

**THIAGARAJAR COLLEGE OF ENGINEERING, MADURAI 625 015**  
**Department of Electronics and Communication Engineering**  
**MINUTES OF THE MEETING**

Name of the meeting : Board of Studies Meeting, ECE Department  
Date of the meeting : 08.12.2018  
Time : 10.30 A.M  
Duration : 3 Hours  
Venue : ECE Seminar Hall, Thiagarajar College of Engineering, Madurai

The following points were discussed:

1. Scheduling of courses, based on CDIO framework, for B. E (ECE) programme for the students admitted from the Academic year 2018-19 onwards.
2. Detailed Syllabi, based on CDIO framework, for courses of II Semester B.E (ECE) programme for the students admitted from the Academic year 2018-19 onwards.
3. 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.
4. New courses in M.E. (Communication Systems) and M.E. (Wireless Technologies) programme for the students admitted from the Academic year 2018-19 onwards.
5. Any other matter

**Attended by:**

Dr.S.J.Thiruvengadam	Chairman, Board of Studies (ECE) / Head of ECE Department, TCE, Madurai	<i>S.J. Thiruvengadam</i>
Dr. Balaji Srinivasan	<del>Associate</del> Professor, Department of EE, Indian Institute of Technology Madras	<i>Chg.</i>
Dr.M.Ganesh Madhan	Professor, Department of Electronics Engineering, Madras Institute of Technology, Chennai	<i>M. Gan</i>
Dr.D.Sriram Kumar	Professor, Department of ECE, National Institute of Technology Trichy	<i>D. Sriram</i>
<i>Dr.</i> Mr.S.Manivannan	<del>Deputy</del> General Manager, Siemens Ltd., Bangalore	<i>S. Manivannan</i> 8/12/2018
Dr.M.Bama	Staff Engineer, Qualcomm Ltd., Chennai	<i>M. Bama</i>

THIAGARAJAR COLLEGE OF ENGINEERING, MADURAI 625 015  
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Faculty Members:

1. Dr.V.Abhaikumar	Professor and Principal	— ABSENT
2. Dr. S. Raju	Professor and Dean (Industry Interface)	— ABSENT
3. Dr. S. Rajaram	Associate Professor	SB
4. Dr. S. Md. Mansoor Roomi	Assistant Professor	— ABSENT
5. Dr. B. Manimegalai	Assistant Professor	Manimegalai
6. Dr.R.A.Alagu Raja	Assistant Professor	rs.alagi.
7. Dr. T. Aruna	Assistant Professor	T. Aruna
8. Dr.S.Kanthamani	Associate Professor	— ABSENT
9. Dr.K.Hariharan	Associate Professor	K.Hariharan
10. Dr. M.S.K. Manikandan	Associate Professor	M.S.K. Manikandan
11. Dr. A. Banumathi	Associate Professor	— ABSENT
12. Dr. A. Thenmozhi	Associate Professor	— ABSENT
13. Dr. B. Yogameena	Associate Professor	B. Yogameena
14. Dr. B. Sathyabama	Associate Professor	B. Sathyabama.
15. Dr.M.N.Suresh	Assistant Professor	M.N. Suresh
16. Dr. K. Rajeswari	Assistant Professor	K.Rajeswari
17. Dr. N.B. Balamurugan	Associate Professor	N.B. Balamurugan

THIAGARAJAR COLLEGE OF ENGINEERING, MADURAI 625 015  
Department of Electronics and Communication Engineering

18. Dr.V.Vinoth Thyagarajan	Assistant Professor	<i>V. Vinoth</i>
19. Dr.S.Ponmalar	Assistant Professor	<i>S. Ponmalar</i>
20. Dr. G. Ananthi	Assistant Professor	<i>G. Ananthi</i>
21. Dr. E. Murugavalli	Assistant Professor	<i>E. Murugavalli</i>
22. Dr.V.N.Senthilkumar	Assistant Professor	<i>V.N. Senthilkumar</i>
23. Dr.K. Vasudevan	Assistant Professor	<i>K. Vasudevan</i>
24. Dr.D. Gracia Nirmala Rani	Assistant Professor	<i>D. Gracia Nirmala Rani</i>
25. Dr. P.G.S. Velmurugan	Assistant Professor	<i>P.G.S. Velmurugan</i>
26. Dr.V.R. Venkatasubramani	Assistant Professor	<i>V.R. Venkatasubramani</i>
27. Dr. K. Kalyani	Assistant Professor	<i>K. Kalyani</i>
28. Mr.M.Senthilnathan	Assistant Professor	- ABSENT
29. Dr. CS Senthilkumar	Assistant Professor/Mathematics	<i>CS. Senthilkumar</i>
30. Dr.R.Suresh	Assistant Professor/Mathematics	
31. Dr.M.Kottaisamy	Professor and Head/ Chemistry	<i>M. Kottaisamy</i>
32. Mr.T.Manichandran	Assistant Professor/Physics	<i>T. Manichandran</i>

**THIAGARAJAR COLLEGE OF ENGINEERING, MADURAI 625 015**  
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#	Points Discussed	Action Plan	Responsibility	Target date
1.	Credit Distribution, Categorization of Courses, Scheduling of Courses, Courses of Study, and Scheme of Examinations	<p>Dr.S.J.Thiruvengadam welcomed the members of the Board of studies and presented the Agenda of the meeting followed by Credit Distribution adhering to AICTE/UGC guidelines and Scheduling of Courses for B.E. ECE Programme for the students admitted in the academic year 2018-19 onwards. The following recommendations are suggested:</p> <ul style="list-style-type: none"> <li>• Minimum credit limit for Foundation course can be relaxed so that students can have freedom to choose programme specific electives instead of foundation elective.</li> <li>• Foundation elective should be really foundational. Advanced courses can be called by appropriate name such as Allied courses etc.</li> <li>• Can introduce audit course with mandatory attendance.</li> <li>• The curriculum should contain comparatively less number of courses, each with more credits.</li> <li>• Electromagnetics in the first semester is too early. This course requires Vector Calculus (curl, divergence) background. Hence, this course can be offered in second semester and instead Network theory can be shifted to first semester.</li> <li>• "Programming for Problem Solving" and "Programming and Coding Lab" should cover "Python and C#" or "Python and Java".</li> <li>• A Curriculum Concept Map has to be developed to show the connectivity of courses. This will help the students to understand the interconnection of courses in the curriculum structure.</li> </ul>	Dr.S.J.Thiruvengadam	16.12.18

**THIAGARAJAR COLLEGE OF ENGINEERING, MADURAI 625 015**  
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#	Points Discussed	Action Plan	Responsibility	Target date
2.	18MA210: Matrices and Ordinary Differential Equations	<p>Dr.C.S.Senthikumar presented the course and the syllabus has been passed for approval in Academic council meeting. The following changes are suggested:</p> <ul style="list-style-type: none"> <li>• Mathematics courses should cover Partial Differentiation, Probability, Liner Algebra, Complex analysis, Matrices, Vector calculus, Optimization, Fourier Transform and Z-Transform. Probability can be covered in 3<sup>rd</sup> semester. Subsequently, Linear Algebra and Optimization can be cover in 4<sup>th</sup> semester.</li> <li>• Vector calculus has to be taught prior to Electromagnetics course.</li> <li>• Laplace, Fourier and Z-Transforms may be taught by ECE faculty as foundation course.</li> </ul>	Dr.C.S.Senthikumar	16.12.18
3.	18EC220: Network Theory	<p>Dr.B.SathyaBama presented the course and the syllabus has been passed for approval in Academic council meeting. The following changes are suggested:</p> <ul style="list-style-type: none"> <li>• This course can be moved to 1<sup>st</sup> semester,</li> <li>• "Magnetically coupled circuits" can be included in the syllabus.</li> </ul>	Dr.B.SathyaBama, Dr.V.R.Venkata Subramani	16.12.18
4.	18EC230: Electronic Devices	<p>Dr.N.B.Balamurugan presented the course and the syllabus has been passed for approval in Academic council meeting. The following changes are suggested:</p> <ul style="list-style-type: none"> <li>• Learning resources may include book: "Electronic Principles" by Malvino.</li> </ul>	Dr.N.B.Balamurugan Dr.V.Vinoth Thyagarajan Dr.K.Vasudevan	16.12.18

**THIAGARAJAR COLLEGE OF ENGINEERING, MADURAI 625 015**  
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5.	18EC240: Semiconductor Physics	<p>Dr.T.Manichandran presented the course and the syllabus has been passed for approval in Academic council meeting. The following changes are suggested:</p> <ul style="list-style-type: none"> <li>• "Superconductivity" and "Piezo-electricity" can be included in the syllabus.</li> </ul>	Dr.T.Manichandran	16.12.18
6.	18EC260: Digital System Design (Theory cum Practical)	<p>Dr.D.Gracia Nirmala Rani presented the course and the syllabus has been passed for approval in Academic council meeting. The following changes are suggested:</p> <ul style="list-style-type: none"> <li>• "Number systems and Codes" and "Methods of base conversions" can be allotted less lecture hour.</li> <li>• Can include "fixed point and floating point representation" in the syllabus.</li> <li>• "K-map up to 5 variables" may just be changed as "K-map"</li> <li>• IC Datasheets can be included in the syllabus.</li> </ul>	Dr.D.Gracia Nirmala Rani	16.12.18
7.	18EC270: Circuits and Devices Lab	<p>Dr.V.Vinoth Thyagarajan and Dr.V.R.Venkatasubramani presented the course and the syllabus has been passed for approval in Academic council meeting. The following changes are suggested:</p> <ul style="list-style-type: none"> <li>• Transient analysis of Diode can be included.</li> <li>• Experiments from Circuits and Experiments from Devices has to be conducted in alternate weeks.</li> </ul>	Dr.V.Vinoth Thyagarajan Dr.V.R.Venkata Subramani	16.12.18

**THIAGARAJAR COLLEGE OF ENGINEERING, MADURAI 625 015**  
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8.	18EC290: Electronics Workshop	<p>Dr.K.Hariharan presented the course and the syllabus has been passed for approval in Academic council meeting. The following changes are suggested:</p> <ul style="list-style-type: none"> <li>• Due importance should be given for ICs while designing PCB.</li> <li>• This is a “need of the hour” course in alignment with industry. Therefore one more credit can be allocated to make this as 2 credit course.</li> </ul>	Dr.K.Hariharan	16.12.18
9.	18AC2A0 Environment Sciences (Mandatory Non-credit course)	<p>Dr.M.Kottaisamy presented the course and the syllabus has been passed for approval in Academic council meeting. The following changes are suggested:</p> <ul style="list-style-type: none"> <li>• Learning resources can include a Documentary on “Home” by Yves Bertrand available in Youtube.</li> <li>• A college level cycle rally / plantation can be arranged to promote environmental awareness.</li> <li>• “Biomedical waste management” and “Nuclear radiation hazard management” can be included in the syllabus.</li> <li>• More marks can be allotted to Activities and Mini-project.</li> </ul>	Dr.M.Kottaisamy	16.12.18
10.	18ES290 Lateral Thinking	<p>Dr.S.J.Thiruvengadam presented the course and the syllabus has been passed for approval in Academic council meeting. The following changes are suggested:</p> <ul style="list-style-type: none"> <li>• Can include case studies in Environmental science.</li> <li>• Guest Lecture by innovators and Entrepreneurs can be arranged, Mr L Kannan, Founder and CTO, Vortex Engineering can be invited to share his innovations in ATM machine.</li> <li>• This course has to be connected with right source.</li> </ul>	Dr.S.J.Thiruvengadam	16.12.18

**THIAGARAJAR COLLEGE OF ENGINEERING, MADURAI 625 015**  
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#	Points Discussed	Action Plan	Responsibility	Target date
11.	14EC1E0: Communication System Design using USRP	Dr.S.J.Thiruvengadam presented the course and the syllabus has been passed for approval in Academic council meeting.	-	-
12.	14EC1F0: IEEE 802.11AX Wireless LAN Systems	Dr.M.Bama presented the course and the syllabus has been passed for approval in Academic council meeting.	-	-
13.	14EC1G0: 5G Wireless Cellular Systems	Dr.M.Bama presented the course and the syllabus has been passed for approval in Academic council meeting.	-	-
14.	14EC1H0: Signal Processing Using Sharc Processor	Dr.S.J.Thiruvengadam presented the course and the syllabus has been passed for approval in Academic council meeting.	-	-
15.	18CNGA1: Convex Optimization for Communications	<p>Dr.S.J.Thiruvengadam presented the course and the revised syllabus has been passed for approval in Academic council meeting.</p> <ul style="list-style-type: none"> <li>• This PG course is an open elective course.</li> <li>• The title has been changed as "Convex Optimization".</li> <li>• The credit has been reduced to 2 credits from 3 credits.</li> <li>• Removed modules on Geometric Programming, Linear Programming and Quadratic Programming, Second Order Cone Programming and Semi definite Programming.</li> </ul>	-	
16.	18CHAB0: Constitution of India (Mandatory Non-credit course)	Dr V R Venkatasubramani presented this course and the syllabus has been passed for approval in Academic council meeting.	-	-
17.	General Recommendations of the Board	Bridge courses can be arranged for Lateral entry Students to cope up with Mathematics related course, Lecture capturing system can help Lateral entry students to learn missed out lecture topics.	-	-

Prepared by VR Venkatasubramani Date: 08.12.2018

Approved by S.J.Thiruvengadam Date: 08.12.2018