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DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

Sl.No. **Details** Date Page No. UG 2018 Scheme III year – 22nd BoS 07 Mar 2020 1-6 1. Meeting UG 2018 Scheme IV year - 23rd BoS Meeting 2. 17 Dec 2020 7-14 UG 2021 Scheme with NEP implementation -3. 19 Dec 2020 15-18 24th BoS Meeting UG 2021 Scheme II year- 25th BoS Meeting UG PO-PSO attainment of 2018-2022 batch-4. 14 Mar 2022 19-23 5. 02 Dec 2022 26th BoS Meeting 24-28 UG 2021 Scheme II year NPTEL electives 27th BoS Meeting 18 May 2023 29-33 6. UG 2021 & 2022 Scheme - 28th BoS Meeting 10 June 2023 34-38 7. PG 2018 Scheme I & II Year scheme discussions 8. 18 Aug 2018 39-43 - 3rd BoS Meeting PG 2018 Scheme I & II Year Syllabus 9. 04 May 2019 44-54 discussions- 4th BoS Meeting

BOS CONTENT SHEET

Department of Electronics & Communication Engineering

Approved by AICTE

Department: Electronics & Communication Engineering Programme: B.E. (Electronics & Communication Engineering)

The following are the new courses added in the curricula in the respective curricular revisions made in 2018 and 2021 schemes. Curricular revisions were discussed thoroughly at the respective Board of Studies meetings. The new courses added are reflected in the revised curricula with the course codes.

Sl. No.	Title of the new course added	Course code	Scheme in which the new course is added	
1.	Broadband Wireless -LTE 4G	18EC73	2018	
2.	High Performance Computing	18EC7F1	2018	
3.	Mixed Signal Integrated Circuit Design	18EC7F2	2018	
4.	Design of Testing and Testability	18EC7F3	2018	
5.	Nanoelectronics	18EC7F4	2018	
6.	Speech Processing	18EC7F5	2018	
7.	Radar Systems Engineering	18EC7F6	2018	
8.	Advanced Digital System Design using Verilog HDL	18EC43	2018	
9.	Analog Integrated Circuits Design	18EC46	2018	
10.	Design Thinking Lab	18EC47	2018	
11.	Digital Signal Processing and Machine Learning	18EC55	2018	
12.	Programming in JAVA	18EC5A1	2018	
13.	Probability Foundations for Electrical Engineers	18EC5A2	2018	
14.	OP-AMP Practical Applications: Design Simulation and Implementation	18EC5A3	2018	
15.	Fiber Optic Communication Technology	18EC5A4	2018	
16.	Minor Computer Networks and ProtocolS	18EC62	2018	
17.	Minor Project	18EC64	2018	
18.	Internet of Things	18CS6C1	2018	
19.	Real Time Systems	18EC6C2	2018	
20.	Low power VLSI Design	18EC6C3	2018	
21.	Database Management Systems	18EC6C4	2018	
22.	Control Engineering	18EC6C5	2018	
23.	Cryptography and Network Security	18EC6C6	2018	
24.	Digital Signal Processing using ARM Cortex M Devices	18EC6D1	2018	

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	Department of Electronics & Con	nmunication Engi	neering
25.	Computer Vision	18EC6D2	2018
26.	Radio Frequency & Millimetre Wave IC Design	18EC6D4	2018
27.	Deep Learning	18EC6D5	2018
28.	Analog Integrated Circuits Design	21EC45	2021
29.	Network Analysis and Control system	21EC35	2021
30.	Design and Analysis of Algorithms	21EC4A1	2021
31.	Database Management System	21EC4A2	2021
32.	Object Oriented Analysis and Design	21EC4A3	2021
33.	Programming, Data Structures and Algorithms using Python	21EC4A4	2021

BoS-CHAIRMAN (Electronics & Communication Engineering)

Professor & Head Dept. of Electronics & Communication Eng. RV College of Engineering Bengaluru-560 059.

DEAN ACADEMICS

DEAN ACADEMICS R.V. College of Engineering Bengaluru - 560 059

PRINCIPAL

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Department of Electronics & Communication Engineering

Department: Electronics & Communication Engineering Programme: M.Tech in Communication Systems

The following are the new courses added in the curricula in the respective curricular revisions made in 2018 and 2022 schemes. Curricular revisions were discussed thoroughly at the respective Board of Studies meetings. The new courses added are reflected in the revised curricula with the course codes.

Sl. No.	Title of the new course added	Course code	Scheme in which the new course is added
1.	Antenna Theory	18MCS2C1	2018
2.	Machine Learning	18MCS2C2	2018
3.	Optical Communication Networks	18MCS2C3	2018
4.	Wireless Sensor Networks and IOT	18MCS2D1	2018
5.	Deep Learning	18MCE2D2	2018
6.	Statistical Learning for Communication	22MAT11DT	2022
7.	Development of Modem SoCs for Wireless, Wireline and IOT applications	22MCS2C1T	2022
8.	Programming and Network Simulation Lab	22MCS14L	2022
9.	Multirate Systems and Filter Banks	22MCS1A2T	2022
10.	Advanced 5G	22MCS2C4T	2022

BoS-CHAIRMAN (Electronics & Communication Engineering)

Professor & Head

Dept. of Electronics & Communication Engg. RV College of Engineering Bengaluru-560 859

DEMICS DEAN

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Department of Electronics & Communication Engineering

Department: Electronics & Communication Engineering Programme: M.Tech in VLSI & Embedded Systems

The following are the new courses added in the curricula in the respective curricular revisions made in 2018 and 2022 schemes. Curricular revisions were discussed thoroughly at the respective Board of Studies meetings. The new courses added are reflected in the revised curricula with the course codes.

SI. No.	Title of the new course added	Course code	Scheme in which the new course is added
1.	Digital IC Design	18MVE13	2018
2.	Advanced Computer Architecture	18MVE1A1	2018
3.	Advanced VLSI Devices	18MVE1B3	2018
4.	High speed VLSI Design	18MVE2C3	2018
5.	Advanced Embedded Processors	18MVE2D2	2018
6.	Static Timing Analysis	18MVE3E3	2018
7.	Digital System Design with FPGA	22MVE11T	2022
8.	ARM CPUs Programming Lab	22MVE14L	2022
9.	Semiconductor Device Modelling	22MVE1A5T	2022
10.	IC Technology	22MVE1B3T	2022
11.	IOT System Design & Architecture	22MVE1B4T	2022
12.	VLSI for Data Conversion Circuits	22MVE1B5T	2022
13.	VLSI Memory Chip Design	22MVE2C2T	2022
14.	Robotics and Industrial Automation	22MVE2C3T	2022

BoS-CHAIRMAN (Electronics & Communication Engineering)

Professor & Head Dept. of Electronics & Communication Engo RV College of Engineering Bengaluru-560 059.

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Fwd: 22nd Board of Studies meeting postponed

ELECTRONICS & COMMUNICATION ENGINEERING, **RVCE** <hod.ec@rvce.edu.in> To: Pratibha Kantanavar <pratibhakantanavar@rvce.edu.in> Wed, Jun 12, 2024 at 3:17 PM

------ Forwarded message ------From: **ELECTRONICS & COMMUNICATION ENGINEERING, RVCE** <hod.ec@rvce.edu.in> Date: Thu, Feb 27, 2020 at 12:48 PM Subject: 22nd Board of Studies meeting postponed To: Rathna G N <<u>rathna@iisc.ac.in</u>>

Madam,

22nd Board of Studies meeting of ECE department is scheduled on 29.02.2020 at 10.00 a.m. **has been postponed to 07.03.2020 at 10.00 a.m.** (due to unavoidable circumstances) in the chambers of the undersigned. You are hereby requested to be present as member of BoS.

Agenda:

- * Discussion and finalization of 5^{th} , 6^{th} and 7^{th} sem 2018 scheme and syllabus
- * Any other issue with the permission of the chair.
- * Ratification of courses for student's credit balance

Copy of the scheme and syllabus will be shared shortly.

With Regards

Dr.Geetha K.S

Professor & Head,

Department of Electronics & Communication Engineering, R.V.College of Engineering - Bengaluru. (O): 08067178042; (M):9900700990

--With Regards Dr. Ravish Aradhya H V Professor and HOD, E and C Dept.,* RV College of Engineering, Bengaluru 560 059. M: 9449542583 * *"Better to be a person of VALUES than to be a person of SUCCESS"* *"ECE Dept UG is NBA accredited for 6-Years"* * Scopus Citations: ORCID.ORG: 0000-0003-3076-9120 http://www.scopus.com/authid/detail.url?authorId=55616592800 * WOS Citations: Researcher ID: 0-6994-2016 https://publons.com/researcher/2206552/ravish-aradhya-h-v/ * Linkedin: https://www.linkedin.com/in/dr-ravish-aradhya-h-v-57902bab/

* Mendeley Citations:

https://www.mendeley.com/reference-manager/library/all-references



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RVCE/E&CE/		2019 - 2020	07.03.2020
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Attendance Sheet

The 22nd Board of Studies meeting held on 07.03.2020, Saturday at 10.00 am in the chamber of the undersigned.

Agenda:

62. Discussion and finalization of 5th, 6th and 7th sem 2018 scheme and syllabus

- 63. Ratification of courses for student's credit balance
- 64. Any other issue with the permission of the chair.

Si No	Name		Signature
1	Dr Geetha KS	Chairman	
_		Professor & Head	
2	Dr.Rathna G N	External member	Kathina Ri-N
3	Mr.Raghavendra Rao	External member	A.D. dw.
4	Mr.Rakthith Gore	Alumni Invitee	Laurguns
5	Mr.Amith	Alumni Invitee	16th auch
6	Mr.Koushik	Alumni Invitee	Et cidit
7	Mr.Nithyananda Bhat	Alumni Invitee	(ANG 1
8	Dr.Shanmukha Nagaraj	Dean Academics Invitee	Shaw
9	Dr. Uma B.V.	Internal member	llo B.V
10	Dr. Ravishankar S	Internal member	Stausheurly
11	Dr. Uttarakumari M	Internal member	Muy
12	Dr. Ravish Aradhya H.V	Internal member	Koly p
13	Dr.Srividya P	Internal member	Built
14	Dr.Mahesh A	Internal member	- Al-
15	Dr. Govindaraju M	Internal member	A wet-an
16	Mr. Ramavenkateswaran N	Internal member	80
17	Mr.Nithin M	Internal member	APHTIM
18	Mr.ArunKumar P Chavan	Internal member	(Λ)

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RVCE/E&CE/	2019 - 2020	
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Minutes of meeting held on Saturday, 7th March, 2020, 10.00 AM at ECE Department

UG 22nd Board of Studies (BoS) Meeting

Dr.Geetha K S, Chairperson, BoS Welcomed the gathering.

Following members and special invitees were present.

No	Name	Role	Structure		
1	Dr. Geetha KS	Chairperson	Prof& HOD, ECE		
2	Dr. Ravishankar S	Member	Faculty		
3	Dr. Uttarakumari M	Member	Faculty		
4	Dr Uma B.V.	Member	Faculty		
5	Dr Ravish Aradhya H.V	Member	Faculty		
6	Dr. Srividya	Member	Faculty		
7	Dr. Rathna G.N.	Member	Subject Expert from academia		
8	Mr. Raghavendra Rao	Special Invitee	Special Invitee from Industry		
9	Mr. Rakshith G	Meritorious Alumnus	Special Invitee from Industry		
10	Mr. Amith B S	Meritorious Alumnus	Special Invitee from Industry		
11	Mr. Koushik	Meritorious Alumnus	Special Invitee from Industry		
12	Mr. Nithyananda Bhat	Meritorious Alumnus	Special Invitee from Industry		
13	Dr. Mahesh A	Member	Faculty		
14	Mr. Arun Kumar Chavan	Member	Faculty		
Cour	Course Coordinators of all the courses were present for the BoS meeting to discuss the syllabus				
Mem	bers Absent				
15	Dr. Dinesh P	Member	Subject Expert from academia.		
16	Dr. K J Vinoy	Member	Subject Expert from academia, VTU		
			Nominee		

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The following points were discussed:

Agenda #	Discussions and Resolutions
61	Review and Finalization of syllabus of 5 th & 6 th semester UG courses under 2108
	scheme
 Dr.Geetha, Ch 	nairperson of BoS welcomed the members and introduced the members and the
special invitee	s to the meeting
 She presented 	the recap of the 3 rd and 4 th semester courses of 2018 scheme. She elaborated on the
themes of the	Design thinking lab which was proposed to formulate and solve the societal issues
within and aro	und the campus. This was well appreciated by the board members.
• However, Bos	S members expressed concern about the continuity of design thinking lab to 5^{th}
semester, so th	at students will be able to complete the process of design thinking till the prototype
/ working mod	lel. They suggested that since the courses proposed in 5 th semester is exposing the
students to the	relevant tools in various field of ECE, they were convinced that the students would
have a better e	xposure to freeze upon the tools in 5 th semester and continue as minor project in 6 th
semester.	
Following suggestion	s are put forth by BoS Members for 5 th semester courses
 Suggestion of 	lab for Embedded Systems Design. Also, modifications in the syllabus and latest
reference book	ts for the subject was suggested.

- For Digital VLSI Design, the concept of current mode logic (CML), pulse trigger logic and FinFET need to be included in the syllabus.
- Application of Machine Learning to signal processing and Communication could be included in DSP and Machine learning course.
- For the Global elective course-Automotive Electronics, the following topics to be introduced in the syllabus:
 - a. Introduction to signal conditioning
 - b. IEEE standards
 - c. Autonomous driving systems
 - d. India specific data sets
 - e. Matlab demonstrations
- Balancing HSS credits. More emphasis should be given for core subjects.
- The Chairperson informed all the BoS members that in the 5th semester, the local elective courses should be taken from courses offered by NPTEL to promote the students to take up online courses. The NPTEL would evaluate and give the result in percentage. This shall be taken by the Controller of Examination and converted to corresponding grades. The tentative courses listed out by NPTEL for 12 weeks were considered and the department have identified Four courses in line with the verticals of the department. Students would have to choose one out of the four suggested.
- The BoS chairperson highlighted that in 2018 scheme, the course on Computer Networks and Internet Protocols was being introduced which concentrated more towards Top Down approach to the course.



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	Radio Frequency	and Millimeter	IC Design was anoth	er new course wherein more concepts of
	millimetre IC De	esign was concer	ntrated when compare	d with the RFIC design in the previous scheme.
	Control Engineer	ring was brough	t as the Professional E	Elective which would cover concepts of state
	space variables.			
	Following suggestic	ons are put fort	h by BoS Members f	or 6 th semester courses:
	For Compute	ter Networks a	and Internet Protoco	ol course, case studies should be included.
	Application	s of Machine lea	arning to the course sh	hould be emphasized.
	 For the comp 	outer vision cour	se, the following topic	es to be included:
	a. Introduc	ction to sensors t	for image processing	
	b. Image a	cquisition		
	c. Case stu	ıdy in unit-4		
	d. Array ca	ameras		
	e. GNA B	ased Algorithm		
	 In Low Powe 	er VLSI Design,	include Power Gating	g in unit-3
	 Non-Sequent 	tial DBMS shou	ld be discussed in DB	MS Course
	 Modification 	of the syllabus	is suggested for weara	ble electronics. Reverse Engineering is a
	suggestion.			
	 Course era ca 	an be included in	n the references for De	eep Learning course.
	ГТ			
	Resolution: The	e suggestions ma	ade by the BoS memb	ers are to be discussed in detail in subsequent

Resolution:	The suggestions made by the BoS members are to be discussed in detail in subsequent
	Academic Advisory Committee (AAC) before placing the same in Academic Council
	meeting.

Agenda #	Discussions and Resolutions	
62	Any other matter with the permission of the chair	
• All the	BoS members firmly expressed their concern that there could be only two compulsory	
CIE's at	nd one re-test/re-quiz in a particular semester as the three CIE's are taking away much of	
the prod	uctive time of teaching learning process. Due to this, the unit 4 and unit 5 in each course	
which would cover the most important contents of the courses are being rushed three		
opined that all these were the feedback they got from our students. They also expressed		
faculty are as well burdened due to three CIE's.		
• All the	BoS members suggested that the 7 th semester syllabus needs some more revisions based	
on the o	hanges done in the 5 th and 6 th somester sullabus. Hence it could be taken for discussion in	

- All the BoS members suggested that the /th semester syllabus needs some more revisions based on the changes done in the 5th and 6th semester syllabus. Hence it could be taken for discussion in a separate meeting.
- Feedback from the stake holders is analysed and recommended for changes in teaching learning process and introduction to new courses. The different applications domains of major projects including internship projects is discussed and recommended to evaluate as per the rubrics.

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R	VCE/E&CE/		2019 - 2020	
	framed.			
	Resolution: It was resolved to have the 7 th semester syllabus review in the next BoS meeting.			

Agenda # Discussions and Resolutions	
62	Ratification of Credit Balancing for the students who have undergone scheme change.
Resolution:	BoS members agreed for the credit balancing.

The meeting ended with thanks from the chair.

10th

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Fwd: 23rd BoS meeting in dept of ECE

ELECTRONICS & COMMUNICATION ENGINEERING, RVCE <hod.ec@rvce.edu.in> To: Pratibha Kantanavar <pratibhakantanavar@rvce.edu.in> Wed, Jun 12, 2024 at 3:16 PM

------ Forwarded message ------From: **ELECTRONICS & COMMUNICATION ENGINEERING, RVCE** <hod.ec@rvce.edu.in> Date: Thu, Dec 17, 2020 at 11:38 AM Subject: 23rd BoS meeting in dept of ECE To: staff_ece_rvce<staff_ece_rvce@googlegroups.com>

Dear Sir,

The 23rd BoS meeting is scheduled in online mode on 17th Dec at 2PM.

The meeting link is as follows. Please join the meeting and share the valuable inputs towards the discussion.

23rd BoS meeting @ Dept of ECE Hosted by HoD ECE

https://rvce.webex.com/rvce/j.php?MTID=m3b4acf5daf5338c6ac138622acca6ec7 Thursday, Dec 17, 2020 2:00 pm | 3 hours | (UTC+05:30) Chennai, Kolkata, Mumbai, New Delhi Meeting number: 159 393 7193 Password: Dbu64iSnpm3

Agenda:

- 1) Discussion on 7th sem Syllabus of 2018 scheme
- 2) NEP implementation 2020- First year curriculum revision
- 3) Ratification of the students who have changed scheme due to vertical progression

4) Any other matter with the permission of the chair

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Join by video system Dial 1593937193@rvce.webex.com You can also dial 210.4.202.4 and enter your meeting number.

Join by phone Use VoIP only

With Regards Dr. Ravish Aradhya H V Professor and HOD, E and C Dept.,* RV College of Engineering, Bengaluru 560 059. M: 9449542583 * *"Better to be a person of VALUES than to be a person of SUCCESS"* *"ECE Dept UG is NBA accredited for 6-Years"* * Scopus Citations: ORCID.ORG: 0000-0003-3076-9120 http://www.scopus.com/authid/detail.url?authorId=55616592800

* WOS Citations: Researcher ID: 0-6994-2016

https://publons.com/researcher/2206552/ravish-aradhya-h-v/ * Linkedin:

https://www.linkedin.com/in/dr-ravish-aradhya-h-v-57902bab/



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15.12.2020

<u>CIRCULAR</u>

The 23rd Board of Studies meeting (online) is scheduled on 17.12.2020, at 2.30 pm.

Agenda:

64. 2018 scheme 7th sem syllabus approval

- 65. Approval for credit balancing for scheme change students
- 66. NEP implementation for first year curriculum

67. Any other issue with the permission of the chair

The following BoS committee members are requested to attend the meeting without fail. Link will be shared.

8

SI No	Name	Designation	C:
1	Dr Geetha KS	Chairman	Signature
		Professor & Head	lectro
2	Dr. Uma B.V.	Professor	4 -2.
3	Dr. Ravishankar S	Professor	thin BA
4	Dr. Uttarakumari M	Professor	P gal
5	Dr. Ravish Aradhya H.V	Professor	Mun
6	Dr.Srividya P	Associate Professor	Kais of
7	Dr.Mahesh A	Associate Professor	Budy
8.	Dr. Govindaraju M 🔨	Assistant Professor	1011
9	Mr. Ramavenkateswaran N 🗸	Assistant Professor	
10	Mr.Nithin M ~	Assistant Professor	and
11	Mr.ArunKumar P Chavan	Assistant Professor	- Alton

Professor & Head Dept. of Electronics & Communication Eng. RV College of Engineering Bengaluru-560 \$59.



Minutes of meeting held on Thursday, 17th Dec, 2020, 2.00 PM in Online

UG 23rd Board of Studies (BoS) Meeting

Dr.Geetha K S, Chairperson, BoS Welcomed the gathering.

Following members and special invitees were present.

No	Name	Role	Structure
1	Dr. Geetha KS	Chairperson	Prof& HOD, ECE
2	Dr. K J Vinoy	VTU Nominee	Prof and Chairman, ECE Dept, IISc
3	Dr. Ravishankar S	Member	Faculty
4	Dr. Uttarakumari M	Member	Faculty
5	Dr Uma B.V.	Member	Faculty
6	Dr Ravish Aradhya H.V	Member	Faculty
7	Dr. Srividya	Member	Faculty
8	Dr. Rathna G.N.	Member	Subject Expert from academia
9	Dr. Dinesh	Member	Subject Expert from academia
10	Mr. Raghavendra Rao	Special Invitee	Special Invitee from Industry
11	Dr.Govinda Raju M	Member	Faculty
12	Dr. Ramavenkateshwaran	Member	Faculty
13	Mr.Nithin M	Member	Faculty
14	Dr. Mahesh A	Member	Faculty
15	Mr. Arun Kumar Chavan	Member	Faculty

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RVCE/E&CE/ 2020 - 2021 21/12/2020	
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The following points were discussed:

Agen	da #	Discussions and Resolutions
64		Review and Finalization of syllabus of 7 th semester UG courses under 2108 scheme
	Dr. Geetha,	Chairperson of BoS welcomed the members with formal introduction.
	Dr. Shanmu continue the	ka Nagaraj, Dean of academics, RVCE addressed the BoS members and requested to ir support for improving up quality in curriculum.
	Chairperson	presented 2018 scheme, highlighting the major changes as compared to 2016 scheme.
Follo	wing suggesti	ons are put forth by BoS Members for 7th semester courses:
	Suggested f Microwaves microwave insight cove	for detailed discussion of one method of computational electromagnetics in the and Radiating systems course and inclusion of more innovative experiments in the lab. Topics in unit-5 of can be reduced as allotted teaching hours is insufficient for rage of all.
•	In the course software dev platform me	High Performance Computing, proposed syllabus oriented towards programming and elopment to perform parallel operations. To support the course title, the topics on mory design and hardware must be included.
•	Topics on de included in 1	sign and fabrication of Carbon Nano Tubes and device manufacturing must be Nanoelectronics.
•	MFCC base DL based te	d feature extraction in the course speech processing can be removed instead ML and chniques must be included to meet current industry standards.
•	The title of Radar" to me	the course Radar Systems Engineering can be changed as "RF based sensing and otivate the students to opt for the same.
•	Topics on E research sco	MI and EMC must be included in the course Automotive Electronics to meet current pe and industry needs.
•	VLSI IC pac the course.	kaging in SoC design course must be removed as these topics are not in the scope of
•	The title of topics propo	the course 'Design of testing and testability' must be changed suitably to match the sed.

Resolution: The suggestions made by the BoS members are to be discussed in detail in subsequent Academic Advisory Committee (AAC) before placing the same in Academic Council meeting.

Murara Boad DV/Viduanikatan Bast 000 67470043 Lad -- 0-



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F	VCE/E&CE/	/ 2020 - 2021 21/12/2020	
	Agenda #	Discussions and Resolutions	
	65 Approval for credit balancing for scheme change students		
Resolution: BoS members agreed for the credit balancing.			

Agenda #	Discussions and Resolutions	
66 NEP Implementation for First Year curriculum		
Resolution:	 The plans for introducing NEP-2020 in the 1st year (2021-22) curriculum at RVCE was presented by Chairperson. BoS members appreciated the effort by RVCE in implementing the NEP. However, they felt that it is better to work in coordination with VTU for planning and implementation of NEP as the institution would still be affiliated to VTU. 	

Agenda #	Discussions and Resolutions	
67	y other matter with the permission of the chair	
	Nil	
Resolution:		

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The meeting ended with vote of thanks from the chair.

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Professor & Head Pept. of Electronics & Communication Engg. RV College of Engineering Bengaluru-560 \$59.



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DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

23rd BOARD OF STUDIES (BoS) MEETING

Action taken on 22nd BoS Meeting held on 7th March 2020

S.No.	Suggestions	Action Taken
1.	Inclusion of lab for Embedded System Design course	3 labs in a semester are not permitted as per the scheme. However, the course handling faculty members are instructed to use the tools in class demonstrations.
2.	Application of ML in signal processing & communication to be included in DSP and ML courses.	Some applications of ML in the field of communication & Singal processing is included with suitable case studies.
3.	Autonomous driving, Indian road context and MATLAB demonstrations to be included in syllabus of automotive electronics.	All suggested topics are included in regular class discussions and experiential learning.
4.	The inclusion of topics on sensors for imaging, acquisition & array cameras to be included in computer vision course,	All suggested topics are included in regular class discussions and experiential learning.



Department of Electronics & Communication Engineering

The following are the new courses added in the curricula in the respective curricular revisions made in 2018 scheme. Curricular revisions were discussed thoroughly at the respective Board of Studies meetings. The new courses added are reflected in the revised curricula with the course codes.

Sl.	Title of the new course added	Course code	Scheme in which
No.			the new course is
			added
1.	Broadband Wireless -LTE 4G	18EC73	<mark>2018</mark>
2.	High Performance Computing	18EC7F1	<mark>2018</mark>
3.	Mixed Signal Integrated Circuit Design	18EC7F2	<mark>2018</mark>
4.	Design of Testing and Testability	18EC7F3	<mark>2018</mark>
5.	Nanoelectronics	18EC7F4	<mark>2018</mark>
<mark>6.</mark>	Speech Processing	18EC7F5	<mark>2018</mark>
7.	Radar Systems Engineering	18EC7F6	<mark>2018</mark>
<mark>8.</mark>	Advanced Digital System Design using	18EC43	2018
9.	Analog Integrated Circuits Design	18EC46	2018
10.	Design Thinking Lab	18EC47	<mark>2018</mark>
11.	Digital Signal Processing and Machine	18EC55	
	Learning	102000	2018
12.	Programming in JAVA	18EC5A1	<mark>201</mark> 8
13.	Probability Foundations for Electrical Engineers	18EC5A2	2018
<mark>14.</mark>	OP-AMP Practical Applications: Design Simulation and Implementation	18EC5A3	2018
15.	Fiber Optic Communication Technology	18EC5A4	<mark>2018</mark>
16.	Minor Computer Networks and ProtocolS	1 <mark>8EC62</mark>	<mark>2018</mark>
17.	Minor Project	18EC64	2018
18.	Internet of Things	18CS6C1	2018
19.	Real Time Systems	18EC6C2	2018
20.	Low power VLSI Design	18EC6C3	<mark>2018</mark>
21.	Database Management Systems	18EC6C4	2018
22.	Control Engineering	18EC6C5	2018



Department of Electronics & Communication Engineering

23.	Cryptography and Network Security	18EC6C6	<mark>2018</mark>
24.	Digital Signal Processing using ARM		
	Cortex M Devices	TOLCODI	<mark>2018</mark>
25.	Computer Vision	18EC6D2	<mark>2018</mark>
26.	Radio Frequency & Millimetre Wave IC	18EC6D4	
	Design	1020004	<mark>2018</mark>
27.	Deep Learning	18EC6D5	<mark>2018</mark>

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Professor & Head Electronics & Communication Eng. V College of Engineering Bengaluru-560 059. Dept. of El

BoS-CHAIRMAN (Electronics & **Communication Engineering**)



Fwd: 24th BoS meeting on 19th August at 2PM at Dept of ECE, RVCE

ELECTRONICS & COMMUNICATION ENGINEERING, RVCE <hod.ec@rvce.edu.in> Wed, Jun 12, 2024 at 3:15 PM To: Pratibha Kantanavar rratibhakantanavar@rvce.edu.in>

------ Forwarded message ------From: ELECTRONICS & COMMUNICATION ENGINEERING, RVCE <hod.ec@rvce.edu.in> Date: Wed, Aug 18, 2021 at 6:19 PM Subject: 24th BoS meeting on 19th August at 2PM at Dept of ECE, RVCE To: K J Vinoy <kjvinoy@iisc.ac.in>, Dr. Dinesh P <dineshprg@gmail.com>, Raghavendra Rao <raghavendraraor@gmail.com>, Rathna G N <rathna@iisc.ac.in>, <rathna@ee.iisc.ernet.in>, Arun Kumar P C <arunkumarpc@rvce.edu.in>, Mahesh A. <mahesha@rvce.edu.in> Cc: <ec_faculty@rvce.edu.in>, Dean Academics R V College of Engineering <dean.academics@rvce.edu.in>

Dear Sir/Madam,

The 24th BoS meeting is scheduled in online mode on 19th August at 2PM.

Agenda:

1) Discussion on First year UG curriculum for the academic year 2021-21 according to NEP 2020. 2) Any other matter with the permission of the chair

The meeting link is as follows. Please join the meeting and share the valuable inputs towards the discussion.

Link for the meeting:

https://rvce.webex.com/rvce/j.php?TID=m013a19fd2b6a17d043facbdd041a8f43

Date: 19th August 2021 Time: 2PM

With Regards

Dr. Geetha K.S

Professor & Head,

Department of Electronics & Communication Engineering, RV College of Engineering - Bengaluru. (O): 08068188178; (M):9900700990

With Regards Dr. Ravish Aradhya H V Professor and HOD, E and C Dept.,* RV College of Engineering, Bengaluru 560 059. M: 9449542583 * *"Better to be a person of VALUES than to be a person of SUCCESS"* *"ECE Dept UG is NBA accredited for 6-Years"*

* Scopus Citations: ORCID.ORG: 0000-0003-3076-9120 http://www.scopus.com/authid/detail.url?authorId=55616592800 * WOS Citations: Researcher ID: 0-6994-2016 https://publons.com/researcher/2206552/ravish-aradhya-h-v/ * Linkedin: https://www.linkedin.com/in/dr-ravish-aradhya-h-v-57902bab/



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DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

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Attendance Sheet:

No	Name	Role	Signature
1.	Dr. H V Ravish Aradhya	Chairperson	Ray and
2.	Dr. Mahesh A	Member	Nals
3.	Dr. Govinda Raju M	Member	(for all M)
4.	Dr. Arunkumar P Chavan	Member	
5.	Dr Prakash Biswagar	Special Invitee	Somm
6.	Dr. H M Mahesha	Member	Communicated.
7.	Dr Balamatti Choudry	Member	ammunicated
8.	Dr. M Uttara Kumari	Member	the internet
9.	Dr Rathna G N	Member	Communicated
10	. Dr Raghavendra Rao	Member	Communicated

Mysore Road, RV Vidyaniketan Post, Bengaluru-560059, Karnataka, India 080-68188178 8179

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DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

RVCE/E&CE/ 2020 - 2021

Minutes of meeting held on Thursday, 19th Dec, 2021, 2.00 PM in Online Mode

UG 24th Board of Studies (BoS) Meeting

Dr.Geetha K S, Chairperson, BoS Welcomed the gathering.

Following members and special invitees were present.

No	Name	Role	Structure
1	Dr. Geetha KS	Chairperson	Prof& HOD, ECE
2	Dr. K J Vinoy	VTU Nominee	Prof and Chairman, ECE Dept, IIS
3	Dr Ravish Aradhya H.V	Member	Faculty
4	Dr. Srividya	Member	Faculty
5	Dr. Rathna G.N.	Member	Subject Expert from academia
6	Dr. Dinesh	Member	Subject Expert from academia
7	Mr. Raghavendra Rao	Special Invitee	Special Invitee from Industry
8	Dr.Govindafaju M	Member	Faculty
9	Dr. Ramavenkateshwaran	Member	Faculty
10	Dr.Nithin M	Member	Faculty
11	Dr. Mahesh A	Member	Faculty
12	Mr. Arun Kumar Chavan	Member	Faculty

meeting to discuss the syllabus

The following points were discussed:

Agenda #	Discussions and Resolutions
68	NEP implementation from the academic year 2021-22
	In accordance with the GO from the Government of Karnataka and subsequently
	the guidelines from VTU, it is decided to implement NEP 2020 from the academic
	year 2021-22. A meeting was held to discuss the curriculum for first year course
	"Elements of Electronics Engineering" in online mode on 19th Aug 2021.

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and the second second second second	2020 - 2021	
 Dr.Gee special She pro- also di based l Dr.Gee program HoD p Non-C curricu Following sug In Abi 	a, Chairperson of BoS welcomed the members and introduced vitees to the meeting. ented the Salient features of NEP and initiatives by VTU in NEP ussed that NEP is more of Project Based Learning than regular rning. Integration of Theory and Lab courses is also discussed. a also discussed the proposed breakup of credits, structure of under and Proposed course wise credit distribution. First year courses and sented the separate syllabus of "Elements of Electronics Engines uit Branches. This syllabus is proposed for implementation in to m at RVCE. estions are put forth by BoS Members y Enhancement courses – There should be a course on Aesthe	the members and the Implementation. She approach of teaching- ergraduate engineering credits are discussed. ering" for Circuit and the 1 st year (2021-22) tics, which would be
importa	t in system design.	

Agenda #	Discussions and Resolutions
69	Any other matter with the permission of the chair
Nil	
Resolution:	

The meeting ended with thanks from the chair.

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Professor & Head Dept of Electronics & Communication Eng RV College of Engineering Benerilium *** 159.



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DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

24th BOARD OF STUDIES (BoS) MEETING

Action taken on 23rd BoS Meeting held on 17th December 2020

S.No.	Suggestions	Action Taken
1.	Inclusion of computational electromagnetics in the course Microwaves & radiating Systems. The innovative experiments or open-ended experiments to be introduced in lab.	All suggested topics are included in regular class discussions and experiential learning.
2.	Parallel architectures & memory designs to be introduced in high performance computing course.	The suggested topics are not included as number of class hours is limited to 36. However, in the later schemes a separate course on computer architecture is proposed to implement.
3.	Design of Carbon Nano Tubes & device manufacturing to be included in Nanoelectronics.	All suggested topics are included in regular class discussions and experiential learning.
4.	EMI & EMC must be included in course automotive electronics.	All suggested topics are included in regular class discussions and experiential learning.
5.	VLSI packaging in SoC Design course must be removed as these topics are not in the scope of the course	All suggested topics are removed.



Fwd: 25th BoS meeting in ECE dept., RVCE

ELECTRONICS & COMMUNICATION ENGINEERING, **RVCE** <hod.ec@rvce.edu.in> To: Pratibha Kantanavar <pratibhakantanavar@rvce.edu.in> Wed, Jun 12, 2024 at 3:15 PM

------ Forwarded message ------From: ELECTRONICS & COMMUNICATION ENGINEERING, RVCE <hod.ec@rvce.edu.in> Date: Sat, Feb 26, 2022 at 11:07 AM Subject: 25th BoS meeting in ECE dept., RVCE To: K J Vinoy <kjvinoy@iisc.ac.in>, Rathna G N <rathna@iisc.ac.in>, Dr. Dinesh P <dineshprg@gmail.com>, Raghavendra Rao <raghavendraraor@gmail.com>, <rathna@ee.iisc.ernet.in>, Geetha K.S. <geethaks@rvce.edu.in> Cc: Arun Kumar P C <arunkumarpc@rvce.edu.in>, Mahesh A. <mahesha@rvce.edu.in>, Govinda Raju M.

<govindaraium@rvce.edu.in>

Dear Sir/Madam,

The 25th BoS meeting is scheduled on 12th March 2022 at 10.30 am. in Electronics & Communication Engineering department, RVCE, Bengaluru.

Agenda:

1) Discussion on Second year UG 2021 scheme and syllabus for the academic year 2022-23 2) Any other matter with the permission of the chair

Kindly confirm your availability.

With Regards

Dr. Geetha K.S

Professor & Head,

Department of Electronics & Communication Engineering, RV College of Engineering - Bengaluru. (O): 08068188178; (M):9900700990

--With Regards Dr. Ravish Aradhya H V Professor and HOD, E and C Dept.,* RV College of Engineering, Bengaluru 560 059. M: 9449542583 * *"Better to be a person of VALUES than to be a person of SUCCESS"* *"ECE Dept UG is NBA accredited for 6-Years"*

* Scopus Citations: ORCID.ORG: 0000-0003-3076-9120 http://www.scopus.com/authid/detail.url?authorId=55616592800 * WOS Citations: Researcher ID: 0-6994-2016 https://publons.com/researcher/2206552/ravish-aradhya-h-v/ * Linkedin: https://www.linkedin.com/in/dr-ravish-aradhya-h-v-57902bab/

* Mendeley Citations:

https://www.mendeley.com/reference-manager/library/all-references

* Semantic Scholar Citations: ID: 0000-0002-8535-9789

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DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

	RVCE/E&CE/	2020 - 2021	
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Minutes of meeting held on Thursday, 14th March, 2022, 3:30 PM in Online Mode

UG 25th Board of Studies (BoS) Meeting

Dr.Geetha K S, Chairperson, BoS Welcomed the gathering.

Following members and special invitees were present.

No	Name	Role	Structure
1	Dr. Geetha KS	Chairperson	Prof & HOD, ECE
3	Dr Ravish Aradhya H.V	Member	Faculty
4	Dr. Srividya	Member	Faculty
5	Dr. Rathna G.N.	Member	Subject Expert from academia
6	Dr. Dinesh	Member	Subject Expert from academia
8	Dr.Govinda Raju M	Member	Faculty
9	Dr. Ramavenkateshwaran	Member	Faculty
10	Dr.Nithin M	Member	Faculty
11	Dr. Mahesh A	Member	Faculty
12	Mr. Arun Kumar Chavan	Member	Faculty
Abse	ntees List		
1	Dr. Uttarakumari	Member	Faculty
2	Dr. Ravishankar S	Member	Faculty
3	Dr. B V Uma	Member	Faculty
Facu	ty members involved in fram	ing the course conter	nts of 3 rd and 4 th semester as per 2021
schen	ne were present.		

The following points were discussed:

Agenda #	Discussions and Resolutions
70	• Dr. Geetha K S, Chairperson of BoS welcomed the members and introduced the
	members and the special invitees to the meeting. The chairperson explained the
	scheme structure to members present and following discussions and suggestions
	are put forth.

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RVCE/E&CE/		2020 - 2021				
	• The sylla	bi discussion was	started	with faculty	coordinators	highlighting th

• The synabl discussion was started with faculty coordinators highlig course contents in comparison with 2018 scheme.

Following suggestions are put forth by BoS Members

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- The course contents of Analog Microelectronics Circuits were presented. As this is introductory and fundamental course on circuits for electronics, contents of 2018 scheme are retained as it in theory. However, in the practice emphasis on breadboard experiments is reduced and but simulation using modern tools is considered. The members suggested to redistribute the total number hours substantially.
- In digital electronics course, HDL component is added to cater the requirements of other circuit branches. The members suggested to conduct industrial training to impart skills required to conduct the activities scheduled under experiential learning.
- Usage of modern engineering tools like MATLAB in different courses like Network Analysis and Control systems may be considered for better understanding of the course contents.
- Design and programming of MAC unit can be studied as a part of self-learning component in digital system design using Verilog HDL.
- A few topics like quantum dots and nanomaterials in Engineering materials can be suitably changed to meet the requirements of circuit branches.
- For lab component of Signal processing lab, the usage of hardware boards like STM32F4 can be checked.
- Comparison of analog and digital filters may be included in analog IC design course.

Resolution:	The suggestions made by the BoS members are to be discussed in detail in subsequent
	Common BoS Meeting to finalize the syllabus.

Agenda #	Discussions and Resolutions		
71	Any other matter with the permission of the chair		
1. Feedback of s	takeholders analysed and added new courses in the 2018 Scheme & 2021 Scheme.		
2. Major project for the final year students were verified with aligned verticals of Electronics and			
Communication	field. Evaluation of the project conducted in phase wise.		
Resolution:	-		

The meeting ended with vote of thanks from the chair.

reth

Professor & Head Dept. of Electronics & Communication Eng. RV College of Engineering Bengaluru-560 059.

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DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

25th BOARD OF STUDIES (BoS) MEETING

Action taken on 24th BoS Meeting held on 19th December 2020

S.No.	Suggestions	Action Taken
1.	Course on Aesthetics to be included in the basket of Ability enhancement	The suggested course is not included.
	courses.	
	Introduction to microcontroller,	All suggested topics are included in regular class
2	Programming in C to be included in	discussions and experiential learning.
2.	principles of electronics for non-	
	circuit branches.	



Invitation for the 26th BoS meeting on Friday (Dec-02, 2022) Hybrid Mode

1 message

ELECTRONICS & COMMUNICATION ENGINEERING, RVCE <hod.ec@rvce.edu.in> Wed, Nov 30, 2022 at 4:06 PM To: Rathna G N <rathna@iisc.ac.in>, rathna@ee.iisc.ernet.in, Dr Balamati Choudhury <balamati@nal.res.in>, Raghavendra Rao <raghavendraraor@gmail.com>, Dr H M Mahesh <hm_mahesh@rediffmail.com>, hm_mahesh@hotmail.com, Electronics and Communicaion Faculty <ec_faculty@rvce.edu.in>

Dear Sir/Madam,

Greetings from the Department of Electronics and Communication Engineering, RV College of Engineering, Bangalore. Hope you are doing well.

As per the guidelines of VTU, we are in the process of formulating the syllabus for the 2022 scheme. In this regard, we invite you for the 26th BoS Meeting scheduled on 2nd December 2022 at 2.30PM in hybrid mode. We request you for physical presence if possible. We are inviting you on short notice, as we need to finalize the syllabus for a few courses of the 2022 scheme and to be intimated to VTU.

Agenda of the meeting is as follows.

- 1. Discussion and Finalization of Basic Electronics syllabus for circuit and non-circuit branches.
- 2. Discussion and finalization of Introduction to Embedded systems syllabus.
- 3. Discussion and finalization of Primer on Semiconductor fundamentals and Quantum syllabus computing.
- 4. Discussion on POs and PSOs attainment levels for 2018-2022 graduated batch.
- 5. Any other matter with the permission of the chair.

The syllabus for the above mentioned courses to be included in the first year 2022 scheme is enclosed herewith for your reference.

Please find the Webex Link to join the meeting online

Join from the meeting link

https://rvce.webex.com/rvce/j.php?MTID=m280253459f0b9799495680c2f16933a0

--With Regards Dr. Ravish Aradhya H V

Professor & Head,

Department of Electronics & Communication Engineering, RV College of Engineering - Bengaluru. (O): 08068188178; (M): 6360290588

4 attachments

- BASIC ELECTRONICS- CIRCUIT BRANCH.docx
- Primer on Semiconductor Fundamentals & Quantum Computing.docx 21K
- Introduction to Embedded Systems.docx 26K
- INTRODUCTION TO ELECTRONICS ENGINEERING NON CIRCUIT.docx 27K



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DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

RVCE/E&CE/	2021 - 2022	

Minutes of meeting held on Friday, 2nd December, 2022, 2.30 PM in Hybrid Mode

UG 26th BOS Meeting

Dr.H V Ravish Aradhya, Chairperson, BOS Welcomed the BOS team.

No	Name	Role	Structure
I	Dr. H V Ravish Aradhya	Chairperson	Prof & HOD, ECE
2	Dr. Mahesh A	Member	Faculty
3	Dr. Govinda Raju M	Member	Faculty
4	Prof Arunkumar P Chavan	Member	Faculty
5	Dr. Ramavenkateshwaran	Special Invitee	Faculty
6	Prof Ravishankar Holla	Special Invitee	Faculty
7	Prof Mahendra B M	Special Invitee	Faculty
8	Dr Prakash Biswagar	Special Invitee	Faculty
9	Dr. Chinmaye R	Member	Faculty
10	Dr. H M Mahesha	Member	Subject Expert from academia
11	Dr Balamatti Choudry	Member	Subject Expert from Industry (VTU Nominee)
12	Dr Abhaya Deshpande	Special Invitee	Faculty
Mem	bers Absent		
1	Dr K S Geetha	Member	Faculty
2	Dr. B V Uma	Member	Faculty
3	Dr. M Uttara Kumari	Member	Faculty
4	Dr Rathna G N	Member	Subject Expert from academia
5	Dr Raghavendra Rao	Member	Subject Expert from Industry

Following members and special invitees are`` present

The following points were discussed:

Mysore Road, RV Vidyaniketan Post, 080-68188178 Bengaluru-560059, Karnataka, India

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DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

RVCE/E&CE/	2021 - 2022		

Agenda #	Discussions and Resolutions		
72	 Dr. H V Ravish Aradhya, Chairperson of BOS welcomed the members and introduced the members and the special invitees to the meeting conducted in hybrid mode. The chairperson explained the scheme structure to members and following discussions and suggestions are put forth. 		
	 Discussion and Finalization of basic electronics and introduction to electronics engineering for circuit and non-circuit branches 		

Following suggestions are put forth by BOS Members

- Dr. H V Ravish Aradhya highlighted regarding 2022 Scheme structure for different cluster.
- · The course contents of basic electronics and introduction to electronics engineering were presented. These are introductory courses for circuit and non-circuit branches for the first year. The members suggested to change the titles of unit 1 and unit 5 in Introduction to Electronics course for a non-circuit branch
- Dr. Balmatti and Dr. H. M. Mahesh proposed to change the case studies topic in the basic electronics course to circuit branches.

Agenda #	Discussions and Resolutions	
73	Discussion and finalization of Introduction to Embedded Systems syllabus	
171 - 11		_

Following suggestions are put forth by BOS Members

- The unit 4 may be renamed as Data Converters and unit 5 may be renamed as electro mechanical sensor and actuators.
- Members suggested to indicate the extent of coverage of the topics to support external question . paper setters.

Agenda #	Discussions and Resolutions
74	Discussion and Finalization of Primer on semiconductors and fundamentals and quantum computing syllabus
Following su	ggestions are put forth by BOS Members

- BOS members suggested to change the title of the course to "Semiconductor Fundamentals and Quantum Computing"
- · Members suggested to include super fusion concept before introducing quantum computing to support leaners in understanding easily.

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DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

RVCE/E&CE/	2021-2022

Agenda #	Discussions and Resolutions
75	Discussion on POs and PSOs attainment level for 2018-2022 graduated batch.
Resolution:	The attainment levels of PO6, PO7, PO9, PO10, PO11 and PO12 are comparatively low. The observations and reasons for attainment are presented in BoS. The action to taken and corresponding measures are also presented. The members suggested to include more of problem-based learning with more inclination to engineer and society in addition to inculcating the skills pertaining to other POs.

Agenda #	enda # Discussions and Resolutions		
76	Ratification of ADDC subject 2021 scheme		
Resolution:	n: BoS members agreed for ratification.		
Agenda #	Discussions and Resolutions		
77	Approval for 5th semester Group-A electives from NPTEL		
Resolution:	The NPTEL courses proposed for 18 scheme 5th semester group A MOOC elective are accepted. The following are alternate courses proposed. 18EC5A2: Advanced Probability Theory, 18EC5A4: Optical Engineering		

Agenda #	Discussions and Resolutions	
78	Any other matter with the permission of chair.	
Resolution:	-	

The meeting ended with thanks from the chair.

Professor & Head Dept. of Electronics & Communication Engg. RV College of Engineering Ben-1004-560 059.

Mysore Road, RV Vidyaniketan Post, 080-68188178 Bengaluru-560059, Karnataka, India

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DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

26th BOARD OF STUDIES (BoS) MEETING

Action taken on 25th BoS Meeting held on 14th March 2022

Sl.No.	Suggestions	Action Taken
1.	Suggested to include the Breadboard related experiments more compared to simulation based experiments in the course Analog Micro-electronics.	Added all experiments on breadboard based experimentations and same will be planned to implement on simulation also.
2.	Suggested to add HDL part in the Analysis of Digital Circuits course.	As per the suggestions, included the HDL part in the Experiential learning of Analysis of Digital Circuits.
3.	Suggested to add Quantum Dots and nano-materials in the course Engineering Materials.	As per the suggestions topics will be added in the UNIT 5 of the course.
4.	Comparison of the Analog and digital filters needs to added in the Analog IC design course. a	Suggestions incorporated.



Invitation for the 27th BoS meeting on Saturday (Jun-10, 2023)

1 message

ELECTRONICS & COMMUNICATION ENGINEERING, RVCE <hod.ec@rvce.edu.in> Thu, Jun 8, 2023 at 4:49 PM To: Rathna G N <rathna@iisc.ac.in>, rathna@ee.iisc.ernet.in, Dr Balamati Choudhury <balamati@nal.res.in>, Raghavendra Rao <raghavendraraor@gmail.com>, Dr H M Mahesh <hm_mahesh@rediffmail.com>, hm_mahesh@hotmail.com, Electronics and Communicaion Faculty <ec_faculty@rvce.edu.in>

Dear Sir/Madam,

Greetings from the Department of Electronics and Communication Engineering, RV College of Engineering, Bangalore. Hope you are doing well.

As per the guidelines of VTU, we are in the process of formulating the syllabus for the 2021 scheme (5th and 6th Sem) and 2022 scheme (3rd and 4th sem). In this regard, we invite you for the 27th BoS Meeting scheduled on 10th June 2023 at 10 AM in ECE department RV College of Engineering.

The syllabus for all the courses indicated in the schemes (both 2021 scheme and 2022 scheme) is enclosed herewith for your reference.

Agenda of the meeting is as follows.Read

1. Read and record the minutes of 26th BOS meeting.

- 2. Discussion and Finalization of 2021 scheme and syllabus for 5th and 6th semester.
- 3. Discussion and finalization of 2022 scheme and syllabus for 3rd and 4th semester.

4. Any other matter with the permission of the chair.

With Regards Dr. Ravish Aradhya H V

Professor & Head,

Department of Electronics & Communication Engineering, RV College of Engineering - Bengaluru. (O): 08068188178; (M): 6360290588

4 attachments

- Syllabus 2021 5th and 6th sem.pdf 812K
- Syllabus 2022 3rd and 4th.pdf
- Scheme 2022 3rd and 4th sem.xlsx 16K





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DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

RVCE/E&CE/	2021 - 2022

Minutes of meeting held on Thursday, 18th May, 2023.

UG 27th BOS Meeting

Dr.H V Ravish Aradhya, Chairperson, BOS Welcomed the BOS team.

nbers are present

LOUO.	wing members are preser	Structure	
No	Name	Role	Structure
1.	Dr. H V Ravish Aradhya	Chairperson	Prof & HOD, ECE
2.	Dr. Mahesh A	Member	Faculty
3.	Dr. Govinda Raju M	Member	Faculty
4	Prof Arunkumar P Chavan	Member	Faculty
5	Dr Prakash Biswagar	Special Invitee	Faculty
6.	Dr. H M Mahesha	Member	Subject Expert from academia
7.	Dr Balamatti Choudry	Member	Subject Expert from Industry (VTU Nominee)-Communicated
8.	Dr. M Uttara Kumari	Member	Faculty
9.	Dr Rathna G N	Member	Subject Expert from academia Communicated
10.	Dr Raghavendra Rao	Member	Subject Expert from Industry Communicated

The following points were discussed:

torrada #	Discussions and Resolutions
Agenda # 79	 Dr. H V Ravish Aradhya, Chairperson of BOS welcomed the members. Discussion and ratification of NPTEL MOOC electives for 4th semester 2021 scheme.

Mysore Road, RV Vidyaniketan Post, 080-68188178 Bengaluru-560059, Kamataka, India

8179

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DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

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		30.05.2023
	2023 - 2024	50.05.2020
DUCE/E&CE/	2023 - 2024	
KVCE/E&CL/		

Dean Academics RV College of Engineering Bengaluru

This is to bring to your kind information that the following MOOC courses for 08 weeks duration with 2 credits as per 2021 scheme IV semester Electronics & Communication Engineering program. (Table-1) attached, have been attached.

attached	, nuve eeen aa		Credits	Duration
S.No	Course code	Course Title	2	08 Weeks
1	21EC4A1	Design and Analysis of Algorithms	2	08 Weeks
2	21EC4A2	Database Management System	2	08 Weeks
3	21EC4A3	Object Oriented Analysis and Design	2	08 Weeks
4	21EC4A4	Programming, Data Structures and Algorithms	2	

It is observed that in the above courses though offered in the current session of NEPTEL 2023 July Session, Sl.No.3 and Sl.No.4 have not been offered by NPTEL as rerun in forthcoming sessions.

In this regard, BoS members in the BoS meeting of Electronics & Communication Engineering Department, RVCE, approved the following additional courses with same duration (08Weeks) and equal complexity for inclusion under Professional elective 'A' group, along with above courses (Sl.No.1 and Sl.No.2) to facilitate students to select the choice of the course.

		Course Title	Credits	Duration
S.No	Course code	Course The	2	08 Weeks
1	21EC4A5 🗸	Introduction to Machine Learning	2	08 Weeks
2	21EC4A6 🗸	Programming, Data Structures and Algorithms	Z	00 WCCKS
-		using Python		

Detailed course contents of added MOOC courses are attached herewith for your perusal.

Now, I request you to kindly add these courses as additional courses in the SAP portal and do the needful and facilitate students for the registration. This course will not be studied again by the students. Request you to do the needful.

Encl:

1. Detailed course contents;

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Prof. & Head

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R.V. College of Engineering Bengaluru - 560 059



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RVCE/E&CE/ 2021 – 2022			
	RVCE/E&CE/	2021 - 2022	

Following suggestions are put forth by BOS Members

- It is observed that, the two previously selected courses "Objected Oriented Analysis and Design" and "Programming, Data Structures and Algorithms" have not been offered by NPTEL as rerun in forth coming session.
- The BoS members have decided to replace these courses by "Introduction to Machine Learning" and "Programming, Data Structures and Algorithms using Python" respectively. The courses selected are with same course duration (8 weeks) and course work.

The meeting ended with thanks from the chair.

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DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

27th BOARD OF STUDIES (BoS) MEETING

Action taken on 26th BoS Meeting held on 2nd Dec 2022

Sl.No.	Suggestions	Action Taken
1.	Suggested to add case study topics to Introduction to Electronics course for circuit branch students cluster in the every unit.	Case study topics added at the end of every unit and planned to do hands on for the same.
2.	Suggested to add Unit titles as "Data Converters" for Unit 4 and "Electro mechanical sensors & Actuators"	Added the unit 4 & 5 contents as per the suggestions. Planned to conduct few experiments on electro mechanical sensors and actuators.
3.	Suggested on course title change for the Primer on Semiconductors & fundamentals on Quantum Computing to Semiconductors & fundamentals on Quantum Computing.	Course title updated as per the given suggestions.



Invitation for the 28th BoS meeting on April 12th 2024 at 2PM

1 message

ELECTRONICS & COMMUNICATION ENGINEERING, RVCE <hod.ec@rvce.edu.in> Thu, Apr 4, 2024 at 1:30 PM To: Raghavendra Rao <raghavendraraor@gmail.com>, Rathna G N <rathna@iisc.ac.in>, Dr Balamati Choudhury <balamati@nal.res.in>, Dr H M Mahesh <hm_mahesh@rediffmail.com>, "Ravish Aradhya H. V." <ravisharadhya@rvce.edu.in>

Cc: "Govinda Raju M." <govindarajum@rvce.edu.in>, Pratibha Kantanavar <pratibhakantanavar@rvce.edu.in>, "Mahesh A." <mahesha@rvce.edu.in>

Dear Sir/Madam,

Greetings from the Department of Electronics and Communication Engineering, RV College of Engineering, Bangalore. Hope you are doing well.

As per the guidelines from AC_RVCE and VTU, we are in the process of formulating the syllabus for the 2021 scheme - 7th and 8th Sem and 2022 scheme - 5th and 6th sem.

In this regard, we invite you for the 28th BoS Meeting scheduled on 12th April 2024 at 2 PM in ECE department RV College of Engineering.

The syllabus for all the courses indicated in the schemes (both 2021 scheme and 2022 scheme) will be shared soon.

Agenda of the meeting is as follows.

- 1. Read and record the minutes of 27th BOS meeting.
- 2. Discussion and finalization of 2021 scheme and syllabus for 7th and 8th semester.
- 3. Discussion and Finalization of 2022 scheme and syllabus for 5th and 6th semester.

4. Approval for proposed content change for the course "Mathematics for Communication Engineering" of 4th semester 2022 scheme.

- 5. Discussion on proposal of 2024 scheme for PG Programs
- 6. Discussion on UG_Result Analysis
- 7. Feedback received from PG NBA visit
- 8. EMI/EMC Precompliance test setup and CoE in Integrated Circuits and Systems Department Initiatives
- 9. Completion of Graduation day of UG PG students (UG-2023 and PG-2024)
- 10. Any other matter with the permission of the chair.

--

With Regards

Dr. Ravish Aradhya H V

Professor and HOD, E and C Dept.,*

RV College of Engineering, Bengaluru 560 059. M: 9449542583 *

"Better to be a person of VALUES than to be a person of SUCCESS"

"ECE Dept UG is NBA accredited for 6-Years"

* Scopus Citations: ORCID.ORG: 0000-0003-3076-9120

http://www.scopus.com/authid/detail.url?authorId=55616592800

* WOS Citations: Researcher ID: 0-6994-2016

https://publons.com/researcher/2206552/ravish-aradhya-h-v/

* Linkedin:

https://www.linkedin.com/in/dr-ravish-aradhya-h-v-57902bab/

* Mendeley Citations:

https://www.mendeley.com/reference-manager/library/all-references

* Semantic Scholar Citations: ID: 0000-0002-8535-9789

https://www.semanticscholar.org/author/H.-V.-Ravish-Aradhya/19255649

* Google Citations: https://scholar.google.com/citations?hl=en&user=T0QNp0kAAAAJ

* RVCE website link:



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DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

RVCE/E&CE/

2021 - 2022

Minutes of meeting held on Saturday, 10th June 2023, 10.00AM.

UG 28th BOS Meeting

Dr.H V Ravish Aradhya, Chairperson, BOS Welcomed the BOS team.

No	Name	Role	Structure	
1	Dr. H V Ravish Aradhya	Chairperson	Prof & HOD, ECE	
2	Dr. M Uttara Kumari	Member	Faculty	
3	Dr. Govinda Raju M	Member	Faculty	
4	Dr. Ramavenkateshwaran	Member	Faculty	
5	Prof Ravishankar Holla	Member	Faculty	
6	Dr Abhaya Deshpande	Member	Faculty	
7	Dr. Arunkumar P Chavan	Member	Faculty	
8	Dr. H M Mahesha	Member	Subject Expert from academia	
9	Dr Rathna G N	Member	Subject Expert from academia	
10	Dr Raghavendra Rao	Member	Subject Expert from Industry (Alumni representative)	
Mem	bers Absent	in the second		
1	Dr K S Geetha	Member	Faculty	
2	Dr. B V Uma	Member	Faculty	
3	Dr. Mahesh A	Member	Faculty	
4	Dr Balamatti Choudry	Member	VTU Nominee	

Following members and special invitees are Present

The following points were discussed:

Agenda #	Discussions and Resolutions
80	Minutes of 26th and 27th MOM were read and recorded.



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DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

RVCE/E&CE/	2021 - 2022
Agenda #	Discussions and Resolutions
81	Discussion and Finalization of 2021 scheme and syllabus for 5th and 6th semester.
 Following sug Membelective Topics 	Igestions are put forth by BOS Members ers suggested include global electives in higher semesters, so that professional course es can be accommodated in 5 th semester. s on memory interfacing, 13C bus, PCI and PCI-express may be introduced in course on Ided System Design . Wiring topology of serial buses can be changed to interconnect egy. In elective course Human Machine Interface , a topic on controls can be included. bers suggested to include topic on VOIP and mobile networks in course Computer orking and Protocols . borofessional core electives in sixth semester must be chosen form all verticals of the timent. Inster elective on Real Time Embedded Systems , topics on Reliability, Circuit design, design, component redundancy, circuit redundancy, system redundancy, fault tolerance be added to impart the knowledge on design of real time systems.

Agenda #	Discussions and Resolutions
82	Discussion and finalization of 2022 scheme and syllabus for 3rd and 4th semester.
0=	

Following suggestions are put forth by BoS Members

- · Members suggested to include Packaging materials, passive elements materials, Heat treatment on materials, aging effect of materials and case studies pertaining to electronics to be included Engineering Material course.
- Members suggested to shift unit 3 to unit 1 and rename it as BJT circuit analysis in ternalog Microelectronics Circuits course. The details of biasing may be reduced by giving overview rather H parameter model can be included. In addition, Unit 4, and unit 5 can be interchanged. The power amplifiers of class A and class B must be dealt by considering both BJT and FET to impart different design considerations and introduction RF MOSFETs may be covered. The precision rectifier can be included in Op amp applications. The Experiential Learning (EL) on transformer coupled power amplifier and audio tone amplifier circuit may be considered.
- Introduction to logic families on CMOS and ECL may be considered in the course stands and Design of Digital Circuits with HDL. EL on-IC packaging types and control unit design may be considered.
- Members suggested to include Bode plots in Network Analysis and Control Systems course.

35



included.

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RVCE/E&CE/	2021 - 2022	
 The suggestions are Fields. Case studie facilities available Topics on memor Programming course, Ana may be included b may be considered 	given move unit 5 to unit 4 in co s on antennas to be included in n CoE in SASM for experiential y interfacing with processor n rse. log Integrated Circuits Design y removing switched capacitor c d for inclusion. The applicatio	topics on data converters (ADC and DAC) ircuit. The noise analysis and RC oscillators nos of PLL and PLLs in oscillators can be

 Agenda #
 Discussions and Resolutions

 83
 Any other matter with the permission of the chair.

 • Equivalent courses between 2018 scheme and 2021 scheme are presented. The courses with similarity more than or equal to 80% in course curriculum across schemes with same credit structure are considered as equivalent.

The meeting ended with thanks from the chair.

Professor & Head Pept. of Electronics & Communication Enge.. RV College of Engineering Bengaluru-560 059.

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DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

28th BOARD OF STUDIES (BoS) MEETING

Action taken on 27th BoS Meeting held on 18th May 2023

Sl.No.	Suggestions	Action Taken
1.	Removal of non-rerun courses on SWAYAM NPTEL portal- Object Oriented and analysis, Programming Data structures and algorithms	Instead of Non-rerun course two more other courses added in the MOOC Professional electives.1. Introduction to machine learning2. Programming ,data structures and algorithms using Python

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RVCE/E&CE	299	2018 - 2019	16.08.2018

CIRCULAR

The 3rd Board of Studies meeting is scheduled on 18.08.2018, Saturday at 10.00 am in the chamber of the undersigned.

Agenda:

b Discussion & Finalization of scheme for PG programmes – Communication Systems, VLSI Design & Embedded Systems

CDiscussion and finalization of 1st year PG syllabus

§. Any other issue with the permission of the chair,

The following BoS committee members are requested to attend the meeting without fail.

Sl No	Name	Designation	Signature
1	Dr Geetha KS	Professor & Head	leetig
2	Dr. Uma B.V.	Professor & Chairman	U.BV.
3	Dr. Ravishankar S	Professor	Stanishand
4	Dr. Uttarakumari M	Professor	YU
5	Dr. Ravish Aradhya H.V	Professor	fores
6	Dr. Veena Devi S.V.	Associate Professor	Dues
7	Mr. Govindaraju M	Assistant Professor	for ell'
8	Mr. Ramavenkateswaran N	Assistant Professor	- An
9	Mr.Nithin M	Assistant Professor	120111Bag
10	Dr.G.N. Rathna	Professor, IISc	
11	Dr. Venkatesh Vadde	Professor, PES University	
12	Mr.Prasanna T	Industry expert	_
13	Mr Raghavendra Rao	Industry expert	and an
14	Mr. Venkatesh Prasad	Industry expert	

Professor & Head Department of Electronics & Communication Engineering R.V. College of Engineering Bangalore - 560 059



18/08/18

Board of Studies Meeting

The 3rd Board of Studies meeting for the discussion & finalization of course syllabus for the PG programs – Communication Systems, VLSI Design & Embedded Systems for 2018 scheme is scheduled on 18- 08-2017, Saturday at 10 am in ECE seminar hall

The following BoS committee members attended the meeting

Sl No	Name	Designation	Signature
1	Dr Geetha KS	Professor & Head	Geettia
2	Dr Uma B.V.	Professor, Chair person	X B
3	Dr. Ravishankar S	Professor	Skan Shant
4	Dr. Uttarakumari M	Professor	- Absent -
5	Dr. Ravish Aradhya H.V	Professor	Ray
6	Dr. Veena Devi S.V.	Associate Professor	Quedi
7	Mr. Govindaraju M	Assistant Professor	C TEL IN
8	Mr. Ramavenkateswaran N	Assistant Professor	R
9	Mr.Nithin M	Assistant Professor	Aditha
10	Dr.G.N. Rathna	Professor, IISc	Ab
11	Dr. Venkatesh Vadde	Professor, PES University	AB
12	Mr.Prasanna T	Industry expert	Ab
13	Mr Raghavendra Rao	Industry expert	Q. J. Q. w
14	Mr. Venkatesh Prasad	Industry expert	Ab

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Minutes of meeting held on Saturday, Aug 18th, 2018, 10.00 AM

3rd Board of studies (BoS) Meeting-PG VLSI & ES

HoD, Dr. Geetha KS, welcomed the BoS Members gathering. Following members and special invitees were present.

S.NO	Faculty
1.	Dr. Geetha KS
2.	Dr Uma B.V.
3.	Dr. Ravishankar S
4.	Dr. Uttarakumari M
5.	Dr. Ravish Aradhya H.V
6.	Dr. Veena Devi S.V
7.	Mr. Govinda Raju M
8.	Mr.Ramavenkateswaran N
9.	Mr. Nithin M
10.	Mr. Raghavendra Rao

The following points were discussed:

Agenda #	Discussions and Base hitten			
Agendu #	Discussions and Resolutions			
6.	Finalization of PG VLSI Design & Embedded Systems in 2018 Scheme			
Sugge cours	estion was putforth by the BoS members regarding specifying lab in the title of the e.			
COURS	e in 4 th semester in the purview of logistical issue			
BoS m	ssion regarding inclusion of Mathematics course for PG VLSI Design & ES program nembers suggested to streamline the electives under different domains			
Resolution:	 Theory & Practice may be included in the title of course HoD will suggest the discussion regarding technical seminar to the central office BoS members suggested not to include Mathematics as a mandatory course as it is not followed in premier institutions It is decided to categorise the electives under domains like VLSI design & testing, Embedded Systems, Algorithms and architectures 			
Agenda #	Discussions and Resolutions			
7.	Finalization of PG VLSI Design & Embedded Systems courses in 2018 Scheme			



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Machine Learning o Unit-IV could be different types of neural network o Unit -V could be deals with development of Deep learning concepts SoC Design o Packaging could be included in two units Advanced Computer Architecture o Topics like solid state drives, SATA, Network Processing Architecture, Blade design architecture can be included o Existing syllabus should be revised by removing basic stuffs on 8085 o Include Pentium HPC architectures Advanced Embedded Systems Design o In Unit III, PCI, PCI express, SATA could be added FPGA design topic can be added to coprocessor architecture o Lab component should be revised BoS members agreed for the above mentioned changes and the same shall be **Resolution:** incorporated. Any other issue with the permission of the chair 8.

		NII	
Resolution:	Nil		

Meeting concluded with thanks to the chair

Professor & Head Dept. of Electronics & Communication Engg., RV College of Englneering Bengaluru-560 Ø59.



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Dated: 22-08-2018

PG 3rd Board of Studies Meeting (BoS) held on 18-08-2018, Saturday Action taken Report

Sub No.	Agenda Details	Action Taken							
	Finalization of PG VLSI Design	The necessary changes have been incorporated as							
6.	& Embedded Systems in 2018	discussed in the AAC & BoS meetings and 2016							
	Scheme	scheme is finalized.							
	Finalization of PG VLSI Design	• The necessary changes have been incorporated as							
	& Embedded Systems courses	discussed in the AAC& BoS meeting and 1 st year							
7.	in 2018 Scheme	syllabus in 2018 scheme is ready for printing							
		• Two elective courses in elective C & D are							
		offered in in 2nd semester							
0	Any other issue with the	Nil							
8.	permission of the chair.	Geotha							

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RVCE/E&CE 2019-20 29-04-20									
Circular									

4th Board of Studies (BOS) meeting is scheduled on 04-05-2014 (Saturday) at 10.30 am in the chambers of undersigned. 2~9

Agenda:

9. Finalization of syllabus of PG sem course for VLSI and CS programs under 2018 scheme

10. Any other issue with the permission of the chair.

The following BoS members are hereby informed to attend the same

S.NO	Faculty	Signature
1.	Dr. Geetha KS	Geetha
2.	Dr Uma B.V.	(LoB)
3.	Dr. Ravishankar S	Ser
4.	Dr. Uttarakumari M	MUL
5.	Dr. Geetha KS	geetla
6.	Dr. Ravish Aradhya H.V.	Row
7.	Dr. Srividya P.	Ewit
8.	Mr. Govinda Raju M	(Loui M
9.	Mr.Ramavenkateswaran. N	9
10.	Mr. Nithin M	Affra

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Professor & Head Dept. of Electronics & Communication Engg. RV College of Engineering Bengaluru-560 (159.



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4th PG Board of Studies (BOS) meeting MTech Communication Systems/VLSI Design & Embedded Systems 04th May 2019

Attendance register for 4th PG BOS Meeting on 04th May 2019 at 10.30 AM

S. NO	Member Name	Role	Sign
1,	Dr. Geetha KS Prof & Head	Chair Person	Geothy
2.	Dr. Ravishankar S	Internal Member	StaniBhan W
3.	Dr. Uttarakumari M	Internal Member	Must
4.	Dr. Uma B.V.	Internal Member	OB.V.
5.	Dr Ravish Aradhya H.V	Internal Member	Ray
6.	Dr. Srividya P	Internal Member	President of
7.	Dr. Govindraju M	Internal Member	(au · M
8.	Mr. Ramavenkateswaran N	Internal Member	- Absent -
9.	Mr. Nithin M	Internal Member	Atthe
10.	Ms Madhu B. R	Internal Member from EEE Dept.	- Absent -
11.	Mr. Kendaganna Swamy. S	Internal Member from E&I Dept.	-Absent -
12.	Dr. Rathna G.N. HSc Bengaluru	External Member- Subject Expert from Academia	Rathwa. le.N.



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13.	Dr. Siva Yellampalli, UTL Technolgies	Representative from Industry	yfMar
14.	Dr. Dinesh P, Professor, ECE Dept, Dayananda Sagar College of Engineering	External Member	Demety objection
15.	Mr U.N. Vasudev Strategic Product Planner and Business Development Manager, Tektronix	Special Invitee from Industry	f
16.	Mr. Raghavendra Rao, Intel Corporation, Bengaluru	Special Invitee from Industry	Q. Q. Q
17.	Dr. Janakiraman, IIT Madras, Chennai	Meritorious alumni	- Assert -

Geeths



To file RV COLLEGE OF ENGINEERING ®, Bengaluru - 59 Department of Electronics & Communication Engineering www.rvcc.cdu.in; hod.ec@rvcc.edu.in; +91-9900700990; 080-6717 8042

Minutes of meeting held on Saturday, May 4th, 2019, 10.30 AM

PG 4th Board of Studies (BoS) Meeting

Dr. Geetha KS, Chairperson, BoS welcomed the gathering.

Following members and special invitees were present.

S.No	Name	Role	Structure
1.	Dr. Geetha KS	Chairperson	Prof& HOD, ECE
2.	Dr. Ravishankar S	Member	Faculty
3.	Dr. Uttarakumari M	Member	Faculty
4.	Dr Uma B.V.	Member	Faculty
5.	Dr Ravish Aradhya H.V	Member	Faculty
6.	Dr. Srividya P	Member	Faculty
7.	Dr. Govindraju M	Member	Faculty
8.	Mr. Nithin M	Member	Faculty
9.	Dr. Rathna G.N.	Member	Subject Expert from academia. Awaiting
			nomination from Academic Council
10.	Dr. Dinesh P	Member	Subject Expert from academia.
			Awaiting nomination from VC, VIU
11.	Dr. Siva Yellampalli	Member	Representative from Industry
12.	Mr. U.N. Vasudev	Special	Special Invitee from Industry
		Invitee	
13.	Mr. Raghavendra Rao	Special	Special Invitee from Industry
		Invitee	
14.	Mr. Rakshith G	Meritorious	Special Invitee from Industry
		alumnus	
15.	Ms. Harshita Bhat	Meritorious	Special Invitee from Industry
4		alumnus	
	Members Absent		
16.	Mr. Ramavenkateswaran N	Member	Faculty
17.	Dr. Janakiraman	Member	Meritorious alumnus





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The following points were discussed:

Agenda #	Discussions and Resolutions									
9.	Finalization of syllabus of PG 3 rd sem course for VLSI and CS programs under 2018 scheme									
Following sug	gestion are put forth by BoS Members									
In PG Comm	unication Systems,									
• Fiber Broad	to the Home (FTTH) may be included and Unit-1 may be reframed in Wireline band Communications course									
 Recer Local 	nt wireless indoor localization standard such as IEEE802.ax may be included in Wireless Area Networks course (WLAN) and Zigbee & LoRA may be included in Unit-5 of WLAN									
 OFDN by inti 	A topics in unit-2 of Wireless Cellular and LTE 4G Broadband course may be modified oducing recent wireless cellular trends									
 In PG_VLSI Design & Embedded Systems, ADC/DAC topic may be included in any of the PG_VLSI courses 										
 In Radio Frequency IC Design (RFIC) course, case studies on RF system de charging may be included and Unit-2 & Unit-5 may be interchanged with foc design 										
Resolution:	 The suggestions made by the BoS members are to be discussed in detail in subsequent Academic Advisory Committee (AAC) before placing the same in Academic Council meeting. 									

Agenda #	Discussions and Resolutions
10.	Any other issue with the permission of the chair.
NIL	
Resolution:	NIL

Page 2 of 3

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Protessor & Head Department of Electronics & Communication Engineering R.V. College of Engineering Bangalore - 560 059



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Meeting concluded with thanks to the chair

et la

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Dated: 10-05-2019

PG 4th Board of Studies Meeting (BoS) held on 04-05-2019, Saturday

Action taken Report

Sub No.	Agenda Details	Action Taken
9,	Finalization of syllabus of PG 3rd sem course for VLSI and CS programs under 2018 scheme	 The necessary changes have been incorporated as discussed in the AAC & BoS meetings and and ready for printing The additional emerging topics to be covered in experiential learning or self-study or assignment
10	Any other issue with the permission of the chair.	Nil

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Department of Electronics & Communication Engineering PG 2016 scheme Courses equivalent with 2018 scheme courses- VLSI & Embedded Systems

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	16MVE13	Advanced Embedded System Design	4:0:0:1	18MVE12	Advanced Embedded Systen Design	3:1:1	100%	Equivalent	Lab Is Incl Scheme.
<i>~</i>	16MVE14	Digital System Design Using Verilog	4:0:0:0	18MVEI1	Digital Systen Design Usin Verilog	4:0:0	70%	Not Equivalent	Unit 4 Is C Changed Syllabus Addition I
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				18MVEIA3	Algorithms For VLSI Design	4:0:0	,	,	Course Add

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RV COLLEGE OF ENGINEERING[®], Bengaluru - 59 Department of Electronics & Communication Engineering PG 2016 scheme Courses equivalent with 2018 scheme courses- VLSI & Embed

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Department of Electronics & Communication Engineering

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Attendance Sheet for 5th PG BoS meeting held on 30.12.2022

I.Dr. II. V. Ravish AradhyaChairperson, Prof & HoD (I/c), ECESignature2.Dr. K. S. GeethaProfessor & Vice Principal	S.No	Name	Role	Circumt
2. Dr. K. S. Geetha Professor & Vice Principal	1.	Dr. H. V. Ravish Aradhya	Chairperson Prof & HoD (1/a) ECE	Signature
3. Dr. B. V. Uma Professor & Dean Student Affairs	2.	Dr. K. S. Geetha	Professor & Vice Principal	- Kan
4. Dr. M. Uttara Kumari Professor -A.Bave of Absence - 5. Dr. S. Ravishankar Visiting Professor -A.Bave of Absence - 6. Dr. B. S. Kariyappa Professor -A.Bave of Absence - 7. Dr. Abhay Deshpande Associate Professor -A.Bave of Absence - 8. Dr.Mahesh A Associate Professor -A.Bave of Absence - 9. Dr. Govinda Raju M Associate Professor -A.Bave of Absence - 10. Prof.ArunKumar P Chavan Associate Professor -A.Bave of Absence - 11. Dr.Chinmaye R Assistant Professor -A.Bave of Absence - 12. Prof.Ravishankar Holla Assistant Professor -A.Bave of Absence - 12. Prof.Ravishankar Holla Assistant Professor -A.Bave of Absence - 13. Prof. B.M.Mahendra Assistant Professor, Special invitee - 14. Dr Balamati Choudhury Member, Expert from outside college, Nominated by VTU - 15. Dr. Rathna G.N. Member, Subject Expert from outside college, Nominated by VTU - 16. Dr. H M Mahesh Member, Subject Expert from outside college. - <	3.	Dr. B. V. Uma	Professor & Dean Student A faire	- Killer + Absence -
5.Dr. S. RavishankarVisiting Professor-A.Bettle of Absence -6.Dr. B. S. KariyappaProfessorRown learn7.Dr.Abhay DeshpandeAssociate ProfessorImage: Constraint of the second	4.	Dr. M. Uttara Kumari	Professor	03.
6. Dr. B. S. Kariyappa Professor Associate Professor 7. Dr.Abhay Deshpande Associate Professor Associate Professor 8. Dr.Mahesh A Associate Professor Associate Professor 9. Dr. Govinda Raju M Associate Professor Associate Professor 10. Prof.ArunKumar P Chavan Assistant Professor - Accave of Absence - 11. Dr.Chinmaye R Assistant Professor - Accave of Absence - 12. Prof.Ravishankar Holla Assistant Professor - Assistant Professor 13. Prof. B.M.Mahendra Assistant Professor, Special invitee - 14. Dr Balamati Choudhury Member, Expert from outside college, Nominated by VTU - 15. Dr. Rathna G.N. Member, Subject Expert from outside college. - 16. Dr. H M Mahesh Member, Subject Expert from outside college. - 17. Mr. Raghavendra Rao, Member, Industry representative and Alumni -	5.	Dr. S. Ravishankar	Visiting Professor	-ABave of Absence -
7.Dr.Abhay DeshpandeAssociate ProfessorConverting Brown and Bro	6.	Dr. B. S. Kariyappa	Professor	Reinsteam
8. Dr.Mahesh A Associate Professor Mail 9. Dr. Govinda Raju M Associate Professor - Leawe of Alsence - 10. Prof.ArunKumar P Chavan Assistant Professor - Leawe of Alsence - 11. Dr.Chinmaye R Assistant Professor - Leawe of Alsence - 12. Prof.Ravishankar Holla Assistant Professor - Maintage - 13. Prof. B.M.Mahendra Assistant Professor, Special invitee - 14. Dr Balamati Choudhury Member, Expert from outside college, Nominated by VTU - 15. Dr. Rathna G.N. Member, Subject Expert from outside college, College. - 16. Dr. H M Mahesh Member, Subject Expert from outside college. - 17. Mr. Raghavendra Rao, Alumni Member, Industry representative and Alumni -	7.	Dr.Abhay Deshpande	Associate Professor	OW Deffin B.S.
9.Dr. Govinda Raju MAssociate ProfessorMail10.Prof.ArunKumar P ChavanAssociate Professor- Leave of Abserve -11.Dr.Chinmaye RAssistant Professor- Reave of Abserve -12.Prof.Ravishankar HollaAssistant Professor- Reave of Abserve -13.Prof. B.M.MahendraAssistant Professor, Special invitee-14.Dr Balamati ChoudhuryMember, Expert from outside college, Nominated by VTU-15.Dr. Rathna G.N.Member, Subject Expert from outside college.Reathward of No16.Dr. H M MaheshMember, Subject Expert from outside college17.Mr. Raghavendra Rao,Member, Industry representative and Alumni-17.Mr. Raghavendra Rao,Member, Industry representative and Alumni-	8.	Dr.Mahesh A	Associate Professor	
10.Prof.ArunKumar P ChavanAssistant Professor- decade g Riserve -11.Dr.Chinmaye RAssistant Professor- Reave g Alserve -12.Prof.Ravishankar HollaAssistant Professor- Reave g Alserve -13.Prof. B.M.MahendraAssistant Professor, Special invitee14.Dr Balamati ChoudhuryMember, Expert from outside college, Nominated by VTU-15.Dr. Rathna G.N.Member, Subject Expert from outside college16.Dr. H M MaheshMember, Subject Expert from outside college17.Mr. Raghavendra Rao, AlumniMember, Industry representative and Alumni-	9.	Dr. Govinda Raju M	Associate Professor	
11.Dr.Chinmaye RAssistant ProfessorAssistant Professor12.Prof.Ravishankar HollaAssistant ProfessorMinmage R13.Prof. B.M.MahendraAssistant Professor, Special inviteeMinmage R14.Dr Balamati ChoudhuryMember, Expert from outside college, Nominated by VTUMember, Subject Expert from outside college.Minmage R15.Dr. Rathna G.N.Member, Subject Expert from outside college.Rathwa Rathwa16.Dr. H M MaheshMember, Subject Expert from outside college.Human17.Mr. Raghavendra Rao, AlumniMember, Industry representative and AlumniAQQg.	10.	Prof.ArunKumar P Chavan	Assistant Professor	- Leave of Absence -
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RVCE/E&CE/	2021 - 2022	

Minutes of meeting held on Friday, 30th December, 2022, 2.00 PM in the HoD Chamber

PG 5th BoS Meeting

Dr.H V Ravish Aradhya, Chairperson, BoS, Welcomed the BoS team.

Following members and special invitees are present

No	Name	Role	Structure
1	Dr. H V Ravish Aradhya	Chairperson	Prof & HOD, ECE
2	Dr. B V Uma	Member	Professor and Dean student affairs
3	Dr. S Ravishankar	Member	Visiting Professor
4	Dr. B S Kariyappa	Member	Professor
5	Dr. Mahesh A	Member	Faculty
6	Prof Ravishankar Holla	Member	Faculty
7	Dr. Ramavenkateshwaran	Special Invitee	Faculty
8	Prof. Mahendra B M	Special Invitee	Faculty
9	Dr. Chinmaye R	Member	Faculty
10	Dr. H M Mahesh	Member	Subject Expert from academia,
			Bangalore University
11	Dr Balamati Choudhury	Member	Subject Expert from Industry (VTU
			Nominee), NAL Bangalore
12	Mr Raghavendra Rao	Member	Subject Expert from Industry, Intel
			Bangalore
13	Dr Rathna G N	Member	Subject Expert from academia, IISc,
			Bangalore
Mem	bers Absent		
1	Dr K S Geetha	Member	Vice Principal and Professor
2	Dr Abhaya Deshpande	Member	Faculty
3	Dr. M Uttara Kumari	Member	Professor
Myso	re Road, RV Vidvaniketan Post.	080-68188178 H	

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R	VCE/	E&CE/		2021 - 2022		
	4	Dr. Govinda R	Raju M	Member	Faculty	
	5	Prof Arunkum	har P Chavan	Member	Faculty	

The following points were discussed:

Agenda #	Discussions and Resolutions					
11	• Dr. H V Ravish Aradhya, Chairperson of BOS welcomed the members and introduced the members and the special invitees. The chairperson explained the					
	forth.					
	• The chairperson highlighted the 2022 Scheme for both PG Communication Systems and VLSI Design & Embedded System					
Following sug	gestions are put forth by BOS Members					
• The co	urses having theory and Lab component, will not have SEE component for the lab.					

• The PG scheme is discussed and finalized.

Agenda #Discussions and Resolutions12Discussion and finalization of Syllabus for PG Communication Systems

Following suggestions are put forth by BOS Members

- In Statistical learning for communication course, Neural Networks application should be introduced. Experiential Learning topics can be on different neural networks applications.
- In Optical Communications and Networks course, Demultiplexing concepts to be introduced in Unit-2.
- In Advanced Communication Systems-1 course, an AI-Based Equalizer design could be introduced in lab component
- In Communication Networks and Protocols, Sliding Window Revisited can be removed from Unit-4
- Cryptography experiment can be included in Programming and Network simulation LAB
- In Advanced Embedded Computing Devices course: The following changes are suggested
 - > Von Neumann, Harvard architectures may be removed
 - Benchmarking Standards: MIPS, MFLOPS may be removed
 - Instead of SATA, PCIE may be introduced
 - > DDRAM, LPDDR, DDR to be covered.
 - LED, OLED, LCD, QDLED to be covered
 - > One system architecture like ARM cortex needs to be introduced

 In Multirate Systems and Filter Banks course, Wavelet transforms and latest developments can be discussed. Time frequency analysis along with wavelet transform can be included in Unit-4. Noise analysis and removal may be included.

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• In Evolution of wireless technologies course, Bluetooth, WiFi, WWAN, PAN to be introduced. Bharath stack could be included as a case study.

Resolution: All the suggestions from BoS members are under consideration.

Agenda #	Discussions and Resolutions
13	Discussion and finalization of Syllabus for PG VLSI Design & Embedded System

Following suggestions are put forth by BOS Members

- In Digital System Design with FPGA course, optimized high level synthesis can be introduced in Unit-3. Cyclone-2 architecture and higher end FPGA can be considered. Wander of clock could be discussed and Interconnects could be introduced in Unit-4. Pipelining and Parallelism can be added in Unit-5
- In Advanced Embedded System Design course, Processor selection criterin with FPGA power consumption to be discussed in Unit-3.
- In Low Power VLSI Design course, discussion on reduction of longest clock path may be incorporated.
- In ASIC DESIGN course, introduction to FPGA can be removed.
- In Real Time Embedded Systems, A1 for scheduling and RT Linux should be added.
- In Semiconductor Device Modelling course, Mathematical modelling should be discussed.
- In Static Timing Analysis course, Optimization and Slack with respect to clock to be discussed.
- In System on Chip Design course, MPSoC, Multichip Packages and chipset-based design should be introduced. Case study should be upgraded. 3G case study should be removed.

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	2021 - 2022		
• In a course	title IC Technol		

- a course title, IC Technology, use IDRC facility of the college for design and fabrication demonstration of simple structures. CENSE lab of IISc and fabrication lab of NAL may be visited for practical exposure. The support for the visit is promised by the external BoS members.
- In VLSI for Data Conversion Circuits course, High speed DAC's to be included.
- In Analog IC Design course, introduction to mixer circuits may be incorporated.
- In Research Methodology course, Research Ethics could be included as a topic for discussion. •
- In Modem SoCs for wireless, wireline and IOT course, IEEE 802.15.4 PAN standard could be introduced.
- In VLSI Memory Chip Design course, Interfacing to the processor must be included in Unit-5.
- In Automotive Electronics course, V2I and V2V to be included in Unit-4.
- In Analog Layout Design Lab include mixed design and RF design.
- In VLSI Testing course, IEEE 1149.1 standard to be included in Unit-4.
- In High-Speed Digital Design course, Transient power analysis, crosstalk, and ground bounce to be included in Unit-2. Case study on high-speed circuits to be included in unit-4. RF ADC and High-speed ADC to be included in unit-5.

Resolution: All the suggestions from BoS members are under consideration.

Agenda #	Discussions and Resolutions
14	Discussion and Finalization POs for both PG Communication Systems and VLSI & Embedded System. All the members suggested to go ahead with the PO statements proposed by the department.
Resolution:	PO's for both the PG programs are finalized

Agenda #	Discussions and Resolutions
15	Any other matter with the permission of chair.
Resolution:	-

The meeting ended with thanks from the chair.

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Department of Electronics & Communication Engineering

Department: Electronics & Communication Engineering Programme: M.Tech in VLSI & Embedded Systems

The following are the new courses added in the curricula in the respective curricular revisions made in 2018 and 2022 schemes. Curricular revisions were discussed thoroughly at the respective Board of Studies meetings. The new courses added are reflected in the revised curricula with the course codes.

Sl.	Title of the new course added	Course code	Scheme in which
No.			the new course is
			added
1.	Digital IC Design	18MVE13	2018
2.	Advanced Computer Architecture	18MVE1A1	2018
3.	Advanced VLSI Devices	18MVE1B3	2018
4.	High speed VLSI Design	18MVE2C3	2018
5.	Advanced Embedded Processors	18MVE2D2	2018
6.	Static Timing Analysis	18MVE3E3	2018
7.	Digital System Design with FPGA	22MVE11T	2022
8.	ARM CPUs Programming Lab	22MVE14L	2022
9.	Semiconductor Device Modelling	22MVE1A5T	2022
10.	IC Technology	22MVE1B3T	2022
11.	IOT System Design & Architecture	22MVE1B4T	2022
12.	VLSI for Data Conversion Circuits	22MVE1B5T	2022
13.	VLSI Memory Chip Design	22MVE2C2T	2022
14.	Robotics and Industrial Automation	22MVE2C3T	2022



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Sl. No.	Title of the new course added	Course code	Scheme in which the new course is added
1.	Antenna Theory	18MCS2C1	2018
2.	Machine Learning	18MCS2C2	2018
3.	Optical Communication Networks	18MCS2C3	2018
4.	Wireless Sensor Networks and IOT	18MCS2D1	2018
5.	Deep Learning	18MCE2D2	2018
6.	Statistical Learning for Communication	22MAT11DT	2022
7.	Development of Modem SoCs for Wireless, Wireline and IOT applications	22MCS2C1T	2022
8.	Programming and Network Simulation Lab	22MCS14L	2022
9.	Multirate Systems and Filter Banks	22MCS1A2T	2022
10.	Advanced 5G	22MCS2C4T	2022