



Dayananda Sagar University

School of Engineering, Kudlu Gate,
Hosur Main Road,
Bengaluru - 560068

Department of Electronics and Communication Engineering

Board of Studies (BOS) May-2022 (UG Programme of Dayananda Sagar University).

Minutes of meeting – 17th May 2022

Agenda

1. Review of the 3rd year (5th and 6th Sem) Syllabus for New Scheme(60:40) B.Tech (ECE) 2020-24
2. Finalization of the 4th year (7th and 8th Sem) Syllabus for New Scheme B.Tech (ECE) 2019-23
3. Review of the Syllabus (1st and 2nd Sem) and scheme B.Tech (ECE)
4. Major and Minor Degree
5. NEP2020
6. Students Feedback on Curriculum for 2019 -2023
7. Relook into credit assigned to modules of the Subjects and Prerequisites.

Board of Studies of Electronics and Communication Engineering Meeting held on 17-05-2022 at 9.30 am A block Broad room and also few members joined virtually on Google meet platform:

- ✓ Chairman welcomed all the External and Internal BOS Members.
- ✓ Chairman briefed about the agenda of meeting.
- ✓ The 2019-2023 Syallbus was discussed in length and suggestions and inputs for Syllabus were noted.
- ✓ Chairman briefed about the syllabus of basic electronics and basic electrical.
- ✓ Projects can be renamed as Minor Projects I/II and evaluation pattern should be clearly defined.
- ✓ Distribution of the teaching hours should be uniform for all five modules.
- ✓ Credit assignment and content of syllabus should be matched.
- ✓ Students Feedback on Curriculum for 2019 -2023 is discussed. Points to be mentioned in Feedback rather than numbers
- ✓ Major and Minor subjects discussed and finalized.
- ✓ NEP Document presented<need more discussion and ellobration.
- ✓ Common format should be maintained for all the subject before going for the hardbound of the syllabus
- ✓ Dr. Gayathri K. M. and Mrs. Shweta M P of the department noted the minutes of the meeting and readout the complete BOS proceedings.
- ✓ Chairman of the Department proposed vote of thanks for the valuable inputs given by the External BOS Members.

UG: 7th and 8th Semester – 2019 Course Matrix

Sl.No	Semester	Subject Title	Suggestions by the BOS Committee
1.	7 th	ROBOTICS AND CONTROL SYSTEMS	<ul style="list-style-type: none"> ▪ Credits and hours should be matched properly ▪ Include Practical's wherever necessary ▪ Basics of Control should be included as one module ▪ As per the requirement of the subject prerequisite should be included properly ▪ Syllabus has to be changed to 52 hours including Tutorials
2.	7 th	ANTENNAS AND WAVE PROPAGATION	<ul style="list-style-type: none"> ▪ No Change
3.	7 th	PROGRAM ELECTIVE – IV OPTICAL COMMUNICATIONS AND NETWORKING	<ul style="list-style-type: none"> ▪ No Change
4.	7 th	MIXED MODE VLSI SIGNAL DESIGN Analog Mixed Signal VLSI Design	<ul style="list-style-type: none"> ▪ Rename the subject as Analog Mixed Signal VLSI Design ▪ Hours should be uniformly distributed in the syllabus properly ▪ Module 3 syllabus can be replaced with PLL, Frequency synthesizer, Sigma –Delta and Analog RF related concepts. ▪ Module 4 syllabus can be reframed with Sub-micron concepts.
5.	7 th	FUNDAMENTALS OF EMBEDDED LINUX (EMBEDDED LINUX)	<ul style="list-style-type: none"> ▪ The word Fundamental should be avoided in the title of the course ▪ Credits mismatch, it should be the 3 credit course ▪ Syllabus should be framed for 39 hours ▪ Module 1 and Module 2 should be reframed ▪ Concepts of Linux programming and Overview of Operating system/Kernel can be included
6.	7 th	VLSI TESTING AND TESTABILITY	<ul style="list-style-type: none"> ▪ No Change ▪ Kindly add Text book for the subject Bushnell and P K Lala

7.	7 th	SENSOR AND INTERFACING DEVICES (Sensors and Signal Conditioning)	<ul style="list-style-type: none"> Title should be changed to Sensors and Signal Conditioning Module 3 contents are not related to the title Module 5 can be on application based
8.	7 th	Program Elective – V SENSOR NETWORK AND PROTOCOLS	<ul style="list-style-type: none"> Title should be reframed to Sensors, Network and Protocols Contents of the syllabus should be mapped to Text books
9.	7 th	LOW POWER VLSI	<ul style="list-style-type: none"> Flow of the Syllabus content should be reframed. Text books Gary and Heap should be added Unipower format Concepts can be introduced as 1 module
10.	7 th	LINUX DEVICE DRIVERS	<ul style="list-style-type: none"> Credits mismatch, it should be the 3 credit course Syllabus contents should be framed for 39 hours
11.	7 th	NETWORK SECURITY	<ul style="list-style-type: none"> No change
12.	7 th	VLSI TECHNOLOGY (VLSI Process Technology)	<ul style="list-style-type: none"> Change the title into VLSI Process Technology
13.	7 th	EMBEDDED SYSTEMS AND ROBOTICS (Embedded System and Automation)	<ul style="list-style-type: none"> Title should be reframed to Embedded System and Automation Credits mismatch, it should be the 3 credit course Syllabus contents should be framed for 39 hours Syllabus should be framed as general topics related to title of the course Word Open source should be avoided Module 5 case study can be reframed to applications
14.	8 th	PROGRAM ELECTIVE – VI WIRELESS SENSOR NETWORKS	<ul style="list-style-type: none"> No Change
15.	8 th	HARDWARE ARCHITECTURE FOR AI	<ul style="list-style-type: none"> Title can be reframed to Hardware platform for AI Reduce the contents in module 4 Setup lab using existing resources
16.	8 th	ADVANCED EMBEDDED SYSTEMS	<ul style="list-style-type: none"> Introduce RISC V Architecture From module 4 move some contents to other modules

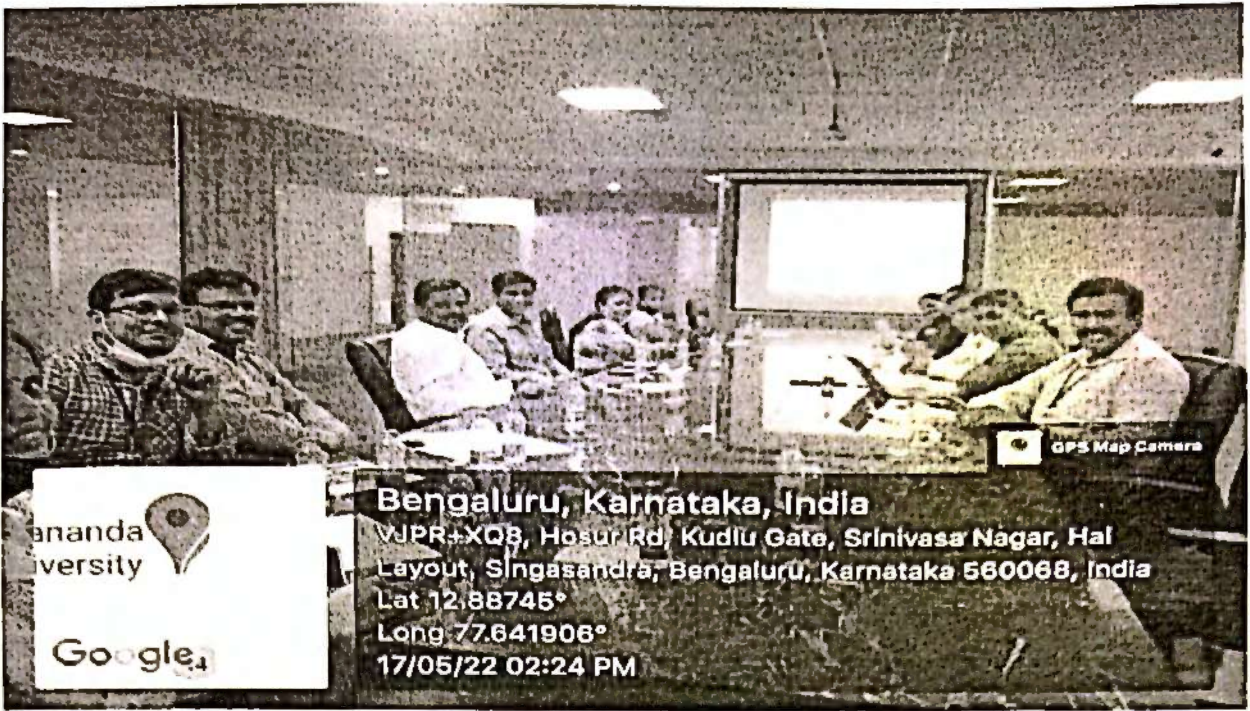
17.	8 th	SATELLITE COMMUNICATION	▪ Add PSLV to syllabus
18.	8 th	VLSI - DIGITAL SIGNAL PROCESSING	▪ In module 2 add Fast adders and Multipliers
19.	8 th	SIGNAL CONDITIONING AND DATA ACQUISITION	▪ In module 1 add Instrumentation amplifiers ▪ Contents in module3 can be moved to module1
20.	8 th	Project work phase1 and phase2	▪ Project work title for 7 th semester and 8 th semester should be reframed to project1 and project2

UG: 1st and 2nd Semester – 2021 Course Matrix

Sl.No	Semester	Subject Title	Suggestions by the BOS Committee
1	1 st /2 nd	Basic Electrical	▪ No Change
2	1 st /2 nd	Basic Electronics	▪ No Change

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Department of Electronics & Communication Engineering
School of Engineering
Dayananda Sagar University, Bengaluru





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Bengaluru, Karnataka, India

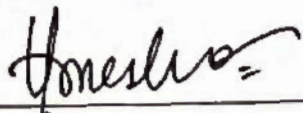
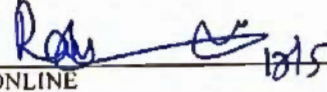
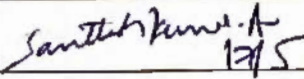
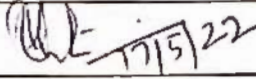
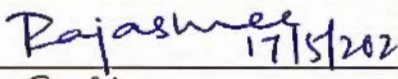
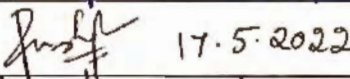
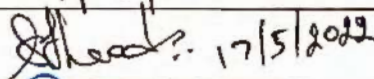
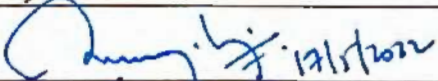
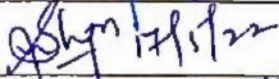

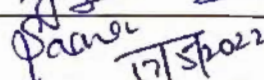
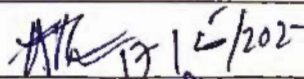
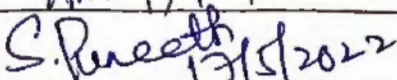
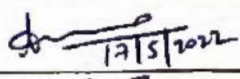
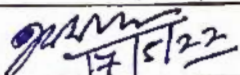
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Layout, Singasandra, Bengaluru, Karnataka 560068, India

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List of BoS Members Present

BOS MEMBERS	Signatures
Dr. Vaibhav Mesharam Chairman Department of ECE , SOE, DSU	
Dr. Ravish Aradhya H V, Professor, Dept. of ECE, RVCE, Bangalore	
Mr. C P Ravikumar, Texas Instrument	ONLINE meet.google.com/ffi-bgem-zbd
Dr. Cyril Raj MS College of Engineering Bangalore	ONLINE meet.google.com/ffi-bgem-zbd
Mr. Santhosh Adinarayana, Maxim Integrated India Pvt Ltd.	
Dr. Narasimha kaulgud, Professor, NIE Mysore	ONLINE
Dr Kiran A Gupta DSCE Bangalore	
Mr. Abhinav G A, Alumni 2016 Batch Research Engineer Continental Indial Pvt Lts	ONLINE meet.google.com/ffi-bgem-zbd
Mr. Abhishek Alumni 2017 Batch Design Engineer L&T Infotech	ONLINE meet.google.com/ffi-bgem-zbd
Dr. Rajashree N, Department of ECE , SOE, DSU	
Dr. Puspha P V Department of ECE , SOE, DSU	
Dr. Theoder Chandra Department of ECE , SOE, DSU	
Dr. Arungalai Vendan Department of ECE , SOE, DSU	
Dr. Pusphamala S Department of ECE , SOE, DSU	
Dr. Gayathri K M Department of ECE , SOE, DSU	
Dr. Saara K Department of ECE , SOE, DSU	
Mr. Abhinav Karan Department of ECE , SOE, DSU	
Mr. Puneeth S Department of ECE , SOE, DSU	
Mrs. Anna Merian George Department of ECE , SOE, DSU	
Dr. Rupam B Department of ECE , SOE, DSU	



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Department of Electronics and Communication Engineering

Board of Studies (BOS) May-2021 (UG programme of Dayananda Sagar University).

Minutes of meeting – 08th May 2021

Agenda

1. Review of the 2nd year (3rd and 4th Sem) Syllabus for New Scheme(60:40) B.Tech (ECE) 2020-24
2. Finalization of the 3rd year (5th and 6th Sem) Syllabus for New Scheme B.Tech (ECE) 2019-23
3. Review of the Syllabus (1st and 2nd Sem) and scheme B.Tech (ECE) 2021-2025

Minutes of the Board of Studies of Electronics and Communication Engineering Meeting held on 08-05-2021 virtually on Google meet platform at 11:00 am :

The following members were present during the online meeting,

BOS MEMBERS PRESENT	
Dr. Vaibhav Mesharam Chairman Department of ECE , SoE, DSU	Dr. Arungalai Vendan Department of ECE , SoE, DSU
Dr. Ravish Aradhya H V, Professor, Dept. of ECE, RVCE, Bangalore	Dr. Pusphamala S Department of ECE , SoE, DSU
Mr. C P Ravikumar, Texas Instrument	Dr. Gayathri K M Department of ECE , SoE, DSU
Dr. Cyril Raj	Dr. Sneha Sharma Department of ECE , SoE, DSU
Mr. Santhosh Adinarayana, Maxim Integrated India Pvt Ltd.	Mr. Abhinav Karan Department of ECE , SoE, DSU
Dr. Narasimha kaulgud, Professor, NIE, Mysore	Mr. Puneeth S Department of ECE , SoE, DSU
Dr Kiran A Gupta, DSCE	Mrs. Anna Merian George Department of ECE , SoE, DSU
Mr. Abishek S Alumini, L & T	Mrs. Manasa K R Department of ECE , SoE, DSU
Mr. Abhinav G A, Alumini	Mrs. Kanmani BS Department of ECE , SoE, DSU
Dr. Rajashee N, Department of ECE , SoE, DSU	Mrs Kokila S Department of ECE , SoE, DSU
Dr. Puspha P V Department of ECE , SoE, DSU	Dr. Theodore Chandra Department of ECE , SoE, DSU

- ✓ Chairman welcomed all the External and Internal BOS Members.
- ✓ Chairman briefed about the agenda along with the introduction of Alumni members.
- ✓ The 2019-2023 Course Scheme was discussed in length and suggestions and inputs for Scheme and Syllabus were noted.
- ✓ Chairman briefed about the 2021 scheme and syllabus of basic electronics and basic electrical.
- ✓ Chairman seek the approval to include the subjects with respective to the MOU signed with BOSCH Rexroth.
- ✓ It is suggested to have **ONE PROPER TEXT BOOK** for framing the syllabus at the Undergraduate Level.
- ✓ Special initiatives can be renamed as Minor Projects I/II and evaluation pattern should be clearly defined.
- ✓ BoS strongly suggested to make embedded system design as a core subject.
- ✓ BoS suggested to make Information theory and coding as a core subject.
- ✓ Distribution of the teaching hours should be uniform for all five modules.
- ✓ BoS suggested to reorganize the contents for subjects such as C programming for embedded System, Embedded system design and Real time Embedded systems.
- ✓ Alumni members suggested to push the subjects like antenna wave propagations and power electronics before seventh semester as this subject highly demands concentration and time.
- ✓ Common format should be maintained for all the subject before going for the hardbound of the syllabus
- ✓ Dr. Gayathri K. M. of the department noted the minutes of the meeting and readout the complete BOS proceedings.
- ✓ Chairman of the Department proposed vote of thanks for the valuable inputs given by the External BOS Members.

UG: 5th and 6th Semester – 2019 Course Matrix

Sl.No	Semester	Subject Title	Suggestions by the BOS Committee
1.	5 th	Analog and Digital Communication	<ul style="list-style-type: none"> ▪ TDM concept can be removed if it is not much relevant. ▪ Include multirate sampling, sampling rate conversion, one or two topics of new trends of communication. ▪ Alumni suggested one module should be on application
2.	5 th	PTSP	<ul style="list-style-type: none"> ▪ The subjects can be correlated to the applications of engineering domains such as signal processing, Machine learning, Data science ▪ The open-ended problems can included from the domains such as communication, control, verification and so on ▪ The team of analog and digital communication and PTSP can frame 5th module syllabus in terms of application or case studies which account for mini projects.

3.	5 th	CMOS VLSI design	<ul style="list-style-type: none"> ▪ Finfets and memsistors can be removed or pushed to advanced subjects of VLSI ▪ Include MOS model parameters and Scaling concepts
4.	5 th	Digital Signal Processing	<ul style="list-style-type: none"> ▪ BoS members suggested to open a new elective on DSP Architecture and Algorithms implementation.
5.	5 th	Information theory and coding	<ul style="list-style-type: none"> ▪ No change
6.	5 th	MEMS	<ul style="list-style-type: none"> ▪ No Change
7.	5 th	C Programming for embedded system	<ul style="list-style-type: none"> ▪ Module 1 and 2 can be combined ▪ Include more concepts on interfacing with output devices and sensors. ▪ Basics C concepts can be removed as it is thought prior ▪ The textbook provided covers only the basic of C, which will not emphasize on embedded system. Hence provide proper textbook which emphasize on both such as “ Peterson for embedded C programming” ▪ Application of this subject should bring in terms of case studies ▪ Clearly define the syllabus is for embedded systems or it is C programming.
8.	5 th	PLC	<ul style="list-style-type: none"> ▪ No Change
9.	6 th	RF and microwave	<ul style="list-style-type: none"> ▪ No Change
10.	6 th	Power Electronics	<ul style="list-style-type: none"> ▪ Include in module 5 the concepts related to battery and battery charging which is more relevant to electric vehicles. ▪ Ned Mohan can also be included as a textbook
11.	6 th	Analog VLSI Design	<ul style="list-style-type: none"> ▪ No change ▪ Needs clarity on one stage opamp
12.	6 th	Embedded System design	<ul style="list-style-type: none"> ▪ Module 5 can be a part of embedded programming ▪ Include Overview of operating systems. ▪ Some of the topics such as traffic light sequencing can be moved to C programming for embedded system. ▪ Module 3 is repetition. ▪ After the scrutiny of 5th Sem and 6th Sem subjects, members opinioned to reorganize the contents in embedded system design and C programming for embedded system

			<ul style="list-style-type: none"> ▪ Alumni suggested the following points from industry perspective <ul style="list-style-type: none"> ➤ Module 1 and 2 should be the specification of applications ➤ Pointers and structures can be elaborated. ➤ Include RAM and ROM read and writing ➤ Include HSM (Hardware Security Module)
13.	6 th	Digital IC design	<ul style="list-style-type: none"> ▪ Include the concept of metastability ▪ Focus on few concepts and specify the adders.
14.	6 th	Digital Image Processing	<ul style="list-style-type: none"> ▪ No Change
15.	6 th	Industry 4.0	<ul style="list-style-type: none"> ▪ Can be renamed as IIoT (Industrial IoT) ▪ Check the availability of textbook which is mentioned, and also selection of the good textbook is very important at UG level. ▪ TCP/IP is already introduced in networking subject, hence can be removed. ▪ The syllabus should be reorganized. ▪ Members suggested to emphasize on history, evolution and introduction about IIOT.

UG: 1st and 2nd Semester – 2021 Course Matrix

Sl.No	Semester	Subject Title	Suggestions by the BOS Committee
1	1 st /2 nd	Basic Electrical	<ul style="list-style-type: none"> ▪ No Change
2	1 st /2 nd	Basic Electronics	<ul style="list-style-type: none"> ▪ No Change

Chairman
Department of Electronics & Communication Engineering
School of Engineering
Dayananda Sagar University, Bengaluru

8th BOS Meeting:ECE Departmen... X

REC

Chairman ECE

Dr. KIRAN GUPTA

P Cyril Prasanna Raj

Ravikumar CP

Dr. Rajashree Narendra

Arungalai Vendan

Dr Sivaramkrishnan S

Ravish Aradhya H. V.

Puneeth S

Dr. Theodore Chandra...

Santhosh Adinarayan

abhinav karan

Abhishek S

Sheha Sharma

Dr. Pushpa DSU

pushpa mala

Sharanabasavaraj S R

Darshan Halliyavar

Abhinav G A

Kanmani B S

Manasa KR

8th BOS Meeting:ECE Department 8th May 202...

People (22)

Chat

Add people

IN CALL

Dr. Gayathri (You)

Abhinav G A

abhinav karan

Abhishek S

Arungalai Vendan

Chairman ECE

Darshan Halliyavar

8th BOS Meeting:ECE Departmen... X

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8th BOS Meeting:ECE Departmen... X

REC

Chairman ECE is presenting

Chairman ECE

Ravikumar CP

abhinav karan

pushpa mala

P Cyril Prasanna...

Dr. KIRAN GUP...

Ravish Aradhya...

Dr. Narasimha K...

Manasa KR

8th BOS Meeting:ECE Departmen... X

People (21)

Chat

Chairman ECE

Chairman ECE Presentation

Dr. KIRAN GUPTA

Dr. Rajashree Narendra

Dr. Theodore Chandra S

Dr. Narasimha kaulgud

Kanmani B S

Kickla Greenivasa

Manasa KR

8th BOS Meeting:ECE Department 8th May 202...

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EMBEDDED SYSTEMS (EES) (10 hours)

Basics of eEOS, Timer Design consideration using eEOS, Multi-state system design, Implementation of Traffic light sequencing using on chip UART for RS-232 communication, memory requirements.

Building the hardware, Basic techniques for reading & writing from I/O port pins, Examples for switches, LED Interfacing using Embedded C, Firmware :Firmware and Bootloader, Example: Sandstone

MODULE 5: EMBEDDED SYSTEMS APPLICATIONS (8 hours)

Case study - Intruder alarm system, HyperTerminal based control-gadget based control for LED interfacing, Discussions on Design, Development & Product Manufacturing Processes of embedded Products like Digital Camera / Adaptive Cruise control in a Car / Mobile Phone / Automated Bahansaid

Text Books:

1. Shaha R.V., "Introduction to Embedded Systems", Tata Mcgraw Hill Education Private Limited, 2009.
2. Andrew N. Sloss, "Domotic Systems Chris Wright, "VLM System Developer's Guide Designing and Optimizing System Software", Elsevier, 2004



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Department of Electronics and Communication Engineering

Board of Studies (BOS) March-2020 (UG programme of Dayananda Sagar University).

Minutes of meeting – 02nd March 2020

Agenda

1. Discussion on Syllabus of Semesters 3 and 4 – 2019-2023 Course Matrix (50:50 Scheme)
2. Minor Degrees in Electronics – 16 Credits – Any 4 Courses (Syllabus)

Minutes of the Board of Studies of Electronics and Communication Engineering Meeting held on 02.03.2020 at 10.30am in the Board Room of School of Engineering, Dayananda Sagar University:

- ✓ Chairman welcomed all the External and Internal BOS Members.
- ✓ Chairman briefed about the agenda along with the introduction of Minor degrees as per Dean's instruction.
- ✓ The 2019-2023 Course Scheme was discussed in length and suggestions and inputs for Scheme and Syllabus were noted.
- ✓ It is suggested to have **ONE TEXT BOOK** for framing the syllabus at the Undergraduate Level.
- ✓ Course Aim & Summary, Course Objective (3-5), and Course Outcomes (5-6) need to be reframed as per the new syllabus.
- ✓ Minor Projects I/II shall be based on Societal needs, students shall do field visit and prepare reports containing-Problems, Possible Solution, Feasibility Check and Evaluation will be done in phases by group of faculty members only.
- ✓ Minor Degree courses were discussed and suggested to have specialization instead of streamwise.
- ✓ Computer Science & Engineering and Computer Systems & Technology departments have suggested the courses from the respective stream and BOS is of the opinion that it need to be floated based on the current market scenario and consider advanced courses.
- ✓ BOS suggested Chairman to identify the Experts in the field of Mechatronics, Machine learning and automation, and Embedded system specializations and find the courses under these specializations the 16 credit courses each of 4 credit and include hands-on.
- ✓ Clear and transparent regulations need to be identified for admission, delivery of the minor degree courses, evaluation, and other related academic and administrative modalities.

- ✓ Few of the minor degree courses suggested by BOS are Microprocessor and Microcontroller, Digital design, Signal Processing, Wireless and Data communication, Embedded and IoT, Electronic product design for Mechanical Engineering, PCB Design.
 - ✓ Course feedback need to be collected from Faculty who have taught and Students for improvement of course content.
 - ✓ Stream based Mathematics syllabus shall be the course in Mathematics from 1st -3rd Semester.
 - ✓ Transducers and Sensors shall be one of Department Elective.
 - ✓ After thorough briefing of the complete Scheme, BOS suggested to include VLSI Laboratory along with the theory.
-
- ✓ Dr. Gayatri K. M. of the department noted the minutes of the meeting and readout the complete BOS proceedings.
 - ✓ Chairman of the Department proposed vote of thanks for the valuable inputs given by the External BOS Members.

UG: 3rd and 4th Semester – 2019 Course Matrix

Sl.No	Semester	Subject Title	Suggestions by the BOS Committee
1.	3rd	Electronics Devices and Circuit Theory	<ul style="list-style-type: none"> ▪ After the scrutiny of 3rd Sem and 4th Sem subjects, members opinioned to merge Electronic Devices and Circuit Theory (3rd Sem) and Analog Circuits (Opamp 4th Sem). ▪ As it is observed by the members that few of the basic topics are repetitive in Basic Electronics (1st /2nd Sem) and Electronic Devices and Circuit Theory and Analog Circuits. ▪ The syllabus shall contain, MOSFET- Characteristics, Amplifier, Oscillators; Opamp- Amplifiers, Filters, Applications. ▪ Include additional Devices (Structural Study) if possible (Content and No. of Contact Hours availability) ▪ Need to concentrated on Design aspects. ▪ The course shall be renamed as Analog Circuits and respective laboratory as Analog Circuits Lab
2.	3rd	Digital System design with Verilog	<ul style="list-style-type: none"> ▪ Members appreciated the Course Aim & Summary, Course Objective and Course Outcome written for this course. ▪ Syllabus shall contain apart from the fundamentals, <ul style="list-style-type: none"> ○ Design of Combinational and Sequential Circuits with applications ○ Timing Analysis ○ Synchronous and Asynchronous applications ○ Emphasis should be given to the design and

			<p>implementation of State Machine based case studies.</p> <ul style="list-style-type: none"> ▪ Shall refer Text Books- Morris Mano or Gajski ▪ Verilog shall be an introduction and details can taught in the Lab.
3.	3rd	Signals and System	<ul style="list-style-type: none"> ▪ No Change and shifted to 4th Semester to make credit adjustment for 3rd Semester
4.	3rd	Network Analysis	<ul style="list-style-type: none"> ▪ No Change
5.	3rd	Electronics Device lab	<ul style="list-style-type: none"> ▪ Electronic Devices Lab will be merge with 4th Sem Analog Circuits Lab ▪ Experiments need to be listed accordingly.
6.	3rd	Digital System design Lab	<ul style="list-style-type: none"> ▪ Design and implementation of Flip-flop Applications shall be added. ▪ Open Ended problem statement can be considered ▪ Timing Analysis should be included ▪ Design of Combinational and Sequential Circuit applications ▪ FPGA related experiments shall be listed and executed
7.	4th	Analog and Digital communication	<ul style="list-style-type: none"> ▪ Sampling concept can be removed as it is covered in Signals and Systems course at 4th Sem. ▪ Course shall contain Analog Communication fundamentals upto DSB/SC and SSB by combining the present initial two sections on Analog Communication (and FM) ▪ In Digital Communication section, MSK and QAM shall be included along with comparison of modulation techniques. ▪ Analog and Digital Communication by Simon Haykin can be considered as text book for framing the syllabus. ▪ The course shall be renamed as Communication Principles and same shall be used for related laboratory.
8.	4th	Analog Circuits	<ul style="list-style-type: none"> ▪ Discussed in detail along with 3rd Semester Electronic Devices and Circuit Theory.
9.	4th	Microcontrollers	<ul style="list-style-type: none"> ▪ CO3 & CO6 need to reframed ▪ Initial two sections of the syllabus can be combined ▪ Flash memory topic and its importance shall be included in the syllabus ▪ Real Time Operating System Concepts should be included and relevant protocols need be included

			<ul style="list-style-type: none"> Members suggested to have ARM processor as separate course by incorporating hands-on in higher semester
10.	4th	Probability theory and stochastic processes	<ul style="list-style-type: none"> Each section shall have case studies / applications to make understand the need of study of Probability Theory and Random/ Stochastic Process in Electronics and Communication Engineering study Probability and Random Processes with Applications to Signal Processing by Henry Stark and John W. Woods <u>And</u> Probability and Random Processes by Miller and Childers shall be considered
11.	4th	Analog and Digital Communication lab	<ul style="list-style-type: none"> Syllabus shall contain details as discussed in Analog and Digital Communication theory. Experiments shall be conducted using discrete components, and verify using MATLAB Include experiments on Coding Experiments can be combined for better clarity of study
12.	4th	Analog Circuits Lab	<ul style="list-style-type: none"> Moved to 03rd Semester and details given in Electronic Devices and Circuit Theory
13.	4th	Microcontrollers lab	<ul style="list-style-type: none"> List of Experiments shall be divided into Assembly and High Level Programming More application can be added and some experiments on RTOS

Chairman
Department of Electronics & Communication Engineering
School of Engineering
Dayananda Sagar University, Bengaluru



DAYANANDA SAGAR UNIVERSITY
SCHOOL OF ENGINEERING
KUDLU GATE, HOSUR ROAD, BANGALORE - 560 068

Department of Electronics and Communication Engineering

Date: 02-03-2020

Attendance BOS meeting
B.Tech (ECE)

List of BOS Members and Faculties present

Sl.No	Name Designation and Affiliation	Sign
1	SANTHOSH ADINARAYAN IC DESIGN MANAGER MAXIM INTEGRATED CIRCUITS INDIA PVT. LTD.	
2	Narasimha Kaulgud ERC Dept, NIE Mysuru	
3	CP RAVIKUMAR, TEXAS INSTRUMENTS	
4.	Prashant P. Patavaram Professor, ECE, SOE, DSU	 02-03-2020
5	GAYATHRI. K. M. Asst. Professor, ECE, SOE, DSU	 2/3/2020



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Sl.No	Name Designation and Affiliation	Sign
6	Dr. Pushpa P.V. Professor, ECE, DSU	 2.3.2020
7	Dr. Rajashree Narendra Professor, ECE, DSU	 2/3/2020
8	Dr. Payal Verma Associate Professor, ECE, DSU.	 2/3/2020
9	Dr. Devaraju. R Associate Professor, ECE, SoE, DSU	 28/03/2020
10	Dr. H.V. Ravish Aradhya Prof & Assoc. Dean, ECE, RVCE, B-59	 02/03/2020
11	Dr. Cyril Prabhanna Raj P. Professor RAO ECE MSEC, Bangalore	 2/3/2020
12	Dr. Kiran Gupta Professor, Dept ECE, DSCE, Blore	 2/3/2020
13	Dr. Theodore Chandra S Associate Professor/ECE, DSU, SoE	 2/3/2020
14	Dr. Vailha AM Chairman & Professor ECE Dept	
15	Ashilesh K. Asst. Prof ECE Dept	 2/3/2020



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Jan-Ju

BOS MINUTES OF MEETING B.VoC(Mechatronics)

DATE: 07-03-2019

The Board of Studies Meeting of the Department of Electronics & Communication Engineering was held on the 07th of March 2019 at the School of Engineering, Block “A”, Campus 3 of DSU.

AGENDA:

1. Result Analysis
2. Finalization of the Syllabus for 3rd and 4th Sem B.VoC(Mechatronics)

1. The availability of innovation lab like Bosch lab, Analog device lab was briefed and the students can utilize the lab for their learning.
2. Student’s feedback has to be got to know about the subjects which is useful to them and based upon that the progress can be done.
3. For digital electronics lab, more experiment has to be added so that the student can understand the basic of the subject well.
4. Students should be given with the projects such a way that it solves some real time problems.
5. For Applied Mechanics subject more application should to included in the syllabus.
6. For subject Applied mechanics some experiment can be added so that they will have the better understanding of the subject. It is also proposed to include virtual lab.
7. In the subject Applied science in module 2 spring, introduction and types of spring alone is sufficient.
8. In the subject measurement the topic RF – ID should be included in theory. And calibration experiment has to be added.
9. For mechatronics subject position control experiment can be added. (Since it is not available in innovation lab, a proposal has to me made to buy it mentioning its need also for B.Tech students)
10. For C and C++ lab, students should be thought about how the interfacing has to be done to real world.
11. Embedded C concept has to be included and concept of interfacing and blinking the LED should be thought to the students
12. For PCB lab the students can use the facilities in the innovation lab, Which helps the students understanding the complete modeling of the PCB design
13. In Fourth Semester Microcontroller subject raspberry pi 3 should be included and student should also be thought about the basics of python programming.
14. In the control system subject use of MATLAB and its application using Simulink should be thought to the students.
15. MEMS subject should be included of credit 2. The subject will have both the theory and practical class. The syllabus for the same has to be prepared.

1. To approve the Scheme of B.Voc in Mechatronics
2. To approve the Syllabus of Ist and IInd Semesters of B.Voc in Mechatronics
3. Any other points with the permission of the chair.

The following deliberations and suggestions were made in the meeting:

1. Total credits of 180 spread out in 6 semesters, i.e., 30 credits in each semester with 12 credits for Theory and 18 credits for the skill component was discussed and designed the scheme accordingly. The syllabi of 1st and 2nd semesters were discussed in detail.
2. The assessment will be based on 50 Marks for CIA and 50 Marks for SEE.
3. The title of Mathematics to be changed to Applied Mathematics.
4. The title of Metrology subject to be changed to Applied Metrology.
5. MATLAB component to be added under CNC / Robotic lab.
6. Python to be added in addition to C and C++ programming.
7. Add-on module for the 1st semester:
Industrial applications of diodes and experiments related to the same to be included in the syllabus of Electronics – I, and Electronics – I Lab.
8. Add-on module for the 2nd semester
 - (a) Mechanical Engineering: Injection Moulding.
 - (b) Electrical Engineering: Introduction to digital energy meters and smart meters. Arduino board based smart energy meter design.
 - (c) Electronics – II: Theory and practicals of power supplies – Linear and SMPS.
9. Metrology: Quality management to be added along with measurement of temperature, velocity, pressure, force etc.

SEMESTER I

General Education Components:12 Credits,180h				
Sl.No.	Subject Code	Subject Name	Credits	Hours

1.		English - I	2	30
2.		Mathematics – I	3	45
3.		Applied Science	2	30
4.		Electronics-1	3	45
5.		Basics of Computer	2	30
Skill Components :18 Credits,270h				
1.		Applied Science Lab	3	45
2.		Basics of Computer Lab	3	45
3.		Electronics-1 Lab	4	60
4.		Workshop	4	60
5.		Engineering Drawing	4	60

SEMESTER 1

General Education Components:12 Credits,180h			
Sl.No.	Subject Code	Subject Name	Suggestions
1.		English - I	No Change
2.		Mathematics – I	Change in Title to Applied Mathematics

3.		Applied Science	No Change
4.		Electronics-1	Industrial applications of diodes
5		Basics of Computer	No Change
Skill Components :18 Credits,270h			
1.		Applied Science Lab	No Change
2.		Basics of Computer Lab	No Change
3.		Electronics-1 Lab	Experiments related to Industrial applications of diodes
4.		Workshop	No Change
5.		Engineering Drawing	No Change

SEMESTER 2

General Education Components :12 Credits,180h				
SI.No.	Subject Code	Subject Name	Credits	Hours
1.		English-II	2	30
2.		Mathematics-II	2	30
3.		Electronics-II	2	30

4.		Electrical Engineering Science	2	30
5		Mechanical Engineering	2	30
6		Metrology	2	30
Skill Components :18 Credits,270h				
1.		CADD	5	75
2.		Workshop Practice	5	75
3.		Electrical Lab	4	60
4.		Electronics-II Lab	4	60

SEMESTER 2

SI.No.	Subject Code	Subject Name	Suggestions
1.		English-II	No Change
2.		Mathematics-II	No Change
3.		Electronics-II	Theory and practicals of power supplies – Linear and SMPS.
4.		Electrical Engineering Science	Introduction to digital

			energy meters and smart meters.
5		Mechanical Engineering	Injection Moulding.
6		Metrology	1. Applied Metrology 2. Quality management to be added along with measurement of temperature, velocity, pressure, force etc
-			
1.		CADD	No Change
2.		Workshop Practice	No Change
3.		Electrical Lab	Arduino board based smart energy meter design.
4.		Electronics-II Lab	Experiments related to power supplies – Linear and SMPS.

SEMESTER 3

General Education Components :12 Credits,180h				
Sl.No.	Subject Code	Subject Name	Credits	Hours
1.		Digital Electronics	3	45
2.		Applied Mechanics	2	30
3.		Computer Programming-C &C++	2	30
4.		Measuring Systems	2	30
5		Mechatronics Systems	3	45

6		Constitution and Ethics*		
Skill Components :18 Credits,270h				
1.		Computer Programming Lab-1	3	45
2.		CAD Lab	3	45
3.		PCB Design & Fabrication Lab	4	60
4.		Measuring Systems Lab	4	60
- 5.		Digital Electronics Lab	4	60

SEMESTER 4

General Education Components :12 Credits,180h				
Sl.No.	Subject Code	Subject Name	Credits	Hours
1.		Microcontrollers & Applications	3	45
2.		Industrial Electronics	3	45
3.		Control Systems	2	30
4.		Computer Programming – Vb, Networking	2	30

5		Pneumatics & Hydraulics	2	30
6		Kannada Language*		
Skill Components :18 Credits,270h				
1.		Computer Programming Lab	4	60
2.		Pneumatics & Hydraulics Lab	4	60
3.		Industrial Electronics Lab	5	75
4.		Microcontroller & Application Lab	5	75

SEMESTER 5

General Education Components :12 Credits,180h				
Sl.No.	Subject Code	Subject Name	Credits	Hours
1.		Embedded System	3	45
2.		CNC Technology & Programming	2	30
3.		Mechatronics System Design	3	45
4.		Programmable Logic Controller	2	30
5		Robotics	2	30
6		Environmental Science*		

Skill Components :18 Credits,270h


1.		MSD Project	6	90
2.		CNC/CAM	3	45
3.		PLC Lab	3	45
4.		Embedded System Lab	3	45
		Robotics Lab	3	45



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SEMESTER 6

General Education Components :12 Credits,180h				
Sl.No.	Subject Code	Subject Name	Credits	Hours
1.		Industrial Management	3	45
2.		Industrial Equipment Maintenance	3	45
3.		Automated Production Systems	3	45
4.		Product Design & Development	3	45
Skill Components :18 Credits,270h				
1.		Project	18	270


Chairman - BoS 06/06/2018



Department of Electronics and Communication Engineering

Date: 19-02-2020

Attendance BOS meeting
B Voc Mechatronics.

List of BOS Members and Faculties present

Sl.No	Name Designation and Affiliation	Sign
1.	K. SURENTHAR KUMAR - Asst Manager - NTTF	
2	Jasmi K.K - Dy. manager - NTTF	
3	JAYARAJ. B Div. Manager - NTTF	
4	GIBSON M. Sr. G.M - Syllabus & Infrastructure	
5	V. RAJASEKHARAN PRINCIPAL NEC	



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Sl.No	Name Designation and Affiliation	Sign
6	G.S. Kalpana, Sr. GM & COE	
7	S. VAGEESH, Dy. Registrar - Exam, DSU	
8	VIJAY KUMAR. S, Deputy Director, Training & Skill development	
9	C.Y. Saravanan Kumar, Taegutree	
10	S.S. SRINIVASA GOPAL Head of Dept & placement	
11	Dr. Vaidhyan Am Professor & Chairman ECE dept	
12	Dr. S. Sivarama Krishnan AP/ECE	
13	Devikarani. H.S. AP/ECE	
14	Dr. Theodore Chandra S Associate Professor/ECE	
15	Abhinav Gowd. AP/ECE	



The Board of Studies Meeting of the Department of Electronics & Communication Engineering was held on the 06th of February 2019 at the School of Engineering, Block “A”, Campus 3 of DSU.

AGENDA:

1. Finalization of the New Scheme B.Tech (ECE) 2019-23
2. 1st-year syllabus finalization.2019-23

The following points were discussed in the BOS meeting

- Credits proposed by the university is 182.
- As per AICTE, one Lab 1Credit (2 hours). As per our proposed credits, we have to bring down lab credits to 1 Credit (2 hours per week) per lab.
- Removing overlap in subjects will reduce the credits.
- Focus on Particular Specialization area and interact with those organizations dealing in these areas. This would assist in vertical skill development than on horizontal skill development.
- Value/credits can be given to internship.
- One mini and one major project is enough.
- Each lab should have one minor project. Minor project can be the outcome of every lab.
- Practical Lab should be given more weightage since its continuous assessment (80:20). 80M for regular experiment and 20M for project. Elevate the level of labs and introduce projects.
- Core courses to be reduced by merging.
- MOOC courses can be added as an elective. MOOC courses can be added instead of mini project.

Semester wise discussion are as follows

First Year

- ES/HS electives needs to identified and modified. These electives can include IP, Patenting etc.
- Since first year has no electronics, a subject as “Joy of Electronics” can be introduced. The motive is to introduce electronics in the first year. Another option is to introduce “Design kits” for electronics in first year.

Third Sem

- Lab credits can be reduced.



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- Minor project as 1Credit can be reconsidered. Minor Project Evaluation scheme to be reconsidered.
- Total reduction in credits is 2.
- Electronic Devices and Circuits title can be modified.
- Digital system Design can be modified as “Digital System Design with Verilog” and lab component modified.
- Network Theory title can be modified.

Fourth Sem

- Analog Circuits can move to 3rd sem and “Digital System Design with Verilog” to fourth sem.
- 2Credit course can be introduced as an optional (Internship/industry offered project/self study component-NPTEL,MOOC) – Open Elective.
- Vacancy in fourth sem can be filled by PTSP. PTSP shifted from 5th sem.
- PIC can be added as a part of microcontroller.

Fifth sem

- Overlap in Computer Architecture from microcontroller can be removed and to check if something extra can be added.
- CMOS can be made core in place of PTSP vacancy.
- Microcontroller + Computer architecture in 4th sem can be made as one subject.
- Vacancy in place of Computer Architecture can be filled with courses that are required for placements.
- Python can be introduced as an Elective.

Sixth sem

- PE Lab can be discussed at departmental level and modified. Theory can be made 4 Credits(3:0:2) model. Focus on industry based PE. PE can be made elective.
- Reframe Computer Networks.
- University Specific Focus can be embedded into syllabus based on our Industry Orientation wrt electives.
- The domains can be Communication/VLSI/ES or Communication/Electronics.
- Control systems can be rethought and applications introduced as part of the syllabus and title be modified as “Robotics and Control Systems”.

Seventh Sem

- Electronic Measurements Theory and Lab can be removed.



- Alternatively, Wireless communication can be included in the core.

Eight Sem

- 8th semester subjects can be covered in prior/earlier semester.
- 20% weightage can be given to MOOC courses.
- Technical seminar can be included to balance the credits.

Concept of Minor was discussed.

- Major Degree in ECE with minor in ECE with minor CSE/ME/CT.
 - Can be effectively implemented with reduction in credits.
-



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Minutes of Meeting of the Board of Studies

The Board of Studies Meeting of the Department of Electronics & Communication Engineering was held on the 6th of Feb 2019 at the School of Engineering, Block "A", Campus 3 of DSU.

Members:

Sl.No.	NAME	Address	Designation
1.	Dr.Vaibhav AM ✓	HoD, Dept. of ECE, SoE, DSU, Bangalore	Chairman <i>Dr. Vaibhav AM</i> 06/2/19
2.	Dr.Vara Prasad ✓	Sr.Scientist, Head – Micro-electronics, ISRO, Bangalore <i>Industry Expert</i>	Member
3.	Dr.C.P Ravi kumar	TEXAS Instruments India, Bangalore	Member <i>C.P. Ravi Kumar</i>
4.	Santhosh.Adinarayan	Maxim India Integrated Circuit Design Pvt. Ltd, Bangalore	Member <i>Santhosh Kumar A</i>
5.	Mr.Ramesh Venkatesan ✓	Principal Engineer, Wipro GE Health care, Bangalore <i>Industry Expert</i>	Member
6.	Dr.Narasimha Kaulgud	Professor, Dept. of ECE, NIE, Mysore	Member
7.	Dr.Rathna G.N.	Principal Research Scientist, Electrical Dept., IISc., Bangalore	Member
8.	Mr.Dharmaray Naidalgi	Manager- Engineering, Intel Mobile Communication, 1 st Floor, Innovator, ITPL, White Field, Bangalore <i>Industry Expert</i>	Member



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9.	Dr.K.L.Sudha	Professor, Dept. of ECE, DSCE, Bangalore	Member
10.	Dr.Sairam Geethanath	Professor, Dept. Medical Electronics, DSCE, Bangalore	Member
11.	Dr Thangadurai Natarajan	Professor ECE Dept. Jain University Bangalore	Member
12.	Dr. Kariyappa B.S.	Professor ECE Dept. R.V. College of Engineering, Bangalore	Member
13.	Dr.P. A. Vijaya	Professor ECE Dept. BNMIT, Bangalore	Member
14.	Dr. Narendra CP	Professor ECE Dept. BIT, Bangalore	Member
15.	Dr. Kiran Gupta	Professor ECE Dept. DSE, Bangalore	Member
16.	Dr. Puttamadappa C	Professor & Registrar, DSU, Bangalore	Member
17.	Dr. Srinivas A	Dean, Professor, Dept. of CSE, SoE, DSU, Bangalore	Member
18.	Dr. Sanjay Chitnis	Director, Innovation and Entrepreneurship, DSU, Bangalore	Member
19.	Dr. Theodore Chandra S	Associate Professor, Dept. of ECE, SoE, DSU, Bangalore	Member

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20.	Dr. Devaraju R	Associate Professor, Dept. of ECE, SoE, DSU, Bangalore	Member	<i>Dr. De</i>
21.	Dr. Arungalai V.	Associate Professor, Dept. of ECE, SoE, DSU, Bangalore	Member	
22.	Dr. Payal Verma	Associate Professor, Dept. of ECE, SoE, DSU, Bangalore	Member	<i>Payal Verma</i>
23.	Dr. Rajeev Kamal	Associate Professor, Dept. of ECE, SoE, DSU, Bangalore	Member	<i>Rajeev Kamal</i>
24.	Dr. Pushpa Mala	Assistant Professor, Dept. of ECE, SoE, DSU, Bangalore	Member	<i>Pushpa Mala</i>

Agenda:

1. Finalization of the New Scheme B.Tech (ECE) 2019-23.
2. 1st year syllabus finalization 2019-23.
3. Syllabus of old scheme (modification)



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Minutes of Meeting of the Board of Studies

The Board of Studies Meeting of the Department of Electronics & Commu was held on the 06th of June 2018 at the School of Engineering, Block “A”,

BoS Members for B-VOC in Mechatronics

Sl.No	Name	Contact/email	Role
1.	Dr. Viswanath Chairman, DSU Dept, of ECE, SoE, DSU,	viswanath-ece@dsu.edu.in 9886481327	Chairman  06/06/2018
2.	Mr. Vinay Choudhary SRR - INTEL TECHNOLOGY INDIA PVT. LTD. Bangalore	vinay.choudhary01@gmail.com +91 9986156627	Member
3.	Mr. Vellian Giri Founder/CEO #129, Tropical Paradise Harlur Road, Kudlu Bangalore - 68	Mobile No: 0919972892392	Member 
4.	Mr. Krishna.M SEG Automotive, GM-R&D Bangalore	Krishna.m@seg-automotive.com 9880001751	Member 
5.	Mr Rajesh Vaddempudi Senior Director - Test Engineering Tessolve Semiconductor Pvt Ltd. Bengaluru	rajesh@tessolve.com 99010 68551	Member
6.	Mr.S K Vijay General Manager – PED TVS Motors, Hosur	sk.vijay@tvs-motor.com Mobile: 919994901740	Member
7.	Dr. Ramesh Shankar Pudale Account Manager – MFG Autodesk Education Enterprises Autodesk India Pvt. Ltd. Unit A-4, “A” Wing, 2 nd Floor, Divyasree Chambers, Langford Road, Bangalore – 560 025	ramesh.pudale@autodesk.com 919535001287	Member 



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7.	Ms.Jasmi Vice Principal NTTF	jasmik@nttf.co.in 9995222867	Member 
8.	Prof. M.S. Rajagopal, Chairman Mechanical Engg.. DSU	msrajagopal@yahoo.com 9900977220	Member 
9.	Dr. Vinayak B Hemadri, Associate Professor, Mech. Engg,DSU	vinayak-me@dsu.edu.in 9910275510	Member
10.	Dr. Vaibhav A.M Professor Dept, of ECE, SoE, DSU,	vaibhav-ece@dsu.edu.in 7259108645	Member 
11	Prof Ayyappan R General Manager NTTF Bangalore	ayyappanr@nttf.co.in 9995019809	Invitee 
12	Prof Gibson Principal NTTF Bangalore	gibsonm@nttf.co.in 7353754994	Invitee 
13	Prof Kalpana COE , General Manager NTTF Bangalore	gsk@nttf.co.in 9844079818	Invitee 
14	Prof GuruVenkatesh VP Training and Placement DSU		Invitee
15	Dr.Puttamadappa C Registrar DSU		Invitee
16	Dr.Srinivas A Dean SOE DSU		Invitee
17	Prof Anita R COE DSU		Invitee
18	Mr.Srinivas Gopal Training and Placement DSU		Invitee 



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Agenda:

1. To approve the Scheme of B.Voc in Mechatronics
2. To approve the Syllabus of Ist and IInd Semesters of B.Voc in Mechatronics
3. Any other points with the permission of the chair.

The following deliberations and suggestions were made in the meeting:

- 1.

SEMESTER 1

General Education Components:12 Credits,180h



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Sl.No.	Subject Code	Subject Name	Credits	Hours
1.		English - I	2	30
2.		Mathematics – I	3	45
3.		Applied Science	2	30
4.		Electronics-1	3	45
5		Basics of Computer	2	30
Skill Components :18 Credits,270h				
1.		Applied Science Lab	3	45
2.		Basics of Computer Lab	3	45
3.		Electronics-1 Lab	4	60
4.		Workshop	4	60
5.		Engineering Drawing	4	60

SEMESTER 2

General Education Components:12 Credits,180h			
Sl.No.	Subject Code	Subject Name	Suggestions



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2.		Mathematics-II	2	30
3.		Electronics-II	2	30
4.		Electrical Engineering Science	2	30
5.		Mechanical Engineering	2	30
6.		Metrology	2	30
Skill Components :18 Credits,270h				
1.		CADD	5	75
2.		Workshop Practice	5	75
3.		Electrical Lab	4	60
4.		Electronics-II Lab	4	60

SEMESTER 2

Sl.No.	Subject Code	Subject Name	Suggestions
1.		English-II	



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1.		English - I	
2.		Mathematics – I	
3.		Applied Science	
4.		Electronics-1	
5.		Basics of Computer	
Skill Components :18 Credits,270h			
1.		Applied Science Lab	
2.		Basics of Computer Lab	
3.		Electronics-1 Lab	
4.		Workshop	
5.		Engineering Drawing	

SEMESTER 2

General Education Components :12 Credits,180h				
Sl.No.	Subject Code	Subject Name	Credits	Hours
1.		English-II	2	30



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2.		Mathematics-II	
3.		Electronics-II	
4.		Electrical Engineering Science	
5		Mechanical Engineering	
6		Metrology	
1.		CADD	
2.		Workshop Practice	
3.		Electrical Lab	
4.		Electronics-II Lab	

SEMESTER 3

General Education Components :12 Credits,180h				
Sl.No.	Subject Code	Subject Name	Credits	Hours
1.		Digital Electronics	3	45



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2.		Mathematics-II	
3.		Electronics-II	
4.		Electrical Engineering Science	
5		Mechanical Engineering	
6		Metrology	
1.		CADD	
2.		Workshop Practice	
3.		Electrical Lab	
4.		Electronics-II Lab	

SEMESTER 3

General Education Components :12 Credits,180h				
Sl.No.	Subject Code	Subject Name	Credits	Hours
1.		Digital Electronics	3	45



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SI.No.	Subject Code	Subject Name	Credits	Hours
1.		Embedded System	3	45
2.		CNC Technology & Programming	2	30
3.		Mechatronics System Design	3	45
4.		Programmable Logic Controller	2	30
5		Robotics	2	30
6		Environmental Science*		
Skill Components :18 Credits,270h				
1.		MSD Project	6	90
2.		CNC/CAM	3	45
3.		PLC Lab	3	45
4.		Embedded System Lab	3	45
		Robotics Lab	3	45



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SEMESTER 6

General Education Components :12 Credits,180h				
Sl.No.	Subject Code	Subject Name	Credits	Hours
1.		Industrial Management	3	45
2.		Industrial Equipment Maintenance	3	45
3.		Automated Production Systems	3	45
4.		Product Design & Development	3	45
Skill Components :18 Credits,270h				
1.		Project	18	270



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Sl.No.	Subject Code	Subject Name	Credits	Hours
1.		Microcontrollers & Applications	3	45
2.		Industrial Electronics	3	45
3.		Control Systems	2	30
4.		Computer Programming – Vb,Networking	2	30
5		Pneumatics & Hydraulics	2	30
6		Kannada Language*		
Skill Components :18 Credits,270h				
1.		Computer Programming Lab	4	60
2.		Pneumatics & Hydraulics Lab	4	60
3.		Industrial Electronics Lab	5	75
4.		Microcontroller & Application Lab	5	75

SEMESTER 5

General Education Components :12 Credits,180h



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2.		Applied Mechanics	2	30
3.		Computer Programming-C &C++	2	30
4.		Measuring Systems	2	30
5		Mechatronics Systems	3	45
6		Constitution and Ethics*		
Skill Components :18 Credits,270h				
1.		Computer Programming Lab-1	3	45
2.		CAD Lab	3	45
3.		PCB Design &Fabrication Lab	4	60
4.		Measuring Systems Lab	4	60
5.		Digital Electronics Lab	4	60

SEMESTER 4

General Education Components :12 Credits,180h



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Minutes of Meeting of the Board of Studies

The Board of Studies Meeting of the Department of Electronics & Communication Engineering was held on the 05th of June 2018 at the School of Engineering, Block “A”, Campus 3 of DSU.

Members:

Sl.No.	NAME	Address	Designation
1	Dr.Viswanath H L	HoD, Dept. of ECE, SoE, DSU, Bangalore	Chairman
2	Dr.Vara Prasad	Sr.Scientist, Head – Micro-electronics, ISRO, Bangalore <i>Industry Expert</i>	Member
3	Mr.Ramesh Venkatesan	Principal Engineer, Wipro GE Health care, Bangalore <i>Industry Expert</i>	Member
4	Dr.Narasimha Kaulgud	Professor, Dept. of ECE, NIE, Mysore	Member
5	Dr.Rathna G.N.	Principal Research Scientist, Electrical Dept., IISc., Bangalore	Member <i>Rathna G.N.</i>
6	Mr.Dharmaray Naidalgi	Manager- Engineering, Intel Mobile Communication, 1 st Floor, Innovator, ITPL, White Field, Bangalore <i>Industry Expert</i>	Member
7	Dr.K.L.Sudha	Professor, Dept. of ECE, DSCE, Bangalore	Member <i>Sudha</i> 5/6/2018
8	Dr.Sairam Geethanath	Professor, Dept. Medical Electronics, DSCE, Bangalore	Member



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9	Dr.Puttamadappa C	Professor & Registrar, DSU, Bangalore	Member
10	Dr.Vaibhav AM	Professor, Dept. of ECE, SoE, DSU, Bangalore	Member <i>Hmesh</i>
11	Mr.Chandra Kanth Singh	Associate Professor, Dept. of ECE, SoE, DSU, Bangalore	Member
12	Dr.Arbind Kumar Gupta	Professor CSE Dept. DSCE, Bangalore	Invitee <i>Arbind</i>
13	Dr.Narayan Dutt	Professor Medical Electronics DSCE, Bangalore	Invitee <i>Narayana dutt</i>
14	Ms.Sreevani N	Project Assistant,CAH, DSU Bangalore	Invitee <i>Sreevani</i>
15	Mr.Jagannathan	Managing Director Miisky Technovation Pvt Ltd Bangalore 98	Invitee
16	Mrs.Shikha Pillai	Head Strategy Siemens Health care Pvt Ltd Bangalore	Invitee
17	Mrs.Uma Parameswaram	Manager Technical Capability Wipro GE Healthcare Pvt Ltd Bangalore	Invitee



Invitation for attending the BoS Meeting on 13-01-2018.

6 messages

Chairman ECE <chairman-ecce@dsu.edu.in>

Tue, Jan 2, 2018 at 12:44 PM

To: "Dr.Varaprasad BKSVL" <bksvlp@isac.gov.in>, dharmaray.nedalgi@intel.com, "Venkatesan, Ramesh (GE Healthcare)" <ramesh.venkatesan@geind.ge.com>, "Dr G.N. Rathna" <rathna@ee.iisc.ernet.in>, Narasimha Kaulgud <narasimha.kaulgud@gmail.com>, sudha lakshminarayana kanakatte <klsudha1@rediffmail.com>, Sairam Geethanath <sairamgeethanath@gmail.com>, Registrar DSU <registrar@dsu.edu.in>, "DR, Vaibhav meshram" <vaibhav-ecce@dsu.edu.in>, chandrakant singh <cksinghiitb@gmail.com>
Cc: "Dr.A.N.N Murthy" <vicechancellor@dsu.edu.in>, Finance Officer DSU <cfo@dsu.edu.in>, "Dr. Sharanabasava C Pilli" <dean-engg@dsu.edu.in>

Dear Sir / Madam,

Greetings from Dayananda Sagar University,

The Board of Studies Meeting of the Academic Year 2017-18 has been scheduled on the 13-01-2018 (Saturday) at 9 30 AM at the School of Engineering, Dayananda Sagar University, Campus-3, Kudlu Gate, Hosur Road, Bangalore -560 068. It is our pleasure to invite you for this Meeting. The agenda for the Meeting is as follows:

1. To review the Syllabus of 7th and 8th Semesters
2. To discuss the scheme of 2019 curriculum
3. To review the syllabus of Institutional Electives
4. Any other points with the permission of the chair.

We would appreciate your confirmation of participation in the BoS Meeting per return mail.

With regards,

Dr. H.L.Viswanath
Professor & Head, Dept. of ECE,
School of Engineering,
Dayananda Sagar University,
Kudlu Gate, Hosur Main Road,
Bangalore - 560068

9886481327

Dr.Varaprasad BKSVL <bksvlp@isac.gov.in>

Tue, Jan 2, 2018 at 12:51 PM

To: Chairman ECE <chairman-ecce@dsu.edu.in>
Cc: dharmaray.nedalgi@intel.com, "Venkatesan, Ramesh (GE Healthcare)" <ramesh.venkatesan@geind.ge.com>, "Dr G.N. Rathna" <rathna@ee.iisc.ernet.in>, Narasimha Kaulgud <narasimha.kaulgud@gmail.com>, sudha lakshminarayana kanakatte <klsudha1@rediffmail.com>, Sairam Geethanath <sairamgeethanath@gmail.com>, Registrar DSU <registrar@dsu.edu.in>, "DR, Vaibhav meshram" <vaibhav-ecce@dsu.edu.in>, chandrakant singh <cksinghiitb@gmail.com>, "Dr.A.N.N Murthy" <vicechancellor@dsu.edu.in>, Finance Officer DSU <cfo@dsu.edu.in>, "Dr. Sharanabasava C Pilli" <dean-engg@dsu.edu.in>

Dear Sir,

The date is fine for me.

Regards,

Varaprasad.

Quoting Chairman ECE <chairman-ecce@dsu.edu.in>:

[Quoted text hidden]

Dr. B.K.S.V.L.Varaprasad,
Scientist/ Engineer 'G',
Head, Advanced Chip Design Division (ACDD),
Controls and Digital Area,
CRO Satellite Centre,
Vimanapura Post,
BANGALORE - 560017,
INDIA. Phone: 080-25082698

गोपनीयता सूचना: यह ई मेल अपने संलग्न दस्तावेजों के साथ केवल अभीष्ट प्राप्तकर्ता (औ) के उपयोग के लिए है। इस ई मेल में गोपनीय और विशेषाधिकृत सूचनाएँ भी हो सकती हैं। इनका अनाधिकृत पुनरीक्षण, उपयोग अथवा वितरण निषिद्ध है। यदि आप अभीष्ट प्राप्तकर्ता नहीं हैं तो, कृपया प्रेषक से संपर्क करें और ई मेल की सभी प्रतियों को नष्ट कर दें।

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Rathna G N <rathna@iisc.ac.in>

Tue, Jan 2, 2018 at 1:20 PM

To: "Dr Varaprasad BKSVL" <bksvlp@isac.gov.in>, Chairman ECE <chairman-ecce@dsu.edu.in>
Cc: "dharmaray.nedalgi@intel.com" <dharmaray.nedalgi@intel.com>, "Venkatesan, Ramesh (GE Healthcare)" <ramesh.venkatesan@geind.ge.com>, Narasimha Kaulgud <narasimha.kaulgud@gmail.com>, sudha lakshminarayana kanakatte <klsudha1@rediffmail.com>, Sairam Geethanath <sairamgeethanath@gmail.com>, Registrar DSU <registrar@dsu.edu.in>, "DR, Vaibhav meshram" <vaibhav-ecce@dsu.edu.in>, chandrakant singh <cksinghiitb@gmail.com>, "Dr.A.N.N Murthy" <vicechancellor@dsu.edu.in>, Finance Officer DSU <cfo@dsu.edu.in>, "Dr. Sharanabasava C Pilli" <dean-engg@dsu.edu.in>

hello,

it is fine with me for 13th

rathna

From: Dr.Varaprasad BKSVL <bksvlp@isac.gov.in>

To: Chairman ECE

Cc: dharmaray.nedalgi@intel.com; Venkatesan, Ramesh (GE Healthcare); Rathna G N; Narasimha Kaulgud; sudha lakshminarayana kanakatte; Sairam Geethanath; Registrar DSU; DR. Vaibhav meshram; chandrakant singh; Dr.A.N.N Murthy; Finance Officer DSU; Dr. Sharanabasava C Pilli

Subject: Re: Invitation for attending the BoS Meeting on 13-01-2018.

Dear Sir,

The date is fine for me.

Regards,

Varaprasad.

Quoting Chairman ECE <chairman-ecce@dssu.edu.in>:

[Quoted text hidden]

Dr. B.K.S.V.L.Varaprasad,
Scientist/ Engineer 'G',
Head, Advanced Chip Design Division (ACDD),
Controls and Digital Area,
ISRO Satellite Centre,
Vimanapura Post,
BANGALORE - 560017,
INDIA. Phone: 080-25082698

गोपनीयता सूचना: यह ई मेल अपने संलग्न दस्तावेजों के साथ केवल अभीष्ट प्राप्तकर्ता (ओं) के उपयोग के लिए है। इस ई मेल में गोपनीय और विशेषाधिकृत सूचनाएँ भी हो सकती हैं। इनका अनाधिकृत पुनरीक्षण, उपयोग अथवा वितरण निषिद्ध है। यदि आप अभीष्ट प्राप्तकर्ता नहीं हैं तो, कृपया प्रेषक से संपर्क करें और ई मेल की सभी प्रतियों को नष्ट कर दें।

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sudha lakshminarayana kanakatte <klsudha1@rediffmail.com>
To: Chairman ECE <chairman-ecce@dssu.edu.in>

Tue, Jan 2, 2018 at 4:00 PM

Dear sir,
Date is fine for me and I will attend the meeting
regards
Dr. K.L. Sudha,
Prof, PG Coordinator(DEC)
Dept of ECE,
DayanandaSagar College of Engineering,
K.S.Layout, Bangalore.
Ph:9845943756

From: Chairman ECE <chairman-ecce@dssu.edu.in>

Sent: Tue, 02 Jan 2018 12:44:08

To: "Dr.Varaprasad BKSVL" <bksvlvp@isac.gov.in>, dharmaray.nedalgi@intel.com, "Venkatesan, Ramesh (GE Healthcare)" <ramesh.venkatesan@geind.ge.com>, "Dr G.N. Rathna" <rathna@ee.iisc.ernet.in>, Narasimha Kaulgud <narasimha.kaulgud@gmail.com>, sudha lakshminarayana kanakatte <klsudha1@rediffmail.com>, Sairam Geethanath <sairamgeethanath@gmail.com>, Registrar DSU <registrar@dssu.edu.in>, "DR. Vaibhav meshram" <vaibhav-ecce@dssu.edu.in>, chandrakant singh <cksinghiitb@gmail.com>

Cc: "Dr.A.N.N Murthy" <vicechancellor@dssu.edu.in>, Finance Officer DSU <fco@dssu.edu.in>, "Dr. Sharanabasava C Pilli" <dean-engg@dssu.edu.in>

Subject: Invitation for attending the BoS Meeting on 13-01-2018.

[Quoted text hidden]

Personal <sairamgeethanath@gmail.com>

Tue, Jan 2, 2018 at 4:32 PM

To: "Dr.Varaprasad BKSVL" <bksvlvp@isac.gov.in>

Cc: Chairman ECE <chairman-ecce@dssu.edu.in>, dharmaray.nedalgi@intel.com, "Venkatesan, Ramesh (GE Healthcare)" <ramesh.venkatesan@geind.ge.com>, "Dr G.N. Rathna" <rathna@ee.iisc.ernet.in>, Narasimha Kaulgud <narasimha.kaulgud@gmail.com>, sudha lakshminarayana kanakatte <klsudha1@rediffmail.com>, Registrar DSU <registrar@dssu.edu.in>, "DR. Vaibhav meshram" <vaibhav-ecce@dssu.edu.in>, chandrakant singh <cksinghiitb@gmail.com>, "Dr.A.N.N Murthy" <vicechancellor@dssu.edu.in>, Finance Officer DSU <fco@dssu.edu.in>, "Dr. Sharanabasava C Pilli" <dean-engg@dssu.edu.in>

Dear Sir,

I am away on sabbatical but would be happy to join via Skype if you have that provision.

Best,
Sairam

Sent from my iPhone

PS: Responses are brief as I am using a mobile device

On 02-Jan-2018, at 2:21 AM, Dr.Varaprasad BKSVL <bksvlvp@isac.gov.in> wrote:

Dear Sir,

The date is fine for me.

Regards,

Varaprasad.

Quoting Chairman ECE <chairman-ecce@dssu.edu.in>:

Dear Sir / Madam,

Greetings from Dayananda Sagar University.

The Board of Studies Meeting of the Academic Year 2017-18 has been scheduled on the 13-01-2018 (Saturday) at 9.30 AM at the School of Engineering, Dayananda Sagar University, Campus-3, Kudlu Gate, Hosur Road, Bangalore -560 068. It is our pleasure to invite you for this Meeting. The agenda for the Meeting is as follows:

1. To review the Syllabus of 7th and 8th Semesters
2. To discuss the scheme of 2019 curriculum
3. To review the syllabus of Institutional Electives
4. Any other points with the permission of the chair

We would appreciate your confirmation of participation in the BoS Meeting per return mail.

With regards,

Dr. H.L.Viswanath
Professor & Head, Dept. of ECE,
School of Engineering,
Dayananda Sagar University,
Kudlu Gate, Hosur Main Road,
Bengaluru - 560068

9886481327

Dr. B.K.S.V.L.Varaprasad,
Scientist/ Engineer 'G',
Head, Advanced Chip Design Division (ACDD),
Controls and Digital Area,
ISRO Satellite Centre,
Vimanapura Post,
BANGALORE - 560017
INDIA. Phone: 080-25082698

गोपनीयता सूचना: यह ई मेल अपने संलग्न दस्तावेजों के साथ केवल अभीष्ट प्राप्तकर्ता (ओं) के उपयोग के लिए है। इस ई मेल में गोपनीय और विशेषाधिकृत सूचनाएँ भी हो सकती हैं। इनका अनाधिकृत पुनरीक्षण, उपयोग अथवा वितरण निषिद्ध है। यदि आप अभीष्ट प्राप्तकर्ता नहीं हैं तो, कृपया प्रेषक से संपर्क करें और ई मेल की सभी प्रतियों को नष्ट कर दें।

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Chairman ECE <chairman-ece@dssu.edu.in>
To: Bhaskar N Chittaikar <facilitymanager@dssu.edu.in>

Wed, Jan 10, 2018 at 9:16 AM

Dear Mr. Bhaskar,

Forwarding herewith the Invitation sent to Experts for participating in the BoS Meeting of the ECE Department on Saturday, the 13-01-2018. We need the following support from you:

1. To reserve the Board Room from 9.30 AM to 2.00 PM
2. Snacks (Coffee + light snacks) around 10-15 AM (about 12 persons)
3. Lunch at 12.30 PM (about 12 persons)

I would appreciate your cooperation in this regard.

With regards,

H.L.Viswanath
Professor & Head, Dept. of ECE,
School of Engineering,
Dayananda Sagar University,
Kudlu Gate, Hosur Main Road,
Bengaluru - 560068

9886481327

----- Forwarded message -----

From: **Chairman ECE** <chairman-ece@dssu.edu.in>

Date: Tue, Jan 2, 2018 at 12:44 PM

Subject: Invitation for attending the BoS Meeting on 13-01-2018.

To: "Dr Varaprasad BKSVL" <bksvlvp@isac.gov.in>, dharmaraj.nedalgil@intel.com, "Venkatesan, Ramesh (GE Healthcare)" <ramesh.venkatesan@geind.ge.com>, "Dr G.N. Rathne" <rathna@ee.iisc.ernet.in>, Narasimha Kaulgud <narasimha.kaulgud@gmail.com>, sudha.lakshminarayana.kanakatte <ktsudha1@rediffmail.com>, Sairam Geethanath <sairamgeethanath@gmail.com>, Registrar DSU <registrar@dssu.edu.in>, "DR. Vaibhav meshram" <vaibhav-ece@dssu.edu.in>, chandrakant singh <cksingh11b@gmail.com>

Cc: "Dr.A.N.N Murthy" <vicechancellor@dssu.edu.in>, Finance Officer DSU <fo@dssu.edu.in>, "Dr. Sharanabasava C Pilli" <dean-engg@dssu.edu.in>

[Quoted text hidden]



DAYANANDA SAGAR UNIVERSITY
SCHOOL OF ENGINEERING
KUDLU GATE, HOSUR ROAD, BANGALORE – 560 068

Minutes of Meeting of the Board of Studies

The Board of Studies Meeting of the Department of Electronics & Communication Engineering was held on the 13th of January 2018 at the School of Engineering, Block "A", Campus 3 of DSU.

Members:

Sl.No.	NAME	Address	Designation
1	Dr.Viswanath H L	HoD, Dept. of ECE, SoE, DSU, Bangalore	Chairman 
2	Dr. Vara Prasad	Sr.Scientist, Head – Micro-electronics, ISRO, Bangalore <i>Industry Expert</i>	Member
3	Mr.Ramesh Venkatesan	Principal Engineer, Wipro GE Health care, Bangalore <i>Industry Expert</i>	Member
4	Dr.Narasimha Kaulgud	Professor, Dept. of ECE, NIE, Mysore	Member
5	Dr.Rathna G.N.	Principal Research Scientist, Electrical Dept., IISc., Bangalore	Member
6	Mr.Dharmaray Naidalgi	Manager- Engineering, Intel Mobile Communication, 1 st Floor, Innovator, ITPL, White Field, Bangalore <i>Industry Expert</i>	Member
7	Dr.K.L.Sudha	Professor, Dept. of ECE, DSCE, Bangalore	Member
8	Dr.Sairam Geethanath	Professor, Dept. Medical Electronics, DSCE, Bangalore	Member



DAYANANDA SAGAR UNIVERSITY
SCHOOL OF ENGINEERING
KUDLU GATE, HOSUR ROAD, BANGALORE - 560 068

9	Dr. Puttamadappa C	Professor & Registrar, DSU, Bangalore	Member
10	Dr. Vaibhav AM	Professor, Dept. of ECE, SoE, DSU, Bangalore	Member <i>[Signature]</i> 13/01/2018
11	Mr. Chandra Kanth Singh	Associate Professor, Dept. of ECE, SoE, DSU, Bangalore	Member

Agenda:

1. To review the Syllabus of 7th and 8th Semesters
2. To discuss the scheme of 2019 curriculum
3. To review the syllabus of Institutional Electives
4. Any other points with the permission of the chair.

The following deliberations and suggestions were made in the meeting:

1. Schemes of 7th and 8th Semesters were reviewed.
2. Suggested to introduce Artificial Intelligence, Machine learning in 1st semester, during the next revision of syllabus in the year 2019.
3. Every subject should have five course outcomes as per the Blooms Taxonomy.
4. Case study must be included in the syllabus for all the relevant subjects.
5. Institutional Electives need to complement with other department subjects.
6. As per the Regulations, the Audit course Kannada Kali and Kannada Manasu to be added to 7th Sem and the scheme to be modified, accordingly.
7. Members were not in support of 50:50 scheme for CIA and SEE marks proposed in the syllabi to be revised in 2019. They insisted on the reverting to 30:70 scheme.



DAYANANDA SAGAR UNIVERSITY
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8. The following suggestions were made by the members in the syllabi of 7th and 8th semesters:

SEMESTER VII

Sl. No.	Subject Code	Subject	Suggestions
1	15EC401	Wireless and Mobile Communications	Overall Course outcome as per Blooms Taxonomy and should be as per overall course and not as per module/unit.
2	15EC402	Embedded system design	Course Outcome needs to change, Need to add practical aspects in Module 5.
3	15HU4XX	Engineering Economics	No changes suggested
4	15EC4XX	Department Elective -V	
5	15EC4XX	Department Elective -VI	
6	15HU4XX	HSS (Law of Engineers)	No changes suggested
7	15IE4XX	Institutional Elective -I	
8	15EC471	ECE LAB9 (VLSI lab)	No changes suggested
9	15HUXX	Kannada Kali	Audit course for Non-Karnataka students – No changes suggested
10	15HUXX	Kannada Manasu	Audit course for Karnataka students – No changes suggested



DAYANANDA SAGAR UNIVERSITY
SCHOOL OF ENGINEERING
KUDLU GATE, HOSUR ROAD, BANGALORE – 560 068

Department Elective –V

Sl. No	Subject Code	Subject	Suggestions
1	15EC421	Satellite Communication	No changes suggested
2	15EC422	DSP System Design	1. In Unit 5, to add specific KIT name(TMS320C6) 2. Maximum number of Text Books should be two, and it (they) should cover the entire syllabus.
3	15EC423	Real Time Operating Systems	Author name missing in Text book
4	15EC424	Optical Communication	No changes suggested

Department Elective –VI

Sl. No	Subject Code	Subject	Suggestions
1	15EC425	Multimedia communication	No changes suggested
2	15EC426	Digital VLSI design and verification	Syllabus to be modified to include the following: 1.Beyond Synthesis 2.From Synthesis to Physical implementation need to be added
3	15EC427	Data analytics	Subject Name changed to : Machine Learning and Data analytics
4	15EC428	Sensor networks	Subject Name changed to : 1.Wireless Sensor networks 2. To Incorporate the Mobility Model



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Institutional Elective –I

Sl. No	Subject Code	Subject	Suggestions
1	15IE4X	Project Management	Instead of Project Management, the members suggested the courses related to department : Sensors, Networks and Protocols
2	15IE4XXI	IMAGE PROCESSING AND COMPUTER VISION	Some Case Study need to be introduced using Tensor flow

SEMESTER VIII

Sl. No.	Subject Code	Subject	Suggestions
1	15EC4XX	Department Elective -VII	
2	15IE4XX	Institutional Elective –II Evolution of Telecommunications	

Department Elective –VII

Sl. No	Subject Code	Subject	Suggestions
1	15EC429 –	Statistical Signal Processing	No changes suggested
2	15EC430 –	Cognitive radio	No changes suggested
3	15EC431 –	Industrial Automation	No changes suggested



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4	15EC432 –	Global tracking and positioning	No changes suggested
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Institutional Elective –II

Sl. No	Subject Code	Subject	Suggestions
1	15IE4XXI	Micro Electro - Mechanical Systems (MEMS)	Instead of MEMS, “Automotive Embedded Systems” was suggested, for which syllabus has to be framed.
2	15IE4X	Evolution of Telecommunications	No changes suggested



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Minutes of Meeting of the Board of Studies

The Board of Studies Meeting of the Department of Electronics & Communication Engineering was held on the 13th of January 2018 at the School of Engineering, Block "A", Campus 3 of DSU.

Members:



Sl.No.	NAME	Address	Designation
1	Dr.Viswanath H L	HoD, Dept. of ECE, SoE, DSU, Bangalore	Chairman 
2	Dr.Vara Prasad	Sr.Scientist, Head – Micro-electronics, ISRO, Bangalore <i>Industry Expert</i>	Member
3	Mr.Ramesh Venkatesan	Principal Engineer, Wipro GE Health care, Bangalore <i>Industry Expert</i>	Member
4	Dr.Narasimha Kaulgud	Professor, Dept. of ECE, NIE, Mysore	Member
5	Dr.Rathna G.N.	Principal Research Scientist, Electrical Dept., IISc., Bangalore	Member
6	Mr.Dharmaray Naidalgi	Manager- Engineering, Intel Mobile Communication, 1 st Floor, Innovator, ITPL, White Field, Bangalore <i>Industry Expert</i>	Member
7	Dr.K.L.Sudha	Professor, Dept. of ECE, DSCE, Bangalore	Member
8	Dr.Sairam Geethanath	Professor, Dept. Medical Electronics,	Member



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		DSCE, Bangalore	
9	Dr.PuttamadappaC	Professor & Registrar, DSU, Bangalore	Member 
10	Dr.Vaibhav AM	Professor, Dept. of ECE, SoE, DSU, Bangalore	Member 
11	Mr.Chandra Kanth Singh	Associate Professor, Dept. of ECE, SoE, DSU, Bangalore	Member

Agenda:

1. To review the Syllabus of 7th and 8th Semesters
2. To discuss the scheme of 2019 curriculum
3. To review the syllabus of Institutional Electives
4. Any other points with the permission of the chair.

The following deliberations and suggestions were made in the meeting:

1. Schemes of 7th and 8th Semesters were reviewed.
2. Suggested to introduce Artificial Intelligence, Machine learning in 1st semester, during the next revision of syllabus in the year 2019.
3. Every subject should have five course outcomes as per the Blooms Taxonomy.
4. Case study must be included in the syllabus for all the relevant subjects.
5. Institutional Electives need to complement with other department subjects.
6. As per the Regulations, the Audit course Kannada Kali and Kannada Manasu to be added to 7th Sem and the scheme to be modified, accordingly.
7. Members were not in support of 50:50 scheme for CIA and SEE marks proposed in the syllabi to be revised in 2019. They insisted on the reverting to 30:70 scheme.



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8. The following suggestions were made by the members in the syllabi of 7th and 8th semesters:

SEMESTER VII

Sl. No.	Subject Code	Subject	Suggestions
1	15EC401	Wireless and Mobile Communications	Overall Course outcome as per Blooms Taxonomy and should be as per overall course and not as per module/unit.
2	15EC402	Embedded system design	Course Outcome needs to change, Need to add practical aspects in Module 5.
3	15HU4XX	Engineering Economics	No changes suggested
4	15EC4XX	Department Elective -V	
5	15EC4XX	Department Elective -VI	
6	15HU4XX	HSS (Law of Engineers)	No changes suggested
7	15IE4XX	Institutional Elective -I	
8	15EC471	ECE LAB9 (VLSI lab)	No changes suggested
9	15HUXX	Kannada Kali	Audit course for Non-Karnataka students – No changes suggested
10	15HUXX	Kannada Manasu	Audit course for Karnataka students – No changes suggested



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Department Elective –V

Sl. No	Subject Code	Subject	Suggestions
1	15EC421	Satellite Communication	No changes suggested
2	15EC422	DSP System Design	1. In Unit 5, to add specific KIT name(TMS320C6) 2. Maximum number of Text Books should be two, and it (they) should cover the entire syllabus.
3	15EC423	Real Time Operating Systems	Author name missing in Text book
4	15EC424	Optical Communication	No changes suggested

Department Elective –VI

Sl. No	Subject Code	Subject	Suggestions
1	15EC425	Multimedia communication	No changes suggested
2	15EC426	Digital VLSI design and verification	Syllabus to be modified to include the following: 1. Beyond Synthesis 2. From Synthesis to Physical implementation need to be added
3	15EC427	Data analytics	Subject Name changed to : Machine Learning and Data analytics
4	15EC428	Sensor networks	Subject Name changed to : 1. Wireless Sensor networks 2. To Incorporate the Mobility Model



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Institutional Elective –I

Sl. No	Subject Code	Subject	Suggestions
1	15IE4X	Project Management	Instead of Project Management, the members suggested the courses related to department : Sensors, Networks and Protocols
2	15IE4XXI	IMAGE PROCESSING AND COMPUTER VISION	Some Case Study need to be introduced using Tensor flow

SEMESTER VIII

Sl. No.	Subject Code	Subject	Suggestions
1	15EC4XX	Department Elective -VII	
2	15IE4XX	Institutional Elective –II Evolution of Telecommunications	

Department Elective –VII

Sl. No	Subject Code	Subject	Suggestions
1	15EC429 –	Statistical Signal Processing	No changes suggested
2	15EC430 –	Cognitive radio	No changes suggested
3	15EC431 –	Industrial Automation	No changes suggested
4	15EC432 –	Global tracking and	No changes suggested



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		positioning	
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Institutional Elective –II

Sl. No	Subject Code	Subject	Suggestions
1	15IE4XXI	Micro Electro - Mechanical Systems (MEMS)	Instead of MEMS, “Automotive Embedded Systems” was suggested, for which syllabus has to be framed.
2	15IE4X	Evolution of Telecommunications	No changes suggested

[Handwritten Signature]
13/01/18

Chairman,
Dept. of Electronics and Communication Engineering,
School of Engineering,
Dayananda Sagar University,
Kudlu Gate, Hosur Main Road,
BENGALURU - 560 068.



MoM of 5th BoS meeting reg

sudha lakshminarayana kanakatte <klsudha1@rediffmail.com>
To: "Dr. Basavaraj I Neelgar" <basavaraj-ec@dsu.edu.in>

Fri, Mar 31, 2017 at 3:09 PM

Sir,
I approve the syllabus formulated as suggestions given in BOS meeting is taken into account.
One correction in Microcontroller-15EC301 subject
Unit 4 -heading is given as "Arduino micro controller" while it should be "Arduino platform"

Regards
Dr. K.L.Sudha,
Prof, PG Coordinator(DEC)
Dept of ECE,
DayanandaSagar College of Engineering,
K.S.Layout, Bangalore.
Ph:9845943756

From: "Dr. Basavaraj I Neelgar" <basavaraj-ec@dsu.edu.in>
Sent: Fri, 31 Mar 2017 10:28:54
To: "Dr G.N. Rathna" <rathna@ee.iisc.ernet.in>, "Dr.Varaprasad BKSVL" <bksvlp@isac.gov.in>, "Dr.Narasimha kaulgud" <narasimha.kaulgud@nie.ac.in>, Narasimha Kaulgud <narasimha.kaulgud@gmail.com>, sudha lakshminarayana kanakatte <klsudha1@rediffmail.com>
Subject: Fwd: MoM of 5th BoS meeting reg
[Quoted text hidden]



Dayananda Sagar
University

Dr. Basavaraj I Neelgar <basavaraj-ece@dsu.edu.in>

MoM of 5th BoS meeting reg

Dr. Narasimha kaulgud <narasimha.kaulgud@nie.ac.in>
To: "Dr. Basavaraj I Neelgar" <basavaraj-ece@dsu.edu.in>

Fri, Mar 31, 2017 at 12:57 PM

Approved from my side.

(I thought I had sent approval earlier)

[Quoted text hidden]

--

Sincerely,
Narasimha Kaulgud
Professor, E&C Dept.,
NIE, Mysuru 560008
<https://goo.gl/H51ubF>

tamasOmA jyOtirga-maya

(let us march away from darkness - towards light)

+91-9900541686



Dayananda Sagar
University

Dr. Basavaraj I Neelgar <basavaraj-~~ece~~@dsu.edu.in>

MoM of 5th BoS meeting reg

Dr G.N. Rathna <rathna@ee.iisc.ernet.in>

Fri, Mar 31, 2017 at 11:48 AM

To: "Dr. Basavaraj I Neelgar" <basavaraj-~~ece~~@dsu.edu.in>

Cc: "Dr.Varaprasad BKSVL" <bksvlp@isac.gov.in>, "Dr.Narasimha kaulgud" <narasimha.kaulgud@nie.ac.in>, Narasimha Kaulgud <narasimha.kaulgud@gmail.com>, sudha lakshminarayana kanakatte <klsudha1@rediffmail.com>

Dear Dr. Basavaraj I Neelgar

Sorry for late reply

The things looks ok to me

with regards

 rathna

[Quoted text hidden]

[Quoted text hidden]



Dayananda Sagar
University

Dr. Basavaraj I Neelgar <basavaraj-ece@dsu.edu.in>

MoM of 5th BoS meeting reg

Dr. Basavaraj I Neelgar <basavaraj-ece@dsu.edu.in>

Thu, Mar 16, 2017 at 12:21 PM

To: "Dr G.N. Rathna" <rathna@ee.iisc.emet.in>, "Dr.Varaprasad BKSVL" <bksvlp@isac.gov.in>, Narasimha Kaulgud <narasimha.kaulgud@gmail.com>, "Dr.Narasimha kaulgud" <narasimha.kaulgud@nie.ac.in>, sudha lakshminarayana kanakatte <ksudha1@rediffmail.com>, Sairam Geethanath <sairamgeethanath@gmail.com>
Cc: Registrar DSU <registrar@dsu.edu.in>, ADMIN REGISTRAR <admin-reg@dsu.edu.in>, "Dr.A.N.N Murthy" <vicechancellor@dsu.edu.in>

Sirs/Madam,

I am very much thankful for you for spending your valuable time to attend the **5th BoS** meeting of ECE dept on **10th March, 2017** and giving your suggestions.

The suggestions made were well taken and modifications are done.

PFA herewith the MoM, scheme and syllabus content for all the courses of V and VI sem.

Hence you are requested to kindly go through and approve.

With regards,

Dr. Basavaraj I Neelgar

Professor and Chairman, ECE dept.

Dayanand Sagar University,


Hosur Main Road


Kudlu Gate


Bengaluru-560 068

Cell: 9676363620

4 attachments

 MoM -5th BOS meeting 10-03-2017.doc
108K

 ECE-V sem.zip
704K

 ECE-VI sem.zip
699K

 BE_EC_Scheme-R15-LATEST.docx
65K



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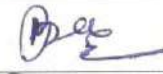
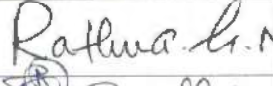

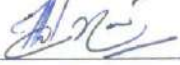
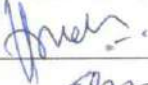

School of Engineering

Department of Electronics & Communication Engineering

5th Board of Studies Meeting (External)

Date & Time : 10-03-2017 10.00 AM

Members Present:

S.No	NAME	DESIGNATION	Signature
1	Dr. Puttamadappa C	Registrar (DSU) & Professor Dept. of ECE DSU, Bengaluru	
2	Dr. Basavaraj Neejar	HOD, Chairman BoS, Dept. of ECE, SOE, DSU, Bengaluru	
3	Dr. Rathna G.N.	Principal Research Scientist Electrical department IISc., Bangalore	
4	Dr. K.L. Sudha	Professor, ECE dept., DSCE, Bengaluru	
5	Dr. Sairam Geethanath	Prof. & Head, Dept. of Medical Electronics, DSCE, Bengaluru	-
6	Dr. H. L. Viswanath	Professor, Dept., of ECE, DSU, Bengaluru	
7	Dr. Vaibhav A.M.	Professor, Dept., of ECE, DSU, Bengaluru	
8	Mr. Chandrakanth Singh	Associate Professor, Dept. of ECE, DSU Bengaluru	

AGENDA:

1. Confirmation of MoM of 4th BoS meeting.
2. Ratification of modifications made in Scheme as suggested by BoS members.
3. Ratification of modification of Syllabus of 5th Semester Courses.
4. Ratification of modification of Syllabus of 6th Semester Courses.
5. Result Analysis of III semester.
6. Academic Improvement Initiatives:
 - a. Project Based Elective in VI or VII semester.
 - b. Introduction of Gracing in academic programmes.
 - c. One text book recommendation for each course for inclusion of Publishers tool initiatives.
 - d. Introduction of additional core course in Ph.D Course work.
7. Any other with the permission of the chairman.


10/3/17
Chairman,
Dept. of Electronics and Communication Engineering,
School of Engineering,
Dayananda Sagar University,
Kudlu Gate, Hosur Main Road,
BENGALURU - 560 068.



Dayananda Sagar
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School of Engineering

Department of Electronics & Communication Engineering

5th Board of Studies Meeting (External)

Date & Time : 10-03-2017 10 AM

Members Present:

S.No	NAME	DESIGNATION
1	Dr. Puttamadappa C	Registrar (DSU) & Professor Dept. of ECE DSU, Bengaluru
2	Dr. Basavaraj Neelgar	HOD, Chairman BoS, Dept. of ECE, SOE, DSU, Bengaluru
3	Dr. Rathna G.N.	Principal Research Scientist Electrical department IISc., Bangalore
4	Dr. K.L. Sudha	Professor, ECE dept., DSCE, Bengaluru
5	Dr. H. I. Viswanath	Professor, Dept., of ECE, DSU, Bengaluru
6	Dr. Vaibhav A.M.	Professor, Dept., of ECE, DSU, Bengaluru
7	Mr. Chandrakanth Singh	Associate Professor, Dept. of ECE, DSU Bengaluru

AGENDA:

1. Confirmation of MoM of 4th BoS meeting.
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4. Ratification of modification of Syllabus of 6th Semester Courses.
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 - d. Introduction of additional core course in Ph.D Course work.
7. Any other with the permission of the chairman.

Minutes of Meeting

1. The meeting was started by Dr. Basavaraj Neelgar, Chairman who welcomed all the members and briefed about the Minutes of Meeting of 4th BoS meeting held on 28th October, 2016 and were confirmed.
2. All the members were briefed about the corrections made as per the suggestions given in the previous BoS meeting. The modifications made in scheme of V to VIII semesters such as



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Department of Electronics & Communication Engineering

inclusion of Microwave Engineering course which was earlier listed as elective to be made as core course since laboratory course is there in scheme, corrections in syllabus content with respect to addition of latest topics, text book edition changes to latest ones were brought to the notice of the members and were ratified.

3. The grouping of electives as per the thrust area and minor corrections in syllabus content made were also shown to the members and were ratified.
4. Members suggested some changes in the courses Digital Communication and Information Theory and error control coding (Elective) which are taken into consideration.
5. In summary the MoM of 4th BoS meeting, Modifications made in scheme and Corrections in syllabus content of some of courses of V and VI semesters were confirmed and ratified by the members.
6. The result analysis of III semester was discussed and though in one course the pass percentage has gone down, members expressed that the overall pass percentage (87%) is good and encouraging. Members suggested to take remedial measures in summer school and improve the result for the course where the pass percentage is less.
7. Some academic improvement initiatives were brought to the notice of the members as under:

a. Project Based Elective in VI or VII semester.

Members felt that since the elective may be opted by some students, it will be difficult to monitor and if the student does not satisfy with project work then the action to be taken has to be defined. Instead, members suggested that if any student opts project based elective then the student should complete the project satisfactorily and also has to appear for end semester examination for that mini project work. The scheme of evaluation may be made as 60% for project and 40% for end semester exam. The option may be offered for one semester only.

b. Introduction of Gracing in academic programmes.

All the members **disagreed** with the initiative and suggested that since the valuation done at two levels it can be taken care during valuation.

c. One text book recommendation for each course for inclusion of Publishers tool initiatives.

Members felt that it is not advisable to have customized course material and go for hard copy printing since nowadays soft copies are preferred. Also since most of the text books are available in soft form (e-books) members had a difference of opinion. The discussion was inconclusive.

d. Introduction of additional core course in Ph.D Course work

It was resolved to have three courses each of 4 credits as under:

1. Research Methodologies; 4 credits
2. Core Paper; 4 credits (decided by guide)
3. Core Paper; 4 credits (decided by guide)



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Department of Electronics & Communication Engineering

8. It was also suggested by the members that the End Semester Question paper pattern to be mentioned in the scheme for all the programmes.
9. Members suggested that in academic regulations there should be clarity on the two schemes 70-30 and 60 – 40 with respect to detained candidates.
10. Members were informed that the suggestion are well taken and the modifications will be implemented. The Minutes of Meeting along with the changes made in syllabus will be sent to all the members by mail for approval.
11. The meeting was concluded by the Chairman at 1.00 p.m.
12. As per the suggestions made by the BoS members the corrections are made and MoMs will be presented before the Academic Council for Approval.

Dr. B.I. Neelgar
Professor & Chairman



Dayananda Sagar University

Live the dream

Dr. Puttamadappa C, ME, Ph.D

Registrar

NOTIFICATION

No. DSU / 2016-17/ BOS

Dated: 21-10-2016

Sub: Constitution of Board of Studies in School of Engineering--Department of Electronics & Communication Engineering of Dayananda Sagar University, Bengaluru.

In supersession of the previous notification in this regard and in accordance with Sections 22 (vi), 28 and 32(i) of the Dayananda Sagar University Act 2012, the Vice Chancellor, has been pleased to constitute a Board of Studies in School of Engineering -- Department of Electronics & Communication Engineering comprising of the following:

Board of Studies in School of Engineering--Department of Electronics & Communication Engineering

SN	Name	Affiliation & Contact details	Designation
1	Dr. Basavaraj Neelgar,	Chairman , ECE, DSU	Chairman
2	Dr. Vara Prasad	Senior Scientist, Head Microelectronics Division, ISRO Satellite Centre, Old Airport Road, Bangalore – 560 057	Member
3	Mr.Dharmaray Naidalgi	Engineer – Manager, Intel Mobile Communication, 1st Floor, Innovator, ITPL, White Field, Bangalore	Member
4	Mr. Ramesh Venkatesan	Principle Engineer, Wipro. G Health care, Bangalore	Member
5	Dr. Rathna G.N	Principal Research Scientist Electrical Department IISc., Bangalore	
6	Dr. N Kaulgud	Professor, NIE, Mysore	Member
7	Dr. K L Sudha	Professor, Dept. of Electronics & Communication, DSCE, Bangalore	Member
8	Dr.Sairam Geethanath	Prof. & Head, Dept. of Medical Electronics, Dayananda Sagar College of Engineering, Bangalore – 560 078	Member
9	Dr Puttamadappa C	Professor , Dept. of ECE, SoE, DSU, Bengaluru	Member
10	Dr. Viswanath H.L	Professor, Dept. of ECE, SoE, DSU, Bengaluru	Member
11	Dr. Viabhav	Professor, Dept. of ECE, SoE, DSU, Bengaluru	Member

P.T.O.

The term of the Board shall be TWO years from the academic year 2016-17 or till re-constitution, whichever is earlier.

The Board shall follow the guidelines stipulated by the University, from time to time, in all academic issues to be decided by it.



Registrar 21/10/16

To,
Concerned

Registrar
Dayananda Sagar University
Bangalore

CC: The Chief Finance Officer, DSU
The Concerned Dean, DSU



Dayananda Sagar
University

Dr. Basavaraj I Neelgar <basavaraj-ece@dsu.edu.in>

BoS meeting on 26th or 28th Oct, 2016

Dr. Basavaraj I Neelgar <basavaraj-ece@dsu.edu.in>

Tue, Oct 18, 2016 at 3:20 PM

To: "Dr.Varaprasad BKSVL" <bksvlp@isac.gov.in>, "Dr G.N. Rathna" <rathna@ee.iisc.emet.in>, dharmaray.nedalgi@intel.com, "Venkatesan, Ramesh (GE Healthcare)" <ramesh.venkatesan@geind.ge.com>, "Dr.Narasimha kaulgud" <narasimha.kaulgud@nie.ac.in>, Narasimha Kaulgud <narasimha.kaulgud@gmail.com>, sudha lakshminarayana kanakatte <klsudha1@rediffmail.com>, Sairam Geethanath <sairamgeethanath@gmail.com>, Registrar DSU <registrar@dsu.edu.in>

Dear Sirs/Madams,

Greetings to all of you from Dept. of ECE, School of Engg. DSU.

I am very much grateful to all of you for being associated with us as BoS members and for giving your valuable suggestion for design of syllabus for our first two years of B.Tech ECE programme.

Now it is planned to have our next BoS (Board of Studies) meeting on either **26th October (Wednesday), 2016** or **28th October 2016 (Friday)**, to discuss and decide the syllabus for our B.Tech III year (5th & 6th Semester) theory courses and lab courses.

Since from 29th October, 2016 there are four consecutive holidays and our Academic council meeting is scheduled in first week of November it is mandate for me to finish BoS meeting during the said dates.

Hence you are requested to kindly give me one of the two dates mentioned on which you are able to visit our campus for BoS meeting so that I can plan for other logistics.

Please reply at the earliest.

With regards,

Dr. Basavaraj I Neelgar

Professor and Chairman, ECE dept.

Dayanand Sagar University,

Hosur Main Road

Kudlu Gate

Bengaluru-560 068

Cell: 9676363620



Dayananda Sagar
University

School of Engineering

Department of Electronics & Communication Engineering

4th Board of Studies Meeting (External)

Date & Time : 28-10-2016 10 AM

Members Present:

S.No	NAME	DESIGNATION	Signature
1	Dr. Puttamadappa C	Registrar (DSU) & Professor Dept. of ECE DSU, Bengaluru	-
2	Dr. Basavaraj Neelgar	HOD, Chairman BoS, Dept. of ECE, SOE, DSU, Bengaluru	<i>Beel</i>
3	Dr. Rathna G.N.	Principal Research Scientist Electrical department IISc., Bangalore	<i>Rathna G.N.</i>
4	Dr. N. Kaulgud	Professor, NIE, Mysore	<i>N. Kaulgud</i>
5	Dr. Sairam Geethanath	Prof. & Head, Dept. of Medical Electronics, DSCE, Bengaluru <i>Director, SATREC</i>	<i>Sairam Geethanath</i>
6	Dr. H. L. Viswanath	Professor, Dept., of ECE, DSU, Bengaluru	<i>H. L. Viswanath</i>
7	Dr. Vaibhav A.M.	Professor, Dept., of ECE, DSU, Bengaluru	<i>Vaibhav A.M.</i>
8	Mr. Chandrakanth Singh	Associate Professor, Dept. of ECE, DSU Bengaluru	

AGENDA:

1. Finalization of course content of B.Tech-5th and 6th semesters for academic year 2017-18
2. Any other with the permission of the chairman

Beel
28/10/16
Chairman / HOD
Electronics & Communication
Engineering Dept.
Dayananda Sagar University
School of Engineering
Kudlu Gate, Hosur Main Road,
BANGALORE - 560 068



Dayananda Sagar
University

Dr. Basavaraj I Neelgar <basavaraj-ece@dsu.edu.in>

MoM of BoS meet held on 28-10-2016 and syllabus of V and VI sem reg

Dr. Basavaraj I Neelgar <basavaraj-ece@dsu.edu.in>

Tue, Nov 8, 2016 at 4:01 PM

To: "Dr G.N. Rathna" <rathna@ee.iisc.emet.in>, "Dr.Narasimha kaulgud" <narasimha.kaulgud@nie.ac.in>, Narasimha Kaulgud <narasimha.kaulgud@gmail.com>, Sairam Geethanath <sairamgeethanath@gmail.com>

Sirs/Madam,

I am very much thankful for you for spending your valuable time to attend the BoS meeting of ECE dept on 28th Oct, 2016 and giving your suggestions.

As per suggestions made, the corrections have been incorporated in the syllabus of V sem and VI sem courses.

PFA herewith the MoM of meeting, scheme and syllabus content for all the courses of V and VI sem.

Since the scheme was already concluded as per instruction of Hon'ble Vice Chancellor the core subjects are not changed. Regarding change of Microwave engineering to core, it will be put forth in Academic council meeting and if permitted the shift can be made.

The grouping of electives has been done as per thrust areas.

Hence you are requested to kindly go through and approve.

With regards,

Dr. Basavaraj I Neelgar

Professor and Chairman, ECE dept.

Dayanand Sagar University,

Hosur Main Road

Kudlu Gate


Bengaluru-560 068


Cell: 9676363620

4 attachments

 **MoM -4th BOS meeting 28-10-2016.doc**
124K

 **BE_EC_Scheme-R15.docx**
65K

 **ECE-V sem.rar**
716K

 **ECE-VI sem.rar**
688K



Dayananda Sagar
University

Dr. Basavaraj I Neelgar <basavaraj-ece@dsu.edu.in>

MoM of BoS meet held on 28-10-2016 and syllabus of V and VI sem reg

Dr. Basavaraj I Neelgar <basavaraj-ece@dsu.edu.in>
To: "Dr G.N. Rathna" <rathna@ee.iisc.emet.in>

Wed, Dec 7, 2016 at 10:01 AM

Thanks Madam. As mentioned convolution and correlation are taught in IV sem course Signals & Systems. Also as per your suggestion the faculty will be instructed to do a revision.

With regards,

Dr. Basavaraj I Neelgar
Professor and Chairman, ECE dept.
Dayanand Sagar University,
Hosur Main Road
Kudlu Gate
Bengaluru-560 068
Cell: 9676363620

[Quoted text hidden]



Dayananda Sagar
University

Dr. Basavaraj I Neelgar <basavaraj-ec@dsu.edu.in>

MoM of BoS meet held on 28-10-2016 and syllabus of V and VI sem reg

Dr G.N. Rathna <rathna@ee.iisc.emet.in>

Wed, Dec 7, 2016 at 9:45 AM

To: "Dr. Basavaraj I Neelgar" <basavaraj-ec@dsu.edu.in>

Cc: "Dr.Narasimha kaulgud" <narasimha.kaulgud@nie.ac.in>, Narasimha Kaulgud <narasimha.kaulgud@gmail.com>, Sairam Geethanath <sairamgeethanath@gmail.com>

Hello,

I have a little objections to the DSP course contents as convolution and correlation is not listed in the syllabus and it is there in the lab!! If it is taught in the signals and systems, please have an hour or two for the revision of sampling theorem and convolution and correlation!! and rest seems to be ok.

with regards

rathna

[Quoted text hidden]

[Quoted text hidden]



Dayananda Sagar
University

School of Engineering
Department of Electronics & Communication Engineering

4th Board of Studies Meeting (External)

Date & Time : 28-10-2016 10 AM

Members Present:

S.No	NAME	DESIGNATION
1	Dr. Basavaraj Neelgar	Professor & Chairman BoS, Dept. of ECE, SoE, DSU, Bengaluru
2	Dr. Rathna G.N.	Principal Research Scientist Electrical department IISc., Bangalore
3	Dr. N. Kaulgud	Professor, NIE, Mysore
4	Dr. Sairam Geethanath	Prof. & Head, Dept. of Medical Electronics, DSCE, Bengaluru
5	Dr. H. L. Viswanath	Professor, Dept., of ECE, DSU, Bengaluru
6	Dr. Vaibhav A.M.	Professor, Dept., of ECE, DSU, Bengaluru
7	Mr. Chandrakanth Singh	Associate Professor, Dept. of ECE, DSU Bengaluru

AGENDA:

1. Finalization of course content of B.Tech-5th and 6th semesters for academic year 2017-18
2. Any other with the permission of the chairman

Minutes of Meeting

1. The meeting was started by Dr. Basavaraj Neelgar, Chairman who welcomed all the members and briefed about scheme from III sem to VIII sem which was finalized in previous BoS meeting.
2. Members suggested some corrections in the course content of some of the courses as shown in the table below :

SEMESTER V

Sl. No.	Subject Code	Subject	Suggestions
1	15EC301	Micro controllers	Module 5 PIC to be replaced by Aurdino Programming basics
2	15EC302	Digital signal Processing	Unit 5 replace 5416 with 6XXX Text Book 2 to be replaced with Vinay K. Ingle



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3	15EC303	Analog Communication	Unit 5 title Noise to be replaced by Noise in Analog Communications Text Book Simon Haykin Edition
4	15EC304	CMOS VLSI	Text book edition Reference book year to be mentioned
5	15EC371	ECE-lab5 (DSP lab)	Combine the experiments in part A
6	15EC372	ECE-Lab 6 (Analog Communication lab)	Windows XP to Windows latest version

SEMESTER VI

Sl. No.	Subject Code	Subject	Suggestions
1	15EC305	Digital communication	10 hours/Module Unit 2 Keying Techniques Unit 4 Shanon theorem: needs modifications
2	15EC306	Antenna and Wave propagation	No suggestions
3	15EC307	ASIC design	Unit name missing Text book to be added
4	15EC308	Computer Networks	Text book and reference books missing Session and presentation layer missing Need to group the layers and make total unit 5
5	15EC309	Power Electronics	Number of hours Some Project on solar cell wind energy
7	15EC373	ECE-lab7 (Communication lab)	Change to Advanced Communication Lab Add some Antenna experiments
8	15EC374	ECE-Lab8 (PE lab)	Add experiment on Characterization of SMPS

3. Members suggested that the electives may be grouped and mapped as per thrust areas and some corrections in some electives:

Department Elective –I

15EC321- Measurements & Virtual Instrumentation
Text Book Lab View to be replaced by MATLAB

Department Elective –II: No corrections

Department Elective –III

15EC329 – Digital Image Processing

Unit Names

Water marking can be added as project work (MATLAB)



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15EC330 – Speech Processing
Unit Names

15EC331 – Internet of Things
Unit 2 to be rename as Evolution of IoT
Python Programming

15EC332 – Data Structure using C++
No Corrections

Department Elective –IV

15EC333 – Microwave Communication
Should be core paper since lab is attached

15EC334 – Wireless Communication standards
No Corrections

15EC335 – Information theory & Error control coding
Typo Unit 3 and Unit 4

15EC336 – Global tracking & positioning
No Corrections

- Members were informed that the suggestion are well taken and since the scheme is already discussed elaborately in previous BoS meeting and was approved in Academic Council meeting, the suggestions made will be discussed and proper decision will be taken.
- The meeting was concluded by the Chairman at 2.00 p.m.
- As per the suggestions made by the BoS members the corrections are made in the syllabus and it will be presented before the Academic Council for Approval.

Dr. B.I. Neelgar
Professor & Chairman

28/10/16
Chairman / HOD
Electronics & Communication
Engineering Dept.
Dayananda Sagar University
School of Engineering
Kudlu Gate, Hosur Main Road,
BANGALORE - 560 068



Dayananda Sagar
University

School of Engineering

Department of Electronics & Communication Engineering

20-10-2016

From,
Dr. Basavaraj I Neelgar,
Professor & Chairman,
Dept. of ECE, SOE,
DSU, Bengaluru – 560 060

To,
The Dean Engineering,
SOE, DSU, Bengaluru – 560 060

Dear Sir,

Sub: Sitting and Transport Charges for 4th BoS meeting reg.

The 4th BoS meeting of Department of Electronics and Communication Engineering, School of Engineering, Dayananda Sagar University, Kudlu Gate, Bengaluru is scheduled to be held on **28th Oct, 2016 at 10 a.m.** at DSU campus.

About 6 external members are expected to attend the meeting. The list of members is as under:

1. Dr. N Kaulgud
2. Dr. Rathna G.N.
3. Dr. Vara Prasad
4. Mr. Dharmaray Naidalgi
5. Dr. Sairam Geethanath
6. Dr. K L Sudha

The internal BoS members will be about 5.

As per norms of DSU the honorarium payable for the external members is Rs. 3000 as sitting Charges and Rs. 1500 for Travel expenses.

Hence you are requested to kindly make arrangements for the amount of **Rs. 27,000 (4500x6=27,000)** payable in cash.

Thanking you,

Yours truly,

(Dr. Basavaraj Neelgar)

6 X 3000 = 18000
6 X 1200 = 7200

25200

lunch & tea from
T. S. S.

To Hon'ble VC.
forwarded for needful
Approval.
20/10/2016.



Dayananda Sagar
University

Dr. Basavaraj I Neelgar <basavaraj-ece@dsu.edu.in>

MoM of BoS meet held on 28-10-2016 and syllabus of V and VI sem reg

Dr. Basavaraj I Neelgar <basavaraj-ece@dsu.edu.in>

Tue, Dec 6, 2016 at 2:47 PM

To: "Dr G.N. Rathna" <rathna@ee.iisc.ernet.in>, "Dr.Narasimha kaulgud" <narasimha.kaulgud@nie.ac.in>, Narasimha Kaulgud <narasimha.kaulgud@gmail.com>, Sairam Geethanath <sairamgeethanath@gmail.com>

Dear Sir/Madam

I had sent the forwarded mail earlier on 8th Nov, 2016 with the attachments of MoM of 4th BoS meeting, scheme and syllabus for V and VI semesters.

After putting the recommendations made by you in Academic council meeting the members agreed to some of the recommendations made such as changing the elective shown course Microwave Engineering as core course. Hence the scheme was modified and the grouping of electives was done by adding 1-2 new elective courses removing duplicates. Accordingly the course codes and syllabus framing was done .

Hence PFA the modified scheme and syllabus for V and VI semester courses..

You are requested to kindly approve by return mail so that the hard copies can be printed for filing at the earliest.

Please ignore the earlier attachments sent and consider the attachments sent with this mail

With regards

Dr. Basavaraj I Neelgar

Professor and Chairman, ECE dept.

Dayanand Sagar University,

Hosur Main Road


Kudlu Gate


Bengaluru-560 068


Cell: 9676363620


[Quoted text hidden]

4 attachments

 **BE_EC_Scheme-R15.docx**
65K

 **ECE-V sem.rar**
700K

 **ECE-VI sem.rar**
694K

 **MoM -4th BOS meeting 28-10-2016.doc**
124K



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School of Engineering
Department of Electronics & Communication Engineering

DAYANANDA SAGAR UNIVERSITY, KUDLU GATE, BENGALURU – 560 068

DETAILS OF BOS MEETING HELD FOR THE ACADEMIC YEAR 2015-16

Department of Electronics & Communication Engineering

SL. NO	BOS MEETING HELD ON	MEMBERS PRESENT	REMARKS
1.	16-04-2015	Dr. Chandra Murthy, Dr. N. Kaulgud Dr. Rathna G.N. Dr. Vara Prasad Dr. Sairam Geethanath Dr. K.L.Sudha Mr. Chandrakanth Singh Mr. Amit Bansal Dr. S.C. Pilli	Scheme and syllabus for B.E. and Scheme of 4 streams of M.Tech were discussed.
2	13-05-2015	Dr. Chandra Murthy, Dr. N. Kaulgud Dr. Rathna G.N. Dr. Vara Prasad Dr. K.L.Sudha Dr. Chandrakanth Singh Dr. Chandrasekhar Vaidynathan Dr. S.C. Pilli	The suggestions made in earlier 1 st meeting were incorporated Scheme and syllabus of B.E and M.Tech and agreed upon by the members. The scheme was finalized.
3	23-01-2016	Dr. Basavraj Neelgar	The scheme and syllabus



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	Dr. Vara Prasad Dr. Hari Prasad Dr. K.L.Sudha Dr. H.L. Viswanath Dr. Chandrasekar Vaidyanathan Dr. Chandrakanth Singh Dr. Theodore Chandra Mr. Godwinraj	of 3 rd and 4 th Semester were presented to members. Some suggestions were given by members which will be incorporated in the scheme and syllabus. The MoM will be sent to external BoS members.

Chairman,
Dept. of Electronics and Communication Engineering,
School of Engineering,
Dayananda Sagar University,
Kudlu Gate, Hosur Main Road,
Bengaluru - 560 068



Dayananda Sagar
University

School of Engineering

Department of Electronics & Communication Engineering

3rd Board of Studies Meeting (External)

Date & Time : 23-01-2016 10 AM

Members Present:

S.No	NAME	DESIGNATION
1	Dr. Basavaraj Neelgar	HOD, Chairman BoS, Dept. of ECE, SOE, DSU, Bengaluru
2	Dr. Vara Prasad	Senior Scientist, Head Microelectronics, ISRO, Bengaluru
3	Dr. Hari Prasad S.A	Pro-VC, Dayananda Sagar University, Bengaluru
4	Dr. K.L. Sudha	Professor, Dept. of Electronics & Communication, DSCE, Bengaluru
5	Dr. H. L. Viswanath	Professor, Dept., of ECE, DSU, Bengaluru
6	Dr. Chandrakanth Vaidynathan	Professor & Chairman, Maths dept., DSU, Bengaluru
7	Mr. Chandrakanth Singh	Hedexperts, Bengaluru
8	Dr. Theodore Chandra	Asst. Professor, Dept. of ECE., DSU, Bengaluru
9	Mr. Godwinraj	Asst. Professor, Dept. of ECE., DSU, Bengaluru

AGENDA:

1. Finalization of Course structure and Scheme for 3rd to 8th Semesters
2. Finalization of course content of B.Tech-3rd and 4th semesters for academic year 2016-17
3. Scheme for PG-programme -M.Tech (Embedded Systems)
4. Finalization of course content of M.Tech (Embedded Systems) programme.
5. Any other with the permission of the chairman

Minutes of Meeting

1. The meeting was started by Dr. Hari Prasad S.A., who welcomed all the members and briefed about the vision and mission of the university to impart outcome based education to the students joining School of Engineering, Dayananda Sagar University, Bengaluru. He also mentioned that the scheme and syllabus is being designed taking into consideration the quality of students getting admitted so that the fundamental knowledge is imparted to aspirants to make them skilled engineers.
2. The scheme and course structure for 3rd to 8th semesters was presented to the members and following were the observations and suggestions made by the members.
 - The subject Engineering Economics need not be kept in III sem and it may be shifted to 5th or 6th semester. Instead for ECE students, Probability theory being important subject, a course on said title may be incorporated in III semester.



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- The subject Operating Systems in 4th semester is also listed in list of Electives in 3rd year and hence it can be offered as elective.
 - The course outcomes may be reduced to 3-4 and the outcomes may be refined with Blooms taxonomy levels.
 - In the syllabus of Digital Logic Design subject, the unit of Sequential Circuits to be shifted before Programmable Logic devices.
 - Members suggested some correction in the flow of course content in some of subjects like the unit name **Timers** in the subject Analog Electronics – II need to be changed as Analog & Mixed signal circuits and the syllabus flow need to be corrected.
 - In the 4th semester subject, Fundamentals of HDL, in Unit -2, the Simulation & Synthesis tools, and test benches may be removed as they are not the part of the content mentioned in the unit. Unit -5 to be corrected. Since the scheme contains mini project for the subject more weightage may be given in continuous assessment.
 - In the 4th semester subject, Microprocessor, unit 3 need to be corrected for sequence of topics covered. In unit – 5 the overview of RISC processors to be covered first.
 - Members also suggested to all introduction of MATLAB in Signals and Systems course.
3. Members were informed that the suggestion are well taken and since the scheme is already discussed elaborately in previous BoS meeting and was approved in Academic Council meeting, the suggestions made will be discussed and proper decision will be taken.
 4. The scheme and course content of M.Tech (Embedded Systems) were presented and approved by the members.
 5. The meeting was concluded by the Chairman at 1.30 p.m.

Considering the suggestions made the BoS members in 3rd BoS meeting following were the decisions made:

- The subject Engineering Economics is shifted to 5th semester.
- The subject Operating Systems is to be offered as an elective.
- A core course on Probability and Stochastic Processes (PTSP) is added in 3rd semester in place of Engineering Economics.
- The subject Control Systems of 5th semester is shifted to 4th semester.
- The syllabus of the subject PTSP was designed as required by ECE curriculum.
- The electives to be grouped for each semester and offered in the respective semester taking into consideration the prerequisite subjects.

The changes made will be put forth before the Academic Council for approval.


Dr. B. L. Neelgar
Professor & Chairman
Chairman
Dept. of Electronics and Communication Engineering
School of Engineering,
Dayananda Sagar University,
Main Road,
Bangalore



Dayananda Sagar
University

School of Engineering

Department of Electronics & Communication Engineering

Board of Studies (2016-17)

Electronics & Communication Engineering

#	Name	Address/Phone Numbers	Designation
1	Dr. Basavaraj I Neelgar	Chairman, Dept. of ECE, School of Engineering, Dayananda Sagar University, Kudlu Gate, Hosur Main Road, Bengaluru – 560068 Phone: +91-80-49092924 Ext. 937 e-mail: basavaraj-ece@dsu.edu.in Mob: 9676363620	Chairman
2	Dr. Vara Prasad	Senior Scientist, Head Microelectronics Division, ISRO, Satellite Centre, Old Airport Road, Bangalore – 560 057 Email: bksvlyp@isac.gov.in Ph:08025083350 Mob:9449030070	Member
3	Mr.Dharmaray Naidalgi	Engineer – Manager, Intel Mobile Communication, 1st Floor, Innovator, ITPL, White Field, Bangalore Email: dharmaray.nedalgi@intel.com Mob:9880396249	Member
4	Mr. Ramesh Venkatesan	Principle Engineer, Wipro. G Health care, Bangalore Email: ramesh.venkatesan@geind.ge.com Mob:9845175432	Member
5	Dr. Rathna G.N	Principal Research Scientist Electrical department IISc., Bangalore Phone: +91 80 2293 3167 E-mail: rathna@ee.iisc.ernet.in	
6	Dr. N. Kaulgud skgk	Professor, NIE, Mysore Email: narasimha.kaulgud@gmail.com Ph: Mob:9900541686	Member



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University

School of Engineering

Department of Electronics & Communication Engineering

7	Dr. K L Sudha	Professor, Dept. of Electronics & Communication, DSCE, Bangalore Email: ksudha1@rediffmail.com Mob:9845943756	Member
8	Dr. Sairam Geethanath	Prof. & Head, Dept. of Medical Electronics, Dayananda Sagar College of Engineering, Bangalore 560 078 Email: sairamgeethanath@gmail.com Mob: 9448293026	Member
9	Dr. Puttamadappa C	Professor , Dept. of ECE, SoE, DSU, Bengaluru e-mail : registrar@dsu.edu.in Phone: 91-80-42113566(D), 42161705 Mob: 9845716228	Member
10	Dr. Viswanath H.L.	Professor, Dept., of ECE, School of Engineering, Dayananda Sagar University, Kudlu Gate, Hosur Main Road, Bengaluru – 560068 Phone: +91-80-49092924 e-mail: viswanath-ecce@dsu.edu.in Mob: 9886481327	Member
11	Dr. Vaibhav A. M.	Professor, Dept., of ECE, School of Engineering, Dayananda Sagar University, Kudlu Gate, Hosur Main Road, Bengaluru – 560068 Phone: +91-80-49092924 e-mail: vaibhav-ecce@dsu.edu.in Mob: 7259108645	Member
12	Mr. Chandrakant Singh	Associate Professor, Dept., of ECE, School of Engineering, Dayananda Sagar University, Kudlu Gate, Hosur Main Road, Bengaluru – 560068 Phone: +91-80-49092924 e-mail: cksinghitb@gmail.com Mob: 9379293311	



Dayananda Sagar
University

Dr. Basavaraj I Neelgar <basavaraj-ece@dsu.edu.in>

re: BoS meeting on 23rd Jan, 2016 reg

Dr. Basavaraj I Neelgar <basavaraj-ece@dsu.edu.in>

Mon, Feb 15, 2016 at 1:34 PM

To: "Dr.Narasimha kaulgud" <narasimha.kaulgud@nie.ac.in>, Narasimha Kaulgud <narasimha.kaulgud@gmail.com>, "Dr G.N. Rathna" <rathna@ee.iisc.ernet.in>, "Dr.Varaprasad BKSVL" <bksvlp@isac.gov.in>, sudha lakshminarayana kanakatte <ksudha1@rediffmail.com>, cmurthy@ece.iisc.ernet.in, dharmaray.nedalgi@intel.com, "Venkatesan, Ramesh (GE Healthcare)" <ramesh.venkatesan@geind.ge.com>, Sairam Geethanath <sairamgeethanath@gmail.com>, Chandrakant Singh <chandrakant.singh@hedexperts.com>, veena c <scveena@gmail.com>, hari prasad <harivat2002@yahoo.co.in>
Cc: "Dr.A.N.N Murthy" <vicechancellor@dsu.edu.in>, "Dr. Sharanabasava C Pilli" <dean-engg@dsu.edu.in>, ananthaprasad1210@yahoo.com, viswanath-ece@dsu.edu.in, "Dr. Theodore Chandra S" <theodore-ece@dsu.edu.in>, godwinraj-ece@dsu.edu.in

Dear Sirs/Madam,

Greetings from Dayananda Sagar University (DSU), Kudlu Gate, Bengaluru.

Thank you very much for your cooperation for successful conduction of **3rd BoS meeting of ECE department on 23rd Jan, 2016.**

Please find attached the **Minutes of Meeting, Scheme for 3rd to 8th semesters and syllabus for III sem and IV sem subjects** modified as suggested by the members present.

Please note that the **syllabus for Engg. Mathematics of IV sem is to be modified by BoS of Maths dept** due to the introduction of separate course **Probability Theory and stochastic processes** in **III sem** for ECE dept. The final syllabus will be notified to you all in due course of time.

You are requested to approve the same so that the same can be carried forward and will be presented before the Academic Council for ratification.

With regards,

Dr. Basavaraj I Neelgar

Professor and Chairman, ECE dept.

Dayanand Sagar University,

Hosur Main Road

Kudlu Gate

Bengaluru-560 068

Cell: 9676363620

[Quoted text hidden]

5 attachments

BE_EC_Scheme-New-latest.docx
65K

ECE-III and IV sem Sem-Syllabus-DSU.zip
805K

MTech_Embedded Systems(AESandIOT)_Scheme_AllSem_5thDec2015 (002).docx
26K

M.Tech_EmbeddedSystems(AESandIOT)_Syllabus_AllSem_4thDec2015.docx
86K



Dayananda Sagar
University

Dr. Basavaraj I Neelgar <basavaraj-ece@dsu.edu.in>

re: BoS meeting on 23rd Jan, 2016 reg

Dr G.N. Rathna <rathna@ee.iisc.emet.in>
To: "Dr. Basavaraj I Neelgar" <basavaraj-ece@dsu.edu.in>

Tue, Feb 16, 2016 at 12:28 PM

Hello,

I just glanced through the syllabus and it seems ok with me.

Only, I am worried about 2 maths in 3rd sem, since the students are introduced to core in this semester and it will be tooheavy with linear algebra and probability together along with core subjects.

with regards

rathna

[Quoted text hidden]

[Quoted text hidden]



Dayananda Sagar
University

Dr. Basavaraj I Neelgar <basavaraj-ece@dsu.edu.in>

re: BoS meeting on 23rd Jan, 2016 reg

Dr. Basavaraj I Neelgar <basavaraj-ece@dsu.edu.in>
To: "Dr G.N. Rathna" <rathna@ee.iisc.ernet.in>

Tue, Feb 16, 2016 at 1:03 PM

Dear madam
Thanks for your valuable inputs.

There are no two maths in 3 sem. The PTSP subject added in III sem is for ECE students and it is framed and taught by ECE faculty.

The probability is in Maths of IV semester and it will be modified by BoS maths as I mentioned in mail. The probability chapter will be reduced and I think some units on complex analysis will be added. The final syllabus of Maths of IV sem will be sent to you once it is finalized In III sem maths there is no probability .

With regards,

Dr. Basavaraj I Neelgar

Professor and Chairman, ECE dept.

Dayanand Sagar University,

Hosur Main Road

Kudlu Gate

Bengaluru-560 068

Cell: 9676363620

[Quoted text hidden]



Dayananda Sagar
University

Dr. Basavaraj I Neelgar <basavaraj-ece@dsu.edu.in>

re: BoS meeting on 23rd Jan, 2016 reg

Chandrakant Singh <chandrakant.singh@hedexperts.com>
To: "Dr. Basavaraj I Neelgar" <basavaraj-ece@dsu.edu.in>

Tue, Feb 16, 2016 at 2:10 PM

This OK from my side.

From: Dr. Basavaraj I Neelgar [mailto:basavaraj-ece@dsu.edu.in]

Sent: Monday, February 15, 2016 1:34 PM

To: Dr.Narasimha kaulgud; Narasimha Kaulgud; Dr G.N. Rathna; Dr.Varaprasad BKSVL; sudha lakshminarayana kanakatte; cmurthy@ece.iisc.emet.in; dharmaray.nedalgi@intel.com; Venkatesan, Ramesh (GE Healthcare); Sairam Geethanath; Chandrakant Singh; veena c; hari prasad

Cc: Dr.A.N.N Murthy; Dr. Sharanabasava C Pilli; ananthaprasad1210@yahoo.com; viswanath-ece@dsu.edu.in; Dr. Theodore Chandra S; godwinraj-ece@dsu.edu.in

Subject: Re: BoS meeting on 23rd Jan, 2016 reg

[Quoted text hidden]



Dayananda Sagar
University

Dr. Basavaraj I Neelgar <basavaraj-ec@dsu.edu.in>

re: BoS meeting on 23rd Jan, 2016 reg

veena c <scveena@gmail.com>

Sun, Feb 21, 2016 at 11:35 AM

To: "Dr. Basavaraj I Neelgar" <basavaraj-ec@dsu.edu.in>

Approved.
I am OK with the syllables.
Thanks and regards
-Veena

[Quoted text hidden]



Dayananda Sagar
University

Dr. Basavaraj I Neelgar <basavaraj-ece@dsu.edu.in>

re: BoS meeting on 23rd Jan, 2016 reg

Narasimha Kaulgud <narasimha.kaulgud@gmail.com>
To: "Dr. Basavaraj I Neelgar" <basavaraj-ece@dsu.edu.in>

Mon, Feb 22, 2016 at 5:44 PM

Dear Professor,
Approved. Sorry for the delay :-(
Hope to make it to your esteemed institute some other time.....
[Quoted text hidden]

tamasOmA jyOtirga-maya
(let us march away from darkness - towards light)

Narasimha Kaulgud
Professor, E&C Dept.,
NIE, Mysuru 560008
+91-9900541686
<https://goo.gl/H51ubF>



Dayananda Sagar
University

School of Engineering

Department of Electronics & Communication Engineering

3rd Board of Studies Meeting (External)

Date & Time : 23-01-2016 10 AM

Members Present:

S.No	NAME	DESIGNATION	SIGNATURE
1	Dr. Basavaraj Neelgar	HOD, Chairman BoS, Dept. of ECE, SOE, DSU, Bengaluru	
2	Dr. Narasimha Kaulgud	Professor, NIE, Mysore	-
3	Dr. Rathna G.N.	Principal Research Scientist, Electrical Dept., IISc., Bengaluru	-
4	Dr. Vara Prasad	Senior Scientist, Head Microelectronics, ISRO, Bengaluru	
5	Dr. Hari Prasad S.A	Pro-VC, Dayananda Sagar University, Bengaluru	
6	Dr. K.L. Sudha	Professor, Dept. of Electronics & Communication, DSCE, Bengaluru	
7	Dr. H. L. Viswanath	Professor, Dept., of ECE, DSU, Bengaluru	
8	Dr. Chandrakanth Vaidynathan	Professor & Chairman, Maths dept., DSU, Bengaluru	-
9	Mr. Chandrakanth Singh	Hedexperts, Bengaluru	
10	Dr. Theodore Chandra	Asst. Professor, Dept. of ECE., DSU, Bengaluru	-
11	Mr. Godwinraj	Asst. Professor, Dept. of ECE., DSU, Bengaluru	

AGENDA:

1. Finalization of Course structure and Scheme for 3rd to 8th Semesters
2. Finalization of course content of B.Tech-3rd and 4th semesters for academic year 2016-17
3. Scheme for PG-programme –M.Tech (Embedded Systems)
4. Finalization of course content of M.Tech (Embedded Systems) programme.
5. Any other with the permission of the chairman

23/1/16
Chairman / HOD
Electronics & Communication
Engineering Dept.
Dayananda Sagar University
School of Engineering
Kudlu Gate, Hosur Main Road,
BANGALORE - 560 068



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University

School of Engineering
Department of Electronics & Communication Engineering

3rd Board of Studies Meeting (External)

Date & Time : 23-01-2016 10 AM

Members Present:

S.No	NAME	DESIGNATION
1	Dr. Basavaraj Neelgar	HOD, Chairman BoS, Dept. of ECE, SOE, DSU, Bengaluru
2	Dr. Vara Prasad	Senior Scientist, Head Microelectronics, ISRO, Bengaluru
3	Dr. Hari Prasad S.A	Pro-VC, Dayananda Sagar University, Bengaluru
4	Dr. K.L. Sudha	Professor, Dept. of Electronics & Communication, DSCE, Bengaluru
5	Dr. H. L. Viswanath	Professor, Dept., of ECE, DSU, Bengaluru
6	Dr. Chandrakanth Vaidynathan	Professor & Chairman, Maths dept., DSU, Bengaluru
7	Mr. Chandrakanth Singh	Hedexperts, Bengaluru
8	Dr. Theodore Chandra	Asst. Professor, Dept. of ECE., DSU, Bengaluru
9	Mr. Godwinraj	Asst. Professor, Dept. of ECE., DSU, Bengaluru

AGENDA:

1. Finalization of Course structure and Scheme for 3rd to 8th Semesters
2. Finalization of course content of B.Tech-3rd and 4th semesters for academic year 2016-17
3. Scheme for PG-programme –M.Tech (Embedded Systems)
4. Finalization of course content of M.Tech (Embedded Systems) programme.
5. Any other with the permission of the chairman

Minutes of Meeting

1. The meeting was started by Dr. Hari Prasad S.A., who welcomed all the members and briefed about the vision and mission of the university to impart outcome based education to the students joining School of Engineering, Dayananda Sagar University, Bengaluru. He also mentioned that the scheme and syllabus is being designed taking into consideration the quality of students getting admitted so that the fundamental knowledge is imparted to aspirants to make them skilled engineers.
2. The scheme and course structure for 3rd to 8th semesters was presented to the members and following were the observations and suggestions made by the members.
 - The subject Engineering Economics need not be kept in III sem and it may be shifted to 5th or 6th semester. Instead for ECE students, Probability theory being important subject, a course on said title may be incorporated in III semester.



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- The subject Operating Systems in 4th semester is also listed in list of Electives in 3rd year and hence it can be offered as elective.
 - The course outcomes may be reduced to 3-4 and the outcomes may be refined with Blooms taxonomy levels.
 - In the syllabus of Digital Logic Design subject, the unit of Sequential Circuits to be shifted before Programmable Logic devices.
 - Members suggested some correction in the flow of course content in some of subjects like the unit name **Timers** in the subject Analog Electronics – II need to be changed as Analog & Mixed signal circuits and the syllabus flow need to be corrected.
 - In the 4th semester subject, Fundamentals of HDL, in Unit -2, the Simulation & Synthesis tools, and test benches may be removed as they are not the part of the content mentioned in the unit. Unit -5 to be corrected. Since the scheme contains mini project for the subject more weightage may be given in continuous assessment.
 - In the 4th semester subject, Microprocessor, unit 3 need to be corrected for sequence of topics covered. In unit – 5 the overview of RISC processors to be covered first.
 - Members also suggested to all introduction of MATLAB in Signals and Systems course.
3. Members were informed that the suggestion are well taken and since the scheme is already discussed elaborately in previous BoS meeting and was approved in Academic Council meeting, the suggestions made will be discussed and proper decision will be taken.
 4. The scheme and course content of M.Tech (Embedded Systems) were presented and approved by the members.
 5. The meeting was concluded by the Chairman at 1.30 p.m.

Considering the suggestions made the BoS members in 3rd BoS meeting following were the decisions made:

- The subject Engineering Economics is shifted to 5th semester.
- The subject Operating Systems is to be offered as an elective.
- A core course on Probability and Stochastic Processes (PTSP) is added in 3rd semester in place of Engineering Economics.
- The subject Control Systems of 5th semester is shifted to 4th semester.
- The syllabus of the subject PTSP was designed as required by ECE curriculum.
- The electives to be grouped for each semester and offered in the respective semester taking into consideration the prerequisite subjects.

The changes made will be put forth before the Academic Council for approval.

Bee
23/11/16
Dr. B.I.Neelgar
Professor & Chairman
Chairman / HOD
Electronics & Communication
Engineering Dept.
Dayananda Sagar University
School of Engineering
Kudlu Gate, Hosur Mam Road,
BANGALORE - 560 088



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Dr. Basavaraj I Neelgar <basavaraj-ece@dsu.edu.in>

re: BoS meeting on 23rd Jan, 2016 reg

Chandra Murthy <cmurthy@ece.iisc.ernet.in>
To: "Dr. Basavaraj I Neelgar" <basavaraj-ece@dsu.edu.in>

Sun, Feb 21, 2016 at 10:38 AM

Dear Basavaraj:

I approve, but I would like to sign out from the BoS. My current schedule does not permit me to contribute to this activity.

Regards,
Chandra

[Quoted text hidden]

BOS-2

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 <rathna@ee.isc.ernet.in>, <sairamgeethanath@gmail.com>

Subject: RE: BOS meeting-DSU-on13/05/16

Date: Tue, 05 May 2015 12:42:54 IST

Cc: <scpilli@yahoo.co.in>

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Dear Sir/Madam

Greetings from DSU

As decided in the previous BOS meeting, the next BOS meeting is scheduled on 13/05/15 at 11AM in board room, DSCE, Bangalore. I request your kind presence in the meeting to finalize the schemes with syllabus for first year.

As per the direction of chairman(engineering)-DSU, few changes are made in the scheme of UG (inclusion of more electives in UG course 5th,6th sem)-file attached for reference

Tentative Schemes for PG courses in 4 different streams have been attached with this mail for your reference and has to be finalized.

Agenda of the meeting

1. To finalize the scheme of UG(ECE) for DSU
2. To finalize the M. Tech schemes for 4 streams

I request confirmation mail from you for further arrangement.

With best regards,

Dr. K.L.Sudha
Prof. Dept ECE
DSCE, Bangalore

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BOARD OF STUDIES-DSU(ECE)

Name	Description	Address/phone numbers	
1.	Dr. Chandra R Murthy	Associate Professor, IISc., Bangalore Phone: +91-80-2293-2464 extn. 21. Fax: +91-80-2360-0563 Email: cmurthy@ece.iisc.ernet.in Mob:9900194025	Busy in other work.
2	Dr. N Kaulgud	Professor, NIE, Mysore Mob:9900541686 Email: narasimha.kaulgud@gmail.com	Still busy 15/04/15
3	Dr. Rathna G.N	Principal Research Scientist Electrical department IISc., Bangalore Phone: +91 80 2293 3167 E-mail:rathna@ee.iisc.ernet.in	Rathna G.N.
4	Dr. Vara Prasad	Senior Scientist, ^{DGM, MCHF} Head Microelectronics Division, ISRO Satellite Centre, Old Airport Road, Bangalore - 560 057 Email: bksvlp@isac.gov.in Ph:08025083350 Mob:9449030070.	B. Prasad
5	Mr. Dharmaraj Naidalgi	Engineer - Manager, Intel Mobile Communication, 1st Floor, Innovator, ITPL, White Field, Bangalore Email: dharmaraj.naidalgi@intel.com Mob:9880396249	out of station
6	Mr. Ramesh Venkatesan	Principle Engineer, Wipro. G Health care, Bangalore Email: ramesh.venkatesan@geind.ge.com Mob:9845175432	out of station
7	Dr. Sairam Geethanath	Prof. & Head, Dept. of Medical Electronics, Dayananda Sagar College of Engineering, Bangalore - 560 078 Email: sairangeethanath@gmail.com Mob: 9448293026	
8	Dr. K L Sudha	Professor, Dept. of Electronics & Communication, DSCE, Bangalore Email: klsudhal@rediffmail.com Mob:9845943756	K. L. Sudha
9	Mr. Amith Bansal	Managing director Hed-X, Bangalore	out of station.
10	Mr. Chandrakanth Singh	Head, L& D, Chandrakanth.singh@hedexperts.com Mob:9379293311	
11.	<u>Dr. Chandrashekar</u>		
12.	<u>Dr. S C Pillai</u>		
13.	<u>Dr. Veena Chakravarti</u>	98459 80607	

DAYANANDA SAGAR UNIVERSITY, BENGALURU.

Minutes of BOS meeting-2 dated 13/05/15.

Meeting started at 11 AM with the agenda of finalizing the scheme and syllabus for B.E and streams of M.Tech. The meeting started with the scheme of B.E which was discussed in earlier meeting and was agreed by members of BOS. Few changes which were incorporated by BOS chairman Engineering was put in front of BOS members and they also accepted for the changes.

The syllabus for subject basic electronics and basics of electrical are presented and mapping of course outcomes with college outcomes for one subject is discussed.

Following points are highlighted in the discussion:

1. References should contain year of publication and edition.
2. ASIC design should be a core subject instead of IOT
3. CAD for VLSI should be the subject in 8th sem instead of CAD tools
4. DSP system design should be included instead of DSP architecture
5. Electives related to renewable energy sources to be added
6. Prerequisite to be mentioned for electives if required

Next topic of discussion was scheme and syllabus of M.TECH(Digital Communication)

The subjects in core and electives were looked into and it is been decided to make detection and estimation theory as one of the core subject. Few electives were removed and few were added as per present industry requirements.

*check
Name change*

M.TECH(Digital electronics and VLSI) scheme and syllabus was considered in detail and major changes were done in the content of few subjects. Few electives were removed and few were added as per present industry requirements.

Mr. Chandrakanth Singh from Head experts presented the scheme and syllabus for Automotive Electronics specialization. Maths subject content was decided based on the requirement. Syllabus content for few subjects was insufficient which was asked to modify and asked to increase number of references. it was decided to have two subjects per elective as it is a new specialization branch.

Next discussion was on M.tech (embedded system)-scheme and syllabus. Maths content was decided as probability and queuing theory. The subjects were put in proper order and finalized.

The meeting ended by consolidation by the chairman(engineering)-DSU at 5PM.

*VLSI & Electron
VLSI design & SP*

*Digital electronics
& comp system.*

[Signature]
13/05/15



Dayananda Sagar
University

School of Engineering

Department of Electronics and Communication Engineering

B.Tech- 3rd Semester

SYLLABUS

(Applicable for 2015-16 admitted batch)

Subject Code	Subject Name	L	T	P	Seminar/P roject	C
15MA201	ENGINEERING MATHEMATICS - III	3	2	--	-	4
Course objectives	<ol style="list-style-type: none"> Understand linear system of equations, structure of Matrices and Determinants Infer different co-ordinate systems and applications of vectors. Know the higher integrations applications in polar coordinates. Learn the concepts of Surface areas and apply to solve numerical problems in engineering domain. 					
Course outcomes	<ol style="list-style-type: none"> Apply Linear Algebra to solve linear equations for a given linear system Evaluate numerical problems on matrices and determinants. Analyze vectors in space and solve problems in engineering domain. Apply double and triple integrations to solve engineering problems Apply Line integration concepts to vectors in space for problems. Calculate surface areas of given distribution functions. 					

LINEAR EQUATIONS

(8 hours)

Systems of linear equations, Row reduction and echelon forms, Vector equations, Solution sets of linear equations, Linear transformations, Matrix of Linear Transformations, Matrix Operations, Inverse of a matrix, Characteristics of invertible matrices.

MATRICES & DETERMINANTS

(10 hours)

Determinants, Eigenvalues and Eigenvectors, Characteristic equation, Diagonalization, Diagonalization of symmetric matrices, Quadratic forms and Singular Value Decomposition



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VECTORS CALCULUS

(12 hours)

3-D Coordinate systems, Vectors, Dot and Cross products. Lines, planes and curves in space. Tangents to curves, Normal vectors of curve, Taylor's formula for two variables.

HIGHER ORDER INTEGRATIONS

(10 hours)

Double integration in polar form, Triple integration in cylindrical and spherical coordinates, Line integrals, Vector Fields and Line integral

SURFACE AREAS

(10 hours)

Path independence, Green's theorem, Surfaces and area, Surface Integrals, Stoke's Theorem, Divergence Theorem

Text Books:

1. Linear Algebra and its applications, David Lay, Steven Lay, Judi Mc Donald, Pearson, 5th edition
2. Thomas's Calculus, G. B. Thomas, M. Weir, J. Hass, Pearson, 12th edition

Reference Books:

1. Advanced Engineering Mathematics, E. Kreyzig, Wiley, 10th Edition
2. Introduction to Linear Algebra, G. Strang, Wellesely- Cambridge Press, 4th edition.



Dayananda Sagar
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School of Engineering

Department of Electronics and Communication Engineering
B. Tech- 3rd Semester

SYLLABUS

(Applicable for 2015-16 admitted batch)

Subject Code	Subject Name	L	T	P	Seminar/ Project	C
15EC203	NETWORK THEORY	3	-	--	-	3
Course objectives	<ol style="list-style-type: none">1. Develop the basic concepts of network analysis, which is the pre-requisite for all the electronics and communication engineering subjects.2. Solve different complex circuits using various network reduction techniques such as Source transformation, Network theorems etc.3. Synthesize the transmission line parameters using two-port networks.4. Evaluate AC and DC transients for complex electrical systems.					
Course outcomes	<ol style="list-style-type: none">1. Investigate the basic concepts to solve and analyze networks.2. Design resonant circuits which are used in wireless transmission and communication networks.3. Understand network theorems to simplify the complex networks and apply for transient analysis in electrical circuits and to analyze the system stability.4. Evaluate the parameters of two port networks to analyze the performance of transmission lines5. Understand basic filters which are used in communication systems.					



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BASIC CONCEPTS & NETWORK TOPOLOGY

(12 hours)

Practical sources, Source transformations, Network reduction using Star – Delta transformation, Loop and node analysis With linearly dependent and independent sources for DC and AC networks, Concepts of super node and super mesh. Graph of a network, Concept of tree and co-tree, incidence matrix, tie-set, tie-set and cut-set schedules, Formulation of equilibrium equations in matrix form, Solution of resistive networks, Principle of duality.

NETWORK THEOREMS

(8 hours)

Source transformation, Superposition, Thevenin's, Norton's, Maximum power transfer, Reciprocity, Tellegen's, Millman's and Compensation theorems for d.c and a.c excitations.

DC-AC TRANSIENT ANALYSIS

(14 hours)

Transient response of R-L, R-C, R-L-C circuits for d.c excitation – initial conditions – solution using differential equations and Laplace transform approaches

Transient response of R-L, R-C, R-L-C circuits for sinusoidal excitation – initial conditions – Solution using Laplace transform approach only.

NETWORK PARAMETERS

(8 hours)

Two port network, Impedance parameters, Admittance parameters, Transmission parameters, hybrid parameters – Inter relationship between parameters – Concept of transformed network – two port network parameters using transformed variables – Interconnection of two port networks.

NETWORK FILTERS

(8 hours)

Characteristic impedance of symmetrical networks, properties of symmetrical networks, Filter fundamentals, pass and stop bands, characteristic impedance, constant K- low pass filter, constant K-high pass filter, Band pass filter, Band Elimination Filter, Basic concepts of Attenuator and Equalizers.

Text Books:

1. Engineering circuit analysis –by W. H. Hayt, J. E. Kimmerly, and S. M. Durbin Mc Graw Hill Education private limited, 7th Edition.
2. Network Analysis by M.E Van Valkenburg, Prentice Hall of India, 3rd Edition.

Reference Books:

1. Fundamentals of Electric circuits by Charles K Alexander, Mathew N.O Sadiku Tata Mc Graw Hill.
2. Electrical Circuit Analysis by A Sudhakar and SP Shyam Mohan, TMH.



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School of Engineering

Department of Electronics and Communication Engineering
B.Tech- 3rd Semester

SYLLABUS

(Applicable for 2015-16 admitted batch)

Subject Code	Subject Name	L	T	P	Seminar/ Project	C
15EC204	DIGITAL LOGIC DESIGN	3	-	--	-	3
Course objectives	<ol style="list-style-type: none">1. Understand number systems and codes and their application to digital circuits and understand Boolean algebra, Karnaugh maps and its application to the design and characterization of digital circuits.2. Analyze a given combinational or sequential circuit using Boolean algebra as a tool to simplify and design logic circuits.3. Understand the logic design of programmable devices, including PLDs4. Demonstrate various synchronous & Asynchronous counters and Universal Shift Registers.					
Course outcomes	<ol style="list-style-type: none">1. Infer different Number systems, Codes, Logic Gates, Boolean laws and theorems.2. Apply the knowledge of Boolean algebra to deduce optimal digital circuits.3. Construct & Implement different types of combinational logic circuits using Logic gates.4. Develop and test different types of Sequential logic circuits using flip flops, counters, PLDs5. Design State Machines and sequence generators & sequence detectors6. Modify traditional design techniques to yield innovative designs					

NUMBER SYSTEMS AND BOOLEAN ALGEBRA

(8 hours)

Review of number systems, conversion of numbers from one radix to another radix, complement representation of negative numbers-binary arithmetic, 4-bit codes: BCD, Excess-3, Basic logic operations. Properties of Boolean Algebra, switching functions, Canonical and Standard forms-



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Algebraic simplification digital logic gates, universal gates and Multilevel NAND/NOR realizations, Gray code, parity checking even parity, odd parity, Hamming code

BOOLEAN FUNCTION MINIMIZATION

(8 hours)

De-Morgan Theorem, Minimization of switching functions using Boolean Theorem, K-Map up to 6-variables. Tabular minimization, minimal SOP and POS Realization. Problem solving using K-map such as code converters

COMBINATIONAL LOGIC CIRCUITS .

(10 hours)

Design of Half adder, Full adder, full subtractor, Ripple carry adder, Carry look ahead adder, Multiplexer, De-Multiplexer Encoder, Priority encoder, Decoder, MUX Realization of switching functions, Parity bit generator, 4 bit Digital Comparator

SEQUENTIAL CIRCUITS

(18 hours)

Classification of sequential circuits (synchronous and asynchronous): basic flip-flops, truth tables and excitation tables (NAND RS latch, NOR RS latch, RS flip-flop, JK flip-flop, T flip-flop, D flip-flop with reset and clear terminals). Conversion of flip-flops, Design of registers, Buffer register, Shift register, Bi-directional shift register, Universal shift register.

Design of Asynchronous & Synchronous counters - Up, Down, Up down, Johnson counters, Ring counters. Finite state machine-capabilities and limitations, Melay and Moore state machines, Meelay to Moore conversion and vice-versa, Derivation of the SM chart, Reduction of state tables and state assignment. Realization of SM Chart.

PROGRAMMABLE LOGIC DEVICES

(6 hours)

Basic PLD's-ROM, PROM, PLA, PAL, and Realization of Switching functions using PLD's, comparison of PROM, PLA and PAL

Text Books:

1. Digital Design – Morris Mano, PHI, 3rd Edition, 2006.
2. Fundamentals of Logic Design – Charles H. Roth, Thomson Publications, 3rd Edition.1998.

Reference Books:

1. Switching & Finite Automata theory – Zvi Kohavi, TMH, 2nd Edition
2. Modern Digital Electronics by RP Jain, TMH.



Dayananda Sagar
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School of Engineering

Department of Electronics and Communication Engineering
B.Tech- 3rd Semester

SYLLABUS

(Applicable for 2015-16 admitted batch)

Subject Code	Subject Name	L	T	P	Seminar/ Project	C
1SEC205	ELECTRO-MAGNETIC FIELD THEORY	3	1	—	-	4
Course objectives	<ol style="list-style-type: none">1. Study the different coordinate systems, Physical significance of Divergence, Curl and Gradient and Understand the applications of Coulomb's law and Gauss law to different charge distributions and the applications of Laplace's and Poisson's Equations to solve real time problems on capacitance of different charge distributions.2. Understand the physical significance of Biot-Savart's and Amperes's Law for different current distributions.3. Know the physical interpretation of Maxwell's equations and applications for Plane waves for their behaviour in different media4. Infer behaviour of E.M. waves incident on the interface between two different media					
Course Outcomes	<ol style="list-style-type: none">1. Evaluate the problems of different charge distributions using Coulomb's law & Gauss law and capacitance problems using Laplace's equation.2. Infer the concept of work and electrical potential and apply to solve related problems.3. Understand Biot-Savart's and Amperes Laws and solve related problems on different current distributions.4. Implement applications of Maxwell's equations in plane waves and their propagation in different Media5. Apply the wave propagation principle to analyze the reflection and refraction of EM waves in dispersive media6. Analyze the power concept associated with EM with Poynting Theorem and evaluate power associated with Plane waves.					



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ELECTROSTATICS -1

(12 hours)

Review of Vector Calculus, Coordinate systems; Coulomb's Law and Electric Field Intensity: Experiment Law of Coulomb, Electric Field Intensity, Field due to Volume Charge, Line Charge, Ring of charge and Sheet Charge, Related Problems.

Electric Flux Density, Gauss' Law and Divergence: Electric Flux Density, Gauss' Law, Divergence, Gauss' Law Differential form, Applications of Gauss' Law and Divergence Theorem, Related Problems

ELECTROSTATICS - 2

(08 hours)

Energy and Potential: Work done in Moving a Point Charge in an Electric Field, Line Integral, Definition of Potential Difference and Potential Gradient, Relation between E & V, Energy Density in static Electric Field, Boundary Conditions, Boundary Conditions for Perfect Dielectrics Related Problems

Poisson's and Laplace's Equations: Poisson's and Laplace's Equations, Uniqueness Theorem, Examples of the Solutions of Laplace's and Poisson's Equations. Related Problems.

MAGNETOSTATICS

(10 hours)

The Steady Magnetic Field: Biot-Savart Law, Applications of Biot-Savart's law, Ampere's Circuital Law, Curl, Stokes' Theorem, Magnetic Flux and Flux Density, Scalar and Vector Magnetic Potentials, Magnetic Boundary Conditions, Energy in Magnetic Field Related Problems

MAXWELL'S EQUATIONS & PLANE WAVES

(14 hours)

Faraday's Law of e.m.f, Inconsistency of Ampere's law, Displacement Current, Maxwell's Equation in Point and Integral Form of different media, Boundary Conditions : Dielectric -Dielectric boundary, Related Problems

Wave equations for conducting and Perfect Dielectric, Uniform Plane wave, Relation between E & H, Sinusoidal Wave equations, Wave Propagation in lossless and conducting media, and Propagation in Good Conductors, Skin Effect, & Good Dielectrics, Poynting Vector and Power Considerations, Power loss in plane conductor, Wave Polarization, Related Problems.

REFLECTION, REFRACTION OF PLANE WAVES

(06 hours)

Reflection and Refraction of Uniform Plane wave: Definitions of Reflection coefficient and Transmission coefficient, Waves at Normal Incidence, for perfect conductor-dielectric boundary & dielectric-dielectric boundary, SWR, Oblique incidence: Perpendicular and Parallel Polarization, for dielectric-dielectric boundary, Brewster angle, Surface Impedance, Related Problems

Text Books:

1. Engineering Electromagnetics-William H. Hayt Jr. and John A. Buck, Tata McGraw Hill, 6th Edition, 2001
2. Electromagnetic Waves and Radiating systems – E. C. Jordan and K.G. Balmain, PHI, 2nd Edn.
3. Electromagnetic fields and Wave theory- G.S.N. Raju, Pearson Education, 2006
4. Electromagnetic Field Theory and Transmission Lines- Gottapu Sasibhushana Rao, Wiley Publishers, 2012.

Reference Books:

1. Electromagnetics- Joseph Edminister, Schaum Outline Series, McGraw Hill.
2. Field and Wave Electromagnetics- David K. Cheng, Pearson Education Asia II Editionn.-1989, Indian Reprint 2001.



School of Engineering

Department of Electronics and Communication Engineering

B.Tech- 3rd Semester

SYLLABUS

(Applicable for 2015-16 admitted batch)

Course code: 15EC206	Probability Theory & Stochastic Processes	L	T	P	C
		3	02	--	4
Course Objectives	<ol style="list-style-type: none"> 1. Understand probability, random variable and random process concepts and their importance in Electronics and Communication Engineering course 2. Calculate statistics related to Random variables and process such as mean, variance, correlation etc 3. Evaluate standard distribution functions such as Poisson's, Gaussian distributions 4. Apply functions of random variables such as characteristic function, moment generating function to calculate statistics. 				
Course outcomes	<ol style="list-style-type: none"> 1. Demonstrate the concepts of Probability Theory, random variables /Random process and describe probability models 2. Transform of random variables in one domain to another domain for statistical signal processing, Bio medical processing 3. Understand the different noise sources for noise estimation in noisy signals in signal processing and communication 4. Calculate statistics related to Random variables/process and generate functions of random variables. 5. Extend the concepts to multiple random variables and apply them to analyse practical problems 				

PROBABILITY THEORY AND DENSITY FUNCTIONS

8 hours

Probability introduced through Sets and Relative Frequency: Experiments and Sample Spaces, Discrete and Continuous Sample Spaces, Events, Probability Definitions and Axioms, Mathematical Model of Experiments, Probability as a Relative Frequency, Joint Probability, Conditional Probability, Total Probability, Bayes' Theorem and Independent Events

RANDOM VARIABLES

12 hours

Definition of a Random Variable, Conditions for a Function to be a Random Variable, Discrete and Continuous random variables, Mixed Random Variable, Distribution and Density functions, Properties, Binomial, Poisson, Uniform, Gaussian, Exponential, Rayleigh, distributions. Conditional Distribution and density functions, properties.



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OPERATIONS ON SINGLE RANDOM VARIABLE

8 hours

Functions of a Random Variable, Expected Value of a Random Variable, Moments about the Origin, Central Moments, Variance and Skew, Chebychev's Inequality, Characteristic Function, Moment Generating Function,

MULTIPLE RANDOM VARIABLES

12 hours

Introduction, Vector Random variables, Joint Distribution and its properties, Marginal Distribution Functions, Joint density and its properties, Conditional Distribution and Density, Statistical independence, Sum of Two Random Variables, Sum of Several Random Variables Central limit theorem, Operations on multiple random variables-Expected Value of a Function of Random Variables: Joint Moments about the Origin, Joint Central Moments, Jointly Gaussian Random Variables: Two Random Variables case, N Random Variable case, Properties.

RANDOM PROCESSES

10 hours

Random process concepts, Classification of Random process, Deterministic and Nondeterministic Processes, Stationary and independence, Distribution and Density Functions, concept of Stationary and Statistical Independence, First-Order Stationary Processes, Second- Order Wide-Sense Stationary, (N-Order) and Strict-Sense Stationary, Correlation and its properties, Cross correlation, covariance, Measurement of correlation, Gaussian Random process, Time Averages and Ergodicity, Mean-Ergodic Processes, Correlation-Ergodic Processes.

Text Books:

1. Probability, Random Variables & Random Signal Principles - Peyton Z. Peebles, TMH, 4th Edition, 2001.
2. Probability, Random Variables and Stochastic Processes – Athanasios Papoulis and S. Unnikrishna Pillai, PHL, 4th Edition, 2002.

Reference books:

1. Probability and Random Processes with Application to Signal Processing – Henry Stark and John W. Woods, Pearson Education, 3rd Edition.
2. Probability Methods of Signal and System Analysis. George R. Cooper, Clave D. MC Gillem, Oxford, 3rd Edition, 1999.
3. Statistical Theory of Communication - S.P. Eugene Xavier, New Age Publications.

BOS-1

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Subject: DSU-BOS(ECE) meeting

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Dear Sir,

Greetings from Dayananda Sagar University

First of all I thank you on behalf of DSU for accepting our invitation to become part of Board Of Studies. It is my pleasure to work with you as convener of BOS and I request your coordination and support in this assignment.

I wish to bring it to your kind notice that the first BOS meeting is scheduled on 16/4/2015 (next week Thursday) at 2PM. I request you to make it convenient to attend the meeting and give your valuable suggestions in framing the effective curriculum for DSU.

I request you to write me back about your convenience to attend the meeting, so that I can arrange for your conveyance on 16/4/15.

The university looks forward for your continued support in BOS activities.

With warm regards,

Dr. K.L.Sudha,
Convener, BOS DSU,
Prof, Dept of ECE,
DSCE, Bangalore
Ph:9645943756

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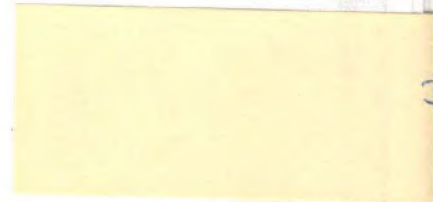
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DAYANANDA SAGAR UNIVERSITY, BENGALURU.

Minutes of BOS meeting-1 dated 16/04/15.

Meeting started at 2 PM with the agenda of finalizing the scheme and syllabus for B.E and scheme of 4 streams of M.Tech. The meeting started with the scheme of B.E The syllabus for subject basic electronics and basics of electrical are presented and mapping of course outcomes with college outcomes for one subject is discussed.

Following points are highlighted in the discussion:

1. Each unit should be designed for 10 hrs,
2. Problems and simulation of basic circuits should be considered for internal evaluation
3. Based on credits allocated for the subject, content should be modified.
4. More electives should be given.
5. Subjects are ordered properly to have labs and sequence of learning.

Next topic of discussion was scheme and syllabus of M.TECH

The subjects in core and electives were looked into for two streams of M.TECH(Digital electronics and VLSI) and Digital communication, automotive electronics. Suggestions were given for proper arrangement of subjects in each stream. Few new subjects were suggested to add.

The meeting ended by consolidation by the chairman(engineering)-DSU at 6PM.

MINUTES OF MEETING:**B.E. Syllabus**

- ❖ All ~~units~~ 10 hours in Basic Electronics.
- ❖ In one hour tutorial they can do Lab. *of 2 hrs*
- ❖ Some problems in the book are ^{to be} worked by the students.
- ❖ Mixing students for continuous evaluation (not a good idea).
- ❖ One course in depth (5 units should be independent).
- ❖ Options in each Unit (For questions).
- ❖ One question for 10 Marks has to be looked into.
- ❖ Mathematical problems to be given to students.
- ❖ Final outcome :- It is left to the discretion of Lecturer ("Tooley" – Book good enough).
- ❖ For simulation be sure that students can be accomodated.
- ❖ Syllabus for electrical seems to be repeated or is it ?
- ❖ 52 hours or 45 hours (All are in 10 hours).
- ❖ (Instead of analog meters to go for advanced or latest).
- ❖ Measurement & Instrument to be in 3rd Semester.
- ❖ S & S has to be made attractive. S & S to be 4th Semester and DSP to be 5th Semester.
- ❖ Control Systems to be 5th Semester.
- ❖ Microprocessors – 8086 and two higher processors.
- ❖ (Move DIP to be elective and have DSP + DIP Lab).
- ❖ FC MOS VLSI syllabus contents has be looked into.

- ❖ Remove solid state devices (replace with VLSI design and testability).
- ❖ Detection and Estimation is important subject (Core Subject).
- ❖ Course on Android Programming for Sensors and Actuators.
- ❖ Course on different communication standards (suggestion).
- ❖ RTOS (very important).
- ❖ Electives in 7th Semester (not balanced)
- ❖ Satellite Communication to be made as a module in Wireless and Mobile Communication.
- ❖ Radar and Satellite to be combined.
- ❖ Data mining to be strengthened.

The points made by the board members were noted and the necessary changes were made in the B.E. syllabus.

A. S. D. S.
16/4/15

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School of Engineering

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Board of Studies

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