based on knowledge areas for promoting research activities.

ITEM NO.9

Faculty and Staff Development Activities.

BoS members appreciated the Faculty and Staff Development activities conducted by the Department and suggested to maintain the same pace in the future.

ITEM NO.10

Student Development Activities.

The Program Coordinator presented the activities of Creative Association of Mechanical Engineering Students (CAMS), SAE India Professional Body activities, Expert and Guest Lecturers organized etc. Hon'ble members appreciated the efforts of the department in enriching the students suited to latest trends.

ITEM NO.12

Student Support Systems.

The Program coordinator presented the counseling system, placement related training, remedial classes, entrepreneurship activities and IIIC activities. Members satisfied with the efforts.

ITEM NO.13

Extension Activities.

The Program Coordinator submitted that the Department is encouraging students to participate in various community oriented activities. NSS Volunteers have participated in Blood Donation Camp organized on 19th March, 2016 on the occasion of College Annual Day. The External Members expressed their satisfaction over the steps taken in involving students over social activities.

ITEM NO.14

Achievements of the Institute.


Chairman (BoS) concluded the meeting with the latest achievements for grant of Rs 1.5 Crore under 'Potential for Excellence Membership' from UGC. Hon'ble external members appreciated Sree Vidyanikethan Engineering College (Autonomous) for being one CPE member among 13 selected institutes at state level. Also, Chairman (BoS) informed that the validity of the TEQIP (Phase -II) status is extended upto Dec 2016 by release of additional Rs.2 Crores.

ITEM NO.15

Discretion for minor changes

The Board authorised the chairman BOS to effect any minor changes as per the need in syllabi and later intimate these changes to the members of the BOS.

The list of internal and external BoS members who have attended the meeting is enclosed herewith.



Chairman, BOS (ME)

Dr T HARI PRASAD

Professor & BOS Chairman

Department of Mechanical Engineering

SREE VIDYANIKETHAN ENGINEERING COLLEGE

(Autonomous)

Sree Sainath Nagar, TIRUPATI-517 102
Chittoor District, Andhra Pradesh, INDIA

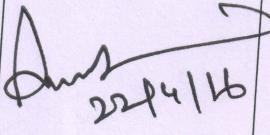
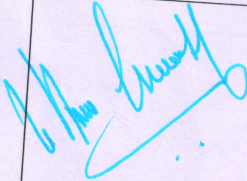
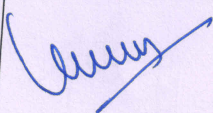


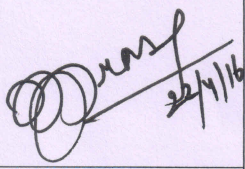
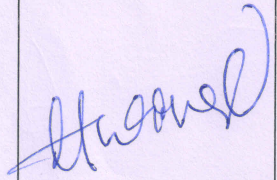
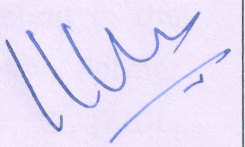
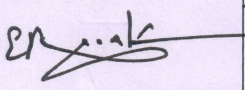
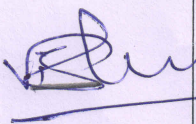
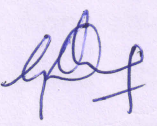
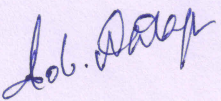
SREE VIDYANIKETHAN ENGINEERING COLLEGE (AUTONOMOUS)

Sree Sainath Nagar, A.Rangampet, Near Tirupati - 517 102. A.P.

DEPARTMENT OF MECHANICAL ENGINEERING

MEMBERS PRESENT

1	Dr.A.Venkata Satyanarayana Professor, Dept of Mechanical Engineering, Sree Vidyanikethan Engineering College, A.Rangampet, Tirupati.	Chairman, BOS	 22/4/16
2	Dr.K.Hemachandra Reddy Professor, Department of Mechanical Engineering, JNTUA College of Engineering, Anatapuramu.	External Member (JNTUA Nominee)	
3	Dr. Bangaru Babu P Professor, Dept. of Mechanical Engineering, National Institute of Technology, Warangal.	External Member (AC Nominee)	—
4	Dr.N.V.R.Naidu Vice Principal & Professor Department of Industrial Engineering, M.s. Ramaiah institute of Technology, Vidya Soudha, MSRIT Post, MSR Nagar, Bangalore.	External Member (AC Nominee)	—
5	Dr.K.Ramesh Kumar Scientist'G' Director, Productionisation & Technology Transfer, Defence R&D Laboratory (DRDL) Kanchanbagh, Hyderabad	External Member (Industry Expert)	

6	Dr. K.C.Varaprasad Professor & Head, Dept. of Mechanical Engineering, Sree Vidyanikethan Engineering College, A.Rangampet, Tirupati.	Internal Member	
7	Dr.T.Hari Prasad Professor, Dept. of Mechanical Engineering, Sree Vidyanikethan Engineering College, A.Rangampet, Tirupati.	Internal Member	
8	Dr. A.K.Damodaram Professor, Dept. of Mechanical Engineering, Sree Vidyanikethan Engineering College, A.Rangampet, Tirupati.	Internal Member	
9	Sri.E.Radhakrishnan Assistant Professor(SL), Dept. of Mechanical Engineering, Sree Vidyanikethan Engineering College, A.Rangampet, Tirupati.	Internal Member	
10	Sri.B.Vishnu Vardhana Naidu Assistant Professor, Dept. of Mechanical Engineering, Sree Vidyanikethan Engineering College, A.Rangampet, Tirupati.	Internal Member	
11	Mr.G.Dileep Kumar Assistant Professor, Dept. of Mechanical Engineering, Sree Vidyanikethan Engineering College, A.Rangampet, Tirupati.	Internal Member	
12	Mr.S.Lakshmi Narayana Assistant Professor, Dept. of Mechanical Engineering, Sree Vidyanikethan Engineering College, A.Rangampet, Tirupati.	Internal Member	



SREE VIDYANIKETHAN ENGINEERING COLLEGE

(AUTONOMOUS)

Sree Sainath Nagar, Tirupati – 517 102, A.P.

DEPARTMENT OF MECHANICAL ENGINEERING

Approved Course Structure

Program: B.Tech.-Mechanical Engineering

Regulations: SVEC-14

I Year

S. No.	Course Code	Course Title	Periods per week			C	Scheme of Examination Max. Marks		
			L	T	P		Int.	Ext.	Total
1.	14BT1HS01	Technical English	2	-	-	4	30	70	100
2.	14BT1BS01	Engineering Physics	2	1	-	4	30	70	100
3.	14BT1BS02	Engineering Chemistry	2	1	-	4	30	70	100
4.	14BT1BS03	Engineering Mathematics	3	1	-	6	30	70	100
5.	14BT10301	Engineering Mechanics	3	1	-	6	30	70	100
6.	14BT1ES01	Programming in C and Data Structures	3	1	-	6	30	70	100
7.	14BT1ES03	Computer-Aided Engineering Drawing	-	1	3	3	25	50	75
8.	14BT1BS05	Engineering Physics and Engineering Chemistry Lab.	-	-	3	3	25	50	75
9.	14BT1ES04	Programming in C and Data Structures Lab.	-	-	3	3	25	50	75
10.	14BT1ES06	Engineering and IT Workshop	-	-	3	3	25	50	75
11.	14BT1HS02	English Language Communication Skills Lab.	-	-	3	3	25	50	75
Total:			15	6	15	45	305	670	975

II Year – I Semester

S. No.	Course Code	Course Title	Periods per week			C	Scheme of Examination Max. Marks		
			L	T	P		Int.	Ext.	Total
1.	14BT3BS01	Matrices and Numerical Methods	3	1	-	3	30	70	100
2.	14BT30234	Basics of Electrical and Electronics Engineering	3	1	-	3	30	70	100
3.	14BT30301	Strength of Materials	3	1	-	3	30	70	100
4.	14BT30302	Materials Science and Metallurgy	3	1	-	3	30	70	100
5.	14BT30303	Thermodynamics	3	1	-	3	30	70	100
6.	14BT30304	Manufacturing Technology-I	3	1	-	3	30	70	100
7.	14BT30321	Computer Aided Machine Drawing Lab	-	1	3	2	25	50	75
8.	14BT30322	Strength of Materials and Materials Science Lab	-	-	3	2	25	50	75
Total:			18	7	6	22	230	520	750

II Year – II Semester

S. No.	Course Code	Course Title	Periods per week			C	Scheme of Examination Max. Marks		
			L	T	P		Int.	Ext.	Total
1.	14BT3BS03	Probability and Statistics	3	1	-	3	30	70	100
2.	14BT3HS01	Environmental Sciences	3	1	-	3	30	70	100
3.	14BT4HS01	Business Communication and Presentation Skills	3	1	-	3	30	70	100
4.	14BT40301	Kinematics of Machinery	3	1	-	3	30	70	100
5.	14BT40302	Fluid Mechanics and Hydraulic Machinery	3	1	-	3	30	70	100
6.	14BT40303	Thermal Engineering - I	3	1	-	3	30	70	100
7.	14BT40304	Manufacturing Technology-II	3	1	-	3	30	70	100
8.	14BT40321	Fluid Mechanics and Hydraulic Machinery lab	-	-	3	2	25	50	75
9.	14BT40322	Manufacturing Technology Lab	-	-	3	2	25	50	75
Total:			21	7	6	25	260	590	850

III Year – I Semester

S. No.	Course Code	Course Title	Periods per week			C	Scheme of Examination Max. Marks		
			L	T	P		Int.	Ext.	Total
1.	14BT4HS02	Professional Ethics	3	1	-	3	30	70	100
2.	14BT50301	Dynamics of Machinery	3	1	-	3	30	70	100
3.	14BT50302	Industrial Engineering and Management	3	1	-	3	30	70	100
4.	14BT50303	Thermal Engineering - II	3	1	-	3	30	70	100
5.	14BT50304	Machine Tools	3	1	-	3	30	70	100
6.	14BT50305	Design of Machine Elements-I	3	1	-	3	30	70	100
7.	14BT50306	Automobile Engineering	3	1	-	3	30	70	100
8.	14BT50321	Machine Tools Lab	-	-	3	2	25	50	75
9.	14BT50322	Thermal Engineering Lab	-	-	3	2	25	50	75
Total:			21	7	6	25	260	590	850

III Year – II Semester

S. No.	Course Code	Course Title	Periods per week			C	Scheme of Examination Max. Marks		
			L	T	P		Int.	Ext.	Total
1.	14BT5HS01	Managerial Economics and principles of Accountancy	3	1	-	3	30	70	100
2.	14BT60301	Design of Machine Elements-II	3	1	-	3	30	70	100
3.	14BT60302	Operations Research	3	1	-	3	30	70	100
4.	14BT60303	Heat Transfer	3	1	-	3	30	70	100
5.	14BT60304	CAD/CAM	3	1	-	3	30	70	100
6.	--	Open Elective	3	1	-	3	30	70	100
7.	14BT60321	Heat Transfer & Dynamics lab	-	-	3	2	25	50	75
8.	14BT60322	CAD/CAM Lab	-	-	3	2	25	50	75
Total:			18	6	6	22	230	520	750

LIST OF OPEN ELECTIVES

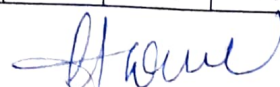
Offering Dept	Course Code	Course Title
BS&H	14BT6HS01	Banking and Insurance
BS&H	14BT6HS02	Cost Accounting and Financial Management
BS&H	14BT6HS03	Entrepreneurship for Micro, Small and Medium Enterprises
CE	14BT70105	Disaster Mitigation and Management
CE	14BT70106	Environmental Pollution and Control
CE	14BT70107	Contract Laws and Regulations
CE	14BT70108	Planning for Sustainable Development
CE	14BT70109	Rural Technology
ME	14BT60305	Artificial Intelligence and Robotics
ME	14BT60306	Global Strategy and Technology
ME	14BT60307	Intellectual Property Rights and Management
ME	14BT60308	Managing Innovation and Entrepreneurship
ME	14BT60309	Material Science
CSE	14BT60502	Engineering Systems Analysis and Design
EIE	14BT71005	Microelectromechanical Systems
IT	14BT61203	Bio-Informatics
IT	14BT61204	Cyber Security and Laws

IV Year – I Semester

S. No.	Course Code	Course Title	Periods per week			C	Scheme of Examination Max. Marks		
			L	T	P		Int.	Ext.	Total
1.	14BT70301	Finite Element Methods	3	1	-	3	30	70	100
2.	14BT70302	Manufacturing System Design	3	1	-	3	30	70	100
3.	14BT70303	Metrology & Measurements	3	1	-	3	30	70	100
4.	14BT70303	Industrial Robotics & Automation	3	1	-	3	30	70	100
5.		Professional Elective-I							
	14BT70305	Refrigeration and Air conditioning	3	1	-	3	30	70	100
	14BT70306	Mechanical Vibrations							
	14BT70307	Tool Design							
	14BT70308	Supply Chain Management							
6.		Professional Elective-II							
	14BT70309	Power Plant Engineering	3	1	-	3	30	70	100
	14BT70310	Geometric Modeling							
	14BT70311	Advanced Welding Techniques							
	14BT70312	Entrepreneurship							
7.	14BT70321	Metrology & Measurements Lab	-	-	3	2	25	50	75
8.	14BT70322	Manufacturing Systems Simulation Lab	-	-	3	2	25	50	75
9.	14BT70323	Seminar	-	-	-	2	-	50	50
Total:			18	6	6	24	230	570	800

IV Year – II Semester

S. No.	Course Code	Course Title	Periods per week			C	Scheme of Examination Max. Marks		
			L	T	P		Int.	Ext.	Total
1.	14BT80301	Production & Operations Management	3	1	-	3	30	70	100
2.	14BT80302	Mechatronics	3	1	-	3	30	70	100
3.		Professional Elective-III							
	14BT80303	Computational Fluid Dynamics	3	1	-	3	30	70	100
	14BT80304	Product Design							
	14BT80305	Advanced Casting Technology							
	14BT80306	Quality Assurance and Reliability							
4.		Professional Elective-IV							
	14BT80307	Non Conventional Energy Sources	4	-	-	3	30	70	100
	14BT80308	Composite Materials							
	14BT80309	Rapid Prototype Technology							
	14BT80310	Project Management							
6.	14BT80321	Comprehensive Viva-Voce	-	-	-	2	-	100	100
7.	14BT80322	Project Work	-	-	20	10	60	140	200
Total:			12	4	20	24	180	520	700

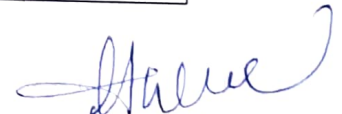

 BOS, Chairman

LIST OF NEW COURSES INTRODUCED

Program: B.Tech.-Mechanical Engineering

Regulations: SVEC-14

Course Code	Name of the course
14BT60305	Artificial Intelligence and Robotics
14BT60306	Global Strategy and Technology
14BT60307	Intellectual Property Rights and Management
14BT60308	Managing Innovation and Entrepreneurship
14BT60309	Material Science
14BT70106	Environmental Pollution and Control
14BT70107	Contract Laws and Regulations
14BT70108	Planning for Sustainable Development
14BT70109	Rural Technology
14BT6HS01	Banking and Insurance
14BT6HS02	Cost Accounting and Financial Management
14BT6HS03	Entrepreneurship for Micro, Small and Medium Enterprises
14BT70311	Advanced Welding Technology
14BT80304	Product Design
14BT80305	Advanced Casting Technology
14BT80306	Quality Management and Reliability
14BT80310	Project Management


BOS, Chairman

Dr. T. HARI PRASAD
Professor & BOS Chairman
Department of Mechanical Engineering
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