Dr. AMBEDKAR INSTITUTE OF TECHNOLOGY, BEGALURU – 560056.

(An Autonomous Institution Affiliated to Visvesvaraya Technological University, Belagavim)

Department of Electronics & Communication Engineering

Ref.No: AIT /EC /BOS /   /2018-19   Date: 23-06-2018

To
Dean (Academics)
Dr Ambedkar Institute of Technology
Bengaluru-56

Madam

Sub: Regarding the details of the BOS meeting held on 23-06-2018
Ref: AIT/Dean / 1550 / 2016718 Dated: 05.06.2018

The BOS meeting of the department was held in the VLSI Lab Hall of our department on Saturday, the 23-06-2018

The BOS committee has approved the following:

1. The Curriculum Design for all the semesters (I to VIII semesters) of UG Course for the batch 2018-19.
2. The syllabus of Basic Electronics for the I/II Semester of UG Courses for applicable to 2018-19 Batch.
3. The Scheme and Syllabus for all the semesters (III to VIII semesters) of UG Course for the Batch 2015,2016 and 2017.
4. The List of BOE members.
5. The list of Valuers / Examiners.
6. The subject Equivalence.

Thanking you

CHAIRMAN BOS
Dept.ECE

Enclosures:

1. List of Members of BOS.
2. Curriculum Design –UG
3. Minutes of the BOS Meeting.
4. Syllabus copy of I/II Semester Basic Electronics for the academic year 2018-19.
5. Scheme of 3rd to 8th Semesters B.E (E &C) for applicable to 2018-19 Batch.
6. Scheme and Syllabus of 3rd to 8th Semesters B.E (E &C) for the academic year 2018-19.
7. Syllabus of Institute Electives.
8. List of Members of BOE.
9. List of Valuers / Examiners.
10. List of Subject Equivalence.

MINUTES OF THE BOARD OF STUDIES MEETING

DATED: Saturday, June 23,2018

Dr. AMBEDKAR INSTITUTE OF TECHNOLOGY, BEGALURU – 560056.
(An Autonomous Institution Affiliated to Visvesvaraya Technological University, Belagavim)

Department of Electronics & Communication Engineering

Minutes of the Board of Studies (BOS) Meeting:

The proceedings of the 8th Board of Studies (BOS) meeting of Electronics and Communication Engineering Department was held on 23-06-2018 at 09:30 a.m. at ECE department under the Chairmanship of Dr.G.V.Jayaramaiah, Professor and Head of the Department of Electronics and Communication Engineering.

At the very outset, the Chairman welcomed all the Internal and External members of BOS to the meeting and gave a preliminary presentation on the agenda items with reference to the scheme and syllabus of UG for the academic year 2018-19

The chairman along with academic coordinator(s) gave a detailed presentation of the courses to be offered to the UG level students of both Core and Elective subjects in a semester wise and also briefed the members about the Curriculum Design of the Department for the UG Course.

The following agenda were placed by the Chairman which were discussed and resolved as follows:

Agenda 1: The confirmation of the proceedings of 7th BOS meeting held on 25-03-2017 at 10 am

The 7th BOS meeting proceedings were confirmed.
Discussion: The members appreciated the progress during the academic year 2017-18.

Agenda 2: To frame, discuss and approve the Curriculum Design for the semesters I to VIII of UG Course for the academic year 2018-19 onwards under **Choice Based Credit System** and **Outcome Based Education System.**

The Chairman appraised the members about the introduction of Choice Based Credit System and Outcome Based Education System for 4 year course in Electronics and Communication Engineering with the course Matrix.

Accordingly, a draft Curriculum Design for the I to VIII Semesters was presented and placed before the **Board Of Studies** Members for their opinion and approval.

Resolution: The BOS members went through the Curriculum Design and discussed in length about various aspects of the Curriculum Design. After Incorporating, the changes suggested by the members of BOS, the **Curriculum Design for I to VIII Semesters was approved 2018-19 onwards.**

Agenda 3: To frame, discuss and approve the syllabus of Basic Electronics for I and II Semester for the academic year 2018-19.

The Chairman presented the Syllabus of the Basic Electronics for the First and Second Semester students of all the branches of Engineering for the academic year 2018-19. Accordingly, a draft syllabus for the First and Second Semesters was presented and placed before the Board Of Studies Members for their opinion and approval.

Resolution: The BOS members went through the Syllabus of Basic Electronics and discussed in length about the various aspects of the syllabus. After Incorporation of the Changes as suggested by the members of BOS, the **Basic Electronics syllabus** for I and II Semesters was approved for the academic year 2018-19.

Agenda 4: To frame, discuss and approve the Scheme for III to VIII Semester under Choice Based Credit System and Outcome Based Education System for 4 Years Course in Electronics and Communication Engineering for the academic year 2018-19 onwards.

The BOS Chairman presented the Scheme for III to VIII Semester under Choice Based Credit System and Outcome Based Education System for 4 Years Course in Electronics and Communication Engineering for the academic year 2018-19 onwards and placed before the Board Of Studies Members for their opinion and approval.

Resolution: The BOS members went through the draft Schemes thoroughly for the III to VIII Semester and discussed in length about various aspects of the title of the subjects and the laboratory. After incorporating certain Changes in the title of subjects as suggested by the committee members of BOS, the **Scheme** for III to VIII Semesters was approved for the academic year 2019-20 onwards under Outcome Based Education System and Choice Based Credit System.

Agenda 5: To frame, discuss and approve the Scheme and Syllabus for III to VIII Semester under Choice Based Credit System and Outcome Based Education System for 4 Years Course in Electronics and Communication Engineering for the academic year 2018-19 onwards and syllabus of the Institute electives offered by the other department students of the college.

The BOS Chairman presented the Scheme and Syllabus for III to VIII Semester for 4 Years Course in Electronics and Communication Engineering for the academic year 2018-19 and placed before the Board Of Studies Members for their opinion and approval.

Resolution: The BOS members went through the draft Schemes and Syllabus thoroughly for the III to VIII Semester applicable to 2015-16 Batch, 2016-17 Batch and 2017-18 Batch and discussed in length about various aspects of the syllabus of theory and laboratory. After incorporating the certain Changes in the Computer Communication Network and Computer Communication Network Laboratory subjects as suggested by the committee members of BOS, the **Scheme and Syllabus** for III to VIII Semesters was approved for the academic year 2018. The members of the BOS committee have also approved the syllabus of the Institute electives for the academic year 2018-19.

Agenda 6: To prepare the panel for the Board of Examiners of the Electronics and Communication Engineering to scrutinize the Question papers of the Semester End Examination for the AY: 2018-19.

The BOS Chairman presented the list of Examiners to scrutinize the question papers for the Semester End Examination for the academic year 2018-19.

Dr. AMBEDKAR INSTITUTE OF TECHNOLOGY, BEGALURU – 560056.
(An Autonomous Institution Affiliated to Visvesvaraya Technological University, Belagavim)

Department of Electronics & Communication Engineering

Resolution: As suggested by the members of the BOS, the list of the Board of Examiners was approved.

Agenda 7: To prepare the panel for the Board of Examiners of the Electronics and Communication Engineering for the academic year 2018-19.

The Chairman of the BOS in E & C department presented the proposed panel of Examiners pertaining to UG in Electronics and Communication Engineering for the academic year 2018-19.

Resoulution: The Panel of Examiners were approved based on the recommendation of BOS members including the changes which were made in the list of Examiners.

Agenda 8: To frame the subject equivalence for the academic year 2018-19.

The Chairman of the BOS in E & C Department presented the proposed subject equivalence pertaining to UG in Electronics and Communication Engineering for the academic year 2018-19.

Resolution: The members of the BOS approved the subject equivalence for the academic year 2018-19 onwards after discussing in length about various aspects of the subject equivalence.

Finally, the meeting of Board of studies was concluded with the Chairman of the BOS in ECE Department thanking to all the members of the BOS for their active participation in the deliberations of the meeting and giving inputs for the progress of the department.

The following BOS members were present on Saturday, June 23, 2018.

1. Dr.G.V.Jayaramaiah, Professor and HOD, Chairman of BOS
2. Dr.Shanthala, Professor and HOD, TCE, BIT, Bengaluru-4 and VTU Nominee
3. Dr.Sadashivappa, Professor and HOD, TCE, RVCE, Bengaluru and Subject Expert
4. Dr.Sheshachalam, Professor, ECE, BMSCE, Bengaluru-18 and Subject Expert
5. Dr.Raveesh Aradhy, Professor, ECE, RVCE, Bengaluru-59 and Subject Expert
6. Dr.Amit Jain, Associate Professor, ECE, CMRIT, Bengaluru-37 and Subject Expert
7. Premakumar Melukote, Alumni Student Nominee
8. Srinivasa.R.K, Project Manager, Qualcomm India Pvt.Ltd, Industry Representative
9. Vinay Sidhaya, Principal Hardware Engineer, Westen Digital, Industry Representative
10. Dr.H.Umadevi, Professr, BOS Member
11. Akalpita L Kulkarni, Associate Professr, BOS Member
12. Dr.S.Ramesh, Professor, BOS Member
13. Dr.Shivaputra, Assistant Professor, BOS Member
14. Meenakshi L Rathod, Assistant Professor, BOS Member

Dr. AMBEDKAR INSTITUTE OF TECHNOLOGY, BEGALURU – 560056.
(An Autonomous Institution Affiliated to Visvesvaraya Technological University, Belagavim)

Department of Electronics & Communication Engineering

Members Absent:

1. Girish Chandra, TCS, Industry Representative
2. Dr.Debabrata Das, Dean-Academics and R & D, Academic Expert

Signature of the Coordiantor(s)

Signature of the BOS Chairman

1. Dr. S. Sharthala
   VTU Nominee

2. Dr. Seshachalam D

3. Dr. Sadashivappa. G

4. Dr. Raveesh Aaradya H.V

Subject Title : Computer Communication Networks(CCN)

Sub.Code: EC72   No. of Credits:04=04:0:0 (L - T – P)   No. of Lecture Hours/Week : 04
Exam Duration:03 Hrs   CIE+Assignment +SEE=45+5+50=100   Total No.of Contact Hours:52

Course Learning Objectives: From this course the students can learn

1 Layerig architecture of OSI reference and TCP/IP model.
2 Elaborates the background concepts, and functionalities of application layer, transport layer, and network layer.
3 Study and analyse the flow and error control schemes.
4 Present ample details about the protocols, technologies, algorithms and standards that are used by each layer as it relates to the internet.
5 Overview of LAN concept, link layer,connecting LANs and connecting devices.

Unit No	Syllabus Contents	No.of Hours	Blooms Taxnomy level.
1	**Network Models:** Network core, Protocol Layers and their Service Models. **Addressing:** Physical addressing, Logical addressing, Port addressing and specific addressing. (T2:45-50) **Connecting Devices:** Passive hubs, Repeaters, Active hubs, Bridges, Two-layer Switch, Routers, Three-Layer Switches and Gateway. (T2:445-455) **Network Topologies:** Bus, Star, Mesh, Ring and Hybrid topologies. TEXT 2	10	L1,L2,L3.
2	**The Link Layer: Links, Access Networks, and LANs:** Introduction to the Link Layer, Error-Detection and -Correction Techniques, Multiple Access Links and Protocols, Switched Local Area Networks, Link Virtualization: A Network as a Link Layer TEXT 2	10	L1,L2,L3.
3	**The Network Layer:** Introduction, Virtual Circuit and Datagram Networks, What's Inside a Router? The Internet Protocol (IP): Forwarding and Addressing in the Internet, Routing Algorithms, Routing in the Internet, Broadcast and Multicast Routing TEXT 1, TEXT 2	12	L1,L2,L3.
4	**Transport Layer:** Introduction and Transport-Layer Services, Multiplexing and Demultiplexing,Connectionless Transport: UDP, Principles of Reliable Data Transfer, Connection-Oriented Transport: TCP, Principles of Congestion Control, TCP Congestion Control. TEXT 1	10	L1,L2,L3
5	**Application Layer:** Principles of Network Applications, The Web and HTTP, File Transfer: FTP, Electronic Mail in the Internet, DNS—The Internet's Directory Service, Peer-to-Peer Applications,Socket Programming. Text1	10	L1,L2,L3

Note 1: Two assignments are evaluated for 5 marks: Assignment -1 from Units 1 and 2.
            Assignment -2 from Units 3, 4 and 5

Course Outcomes: After successful completion this course the student should be able to

CO1 Define the network models, layered tasks and protocols for data transmission.

CO2 Explain the functionalities and services of application layer, transport layer, network layer, and data link layer.

CO3 Compare and contrast between various protocols in each layer.

CO4 Apply the various protocols and functions to create networks.

Course Outcomes Mapping with Programme Outcomes.

CO1   PO1, PO2

CO2   PO1, PO2

CO3   PO1, PO2

CO4   PO1, PO2

Text Books.

1   James F. Kurose, Keith W. Ross, "**Computer Networks**", Pearson Education,   2nd Edition, **2003**.

2   B.Forouzan ," **Data Communication and Networking**", TMH, 4th Edition, *2006*.

3   CCNA routing and Switching study guide.

Reference Text Books.

1   Russel Bradford, "**The Art of Computer Networking"**, Pearson Education, Ist Edition, **2007**.

Web Links.

1   nptel.ac.in/courses/106105081/1

2   http://www.bau.edu.jo/UserPortal/UserProfile/PostsAttach/10617_1870_1.pdf

Sub Title: COMPUTER COMMUNICATION NETWORKS LABORATORY		
Sub Code:ECL76	**No of Credits :** **0:0:1.5:0**	**No of lecture hours/week :** **3**
Exam Duration :03Hours	**Exam Marks : 50**	**Total No of lab : 13**

<table>
<tr><td colspan="3" align="center">Course Learning Objectives(CLOs)</td></tr>
<tr><td>1.</td><td colspan="2">To be able to perform experiment to simulate stuffing and de-stuffing, Encryption and Decryption of message.</td></tr>
<tr><td>2.</td><td colspan="2">To be able to perform experiment to simulate spanning tree and shortest path algorithm.</td></tr>
<tr><td>3.</td><td colspan="2">To be able to perform experiment to simulate polynomial code checksum for CRC-CCITT.</td></tr>
<tr><td>4.</td><td colspan="2">To be able to perform experiment to simulate various LAN protocols.</td></tr>
<tr><td>5.</td><td colspan="2">To be able to perform experiment to simulate serial using data communication kit.</td></tr>
</table>

EX. NO.	Syllabus	No of Hours
1	Write a C program to implement Bit Stuffing and deStuffing.	3
2	Write a C program to simulate a character stuffing and destuffing for a given message.	3
3	Write a C program to compute a polynomial checksum for a given binary data frame	3
4	Write a C program to simulate a shortest path Algorithm.	3
5	Using TCP/IP Sockets, write a client-server program to make client to communicate with Server using socket programming techniques in python.	3
	PART-B [Simulation]	

6	**SERIAL COMMUNICATION USING**
	
	    (i) RS232
	
	    (ii) MODEM COMMUNICATION
	
	    (iii) FIBER OPTIC COMMUNICATION
		3

7	**Configuring and Verifying LAYER 2 Switches:** Establish a communication between the HOSTS by connecting the Network Devices as given below, configure them and verify the same. Configuration includes HOSTNAME, BANNER, PASSWORD (CONSOLE, TELNET and ENABLE),MANAGEMENT IPand DEFAULT GATEWAY.	3

BOS Chairman   Signature of Principal

8	**Configuring and Verifying VLAN:**Establish a communication between the hosts by connecting the network Devices as given below, configure them and verify the same. Configuration includes Switch port configuration and encapsulation methods.	3
9	**Configuring and Verifying IP Routing:**Establish a communication between the hosts by connecting the network Devices as given below, configure them and verify the same. Configuration includes: 1. Static Routing 2. Dynamic Routing (RIP/OSPF/EIGRP)	3
10	**Configuring DHCP Server on a Router:** Configure DHCP server on a router to assign IP address dynamically to the hosts and verify the same **a. For One Broadcast Domain** **b. For Many Broadcast Domain**	3
11	**PART-C [Simulation Case-Study]** Dr. AIT is granted a block of addresses starting from **192.168.100.0/24**. The Dr. AIT College committee decided to distribute these blocks of addresses to **THREE** Departments with each department receiving just **FOUR** Addresses. **1. Design the sub blocks and give the slash notation to each sub block.**	3
12	**2. Simulate the above case using Cisco-packet Tracer.** Note: while simulating Consider the following Constraints: a. Establish a communication within the Departments. b. Only HOD's of each Department can communicate (Single user from each Department) with each other.	3
13	Create topology to demonstrate port security using any application layer protocol.	3
	Programme Outcomes (POs)	

1	Able to perform experiment to simulate stuffing /de-stuffing bit frame and character frame data: coded using C/C++.
2	Able to perform experiment to simulate spanning tree and shortest path algorithm: coded using C/C++.
3	Able to perform experiment to simulate polynomial code checksum for CRC-CCITT: coded using C/C++.
4	Able to perform experiment to simulate Encryption and Decryption of message: coded using C/C++.
5	Able to perform experiment to simulate Serial and parallel communication using data communication kit.

Relationship to the Program Outcomes(POs)	
Course Outcomes (COs)	**Program Outcomes (POs)**
CO1	PO5,PO6,PO7
CO2	PO5,PO6,PO7
CO3	PO5,PO6,PO7
CO4	PO5,PO6,PO7
CO5	PO5,PO6,PO7

Dr. AMBEDKAR INSTITUTE OF TECHNOLOGY, BEGALURU – 560056.
(An Autonomous Institution Affiliated to Visvesvaraya Technological University, Belagavim)

Department of Electronics & Communication Engineering

Ref.No: AIT /EC /BOS /   /2019-20   Date: 03-06-2019

To
Dean (Academics)
Dr Ambedkar Institute of Technology
Bengaluru-560 056

Madam

Sub: Regarding the details of the BOS meeting held on 11-05-2019
Ref: No Dr.AIT/Dean/003/2018-19 Dated: 22.04.2019

The BOS meeting of the department was held at Seminar Hall S001 in Silver Jubilee Building of our college on Saturday, the 11-05-2019

The BOS committee has approved the following:

1. The Curriculum Design for all the semesters (I to VIII semesters) of UG Course for the batch 2019-20.
2. The syllabus of Basic Electronics for the I/II Semester of UG Courses for applicable to 2019-20 Batch.
3. The Scheme and Syllabus for the V to VIII semesters of UG Course for the Batch 2016,2017
4. The Scheme and Syllabus for III and IV semesters of UG Course for the Batch 2018
5. The List of BOE members for the UG
6. The list of Valuers / Examiners for the UG.
7. The subject Equivalence for the UG
8. List of Subjects identified for the Honorary Degree(Major and Minor)

Thanking you

CHAIRMAN BOS
Dept.ECE

Enclosures:

1. List of Members of BOS.
2. Curriculum Design –UG
3. Minutes of the BOS Meeting.
4. Syllabus copy of I/II Semester Basic Electronics for the academic year 2019-20.
5. Scheme and Syllabus of 5th to 8th Semesters B.E (E &C) for applicable to Batch 2016 and 2017.
6. Scheme and Syllabus of 3rd and 4th Semesters B.E (E &C) for the academic year 2019-20.
7. Syllabus of Institute Electives.(Inter Departmental Electives)
8. List of Members of BOE.
9. List of Valuers / Examiners.
10. List of Subject Equivalence.
11. List of Subjects identified for the Honorary Degree(Major and Minor)

DR. AMBEDKAR INSTITUTE OF TECHNOLOGY, BANGALORE
(An Autonomous Institution Affiliated to VTU, Belgaum)
DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

LIST OF MEMBERS FOR BOARD OF STUDIES for the Academic year 2019-21
Date:11-05-2019

Sl No.	CATEGORY	Nomination of the Committee	Name of the Person with Designation	Signature
1	Head of the Department	Chairperson	Dr. Jayaramaiah.G.V. Professor and Head Department of ECE, Dr.AIT Bengaluru-56	
2	Faculty Members at Different Levels Bearing Different Specializations	Member 1.	Dr.Umadevi.H Professor. Dept. of ECE, Dr. AIT, Bengaluru-56	OOD
		Member 2.	Dr. Mahalinga V Mandi, Professor Dept of ECE, Dr.AIT, Bengaluru-56	OOD
		Member 3.	Smt. Akalpita L Kulkarni Dept of ECE, Dr. AIT, Bengaluru-56 Assoc. Professor Dept of ECE, Dr AIT, Bengaluru-56	
		Member 4.	Dr. Ramesh.S Professor, Dept of ECE, Dr.AIT, Bengaluru-56, Bengaluru-56	
		Member 5.	Smt. Sudha.B.S. Associate Professor Dept of ECE, Dr.AIT, Bengaluru-56	
		Member 6.	Dr.Shivaputra Assistant Professor Dept of ECE, Dr.AIT, Bengaluru-56	
		Member 7.	Dr. Jambunath S Baligar Associate Professor Dept of ECE, Dr.AIT, Bengaluru-56	
		Member 8.	Dr.Chetan.S Assistant Professor, Dept of ECE, Dr.AIT, Bengaluru-56	
3	Subject Experts from outside the College	Member 1.	Dr. Devendra Jalihal Professor, EEE department IIT Madras, Chennai-600 036	

	Nominated by Academic Council	Member 2.	Santanu Mahapatra Professor, Department of Electronic Systems Engineering Indian Institute of Science Bangalore Bengaluru- 560012 INDIA	
		Member 3.	Dr. Mrityunjaya V Latte Principal JSS Academy of Technical Education, Dr. Vishnuvardhan Road, Uttarahalli – Kengeri Main Road, Bengaluru- 560 045, India	
		Member 4.	P.Nagaraju Associate Professor, TCE, RVCE, Bangalore-560 059	
4	Expert from IET Ayodhya	Member 5.	Prof. Ramapati Mishra Director, Former HOD, ECE IET Ayodya, UP	
5	Expert from outside College, Nominated by Vice-Chancellor(VTU)	VTU Nominee	Sri Ram P Hegde Professor and HOD, Department of Electronics and Communication Engineering SDM college of Engineering Ujire-Dharmastala Road, Uijre, Karnataka -574240	
6	Representative from Industry/Corporate Sector/Allied area related to Placement Nominated by Academic council	Member 1.	Narashimamurthy Analog devices India Private Limited Saapuria Nova No.1, Varthur Road Nagavarapalya Bengaluru-560 093	
		Member 2.	Dr. J. Krishna Kishore Senior Scientist, ISRO Satellite Centre Bangalore – 560017 India	ABS
7		Member 3.	Arun Chandrashekar Principal Scientist INTEL Corporation Bengaluru India	ABS

8	Post Graduate Meritorious alumnus nominated by Principal	Member	Mr. Kubendra.K Senior Design Engineer VLSI Group Samsung India,Outer ring Road, Near Marathahalli Bengaluru	
9	Student Representatives	Member	Keerthana N 1DA18EC064 1st Year ECE. UG Student	
10		Member	Vishaka bhat 1DA17cc155 2nd Year, ECE UG Student	
11		Member	Vidhee L 1DA17EC150 2nd Year, ECE UG Student	
12		Member	Sharath N 1DA16EC108 3rd Year, ECE UG Student	
13		Member	Bharath K 1DA16EC144 3rd Year, ECE UG Student	
14		Member	Heera P 1DA16EC041 3rd Year, ECE UG Student	
15		Member	Kumudini G 1DA15EC072 4th Year, ECE UG Student	
16		Member	Pranav Jayaram 1DA15EC105 4th Year, ECE UG Student	
17		Member	Arpitha B V 1DA17LVS02 2nd Year, M.Tech. PG Student	
18		Member	Chinthana K S 1DA17LVS04 2nd Year, M.Tech. PG Student	

MINUTES OF THE BOARD OF STUDIES MEETING

DATED: Saturday, May 11, 2019

Dr. AMBEDKAR INSTITUTE OF TECHNOLOGY, BEGALURU – 560056.
(An Autonomous Institution Affiliated to Visvesvaraya Technological University, Belagavim)

Department of Electronics & Communication Engineering

Minutes of the Board of Studies (BOS) Meeting:

The proceedings of the 9th Board of Studies (BOS) meeting of Electronics and Communication Engineering Department was held on 11-05-2019 at 11 a.m. at ECE department under the Chairmanship of Dr.G.V.Jayaramaiah, Professor and Head of the Department of Electronics and Communication Engineering.

At the very outset, the Chairman welcomed all the Internal and External members of BOS to the meeting and gave a preliminary presentation on the agenda items with reference to the scheme and syllabus of UG for the academic year 2019-20

The chairman along with academic coordinator(s) gave a detailed presentation of the courses to be offered to the UG level students of both Core and Elective subjects in a semester wise and also briefed the members about the Curriculum Design of the Department for the UG Course.

The following agenda were placed by the Chairman which were discussed and resolved as follows:

Agenda 1: The confirmation of the proceedings of 8th BOS meeting held on 25-06-2018 at 10 am

The 8th BOS meeting proceedings were confirmed.
Discussion: The members appreciated the progress during the academic year 2018-19.

Agenda 2: To frame, discuss and approve the Curriculum Design for the semesters I to VIII of UG Course for the academic year 2019-20 onwards under Choice Based Credit System and Outcome Based Education System.

The Chairman appraised the members about the introduction of Choice Based Credit System and Outcome Based Education System for 4 year course in Electronics and Communication Engineering with the course Matrix.
Accordingly, a draft Curriculum Design for the I to VIII Semesters was presented and placed before the Board Of Studies Members for their opinion and approval.

Resolution: The BOS members went through the Curriculum Design and discussed in length about various aspects of the Curriculum Design. After Incorporating, the changes suggested by the members of BOS, the **Curriculum Design** for I to VIII Semesters was approved 2019-20 onwards.

Agenda 3: To frame, discuss and approve the syllabus of Basic Electronics for I and II Semester for the academic year 2019-20.

The Chairman presented the Syllabus of the Basic Electronics for the First and Second Semester students of all the branches of Engineering for the academic year 2019-20. Accordingly, a draft syllabus for the First and Second Semesters was presented and placed before the Board Of Studies Members for their opinion and approval.

Dr. AMBEDKAR INSTITUTE OF TECHNOLOGY, BEGALURU – 560056.
(An Autonomous Institution Affiliated to Visvesvaraya Technological University, Belagavim)

Department of Electronics & Communication Engineering

Resolution: The BOS members went through the Syllabus of Basic Electronics and discussed in length about the various aspects of the syllabus. After Incorporation of the Changes as suggested by the members of BOS. the **Basic Electronics syllabus** for I and II Semesters was approved for the academic year 2019-20.

Agenda 4: To frame, discuss and approve the Scheme for III and IV Semester under Choice Based Credit System and Outcome Based Education System for 4 Years Course in Electronics and Communication Engineering for the academic year 2019-20 onwards.

The BOS Chairman presented the Scheme for III and IV Semester under Choice Based Credit System and Outcome Based Education System for 4 Years Course in Electronics and Communication Engineering for the academic year 201920 onwards and placed before the Board Of Studies Members for their opinion and approval.

Resolution: The BOS members went through the draft Schemes thoroughly for the III to VIII Semester and discussed in length about various aspects of the title of the subjects and the laboratory. After incorporating certain Changes in the title of subjects as suggested by the committee members of BOS, the **Scheme** for III and IV Semesters was approved for the academic year 2019-20 onwards under Outcome Based Education System and Choice Based Credit System.

Agenda 5: To frame, discuss and approve the Scheme and Syllabus for V to VIII Semester under Choice Based Credit System and Outcome Based Education System for 4 Years Course in Electronics and Communication Engineering for the academic year 2019-20 onwards and syllabus of the Institute electives offered by the other department students of the college.

The BOS Chairman presented the Scheme and Syllabus for V to VIII Semester for 4 Years Course in Electronics and Communication Engineering for the academic year 2018-19 and placed before the Board Of Studies Members for their opinion and approval.

Resolution: The BOS members went through the draft Schemes and Syllabus thoroughly for the V to VIII Semester applicable to 2016-17 and Batch, 2017-18 Batch and discussed in length about various aspects of the syllabus of theory and laboratory. After incorporating the certain Changes in the Computer Communication Network and Computer Communication Network Laboratory subjects as suggested by the committee members of BOS, the **Scheme and Syllabus** for III to VIII Semesters was approved for the academic year 2018. The members of the BOS committee have also approved the syllabus of the Institute electives for the academic year 2019-20.

Agenda 6: To prepare the panel for the Board of Examiners of the Electronics and Communication Engineering to scrutinize the Question papers of the Semester End Examination for the AY: 2019-20.

The BOS Chairman presented the list of Examiners to scrutinize the question papers for the Semester End Examination for the academic year 2019-20.

Dr. AMBEDKAR INSTITUTE OF TECHNOLOGY, BEGALURU – 560056.
(An Autonomous Institution Affiliated to Visvesvaraya Technological University, Belagavim)

Department of Electronics & Communication Engineering

Resolution: As suggested by the members of the BOS, the list of the Board of Examiners was approved.

Agenda 7: To prepare the panel for the Board of Examiners of the Electronics and Communication Engineering for the academic year 2019-20.

The Chairman of the BOS in E & C department presented the proposed panel of Examiners pertaining to UG in Electronics and Communication Engineering for the academic year 2019-20.

Resoulution: The Panel of Examiners were approved based on the recommendation of BOS members including the changes which were made in the list of Examiners.

Agenda 8: To frame the subject equivalence for the academic year 2019-20.

The Chairman of the BOS in E & C Department presented the proposed subject equivalence pertaining to UG in Electronics and Communication Engineering for the academic year 2019-20.

Resoulution: The members of the BOS approved the subject equivalence for the academic year 2019-20 onwards after discussing in length about various aspects of the subject equivalence.

Finally, the meeting of Board of studies was concluded with the Chairman of the BOS in ECE Department thanking to all the members of the BOS for their active participation in the deliberations of the meeting and giving inputs for the progress of the department.

The following BOS members were present on Saturday, June 23, 2018.

1. Dr.G.V.Jayaramaiah, Professor and HOD, Chairman of BOS
2. Dr..Sri Ram P Hegde, Professor and HOD, ECE, SDMIT, Ujier, Dakshina kannada District, Karnataka and VTU Nominee
3. Dr.Devendra Jalihal, Professor and HOD, EEE, IIT Madras and Subject Expert
4. Dr.Santanu Mahapara Professor, Electronics and System Design, IISc, Bengaluru-19
5. Professor Ramapati Mishra, Director and Professor at IET Ayodhya, UP and Subject Expert
6. Prof. P.Nagaraj., Associate Professor, ECE, RVCE, Bengaluru-59 and Subject Expert
7. Mr Kubendra, Alumni Student Nominee
8. Mr Narasimha Murthy, Project Manager, Analog Devices and Industry Representative
9. Dr.H.Umadevi, Professr, BOS Member
10. Akalpita L Kulkarni, Associate Professr, BOS Member
11. Dr.S.Ramesh, Professor, BOS Member
12. Dr.Shivaputra, Assistant Professor, BOS Member
13. Dr Jambunath S Baligar, Assistant Professor, BOS Member
14. Dr. Chetan. S, Assistant Professor, BOS Member

Members Absent:

1. Dr. J. Krishna Kishore.Senior Scientist., Industry Representative
2. Arun Chandrashekar, Principal Scientist, Industry Representative
3. Dr. Mrityunjaya V Latte,Principal JSS Academy of Technical Education,. Academic Expert
4. Dr.Umadevi, Professor, Internal BOS Member
5. Dr.Mahalinga V Mandi, Professor, Internal BOS Member

Signature of the Coordiantor(s)

Signature of the BOS Chairman

Dr. AMBEDKAR INSTITUTE OF TECHNOLOGY

An Autonomous Institution, Aided by Government of Karnataka, Accredited by NAAC
and Affiliated to VTU, Belagavi
BDA Outer Ring Road, Mallathalli,Bengaluru-56

Board Of Studies 2020-21

Proposed UG Scheme and Syllabus
AY: 2020-21

Submitted by
Department of Electronics and Communication Engineering

To
DEAN (Academic)

For Seeking Approval from the Academic Council

Dr. AMBEDKAR INSTITUTE OF TECHNOLOGY, BEGALURU – 560056.
(An Autonomous Institution Affiliated to Visvesvaraya Technological University, Belgaum)

Department of Electronics & Communication Engineering

Members of BOS:

Sl No.	CATEGORY	Nomination of the Committee	Name of the Person with Designation
1	Head of the Department	Chairperson	Dr. Ramesh.S Professor and Head Department of ECE, Dr.AIT, Bengaluru-56
2	Faculty Members at Different Levels Bearing Different Specializations	Member 1.	Dr.Umadevi.H Professor, Department of ECE, Dr.AIT, Bengaluru-56
		Member 2.	Dr. Mahalinga V Mandi, Professor, Department of ECE, Dr.AIT, Bengaluru-56
		Member 3.	Smt. Akalpita L Kulkarni Associate Professor, Department of ECE, Dr.AIT, Bengaluru-56
		Member 4.	Smt. Sudha.B.S. Associate Professor, Department of ECE, Dr.AIT, Bengaluru-56
		Member 5.	Dr.Shivaputra Assistant Professor Department of ECE, Dr.AIT, Bengaluru-56
		Member 6.	Smt. Meenakshi.L.R. Assistant Professor, Department of ECE, Dr.AIT, Bengaluru-56
		Member 7.	Dr. Jambunath S Baligar Associate Professor Department of ECE, Dr.AIT, Bengaluru-56
		Member 8.	Dr. Chetan. S Assistant Professor, Department of ECE, Dr.AIT, Bengaluru-56

Dr. AMBEDKAR INSTITUTE OF TECHNOLOGY, BEGALURU – 560056.
(An Autonomous Institution Affiliated to Visvesvaraya Technological University, Belgaum)

Department of Electronics & Communication Engineering

3	Subject Experts from outside the College Nominated by Academic Council	Member 1.	Dr. Devendra Jalihal Professor, EEE department IIT Madras, Chennai-600 036
		Member 2.	Prof. Santanu Mahapatra Professor, Department of Electronic Systems Engineering, Indian Institute of Science Bangalore, Bengaluru- 560012
		Member 3.	Dr. Mrityunjaya V Latte Principal JSS Academy of Technical Education, Dr. Vishnuvardhan Road, Uttarahalli – Kengeri Main Road, Bengaluru- 560 045
		Member 4.	Prof. P.Nagaraju Associate Professor, Dept. of TCE, RVCE, Bengaluru-560 059
4	Expert from IET Ayodhya	Member 5.	Prof. Ramapati Mishra Director, Former HOD, Dept. of ECE IET Ayodya, UP India
5	Expert from outside College, Nominated by Vice Chancellor (VTU)	VTU Nominee	Dr. Sri Ram P Hegde Professor and HOD, Department of ECE, SDM college of Engineering Ujire-Dharmastala Road, Uijre, Karnataka -574240
	Representative from Industry /Corporate Sector/Allied area related to Placement Nominated by Academic council	Member 1.	Mr. Narashimamurthy Analog devices India Private Limited Saapuria Nova No.1, Varthur Road Nagavarapalya Bengaluru-560 093

Dr. AMBEDKAR INSTITUTE OF TECHNOLOGY, BEGALURU – 560056.
(An Autonomous Institution Affiliated to Visvesvaraya Technological University, Belgaum)

Department of Electronics & Communication Engineering

6		Member 2.	Dr. J. Krishna Kishore Senior Scientist, ISRO Satellite Centre, Bangalore – 560017
		Member 3.	Mr. Arun Chandrashekar Principal Scientist, INTEL Corporation, Bengaluru,
		Member 4.	Mr. Manjunath B Senior Manger HR, Wistron, India Bengaluru,
7	Post Graduate Meritorious alumnus nominated by Principal	Member	Mr. Kubendra.K Senior Design Engineer VLSI Group, Samsung India,Outer ring Road, Near Marathahalli, Bengaluru

CHAIRMAN
BOS Dept. of ECE

Dr. AMBEDKAR INSTITUTE OF TECHNOLOGY, BEGALURU – 560056.
(An Autonomous Institution Affiliated to Visvesvaraya Technological University, Belgaum)

Department of Electronics & Communication Engineering

MINUTES OF THE MEETING

OF

THE

BOARD OF STUDIES 2020-21

DATED: Thursday, 20th August 2020

Dr. AMBEDKAR INSTITUTE OF TECHNOLOGY, BEGALURU – 560056.
(An Autonomous Institution Affiliated to Visvesvaraya Technological University, Belgaum)

Department of Electronics & Communication Engineering

BOS Meeting Notice

Sub: Online Board of Studies Meeting is convened on 20-08-2020

With reference to the above subject, Online Board of Studies Meeting of the department is convened on Thursday, the 20th August 2020 at 10:30.a.m. on Google Meet online Platform to finalizing the scheme and syllabus of UG in B.E.(E & C) and PG in M.Tech in VLSI Design and Embedded Systems for the academic year 2020-21 with the following agenda.

Agenda:

1. Approval of the Scheme and Syllabus of 1st to 8th Semesters B.E (E &C) for the Batch-2020
2. Approval of the Scheme and Syllabus of 3rd to 8th Semester B.E(E & C) for the Batch -2019
3. Approval of the Scheme and Syllabus of 5th to 8th Semester B.E(E & C) for the Batch-2018
4. Approval of the Scheme and Syllabus of 7th to 8th Semester B.E(E & C) for the Batch-2017
5. Approval to AICTE Syllabus of Basic Electronics (18EC14/24) for 1st /2nd Semester for the Batch 2020.
6. Approval of the Scheme and Syllabus for the 1st and 2nd Semester PG for the Batch-2020
7. Approval of the Scheme and Syllabus for the 3rd and 4th Semester PG for the Batch-2019.
8. Approval of the courses for the Major, Minor Degree
9. Approved to conduct courses and examination for Repeaters in parallel with regular courses and examinations.
10. Approval of List of Examiners

Dr. AMBEDKAR INSTITUTE OF TECHNOLOGY, BEGALURU – 560056.
(An Autonomous Institution Affiliated to Visvesvaraya Technological University, Belgaum)

Department of Electronics & Communication Engineering

Minutes of Board of Studies (BOS) Meeting:

The Meeting of Board of Studies (BOS) of department Electronics and Communication Engineering was held on 20-08-2020 at 10:30 a.m. under the Chairmanship of the Dr. Ramesh S, Professor and Head, Department of Electronics and Communication Engineering on Digital Platform Google Meet with meeting-id.

At the very outset, the Chairman welcomed all the Internal and External members of BOS to the meeting and gave a preliminary presentation on the agenda items with reference to the scheme and syllabus of UG for the academic year 2020-21
The chairman along with academic coordinator(s) gave a detailed presentation of the courses to be offered to the students in both Core and Elective subjects in semester wise at the Under Graduate level and also briefed the members about the Curriculum Design of the Department for the UG Course.

PROCEEDINGS/RESOLUTIONS:

The following are the Suggestions of the members of BOS with reference to the presentations:

➢ Tutorial sessions need to be included for the courses wherever more practice is required.
  Sol. Tutorial Sessions incorporated for Subjects including Numerical.
➢ New technologies like Machine learning, Artificial Intelligence should be introduced in the curriculum.
  Sol. Subjects introduced
➢ Simulation tools relevant to the course need to be integrated.
  Sol. Virtual labs, Xilinx and Cadence have been included in curriculum
➢ Department should play crucial role in placement orientation.
  Sol. Placement and training as made a mandatory non-credit subject in curriculum
➢ Mini projects in courses: Understanding and presentation of relevant IEEE journal papers.
  Sol. More of IEEE journals based and Industry based projects will be implemented as Mini Projects and Major Projects.
➢ Assignment Programs should be added to Python Programming Course.
  Sol. Programming Exercises have been included in appropriate Modules.

Dr. AMBEDKAR INSTITUTE OF TECHNOLOGY, BEGALURU – 560056.
(An Autonomous Institution Affiliated to Visvesvaraya Technological University, Belgaum)

Department of Electronics & Communication Engineering

Finally the BOS members approved the following after incorporating the suggested modifications

- ➢ Approved the Curriculum Design for the semesters I to VIII of UG Course for the students of the Batch 2017
- ➢ Approved the Syllabus of Basic Electronics for the semesters I/II of UG Course for the academic year 2020-21.
- ➢ Approved the Scheme and syllabus for all the semesters III to VIII of UG Course for the academic year 2020-21.
- ➢ Approved the Syllabus for Institute Electives offered by the ECE Department.
- ➢ Approved to conduct courses and examination for Repeaters in parallel with regular courses and examinations.
- ➢ Approved the List of BOE members.
- ➢ Approved the list of Valuers / Examiners.

CHAIRMAN
BOS Dept. of ECE

BOS Coordinators   **Signatures**

1. Dr.Shivaputra

2. Mr. Anand H D

Dr. AMBEDKAR INSTITUTE OF TECHNOLOGY, BEGALURU – 560056.
(An Autonomous Institution Affiliated to Visvesvaraya Technological University, Belgaum)

Department of Electronics & Communication Engineering

Attendance List:

Sl No.	CATEGORY	Nomination of the Committee	Name of the Person with Designation	Present/Absent
8	Head of the Department	Chairperson	Dr. Ramesh.S Professor and Head Department of ECE, Dr.AIT, Bengaluru-56	Present
9	Faculty Members at Different Levels Bearing Different Specializations	Member 1.	Dr.Umadevi.H Professor, Department of ECE, Dr.AIT, Bengaluru-56	Present
		Member 2.	Dr. Mahalinga V Mandi, Professor, Department of ECE, Dr.AIT,	Absent
		Member 3.	Smt. Akalpita L Kulkarni Associate Professor, Department of ECE, Dr.AIT,	Absent
		Member 4.	Smt. Sudha.B.S. Associate Professor, Department of ECE, Dr.AIT, Bengaluru-56	Present
		Member 5.	Dr.Shivaputra Assistant Professor Department of ECE, Dr.AIT, Bengaluru-56	Present
		Member 6.	Smt. Meenakshi.L.R. Assistant Professor, Department of ECE, Dr.AIT, Bengaluru-56	Present
		Member 7.	Dr. Jambunath S Baligar Associate Professor Department of ECE, Dr.AIT,	Present
		Member 8.	Dr. Chetan. S Assistant Professor, Department of ECE, Dr.AIT,	Present

Dr. AMBEDKAR INSTITUTE OF TECHNOLOGY, BEGALURU – 560056.
(An Autonomous Institution Affiliated to Visvesvaraya Technological University, Belgaum)

Department of Electronics & Communication Engineering

10	Subject Experts from outside the College Nominated by Academic Council	Member 1.	Dr. Devendra Jalihal Professor, EEE department IIT Madras, Chennai-	Absent
		Member 2.	Prof. Santanu Mahapatra Professor, Department of Electronic Systems Engineering, Indian Institute of Science Bangalore,	Present
		Member 3.	Dr. Mrityunjaya V Latte Principal JSS Academy of Technical Education, Dr. Vishnuvardhan Road, Uttarahalli – Kengeri Main Road, Bengaluru- 560 045	Present
		Member 4.	Prof. P.Nagaraju Associate Professor, Dept. of TCE, RVCE, Bengaluru-560 059	Present
11	Expert from IET Ayodhya	Member 1.	Prof. Ramapati Mishra Director, Former HOD, Dept. of ECE IET Ayodya, UP India	Present
12	Expert from outside College, Nominated by Vice Chancellor (VTU)	VTU Nominee	Dr. Sri Ram P Hegde Professor and HOD, Department of ECE, SDM college of Engineering Ujire-Dharmastala Road, Uijre,	Present
	Representative from Industry /Corporate Sector/Allied area related to Placement Nominated by Academic council	Member 1.	Mr. Narashimamurthy Analog devices India Private Limited Saapuria Nova No.1, Varthur Road	Absent
		Member 2.	Dr. J. Krishna Kishore Senior Scientist, ISRO Satellite Centre, Bangalore – 560017	Responded with recommendations through mail.

Dr. AMBEDKAR INSTITUTE OF TECHNOLOGY, BEGALURU – 560056.
(An Autonomous Institution Affiliated to Visvesvaraya Technological University, Belgaum)

Department of Electronics & Communication Engineering

		Member 3.	Mr. Arun Chandrashekar Principal Scientist, INTEL Corporation, Bengaluru	Absent
		Member 3	Mr. Arun Chandrashekar Principal Scientist, INTEL Corporation, Bengaluru	Absent
		Member 4	Mr. Manjunath B Senior Manger HR, Wistron, India Bengaluru,	Present
13	Post Graduate Meritorious alumnus nominated by Principal	Member 1.	Mr. Kubendra.K Senior Design Engineer VLSI Group, Samsung India,Outer ring Road, Near Marathahalli, Bengaluru	Present
14	Student Representative	Member 1.	K M Kanchana 2nd Year 1DA19EC056 UG Student	Present
		Member 2.	Shashank S 2nd Year 1DA19EC129 UG Student	Present
		Member 3.	Akhilesh Bagalkot 3rd Year 1DA18EC007 UG Student	Present
		Member 4.	Vaishnavi V Bhat 3rd Year 1DA18EC150 UG Student	Present
		Member 5.	Vishaka Bhat 4th Year 1DA17EC155 UG Student	Present

Dr. AMBEDKAR INSTITUTE OF TECHNOLOGY, BEGALURU – 560056.
(An Autonomous Institution Affiliated to Visvesvaraya Technological University, Belgaum)

Department of Electronics & Communication Engineering

		Member 6.	Manoja R 4th Year 1DA17EC076 UG Student	Present
		Member 7.	Meghana S R 2nd Year PG Student	Present
		Member 8.	Manu Mathew 2nd Year PG Student	Present
		Member 9.	Vani K 2nd Year PG Student	Present

Dr. AMBEDKAR INSTITUTE OF TECHNOLOGY, BEGALURU – 560056.
(An Autonomous Institution Affiliated to Visvesvaraya Technological University, Belgaum)

Department of Electronics & Communication Engineering

List of BOE Members:

SL. NO.	NAME AND ADDRESS
1.	Dr. Ramesh S. Professor and Head, dept. of ECE
	External BOE members:
1.	Dr. Dinesh P, Professor, Department of ECE, DSCE, Bengaluru
2.	Nagraj P, Assoc. Professor, Department of TCE, RVCE, Bengaluru
3.	Dr.Rajeshwari Hegade, Professor and Head, Department of TCE, BMSCE, Bengaluru-19
	Internal BOE Members:
1.	Umadevi.H, Assoc. Professor,
2.	Sudha B S, Assoc. Professor
3.	Dr. Shivaputra, Assistant Professor
4.	Meenakshi L R, Assistant Professor
5.	Mohankumar V, Assistant Professor
6.	Girija S, Assistant Professor

CHAIRMAN
BOS Dept. of ECE

Dr. AMBEDKAR INSTITUTE OF TECHNOLOGY

(An Autonomous Institute affiliated to VTU, Accredited by NAAC with 'A' grade)

BDA Outer Ring Road, Mallathalli,Bengaluru-56

Board Of Studies 2021-22

Proposed UG
Scheme and Syllabus
For
Academic Year (AY) : 2021-22

Submitted by
Department of Electronics and Communication Engineering

To
DEAN (Academic)

For Seeking Approval from the Academic Council

Dr. AMBEDKAR INSTITUTE OF TECHNOLOGY, BEGALURU – 560056.
(An Autonomous Institution Affiliated to Visvesvaraya Technological University, Belgaum)

Department of Electronics & Communication Engineering

Ref. No: AIT /EC /BOS /૨૧ /2020-21

6|8|21

Date: 19-06-2021

To
Dean (Academic)
Dr Ambedkar Institute of Technology
Bengaluru-56

Sir,

Sub: Regarding the details of the BOS meeting held on 19-06-2021

The BOS meeting of the department was held through the Digital Platform, Google Meet on Saturday, 19-06-2021 through the meeting link: **meet.google.com/oek-ffdx-ngs**

The BOS committee has approved the following:

1. Approved the syllabus of Basic Electronics for the I/II Semester of UG Courses for the academic year 2021-22 (Batch-2021).
2. Approved the Scheme for all the semesters (III to VIII semesters) of UG Course for the academic year 2021-22.
3. Approved the Syllabus for all the semesters (III to VIII semesters) of UG Course for the academic year 2021-22.
4. Approved the List of BOE members.
5. Approved the list of Valuers / Examiners.

Thanking you

U. 8.. 21

CHAIRMAN BOS
Dept. of ECE

HOD
Dept. of Electronics and Communication Engg.,
Dr. Ambedkar Institute of Technology
Bengaluru - 560056

Enclosures:

1. List of Members of BOS.
2. Curriculum Design –UG
3. Minutes of the BOS Meeting.
4. Scheme & Syllabus of I/II Semester Basic Electronics for the academic year 2021-22.
5. Scheme & Syllabus of 3rd and 4th Semesters for the academic year 2021-22.
6. Scheme & Syllabus of 5th and 6th Semesters for the academic year 2021-22.
7. Scheme & Syllabus of 7th and 8th Semesters for the academic year 2021-22.
8. List of BOE Members.
9. List of valuers / Examiners.

Dr. AMBEDKAR INSTITUTE OF TECHNOLOGY, BEGALURU – 560056.
(An Autonomous Institution Affiliated to Visvesvaraya Technological University, Belgaum)

Department of Electronics & Communication Engineering

Members of BOS:

Sl No.	CATEGORY	Nomination of the Committee	Name of the Person with Designation
1	Head of the Department	Chairperson	Dr. Ramesh.S Professor and Head Department of ECE, Dr.AIT, Bengaluru-56
2	Faculty Members at Different Levels Bearing Different Specializations	Member 1.	Dr.Umadevi.H Professor, Department of ECE, Dr.AIT, Bengaluru-56
		Member 2.	Dr. Mahalinga V Mandi, Professor, Department of ECE, Dr.AIT, Bengaluru-56
		Member 3.	Smt. Sudha.B.S. Associate Professor, Department of ECE, Dr.AIT, Bengaluru-56
		Member 4.	Dr.Shivaputra Assistant Professor Department of ECE, Dr.AIT, Bengaluru-56
		Member 5.	Smt. Meenakshi.L.R. Assistant Professor, Department of ECE, Dr.AIT, Bengaluru-56
		Member 6.	Mr. Mohan Kumar V Assistant Professor, Department of ECE, Dr.AIT, Bengaluru-56
		Member 7.	Dr. Jambunath S Baligar Associate Professor Department of ECE, Dr.AIT, Bengaluru-56
		Member 8.	Dr. Chetan. S Assistant Professor, Department of ECE, Dr.AIT, Bengaluru-56

Dr. AMBEDKAR INSTITUTE OF TECHNOLOGY, BEGALURU – 560056.
(An Autonomous Institution Affiliated to Visvesvaraya Technological University, Belgaum)

Department of Electronics & Communication Engineering

3	Subject Experts from outside the College Nominated by Academic Council	Member 1.	Dr. Devendra Jalihal Professor, EEE department IIT Madras, Chennai-600 036
		Member 2.	Prof. Santanu Mahapatra Professor, Department of Electronic Systems Engineering, Indian Institute of Science Bangalore, Bengaluru- 560012
		Member 3.	Dr. Mrityunjaya V Latte Principal JSS Academy of Technical Education, Dr. Vishnuvardhan Road, Uttarahalli – Kengeri Main Road, Bengaluru- 560 045
		Member 4.	Prof. P.Nagaraju Associate Professor, Dept. of TCE, RVCE, Bengaluru-560 059
4	Expert from IET Ayodhya	Member 5.	Prof. Ramapati Mishra Director, Former HOD, Dept. of ECE IET Ayodya, UP India
5	Expert from outside College, Nominated by Vice Chancellor (VTU)	VTU Nominee	Dr. Sri Ram P Hegde Professor and HOD, Department of ECE, SDM college of Engineering Ujire-Dharmastala Road, Uijre, Karnataka -574240
	Representative from Industry /Corporate Sector/Allied area related to Placement Nominated by Academic council	Member 1.	Mr. Narashimamurthy Analog devices India Private Limited Saapuria Nova No.1, Varthur Road Nagavarapalya Bengaluru-560 093

Dr. AMBEDKAR INSTITUTE OF TECHNOLOGY, BEGALURU – 560056.
(An Autonomous Institution Affiliated to Visvesvaraya Technological University, Belgaum)

Department of Electronics & Communication Engineering

6		Member 2.	Dr. J. Krishna Kishore Senior Scientist, ISRO Satellite Centre, Bangalore – 560017
		Member 3.	Mr. Arun Chandrashekar Principal Scientist, INTEL Corporation, Bengaluru,
		Member 4.	Mr. Manjunath B Senior Manger HR, Wistron, India Bengaluru,
7	Post Graduate Meritorious alumnus nominated by Principal	Member	Mr. Kubendra.K Senior Design Engineer VLSI Group, Samsung India,Outer ring Road, Near Marathahalli, Bengaluru

4- 8- 21

CHAIRMAN

BOS Dept. of ECE

HOD
Dept. of Electronics and Communication Engg..
Dr. Ambedkar Institute of Technology
Bengaluru - 560056

Dr. AMBEDKAR INSTITUTE OF TECHNOLOGY, BEGALURU – 560056.
(An Autonomous Institution Affiliated to Visvesvaraya Technological University, Belgaum)

Department of Electronics & Communication Engineering

MINUTES OF THE MEETING

OF THE

BOARD OF STUDIES 2021-22

DATED: Saturday, 19th June 2021

Dr. AMBEDKAR INSTITUTE OF TECHNOLOGY, BEGALURU – 560056.
(An Autonomous Institution Affiliated to Visvesvaraya Technological University, Belgaum)

Department of Electronics & Communication Engineering

BOS Meeting Notice

Sub: Online Board of Studies Meeting is convened on 19-06-2021

With reference to the above subject, Online Board of Studies Meeting of the department is convened on Saturday, the 19th June 2021 at 11:00 a.m. on Google Meet online Platform for finalizing the scheme and syllabus of UG in B.E. (E & C) and PG in M.Tech in VLSI Design and Embedded Systems for the academic year 2021-22 with the following agenda.

Agenda:

1. Approval of the Scheme and Syllabus of 1st to 8th Semesters B.E (E &C) for the Batch-2021
2. Approval of the Scheme and Syllabus of 3rd to 8th Semester B.E(E & C) for the Batch -2020
3. Approval of the Scheme and Syllabus of 5th to 8th Semester B.E(E & C) for the Batch-2019
4. Approval of the Scheme and Syllabus of 7th to 8th Semester B.E(E & C) for the Batch-2018
5. Approval to AICTE Syllabus of Basic Electronics (18EC14/24) for 1st /2nd Semester for the Batch 2020.
6. Approval of the Scheme and Syllabus for the 1st and 2nd Semester PG for the Batch-2021
7. Approval of the Scheme and Syllabus for the 3rd and 4th Semester PG for the Batch-2020.
8. Approval of the courses for the Major, Minor Degree
9. Approved to conduct courses and examination for Repeaters in parallel with regular courses and examinations.
10. Approval of List of Examiners

Dr. AMBEDKAR INSTITUTE OF TECHNOLOGY, BEGALURU – 560056.
(An Autonomous Institution Affiliated to Visvesvaraya Technological University, Belgaum)

Department of Electronics & Communication Engineering

Minutes of Board of Studies (BOS) Meeting:

The Meeting of Board of Studies (BOS) of department Electronics and Communication Engineering was held on 19-06-2021 at 11:00 a.m. under the Chairmanship of the Dr. Ramesh S, Professor and Head, Department of Electronics and Communication Engineering on Digital Platform Google Meet with meeting-id: meet.google.com/oek-ffdx-ngs

At the very outset, the Chairman welcomed all the Internal and External members of BOS to the meeting and gave a preliminary presentation on the agenda items with reference to the scheme and syllabus of UG for the academic year 2021-22

The chairman along with academic coordinator(s) gave a detailed presentation of the courses to be offered to the students in both Core and Elective subjects in semester wise at the Under Graduate level and also briefed the members about the Curriculum Design of the Department for the UG Course.

PROCEEDINGS/RESOLUTIONS:

The following are the Suggestions of the members of BOS with reference to the presentations:

➢ Inter-department Elective Subject, Unmanned Automatic Vehicles (UAV) should be introduced in the curriculum.

Sol. Subject 'Introduction to Unmanned Automatic Vehicles (UAV)' with subject code 18ECE13 added to Open Elective-C list.

➢ Syllabus of Inter-department Elective Subject, Television Engineering (18ECE03) must be updated.

Sol. Syllabus of Television Engineering (18ECE03) subject is updated and renamed as Digital Television Engineering.

Dr. AMBEDKAR INSTITUTE OF TECHNOLOGY, BEGALURU – 560056.
(An Autonomous Institution Affiliated to Visvesvaraya Technological University, Belgaum)

Department of Electronics & Communication Engineering

Finally, the BOS members approved the following after incorporating the suggested modifications

- ➢ Approved the Curriculum Design for the semesters I to VIII of UG Course for the students of the Batch 2021
- ➢ Approved the Syllabus of Basic Electronics for the semesters I/II of UG Course for the academic year 2021-22.
- ➢ Approved the Scheme and syllabus for all the semesters III to VIII of UG Course for the academic year 2021-22.
- ➢ Approved the Scheme and syllabus for all the semesters V to VIII of UG Course for the academic year 2021-22.
- ➢ Approved the Scheme and syllabus for all the semesters VII to VIII of UG Course for the academic year 2021-22.
- ➢ Approved the Syllabus for Institute Electives offered by the ECE Department.
- ➢ Approved to conduct courses and examination for Repeaters in parallel with regular courses and examinations.
- ➢ Approved the List of BOE members.
- ➢ Approved the list of Valuers / Examiners.

CHAIRMAN 4.8.21

BOS Dept. of ECE

HOD
Dept. of Electronics and Communication Engg..
Dr. Ambedkar Institute of Technology
Bengaluru - 560056

BOS Coordinators   **Signatures**

1. Dr.Shivaputra

2. Mr. Anand H D

DR.AMBEDKAR INSTITUTE OF TECHNOLOGY

(An Autonomous Institution Affiliated To VTU, Belgaum)

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

(EFFECTIVE FROM ACADEMIC YEAR 2017-18)

Scheme of Teaching for V Semester B.E (2015 Batch)

Subject Code	Title	Teaching Dept.	Contact hours/week				Examination		
			Theory	Tutorial	Practical	No of credits	CIE	SEE	Total Marks
EC51	Microwave Engineering	EC	03	00	00	03	50	50	100
EC52	Digital Signal Processing	EC	04	00	00	04	50	50	100
EC53	Analog Communication	EC	03	00	00	03	50	50	100
EC54	Fundamentals of CMOS VLSI	EC	04	00	00	04	50	50	100
EC55	Antenna and Wave Propagation	EC	04	00	00	04	50	50	100
EC56	Object Oriented Programming with C++	EC	04	00	00	04	50	50	100
ECL57	DSP Lab	EC	00	00	03	1.5	50	50	100
ECL58	Analog Communication Lab	EC	00	00	03	1.5	50	50	100
TOTAL			**22**	**00**	**06**	**25**	**400**	**400**	**800**

CHAIRMAN
BOS

DEAN
(ACADEMIC)

PRINCIPAL

((EFFECTIVE FROM ACADEMIC YEAR 2017-18)

Scheme of Teaching for VI Semester B.E (2015 Batch)

Subject Code	Title	Teaching Dept.	Theory	Tutorial	Practical	No of credits	CIE	SEE	Total Marks
HS03	Management & Entrepreneurship	MBA	04	00	00	04	50	50	100
EC61	Analog and Mixed Mode VLSI	EC	03	00	00	03	50	50	100
EC62	Digital Communication	EC	04	00	00	04	50	50	100
EC63	Embedded System Design	EC	03	00	00	03	50	50	100
EC64	Information Theory and Coding	EC	03	00	00	03	50	50	100
EC65X	ELECTIVE_1 (GROUP-A)	EC	04	00	00	04	50	50	100
ECL66	Advanced Communication Lab	EC	00	00	03	1.5	50	50	100
ECL67	Embedded System Lab	EC	00	00	03	1.5	50	50	100
ECP68	Mini-Project	EC	00	00	03	02	50	50	100
TOTAL			**21**	**00**	**9**	**26**	**450**	**450**	**900**

SUBJECT CODE	ELECTIVE -1 (Group A) Credits-4
15EC651	Artificial Neural Network
15EC652	Adaptive Signal Processing
15EC653	Digital Switching Systems
15EC654	Power Electronics

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

(EFFECTIVE FROM ACADEMIC YEAR 2017-18)

Scheme of Teaching for III Semester B.E (E & C) (2016 Batch)

Subject Code	Title	Teaching Dept.	Contact hours/week				Examination		
			Theory	Tutorial	Practical	No of credits	CIE	SEE	Total Marks
MA31	Engineering Mathematics-III	Mat	03	02	00	04	50	50	100
EC31	Analog Electronics Circuits	EC	04	00	00	04	50	50	100
EC32	Digital Design	EC	04	00	00	04	50	50	100
EC33	Electrical Circuit Analysis	EC	03	02	00	04	50	50	100
EC34	Electronic Instrumentation and Measurements	EC	03	00	00	03	50	50	100
EC35	Signals & Systems	EC	03	02	00	04	50	50	100
ECL36	Analog Electronics Circuits Lab	EC	00	00	03	1.5	50	50	100
ECL37	Digital Design Lab	EC	00	00	03	1.5	50	50	100
		TOTAL	20	06	06	26	450	450	900

CHAIRMAN
BOS

DEAN
(ACADEMIC)

PRINCIPAL

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

(EFFECTIVE FROM ACADEMIC YEAR 2017-18)

Scheme of Teaching for IV Semester B.E (E & C) (2016 Batch)

Subject Code	Title	Teaching Dept.	Contact hours/week				Examination		
			Theory	Tutorial	Practical	No of credits	CIE	SEE	Total Marks
MA41	Engineering Mathematics-IV	Mat	03	02	00	04	50	50	100
EC41	Microprocessor and Microcontroller	EC	03	02	00	04	50	50	100
EC42	Control Systems	EC	04	00	00	04	50	50	100
EC43	Fields and Waves	EC	03	02	00	04	50	50	100
EC44	Verilog HDL	EC	04	00	00	04	50	50	100
EC45	Linear Integrated Circuits	EC	04	00	00	04	50	50	100
ECL46	Microcontroller Lab	EC	00	00	03	1.5	50	50	100
ECL47	HDL Lab	EC	00	00	03	1.5	50	50	100
		TOTAL	**21**	**06**	**06**	**27**	**450**	**450**	**900**

**CHAIRMAN
BOS**

**DEAN
(ACADEMIC)**

PRINCIPAL

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

(EFFECTIVE FROM ACADEMIC YEAR 2017-18)
Scheme of Teaching for VII Semester B.E(E & C) (2014 Batch)

Subject Code	Title	Teaching Dept.	Contact hours/week				Examination		Total Marks
			Theory	Tutorial	Practical	No of credits	CIE	SEE	
EC71	Optical Fiber Communication	EC	03	00	00	03	50	50	100
EC72	Computer Communication Network	EC	04	00	00	04	50	50	100
EC73X	Elective-2 (Group B)	EC	04	00	00	04	50	50	100
EC74X	Elective-3 (Group C)	EC	04	00	00	04	50	50	100
ECEXX	Institute Elective-1 (Group-1)	EC	04	00	00	04	50	50	100
ECL75	VLSI Lab	EC	00	00	03	1.5	50	50	100
ECL76	CCN Lab	EC	00	00	03	1.5	50	50	100
ECP77	Project Phase-1	EC	00	00	01	-	-	-	-
		TOTAL	**20**	**00**	**07**	**22**	**350**	**350**	**700**

DEPARTMENTAL ELECTIVE SUBJECTS

SUBJECT CODE	ELECTIVE -2 (Group B) Credits- 4		SUBJECT CODE	ELECTIVE -3 (Group C) Credits- 4
EC731	Nano Electronics		EC741	Multimedia Communication
EC732	Wireless Sensor Network		EC742	Speech Processing
EC733	DSP Algorithms & Architecture		EC743	Operating System
EC734	Image Processing		EC744	Operation Research
EC735	Wireless Communication		EC745	Robotics

INSTITUTE ELECTIVE SUBJECTS

SUBJECT CODE	ELECTIVE -2 (Group B) Credits- 4
ECE01	Cryptography
ECE02	Automotive Safety measurements
ECE06	Mechatronics
ECE07	Robotics And Machine Vision System

CHAIRMAN (BOS)   **DEAN (ACADEMIC)**   **PRINCIPAL**

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

(EFFECTIVE FROM ACADEMIC YEAR 2016-17)   Scheme of Teaching for VIII Semester B.E (E & C) (2014 Batch)

Subject Code	Title	Teaching Dept.	contact hours/week				Maximum Marks		
			Theory	Tutorial	Practical	No of credits	CIE	SEE	Total Marks
HS04	Intellectual Property Rights	MBA	02	00	00	02	50	50	100
EC81x	Elective-4 (Group D)	EC	04	00	00	04	50	50	100
EC8XX	Institute Elective-2 (Group- II)	EC	04	00	00	04	50	50	100
ECS82	Seminar	EC	00	00	02	02	50	-	050
ECP83	Project Work	EC	00	00	00	12	100	100	200
	TOTAL		**10**	**00**	**00**	**24**	**300**	**250**	**550**

DEPARTMENTAL ELECTIVE SUBJECTS	
SUBJECT CODE	**ELECTIVE -2 (Group B) Credits- 4**
EC811	Satellite Communication
EC812	Cryptography and Network Security
EC813	Real Time Operating System
EC814	Adhoc Wireless Networks
EC815	Datastructure using C++
EC816	Virtual Instrumentation

INSTITUTE ELECTIVE SUBJECTS	
SUBJECT CODE	**Subject Title(Group-2) Credits- 4**
ECE03	Semiconductor Fabrication
ECE04	Wireless sensor Network
ECE05	Mobile communication
ECE08	Sensors

CHAIRMAN (BOS)   **DEAN (ACADEMIC)**   **PRINCIPAL**

SCHEME OF TEACHING AND EXAMINATION from Academic Year 2021-22
B.E in Electronics and Communication Engineering
Outcome Based Education (OBE) and Choice Based Credit System (CBCS) (Applicable to 2018 Batch)

I Semester (Physics Group)

Sl. No	Course and Course Code		Course Title	Teaching Dept.	Board Paper Setting	Teaching Hours / Week			Examination				Credits
						Theory Lecture (L)	Tutorial (T)	Drawing / Practical (P)	Duration in Hours	CIE Marks	SEE Marks	Total Marks	
1	BC	18MA11	Differential Equations & Complex Variables	MAT	Science	03	02	--	03	050	050	100	04
2	BC	18PH12	Engineering Physics	PHY	Science	03	02	--	03	050	050	100	04
3	ES	18EE13	Basic Electrical Engineering	EE	EE	02	02	--	03	050	050	100	03
4	ES	18CV14	Civil Engineering and Mechanics	EC/EI/TC	CIV	02	02	--	03	050	050	100	03
5	ES	18MEL15	Engineering Graphics and Design	ME,IEM	ME	02	--	02	03	050	050	100	03
6	BC	18PHL16	Engineering Physics Laboratory	PHY	Science	--	--	02	03	050	050	100	01
7	ES	18EEL17	Basic Electrical Engineering Laboratory	EE	EE	--	--	02	03	050	050	100	01
8	HS	18HS11/ 18HS12	English/Kannada	HS	HS	01	--	02	02	050	050	100	01
			Total			**13**	**08**	**08**	**23**	**400**	**400**	**800**	**20**

Note: **BC: Basic Course, ES: Engineering Science. HS: Humanities, EE: Electrical & Electronics Engineering, ME: Mechanical Engineering, CS: Computer Science and Engineering, PHY: Physics, CIV: Civil Engineering**

BOS Chairman   Dean(Academics)   Principal

Dr. Ambedkar Institute of Technology, Bengaluru-560 056
SCHEME OF TEACHING AND EXAMINATION from Academic Year 2021-22
B.E in Electronics and Communication Engineering
Outcome Based Education (OBE) and Choice Based Credit System (CBCS) (Applicable to 2018 Batch)

II Semester(Chemistry Cycle)

Sl. No	Course and Course Code		Course Title	Teaching Dept.	Board Paper Setting	Teaching Hours / Week			Examination				Credits
						Theory Lecture (L)	Tutorial (T)	Drawing/ Practical (P)	Duration in Hours	CIE Marks	SEE Marks	Total Marks	
1	BC	18MA21	Calculus and Linear Algebra	MAT	Science	03	02	--	03	050	050	100	04
2	BC	18CH22	Engineering Chemistry	CHE	Science	03	02	--	03	050	050	100	04
3	ES	18CS23	Programming for Problem Solving	CS	CS	02	02	--	03	050	050	100	03
4	ES	18EC24	Basic Electronics	EC/EI/TC	ECE	02	02	--	03	050	050	100	03
5	ES	18ME25	Elements of Mechanical Engineering	ME,IEM	ME	02	02	--	03	050	050	100	03
6	BC	18CHL26	Engineering Chemistry Laboratory	CHE	Science	--	--	02	03	050	050	100	01
7	ES	18CSL27	Computer Programming Laboratory	CS	CS	--	--	02	03	050	050	100	01
8	HS	18HS21/ 18HS22	English/Kannada	HS	HS	01	--	02	02	050	050	100	01
			Total			13	10	06	23	400	400	800	20

Note: BC: Basic Course, ES: Engineering Science. HS: Humanities, ECE: Electronics and Communication Engineering, EI: Electronics and Instrumentation, TC: Telecommunication Engineering, ME: Mechanical Engineering, CS: Computer Science and Engineering, CHE: Chemistry, MAT: Mathematics

BOS Chairman   Dean(Academics)   Principal

SCHEME OF TEACHING AND EXAMINATION from Academic Year 2021-22
B.E in Electronics and Communication Engineering
Outcome Based Education (OBE) and Choice Based Credit System (CBCS) (Applicable to 2018 Batch)

III Semester

Sl. No	Course and Course Code		Course Title	Teaching Dept.	Teaching Hours / Week			Examination				Credits
					Theory Lecture (L)	Tutorial (T)	Drawing/ Practical (P)	Duration in Hours	CIE Marks	SEE Marks	Total Marks	
1	BC	18MA31	Transforms & Applications	MAT	02	02	--	03	050	050	100	03
2	PC	18EC31	Electronics devices	EC	04	--	--	03	050	050	100	04
3	PC	18EC32	Digital System Design	EC	04	--	--	03	050	050	100	04
4	PC	18EC33	Network Theory	EC	04	--	--	03	050	050	100	04
5	PC	18EC34	Engineering Statistics	EC	03	--	--	03	050	050	100	03
6	PC	18EC35	Power Electronics & Instrumentation	EC	03	--	--	03	050	050	100	03
7	PC	18ECL36	Electronic Devices & Instrumentation Laboratory	EC	--	--	02	03	050	050	100	01
8	PC	18ECL37	Digital System Design Laboratory	EC	--	--	02	03	050	050	100	01
9	HS	18HS31/32	Constitution of India Professional Ethics and Cyber law /Environmental Studies	HS	01	--	--	02	050	050	100	01
10	MC	18HS33	Soft skills (MC)	HS	04	--	--	03	050	---	050	00
Total					**25**	**02**	**04**	**29**	**500**	**450**	**950**	**24**

Course prescribed to lateral entry Diploma holders admitted to III semester of Engineering programs

| **11.** | MC | 18MAD41 | Advance Mathematics – I | MAT | 02 | 02 | -- | 03 | 50 | -- | -- | 00 |

a.) The mandatory non – credit courses Advance Mathematics I and II prescribed at III and IV semesters respectively, to lateral entry Diploma holders admitted to III semester of BE programs shall compulsorily be registered during respective semesters to complete all the formalities of the course and appear for SEE examination.

b.) The mandatory non – credit courses Basic Engineering Mathematics I and II, prescribed to lateral entrant Diploma holders admitted to III and IV semester of BE programs, are to be completed to secure eligibility to VII semester. However, they are not considered for vertical progression from II year to III year of the programme but considered as head of passing along with credit courses of the programme to eligibility to VII semester.

BOS Chairman   Dean(Academics)   Principal

Dr. Ambedkar Institute of Technology, Bengaluru-560 056
SCHEME OF TEACHING AND EXAMINATION from Academic Year 2021-22
B.E in Electronics and Communication Engineering
Outcome Based Education (OBE) and Choice Based Credit System (CBCS) (Applicable to 2018 Batch)

IV Semester

Sl. No	Course and Course Code		Course Title	Teaching Dept.	Teaching Hours / Week			Examination				Credits
					Theory Lecture (L)	Tutorial (T)	Drawing / Practical (P)	Duration in Hours	CIE Marks	SEE Marks	Total Marks	
1.	BC	18MA41	Probability, Numerical and Optimization Technique	MAT	02	02	--	03	050	050	100	03
2.	PC	18EC41	Analog Circuits	EC	04	--	--	03	050	050	100	04
3.	PC	18EC42	Principles of Communication Systems	EC	03	--	--	03	050	050	100	03
4.	PC	18EC43	Computer Organization and Architecture	EC	04	--	--	03	050	050	100	03
5.	PC	18EC44	Verilog HDL	EC	04	--	--	03	050	050	100	04
6.	PC	18EC45	Signals and Systems	EC	04	--	--	03	050	050	100	04
7.	PC	18ECL46	Analog Circuits and Communication Laboratory	EC	--	--	02	02	050	050	100	01
8.	PC	18ECL47	HDL Lab	EC	--	--	02	02	050	050	100	01
9.	CIV	18HS41/ 42	Constitution of India Professional Ethics and Cyber law/ Environmental Studies	HS/CIV	01	--	--	02	050	050	100	01
10.	MC	18HS43	Soft skills (NCMC)	HS	04	--	--	03	050	--	050	00
				Total	**26**	**02**	**04**	**27**	**500**	**450**	**950**	**24**

Course prescribed to lateral entry Diploma holders admitted to III semester of Engineering programs

11.	MC	18MAD41	Advance Mathematics – II	MAT	02	02	--	03	50	--	--	00

a.) The mandatory non – credit courses Advance Mathematics I and II prescribed at III and IV semesters respectively, to lateral entry Diploma holders admitted to III semester of BE programs shall compulsorily be registered during respective semesters to complete all the formalities of the course and appear for SEE examination.

b.) The mandatory non – credit courses Basic Engineering Mathematics I and II, prescribed to lateral entrant Diploma holders admitted to III and IV semester of BE programs, are to be completed to secure eligibility to VII semester. However, they are not considered for vertical progression from II year to III year of the programme but considered as head of passing along with credit courses of the programme to eligibility to VII semester.

BOS Chairman   Dean(Academics)   Principal

Dr. Ambedkar Institute of Technology, Bengaluru-560 056
SCHEME OF TEACHING AND EXAMINATION from Academic Year 2021-22
B.E in Electronics and Communication Engineering
Outcome Based Education (OBE) and Choice Based Credit System (CBCS) (Applicable to 2018 Batch)

V Semester

Sl. No	Course and Course Code		Course Title	Teaching Dept.	Teaching Hours / Week				Examination			Credits
					Theory Lecture (L)	Tutorial (T)	Drawing / Practical (P)	Duration in Hours	CIE Marks	SEE Marks	Total Marks	
1	PC	18HS51	IPR	HS	03	--	--	03	050	050	100	03
2	PC	18EC51	Electromagnetic Waves	EC	04	--	--	04	050	050	100	03
3	PC	18EC52	Digital Signal Processing	EC	04	--	--	04	050	050	100	04
4	PC	18EC53	Digital Communication	EC	04	--	--	04	050	050	100	04
5	PC	18EC54	Microprocessor and Microcontroller	EC	03	--	--	04	050	050	100	03
6	PE	18EC55X	Professional Elective-1	EC	03	--	--	03	050	050	100	03
7	OE	18EC56X	Open-Elective A		03	--	--	03	050	050	100	03
8	PC	18ECL57	Microcontroller Laboratory	EC	--	--	02	02	050	050	100	01
9	PC	18ECL58	Digital Signal Processing Laboratory	EC	--	--	02	02	050	050	900	01
				Total	**24**	**00**	**04**	**29**	**400**	**450**	**800**	**25**

18EC55x_Professional Elective – 1		
Sl. No.	Course Code	Course Title
1	18EC551	Digital Switching System
2	18EC552	Programming with Python
3	18EC553	Artificial Neural Networks
4	18EC554	Object Oriented Programming with C++
5	18EC555	Control Systems

Open Elective-A(OE-A)		
Sl. No.	Course Code	Course Title
1	18EC561	Real Time Operating System(CS,IS, EI, ML)
2	18EC562	Mechatronics (CS,IS, EI, ML, ME, IEM, EEE)
3	18EC563	Television Engineering (TE, EI, ML)
4	18EC564	Sensors (CS, IS, ML, TC)

BOS Chairman   Dean(Academics)   Principal

SCHEME OF TEACHING AND EXAMINATION from Academic Year 2021-22
B.E in Electronics and Communication Engineering
Outcome Based Education (OBE) and Choice Based Credit System (CBCS) (Applicable to 2018 Batch)

VI Semester

Sl. No	Course and Course Code		Course Title	Teaching Dept.	Teaching Hours / Week			Examination					Credits
					Theory Lecture (L)	Tutorial (T)	Drawing/ Practical (P)	Duration in Hours	CIE Marks	SEE Marks	Total Marks		
1	PC	18HS61	Management and Entrepreneurship	EC	03	--	--	03	050	050	100	03
2	PC	18EC61	CMOS VLSI Design	EC	04	--	--	03	050	050	100	04
3	PC	18EC62	Embedded Systems	EC	03	--	--	03	050	050	100	03
4	PC	18EC63	Computer Communication Network	EC	04	--	--	03	050	050	100	04
5	PC	18EC64x	Professional Elective – 2	EC	03	--	--	03	050	050	100	03
6	OE	18EC65x	Open Elective –B	EC	03	--	--	03	050	050	100	03
7	PC	18ECL66	Embedded Systems Laboratory	EC	--	--	02	02	050	050	100	01
8	PC	18ECL67	VLSI Laboratory	EC	--	--	02	02	050	050	100	01
9	M	18ECM68	Mini Project					03	050	050	100	02
10	INT	18ECI69	Industry Internship	To be carried out during the intervening vacations of VI an VII semesters				--	--	--	--	--
			Total		**20**	**00**	**04**	**27**	**450**	**450**	**900**	**24**

18EC65x_Professional Elective – 2 (PECEL 2)		
Sl. No.	Course Code	Course Title
1	18EC641	Semiconductor Fabrication
2	18EC642	Cryptography
3	18EC643	Information Theory & Coding
4	18EC644	System Verilog for verification
5	18EC645	Internet of Things

Open Elective-B(OE-B)		
Sl. No.	Course Code	Course Title
1	18EC651	Automotive Safety Measurements(ME,IEM,EE)
2	18EC652	Nano Electronics (CS,IS,ML,TC)
3	18EC653	Wireless Sensor Networks(EE,ML,EI)
4	18EC654	Robotics and Machine vision systems(ME,EI,EE,ML)

BOS Chairman   Dean(Academics)   Principal

Dr. Ambedkar Institute of Technology, Bengaluru-560 056
SCHEME OF TEACHING AND EXAMINATION from Academic Year 2021-22
B.E in Electronics and Communication Engineering
Outcome Based Education (OBE) and Choice Based Credit System (CBCS) (Applicable to 2018 Batch)

VII Semester

Sl. No	Course and Course Code		Course Title	Teaching Dept.	Teaching Hours / Week			Examination					Credits
					Theory Lecture (L)	Tutorial (T)	Drawing / Practical (P)	Duration in Hours	CIE Marks	SEE Marks	Total Marks		
1	MC	18HS71	Cost Management of Engg Projects	HS	03	--	--	03	050	050	100		02
2	PC	18EC71	Wireless Communication	EC	04	--	--	03	050	050	100		04
3	PC	18EC72	Microwave and Antenna	EC	04	--	--	03	050	050	100		04
4	PE	18EC73X	Professional Elective-3	EC	03	--	--	03	050	050	100		03
5	PE	18EC74X	Professional Elective-4	EC	03	--	--	03	050	050	100		03
6	OE	18EC75X	Open Elective-C	EC	03	--	--	03	050	050	100		03
7	PC	18ECL76	Advance Communication Lab	EC	--	--	02	02	050	050	100		01
8	PC	18ECL77	Computer Communication Network Lab	EC	--	--	02	02	050	050	100		01
9	Project	18ECP78	Project work phase-1	EC	--	--	02	02	050	050	100		02
10	INT	18ECI79	Internship	--	--	--	--	---	---	---	--		--
			Total		**20**	**--**	**06**	**24**	**400**	**400**	**800**		**23**

Internship: All the students admitted to III year of BE have to undergo mandatory internship of 4 weeks during the vacations of VI and VII semesters and /or VII and VIII semesters. A University examination will be conducted during VIII semester and prescribed credit are added to VIII semester. Internship is considered as a head of passing and is considered for the award of degree. Those, who do not take-up/complete the internship will be declared as failed and have to complete during subsequent University examination after satisfy the internship requirements

Note: : PC: Professional Core. PE: Professional Elective, OE: Open Elective. MC: Mandatory Course, PRJ: Project work, INT: Internship
Select **ANY ONE** of the Professional Elective. Open Elective-A: Students can select any one of the open electives (Please refer to consolidated list of Dr AIT for open electives) offered by any Department

BOS Chairman   Dean(Academics)   Principal

Dr. Ambedkar Institute of Technology, Bengaluru-560 056
SCHEME OF TEACHING AND EXAMINATION from Academic Year 2021-22
B.E in Electronics and Communication Engineering
Outcome Based Education (OBE) and Choice Based Credit System (CBCS) (Applicable to 2018 Batch)

Professional Elective-3(PE-3)

Sl. No.	Course Code	Course Title
1	18EC731	5G Technology
2	18EC732	Virtual Reality
3	18EC733	Real Time Operating systems
4	18EC734	DSP Algorithm and architecture
5	18EC735	Network and Cyber Security
6	18EC736	Optical Fibre Communication

Professional Elective-4(PE-4)

Sl. No.	Course Code	Course Title
1	18EC741	Analog and Mixed Mode VLSI
2	18EC742	Operating systems
3	18EC743	Satellite Communication
4	18EC744	Real Time Embedded Systems
5	18EC745	Operations Research
6	18EC746	Adaptive Signal Processing

Open Elective-C (OE-C)

Sl. No	Course Code	Course Title
1	18EC751	Internet of Things (CS, IS, EI, TE, ML, ME, IEM, EEE, CV)
2	18EC752	Cryptography (CS, IS, ML,TE, EI,EEE)
3	18EC753	Mobile Communication (EI, EE, ML)
4	18EC754	Bio Mechatronics (CS, IS, EI, TE, ML, ME, IEM, EEE, CV)
5	18EC755	Introduction to Unmanned Aerial Vehicle (UAV) (CS,IS, EI, TE,ML, ME, IEM, EEE,CV)

BOS Chairman   Dean(Academics)   Principal

Dr. Ambedkar Institute of Technology, Bengaluru-560 056
SCHEME OF TEACHING AND EXAMINATION from Academic Year 2021-22
B.E in Electronics and Communication Engineering
Outcome Based Education (OBE) and Choice Based Credit System (CBCS) (Applicable to 2018 Batch)

VIII Semester

Sl. No	Course and Course Code		Course Title	Teaching Dept.	Teaching Hours / Week			Examination				Credits
					Theory Lecture (L)	Tutorial (T)	Drawing/ Practical (P)	Duration in Hours	CIE Marks	SEE Marks	Total Marks	
1	MC	18CV81	Occupational and Safety and Health administration	CV	03	--	--	03	050	050	100	02
2	Project	18ECP82	Project Work Phase-2	EC	--	--	03	03	050	050	100	10
3	Seminar	18ECS83	Technical Seminar	EC	--	--	03	03	050	050	100	01
4	INT	18ECI84	Internship	EC	--	--	03	03	050	050	100	02
				Total	03	--	09	12	250	250	500	15

Internship: Those, who have not pursued /completed the internship will be declared as failed and have to complete during subsequent SEE examination after they satisfy the internship requirements.

Note: : PC: Professional Core. PE: Professional Elective, OE: Open Elective. MC: Mandatory Course, PRJ: Project work, INT: Internship

Select **ANY ONE** of the Professional Elective and Open Elective subject

Students can select any one of the open electives (Please refer to consolidated list of Dr. AIT open electives) offered by any Department.
Selection of an open elective is not allowed provided,

• The candidate has studied the same course during the previous semesters of the programme.

• The syllabus content of open elective is similar to that of Departmental core courses or professional electives. Registration to electives shall be documented under the guidance of Programme Coordinator/ Mentor.

BOS Chairman   Dean(Academics)   Principal