



Dr. Ambedkar Institute of Technology, Bangalore – 56

Department of Electronics & Instrumentation Engineering

The attached documents are valid and approved.

[Handwritten Signature]

Prof. & Head

5/11/22

Professor & Head

Department of Electronics

Instrumentation Engineering

Dr. Ambedkar Institute of Technology

Bangalore - 560 056

Dr Ambedkar Institute of Technology, Bangalore - 560056
(An Autonomous Institute Affiliated to VTU Belgaum)
Department of Instrumentation Technology

15-05-2017

Minutes of the meeting

The BOS meeting is started at 10. 00 AM by welcoming all BOS members by the Head of the Department

1. Finalize the Syllabus Content of 7th and 8th Sem of 2014 – 15 Batch

BOS chairman highlighted the scheme and the draft syllabus of the 7th to 8th Sem to the BOS members and discussed to get their opinion.

All BOS members accepted the draft syllabus proposed for the forthcoming 7th and 8th Semester.

2. Finalize the Scheme & Syllabus Content of 5th and 6th Sem of 2015 – 16 Batch

Dr Shivaprakash and other BOS members suggested to teach HTML subject after teaching C++ .They also suggested to rename the subject title based on the objective of the subject.

Dr Vijaya and other BOS members suggested to remove microcontroller subject and introduce advance microcontroller like MSP430 subject in the syllabus as this is the subject which is most expected in the industry today.

Dr K B Raja and other BOS members suggested to rename the ARM Processor subject to general name similarly Arm lab can be replaced with embedded system Lab

Also experts suggested to specify the focused area for the mini project. They also suggested to introduce IOT to the students by introducing as a lab component. As this is the subject which is most expected in the industry today.

Also experts suggested to teach computer networks in lower semester.

3. Finalize the Scheme & Syllabus Content of 3rd and 4th Sem of 2016 – 17 Batch

1. Dr Shivaprakash suggested to combine AEC and DE into single lab component. OR otherwise AEC lab can be combined with AIC lab. He also suggested introducing transducers lab in the third semester.

4. Approval of BOE Members and Examiners for theory and Practical examinations of III, IV, V, VI, VII, VIII Sem Subjects

The list of examiners for 3rd – 8th Sem Subjects are made by discussing with BOS Members for the approval - **List enclosed**

5. Method of Evaluation for Each subject

The existing evaluation method is highlighted to the BOS Members.

5. Method of Evaluation for Each subject

The existing evaluation method is highlighted to the BOS Members. Also BOS chairman explained the introduction of the new components, that is assignment or industrial visit per each subject for five marks and the CIE for 45 marks including descriptive and quiz components.

Actions Taken:

Finalize the Syllabus Content of 7th and 8th Sem of 2013 – 14 Batch

1. The suggestions given by BOS members are incorporated and finalized the draft syllabus

2. Finalize the Scheme & Syllabus Content of 5th and 6th Sem of 2014 – 15 Batch

Finalized the draft syllabus as per the members suggestions

3. Finalize the Scheme & Syllabus Content of 3rd and 4th Sem of 2015 – 16 Batch

The suggestions given by BOS members are incorporated and finalized the scheme and draft syllabus.

All the above are approved and recommended by the BOS members.

Finally meeting concluded with the vote of thanks by the Chairman BOS.


Professor and Head

Dr Ambedkar Institute of Technology, Bangalore - 560056
(An Autonomous Institute Affiliated to VTU Belgaum)
Department of Instrumentation Technology

18-06-2018

Minutes of the meeting

The BOS meeting for the finalization of scheme and syllabus of UG in Electronics and Instrumentation Engineering and PG in M.Tech Electronics is started at 10. 30AM by welcoming all BOS members by the Chairman BOS, Head of the Department

1. Finalize the Scheme of 3rd to 8th semester for 2018-19 Batch

BOS chairman informed all the members that as per guidelines of AICTE/VTU for the 2018 -19 academic year, the required credits to be earned by the students for the award of degree is 175. Also it is highlighted that 40 credits are allocated to 1st year courses. Remaining 135 credits are distributed from 3rd to 8th semester and a detailed scheme is prepared by following the college guidelines. 3rd to 8th semester draft scheme is presented before the BOS members for the discussion. The following suggestions are made by the members during the discussion.

1. A separate book can be maintained for tutorial classes and few books can be collected from the students for document purpose
2. To incorporate the basic fundamentals in the first year itself.
3. Few experiments related to fluid mechanics can be included in the transducers lab
4. Control system related topics can be demonstrated by conducting experiments like Bode plot etc.
5. In Microcontroller MSP430 can be taught instead of 8051
6. All the BOS members suggested to reduce the number of components in the 3rd and 4th semester because the number of courses in the 3rd and 4th semester is more compared to the higher semesters.
7. In the subject Embedded system one or two unit can have topic related to embedded system and the remaining units can be related to ARM processor
8. As the analytical instrumentation subject is more important for the students at least few important topics can be added in process instrumentation subject itself
9. Students can be allowed to do Interdisciplinary projects so that they will learn how other department subjects can be integrated to their own subjects
10. Discussed about whether to retain the subject VLSI design or not and finally decided to retain the subject as it will be useful for the students those who are going for PG.
11. DCS and IDC are the two important subjects for instrumentation engineers so all BOS members suggested to split and can have more weightage for the subjects
12. In place of Microcontroller lab simulation lab can be introduced if microcontroller subject is removed.
13. In wireless communication subject one unit can be IOT related topics and the subject can be renamed as wireless communication and IOT

2. Finalize the Scheme and syllabus of 3rd to 4th semester for 2017-18 Batch

BOS chairman highlighted the scheme and the draft syllabus of the 3rd to 4th Sem to the BOS members and discussed to get their opinion.

All BOS members accepted the draft syllabus proposed for the forthcoming 3rd to 4th Semester.

3. Finalize the Scheme & Syllabus Content of 5th and 6th SEM for 2016 – 17 Batch

BOS chairman highlighted the scheme and the draft syllabus of the 5th to 6th Sem to the BOS members and discussed to get their opinion.

All BOS members accepted the draft syllabus proposed for the forthcoming 5th and 6th Semester.

4. Finalize the Syllabus Content of 7th and 8th Sem for 2015 – 16 Batch

BOS chairman highlighted the scheme and the draft syllabus of the 7th to 8th Sem to the BOS members and discussed to get their opinion. Discussion was held in related to the changes made in the Elective subject of 7th Semester: micro system and nano technology and the members approved the same.

All BOS members accepted the draft syllabus proposed for the forthcoming 7th and 8th Semester.

5. Finalize the Scheme & Syllabus Content of 1st and 2nd Sem M.Tech Electronics of 2018 - 19 Batch.

BOS chairman informed all the members that as per guidelines of AICTE/VTU for the 2018 -19 academic year, the required credits to be earned by the students for the award of degree is 88 and a detailed scheme is prepared by following the college guidelines. 1st to 4th semester tentative scheme is presented before the BOS members for the discussion. The following suggestions are made by the members during the discussion.

All BOS members suggested to follow the current (2018) VTU guidelines for PG and to retain 2017-18 Scheme and syllabus.

6. Finalize the Syllabus Content of 3rd and 4th Sem M.Tech Electronics for 2017 – 18 Batch

BOS chairman highlighted the scheme and the draft syllabus of the 3rd and 4th Sem to the BOS members and discussed to get their opinion.

All BOS members accepted the draft syllabus proposed for the forth coming 3rd and 4th Semester.

7. Defining Subject equivalences to the students admitted in different academic years

The members suggested to define the subject equivalence as and when required and to get it ratified by the members in the immediate BOS meetings

8. Approval of BOE Members and Examiners for theory and Practical examinations of III, IV, V, VI, VII, VIII Sem Subjects

The list of examiners for 3rd – 8th Sem Subjects are made by discussing with BOS Members for the approval - **List enclosed**

9. Approval of PSOs, Vision, Mission of the Department

BOS Chairman informed the members that 4 Programme Specific outcomes (PSOs) are drafted for the UG programme in Electronics and Instrumentation Engineering by following NBA

guidelines and taking the feedback from the stakeholders. The tentative PSOs are presented before the members for the discussion/suggestions. Members approved the PSOs as presented (Copy enclosed)

The vision mission of the department is presented and discussed for any revision

All members suggested to retain the vision mission in the present form itself (Copy enclosed)

Actions Taken:

1. Finalize the Scheme of 3rd to 8th semester for 2018-19 Batch

Draft scheme of 3rd - 8th Semester for the 2018 - 19 batch is finalized by incorporating the suggestions given by the BOS members

2. Finalize the Scheme and syllabus of 3rd to 4th semester for 2017-18 Batch

The suggestions given by BOS members are incorporated and finalized the scheme and draft syllabus.

3. Finalize the Scheme & Syllabus Content of 5th and 6th Sem of 2016 - 17 Batch


Finalized the draft syllabus as per the members suggestions

4. Finalize the Syllabus Content of 7th and 8th Sem for 2015 - 16 Batch

Finalized the draft syllabus of 7th and 8th Sem for 2015 - 16 Batch as per the members suggestions

All the above are approved and recommended by the BOS members.

Finally meeting concluded with the vote of thanks by the Chairman BOS.


Professor and Head
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Department of Electronics and Instrumentation Engineering

22-05-2019

Minutes of the meeting

The BOS meeting is started at 10. 00 AM by welcoming all BOS members by the Head of the Department

1. Finalize the Scheme 3rd to 8th semester of 2019-20 batch

BOS chairman highlighted the scheme 3rd to 8th semester of 2019-20 to the BOS members and discussed to get their opinion.

The following points are highlighted by the BOS members

1. The subject in 3rd semester Fluid mechanics should be removed.
2. Soft skill can be renamed as communication skill
3. The subject Micro-controller can be named as micro-controller and applications.
4. Transducers and Measurements Lab can be named as sensors and signal conditioning circuit's lab in this fundamentals can be removed and real time experiments can be included.
5. Virtual instrumentation lab can be introduced in 5th semester.
6. The subject Chemical in instrumentation can be renamed as Instrumental methods of analysis.
7. For elective subject verticals should be put.
8. Technical seminar should be in 6th semester so that students can identify their project problem.

2. Finalize the Syllabus Content of 7th and 8thSem of 2016 – 17 Batch

BOS chairman highlighted the scheme and the draft syllabus of the 7th to 8thSem to the BOS members and discussed to get their opinion.

All BOS members accepted the draft syllabus proposed for the forthcoming 7th and 8th Semester.

3. Finalize the Scheme & Syllabus Content of 5th and 6thSem of 2017 – 18 Batch

BOS chairman highlighted the scheme and the draft syllabus of the 5th to 6thSem to the BOS members and discussed to get their opinion.

All BOS members accepted the draft syllabus proposed for the forthcoming 5th and 6th Semester.

4. Finalize the Syllabus Content of 3rd and 4thSem of 2018 –19 Batch

1. In the Subject Analog Electronic Circuits subject MOSFET related topics should be included instead of BJT
2. EMI can be introduced in any of the subject.
3. All BOS members suggested to include real time applications in all the subjects

5. Defining Subject equivalences and credit balance to the students admitted in different academic years

6. Approval of BOE Members and Examiners for theory and Practical examinations

The list of examiners for 3rd – 8th Sem Subjects are made by discussing with BOS Members for the approval -List enclosed

7. Finalize the Honor and Minor Scheme

All BOS members suggested to revise the Minor and Honor Subjects

Actions Taken:

1. Finalize the Scheme 3rd to 8th semester of 2019-20 batch

1. The subject in 3rd semester Fluid mechanics is replaced with Measurements and Instrumentation
2. The subject Micro-controller is renamed named as micro-controller and applications.
3. Transducers and Measurements Lab is named as sensors and signal conditioning circuits lab in this lab few real time experiments is included.
4. Virtual instrumentation lab is introduced in 5th semester.
5. The subject Chemical in Instrumentation is renamed as Instrumental methods of analysis.
6. Verticalshave introduced in elective subjects.
7. To include the Technical seminar in 6th semesteris not incorporated as it is the centralized decision.

2. Finalize the Syllabus Content of 7th and 8th Sem of 2016 – 17 Batch

The suggestions given by BOS members are incorporated and finalized the draft syllabus

3. Finalize the Scheme & Syllabus Content of 5th and 6th Sem of 2017 – 18 Batch

The suggestions given by BOS members are incorporated and finalized the draft syllabus

4. Finalize the Scheme & Syllabus Content of 3rd and 4th Sem of 2018 –19 Batch

The suggestions given by BOS members are incorporated and finalized the draft syllabus scheme and draft syllabus.

5. Defining Subject equivalences and credit balance to the students admitted in different academic years

6. Approval of BOE Members and Examiners for theory and Practical examinations

The BOE Members and Examiners for theory and Practical examinations are approved from BOS members

7. Finalize the Honor and Minor Scheme

The Honor and Minor subjects are drafted as per the suggestion given by the BOS members

All the above are approved and recommended by the BOS members.

Finally meeting concluded with the vote of thanks by the Head of the Department.



Professor and Head,

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Department of Electronics and Instrumentation Engineering

14-08-2020

Minutes of the meeting

The BOS meeting is started at 2.30 PM by welcoming all BOS members by the BOS chairman

Before discussing the actual agenda of the 11th BOS meeting, the members were briefed about the minutes of 10th BOS meeting held on 22-05-2019 and its action taken report. All members approved the same

Agenda 1: Finalize the Scheme 3rd to 8th semester of 2018-19 batch

BOS chairman highlighted the proposed scheme of 3rd to 8th semester for 2018-19 Batch to the BOS members and discussed to get their opinion.

The following points are highlighted by the BOS members

1. All BOS members suggested to make Advanced Control System as core subject instead of professional elective
2. The subject Instrumental methods of analysis can be renamed to Analytical Instrumentation as this is the familiar name, anyone can understand the topics in that subject
3. All BOS members suggested to shift the subject Instrumental methods of analysis to elective, as it is not included in the gate examination.
4. The subject Embedded system design can be suitably renamed instead of generic name.

Agenda 2: Finalize the Syllabus Content of 7th and 8th Sem of 2017 – 18 Batch

BOS chairman highlighted the scheme and the draft syllabus of the 7th to 8th Sem to the BOS members and discussed to get their opinion.

All BOS members accepted the draft syllabus proposed for the forthcoming 7th and 8th Semester.

Agenda 3: Finalize the Scheme & Syllabus Content of 5th and 6th Sem of 2018 – 19 Batch

BOS chairman highlighted the scheme and the draft syllabus of the 5th to 6th Sem to the BOS members and discussed to get their opinion.

The following points are highlighted by the BOS members

1. All BOS members expressed that In the Digital signal processing subject if MATLAB program is indicated in the syllabus content, open ended questions will be framed on that topic.
2. BOS members suggested to have maximum of two text books; remaining books can be the reference books
3. The subject process control system can be renamed as Process Automation and Control

4. In the subject process control system unit 2&3 can be merged and 5th unit safety instrumentation can be introduced as it is very much needed for instrumentation engineers
5. BOS members suggested to include applications/case studies related to instrumentation in the subject C++ and data structures.
6. In the subject Biomedical Instrumentation BOS members suggested to include understanding of Diagnostic systems.
7. BOS members suggested to include fundamental concepts of drives, before teaching drives in the subject Power Electronics and Drives so that students will understand the concept better.
8. In the subject Power Electronics and Drives BOS members suggested to include MOSFET
9. BOS members suggested to replace the detail syllabus with main headings of the topic in the subject Digital image processing.
10. In the Digital Signal Processing Lab BOS members suggested to have real time processing experiments.
11. BOS members suggested to include topics like wiring diagram, I/O cards in the subject PLC and SCADA .
12. In the subject advance control system BOS members suggested to include the topics like, system identification or multivariable control.
13. In the subject Embedded systems design, BOS members expressed to include the topic DMI along with interrupts

Agenda 4: Finalize the Syllabus Content of 3rd and 4thSem of 2019 –20 Batch

BOS chairman highlighted the scheme and the draft syllabus of the 3rd and 4th Sem to the BOS members and discussed to get their opinion.

All BOS members accepted the draft syllabus proposed for the forthcoming 3rd and 4th Semester.

Agenda 5: Defining Subject equivalences and credit balance to the students admitted in different academic years

BOS chairman informed the members regarding the need of defining the subject equivalences to the students re admitting with other batch students.

All members suggested presenting such cases and getting the approval as and when required.

Agenda 6: Approval of BOE Members and Examiners for theory and Practical examinations

The list of examiners for 3rd – 8thSem Subjects are made by discussing with BOS Members for the approval -List enclosed

Agenda 7: Finalize the Vision, Mission, PEO and PSO

BOS chairman highlighted the revised vision, mission PEO and PSOs of the department and the BOS members approved the same.

8. Any Other Issue:

All BOS members informed the adoption of blended teaching learning process in all courses from 2020-2021 onwards

Actions Taken for:

Agenda 1: Finalize the Scheme 3rd to 8th semester of 2018-19 batch

1. The subject Advanced Control System is made a core subject in 6th semester
2. The subject Instrumental methods of analysis renamed as Analytical Instrumentation
3. The subject Analytical Instrumentation is shifted to elective group in 7th semester.
4. The subject Embedded system design can be suitably renamed as **Embedded Systems using ARM controller.**

Agenda 2: Finalize the Syllabus Content of 7th and 8th Sem of 2016 – 17 Batch

The suggestions given by BOS members are incorporated and finalized the draft syllabus

Agenda 3: Finalize the Scheme & Syllabus Content of 5th and 6th Sem of 2017 – 18 Batch

The suggestions given by BOS members are incorporated and finalized the draft syllabus

Agenda 4: Finalize the Scheme & Syllabus Content of 3rd and 4th Sem of 2018 –19 Batch

The suggestions given by BOS members are incorporated and finalized the draft syllabus scheme and draft syllabus.

Agenda 5: Defining Subject equivalences and credit balance to the students admitted in different academic years

Member's suggestion is noted.

Agenda 6: Approval of BOE Members and Examiners for theory and Practical examinations


The BOE Members and Examiners for theory and Practical examinations are approved from BOS members – List enclosed

Agenda 7: Finalize the Vision, Mission, PEO and PSO

Member's suggestion is noted and finalized the vision & Mission of the department and PEO and PSO of the programme.

All the above are approved and recommended by the BOS members.

Finally meeting concluded with the vote of thanks by the Head of the Department.


Professor and Head,
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Department of Electronics and Instrumentation Engineering

24-06-2021

Minutes of the meeting

The BOS meeting is started at 10.00 AM by welcoming all BOS members by the BOS chairman

Before discussing the actual agenda of the 12th BOS meeting, the members were briefed about the minutes of 11th BOS meeting held on 14-08-2020 and its action taken report. All members approved the same

Agenda 1: Finalize the Scheme 3rd to 8th semester of 2021-22 batch

BOS chairman highlighted the proposed scheme of 3rd to 8th semester for 2021-22 Batch to the BOS members. All BOS members accepted the scheme.

Agenda 2: Finalize the Syllabus Content of 7th and 8th Sem of 2018 – 19 Batch and old Batches falling under 200 credits Scheme (Parallel Batch)

BOS chairman highlighted the scheme and the draft syllabus of the 7th to 8th Sem to the BOS members and discussed to get their opinion.

The BOS members highlighted the following points

1. All BOS members expressed to have easy subjects in 7th semester
2. All members suggested to form a verticals for elective subjects
3. Members suggested to include Open elective subjects as building automation, industrial automation, industrial 4.0
4. BOS members expressed to replace the Optical instrumentation subject in the open elective with industrial and process automation that should start with electrical, mechanical and electronics automation because it is too narrow and specific
5. Members expressed to rename the title of the subject Instrumentation and Measurements with Instrumentation and Measurement techniques
6. All members expressed that the Technical seminar must be continuous evaluation at least two presentation must be there
7. Also members suggested that Technical seminar first presentation can be CIE and the second presentation can be SEE
8. Members of BOS suggested in IOT & Wireless sensor network subject syllabus is more should be revamped reduced and few case study like Agriculture, environment and pharmaceutical can be included
9. All members expressed to revise the Text book edition in all the subjects
10. Members suggested to reduce the objective in 18EI72 also suggested to refer the text book Liptak to frame the syllabus for 18EI72
11. BOS members expressed to Make 2 units on protocols and remaining on DCS in subject 18EI72

For the 200 credit parallel batch, students BOS members accepted the syllabus content

Agenda 3: Finalize the Syllabus Content of 5th and 6th Sem of 2019 – 20 Batch and old Batches falling under 200

BOS chairman highlighted the scheme and the draft syllabus of the 5th to 6th Sem to the BOS members and discussed to get their opinion.

All BOS members accepted the draft syllabus proposed for the forthcoming 5th and 6th Sem of 2019 – 20 Batch and old Batches falling under 200

Agenda 4: Finalize the Syllabus Content of 3rd and 4th Sem of 2020 –21 Batch

BOS chairman highlighted the scheme and the draft syllabus of the 3rd and 4th Sem to the BOS members and discussed to get their opinion.

All BOS members accepted the draft syllabus proposed for the forthcoming 3rd and 4th Semester.

Agenda 5: Defining Subject equivalences and credit balance to the students admitted in different academic years

BOS chairman informed the members regarding the need of defining the subject equivalences to the students re admitting with other batch students.

All members suggested presenting such cases and getting the approval as and when required.

Agenda 6: Finalize the scheme and syllabus of Electronics and Instrumentation (Honors) and Minor Degree

1. All members suggested to increase the credits in honor and minor subjects so that the number of subjects can be reduced
2. All BOS members accepted the draft scheme of Honor and Minor courses proposed.

Agenda 7: Approval of BOE Members and Examiners for theory and Practical examinations

The list of examiners for 3rd – 8th Sem Subjects are made by discussing with BOS Members for the approval -List enclosed

8. Any Other Issue:

Discussion on certification program: All BOS members expressed to have it as a value added program also members suggested to do survey and identify the kind of learners before framing the syllabus for certification courses

Actions Taken for:

Agenda 1: Finalize the Scheme 3rd to 8th semester of 2021-22 batch

The suggestions given by BOS members are incorporated and finalized the draft syllabus

Agenda 2: Finalize the Syllabus Content of 7th and 8th Sem of 2018 – 19 Batch

The suggestions given by BOS members are incorporated and finalized the draft syllabus

Agenda 3: Finalize the Scheme & Syllabus Content of 5th and 6th Sem of 2019 – 20 Batch

The suggestions given by BOS members are incorporated and finalized the draft syllabus

Agenda 4: Finalize the Scheme & Syllabus Content of 3rd and 4th Sem of 2018 –19 Batch

The suggestions given by BOS members are incorporated and finalized the draft syllabus scheme and draft syllabus.

Agenda 5: Defining Subject equivalences and credit balance to the students admitted in different academic years

Member's suggestion is noted.

Agenda 6: Finalize the scheme and syllabus of Electronics and Instrumentation (Honors) and Minor Degree

Member's suggestion is noted.

Agenda 7: Approval of BOE Members and Examiners for theory and Practical examinations

The BOE Members and Examiners for theory and Practical examinations are approved from BOS members – List enclosed

All the above are approved and recommended by the BOS members.

Finally meeting concluded with the vote of thanks by the Head of the Department.


Professor and Head,
Professor & Head
Department of Instrumentation Technology
Dr. Ambedkar Institute of Technology
Bangalore - 560 056.

Academic Year 2017-18
SCHEME OF TEACHING & EXAMINATION
Electronics & Instrumentation Engineering
III SEMESTER

Academic Year of Admission 2016-17

Subject Code	Title	Teaching Department	Teaching hours/week				Examination			
			L	T	P	Credits	Duration (hrs)	CIE	Theory/Practical I SEE	Total Marks
MA31	Engineering Mathematics - III	Maths	03	02	00	04	03	50	50	100
EI 31	Analog Electronic Circuits	EI	04	00	00	04	03	50	50	100
EI 32	Digital Electronics	EI	04	00	00	04	03	50	50	100
EI 33	Network Analysis	EI	03	02	00	04	03	50	50	100
EI 34	Signals & Systems	EI	03	02	00	04	03	50	50	100
EI 35	Transducers & Measurement Techniques	EI	04	00	00	04	03	50	50	100
EI L36	Analog Electronic Circuits Lab	EI	-	-	03	1.5	03	50	50	100
EI L37	Digital Electronics Lab	EI	-	-	03	1.5	03	50	50	100
Total			21	06	06	27	24	400	400	800

SCHEME OF TEACHING & EXAMINATION
Electronics & Instrumentation Engineering
IV SEMESTER

Subject Code	Title	Teaching Department	Teaching hours/week				Examination			
			L	T	P	Credits	Duration (hrs)	CIE	Theory/ Practical SEE	Total Marks
MA41	Engineering Mathematics - IV	Maths	03	02	00	04	03	50	50	100
EI 41	Process Instrumentation	EI	04	00	00	04	03	50	50	100
EI 42	Control Systems	EI	04	00	00	04	03	50	50	100
EI 43	Communication Technology	EI	03	00	00	03	03	50	50	100
EI 44	Digital System Design Using HDL	EI	04	00	00	04	03	50	50	100
EI 45	Linear IC's & Applications	EI	04	00	00	04	03	50	50	100
EI L46	HDL Lab	EI	-	-	03	1.5	03	50	50	100
EI L47	Analog IC's & Signal Conditioning Circuits Lab	EI	-	-	03	1.5	03	50	50	100
Total			22	02	06	26	24	400	400	800

Scheme of Teaching & Examination

**Electronics & Instrumentation Engineering
V Semester**

Academic Year of Admission 2015-16

Subject Code	Title	Teaching Department	Teaching hours/week				Examination			
			L	T	P	Credits	Duration (hrs)	CIE	Theory/ Practical SEE	Total Marks
HS03	Management and Entrepreneurship	MBA	04	00	00	04	03	50	50	100
EI 51	Digital Signal Processing	EI	03	02	00	04	03	50	50	100
EI 52	Microcontrollers	EI	04	00	00	04	03	50	50	100
EI 53	Process Control Systems	EI	04	00	00	04	03	50	50	100
EI 54x	Elective-I (Group-A)	EI	03	00	00	03	03	50	50	100
EI L55	DSP Lab	EI	-	-	02	1.0	03	50	50	100
EI L56	Microcontroller Lab	EI	-	-	03	1.5	03	50	50	100
EI L57	Measurements And Virtual Instrumentation Lab	EI	-	-	03	1.5	03	50	50	100
Total			17	02	08	23	26	400	400	800

Electives – 1 (Group – A)		
Sl. No.	Subject Code	Title of the Subject
1	EI 541	Biomedical Instrumentation
2	EI 542	HTML 5 and Java Script
3	EI 543	Automobile Instrumentation
4	EI 544	DSP Architecture

**Scheme of Teaching & Examination
Electronics & Instrumentation Engineering**

VI Semester

Academic Year of Admission 2015-16

Subject Code	Title	Teaching Department	Teaching hours/week				Examination			
			L	T	P	Credits	Duration (hrs)	CIE	Theory/ Practical SEE	Total Marks
EI 61	PLC and SCADA	EI	04	00	00	04	03	50	50	100
EI 62	Programming in C++ and Data Structures	EI	03	02	00	04	03	50	50	100
EI 63	Industrial Data Communication	EI	04	00	00	04	03	50	50	100
EI 64	ARM Processor	EI	04	00	00	04	03	50	50	100
EI 65x	Elective-2 (Group-B)	EI	03	00	00	03	03	50	50	100
EI 66x	Elective-3 (Group-C)	EI	03	00	00	03	03	50	50	100
EI L67	ARM Lab	EI	-	-	02	1.0	03	50	50	100
EI L68	Control System & Data Converters Lab	EI	-	-	02	1.0	03	50	50	100
EI P69	Mini Project	EI	-	-	04	02	03	50	50	100
Total			21	02	08	26	27	450	450	900

Electives – 2 (Group – B)			Electives – 3 (Group – C)		
Sl. No.	Subject Code	Title of the Subject	Sl. No.	Subject Code	Title of the Subject
1	EI 651	Operating Systems	1	EI 661	Advanced Control Systems
2	EI 652	Digital Image Processing	2	EI 662	Power Plant Instrumentation
3	EI 653	Analytical Instrumentation	3	EI 663	Aircraft Instrumentation
4	EI 654	Power Electronics and Drives	4	EI 664	Control System Components

*Interdepartmental Elective can be opted from 5th Sem onwards

Scheme of Teaching & Examination
Electronics & Instrumentation Engineering
VII Semester

Academic Year of Admission 2014-15

Subject Code	Title	Teaching Department	Teaching hours/week				Examination			
			L	T	P	Credits	Duration (hrs)	CIE	Theory/ Practical SEE	Total Marks
EI 71	VLSI Design	EI	04	00	00	04	03	50	50	100
EI 72	DCS and Industrial safety system	EI	04	00	00	04	03	50	50	100
HS 04	IPR	EI	02	00	00	02	03	50	50	100
EI 73x	Elective-4 (Group-D)	EI	04	00	00	04	03	50	50	100
EI 74x	Elective-5 (Group-E)	EI	03	00	00	03	03	50	50	100
	Elective-6 (Group-F)*		04	00	00	04	03	50	50	100
EI L75	Process Control Lab	EI	-	-	03	1.5	03	50	50	100
EI L76	VLSI Lab	EI	-	-	03	1.5	03	50	50	100
EI P77	Project Work Phase 1				04	02	04	-	-	-
Total			21	00	10	26	28	400	400	800

Electives-4 (Group- D)			Electives-5 (Group- E)		
Sl. No	Subject Code	Title of the Subject	Sl. No	Subject Code	Title of the Subject
1	EI 731	Robotics and Automation	1	EI 741	Embedded Systems & RTOS
2	EI 732	Neural Networks & Fuzzy Logic	2	EI 742	Micro Systems and Nanotechnology
3	EI 733	Medical Imaging Systems	3	EI 743	Digital System Design Using Verilog HDL
4	EI 734	Industrial Process Control	4	EI 744	Remote Sensing and Telemetry

**Scheme of Teaching & Examination
Electronics & Instrumentation Engineering**

VIII Semester

Academic Year of Admission 2014-15

Subject Code	Title	Teaching Department	Teaching hours/week				Examination			
			L	T	P	Credits	Duration (hrs)	CIE	Theory/ Practical SEE	Total Marks
EI 81X	Elective-7(Group-G)	EI	03	00	00	03	03	50	50	100
EI 82X	Elective-8(Group-H)	EI	03	00	00	03	03	50	50	100
	Elective-9 (Group-I)*		04	00	00	04	03	50	50	100
EI P83	Project Work Phase -2	EI	-	-	20	10	-	100	100	200
EI S84	Seminar	EI	00	00	-	02	03	50	-	50
Total			10	00	20	22	12	300	250	550

Electives-7 (Group- G)			Elective-8(Group-H)		
Sl. No	Subject Code	Title of the Subject	Sl. No	Subject Code	Title of the Subject
1	EI 811	Smart Sensors		EI 821	Biomedical DSP
2	EI 812	Low Power VLSI		EI 822	Lasers & Optical Instrumentation
3	EI 813	Wireless Communication		EI 823	Computer Networks
4	EI 814	Industrial Instrumentation		EI 824	Speech Signal Processing

*Interdepartmental Elective

Academic Year 2018-19
SCHEME OF TEACHING & EXAMINATION
Electronics & Instrumentation Engineering
III SEMESTER

Academic Year of Admission 2017-18

Subject Code	Title	Teaching Department	Teaching hours/week				Examination			
			L	T	P	Credits	Duration (hrs)	CIE	Theory/Practical SEE	Total Marks
MA31	Engineering Mathematics - III	Maths	03	02	00	04	03	50	50	100
EI 31	Analog Electronic Circuits	EI	04	00	00	04	03	50	50	100
EI 32	Digital Electronics	EI	04	00	00	04	03	50	50	100
EI 33	Network Analysis	EI	03	02	00	04	03	50	50	100
EI 34	Signals & Systems	EI	03	02	00	04	03	50	50	100
EI 35	Transducers & Measurement Techniques	EI	04	00	00	04	03	50	50	100
EI L36	Analog Electronic Circuits Lab	EI	-	-	03	1.5	03	50	50	100
EI L37	Digital Electronics Lab	EI	-	-	03	1.5	03	50	50	100
Total			21	06	06	27	24	400	400	800

SCHEME OF TEACHING & EXAMINATION
Electronics & Instrumentation Engineering
IV SEMESTER

Academic Year of Admission 2017-18

Subject Code	Title	Teaching Department	Teaching hours/week				Examination			
			L	T	P	Credits	Duration (hrs)	CIE	Theory/ Practical SEE	Total Marks
MA41	Engineering Mathematics - IV	Maths	03	02	00	04	03	50	50	100
EI 41	Process Instrumentation	EI	04	00	00	04	03	50	50	100
EI 42	Control Systems	EI	04	00	00	04	03	50	50	100
EI 43	Communication Technology	EI	03	00	00	03	03	50	50	100
EI 44	Digital System Design Using HDL	EI	04	00	00	04	03	50	50	100
EI 45	Linear IC's & Applications	EI	04	00	00	04	03	50	50	100
EI L46	HDL Lab	EI	-	-	03	1.5	03	50	50	100
EI L47	Analog IC's & Signal Conditioning Circuits Lab	EI	-	-	03	1.5	03	50	50	100
Total			22	02	06	26	24	400	400	800

Scheme of Teaching & Examination

**Electronics & Instrumentation Engineering
V Semester**

Academic Year of Admission 2016-17

Subject Code	Title	Teaching Department	Teaching hours/week				Examination			
			L	T	P	Credits	Duration (hrs)	CIE	Theory/ Practical SEE	Total Marks
HS03	Management and Entrepreneurship	MBA	04	00	00	04	03	50	50	100
EI 51	Digital Signal Processing	EI	03	02	00	04	03	50	50	100
EI 52	Microcontrollers	EI	04	00	00	04	03	50	50	100
EI 53	Process Control Systems	EI	04	00	00	04	03	50	50	100
EI 54x	Elective-I (Group-A)	EI	03	00	00	03	03	50	50	100
EI L55	DSP Lab	EI	-	-	02	1.0	03	50	50	100
EI L56	Microcontroller Lab	EI	-	-	03	1.5	03	50	50	100
EI L57	Measurements And Virtual Instrumentation Lab	EI	-	-	03	1.5	03	50	50	100
Total			17	02	08	23	26	400	400	800

Electives – 1 (Group – A)		
Sl. No.	Subject Code	Title of the Subject
1	EI 541	Biomedical Instrumentation
2	EI 542	HTML 5 and Java Script
3	EI 543	Automobile Instrumentation
4	EI 544	DSP Architecture

**Scheme of Teaching & Examination
Electronics & Instrumentation Engineering**

VI Semester

Academic Year of Admission 2016-17

Subject Code	Title	Teaching Department	Teaching hours/week				Examination			
			L	T	P	Credits	Duration (hrs)	CIE	Theory/ Practical SEE	Total Marks
EI 61	PLC and SCADA	EI	04	00	00	04	03	50	50	100
EI 62	Programming in C++ and Data Structures	EI	03	02	00	04	03	50	50	100
EI 63	Industrial Data Communication	EI	04	00	00	04	03	50	50	100
EI 64	ARM Processor	EI	04	00	00	04	03	50	50	100
EI 65x	Elective-2 (Group-B)	EI	03	00	00	03	03	50	50	100
EI 66x	Elective-3 (Group-C)	EI	03	00	00	03	03	50	50	100
EI L67	ARM Lab	EI	-	-	02	1.0	03	50	50	100
EI L68	Control System & Data Converters Lab	EI	-	-	02	1.0	03	50	50	100
EI P69	Mini Project	EI	-	-	04	02	03	50	50	100
Total			21	02	08	26	27	450	450	900

Electives – 2 (Group – B)			Electives – 3 (Group – C)		
Sl. No.	Subject Code	Title of the Subject	Sl. No.	Subject Code	Title of the Subject
1	EI 651	Operating Systems	1	EI 661	Advanced Control Systems
2	EI 652	Digital Image Processing	2	EI 662	Power Plant Instrumentation
3	EI 653	Analytical Instrumentation	3	EI 663	Aircraft Instrumentation
4	EI 654	Power Electronics and Drives	4	EI 664	Control System Components

*Interdepartmental Elective can be opted from 5th Sem onwards

**Scheme of Teaching & Examination
Electronics & Instrumentation Engineering
VII Semester**

Academic Year of Admission 2015-16

Subject Code	Title	Teaching Department	Teaching hours/week				Examination			
			L	T	P	Credits	Duration (hrs)	CIE	Theory/ Practical SEE	Total Marks
EI 71	VLSI Design	EI	04	00	00	04	03	50	50	100
EI 72	DCS and Industrial safety system	EI	04	00	00	04	03	50	50	100
HS 04	IPR	EI	02	00	00	02	03	50	50	100
EI 73x	Elective-4 (Group-D)	EI	04	00	00	04	03	50	50	100
EI 74x	Elective-5 (Group-E)	EI	03	00	00	03	03	50	50	100
	Elective-6 (Group-F)*		04	00	00	04	03	50	50	100
EI L75	Process Control Lab	EI	-	-	03	1.5	03	50	50	100
EI L76	VLSI Lab	EI	-	-	03	1.5	03	50	50	100
EI P77	Project Work Phase 1				04	02	04	-	-	-
Total			21	00	10	26	28	400	400	800

Electives-4 (Group- D)			Electives-5 (Group- E)		
Sl. No	Subject Code	Title of the Subject	Sl. No	Subject Code	Title of the Subject
1	EI 731	Robotics and Automation	1	EI 741	Embedded Systems & RTOS
2	EI 732	Neural Networks & Fuzzy Logic	2	EI 742	Micro Systems and Nanotechnology
3	EI 733	Medical Imaging Systems	3	EI 743	Digital System Design Using Verilog HDL
4	EI 734	Industrial Process Control	4	EI 744	Remote Sensing and Telemetry

**Scheme of Teaching & Examination
Electronics & Instrumentation Engineering
VIII Semester**

Academic Year of Admission 2015-16

Subject Code	Title	Teaching Department	Teaching hours/week				Examination			
			L	T	P	Credits	Duration (hrs)	CIE	Theory/ Practical SEE	Total Marks
EI 81X	Elective-7(Group-G)	EI	03	00	00	03	03	50	50	100
EI 82X	Elective-8(Group-H)	EI	03	00	00	03	03	50	50	100
	Elective-9 (Group-I)*		04	00	00	04	03	50	50	100
EI P83	Project Work Phase -2	EI	-	-	20	10	-	100	100	200
EI S84	Seminar	EI	00	00	-	02	03	50	-	50
Total			10	00	20	22	12	300	250	550

Electives-7 (Group- G)			Elective-8(Group-H)		
Sl. No	Subject Code	Title of the Subject	Sl. No	Subject Code	Title of the Subject
1	EI 811	Smart Sensors		EI 821	Biomedical DSP
2	EI 812	Low Power VLSI		EI 822	Lasers & Optical Instrumentation
3	EI 813	Wireless Communication		EI 823	Computer Networks
4	EI 814	Industrial Instrumentation		EI 824	Speech Signal Processing

*Interdepartmental Elective

Academic Year 2019-20

Dr. Ambedkar Institute of Technology, Bengaluru-560 056

SCHEME OF TEACHING AND EXAMINATION from Academic Year 2018-19

B.E Electronics and Instrumentation Engineering

Outcome Based Education (OBE) and Choice Based Credit System (CBCS)

Academic Year of Admission 2018-19

III SEMESTER

Sl. No	Course and Course Code		Course Title	Teaching Department	Teaching Hours /Week			Examination				Credits
					Theory	Tutorial	Practical/Draw	Duration	CIE Marks	SEE Marks	Total Marks	
					L	T	P					
1	BC	18MA31	Transforms & Applications	Mathematics	2	2	--	03	50	50	100	3
2	PC	18EI31	Analog Electronic Circuits	EI	3	0	--	03	50	50	100	3
3	PC	18EI32	Digital System Design	EI	4	0	--	03	50	50	100	4
4	PC	18EI33	Network Analysis	EI	3	2	--	03	50	50	100	4
5	PC	18EI34	Measurements and Instrumentation	EI	3	0	--	03	50	50	100	3
6	PC	18EI35	Sensors & Applications	EI	4	0	--	03	50	50	100	4
7	PC	18EIL36	Analog Electronic CircuitsLab	EI	--	0	2	03	50	50	100	1
8	PC	18EIL37	Digital System Design Lab	EI	--	0	2	03	50	50	100	1
9	HS	18HS31	Constitution of India Professional Ethics and Human Rights/ / Env. Studies	Hu/Civ	1	--	--	02	50	50	100	1
10	MC	18HS33	Soft skills (MC)	Humanities	04		--	03	50	-	50	0
TOTAL					24	04	04	29	500	450	950	24

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

11	MC	18MAD31	Advance Mathematics - I	Mathematics	02	01	--	03	50		50	0
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Note: HODs are informed to accommodate one more laboratory in addition to the above courses if needed, without altering the total number of credits (TOTAL: 24).

(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** Advance Mathematics I and II, prescribed to lateral entrant Diploma holders admitted to III 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.

Note: BC: Science Course, PC: Professional Core. Hu: Humanities, MC: Mandatory Course.

Dr. Ambedkar Institute of Technology, Bengaluru-56

SCHEME OF TEACHING AND EXAMINATION from Academic Year 2018-19

B.E Electronics and Instrumentation Engineering

Outcome Based Education (OBE) and Choice Based Credit System (CBCS)

Academic Year of Admission 2018-19

IV SEMESTER

Sl. No	Course and Course code		Course Title	Teaching Department	Teaching Hours /Week			Examination				Credits
					Th eor y	Tutori al	Practi cal/ Draw	Durati on in	CIE Marks	SEE Marks	Total Marks	
					L	T	P					
1	BC	18MA41	Probability, Numerical & Optimization Techniques	Mathematics	2	2	--	03	50	50	100	3
2	PC	18EI41	Process Instrumentation	EI	3	0	--	03	50	50	100	3
3	PC	18EI42	Control Systems	EI	4	0	--	03	50	50	100	4
4	PC	18EI43	Microcontroller and Applications	EI	4	0	--	03	50	50	100	4
5	PC	18EI44	Signals and Systems	EI	3	2	--	03	50	50	100	4
6	PC	18EI45	Linear IC's & Applications	EI	3	0	--	03	50	50	100	3
7	PC	18EIL46	Sensors and Signal Conditioning Circuits Lab	EI	--	0	2	03	50	50	100	1
8	PC	18EIL47	Microcontroller Lab	EI	--	0	2	03	50	50	100	1
9	HS	18HS41/42	Constitution of India Professional Ethics and Human Rights/ Env. Studies	Hum/Civ	1	--	--	02	50	50	100	1
10	MC	18HS43	Employability skills (MC)	Humanities	04		--	03	50	-	50	0
TOTAL					24	04	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 - II	Mathematics	02	01	--	03	50		50	0
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Note: HODs are informed to accommodate one more laboratory in addition to the above courses if needed, without altering the total number of credits (TOTAL: 24). The mandatory non – credit courses Advance Mathematics I and II prescribed at III and IV semesters respectively, to lateral entrant 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.

(a) The mandatory non – credit courses Advance Mathematics I and II, prescribed to lateral entrant Diploma holders admitted to III 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.

Note: BC: Science Course, PC: Professional Core. Hu: Humanities, MC: Mandatory Course. ENV: Environmental Studies, CIP: Constitution of India Professional Ethics and Human Rights

**Scheme of Teaching & Examination
Electronics & Instrumentation Engineering
V Semester**

Academic Year of Admission 2017-18

Subject Code	Title	Teaching Department	Teaching hours/week				Examination			
			L	T	P	Credits	Duration (hrs)	CIE	Theory / Practical SEE	Total Marks
HS03	Management and Entrepreneurship	MBA	04	00	00	04	03	50	50	100
EI 51	Digital Signal Processing	EI	03	02	00	04	03	50	50	100
EI 52	Microcontrollers	EI	04	00	00	04	03	50	50	100
EI 53	Process Control Systems	EI	04	00	00	04	03	50	50	100
EI 54x	Elective-I (Group-A)	EI	03	00	00	03	03	50	50	100
EI L55	DSP Lab	EI	-	-	02	1.0	03	50	50	100
EI L56	Microcontroller Lab	EI	-	-	03	1.5	03	50	50	100
EI L57	Measurements And Virtual Instrumentation Lab	EI	-	-	03	1.5	03	50	50	100
Total			17	02	08	23	26	400	400	800

Electives – 1 (Group – A)		
Sl. No.	Subject Code	Title of the Subject
1	EI 541	Biomedical Instrumentation
2	EI 542	HTML 5 and Java Script
3	EI 543	Automobile Instrumentation
4	EI 544	DSP Architecture

**Scheme of Teaching & Examination
Electronics & Instrumentation Engineering
VI Semester**

Academic Year of Admission 2017-18

Subject Code	Title	Teaching Department	Teaching hours/week				Examination			
			L	T	P	Credits	Duration (hrs)	CIE	Theory / Practical SEE	Total Marks
EI 61	PLC and SCADA	EI	04	00	00	04	03	50	50	100
EI 62	Programming in C++ and Data Structures	EI	03	02	00	04	03	50	50	100
EI 63	Industrial Data Communication	EI	04	00	00	04	03	50	50	100
EI 64	ARM Processor	EI	04	00	00	04	03	50	50	100
EI 65x	Elective-2 (Group-B)	EI	03	00	00	03	03	50	50	100
EI 66x	Elective-3 (Group-C)	EI	03	00	00	03	03	50	50	100
EI L67	ARM Lab	EI	-	-	02	1.0	03	50	50	100
EI L68	Control System & Data Converters Lab	EI	-	-	02	1.0	03	50	50	100
EI P69	Mini Project	EI	-	-	04	02	03	50	50	100
Total			21	02	08	26	27	450	450	900

Electives – 2 (Group – B)			Electives – 3 (Group – C)		
Sl. No.	Subject Code	Title of the Subject	Sl. No.	Subject Code	Title of the Subject
1	EI 651	Operating Systems	1	EI 661	Advanced Control Systems
2	EI 652	Digital Image Processing	2	EI 662	Power Plant Instrumentation
3	EI 653	Analytical Instrumentation	3	EI 663	Aircraft Instrumentation
4	EI 654	Power Electronics and Drives	4	EI 664	Control System Components

***Interdepartmental Elective can be opted from 5th Sem onwards**

**Scheme of Teaching & Examination
Electronics & Instrumentation Engineering
VII Semester**

Academic Year of Admission 2016-17

Subject Code	Title	Teaching Department	Teaching hours/week				Examination			
			L	T	P	Credits	Duration (hrs)	CIE	Theory /Practical SEE	Total Marks
EI 71	VLSI Design	EI	04	00	00	04	03	50	50	100
EI 72	DCS and Industrial safety system	EI	04	00	00	04	03	50	50	100
HS 04	IPR	EI	02	00	00	02	03	50	50	100
EI 73x	Elective-4 (Group-D)	EI	04	00	00	04	03	50	50	100
EI 74x	Elective-5 (Group-E)	EI	03	00	00	03	03	50	50	100
	Elective-6 (Group-F)*		04	00	00	04	03	50	50	100
EI L75	Process Control Lab	EI	-	-	03	1.5	03	50	50	100
EI L76	VLSI Lab	EI	-	-	03	1.5	03	50	50	100
EI P77	Project Work Phase 1				04	02	04	-	-	-
Total			21	00	10	26	28	400	400	800

Electives-4 (Group- D)			Electives-5 (Group- E)		
Sl. No	Subject Code	Title of the Subject	Sl. No	Subject Code	Title of the Subject
1	EI 731	Robotics and Automation	1	EI 741	Embedded Systems & RTOS
2	EI 732	Neural Networks & Fuzzy Logic	2	EI 742	Micro Systems and Nanotechnology
3	EI 733	Medical Imaging Systems	3	EI 743	Digital System Design Using Verilog HDL
4	EI 734	Industrial Process Control	4	EI 744	Remote Sensing and Telemetry

**Scheme of Teaching & Examination
Electronics & Instrumentation Engineering
VIII Semester**

Academic Year of Admission 2016-17

Subject Code	Title	Teaching Department	Teaching hours/week				Examination			
			L	T	P	Credits	Duration (hrs)	CIE	Theory / Practical SEE	Total Marks
EI 81X	Elective-7(Group-G)	EI	03	00	00	03	03	50	50	100
EI 82X	Elective-8(Group-H)	EI	03	00	00	03	03	50	50	100
	Elective-9 (Group-I)*		04	00	00	04	03	50	50	100
EI P83	Project Work Phase -2	EI	-	-	20	10	-	100	100	200
EI S84	Seminar	EI	00	00	-	02	03	50	-	50
Total			10	00	20	22	12	300	250	550

Electives-7 (Group- G)			Elective-8(Group-H)		
Sl. No	Subject Code	Title of the Subject	Sl. No	Subject Code	Title of the Subject
1	EI 811	Smart Sensors		EI 821	Biomedical DSP
2	EI 812	Low Power VLSI		EI 822	Lasers & Optical Instrumentation
3	EI 813	Wireless Communication		EI 823	Computer Networks
4	EI 814	Industrial Instrumentation		EI 824	Speech Signal Processing

Academic Year 2020-21

Dr. Ambedkar Institute of Technology, Bengaluru-560 056

SCHEME OF TEACHING AND EXAMINATION from Academic Year 2020-21

B.E Electronics and Instrumentation Engineering

Outcome Based Education (OBE) and Choice Based Credit System (CBCS)

Academic Year of Admission 2019-20

III SEMESTER

Sl. No	Course and Course Code		Course Title	Teaching Department	Teaching Hours /Week			Examination				Credits
					The	Tut	Pra	Dura	CIE Marks	SEE Marks	Total Marks	
1	BC	18MA31	Transforms & Applications	Mathematics	2	2	--	03	50	50	100	3
2	PC	18EI31	Analog Electronic Circuits	EI	3	0	--	03	50	50	100	3
3	PC	18EI32	Digital System Design	EI	4	0	--	03	50	50	100	4
4	PC	18EI33	Network Analysis	EI	3	2	--	03	50	50	100	4
5	PC	18EI34	Measurements and Instrumentation	EI	3	0	--	03	50	50	100	3
6	PC	18EI35	Sensors & Applications	EI	4	0	--	03	50	50	100	4
7	PC	18EIL36	Analog Electronic Circuits Lab	EI	--	0	2	03	50	50	100	1
8	PC	18EIL37	Digital System Design Lab	EI	--	0	2	03	50	50	100	1
9	HS	18HS31	Constitution of India Professional Ethics and Human Rights / Env. Studies	Hu/Civ	1	--	--	02	50	50	100	1
10	MC	18HS33	Soft skills (MC)	Humanities	04		--	03	50	-	50	0
TOTAL					24	04	04	29	500	450	950	24

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

11	MC	18MAD31	Advance Mathematics - I	Mathematics	02	01	--	03	50		50	0
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Note: HODs are informed to accommodate one more laboratory in addition to the above courses if needed, without altering the total number of credits (TOTAL: 24).

(c) **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.

(d) **The mandatory non – credit courses** Advance Mathematics I and II, prescribed to lateral entrant Diploma holders admitted to III 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.

Note: BC: Science Course, PC: Professional Core. Hu: Humanities, MC: Mandatory Course.

Dr. Ambedkar Institute of Technology, Bengaluru-56

SCHEME OF TEACHING AND EXAMINATION from Academic Year 2020-21

B.E Electronics and Instrumentation Engineering

Outcome Based Education (OBE) and Choice Based Credit System (CBCS)

Academic Year of Admission 2019-20

IV SEMESTER

Sl. No	Course and Course code		Course Title	Teaching Department	Teaching Hours /Week			Examination				Credits
					Th	Tu	Pr	Dur	CIE Marks	SEE Marks	Total Marks	
					L	T	P					
1	BC	18MA41	Probability, Numerical & Optimization Techniques	Mathematics	2	2	--	03	50	50	100	3
2	PC	18EI41	Process Instrumentation	EI	3	0	--	03	50	50	100	3
3	PC	18EI42	Control Systems	EI	4	0	--	03	50	50	100	4
4	PC	18EI43	Microcontroller and Applications	EI	4	0	--	03	50	50	100	4
5	PC	18EI44	Signals and Systems	EI	3	2	--	03	50	50	100	4
6	PC	18EI45	Linear IC's & Applications	EI	3	0	--	03	50	50	100	3
7	PC	18EIL46	Sensors and Signal Conditioning Circuits Lab	EI	--	0	2	03	50	50	100	1
8	PC	18EIL47	Microcontroller Lab	EI	--	0	2	03	50	50	100	1
9	HS	18HS41/42	Constitution of India Professional Ethics and Human Rights/ Env. Studies	Hum/Civ	1	--	--	02	50	50	100	1
10	MC	18HS43	Employability skills (MC)	Humanities	04		--	03	50	-	50	0
TOTAL					24	04	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 - II	Mathematics	02	01	--	03	50		50	0
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Note: HODs are informed to accommodate one more laboratory in addition to the above courses if needed, without altering the total number of credits (TOTAL: 24). The mandatory non – credit courses Advance Mathematics I and II prescribed at III and IV semesters respectively, to lateral entrant 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 Advance Mathematics I and II, prescribed to lateral entrant Diploma holders admitted to III 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.

Note: BC: Science Course, PC: Professional Core. Hu: Humanities, MC: Mandatory Course. ENV: Environmental Studies, CIP: Constitution of India Professional Ethics and Human Rights

Dr. Ambedkar Institute of Technology, Bengaluru-560 056

SCHEME OF TEACHING AND EXAMINATION from Academic Year 2020-21

B.E Electronics and Instrumentation Engineering

Outcome Based Education(OBE) and Choice Based Credit System (CBCS)

Academic Year of Admission 2018-19

V SEMESTER

Sl.No	Course and Course code		Course Title	Teaching	Teaching Hours /Week			Examination				Credits
					Th	Tu	Pr	Dur	CIE Marks	SEE Marks	Total Marks	
					L	T	P					
1	HS	18HS51/52	M&E / IPR (title as per BOS decision)	Hu	3	-	--	03	50	50	100	3
2	PC	18EI51	Digital Signal Processing	EI	3	2	--	03	50	50	100	4
3	PC	18EI52	Communication Technology	EI	3	-	--	03	50	50	100	3
4	PC	18EI53	Process Automation and Control	EI	3	--	--	03	50	50	100	3
5	PC	18EI54	C++ and Data Structures	EI	3	2	--	03	50	50	100	4
6	PE	18EI55X	Elective -1	EI	3	--	--	03	50	50	100	3
7	OE	18EI56X	Open Elective -A	-	3	--	--	03	50	50	100	3
8	PC	18EIL57	Digital Signal Processing Lab	EI	--	--	2	03	50	50	100	1
9	PC	18EIL58	Control systems and simulation Lab	EI	--	--	2	03	50	50	100	1
TOTAL					21	04	4	27	450	450	900	25

Note: Hu: Humanities, PC: Professional Core, MC: Mandatory Course,

Electives

Course code	Professional Electives -1	Open Elective –A
18EI551	Biomedical Instrumentation	Students can select any one of the open electives (Please refer to consolidated list of Dr AIT for open electives) offered by any Department. Selection of an open elective is not allowed provided: <ul style="list-style-type: none"> 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. A similar course, under any category, is prescribed in the higher semesters of the programme. Registration to electives shall be documented under the guidance of Programme Coordinator/ Mentor.
18EI552	Power Electronics and Drives	
18EI553	Digital Image Processing	
18EI554	Automotive Electronics	
OPEN ELECTIVE-A		
18EI561	Sensors & Applications	
18EI562	Virtual Instrumentation	

.Ambedkar Institute of Technology, Bengaluru-560 056

SCHEME OF TEACHING AND EXAMINATION from Academic Year2020-21

B.E Electronics and Instrumentation Engineering

Outcome Based Education(OBE) and Choice Based Credit System (CBCS)

Academic Year of Admission 2018-19

VI SEMESTER

Sl. No	Course and Course code		Course Title	Teaching Department	Teaching Hours /Week			Examination				Credits
					Theory Lecture	Tutorial	Practical/ Drawing	Duration in hours	CIE Marks	SEE Marks	Total Marks	
					L	T	P					
1	HS	18HS61/62	M&E/IPR	Hu	3	--	--	03	50	50	100	3
2	PC	18EI61	PLC and SCADA	EI	4	--	--	03	50	50	100	4
3	PC	18EI62	Embedded Systems using ARM Controller	EI	4	--	--	03	50	50	100	4
4	PC	18EI63	Advanced Control System	EI	3	--	--	03	50	50	100	3
5	PE	18EI64X	Professional Elective -2	EI	3	--	--	03	50	50	100	3
6	OE	18EI65X	Open Elective -B	-	3	--	--	03	50	50	100	3
7	PC	18EIL66	Embedded System Design Lab	EI	--	--	2	03	50	50	100	1
8	PC	18EIL67	Virtual Instrumentation Lab	EI	--	--	2	03	50	50	100	1
9	MP	18EIM68	Mini-project					03	50	50	100	2
10	INT	18 EII69	Industry Internship	(To be carried out during the intervening vacations of VI and VII semesters)				--	--	--	--	--
TOTAL					20	0	4	24	450	450	900	24

Note: PC: Professional core, PE: Professional Elective, OE: Open Elective, MP: Mini-Project, INT: Internship.

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.

Electives

Course code	Professional Electives -2	Open Elective –B
18 EI 641	Aircraft Instrumentation	Students can select any one of the open electives (Please refer to consolidated list of DrAIT for open electives) offered by any Department.
18 EI 642	Robotics and Automation	

18 EI 643	Machine Learning using Python Programming
18 EI 644	VLSI Design
Open Elective –B	
18EI651	Air Craft Instrumentation
18EI652	Robotics and Applications

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.
 - A similar course, under any category, is prescribed in the higher semesters of the programme.
- Registration to electives shall be documented under the guidance of Programme Coordinator/ Mentor.

**Scheme of Teaching & Examination
Electronics & Instrumentation Engineering
VII Semester**

Academic Year of Admission 2017-18

Subject Code	Title	Teaching Department	Teaching hours/week				Examination			
			L	T	P	Credits	Duration (hrs)	CIE	Theory / Practical SEE	Total Marks
EI 71	VLSI Design	EI	04	00	00	04	03	50	50	100
EI 72	DCS and Industrial safety system	EI	04	00	00	04	03	50	50	100
HS 04	IPR	EI	02	00	00	02	03	50	50	100
EI 73x	Elective-4 (Group-D)	EI	04	00	00	04	03	50	50	100
EI 74x	Elective-5 (Group-E)	EI	03	00	00	03	03	50	50	100
	Elective-6 (Group-F)*		04	00	00	04	03	50	50	100
EI L75	Process Control Lab	EI	-	-	03	1.5	03	50	50	100
EI L76	VLSI Lab	EI	-	-	03	1.5	03	50	50	100
EI P77	Project Work Phase 1				04	02	04	-	-	-
Total			21	00	10	26	28	400	400	800

Electives-4 (Group- D)			Electives-5 (Group- E)		
Sl. No	Subject Code	Title of the Subject	Sl. No	Subject Code	Title of the Subject
1	EI 731	Robotics and Automation	1	EI 741	Embedded Systems & RTOS
2	EI 732	Neural Networks & Fuzzy Logic	2	EI 742	Micro Systems and Nanotechnology
3	EI 733	Medical Imaging Systems	3	EI 743	Digital System Design Using Verilog HDL
4	EI 734	Industrial Process Control	4	EI 744	Remote Sensing and Telemetry

Scheme of Teaching & Examination
Electronics & Instrumentation Engineering
 VIII Semester

Academic Year of Admission 2017-18

Subject Code	Title	Teaching Department	Teaching hours/week				Examination			
			L	T	P	Credits	Duration (hrs)	CIE	Theory / Practical SEE	Total Marks
EI 81X	Elective-7(Group-G)	EI	03	00	00	03	03	50	50	100
EI 82X	Elective-8(Group-H)	EI	03	00	00	03	03	50	50	100
	Elective-9 (Group-I)*		04	00	00	04	03	50	50	100
EI P83	Project Work Phase -2	EI	-	-	20	10	-	100	100	200
EI S84	Seminar	EI	00	00	-	02	03	50	-	50
Total			10	00	20	22	12	300	250	550

Electives-7 (Group- G)			Elective-8(Group-H)		
Sl. No	Subject Code	Title of the Subject	Sl. No	Subject Code	Title of the Subject
1	EI 811	Smart Sensors		EI 821	Biomedical DSP
2	EI 812	Low Power VLSI		EI 822	Lasers & Optical Instrumentation
3	EI 813	Wireless Communication		EI 823	Computer Networks
4	EI 814	Industrial Instrumentation		EI 824	Speech Signal Processing

Academic Year 2021-22

Dr. Ambedkar Institute of Technology, Bengaluru-560 056

SCHEME OF TEACHING AND EXAMINATION from Academic Year 2021-22

B.E Electronics and Instrumentation Engineering
Outcome Based Education (OBE) and Choice Based Credit System (CBCS)

Academic Year of Admission 2020-21

III SEMESTER

Sl. No	Course and Course Code		Course Title	Teaching Department	Teaching Hours /Week			Examination			Credits	
					Theory Lecture	Tutorial	Practical/ Drawing	Duration in hours	CIE Marks	SEE Marks		Total Marks
					L	T	P					
1	BC	18MA31	Transforms & Applications	Mathematics	2	2	--	03	50	50	100	3
2	PC	18EI31	Analog Electronic Circuits	EI	3	0	--	03	50	50	100	3
3	PC	18EI32	Digital System Design	EI	4	0	--	03	50	50	100	4
4	PC	18EI33	Network Analysis	EI	3	2	--	03	50	50	100	4
5	PC	18EI34	Measurements and Instrumentation	EI	3	0	--	03	50	50	100	3
6	PC	18EI35	Sensors & Applications	EI	4	0	--	03	50	50	100	4
7	PC	18EIL36	Analog Electronic Circuits Lab	EI	--	0	2	03	50	50	100	1
8	PC	18EIL37	Digital System Design Lab	EI	--	0	2	03	50	50	100	1
9	HS	18HS31	Constitution of India Professional Ethics and Human Rights/ / Env. Studies	Hu/Civ	1	--	--	02	50	50	100	1
10	MC	18HS33	Soft skills (MC)	Humanities	04		--	03	50	-	50	0
TOTAL					24	04	04	29	500	450	950	24
Course prescribed to lateral entry Diploma holders admitted to III semester of Engineering programs												
11	MC	18MAD31	Advance Mathematics - I	Mathematics	02	01	--	03	50		50	0

Note: HODs are informed to accommodate one more laboratory in addition to the above courses if needed, without altering the total number of credits (TOTAL: 24).

(e) **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.

(f) **The mandatory non – credit courses** Advance Mathematics I and II, prescribed to lateral entrant Diploma holders admitted to III 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.

Note: BC: Science Course, PC: Professional Core. Hu: Humanities, MC: Mandatory Course.

Dr. Ambedkar Institute of Technology, Bengaluru-56

SCHEME OF TEACHING AND EXAMINATION from Academic Year 2021-22

B.E Electronics and Instrumentation Engineering
Outcome Based Education (OBE) and Choice Based Credit System (CBCS)

Academic Year of Admission 2020-21

IV SEMESTER

Sl. No	Course and Course code		Course Title	Teaching Department	Teaching Hours /Week			Examination			Credits	
					Theory Lecture	Tutorial	Practical/ Drawing	Duration in hours	CIE Marks	SEE Marks		Total Marks
					L	T	P					
1	BC	18MA41	Probability, Numerical & Optimization Techniques	Mathematics	2	2	--	03	50	50	100	3
2	PC	18EI41	Process Instrumentation	EI	3	0	--	03	50	50	100	3
3	PC	18EI42	Control Systems	EI	4	0	--	03	50	50	100	4
4	PC	18EI43	Microcontroller and Applications	EI	4	0	--	03	50	50	100	4
5	PC	18EI44	Signals and Systems	EI	3	2	--	03	50	50	100	4
6	PC	18EI45	Linear IC's & Applications	EI	3	0	--	03	50	50	100	3
7	PC	18EIL46	Sensors and Signal Conditioning Circuits Lab	EI	--	0	2	03	50	50	100	1
8	PC	18EIL47	Microcontroller Lab	EI	--	0	2	03	50	50	100	1
9	HS	18HS41/42	Constitution of India Professional Ethics and Human Rights/ Env. Studies	Hum/Civ	1	--	--	02	50	50	100	1
10	MC	18HS43	Employability skills (MC)	Humanities	04		--	03	50	-	50	0
TOTAL					24	04	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 - II	Mathematics	02	01	--	03	50		50	0

Note: HODs are informed to accommodate one more laboratory in addition to the above courses if needed, without altering the total number of credits (TOTAL: 24).

(c) The mandatory non – credit courses Advance Mathematics I and II prescribed at III and IV semesters respectively, to lateral entrant 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.

(d) The mandatory non – credit courses Advance Mathematics I and II, prescribed to lateral entrant Diploma holders admitted to III 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.

**Note: BC: Science Course, PC: Professional Core. Hu: Humanities, MC: Mandatory Course.
ENV: Environmental Studies, CIP: Constitution of India Professional Ethics and Human Rights**

Dr. Ambedkar Institute of Technology, Bengaluru-560 056

SCHEME OF TEACHING AND EXAMINATION from Academic Year 2021-22

B.E Electronics and Instrumentation Engineering

Outcome Based Education(OBE) and Choice Based Credit System (CBCS)

Academic Year of Admission 2019-20

V SEMESTER

Sl. No	Course and Course code		Course Title	Teaching Department	Teaching Hours /Week			Examination			Credits	
					Theory Lecture	Tutorial	Practical/ Drawing	Duration in hours	CIE Marks	SEE Marks		Total Marks
					L	T	P					
1	HS	18HS51/52	M&E / IPR (title as per BOS decision)	Hu	3	-	--	03	50	50	100	3
2	PC	18EI51	Digital Signal Processing	EI	3	2	--	03	50	50	100	4
3	PC	18EI52	Communication Technology	EI	3	-	--	03	50	50	100	3
4	PC	18EI53	Process Automation and Control	EI	3	--	--	03	50	50	100	3
5	PC	18EI54	C++ and Data Structures	EI	3	2	--	03	50	50	100	4
6	PE	18EI55X	Elective -1	EI	3	--	--	03	50	50	100	3
7	OE	18EI56X	Open Elective -A	-	3	--	--	03	50	50	100	3
8	PC	18EIL57	Digital Signal Processing Lab	EI	--	--	2	03	50	50	100	1
9	PC	18EIL58	Control systems and simulation Lab	EI	--	--	2	03	50	50	100	1
TOTAL					21	04	4	27	450	450	900	25

Note: Hu: Humanities, PC: Professional Core, MC: Mandatory Course,

Electives

Course code	Professional Electives -1	Open Elective –A
18EI551	Biomedical Instrumentation	Students can select any one of the open electives (Please refer to consolidated list of Dr AIT for open electives) offered by any Department. Selection of an open elective is not allowed provided:
18EI552	Power Electronics and Drives	
18EI553	Digital Image Processing	
18EI554	Automotive Electronics	

OPEN ELECTIVE-A	
18EI561	Sensors& Applications
18EI562	Virtual Instrumentation

- 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.
 - A similar course, under any category, is prescribed in the higher semesters of the programme.
- Registration to electives shall be documented under the guidance of Programme Coordinator/ Mentor.

Dr.Ambedkar Institute of Technology, Bengaluru-560 056

SCHEME OF TEACHING AND EXAMINATION from Academic Year2021-22

B.E Electronics and Instrumentation Engineering
Outcome Based Education(OBE) and Choice Based Credit System (CBCS)

Academic Year of Admission 2019-20

VI SEMESTER

Sl. No	Course and Course code		Course Title	Teaching Department	Teaching Hours /Week			Examination			Credits	
					Theory Lecture	Tutorial	Practical/ Drawing	Duration in hours	CIE Marks	SEE Marks		Total Marks
					L	T	P					
1	HS	18HS61/62	M&E/IPR	Hu	3	--	--	03	50	50	100	3
2	PC	18EI61	PLC and SCADA	EI	4	--	--	03	50	50	100	4
3	PC	18EI62	Embedded Systems using ARM Controller	EI	4	--	--	03	50	50	100	4
4	PC	18EI63	Advanced Control System	EI	3	--	--	03	50	50	100	3
5	PE	18EI64X	Professional Elective -2	EI	3	--	--	03	50	50	100	3
6	OE	18EI65X	Open Elective -B	-	3	--	--	03	50	50	100	3
7	PC	18EIL66	Embedded System Design Lab	EI	--	--	2	03	50	50	100	1
8	PC	18EIL67	Virtual Instrumentation Lab	EI	--	--	2	03	50	50	100	1
9	MP	18EIM68	Mini-project					03	50	50	100	2
10	INT	18 EII69	Industry Internship	(To be carried out during the intervening vacations of VI and VII semesters)				--	--	--	--	--
TOTAL					20	0	4	24	450	450	900	24

Note: PC: Professional core, PE: Professional Elective, OE: Open Elective, MP: Mini-Project, INT: Internship.

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.

Electives

Course code	Professional Electives -2	Open Elective –B
18 EI 641	Aircraft Instrumentation	Students can select any one of the open electives (Please refer to consolidated list of Dr AIT for open electives) offered by any Department.
18 EI 642	Robotics and Automation	

Dr.Ambedkar Institute of Technology, Bengaluru-560 056

SCHEME OF TEACHING AND EXAMINATION from Academic Year 2021-22

B.E Electronics and Instrumentation Engineering
Outcome Based Education(OBE) and Choice Based Credit System (CBCS)

18 EI 643	Machine Learning using Python Programming
18 EI 644	VLSI Design
Open Elective –B	
18EI651	Air Craft Instrumentation
18EI652	Robotics and Applications

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.
- A similar course, under any category, is prescribed in the higher semesters of the programme.

Registration to electives shall be documented under the guidance of Programme Coordinator/ Mentor.

Academic Year of Admission 2018-19												
VII SEMESTER												
Sl.No	Course and Course code		Course Title	Teaching Department	Teaching Hours /Week			Examination				Credits
					Theory Lecture	Tutorial	Practical/	Duration in hours	CIE Marks	SEE Marks	Total Marks	
					L	T	P					
1	MC	18HS71/72	CMEP /OSHA	IM/CV	2	--	--	03	50	50	100	2
2	PC	18EI71	IOT and Wireless Sensor Networks	EI	4	--	--	03	50	50	100	4
3	PC	18EI72	Industrial Data Communication & DCS	EI	4	--	--	03	50	50	100	4
4	PE	18EI73X	Professional Elective -3	EI	3	--	--	03	50	50	100	3
5	PE	18EI74X	Professional Elective -4	EI	3	--	--	03	50	50	100	3
6	OE	18EI75X	Open Elective –C	-	3	--	--	03	50	50	100	3
7	PC	18EIL76	Process Control and Automation Lab	EI	--	--	2	03	50	50	100	1
8	PC	18EIL77	IOT Lab	EI	--	--	2	03	50	50	100	1
9	Project	18EIP78	Project Work Phase – 1	EI	--	--	2	03	50	50	100	2
10	INT	18EII79	Internship	(If not completed after VI semester examinations, it has to be carried out during the intervening vacations of VII and VIII semesters)				--	--	--	--	--
TOTAL				19	--	6	27	450	450	900	23	
Note: PC: Professional Core, PE: Professional Elective, OE: Open Elective, INT: Internship,MC: Mandatory Course												
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 SEE examination will be conducted during VIII semester and prescribed credits shall be 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 SEE examination after satisfy the internship requirements.												
Electives												
Course code		Professional Electives – 3				Open Elective –C						
18 EI731		Analytical Instrumentation				Students can select any one of the open electives (Please refer to						

18 EI732	Artificial Intelligence in Industrial Automation
18 EI733	Biomedical Signal Processing
18 EI734	Neural Networks & Applications
Course code	Professional Electives – 4
18 EI741	Lasers & Optical Instrumentation
18 EI742	Multimedia Communication
18EI743	Adaptive Signal Processing
18EI744	Micro Systems and Nanotechnology
Open Elective –C	
18EI751	Optical Instrumentation & Applications
18EI752	Instrumentation & measurement Techniques
CMEP: Cost Management of Engg Projects, OSHA: Occupational Safety and Health Administration	

consolidated list of Dr. AIT for 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.
 - A similar course, under any category, is prescribed in the higher semesters of the programme.

Registration to electives shall be documented under the guidance of Programme Coordinator/ Mentor.

Dr.Ambedkar Institute of Technology, Bengaluru-560 056

SCHEME OF TEACHING AND EXAMINATION from Academic Year 2021-22

B.E Electronics and Instrumentation Engineering

Outcome Based Education(OBE) and Choice Based Credit System (CBCS)

Academic Year of Admission 2018-19

VIII SEMESTER

Sl. No	Course and Course code		Course Title	Teaching Department	Teaching Hours /Week			Examination				Credits
					Theory Lecture	Tutorial	Practical/ Drawing	Duration in hours	CIE Marks	SEE Marks	Total Marks	
					L	T	P					
1	MC	18XX81	CMEP /OSHA	IM /CV	4	--	--	03	50	50	100	2
2	Project	18EIP84	Project Work Phase – 2		--	--	20	03	50	50	100	10
3	Seminar	18EIS85	Technical Seminar		--	--	2	03	50	50	100	1
4	INT	18EII86	Internship	(Completed during the intervening vacations of VI and VII semesters and /or VII and VIII semesters.)			03	50	50	100	2	
TOTAL					04	--	22	12	200	200	400	15

Note: PC: Professional Core, PE: Professional Elective, OE: Open Elective, INT: Internship, MC: Mandatory Course

Electives

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.

CMEP: Cost Management of Engg Projects, OSHA:Occupational Safety and Health Administration