Vasavi College of Engineering
(Autonomous)
(Sponsored by VASAVI ACADEMY OF EDUCATION)
(Affiliated to Osmania University, Hyderabad, Approved by A.I.C.T.E.)
9-5-81, Ibrahimbagh, HYDERABAD – 500 031 (T.S.)

Minutes of 12th meeting of Board of Studies held on
13th June 2022 at Department of Electrical and Electronics Engineering

Date: 13/06/2022

Members Present:

S.No	Name of the Member		
1	Dr.M.Chakravarthy	:	Chaiman BoS, HoD EEE
2	Dr. N.Viswanathan	:	Professor, Dept of EE, NIT Warangal
3	Dr.G.Yesuratnam	:	Professor , Osmaina Univeristy
4	Dr. Ravikumar Bhimasingu	:	Associate Professor, IIT Hyderabad
5	Mr.Srinath Topucharla	:	Senior Electronics Hardware Manager, ABB, Hyderabad
6	Dr.K.Ravi Kumar	:	Professor
7	Dr..Ch.V.S.S.Sailaja	:	Associate Professor
8	Mrs.G. Sandhya Rani	:	Assistant Professor (Sr.)
9	Mr.M. Sreenivasulu	:	Assistant Professor (Sr.)
10	Mr.G.Mahesh	:	Assistant Professor
11	Mr.U.Elisha	:	Assistant Professor
12	Mr.N.Uday Kumar	:	Assistant Professor
13	Mr.P.Rajasekhar Reddy	:	Assistant Professor
14	Mr.P.Ravi	:	Assistant Professor
15	Dr.Ch.Kasi Ramakrishna Reddy	:	Assistant Professor
16	Dr.C.Srinivasaratnam	:	Assistant Professor
17	Ms.Sheik Ruksana	:	Assistant Professor

Members Absent:

S.No	Name of the Member		
1	Mr.V.Vinay Babu	:	Audit Analytics Specialist Assistant, Deloitte, Hyderabad

Dr.M.Chakravarthy , HoD EEE, Chaiman BoS, welcomed the members and presided over the meeting.

1. Review the minutes and approve the Action Taken Report on the decisions taken in the 11th meeting of BoS held on 11-08-2021.

S.No	Suggestions made	Action taken
1	Dr.N.Vishwantathan suggested reframing the course outcomes of Electrical Machines Lab course to reflect the Blooms Taxonomy Levels.	Modified Course Outcomes accordingly
2	Dr.Ravikumar Bhimsingh suggested that the minimum number of course outcomes should match with the number of Units	Number of outcomes are changed as per the suggestion
3	**Dr.Ravikumar Bhimsingh** ➢ Suggested to change the title of Electrical Machines-I course to " DC Machines and Transformers" and title of "Electrical Machines-II" course to "AC Machines" to get an idea about the course. ➢ suggested to change the title of Electrical Machines Lab -I course to " DC Machines and Transformers Lab" and title of "Electrical Machines Lab -II" course to "AC Machines Lab" ➢ Change the topic V curves to " V and Λ" curves in Electrical Machines –II Course.	➢ Title of Electrical Machines-I course is changed to "DC Machines and Transformers" and title of "Electrical Machines-II" course is renamed as "AC Machines" to get an idea about the course. ➢ Title of Electrical Machines Lab -I course is changed to " DC Machines and Transformers Lab" and title of "Electrical Machines Lab -II" course is changed to "AC Machines Lab" ➢ V curves topic is changed to " V and Λ" curves in Electrical Machines –II Course.
4	**Dr. N. Vishwanatham** ➢ Suggested to separate the Speed control and Swinburne's Experiment into two different experiments. ➢ Suggested to separate Dynamic braking and	All the said modifications are incorporated

	Retardation test into two different experiments.	
5	**Mr.Srinath Topucharla** ➢ Suggested to offer projects on variable frequency drives and digital drives.	Incorporated in "Theme based Project Course"

2. Review and approve

i) Department Vision & Mission statements

Department Vision:

Excellence in quality education by keeping pace with rapidly changing technologies and to create man power of global standards in the field of Electrical and Electronics Engineering

Department Mission:

To impart in-depth knowledge to students through inductive teaching and learning practices, so that they acquire the skill to innovate, excel and lead in their profession with values and ethics that will benefit society.

ii) Program Educational Objectives and Program Specific Outcomes

Program Educational Objectives

PEO 1: Graduates will acquire technical competence to analyze, design and solve engineering problems in the field of Electrical and Electronics engineering and use modern engineering tools, techniques and software.

PEO 2: Graduates will be able to acquire necessary skills and obtain employment and will be productive in the professional practice of Electrical and Electronics Engineering and related fields.

PEO 3: Graduates will be sensitive to professional and social contexts, committed to ethical action and engaged in lifelong learning skills.

Program Specific Outcomes.

EEE students will be able to design, analyze Power Systems & Electrical Machines to solve complex engineering problems.

EEE students will be able to design and analyze Electrical and Power Electronic Circuits.

EEE students will be able to use and apply modern software tools and techniques related to Electrical Engineering.

The BoS has reviewed and approved the Vision, Mission & PEOs, PSOs of the Department

iii) Statements of Course Outcomes

Course Outcomes are presented in the respective syllabi of the course.

The BoS has reviewed and approved the course outcomes.

3. Institute & Department Achievements

Chairman BoS presented the following points:

- The college is NAAC accredited with A++ grade.
- Autonomy of the college is extended for a period of 10 years i.e., up to Academic Year 2030-2031.
- Department is accredited for a period of three years by NBA from 2021-2024
- The following students of EEE has scored CAT ranks and admissions

  G.Meghana 1602-16-734-018 IIM Trichy (93.14 percentile)

  Ch.Ujwala 1602-18-734-053 IIM Bangalore (93.01 percentile)

  G.Likhit 1602-18-734-020 IIFT Kolkata (88.01 percentile)
- C. Surya Teja (1602-18-734-051) secured All India 629 GATE rank for the academic year 2021-22.
- Placement details of EEE students till date for the academic year 2021-22 are as follows
  - Gross Selection :92
  - Net Selection :51
  - % of Students Placed :89.47
- Department organized ATAL Faculty Development Program on "Artificial Intelligent Techniques Applied to Power Systems" during 13th -17th December 2021.
- Department has signed three MoUs with

- M/s. Solar Bull
- M/s. Sri Gayatri Energy Services
- M/s Varcas Pvt. Limited

- Varcas Pvt. Limited donated 1 EV scooter and entire test equipment worth Rs. 2.00 lakh.
- Department organized training program for IV, VI and VIII Semester students in substation operation, Protection and Switchgear items, Numerical relays, Animated DTR, Anatomy of three phase DTR featuring core etc., at Central Power Training Institute (CPTI)-TSSPDCL, Hyderabad on 26-04-2022,27-04-2022 and 06-05-2022.
- Department has developed
  - Demonstration of Zone Protection, Over/Under Voltage Protection, Over/Under Current Protection of transmission line using LabVIEW
  - Demonstration of Characteristics of IDMT and DMT Relays using LabVIEW
  - Implementation of 3phase converter logics with TMS320F2407
  - Implementation of Arduino Based Buk Chopper
- It is proposed to develop
  - Single phase Inverter
  - 4 leg inverter control logics
  - Variable frequency drive
  - Solar PV Inverter
  - 3 level Inveter
  - Grid Connected PV Inverter
  - 3 phase , Single Phase PWM Converter

The BoS has noted the achievements of the department.

4. **Discuss & review the following for the B.E. (EEE) students to be admitted during the academic year 2022-23 :**

BoS Chairman briefed on the following changes made in the curriculum for students to be admitted in the academic year 2022-23.

- Circuit Theory Course and Electrical Circuits Lab are moved to Semester I.
- Power System course is moved to Semester II.
- Electrical Measurements and Instrumentation Course and Lab is moved to Semester III.

BoS Chairman presented

i. Scheme of Instruction and Examinations from I to VIII semesters

ii. Syllabi for I & II semester courses

Members of BoS reviewed the scheme and syllabi of R22 regulations.

5. **Discuss & review the following for the B.E. (EEE) students admitted during the academic year 2021-22 :**

BoS Chairman presented

i. Scheme of Instruction and Examinations for III & IV semesters

ii. Syllabi for III & IV semester courses

Members of BoS reviewed the scheme and syllabi of R21 regulations.

6. **Discuss & review the following for the B.E. (EEE) students admitted during the academic year 2020-21:**

BoS Chairman presented

a. Scheme of instruction and examinations for V and VI semesters

b. Syllabi for V and VI semester courses

Members of BoS reviewed the scheme and syllabi of R20 regulations.

7. **Discuss & review the following for the B.E. (EEE) students admitted during the academic year 2019-20:**

BoS Chairman presented

a. Scheme of Instruction and Examinations for VII & VIII semesters

b. Syllabi for VII & VIII semester courses

Members of BoS reviewed the scheme and syllabi of R19 regulations.

8. **Discuss & review the following for the M.E.(PSPE) students to be admitted during the academic year 2022-23:**

BoS Chairman presented

a. Scheme of Instruction and Examinations from I to IV semesters

b. Syllabi for I & II semester courses

Members of BoS reviewed the scheme and syllabi of R22 regulations.

9. **Discuss & review the following for the M.E.(PSPE) students admitted during the academic year 2021-22:**

BoS Chairman presented

a. Scheme of Instruction and Examinations for III & IV semesters

b. Syllabi for III & IV semester courses

Members of BoS reviewed the scheme and syllabi of R21 regulations.

Dr. N. Vishwanatham

- Suggested to move Core-VI Power Electronic Converters of Semester II to Semester I and Core II- Applications of Power Electronics to power systems of semester I to semester II.

Dr.Ravikumar Bhimasingu Suggested

- To rename the Power system stability course title as Power System Dynamics & Control.
- To incorporate Bode Plot technique in Dynamic modelling of DC-DC Converters.

Mr.Srinath Topucharla

- Suggested to offer differential equations topic in bridge course for lateral entry students.

Department Advisory Committee advised to change the

- Title of Electric Drives and Static Control course to Electric Drives and Control.
- Title of Switched Mode Power Conversion course to Switched Mode Power Converters.

Board of studies also recommended to modify the course titles.

Syllabus Modifications:

Digital Signal Processing (M.Sreenivasulu)

S. No.	Type of change	Unit	Topics added / modified / deleted	COs mapped	POs mapped

1.	Addition	I	Zero input response and zero state response	2	1,2
2.	Deletion	V	multiplexing – general purpose I/O control registers.	-	-
3	Addition	V	DSP based control for brushless DC motor	5	2

Digital Signal Processing Lab(M.Sreenivasulu)

S. No.	Type of change	Experiments added / modified / deleted	COs mapped	POs mapped
1.	Addition	Demonstration of aliasing using LabVIEW	1	2
2.	Addition	Digital FIR filter design using LabVIEW	2	4
3	Addition	Generation of PWM pulses using code composer studio	3	4

Power Electronics (P.Rajasekhar Reddy)

S. No.	Type of change	Unit	Topics added / modified / deleted	COs mapped	POs mapped
1.	Addition	IV	Three phase bridge inverters with 180^0 and 120^0 modes of operation; voltage control of single phase inverters – Single pulse width modulation, multiple pulse width modulation, sinusoidal pulse width modulation.	2	1,2
2.	Addition	V	Bidirectional converter; Applications of power electronics.	5	1,2

Control Systems (Dr.Ch.V.S.S.Sailaja)

S. No.	Type of change	Unit	Topics added / modified / deleted	COs mapped	POs mapped	PSOs mapped

1.	Addition	I	Mathematical modelling of mechanical & Electrical Systems	1	1,2	2
2	Addition	II	Tuning of PID using Ziegler-Nichols rules for tuning PID Controllers .	2	1,2	2
3	Addition	III	Transfer function from Bode plot	3	1,2	2
4	Addition	IV	Gain margin , Phase margin	4	1,2	2

Control Systems & Simulation Lab : (Dr.Ch.V.S.S.Sailaja)

S. No.	Type of change	Experiments added / modified / deleted	COs mapped	POs mapped
1.	Addition	Step Response of first order and Second order system using LabVIEW	1	3,5
2.	Addition	Time response specifications using LabVIEW	1	
3	Addition	Stability analysis of control systems from Bode plot, Root locus, Nyquist Plot using LabVIEW	4	3,5
4	Addition	Water Level Control using LabVIEW	4	3,5
5	Addition	Effect of PID controller on dynamics of system using LabVIEW	2	3,5
6	Addition	Block diagram reduction using LabVIEW	4	3,5

Switchgear and Protection (Dr.Ch.V.S.S.Sailaja)

S. No.	Type of change	Unit	Topics added / modified / deleted	COs mapped	POs mapped
1.	Addition	III	Bus bar Protection	3	1,2

Power Systems Lab (Dr.C.Srinivasaratnam)

S.No	Experiment	CO mapping	PO Mapping
1	Zonal protection of Long transmission line using LABVIEW	2	1,2,5,12
2	Differential protection of single-phase Transformer using LABVIEW.	2	1,2,5,12

Electrical and Hybrid Vehicles(U.Elisha)

S. No.	Type of change	Unit	Topics added / modified / deleted	COs mapped	PO mapped
1.	Addition	I	Vehicle Dynamics Modelling and Simulation	1	1,2
2	Addition	V	Energy management system for EV's	5	1,2
3	Addition	V	Level-1, Level-2, Level-3 charging	5	1,2
4	Addition	V	BMS for EV's, BMS block representation, battery monitoring system for an EV	5	1,2

Electrical Machine Design(Dr.Ch.V.S.S.Sailaja)

S. No.	Type of change	Unit	Topics added / modified / deleted	COs mapped	PO mapped
1.	Addition	I	Quantity of cooling medium required	1	1,2

AI Applications to Power Systems (Dr.C.Srinivasaratnam)

S. No.	Type of change	Unit	Topics added / modified / deleted	COs mapped	POs mapped
1	Addition	I	Activation functions, Architecture of Neural networks: Types of learnings, Supervised Learning Algorithms: Hebb network, Perceptron model, Adaline model.	CO-1	1,3,4,12
2	Addition	II	Membership functions, Defuzzification methods: Max-Membership Principle, Centroid method, Weighted Average method, Mean-Max Membership, Centre of Largest areas, center of sums, First of Maxima, Last of Maxima.	CO-2	1,3,4,12
3	Addition	III	Numerical on GA.	CO-3	1,3,4,12
4	Addition	IV	Numerical on PSO, Numerical on Jaya	CO-4	1,3,4,12

BoS has reviewed the syllabus modification suggested by the faculty.

M. Chakravarthy

HoD EEE