

## DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

31.08.2023

### MINUTES OF BOARD OF STUDIES MEETING

Faculty	: Electronics and Communication Engineering
Programmes Offered	:1. B.E - Electronics and Communication Engineering
	2. M.E – VLSI Design
Date & Time	: 31.08.2023 & 9.30a.m
Venue	: Meeting Hall, Main Block

#### The Members of the Board of Studies are,

S. No.	Member Category	Name, Designation and Affiliation	
1	Chair Person	Dr.A.Gopi Saminathan, Professor & Head, Department of Electronics and Communication Engineering, NPR College of Engineering and Technology, Natham-624401, Dindigul.	
2	University Nominee	Dr.R.A.Alaguraja, Professor, Department of Electronics and Communication Engineering, Thiagarajar College of Engineering, Madurai	
3	Subject Expert 1	Dr.G.Thavasi Raja Associate Professor, Department of Electronics and Communication Engineering, National Institute of Technology, Trichy	
4	Subject Expert 2	Dr.M.Lordwin Cecil Prabahar, Associate Professor, Department of Electronics and Communication Engineering, Vel Tech Rangarajan Dr. Sagunthala R&D IST, Chennai.	
5	Expert from outside the Autonomous College	Dr.S.Mohamed Mansoor Roomi, Professor, Department of Electronics and Communication Engineering, Thiagarajar College of Engineering, Madurai	
6	Industry Expert	Mr.K.Sivakumar, Senior Program Manager-VLSI, Tessolve Semiconductor Pvt. Ltd., Bangalore	
7	Meritorious Alumnus	Mr. M.Kishore Raj, Software Developer, HCL Tech., Madurai	

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8	All Faculty Members of the Department	<ol> <li>Dr.M.Ameena Banu, Professor</li> <li>Dr.S.M.Vijayarajan, Associate Professor</li> <li>Mrs.S.Kamalam, Assistant Professor</li> <li>Mr.K.Jayaprakasam, Assistant Professor</li> <li>Mr.J.G.Sabarish, Assistant Professor</li> <li>Mr.S.Sudhakar, Assistant Professor</li> <li>Mr.S.Sudhakar, Assistant Professor</li> <li>Mr.S.C.Kannika Parameshwari, Assistant Professor</li> <li>Ms.S.Priyadharsini, Assistant Professor</li> <li>Mr.P.Abdul Samad, Assistant Professor</li> <li>Mr.P.Abdul Samad, Assistant Professor</li> <li>Mr.S.Allwyn Anand, Assistant Professor</li> <li>Mrs.G.Renganayahi, Assistant Professor</li> <li>Mrs.M.Infant Dalima, Assistant Professor</li> <li>Mr.S.Ayyappan, Assistant Professor</li> <li>Mr.S.Ravanaraja, Assistant Professor</li> <li>Mr.S.Narkees Begam, Assistant Professor</li> <li>Mr.A.G.Paranthaman, Assistant Professor</li> <li>Mr.A.G.Paranthaman, Assistant Professor</li> <li>Mr.S.T.Esther, Assistant Professor</li> </ol>			

Dr.A.Gopi Saminathan, Chairman, Board of Studies of the Faculty of Electronics and Communication Engineering welcomed and introduced the External BoS members to the internal members. He started the presentation with a brief introduction on Vision and Mission of the Department of Electronics and Communication Engineering. He explained the highlights of the new curriculum to the members. The following are the suggestions given by the members.

### 1. B.E- Electronics and Communication Engineering

The Members of Board of Studies reviewed the proposed Curriculum for all 8 semesters and Syllabi (Semester 1 & 2) and offered the following suggestions.

## Recommendations from Dr.R.A.Alaguraja, University Nominee

- 1. Engineering Physics in Semester 1 and Physics for Electronics Engineering in Semester 2 may be merged as single course.
- Contents of Engineering Chemistry and Problem Solving & Python Programming courses may be reduced.
- Syllabus of Physics and Chemistry courses may be framed with the focus on ECE students. The experiments in Physics and Chemistry Laboratory should be in aligning with the theory courses.
- In Semester 2, the practical course Professional English Laboratory II, may be considered as Non-credit course.





- In Semester 2, in the course Electronic Devices, 4<sup>th</sup> unit Title can be changed as Special Purpose Semiconductor Diodes instead of Special Semiconductor Diodes.
- 6. In Semester 3, Data Structure may be handled with both C and Python.
- 7. In Semester 4, content related to Microprocessor and Microcontroller may be added with Embedded Systems.
- 8. Internship in Semester 5 may be removed and Mini Project may be retained in Semester 6.
- 9. For Theory with Laboratory Integrated Courses, End Semester External Practical Examination is not necessary, Internal Model Examination alone is sufficient.
- 10. Courses with practical session focusing on software tools may be included which will be helpful for placement.
- 11. In Verticals for Professional Elective Courses, Underwater Communication may be removed, some of the courses in Space Technologies may be added with High Speed Communication and no. of verticals may be only 6.
- 12. In Semester 2, the course Engineering Graphics may be replaced by core paper and it may be included in Open Elective List.

### **Recommendations from Dr.S.Mohamed Mansoor Roomi, Subject Expert**

- 1. Engineering Physics in Semester 1 and Physics for Electronics Engineering in Semester 2 may be merged as single course.
- 2. Syllabus of Physics and Chemistry courses may be framed with the focus on ECE students. The experiments in Physics and Chemistry Laboratory should be in aligning with the theory courses.
- 3. Internship in Semester 5 and Mini Project in Semester 6 may be removed.
- In Semester 2, the course Transforms and Partial Differential Equations shall be renamed as Partial Differential Equations and Transforms.
- 5. Courses in a semester must be arranged in an order like Analog, Digital, Communication and other subjects to maintain a flow of content.
- Core courses like Wireless Communication, Fiber Optic Communication, Microwave Engineering, Satellite Communication, Image Processing can be included.
- For Theory with Laboratory Integrated Courses, End Semester External Practical Examination is not necessary, Internal Model Examination alone is sufficient.

# Recommendations from Dr.G.Thavasi Raja, Subject Expert

- In Semester 2, the experiments in Engineering Practices Laboratory may be included in Electronic Devices laboratory and considered as single practical course.
- In Semester 2, for the course Electronic Devices, latest Edition of Text books and Reference books can be included and bloom's level must be increased.
- In Semester 2, in the course Circuit Analysis, distribution of periods for each unit can be changed based on the content.





- 4. In Semester 3, Data Structure may be handled with both C and Python.
- 5. The course Display Systems in semester 6 may be shifted to Elective.
- 6. Number of Professional Elective verticals can be reduced and some more courses on recent technologies may be added.

### Recommendations from Dr.M.Lordwin Cecil Prabahar, Subject Expert

- 1. Contents of Engineering Chemistry and Problem Solving & Python Programming courses may be reduced.
- 2. Internal and External mark allotment for all kind of courses may be fixed as 40 and 60 respectively.
- 3. The Internal mark 40 can be calculated as follows.

Nature of Course		Theory	Practical	
Mature of Course	CIA	Assignment/Seminar	<b>Observation</b> /Record	Model
Theory	3x10=30		-	-
Practical	-	-	30	10
Theory with Laboratory (IC)	3x10=30	-	-	10

#### 4. The End Semester Examination may be conducted as,

Nature of Course	Theory	Practical
Theory	YES	- 1
Practical	•	YES
Theory with Laboratory (IC)	YES	-

### **Recommendations from Industry Expert**

- 1. In Semester 1, a course on C Programming may be included instead of Problem Solving & Python Programming.
- One of the emerging technologies and industry requirement 'Embedded System', basic knowledge on 'C Programming' is essential.
- 3. Before studying Python, knowledge on 'C Programming' is required.
- Defore studying Python programming course may be shifted to Semester 2.

#### **General Suggestions:**

- 1. Number of BoS meeting per year may be maximum of 2.
- 2. Based on the complexities of subjects, the order of subjects may be rearranged in a semester.
- More care must be taken while giving Course Code to avoid confusions.
- 4. Number of Course Outcomes (COs) can be fixed as minimum of 6.
- For Continuous Internal Assessments, the syllabus for each assessment shall be mentioned in terms of number of COs.
- For all Courses, the Internal and External Mark split up, End Semester Assessment method (Theory, Practical, Internal, External).





- 7. For Theory with Laboratory Integrated Courses, End Semester Examination for practical is not required and one model practical examination is sufficient.
- For all the subjects usage of acronyms in curriculum and syllabus shall be avoided and foreign author books must be given as text books.

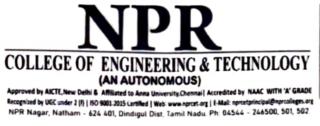
#### 2. M.E- VLSI Design

The Members of Board of Studies reviewed the proposed Curriculum and Syllabi for all 4 semesters and offered the following suggestions.

### Recommendations from BoS Members on Curriculum:

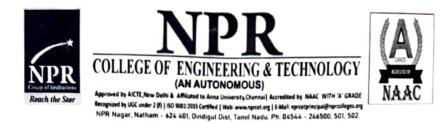
- 1. One new course may be included based on suggestions from CDAC for framing the syllabus.
- 2. The course VLSI Signal Processing in Semester 3 may be removed.
- 3.A theory course for FPGA may be included.







Dr.A.Gopi Saminathan,Dr.R.A.Alaguraja,Professor & Head,Professor, Department of Electronics and Communication Engineering,Department of Electronics and Communication Engineering,Professor, Department of Electronics and Communication Engineering, Thiagarajar College of Engineering, MaduraiNPR College of Engineering and Technology,College of Engineering, MaduraiNatham-624401, Dindigul.Jor.M.Lordwin Cecil Prabahar, Associate Professor,Associate Professor,Associate Professor,	fini-tar		KARE	2.	
Department of Electronics and Communication Engineering,Communication Engineering, College of Engineering, MaduraiNPR College of Engineering and Technology, Natham-624401, Dindigul.Communication Engineering, MaduraiCollege of Engineering and Technology, Dr.G.Thavasi RajaDr.M.Lordwin Cecil Prabahar, Associate Professor,			Dr.R.A.Alaguraja,		
Department of Electronics and Communication Engineering,College of Engineering, MaduraiNPR College of Engineering and Technology,College of Engineering, MaduraiNatham-624401, Dindigul.Jor.M.Lordwin Cecil Prabahar, Associate Professor,Dr.G.Thavasi RajaDr.M.Lordwin Cecil Prabahar, Associate Professor,	Professor & Head,				
Technology, Natham-624401, Dindigul.				6	
G.Thavasi RajaDr.M.Lordwin Cecil Prabahar,Associate Professor,Associate Professor,					
Dr.G.Thavasi RajaDr.M.Lordwin Cecil Prabahar,Associate Professor,Associate Professor,	Natham-624401, Dindigul.				
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Associate Professor,	Dr.G.Thavasi Raja	Dr.G.Thavasi Raja		Dr.M.Lordwin Cecil Prabahar,	
	Associate Professor,	Associate Professor,		Associate Professor,	
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Dr.S.Mohamed Mansoor Roomi, Mr.K.Sivakumar, Mr. M.Kishore Raj,	Dr.S.Mohamed Mansoor Roomi,	Mr.H	K.Sivakumar,	Mr. M.Kishore Raj,	
Professor, Department of Electronics and Communication Engineering, Thiagarajar College ofSenior Program Manager- VLSI,Software Developer, 	Professor, Department of Electronics and Communication		•		
Engineering, Madurai Engineering, Madurai Pvt. Ltd., Bangalore	Engineering, Madurai Tes				



#### DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

31.08.2023

#### **BOARD OF STUDIES MEETING – ATTENDANCE REPORT**

Date : 31.08.2023

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Time :9.30a.m

Venue

: Meeting Hall, Main Block

S. No.	Name of the Member	Member Category	Signature
1.	Dr.A.Gopi Saminathan	Chair Person	yen tar Renali
2.	Dr.R.A.Alaguraja	University Nominee	Rende
3.	Dr.G.Thavasi Raja	Subject Expert 1	=" Tholy
4.	Dr.M.Lordwin Cecil Prabahar	Subject Expert 2	dud
5.	Dr.S.Mohamed Mansoor Roomi	Expert from outside the Autonomous College	Ju- Z
6.	Mr.K.Sivakumar	Industry Expert	Online
7.	Mr. M.Kishore Raj	Meritorious Alumnus	Absent
8.	Dr.M.Ameena Banu	Professor/ECE	M. Al.
9.	Dr.S.M.Vijayarajan	Associate Professor/ECE	St-f
10.	Mrs.S.Kamalam	Assistant Professor/ECE	Say
1.	Mr.K.Jayaprakasam	Assistant Professor/ECE	. AS
2.	Mr.J.G.Sabarish	Assistant Professor/ECE	Taras
3.	Mr.S.Sudhakar	Assistant Professor/ECE	Ent
4.	Mrs.C.Kannika Parameshwari	Assistant Professor/ECE	Kirkan
5.	Ms.S.Priyadharsini	Assistant Professor/ECE	S.P.J







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17.	1	Mr.S.Allwyn Anand	Assistant Professor/ECE	S. R. R
18.		Mrs.G.Renganayahi	Assistant Professor/ECE	Rong
19.		Mrs.M.Infant Dalima	Assistant Professor/ECE	Norw
20.		Mr.S.Ayyappan	Assistant Professor/ECE	5.0400
21.		Mrs.P.Jeyalakshmi	Assistant Professor/ECE	Qu-
22		Mr.S.Ravanaraja	Assistant Professor/ECE	Stay
23	3.	Mrs.S.Narkees Begam	Assistant Professor/ECE	A A
2	4.	Mrs.G.Jeyalakshmi	Assistant Professor/ECE	a Sengel
2	25.	Mr.A.G.Paranthaman	Assistant Professor/ECE	AGOR
2	26.	Mrs.T.Esther	Assistant Professor/ECE	ty.
I	nvite	ed Members		
2	27.	Mrs.C.Yogitha	Assistant Professor/Maths	ciletha.
:	28.	Dr.G.Kandiban	Associate Professor/Physics	Gom
	29.	Dr.S.Nagasubramanian	Assistant Professor/Chemistry	SNon
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Dr.A.Gopi Saminathan Chairman-BoS



## DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

05.09.2023

### ACTION TAKEN REPORT AFTER BoS MEETING

The Board of Studies meeting was held on 31.08.2023 for the UG and PG programs under Department of Electronics and Communication Engineering. The Board of Studies Members reviewed the proposed Curriculum for all 8 semesters and Syllabi (Semester 1 & 2) for UG and and proposed Curriculum for all 4 semesters for M.E-VLSI Design and offered the suggestions. The steps taken against the suggestions are listed here.

S. No.	Member	Suggestions Given	Actions Taken
<b>S. No.</b>	Member Dr.R.A.Alaguraja, Professor, Dept. of ECE, Thiagarajar College of Engineering, Madurai. University Nominee	Engineering Physics in Semester 1 and Physics for Electronics Engineering in Semester 2 may be merged as single course. In Semester 2, 4 <sup>th</sup> unit title in the course Electronic Devices may be changed. Internship in Semester 5 is not needed and Mini Project in Semester 6 may be removed. In Semester 4, content related to Microprocessor and Microcontroller may be added with Embedded Systems.	Content of both courses merged together and kept in Semester 1 as <b>Physics for Electronics</b> <b>Engineering.</b> Special Semiconductor Diodes was changed as <b>Special</b> <b>Purpose Semiconductor</b> <b>Diodes.</b> <b>Internship</b> in Semester 5 was removed and <b>Mini Project</b> in Semester 6 was retained. While framing syllabus <b>Embedded Systems</b> , it will be considered.
		For Theory with Laboratory Integrated Courses, End Semester External Practical Examination is not necessary, Internal Model Examination	will be decided based on the discussion with all Head of the Departments and Principal.
		alone is sufficient. Courses with practical session focusing on software tools may be included which will be helpful for placement.	future.







		In Semester 2, the course Engineering Graphics may be replaced by core paper and it may be included in Open Elective List. Suggested to avoid acronyms for new terms in syllabus for example, UVM in the course Design for verification	In Semester 2, the course Engineering Graphics was replaced by <b>Electronic Devices</b> and Engineering Graphics was included in Open Elective List as <b>Engineering Graphics</b> <b>Design</b> . Course title can be changed as Design for verification using Universal Verification Methodology (UVM).
		using UVM. Transforms and Partial Differential Equations course title in Semester 2 may be changes based on the syllabus order.	It was renamed as <b>Partial</b> <b>Differential Equations and</b> <b>Transforms.</b>
2	Dr.S.Mohamed Mansoor Roomi, Professor, Dept. of ECE, Thiagarajar College of Engineering, Madurai. Subject Expert	Core courses Wireless Communication, Fibre Optic Communication, Satellite Communication and Microwave Engineering may be included in the curriculum.	Optical Communication and Networks and Microwave Engineering were included as core courses in Semester 6.
		In M.E Semester 3, VLSI Signal Processing course may be removed.	VLSI Signal Processing course was removed.
	Dr.G.Thavasi Raja Associate Professor,	In Semester 2, separate Engineering Practices lab is not required, instead of that some of the experiments related to Electronics may be included in Electronic Devices laboratory.	electronic components and display devices were included in Electronic Devices
3	Dept. of ECE, National Institute of Technology, Trichy <b>Subject Expert</b>	The core course Display Systems in semester 6 may be shifted to Elective list. In M.E-VLSI Design curriculum, order of subjects may be changed based on the usage of	wasshiftedtoProfessionalElectiveVerticalunderSemiconductor technologies.InM.E-VLSIDesigncurriculum, the order of subjectswas changed.





4	Dr.M.Lordwin Cecil Prabahar, Associate Professor, Dept. of ECE, Vel Tech Rangarajan Dr. Sagunthala R&D IST, Chennai. <b>Subject Expert</b>	verilog and system verilog tools. Number of Verticals (8) for Professional Elective Courses may be reduced. Internal and External mark allotment for all kind of courses may be fixed as 40 and 60 respectively. In M.E-VLSI Design curriculum, a new course on FPGA may be included.	The vertical for Underwater Communication was removed, some of the courses in Space Technologies were added with High Speed Communication and no. of verticals was reduced to 6. The information was passed to CoE section. It will be decided based on the discussion with all Head of the Departments and Principal. A course Designing with FPGA is included in Semester 2 and the corresponding practical course FPGA laboratory was shifted from Semester 1 to Semester 2.
5	Mr.K.Sivakumar, Senior Program Manager-VLSI, Tessolve Semiconductor Pvt. Ltd., Bangalore Industry Expert	Before studying a course on Problem Solving and Programming using Python, a course on C is required. Also, for working with Embedded systems, knowledge on C is essential.	A course <b>Problem Solving and</b> <b>C Programming</b> is included in Semester 1 as Integrated Course and Problem Solving and Python Programming is shifted to Semester 2 as <b>Python</b> <b>Programming.</b>

# Action Taken against General Suggestions:

S. No.	Suggestions Given	Action Taken
1.	Number of BoS meeting per year may be	Considered
1.	manimum of 2	
2.	Based on the complexities of subjects, the	Considered in Semester 1 and 2 now.
	order of subjects may be rearranged in a	
	semester.	
3.	More care must be taken while giving	Conveyed to DAC office and CoE
	Course Code to avoid confusions.	section.
4.	Number of Course Outcomes (COs) can be	Considered for ECE subjects currently.
	fixed as minimum of 6.	
5.	For Continuous Internal Assessments, the	Considered for ECE subjects currently.
	syllabus for each assessment shall be	
	mentioned in terms of number of COs.	



6.	Mark split up, End Semester Assessment method (Theory, Practical, Internal, External) must be given with syllabus.	
7.	For Theory with Laboratory Integrated Courses, End Semester Examination for practical is not required and one model practical examination is sufficient.	examination alone for Theory with

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Dr.A.Gopi Saminathan Chairman-BoS