MINUTES OF THE MEETING

Name of the meeting

: Board of Studies Meeting (Online via Google meet), ECE Department

Date of the meeting

04th July 2020

Time Duration 10.30 A.M 3 Hours

The following points were discussed:

1. Detailed Syllabi, based on CDIO framework, for Humanities and Social Science Course of B.E (ECE) programme for the students admitted from the Academic year 2018-19 onwards.

2. Detailed Syllabi, based on CDIO framework, for Engineering Science Courses of B.E (ECE) programme for the students admitted from the Academic

year 2018-19 onwards.

3. Detailed Syllabi, based on CDIO framework, for Core Course of B.E (ECE) programme for the students admitted from the Academic year 2018-19 onwards.

4. Detailed Syllabi, based on CDIO framework, for Elective courses of B.E (ECE) programme for the students admitted from the Academic year 2018-19

onwards.

5. Detailed Syllabi, based on CDIO framework, for Engineering Sciences Elective courses of B.E (ECE) programme for the students admitted from the Academic year 2018-19 onwards. These courses are also offered as Engineering Sciences Elective for other B.E/B.Tech programme.

6. Revised Syllabi of 18CN121 Cellular Wireless Networks, a Core Course of M.E (Communication Systems) programme for the students admitted from the

Academic year 2020-21 onwards.

7. Categorization of courses in Choice Based Credit System (CBCS) for B. E (ECE) programme for the students admitted from the Academic year 2018-19 onwards.

8. Scheduling of courses, Courses of Study, and Scheme of Examination for B. E (ECE) programme for the students admitted from the Academic year

2018-19 onwards.

9. Revised Prerequisites for courses of B. E (ECE) programme for the students admitted from the Academic year 2018-19 onwards.

10. Any other matter.

Attended by:

Chairman, Board of Studies (ECE) / Professor and Head of ECE Department, TCE. Madurai Dr.S.Rajaram

Professor, Department of EE, Indian Institute of Technology Madras Dr. Balaji Srinivasan

Professor, Department of Electronics Engineering, Madras Institute of Technology. Chennai Dr.M.Ganesh Madhan

Professor, Department of ECE, National Institute of Technology Trichy Dr.D.Sriram Kumar

Director and CTO, MMRFIC Technology Pvt. Ltd., Bengaluru Dr. T. Ganesan

General Manager, Siemens Ltd., Bangalore Dr.S.Manivannan

Sr. Project Leader, Jasmine InfoTech Pvt. Ltd., Chennai Mr.P.Chinnadurai

Project Manager, Thiagarajar Telekom Solutions Ltd., Madurai Dr. S. Deepak Ram Prasath

Faculty Members:

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2. Dr.B.Manimegalai

3. Dr.R.A.Alagu Raja

4. Dr.S.Kanthamani

5. Dr.K.Hariharan

6. Dr M.S.K. Manikandan

7. Dr A. Banumathi

8. Dr B. Yogameena

9. Dr B. Sathyabama

10. Dr.M.N.Suresh

11. Dr K. Rajeswari

12. Dr N.B. Balamurugan

13. Dr.S.Ponmalar

14. Dr.V.Vinoth Thyagarajan

15. Dr G. Ananthi

16. Dr E. Murugavalli

17. Dr.V.N.Senthilkumaran

18. Dr.K.Vasudevan

19. Dr.D.Gracia Nirmala Rani

20. Dr P.G.S. Velmurugan

21. Dr.V.R. Venkatasubramani

22. Mr M.Senthilnathan

23. Mr.B.Brucelee

Professor, ECE and Dean (Academic Process)

Professor

Assistant Professor

Associate Professor

Associate Professor

Associate Professor

Associate Professor

Associate Professor

Associate Professor

Assistant Professor

Assistant Professor

Associate Professor

Assistant Professor

Assistant Professor

Assistant Professor

Assistant Professor/Mechanical Department

#	Points Discussed	Action Plan	Responsibility	Target date
1.	Agenda of the Meeting	Dr.S.Rajaram welcomed the members of the Board of studies and presented the Agenda of the meeting. Dr.V.R.Venkatasubramani displayed the statement of Vision, Mission, Programme Educational Objectives, Programme Outcomes, Programme Specific Outcomes of the B.E (ECE) programme Dr.V.R.Venkatasubramani presented the Scheduling of Courses highlighting the courses to be passed in this BoS meeting.		-
2.	18EC610 Accounting and Finance	 Mr.B.Brucelee presented the course and the syllabus has been passed for approval in Academic council meeting. The following changes are suggested: Taxes such as VAT and GST can be included. Also, standard accounting software such as Tally can be included in the syllabus. Latest books can be added to the learning resources. This course is a common course for all Engineering departments. Hence final decision shall be taken considering the BoS meeting comments from all the departments. 	Mr.B.Brucelee	09.07.20
3.	18EC630 Data Structures and Algorithms	Dr.S.Ponmalar presented the course and the syllabus has been passed for approval in Academic council meeting. The following changes are suggested: • Can be little oriented towards data science by including Big data and Parallel Computing. • Can include applications to handle unstructured data – Text and Image.	Dr.S.Ponmalar	09.07.20
4.	18EC670 Data Structures and Algorithms Laboratory	Dr.S.Ponmalar presented the course and the syllabus has been passed for approval in Academic council meeting. The following changes are suggested: OOPS Concepts with C++ is alright. Python is also preferable. The theory should sync with laboratory activities.	Dr.S.Ponmalar	09.07.20

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5.	18EC660 Digital Communication Transceiver	 Dr.M.N.Suresh presented the course and the syllabus has been passed for approval in Academic council meeting. The following changes are suggested: The title can be changed as "Digital Communication System Design". Modeling of wireline channels and the channel effects simulation can be implemented in the Laboratory classes. Learning resources can include a book titled "The Physical Layer of Communication Systems" by Richard A Thompson, David Tipper, Joseph Kabara, Prashant Krishnamurthy, Noise analysis and simulation part is explained well in this book. Multiplicative noise analysis can be included in the syllabus. Learning resources can include a book titled "Digital Communications" by Bernard Sklar. Noise analysis part can be simulated using MATLAB in laboratory classes. Voice, video analysis part may be implemented in Laboratory sessions using 	Dr.M.N.Suresh	09.07.20
6.	18ECPL0 Medical Imaging and Processing	 hardware. Dr.A.Banumathi presented the course and the syllabus has been passed for approval in Academic council meeting. The following changes are suggested: Acquisition portion may be reduced and instead, the processing portion can be increased. Specifically, MRI topic can be reduced and details on processing part can be increased. Can include grated images in the syllabus. Can limit the classifier to the application level Can give more emphasis on practical aspects of challenges in medical image processing. Algorithms run towards networks. Therefore, more focus on 	Dr.A.Banumathi	09.07.20
7	18ECPM0 Planar Antennas for Wireless Applications	Segmentation can be given. Dr.B.Manimegalai presented the course and the syllabus has been passed for approval in Academic council meeting. The following changes are suggested: The syllabus may start with the applications -system-level perspective and standards, antenna requirements and practical aspects of challenges. Software-based practical simulations and case studies can be included in assignments. Topics such as Radar, patch arrays, phased array antenna, antennas for health care applications can be included in the syllabus.	Dr.B.Manimegalai	09.07.20

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8.	18ECPN0 Electromagnetic Interference and Compatibility	 Dr.K.Vasudevan presented the course and the syllabus has been passed for approval in Academic council meeting. The following changes are suggested: Include EMC standards, Civilian and Military EMC standards. Include standard EMC test procedures in the Test and Measurement section. Include topics that specify the importance of EMC standards. Remove topics like anechoic chamber, TEM/GTEM, reverberation chamber – as they are already covered in the Antennas and Wave Propagation course. Upfront the course should start with Historical background, World famous events, Relevant interesting facts and Practical aspects of challenges to gather the attention of the students. Prof Pandey's technical resource materials may be utilized for this purpose. 	Dr.K.Vasudevan	09.07.20
9.	18ECPP0 RF MEMS Design and Technology	Dr.S.Kanthamani presented the course and the syllabus has been passed for approval in Academic council meeting. The following changes are suggested: • 3-D printing topic may be included. • Three different software are being exposed to students. Can reduce the number of software exposure.	Dr.S.Kanthamani	09.07.20
10.	18ECPQ0 Random Signal Processing	Dr.M.N.Suresh presented the course and the syllabus has been passed for approval in Academic council meeting. The following changes are suggested: The title of the course can be changed as "Statistical Signal Processing" Learning resources can include a book titled "Introduction to Signal Processing" by Sophocles J Orfanidis. More learning resource on Detection and estimation can be included.	Dr.M.N.Suresh	09.07.20
11.	18ECPR0 Polar Codes	Dr.V.N.Senthilkumaran presented the course and the syllabus has been passed for approval in Academic council meeting. The following changes are suggested: The underlying mathematics has to be taught to students, upfront. Types of Decoding" can be mentioned in a detailed manner.	Dr.V.N.Senthilkumaran	09.07.20
12.	18ECPS0 Physical Layer in 5G New Radio	Dr.G.Ananthi presented the course and the syllabus has been passed for approval in Academic council meeting. The following changes are suggested: Title of the course can be changed as "Physical Layer Processing in 5G NR"	Dr.G.Ananthi	09.07.20
13.	18ECPT0 Deep Learning For Speech Processing	 Dr.K.Rajeswari presented the course and the syllabus has been passed for approval in Academic council meeting. The following changes are suggested: Can focus more on Applications of Deep Learning. Examples such as Alexa open sources can be included RTL for speech processing can be included. Can remove reinforcement learning algorithms. Can include "End to End speech recognition". 	Dr.K.Rajeswari	09.07.20

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14.	18ECPU0 Nano-Scale Device Modeling	Dr.N.B.Balamurugan presented the course and the syllabus has been passed for approval in Academic council meeting. The following changes are suggested: • Title of the course can be changed as "VLSI Device Modeling".	Dr.N.B.Balamurugan	09.07.20
15.	18ECPV0 Low Power CMOS VLSI System	Dr.V.Vinoth Thyagarajan presented the course and the syllabus has been passed for approval in Academic council meeting without change.	-	-
16.	18ECPW0 CAD for VLSI	Dr.D.Gracia Nirmala Rani presented the course and the syllabus has been passed for approval in Academic council meeting without change.		-
17.	18ECPY0 ASIC Design	Dr.V.R.Venkatasubramani presented the course and the syllabus has been passed for approval in Academic council meeting without change.	-	- 00.07.20
18.	18ECPZ0 Design of IoT Frame Work	Dr.K.Hariharan presented the course and the syllabus has been passed for approval in Academic council meeting. The following changes are suggested: Can include sensors and actuators in the syllabus. Can include topics on AWS, IBM Cloud and Google cloud in the syllabus. Title of the course can be changed as "IoT System and Applications". Can include topics on IoE and IoM. Can remove topics on ADC and DAC.	Dr.K.Hariharan	09.07.20
19.	18ECRA0 Real-Time Embedded Systems	Dr.K.Hariharan presented the course and the syllabus has been passed for approval in Academic council meeting. • Can include topics on GPU and instead remove topics on timers and counters.	Dr.K.Hariharan	09.07.20
20.	18ECRB0 Adhoc and Sensor Networks	Dr.M.S.K.Manikandan presented the course and the syllabus has been passed for approval in Academic council meeting without change.	-	-
21.	18ECEA0 MEMS Technology	Dr.S.Kanthamani presented the course and the syllabus has been passed for approval in Academic council meeting. The following changes are suggested: Necessary steps should be taken such that the ECE students who have chosen/taken "RF MEMS and Technology" elective course should not be offered "18ECEA0 MEMS Technology" course from the engineering sciences elective category. The idea is to prevent duplication in the courses, they study.	Dr.S.Kanthamani	09.07.20
22.	18ECEB0 Machine Learning for All	 Dr.P.G.S.Velmurugan presented the course and the syllabus has been passed for approval in Academic council meeting. The following changes are suggested: The title of the course can be changed as "Fundamentals of Machine Learning". Topics on Clustering, Supervised, Unsupervised and Reinforcement learning can be included in the syllabus More simulation topics can be included. 	Dr.P.G.S.Velmurugan	09.07.20

#	Points Discussed	Department of Electronics and Communication Engineering Action Plan	Responsibility	Target date
23.	18ECEC0 IoT Sensors and Device	Mr.M.Senthilnathan presented the course and the syllabus has been passed for approval in Academic council meeting. The following changes are suggested: • The content of the syllabus has to be reduced.	Mr.M.Senthilnathan	09.07.20
24.	18ECED0 Blockchain Technology	Dr.E.Murugavalli presented the course and the syllabus has been passed for approval in Academic council meeting without change.	-	-
25.	18ECEE0 5G Wireless Networks	Dr.M.S.K.Manikandan presented the course and the syllabus has been passed for approval in Academic council meeting without change.	÷	-
26.	18CN131 Wireless Cellular Networks	Dr.M.S.K.Manikandan presented the course and the Revised syllabus has been passed for approval in Academic council meeting. This course was revised as per course teacher/facilitator feedback. Physical layer aspects of 5G, such as like 5G Channel Model / Capacity analysis of Massive MIMO / Sectorization in Cell deployment, have to be reduced.		<u>-</u>
27.	18ES590 System Thinking	Dr.S.J.Thiurvengadam presented the course and the syllabus has been passed for approval in Academic council meeting. The following changes are suggested: • The title of the course can be changed as "System Engineering". This course is a common course for all Engineering departments. Hence final decision shall be taken considering the BoS meeting comments from all the departments.	Dr.S.J.Thiurvengadam	09.07.20
28.	18CHAC0 Essence of Indian Knowledge (Mandatory Non-credit course)	Dr.V.R.Venkatasubramani presented the course and the syllabus has been passed for approval in Academic council meeting without change.		•
29.		Revised Prerequisites, for courses of B. E (ECE) programme for the students admitted from the Academic year 2018-19 onwards, has been passed for approval in Academic council meeting without change.	- 	property and the
30.	General Recommendation	All the courses should start with Historical background, World famous events, Relevant interesting facts and Practical aspects of challenges to gather the attention of the students. As far as possible, course titles should be chosen such that it attracts students and adds more value to them.	•	. o. 1 o. 10 • 04 o. 1

Prepared by Prepare Souther Date: 10.07.2020 (Dr.V.R.Venkatasubramani)

(HoD/ECE)

This Board of Studies Meeting is conducted online and hence the member signatures are not present.