

S.P.G.Chidambara Nadar - C.Nagammal Campus S.P.G.C.Nagar, K.Vellakulam - 625 701, (Near Virudhunagar), Madurai District.

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

Minutes of Meeting – 08th May, 2021

MINUTES OF THE 2nd ONLINE MEETING

BOARD OF STUDIES ELECTRICAL AND ELECTRONICS ENGINEERING

DATE: 08-05-2021 TIME: 10.30 am to 12.30 pm

Platform: Microsoft Teams

Meeting Link: shorturl.at/abAE7

IN ATTENDANCE:

S. No.	Name of the Expert	Designation	Capacity
1.	Dr. M. Saravanan	Professor Department of EEE Thiagarajar College of Engineering, Madurai.	AU Nominee
2.	Dr. Sishaj P Simon	Associate Professor Department of EEE National Institute of Technology, Trichy.	Academic Council nominated BoS
3.	Dr. S. Jeevananthan	Professor Department of EEE Pondicherry Engineering College, Pondicherry.	Members
4.	Dr. K. Janakiraman	Head – Technical M/s. OBO BETTERMANN India Pvt. Ltd., Chennai	Industrialist
5.	Er. R.V. Prathiba	Research Scholar Department of EEE Thiagarajar College of Engineering, Madurai.	Alumni



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S. No.	Name of the Faculty	Designation
1.	Dr. D. Prince Winston	Professor & Head / EEE Chairman, Board of Studies (EEE Board)
2.	Dr. S.Kalyani	Professor / EEE Dean (Examination)
3.	Dr. M. Sudalaimani	Assistant Professor / EEE
4.	Dr. S. Rajesh Babu	Assistant Professor / EEE
5.	Dr. J. Jeslin Drusila Nesamalar	Assistant Professor / EEE
6.	Mrs. B. Noorul Hamitha	Assistant Professor / EEE
7.	Mrs. V. Chandra	Assistant Professor / EEE
8.	Mr. B. Guru Karthik Babu	Assistant Professor / EEE
9.	Mr. A. Azarudeen	Assistant Professor / EEE
10.	Mr. D. Mariappan	Assistant Professor / EEE
11.	Mr. K. Ganesan	Assistant Professor / EEE
12.	Mr. S. Jegan	Assistant Professor / EEE
13.	Mrs. S. Vimala Devi	Assistant Professor / EEE
14.	Mrs. C. Nagadevi	Assistant Professor / EEE
15.	Mr. A. Karthikeyan	Assistant Professor / EEE
16.	Mr. R. Ganesan	Assistant Professor / EEE
17.	Ms. R. Reenu	Assistant Professor / EEE
18.	Mr. T. Hari Prasath	Assistant Professor / EEE



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THE MINUTES:

The meeting is called for considering the Undergraduate curriculum & syllabi in R2020 Regulations.

DISCUSSIONS:

- The meeting started in online mode in Microsoft Teams platform at 10.00am.
 Dr. D. Prince Winston, Professor & Head / EEE gave a warm cordial welcome to all the members of the Board of Studies.
- 2. **Dr. D. Prince Winston**, Professor & Head / EEE presented minutes of meeting and action taken report of 1st BoS Meeting held on 05th August 2020 to the experts.
- 3. **Dr. D. Prince Winston,** Professor / EEE presented the UG curriculum with detailed syllabi for semester 3 & 4.
- 4. **Dr. S. Kalyani,** Professor / EEE & Dean (Examination) presented the UG curriculum with detailed syllabi for semester 5 & 6.
- 5. **Dr. M. Sudalaimani,** Assistant Professor / EEE presented the UG curriculum with detailed syllabi for semester 7 & 8.
- 6. **Dr. J. Jeslin Drusila Nesamalar,** Assistant Professor / EEE presented the UG curriculum with detailed syllabi for professional elective courses 1 & 2.
- 7. **Dr. S. Rajesh Babu,** Assistant Professor / EEE presented the UG curriculum with detailed syllabi for professional elective courses 3 & 4.



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8. Suggestions given by Experts for each UG course based on syllabus presented follows herein

S. No.	Name of the Course	Comments	Modification / Justification
1.	Electron Devices and Circuits	 Dr. S. Jeevananthan & Dr. M. Saravanan suggested that title of Unit 1 can be changed as "Semiconductor diodes and applications" and the topic UJT in Unit 1 can be moved to Unit 2 Dr. S. Jeevananthan suggested that design of amplifiers for any particular application with one case study can be given. Dr. M. Saravanan suggested that type of FET amplifier and power amplifier can be specified in particular as mentioned in BJT like CC, CE, CB. Dr. Sishaj P Simon enquired about the allocation of credits and total periods allotted. 	 Modifications made for all suggestions given by the experts Title of Unit 1 changed as "Semiconductor diodes and its applications" UJT characteristics and application as relaxation oscillator, moved to unit 2. design of single stage RC coupled amplifier using BJT added. Changed as Small signal analysis CS and CD configuration of FET amplifier instead of Small signal analysis of FET amplifier.



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S. No.	Name of the Course	Comments	Modification / Justification
2.	DC Machines and Transformers	 Dr. K. Janakiraman suggested to include the practical applications of machines / transformers used in industries wherever necessary. Dr. S. Jeevananthan enquired whether by excluding unit 2 will be there any difficulty in learning other units. Also he enquired whether the allotted 12 hours will be sufficient for unit 3. Dr. M. Saravanan & Dr. Sishaj P Simon suggested that topics like Auto transformer and 3-phase transformer can be kept in a separate unit, as Unit 3 seems to be more heavy. 	 As per the suggestion, the changes are incorporated in the latest syllabus. Concepts in Rotating Machines and Introduction of Transformers has been merged as Unit 2. In the revised syllabus, the allotted hours will be sufficient for all units.
3.	Power Plant Engineering	• Dr. K. Janakiraman suggested that Design of 1 kW and 1 MW solar plant can be included in unit 4.	Design of l kW and 1 MW solar plant is included in unit 4
4.	Transmission and Distribution	• Dr. M. Saravanan suggested that Synchronous condenser in unit 5 can be removed as it is not used nowadays in practical applications.	• The topic Synchronous condenser in unit 5 is removed.



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S. No.	Name of the Course	Comments	Modification / Justification
5.	Electronic Devices and Circuits Laboratory	• Dr. M. Saravanan & Dr. Sishaj P Simon suggested the title of all experiments should be generalized and any specific instrument / kit need be mentioned in the title of the experiment.	Removed the instrument company name in Ex.1
6.	Listening & Speaking	• Dr. Sishaj P Simon, Dr. M. Saravanan & Dr. K. Janakiraman suggested that title of the course is not professional and it can be modified in consultation with the HoD / English.	The title has been changed as "Interpersonal Skills - Listening and Speaking"
7.	AC Machines	Dr. M. Saravanan suggested that pole changing and cascade connections can be removed from unit IV as they are not used much nowadays.	As per the suggestion, the topics were removed



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S. No.	Name of the Course	Comments	Modification / Justification
8.	Linear and Digital Integrated Circuits	 Dr. S. Jeevananthan suggested that in unit 1 topics related to IC fabrication can be mentioned in detail by including sub-topics for better clarity. Dr. S. Jeevananthan and Dr. Sishaj P Simon suggested that in unit 2 the introduction of Op-amp can be included before Op-amp characteristics. It is suggested that the title of unit 5 need to be changed as Design and Analysis of Synchronous and Asynchronous Sequential circuits. 	 As per the suggestion it the fabrication of diodes, capacitors, transistors and resistors topic will be mentioned clearly Unit 2 will be renamed as Op-amp characteristics Unit 5 will be changed as Design and Analysis of Synchronous and Asynchronous Sequential circuits
9.	Measurements and Instrumentation	• Dr. M. Saravanan suggested that in unit 3 the topic magnetic tape can be removed.	 Magnetic Tape Recorder is one of a old technology no one is using currently so it is removed.



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S. No.	Name of the Course	Comments	Modification / Justification
10.	Linear and Digital Integrated Circuits Laboratory	 Dr. M. Saravanan suggested In title of exp. 1, instead of amplifier circuits, various circuits can be mentioned as all are not amplifiers. The instrument name to be removed in title of Exp. 2 The types of waveforms which will be generated to be mentioned in Exp. 5. The Special ICs used in Exp. 6 to be mentioned explicitly. 	 The name of the amplifier circuit will be mentioned The Texas instruments name will be removed Name of the waveforms will be mentioned Special ICs name will be mentioned.



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S. No.	Name of the Course	Comments	Modification / Justification
11.	AC Machines Laboratory	 Dr. M. Saravanan suggested that 1-phase and/or 3-phase machine is used can be mentioned wherever applicable in all experiements. Er. R. V. Prathiba suggested that practice on simulation software to carry out the experiments can be given to students in laboratories, wherever possible. Dr. S. Jeevananthan suggested that full working videos of doing the experiment can be recorded in the lab with the help of faculty / lab instructors and the same can be sent to students for better understanding 	 As per the suggestion, the corrections were done Simulation based experiments, video recordings can be added in the content beyond syllabus
12.	Advanced Reading and Writing	 Dr. Sishaj P Simon & Dr. M.Saravanan suggested that the title of the course can be renamed suitably to be more professional. 	• The title has been changed as "Introduction to Advanced Reading and Writing"



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S. No.	Name of the Course	Comments	Modification / Justification
13.	Microprocessors and Microcontrollers	 Dr. M. Saravanan & Dr. Sishaj P Simon suggested In Unit 4 peripheral Interface ICs can be removed as they are not used nowadays. Embedded C programing (parallel port, serial port and timer etc.) of 8051 microcontroller can be included. In unit 5, key board and display interface can be removed and microcontroller applications can be included. 	 As the course is common for EEE and EIE syllabus was framed as per the anna university regulation 2017. The course relates with laboratory however fundamental concepts were essential. In unit 5 key board and display interface were removed. In unit 5 Introduction to Embedded C Programming is included.
14.	Control and Instrumentation Laboratory	 Dr. Sishaj P Simon suggested that open source software packages such as SCILAB is available as an alternative to MATLAB. Hence, he suggested not to mention the name of any specific software in experiment titles. Dr. M. Saravanan asked to check the terms about the sensor or sensors (if multiple sensors are used) and machine or machines and change accordingly. 	 As per the suggestions, the corrections were done. Instead of specifying MATLAB software, it was mentioned generally as 'suitable software package'. The spelling mistake was corrected.



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S. No.	Name of the Course	Comments	Modification / Justification
15.	Microprocessors and Microcontrollers Laboratory	 Dr. M. Saravanan suggested that Peripheral Interface ICs experiments can be removed. Experiments regarding 8051 assembly and embedded C program can be added. Title of the exp.12 can be changed as "Hardware development for any application using embedded processor". 	 To have practical knowledge on interfacing concepts the experiments were included. Experiments related with embedded C programs were added. Title of the experiment 12 is modified.
16.	Digital Signal Processing	 Dr. M. Saravanan suggested that in unit 5 introduction to commercial DSP processors can be given instead of introduction to commercial processors 	• As per the suggestion, the corrections were done



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17.	Power Electronics and Drives	 Dr. Sishaj P Simon & Dr. M. Saravanan asked to correct the spelling in the title of the course. Dr. M. Saravanan suggested that In Unit 2 content is heavy and can be reduced. In Unit 3 only 1-phase cyclo-converter is sufficient. In Unit 5 introduction to vector control of induction motor (at block diagram level) can be included. 	Modified as per the suggestions. Subject to the approval by the Subject Expert Dr. D. Prince Winston.
18.	Renewable Energy Systems	 Dr. Sishaj P Simon clarified whether this course deals with RE sources or RE systems. Dr. Sishaj P Simon asked to check is there any repetition of topics in comparison with Power Plant engineering course offered in Semester 3. 	This course deals with RE Systems and RE Sources are discussed in Power Plant Engineering. There is no repetition of topics in Power Plant Engineering.



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S. No.	Name of the Course	Comments	Modification / Justification
19.	Power Electronics and Drives Laboratory	 Dr. M. Saravanan suggested that exp. 1 should be changed as Gate Pulse Generation using R, RC and UJT triggering circuit. Exp. 4 & 10 can be renamed as speed control instead of characteristics. 1-phase and/or 3-phase can be mentioned wherever applicable. In exp.5 AC to DC can be removed and renamed accordingly. 	 Modified as per the suggestions. Subject to the approval by the Subject Expert Dr. D. Prince Winston.
20.	Power System Operation and Control	Dr. Sishaj P Simon suggested that in unit 5 "some basic state estimator" can be removed as it is found repetitive.	As per the suggestion, the topic "some basic state estimator" was removed from UNIT V
21.	Power System Simulation Laboratory	Dr. Sishaj P Simon suggested that open source software can be used for the simulation experiments and name of any specific software need not be mentioned in any experiment.	 Every circuit open-source software and application is available for the simulation of power system experiments. Name of the software is not mentioned anywhere in the list of experiments



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22.	Mini Project	Dr. Sishaj P Simon and Dr. M. Saravanan suggested to mention the batch size for each group as 3 to 4. This will confirm the equal contribution by the students.	Modification done as per comment
23.	Advanced Control Systems	• Dr. M. Saravanan asked to check the alignment and formatting.	• The formatting was done.
24.	Fundamentals of IoT	 Dr. Sishaj P Simon and Dr. M. Saravanan suggested to change the title as "Internet of Things & its Applications" Dr. M. Saravanan suggested to include the recent editions in the reference books. 	Changes done as per the comments
25.	Smart Grid	 Dr. Sishaj P Simon suggested to move the course to semester 7 as it requires some prerequisite knowledge on power system related courses. Dr. Sishaj P Simon suggested to remove PMU in unit 4 and to include Demand Response Management in unit 3. 	 PMU topic Removed in unit IV Added Demand Response Management in Unit 3
26.	Design of Electrical Apparatus	Dr. M. Saravanan asked to change KVA to kVA in Unit-II.	The correction was made as per the suggestion



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S. No.	Name of the Course	Comments	Modification / Justification
27.	Electric Vehicles and Management	 Dr. M. Saravanan & Dr. Sishaj P Simon suggested to include V2G and G2V concepts in unit 5. The title can be made as electric vehicles or electric vehicles and energy management. 	 Modified as per the suggestions. Subject to the approval by the Subject Expert Dr. D. Prince Winston.
28.	Restructured Power Systems	• Dr. Sishaj P Simon suggested that Unit commitment in restructuring (profit based or price based) can be included.	The correction was made as per the suggestion
29.	Machine Learning Algorithm for Electrical Engineering	 Dr. Sishaj P Simon suggested that references can be mentioned in detail including the edition, publishers etc. 	 The correction was made as per the suggestion. One book has been added.
30.	Modern Power Converters	 Dr. M. Saravanan asked to change the title of unit 1 and the topic power system harmonics can be removed. The relevance of reference books included need to be checked. 	•
31.	Energy Storage Technology	Dr. Sishaj P Simon & Dr. M. Saravanan suggested that compressed air technologies can be included in unit 1 or wherever applicable.	Compressed air storage technology will be included in the first unit



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S. No.	Name of the Course	Comments	Modification / Justification
32.	High Voltage Engineering	Dr. M. Saravanan suggested that AC / DC high voltage system available in our country can be added as a case study or introduction.	As per the suggestion, the topics were included
33.	Industrial Automation	Dr. Sishaj P Simon & Dr. M. Saravanan suggested that in unit 4 study of any one DCS available in market could be specifically mentioned. (Ex. Siemens DCS) or case study on commercial DCS.	 As per the suggestion, the topic has been included Also the title has been changed as "Introduction to Industrial Automation"
34.	Power Electronics for Renewable Energy System	Dr. M. Saravanan suggested whether three-phase AC voltage controllers in unit 3 is necessary to be included.	Three-phase AC voltage controllers needed in wind energy system because the basic of bidirectional control were covered in that topic.
35.	Fundamentals of Nanoscience	• Dr. S. Jeevananthan asked to change the title of the course	The title has been changed to "Nano Technology"

9. **Dr. S. Kalyani, Professor / EEE & Dean (Examination)** presented the three member committee list for online courses (mandatory for 6 credits for each student), value added courses (optional) and industrial internship (optional) for the approval of BoS members. She also explained in detail about the process followed for approving the students' performance in such courses. The external BoS members approved the three member committee list.



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- 10. **Dr. S. Kalyani, Professor / EEE & Dean (Examination)** presented the list of panel members for staff selection and examination process. Dr. M. Saravanan suggested to include Dr. Sishaj P Simon and Dr. S. Jeevananthan in that list for staff selection.
- 11. The report on the university result analysis was presented. Dr. Sishaj P Simon & Dr. M. Saravanan commented on the result of 2nd year as the pass percentage is 42% and requested to give more care and concern for II year students to improve their performance in the upcoming examinations.
- 12. The external BoS members asked the HoD / EEE to send the Open elective courses, Value added courses and other documents through online for their approval.
- 13. <u>Date of next meeting:</u> The next meeting will be held after 6 months. (Tentatively, 3rd week of January, 2022).
- 14. **Dr. S. Kalyani, Professor / EEE & Dean (Examination)** proposed the vote of thanks to all the external and internal experts and the meeting adjourned.