



OSMANIA UNIVERSITY
HYDERABAD – 500 007

No. S/S/M/Acad.II/2017

Dated: 1) -04-2017

The Dean

Faculty of -----
Osmania University
Hyderabad.

Sub: Osmania University - Choice Based Credit System (CBCS) - Report of the committee to frame Rules, Regulations and Guidelines - 2016 - 2017 for undergraduate courses - Communication - Reg.

Sir / Madam,

With reference to the subject cited, I am to inform you that the Standing Committee of the Academic Senate at its meeting held on 23-03-2017 has resolved to approve the recommendations of the committee to frame **Rules & Regulations and guidelines** on adoption of **CBCS at undergraduate level** Osmania University with effect from the academic year 2016-2017 (copy enclosed).

This is for your information and necessary action.

Yours Sincerely,


DEPUTY REGISTRAR
(Academic)

Copy to

1. The Principal, -----
2. The Head, Dept. of -----, OU.
3. The Chairperson, BoS. in -----, OU.
4. The Controller of Examinations, OU.
5. The Addl. Controller of Examinations (UG/PG/Prof/Conf.), O.U.
6. The Supt. Unit-II to note the action taken on item No.8

The Director (I.S.) with a request to place the same in Univ. website



Dean, Faculty of Informatics
University College of Engineering(A), Osmania University, Hyderabad-007

Prof Syeda Sameen Fatima
Dean, Faculty of Informatics

Tel.no. 040-27097577
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Grams :UNICOLENG

Order no. /DeanIT/2016

Date: 04-02-2016

Order

Osmania University (OU) has planned to introduce Choice Based Credit System (CBCS) from the academic year 2016-2017 for all its undergraduate and postgraduate programs as per the direction of the UGC. The following Working Groups have been formed for defining the Scheme, Syllabus, Rules and Regulations as per the UGC guidelines for implementing CBCS:

1. **Working Group for MCA**
 - a. Dr K Shyamala, OUCE, Chairperson
 - b. Dr VB Narsimha, OUCE, Member
 - c. Mrs B Sujatha, OUCE, Member
2. **Working Group for MSc(IS)**
 - a. Dr K Shyamala, OUCE, Chairperson
 - b. Dr VB Narsimha, OUCE, Member
 - c. Mrs B Sujatha, OUCE, Member
 - d. Head, Dept of CSE/IT, Nizam College, Member
3. **Working Group for BCA**
 - a. Dr K Shyamala, OUCE, Chairperson
 - b. Dr VB Narsimha, OUCE, Member
 - c. Mrs B Sujatha, OUCE, Member
 - d. Head, Dept of CSE/IT, Nizam College, Member
 - e. Head, Dept of CSE/IT, Saifabad PG College, Member
 - f. Head, Dept of CSE/IT, Secunderabad PG College, Member
4. **Working Group for BSc**
 - a. Dr K Shyamala, OUCE, Chairperson
 - b. Dr VB Narsimha, OUCE, Member
 - c. Mrs B Sujatha, OUCE, Member
 - d. Head, Dept of CSE/IT, Nizam College, Member
 - e. Head, Dept of CSE/IT, Saifabad PG College, Member
 - f. Head, Dept of CSE/IT, Secunderabad PG College, Member
 - g. Head, Dept of CSE/IT, Kothi Women's College, Member

5



Chairperson, Board of Studies, IT
University College of Engineering(A), Osmania University, Hyderabad-007

Prof P Premchand
Chairperson, Board of Studies, IT

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Grams :UNICOLENG

5. Working Group for BE(IT)
- a. Dr K Shyamala, OUCE, Chairperson
 - b. Dr VB Narsimha, OUCE, Member
 - c. Mrs B Sujatha, OUCE, Member
 - d. Head, Dept of CSE, Vasavi College of Engineering, Member
 - e. Head, Dept of IT, CBIT, Member
 - f. Head, Dept of IT, MVSR, Member
 - g. Dr Moiz Khaiser, MJCET, Member

Chairperson, Board of Studies, IT
CHAIRMAN
Board of Studies (IT)
Dept. of Computer Science & Engg
University College of Engineering
Osmania University, Hyd-500 007



University College of Engineering

(AUTONOMOUS)

OSMANIA UNIVERSITY, HYDERABAD - 500 007.

Minutes of the Meeting of the Committee constituted for consideration of the introduction of CBCS (Choice Based Credit System) in P.G. Programmes of Engineering held on 8th May 2015 at 12.00 Noon.

Members Present

- | | |
|---|------------------|
| 1. Prof. Ravande Kishore, Director, CDAAC | Chairperson |
| 2. Prof. A. Venugopal Reddy, Dean, Faculty of Engg. | Special invitee. |
| 3. Prof. PVN Prasad, Dept. of Electrical Engg. | Member |
| 4. Prof. Sriram Venkatesh, Dept. of Mech. Engg. | Member/Convener |
| 5. Dr. P. Rajasekhar, Dept. of Civil Engg. | Member |

Member on Leave of Absence

1. Prof. Sameen Fatima, Dept. of CSE

The Chairperson extended welcome to the members and special invitee and initiated the proceedings of the meetings.

Prof. Ravande Kishore and Prof. A. Venugopal Reddy briefed the members about Choice Based Credit System (CBCS) to be introduced at P.G. level as per the directions of UGC. Prof. A. Venugopal Reddy also briefed about the initiatives taken by the University authorities about CBCS. The committee discussed all the issues pertaining CBCS and the existing system of P.G. Programmes in Engineering at University College of Engineering. Accordingly, the committee arrived at certain recommendations as listed below:

1. To continue with present pattern of 6 core subjects + 6 elective subjects + Seminars and Laboratories.

To include 3 to 4 cross discipline / Cross specialization courses as electives in each of the P.G. Programme. This should necessarily include Engineering Research Methodology subject. A Joint meeting of Board of Studies of various Departments is to be convened to finalize Cross discipline /Cross specialization courses as electives.

3. To introduce the credit system in P.G Programmes of engineering as per the details given below.

Subject particulars	Instructions/Contact hours	No. of credits
Core/elective subject	Three clock hours duration per week	03
Seminar	Two and half hour duration per week	02
Laboratory	Two and half hour duration per week	02
Project Seminar	Four clock hours per week*	08
Dissertation	Six clock hours per week*	12

(* Minimum contact for students to interact with the faculty)

4. To give more weightage for continuous internal assessment (CIA) of students.

Accordingly the marks for CIA are to be revised upwards to 30(Thirty) and Semester examination (ESE) marks are to be revised to 70 (Seventy).

5. Existing minimum marks of 50(Combined CIA+ESE) remain the pass marks in any course.

6. As regards to Seminars and Laboratories, they would continue to remain as Departmental requirements with the same criteria of 50% as pass marks.

7. To introduce grace marks of two for candidates who are failing by only two marks margin in any theory subject.

8. To award letter grading for each course of P.G. Programmes on the same scale as is done for courses of B.E Programmes.

9. For Calculation of SGPA and CGPA, it is recommended to adopt the same guidelines followed for B.E Programmes.

10. To reintroduce re-registration of subject as was practiced earlier.

The committee decided to meet again to discuss and evolve the evaluation procedure for Project seminar and Dissertation.

Chairperson



OSMANIA UNIVERSITY
HYDERABAD - 500 007

No. ⁵⁷⁸ /I/Acad.I/2016

Date: 6 -06-2016

To

All the Members of Faculty of Engineering,
Osmania University,
HYDERABAD.

Sub: Convening the Meeting of Faculty of Engineering on 18-6-2016 –
Notice – Issued - Reg.

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Sir/Madam,

A meeting of the Faculty of Engineering, Osmania University, is convened on **Saturday the 18th June, 2016 at 10.30 A.M.** in the Committee Room, Department of Civil Engineering, University College of Engineering, (Main Building-1st Floor), Osmania University, Hyderabad to discuss the following agenda

1. To consider and approve B.E.I year syllabus and scheme of instructions under CBCS system from the year 2016-2017.
2. To consider and approve B.E. III year syllabus and scheme of instructions from the year 2016-2017

You are, therefore, requested kindly to make it convenient to attend the meeting on **18-6-2016 at 10.30 A.M.** A copy of the agenda will be sent in due course.

The External members are requested to produce the travelling tickets for claiming the travelling allowance while submitting the bills.

M. E. S.
m. j.

Yours faithfully,

[Signature]
ASSISTANT REGISTRAR
(Academic)

To

1. The Dean, Faculty of Engineering O.U.
2. The Dean, Faculty of Technology, O.U.
3. The Dean, Faculty of Science, O.U.
4. The Dean, Faculty of Informatics, O.U.
5. The Chairman, Board of Studies in Electronics & Communication Engg., O.U.
6. The Chairman, Board of Studies in Computer Science & Engg., O.U.
7. The Chairman, Board of Studies in Electrical Engg., O.U.
8. The Chairman, Board of Studies in Civil Engineering, O.U.
9. The Chairman, Board of Studies in Mechanical Engineering, O.U.
10. The Chairman, Board of Studies in Biomedical Engineering, O.U.
11. The Principal, University College of Engineering, O.U.
12. Prof. Ramachandram, Dept. of Comp. Science & Engineering, O.U.
13. Prof. P.V.N. Prasad, Dept. of Electrical Engineering, O.U.
14. Prof. Venkateswara Rao, Dept. of Bio-Medical Engineering, O.U.
15. Prof. S. Venkatesh, Dept. of Mechanical Engineering, O.U.
16. Dr. P. Chandrasekhar, Dept. of ECE, O.U.
17. The Principal, Chaitanya Bharathi Institute of Technology, Gandipet, Hyderabad
18. The Principal, MVSR, Engineering College, Nadergul, R.R. Dist.
19. The Principal, Muffakhamjah College of Engg. & Tech. Banjarahills, Hyderabad.
20. The Principal, Vasavi College of Engineering, Ibrahimbagh, Hyderabad.
21. The Principal, Deccan College of Engg. & Tech. Darus-salam, Nampally, ,
Hyderabad.
22. The Principal, Methodist College of Engineering, Abids, Hyderabad.
23. The Principal, College of Engineering, JNTU, Kukatpally, Hyderabad – 500 085.
24. The Dean, Academic, NIT, Warangal.
25. The Executive Director (R & D), ECIL., Hyderabad – 500 062.
26. Dr. V.N. Sastry, Assistant Professor, Institute of Development & Research in
Banking & Technology (IDRBT), Road No. 1, Castle Hills, Masab Tank,
Hyderabad, 57
27. The Director, Institute of Chemical Technology (IICT) Uppal Road Hyd.7
28. The Principal Director, CITD, Balanagar, Hyd.37
29. The Executive Director, BHEL (R&D) Vikasnagar, Hyderabad.93

Copy to: -

1. The Dean, Faculty of Engineering, O.U.
2. The Asst. Registrar (Accounts – Pay Bills), O.U. (with a request to make
arrangements for the Payment of TA / DA for the External Members)

09/JUNE/2016/ECE(3)

E-mail sekharpaidimarry@gmail.com

Fax: 040-27095179



DEPT. OF ELECTRONICS & COMMUNICATION ENGINEERING
UNIVERSITY COLLEGE OF ENGINEERING (AUTONOMOUS)
OSMANIA UNIVERSITY: HYDERABAD – 500 007

Subject : Minutes of Meeting of Board of Studies in ECE, Osmania University, Hyderabad.
Ref No : 442/ECE/OU/BoS/2016 dated 6th June, 2016
Date, Time & Venue : 9th June, 2016 at 2:30 pm at UCE ECE Dept., OU.

The following were present:

1. Dr. P. Chandra Sekhar, Chairman, BOS in ECE and Convener
2. Dr. B. Rajendra Naik, Head, ECE, OU
3. Dr. R. Hema Latha, Dept. of ECE, UCE, OU
4. Dr. P. Laxmi Narayana, Professor/Principal Scientist, NERTU, OU
5. Dr. Kaleem Fatima, Dept of ECE, MJCET
6. Dr. MA Nayeem, Dept of ECE, DCET
7. Dr. DR Jahagirdar, Scientist, RCI, Hyderabad
8. Dr. Nukala Srinivasa Rao, Dept of ECE, Matrusri College of Engineering
9. Mr. I. Srikanth, Dept of ECE, Methodist
10. Mr. A. Gopala Sharma, Dept of ECE, SCETW
11. Mr. Nuli Namasivaya, Dept of ECE, MVSRC
12. Mrs. B. Sarala, Dept of ECE, MVSRC
13. Mrs. Y. Latha, Dept of ECE, SCETW
14. Mr. Md. Misbahuddin, Dept of ECE, UCE, OU

1.1 Welcome

The meeting started with the Chairman and Convener welcoming the members. He introduced all the members attended. He briefed the members that a series of meeting of the Head of the Departments of OU and its Affiliated Colleges from 18th March, 2016 onwards was organized to discuss and propose the scheme of instruction of III/IV and IV/IV BE(ECE). After thorough discussions scheme of III/IV and IV/IV BE (ECE) has been proposed and sub committees were constituted to propose the syllabus of III/IV BE (ECE).

1.2 Scheme & Syllabi of B.E (ECE) III/IV

Chairman proposed the Scheme and Syllabi of III/IV and IV/IV BE (ECE) and the members approved the same. Syllabus of III/IV BE (ECE) is discussed in detail and members suggested some modifications. The same were incorporated in the contents as given in Appendix-I.

09/JUNE/2016/ECE

I semester:

- i. Pulse circuits are included in Digital IC applications.
- ii. Computer Organization and Architecture is moved from III year II semester to III year I semester in place of Microprocessor and Microcontroller.
- iii. Digital System Design with VERILOG HDL and VERILOG HDL lab are introduced.

II Semester

- i. Analog and Digital Communication labs are merged.
- ii. Electronic Instrumentation is moved to IV year.

1.3 Scheme of B.E (ECE) IV/IV

The Scheme of BE IV/IV year is discussed and is approved as given in Appendix-II.

I Semester

- i. Two electives are introduced instead of one in existing scheme.
- ii. Computer Networks is shifted to IV II semester.
- iii. Mobile and Cellular Communication is made elective in IV II semester.

II Semester

- i. Radar and Satellite Communication is made elective.
- ii. In addition, two electives are offered.

1.4 Scheme of Instructions and Examinations for BE I and II semester (CBCS Pattern)

As per OU norms, we are to adopt Choice Based Credit System (CBCS) from the academic year 2016-17 onwards. In view of this, the existing rules of autonomous college will be adopted. It is proposed:

- A. To adopt semester-wise nomenclature to describe the academic years of UG program as described below:

OLD	NEW
I year I semester	I semester
I year II semester	II semester
II year I semester	III semester
II year II semester	IV semester
III year I semester	V semester
III year II semester	VI semester
IV year I semester	VII semester
IV year II semester	VIII semester

09/JUNE/2016/ECE

- B. Each theory course offers three credits and lab course offers one credit.
- C. The Scheme of Instruction is split into: Continuous Internal Evaluation (CIE) and Semester End Examination (SEE). For theory subject, CIE carries 30 marks and SEE carries 70 marks. For lab course CIE carries 25 marks and SEE carries 50 marks.
- D. The grades will be allotted based on the marks secured in university exam and sessionals as per the following criteria.

Academic Performance	Letter Grade	Grade Points
90% and above	S	10
80 % and above	A	09
70 % and above	B	08
60 % and above	C	07
50 % and above	D	06
40 % and above	E	05
Below 40 %	F	0

- E. Out of 30 sessional marks for theory, 10 marks are allotted for Assignments/Tutorials/Quizzes etc, in the course. The rest of the marks are to be based on the Internal test, weightage for each test is 10 marks.
- F. Two internal tests will be conducted in each semester. Each will carry 20 marks, out of which 6 marks for Part-A consisting of Objective and short answer questions and 14 marks for Part-B consisting of subjective questions. Average of tow tests plus marks obtained in assignments/tutorials/quizzes etc will be taken as sessional marks.
- G. Out of 25 or 50 sessional marks for practical, 10 or 20 allotted for viva-voce exam/test and 15 or 30 marks are allotted for laboratory record and observation.
- H. The question paper will be in two parts: Part – A is compulsory and covers the entire syllabus and carries 20 marks. Part-B carries 50 marks and covers all the units of the syllabus.
- I. Out of 50 marks for Project Work-1, 25 marks to be awarded by the guide/supervisor and remaining 25 marks to be awarded by a subject expert committee constituted by the concerned HOD.
- J. The evaluation of BE project for maximum of 100 marks will be done as follows:
- 40 marks are allotted for quality of the project work covering a) literature review b) innovation/originality c) methodology and d) relevance/practical application.
 - 30 marks are allotted to Report writing/Documentation.
 - 30 marks are allotted to a) quality and clarity of presentation of project work and b) based on the performance in terms of his/her viva-voce examination and overall subject knowledge.

09/June/2016/ECS

1.5 *Syllabus of Courses (Theory and Practicals) to be offered during I and II semesters.*

- A. I Semester courses are common to all branches.
- B. In II Semester, one core subject and lab are introduced: Basic Circuit Analysis and Electronic Workshop lab. The scheme is enclosed as Appendix 3

1.6 *Scheme and Instructions and Examination for III, IV, V, VI, VII and VIII semesters as per CBCS requirements (to be tentative with minor changes permitted subsequently)*

The courses offered in the existing scheme are almost mapped to the new scheme.

- A. In III Semester, Signal analysis and Transform Techniques, Switching Theory and Logic Design, Environmental Studies and Electrical Technology are introduced. Electromagnetic Theory is shifted to IV semester.
- B. In IV semester, Pulse and Digital Circuits, Networks Lab and Elements of Mechanical Engineering are introduced.
- C. In V semester, Microprocessor and Microcontroller, MPMC lab and Antenna and Wave Propagation are introduced.
- D. In VI semester, VLSI and Verilog Lab, one Professional Elective and one Open Elective are introduced.
- E. In VII semester, Electronic Instrumentation, Computer Organization and Architecture, One Professional Elective and one Open Elective are introduced.
- F. In VIII semester, Computer Networks and Two professional electives are offered.

The detailed scheme is enclosed herewith Append 4.

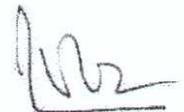
1.7 *ME Courses.*

The Chairman informed the members that in ME three specializations are offered: Digital Systems (MJCET and DCET), Embedded Systems and VLSI Design (MVSR) and Embedded Systems (Stanley). The core and electives courses are presented to the members. It is felt that no modifications are done at ME courses. Modifications are proposed to an elective course entitled "Scripting Languages for VLSI Design Automation", which are approved. This course can be offered to all three specializations.

1.8 *And any other matter with the permission of the Chair.*

- A. Dr. DR Jahagirdar suggested to allot credits depending the depth of the subjects i.e., there should be at least one subject in each semester with 4 credits.
- B. Dr. N. srinivasa Rao felt that the number of credits is slightly less as per AICTE norms. He requested the authorities to look in to this matter.
- C. He also suggested having relaxation of some credits/subject as is done in JNTUH.
- D. The committee authorizes the Chairman to send the panel of examiners for BE, ME and Ph.D. courses in ECE.

The Chairman thanked the members for their active participation.



Chairman,

BOS in ECE (Global), Osmania University

CHAIRMAN
BOARD OF STUDIES
Dept. of Electronics & Commn. Engg
Osmania University,
Hyderabad-500 007.



SCHEME OF INSTRUCTION & EXAMINATION

B.E. I - SEMESTER

(Civil Engineering, Computer Science & Engineering,
Electronics & Communication Engineering, Electrical & Electronics Engineering,
and Electronics & Instrumentation Engineering)

S. No	Course Code	Course Title	Scheme of Instructions (Contact Hrs/Wk)			Scheme of Examination			Credits
			L	T	Pr/Drg	CIE	SEE	Duration in Hrs	
Theory Courses									
1.	BS 101 MT	Engineering Mathematics I	3	1	0	30	70	3	3
2.	BS 102 PH	Engineering Physics I	3	0	0	30	70	3	3
3.	BS 103 CH	Engineering Chemistry I	3	0	0	30	70	3	3
4.	ES 104 CE	Engineering Mechanics I	3	1	0	30	70	3	3
5.	ES 105 CS	Computer Programming and Problem Solving	3	0	0	30	70	3	3
6.	MC 106 EG	Engineering English	3	0	0	30	70	3	3
Practical / Laboratory Courses									
7.	BS 151 PH	Engineering Physics Lab I	0	0	2	25	50	3	1
8.	BS 152 CH	Engineering Chemistry Lab I	0	0	2	25	50	3	1
9.	ES 153 CE	Engineering Graphics I	0	0	2 x 2	50	50	3	2
10.	ES 154 CS	Computer Programming Lab	0	0	2	25	50	3	1
11.	ES 155 ME	Engineering Workshop I	0	0	2	25	50	3	1
12.	MC 156 EG	Engineering English Lab	0	0	2	25	50	3	1
Total			18	2	14	355	720		25

BS: Basic Sciences

ES: Engineering Sciences

MC: Mandatory Course

PC: Professional Course

HS: Humanities and Sciences

PE: Professional Elective

OE: Open Elective

CIE: Continuous Internal Evaluation

SEE: Semester End Examination(Univ.Exam)

L: Lectures T: Tutorials

Note: 1) Each contact hour is a Clock Hour

2) The practical class can be of two and half hour (clock hours) duration as per the requirement of a particular laboratory.

SCHEME OF INSTRUCTION & EXAMINATION
B.E. II - SEMESTER
(CIVIL ENGINEERING)

S. No	Course Code	Course Title	Scheme of Instructions (Contact Hrs/Wk)			Scheme of Examination			Credits
			L	T	Pr/Drg	CIE	SEE	Duration in Hrs	
Theory Courses									
1.	BS 201 MT	Engineering Mathematics II	3	1	0	30	70	3	3
2.	BS 202 PH	Engineering Physics II	3	0	0	30	70	3	3
3.	BS 203 CH	Engineering Chemistry II	3	0	0	30	70	3	3
4.	HS 204 EG	Business Communication and Presentation Skills	3	0	0	30	70	3	3
5.	ES 205 CE	Engineering Mechanics-II	3	1	0	30	70	3	3
Practical / Laboratory Courses									
6.	BS 251 PH	Engineering Physics Lab II	0	0	2	25	50	3	1
7.	BS 252 CH	Engineering Chemistry Lab II	0	0	2	25	50	3	1
8.	ES 930 CS	Computer Skills Lab	0	0	2	25	50	3	1
9.	HS 253 EG	Communication Skills Lab	0	0	2	25	50	3	1
10.	ES 254 CE	Engineering Graphics-II	0	0	2x2	50	50	3	2
11.	PC 255 CE	Building Drawing	0	0	2x2	50	50	3	2
		Total	15	2	16	350	650		23

BS: Basic Sciences

ES: Engineering Sciences

MC: Mandatory Course

PC: Professional Course

HS: Humanities and Sciences

PE: Professional Elective

OE: Open Elective

CIE: Continuous Internal Evaluation

SEE: Semester End Examination (Univ.Exam)

L: Lectures T: Tutorials

Note: 1) Each contact hour is a Clock Hour

2) The practical class can be of two and half hour (clock hours) duration as per the requirement of a particular laboratory.

FACULTY OF ENGINEERING
Scheme of Instruction & Examination

and

Syllabi

B.E. III-Semester & IV-Semester

of

Four Year Degree Programme

In

Civil Engineering

(With effect from the academic year 2017 – 2018)

(As approved in the faculty meeting held on 26 July 2017)



Issued by

Dean, Faculty of Engineering
Osmania University, Hyderabad
July 2017

SCHEME OF INSTRUCTION & EXAMINATION
B.E. III – Semester
(CIVIL ENGINEERING)

S. No.	Course Code	Course Title	Scheme of Instruction				Scheme of Examination			Credits
			L	T	Pr/Drg	Contact Hrs/Wk	CIE	SEE	Duration in Hrs	
Theory Courses										
1	BS 301 MT	Engineering Mathematics-III	3	1	-	4	30	70	3	3
2	ES321EE/ME	Electrical and Mechanical Technology	3	-	-	3	30	70	3	3
3	PC301CE	Engineering Geology	3	-	-	3	30	70	3	3
4	PC302CE	Strength of Materials - I	3	1	-	4	30	70	3	3
5	PC303CE	Fluid Mechanics-I	3	1	-	4	30	70	3	3
6	PC304CE	Building Materials and Construction	3	-	-	3	30	70	3	3
7	PC305CE	Surveying-I	3	-	-	3	30	70	3	3
Practical / Laboratory Courses										
8	PC 351 CE	Engineering Geology Lab	-	-	2	2	25	50	3	1
9	PC 352 CE	Surveying-I Lab	-	-	2	2	25	50	3	1
Total			21	03	4	28	260	590		23

Engineering Service Courses offered to other Departments

S. No.	Course Code	Course Title	Scheme of Instruction				Scheme of Examination			Credits
			L	T	Pr/Drg	Contact Hrs/Wk	CIE	SEE	Duration in Hrs	
Theory Courses										
1.	ES321CE	Mechanics of Materials (for ME,PE &AE)	3	1	-	4	30	70	3	3
2.	MC916CE	Environmental Sciences (for CSE,EEE,EIE,ME& PE)	3	-	-	3	30	70	3	3
Practical /Laboratory Courses										
3.	ES361CE	Mechanics of Materials Lab (for ME & PE)	-	-	2	2	25	50	3	1

BS: Basic Sciences

ES: Engineering Sciences MC: Mandatory Course

PC: Professional Course HS: Humanities and Sciences

L: Lectures T: Tutorials Pr : Practicals Drg: Drawing

CIE: Continuous Internal Evaluation

SEE: Semester End Examination (Univ. Exam)

Note: 1) Each contact hour is a Clock Hour

2) The practical class can be of two and half hour (clock hours) duration as per the requirement of a particular laboratory.

3) Students admitted into B.E./B.Tech. courses under lateral entry scheme (through ECET) from the academic year 2017-18 should undergo the following bridge course subjects at III Semester (CBCS).

(1) ES 154 CS Computer Programming Lab

(2) MC 156 EG Engineering English Lab

SCHEME OF INSTRUCTION & EXAMINATION
B.E. IV – Semester
(CIVIL ENGINEERING)

S. No.	Course Code	Course Title	Scheme of Instruction				Scheme of Examination			Credits
			L	T	Pr/Drg	Contact Hrs/Wk	CIE	SEE	Duration in Hrs	
Theory Courses										
1	BS423MT	Numerical Methods	3	1	-	4	30	70	3	3
2	PC401CE	Strength of Materials-II	3	1	-	4	30	70	3	3
3	PC402CE	Fluid Mechanics-II	3	1	-	4	30	70	3	3
4	PC403CE	Surveying-II	3	1	-	4	30	70	3	3
5	PC404CE	Hydrology and Water Management	3	-	-	3	30	70	3	3
6	MC916CE	Environmental Sciences	3	-	-	3	30	70	3	3
7	HS401BM	Managerial Economics and Accountancy	3	-	-	3	30	70	3	3
Practical / Laboratory Courses										
8	PC451CE	Material Testing Lab	-	-	2	2	25	50	3	1
9	PC452CE	Fluid Mechanics-I lab	-	-	2	2	25	50	3	1
10	PC453CE	Surveying-II Lab	-	-	2	2	25	50	3	1
Total			21	4	06	31	285	640		24

Engineering Service Courses Offered to other Departments

S. No.	Course Code	Course Title	Scheme of Instruction				Scheme of Examination			Credits
			L	T	Pr/Drg	Contact Hrs/Wk	CIE	SEE	Duration in Hrs	
Theory Courses										
1.	MC916CE	Environmental Sciences (for ECE & AE)	3	-	-	3	30	70	3	3

BS: Basic Sciences ES: Engineering Sciences MC: Mandatory Course
 PC: Professional Course HS: Humanities and Sciences
 L: Lectures T: Tutorials Pr : Practicals Drg: Drawing
CIE: Continuous Internal Evaluation **SEE:** Semester End Examination (Univ. Exam)

- Note:** 1) Each contact hour is a Clock Hour
 2) The practical class can be of two and half hour (clock hours) duration as per the requirement of a particular laboratory.

FACULTY OF ENGINEERING
Scheme of Instruction & Examination
and
Syllabi
B.E. V and VI Semester
of
Four Year Degree Programme
in
CIVIL ENGINEERING

(With effect from the Academic Year 2018 - 2019)
(As approved in the Faculty Meeting held on 26 June 2018)



Issued by
Dean, Faculty of Engineering
Osmania University, Hyderabad – 500 007
2018

SCHEME OF INSTRUCTION & EXAMINATION
B.E. V - Semester
(CIVIL ENGINEERING)

S. No.	Course Code	Course Title	Scheme of Instruction				Scheme of Examination			Credits
			L	T	P/D	Contact Hrs/Wk	CIE	SEE	Duration in Hrs	
Theory Courses										
1	PC 501 CE	Reinforced Cement Concrete	3	1	-	4	30	70	3	3
2	PC 502 CE	Theory of Structures – I	3	1	-	4	30	70	3	3
3	PC 503 CE	Concrete Technology	3	-	-	3	30	70	3	3
4	PC 504 CE	Hydraulic Machines	3	-	-	3	30	70	3	3
5	PC 505 CE	Transportation Engg. – I	3	-	-	3	30	70	3	3
6	PC 506 CE	Environmental Engineering	3	-	-	3	30	70	3	3
7	PC 507 CE	Water Resource Engg. – I	3	-	-	3	30	70	3	3
8	PE-I	Professional Elective – I	3	-	-	3	30	70	3	3
Practical/Laboratory Courses										
9	PC 551 CE	Fluid Mechanics Lab – II	-	-	2	2	25	50	3	1
10	PC 552 CE	Transportation Engineering Lab	-	-	2	2	25	50	3	1
11	PC 553 CE	Environmental Engineering Lab	-	-	2	2	25	50	3	1
			24	02	06	32	315	710		27

Professional Elective – I		
S. No.	Course Code	Course Title
1	PE 501 CE	Advanced Concrete Technology
2	PE 502 CE	Hydropower Engineering
3	PE 503 CE	Infrastructure Engineering
4	PE 504 CE	Soft Computing Skills in CE

PC: Professional Course PE: Professional Elective
L: Lecture T: Tutorial P: Practical D: Drawing
CIE: Continuous Internal Evaluation SEE: Semester End Examination (Univ. Exam)

Note:

1. Each contact hour is a Clock Hour
2. The duration of the practical class is two clock hours, however it can be extended wherever necessary, to enable the student to complete the experiment.

SCHEME OF INSTRUCTION & EXAMINATION
B.E. VI - Semester
(CIVIL ENGINEERING)

S. No.	Course Code	Course Title	Scheme of Instruction				Scheme of Examination			Credits
			L	T	P/D	Contact Hrs/Wk	CIE	SEE	Duration in Hrs	
Theory Courses										
1	PC 601 CE	Steel Structures	3	1	-	4	30	70	3	3
2	PC 602 CE	Structural Engineering Design & Detailing – I (Concrete)	3	1	-	4	30	70	3	3
3	PC 603 CE	Theory of Structures – II	3	1	-	4	30	70	3	3
4	PC 604 CE	Water Resource Engineering II	3	-	-	3	30	70	3	3
5	PC 605 CE	Soil Mechanics	3	-	-	3	30	70	3	3
6	PC 606 CE	Transportation Engineering – II	3	-	-	3	30	70	3	3
7	PE-II	Professional Elective – II	3	-	-	3	30	70	3	3
8	OE-I	Open Elective – I	3	-	-	3	30	70	3	3
Practical/ Laboratory Courses										
9	PC 651 CE	Soil Mechanics Lab	-	-	2	2	25	50	3	1
10	PC 652 CE	Concrete Technology Lab	-	-	2	2	25	50	3	1
11	PW 661 CE	Survey Camp	-	-	-	-	-	50	3	2
Total			24	03	04	31	290	710	-	28

PC: Professional Course PE: Professional Elective OE: Open Elective PW: Project Work
L: Lecture T: Tutorial P: Practical D: Drawing
CIE: Continuous Internal Evaluation SEE: Semester End Examination (Univ. Exam)

Note -1:

1. Each contact hour is a Clock Hour
2. The duration of the practical class is two clock hours, however it can be extended wherever necessary, to enable the student to complete the experiment

Note-2:

- * The students have to undergo a Summer Internship of four weeks duration after VI semester and credits will be awarded in VII semester after evaluation.
- ** Subject is not offered to the students of Civil Engineering Department

Open Elective-I:		
S.No	Course Code	Course Title
1	OE601CE	Disaster Management**
2	OE602CE	Geo Spatial Techniques**
3	OE601CS	Operating Systems
4	OE602CS	OOP using Java
5	OE601IT	Database Systems
6	OE601EC	Principles of Embedded Systems
7	OE602EC	Digital System Design using HDL Verilog
8	OE601EE	Reliability Engineering
9	OE602EE	Basics of Power Electronics
10	OE601ME	Industrial Robotics
11	OE602ME	Material Handling
12	OE632AE	Automotive Safety & Ergonomics

Professional Elective – II		
S.No.	Course Code	Course Title
1	PE 601 CE	Earthquake Resistant Design of Buildings
2	PE 602 CE	Wastewater Treatment
3	PE 603 CE	Ground Improvement Techniques
4	PE 604 CE	Watershed Management

IV Year CIVIL 1604-16; 1604-17

CBCS

FACULTY OF ENGINEERING

Scheme of Instruction & Examination

(CBCS Curriculum for the Academic Year 2019-2020)

and

Syllabi

B.E. VII and VIII Semester

of

Four Year Degree Programme

In

Civil Engineering

(With effect from the academic year 2019– 2020)

(As approved in the faculty meeting held on 25-06-2019)



Issued by

Dean, Faculty of Engineering

Osmania University, Hyderabad – 500 007

2019

SCHEME OF INSTRUCTION & EXAMINATION
B.E. VII - Semester
(CIVIL ENGINEERING)

S. No.	Course Code	Course Title	Scheme of Instruction				Scheme of Examination			Credits
			L	T	P/D	Contact Hrs/Wk	CIE	SEE	Duration in Hrs	
Theory Courses										
1	PC 701 CE	Str. Engg. Design and Drawing – II (Steel)	3	1	-	4	30	70	3	3
2	PC 702 CE	Estimation Costing & Specifications	3	1	-	4	30	70	3	3
3	PC 703 CE	Finite Element Techniques	3	-	-	3	30	70	3	3
4	PC 704 CE	Prestressed Concrete	3	-	-	3	30	70	3	3
5	PC 705 CE	Foundation Engineering	3	-	-	3	30	70	3	3
6		Open Elective – II	3	-	-	3	30	70	3	3
7		Open Elective – III	3	-	-	3	30	70	3	3
Practical/ Laboratory Courses										
8	PC 751 CE	Computer Application Lab	-	-	2	2	25	50	3	1
9	PW 761 CE	Project Work – I	-	-	4	4	50	-	-	2
10	SI 762 CE	Summer Internship	-	-	-	-	50	-	-	2
			21	02	06	29	335	540		26

Open Elective – II			Open Elective – III		
S. No.	Course Code	Course Title	S. No.	Course Code	Course Title
1	OE 771 CE**	Green Building Technologies	1	OE 781 CE**	Road Safety Engineering
2	OE 772 CS	Data Science Using R Programming	2	OE 782 IT	Software Engineering
3	OE 773 EC	Fundamentals of IoT	3	OE 783 EC	Principles of Electronic Communications
4	OE 774 EE	Non-Conventional Energy Sources	4	OE 784 EE	Illumination and Electric Traction systems
5	OE 775 ME	Entrepreneurship	5	OE 785 ME	Mechatronics

PC: Professional Course

PE: Professional Elective

L: Lectures

T: Tutorials

P: Practical

D: Drawing

CIE: Continuous Internal Evaluation

SEE: Semester End Examination (Univ. Exam)

Note: 1) Each contact hour is a Clock Hour

2) The practical class can be of two and half hour (clock hours) duration as per the requirement of a particular laboratory.

Note-2: * The students have to undergo a Summer Internship of four weeks' duration after VI semester and credits will be awarded in VII semester after evaluation.

** Subject is not offered to the students of Civil Engineering Department.

**SCHEME OF INSTRUCTION & EXAMINATION
B.E. VIII - SEMESTER
(CIVIL ENGINEERING)**

S. No.	Course Code	Course Title	Scheme of Instruction				Scheme of Examination			Credits
			L	T	P/D	Contact Hrs/Wk	CIE	SEE	Duration in Hrs	
Theory Courses										
1	PC 801 CE	Construction Management & Technology	3	-	-	3	30	70	3	3
2		Professional Elective – III	3	-	-	3	30	70	3	3
3		Professional Elective – IV	3	-	-	3	30	70	3	3
4		Professional Elective – V	3	-	-	3	30	70	3	3
5	MC 901 EG	Gender Sensitization	3	-	-	3	30	70	3	-
Practical/ Laboratory Courses										
6	PW 961 CE	Project Work – II	-	-	16	16	50	100	-	8
7		Mandatory Course	-	-	3	3	50	-	3	-
			15	-	19	34	250	450		20

Professional Elective – III			Professional Elective – IV		
S. No.	Course Code	Course Title	S. No.	Course Code	Course Title
1	PE 821 CE	Retrofitting and Rehabilitation of Structures	1	PE 831 CE	Structural Dynamics
2	PE 822 CE	Computer Aided Analysis and Design	2	PE 832 CE	Design with Geosynthetics
3	PE 823 CE	Applied Hydrology	3	PE 833 CE	Groundwater Management
4	PE 824 CE	Introduction to Climate Change	4	PE 834 CE	Intelligent Transportation Systems
Professional Elective – V			Mandatory Course		
1	PE 841 CE	Prefabrication Engineering	1	MC 951 SP	Yoga Practice
2	PE 842 CE	Principles of Green Building Practices	2	MC 952 SP	NSS
3	PE 843 CE	Advanced Reinforced Concrete Design	3	MC 953 SP	Sports
4	PE 844 CE	Traffic Engineering & Infrastructure Design			

PC: Professional Course

PE: Professional Elective

L: Lectures

T: Tutorials

P: Practical

D: Drawing

CIE: Continuous Internal Evaluation

SEE: Semester End Examination (Univ. Exam)

Note: 1) Each contact hour is a Clock Hour

2) The duration of the practical class is two clock hours, however it can be extended wherever necessary, to enable the student to complete the experiment

SCHEME OF INSTRUCTION & EXAMINATION
B.E. I - SEMESTER
 (Civil Engineering, Computer Science & Engineering,
 Electronics & Communication Engineering, Electrical & Electronics Engineering,
 and Electronics & Instrumentation Engineering)

S. No	Course Code	Course Title	Scheme of Instructions (Contact Hrs/Wk)			Scheme of Examination			Credits
			L	T	Pr/Drg	CIE	SEE	Duration in Hrs	
Theory Courses									
1.	BS 101 MT	Engineering Mathematics I	3	1	0	30	70	3	3
2.	BS 102 PH	Engineering Physics I	3	0	0	30	70	3	3
3.	BS 103 CH	Engineering Chemistry I	3	0	0	30	70	3	3
4.	ES 104 CE	Engineering Mechanics I	3	1	0	30	70	3	3
5.	ES 105 CS	Computer Programming and Problem Solving	3	0	0	30	70	3	3
6.	MC 106 EG	Engineering English	3	0	0	30	70	3	3
Practical / Laboratory Courses									
7.	BS 151 PH	Engineering Physics Lab I	0	0	2	25	50	3	1
8.	BS 152 CH	Engineering Chemistry Lab I	0	0	2	25	50	3	1
9.	ES 153 CE	Engineering Graphics I	0	0	2 x 2	50	50	3	2
10.	ES 154 CS	Computer Programming Lab	0	0	2	25	50	3	1
11.	ES 155 ME	Engineering Workshop I	0	0	2	25	50	3	1
12.	MC 156 EG	Engineering English Lab	0	0	2	25	50	3	1
Total			18	2	14	355	720		25

BS: Basic Sciences ES: Engineering Sciences MC: Mandatory Course
 PC: Professional Course HS: Humanities and Sciences PE: Professional Elective
 OE: Open Elective CIE: Continuous Internal Evaluation SEE: Semester End Examination(Univ.Exam)

L: Lectures T: Tutorials

Note: 1) Each contact hour is a Clock Hour

2) The practical class can be of two and half hour (clock hours) duration as per the requirement of a particular laboratory.

SCHEME OF INSTRUCTION & EXAMINATION
B.E. II - SEMESTER
(COMPUTER SCIENCE & ENGINEERING)

S. No	Course Code	Course Title	Scheme of Instructions (Contact Hrs/Wk)			Scheme of Examination			Credits
			L	T	Pr/Drg	CIE	SEE	Duration in Hrs	
Theory Courses									
1.	BS 201 MT	Engineering Mathematics II	3	1	0	30	70	3	3
2.	BS 202 PH	Engineering Physics II	3	0	0	30	70	3	3
3.	BS 203 CH	Engineering Chemistry II	3	0	0	30	70	3	3
4.	HS 204 EG	Business Communication and Presentation Skills	3	0	0	30	70	3	3
5.	PC 205 CS	Object Oriented Programming using C++	3	1	0	30	70	3	3
6.	ES 950 EE	Basic Electrical Engg.	3	0	0	30	70	3	3
Practical / Laboratory Courses									
7.	BS 251 PH	Engineering Physics Lab II	0	0	2	25	50	3	1
8.	BS 252 CH	Engineering Chemistry Lab II	0	0	2	25	50	3	1
9.	ES 930 CS	Computer Skills Lab	0	0	2	25	50	3	1
10.	HS 253 EG	Communication Skills Lab	0	0	2	25	50	3	1
11.	PC 254 CS	C++ Programming Lab	0	0	2	25	50	3	1
Total			18	2	10	305	670		23

BS: Basic Sciences
 PC: Professional Course
 OE: Open Elective

ES: Engineering Sciences
 HS: Humanities and Sciences
 CIE: Continuous Internal Evaluation

MC: Mandatory Course
 PE: Professional Elective
 SEE: Semester End Examination (Univ.Exam)

L: Lectures T: Tutorials

Note: 1) Each contact hour is a Clock Hour

2) The practical class can be of two and half hour (clock hours) duration as per the requirement of a particular laboratory.

CBCS

FACULTY OF ENGINEERING
Scheme of Instruction & Examination
and
Syllabi
B.E. III-Semester & IV-Semester
of
Four Year Degree Programme
In
COMPUTER SCIENCE AND ENGINEERING
(With effect from the academic year 2017 – 2018)
(As approved in faculty meeting held on 26 July 2017)



Issued by
Dean, Faculty of Engineering
Osmania University, Hyderabad

SCHEME OF INSTRUCTION & EXAMINATION
B.E. III - SEMESTER
(COMPUTER SCIENCE AND ENGINEERING)

S. No	Course Code	Course Title	Scheme of Instruction				Scheme of examination			Credits
			L	T	Pr/Drg	Contact Hrs / wk	CIE	SEE	Duration in Hrs	
Theory Courses										
1	BS 301 MT	Engineering Mathematics-III	3	1	-	4	30	70	3	3
2	ES 934 EC	Basic Electronics	3	-	-	3	30	70	3	3
3	PC 301 CS	Data Structures	3	1	-	4	30	70	3	3
4	PC 302 CS	Discrete Mathematics	3	1	-	4	30	70	3	3
5	PC 303 CS	Logic and Switching Theory	3	1	-	4	30	70	3	3
6	MC 916 CE	Environmental Sciences	3	-	-	3	30	70	3	3
Practical / Laboratory Courses										
7	ES 361 EE	Electrical Engineering Lab	-	-	2	2	25	50	3	1
8	ES 955 EC	Basic Electronics Lab	-	-	2	2	25	50	3	1
9	PC 351 CS	Data Structures Lab	-	-	2 x 2	4	25	50	3	2
Total			18	4	8	30	255	570		22

BS: Basic Sciences

ES: Engineering Sciences

MC: Mandatory Course

PC: Professional Course

HS: Humanities and Sciences

L: Lectures

T: Tutorials

Pr : Practicals

Drg: Drawing

CIE: Continuous Internal Evaluation

SEE: Semester End Examination (Univ.Exam)

Note: 1) Each contact hour is a Clock Hour

2) The practical class can be of two and half hour (clock hours) duration as per the requirement of a particular laboratory.

3) Students admitted into B.E./B.Tech. courses under lateral entry scheme (through ECET) from the academic year 2017-18 should undergo the following bridge course subjects at III Semester (CBCS).

(1) ES 154 CS Computer Programming Lab

(2) MC 156 EG Engineering English Lab

SCHEME OF INSTRUCTION & EXAMINATION
B.E. IV - SEMESTER
(COMPUTER SCIENCE AND ENGINEERING)

S. No	Course Code	Course Title	Scheme of Instruction				Scheme of examination			Credits
			L	T	Pr/Drg	Contact Hrs / wk	CIE	SEE	Duration in Hrs	
Theory Courses										
1	BS 421 MT	Mathematics And Statistics	3	1	-	4	30	70	3	3
2	ES 422 EC	Signals And System Analysis	3	-	-	3	30	70	3	3
3	PC 401CS	Computer Organization	3	1	-	4	30	70	3	3
4	PC 402 CS	Object Oriented Programming Using Java	3	1	-	4	30	70	3	3
5	PC 403 CS	Programming Languages	3	1	-	4	30	70	3	3
6	PC 404 CS	Microprocessors And Interfacing	3	1	-	4	30	70	3	3
Practical / Laboratory Courses										
7	PC 451 CS	Java Programming Lab	-	-	2	2	25	50	3	1
8	PC 452 CS	Microprocessors	-	-	2	2	25	50	3	1
9	PC 454 CS	Mini Project	-	-	2x2	4	25	50	3	2
10	MC 453 HS	Society Outreach Program	-	-	2	2	50	--	3	2 units
Total			18	5	10	33	305	570		22

BS: Basic Sciences

ES: Engineering Sciences

MC: Mandatory Course

PC: Professional Course

HS: Humanities and Sciences

L: Lectures

T: Tutorials

Pr : Practicals

Drg: Drawing

CIE: Continuous Internal Evaluation

SEE: Semester End Examination (Univ.

Exam)

Note: 1) Each contact hour is a Clock Hour

2) The practical class can be of two and half hour (clock hours) duration as per the requirement of a particular laboratory.

III Year CSE 1604-16; 1604-17

Faculty of Engineering

CBCS

With effect from the Academic Year 2018-2019

FACULTY OF ENGINEERING

Scheme of Instruction & Examination

and

Syllabi

B.E. V and VI Semesters

of

Four Year Degree Programme

in

COMPUTER SCIENCE AND ENGINEERING

(With effect from the Academic Year 2018 – 2019)

(As approved in the Faculty Meeting held on 26th June 2018)



Issued by

Dean, Faculty of Engineering

Osmania University, Hyderabad - 500 007

2018

SCHEME OF INSTRUCTION & EXAMINATION
B.E. VI - Semester
(COMPUTER SCIENCE & ENGINEERING)

S. No	Course code	Course Title	Scheme of Instruction				Scheme of Examination			Credits
			L	T	P/D	Contact Hrs/Wk	CIE	SEE	Duration in Hrs	
Theory Course										
1	PC601CS	Design and Analysis of Algorithms	3	1	-	4	30	70	3	3
2	PC602CS	Software Engineering	3	1	-	4	30	70	3	3
3	PC603CS	Web Programming	3	1	-	4	30	70	3	3
4	PC604CS	Computer Networks & Programming	3	1	-	4	30	70	3	3
5	PE-II	Professional Elective-II	3	1	-	4	30	70	3	3
6	OE	Open Elective-I	3	-	-	3	30	70	3	3
Practical/ Laboratory Course										
7.	PC651CS	Software Engineering Lab	-	-	2	2	25	50	3	1
8.	PC652CS	Web Programming Lab	-	-	2	2	25	50	3	1
9.	PC653CS	Computer Networks & Programming Lab	-	-	2	2	25	50	3	1
10.	MC	Mandatory Course	-	-	3	3	50	-	3	0
11.	SI671CS	Summer Internship*	-	-	-	-	-	-	-	-
Total			18	05	09	32	305	570		21

PC: Professional Course

PE: Professional Elective

MC: Mandatory Course

OE: Open Elective

SI: Summer Internship

L: Lecture T: Tutorial

P: Practical D: Drawing

CIE: Continuous Internal Evaluation

SEE: Semester End Examination (Univ. Exam)

Note-1:

1. Each contact hour is a Clock Hour
2. The practical class can be of two and half hour (clock hours) duration as per the requirement of a particular laboratory.

Note-2:

*The students have to undergo a Summer Internship of four weeks duration after VI semester and credits will be awarded in VII semester after evaluation.

** Subject is not offered to the students of CSE and IT Department.

Open Elective-I:		
S.No	Course Code	Course Title
1	OE601CE	Disaster Management
2	OE602CE	Geo Spatial Techniques
3	OE601CS	Operating Systems**
4	OE602CS	OOP using Java**
5	OE601IT	Database Systems**
6	OE601EC	Principles of Embedded Systems
7	OE602EC	Digital System Design using HDL Verilog
8	OE601EE	Reliability Engineering
9	OE602EE	Basics of Power Electronics
10	OE601ME	Industrial Robotics
11	OE602ME	Material Handling
12	OE632AE	Automotive Safety & Ergonomics

Professional Elective – II		
S.No	Course Code	Course Title
1	PE 601CS	Graph Theory and Its Applications
2	PE 602CS	Advanced Computer Graphics
3	PE 603CS	Advanced Databases

Mandatory Course		
S.No	Course Code	Course Title
1	MC951SP	Yoga Practice
2	MC952SP	National Service Scheme
3	MC953SP	Sports

IV Year CSE 1604-16; 1604-17

CBCS

FACULTY OF ENGINEERING

Scheme of Instruction & Examination

(CBCS Curriculum for the Academic Year 2019-2020)

and

Syllabi

B.E. VII and VIII Semester

of

Four Year Degree Programme

In

Computer Science and Engineering

(With effect from the academic year 2019– 2020)

(As approved in the faculty meeting held on 25-06-2019)



Issued by

Dean, Faculty of Engineering

Osmania University, Hyderabad – 500 007

2019

SCHEME OF INSTRUCTION & EXAMINATION
B.E. VII - Semester
(COMPUTER SCIENCE AND ENGINEERING)

S. No.	Course Code	Course Title	Scheme of Instruction				Scheme of Examination			Credits
			L	T	P/D	Contact Hrs/Wk	CIE	SEE	Duration in Hrs	
Theory Courses										
1	PC 701 CS	Compiler Construction	3	1	-	4	30	70	3	3
2	PC 702 CS	Distributed Systems	3	1	-	4	30	70	3	3
3	PC 703 CS	Information Security	3	1	-	4	30	70	3	3
4	PC 704 CS	Data Mining	3	1	-	4	30	70	3	3
5		Open Elective – II	3	-	-	3	30	70	3	3
6		Open Elective – III	3	-	-	3	30	70	3	3
Practical/ Laboratory Courses										
7	PC 751 CS	Compiler Construction Lab	-	-	2	2	25	50	-	1
8	PC 752 CS	Distributed Systems Lab	-	-	2	2	25	50	-	1
9	PC 753 CS	Data Mining Lab	-	-	2	2	25	50	-	1
10	PW 761 CS	Project Work – I	-	-	4	4	50	-	-	2
11	SI 762 CS	Summer Internship	-	-	-	-	50	-	-	2
			18	04	10	32	355	570		25

Open Elective – II			Open Elective – III		
S. No.	Course Code	Course Title	S. No.	Course Code	Course Title
1	OE 771 CE	Green Building Technologies	1	OE 781 CE	Road Safety Engineering
2	OE 772 CS**	Data Science Using R Programming	2	OE 782 IT**	Software Engineering
3	OE 773 EC	Fundamentals of IoT	3	OE 783 EC	Principles of Electronic Communications
4	OE 774 EE	Non-Conventional Energy Sources	4	OE 784 EE	Illumination and Electric Traction systems
5	OE 775 ME	Entrepreneurship	5	OE 785 ME	Mechatronics

PC: Professional Course

PE: Professional Elective

L: Lectures

T: Tutorials

P: Practical

D: Drawing

CIE: Continuous Internal Evaluation

SEE: Semester End Examination (Univ. Exam)

Note: 1) Each contact hour is a Clock Hour

2) The practical class can be of two and half hour (clock hours) duration as per the requirement of a particular laboratory.

Note-2: * The students have to undergo a Summer Internship of four weeks' duration after VI semester and credits will be awarded in VII semester after evaluation.

** Subject is not offered to the students of CSE and IT Departments.

**SCHEME OF INSTRUCTION & EXAMINATION
B.E. VIII - SEMESTER
(COMPUTER SCIENCE AND ENGINEERING)**

S. No.	Course Code	Course Title	Scheme of Instruction				Scheme of Examination			Credits
			L	T	P/D	Contact Hrs/Wk	CIE	SEE	Duration in Hrs	
Theory Courses										
1		Professional Elective – III	3	-	-	3	30	70	3	3
2		Professional Elective – IV	3	-	-	3	30	70	3	3
3		Professional Elective – V	3	-	-	3	30	70	3	3
Practical/ Laboratory Courses										
4	PW 961 CS	Project Work – II	-	-	16	16	50	100	-	8
			09	-	16	25	140	310		17

Professional Elective – III			Professional Elective – IV		
S. No.	Course Code	Course Title	S. No.	Course Code	Course Title
1	PE 821 CS	Mobile Computing	1	PE 831 CS	Embedded Systems
2	PE 822 CS	Image Processing	2	PE 832 CS	Information Retrieval Systems
3	PE 823 CS	Software Quality and Testing	3	PE 833 CS	Machine Learning
4	PE 824 CS	Web Services and Architecture	4	PE 834 CS	Natural Language Processing
5	PE 825 CS	Computational Intelligence	5	PE 835 CS	Data Science using R Programming
Professional Elective – V					
1	PE 841 CS	Multicore and GPU Programming			
2	PE 842 CS	Cloud Computing			
3	PE 843 CS	Human Computer Interaction			

PC: Professional Course

PE: Professional Elective

L: Lectures

T: Tutorials

P: Practical

D: Drawing

CIE: Continuous Internal Evaluation

SEE: Semester End Examination (Univ. Exam)

Note: 1) Each contact hour is a Clock Hour

2) The duration of the practical class is two clock hours, however it can be extended wherever necessary, to enable the student to complete the experiment

SCHEME OF INSTRUCTION & EXAMINATION

B.E. I - SEMESTER

(Civil Engineering, Computer Science & Engineering,
Electronics & Communication Engineering, Electrical & Electronics Engineering,
and Electronics & Instrumentation Engineering)

S. No	Course Code	Course Title	Scheme of Instructions (Contact Hrs/Wk)			Scheme of Examination			Credits
			L	T	Pr/Drg	CIE	SEE	Duration in Hrs	
Theory Courses									
1.	BS 101 MT	Engineering Mathematics I	3	1	0	30	70	3	3
2.	BS 102 PH	Engineering Physics I	3	0	0	30	70	3	3
3.	BS 103 CH	Engineering Chemistry I	3	0	0	30	70	3	3
4.	ES 104 CE	Engineering Mechanics I	3	1	0	30	70	3	3
5.	ES 105 CS	Computer Programming and Problem Solving	3	0	0	30	70	3	3
6.	MC 106 EG	Engineering English	3	0	0	30	70	3	3
Practical / Laboratory Courses									
7.	BS 151 PH	Engineering Physics Lab I	0	0	2	25	50	3	1
8.	BS 152 CH	Engineering Chemistry Lab I	0	0	2	25	50	3	1
9.	ES 153 CE	Engineering Graphics I	0	0	2 x 2	50	50	3	2
10.	ES 154 CS	Computer Programming Lab	0	0	2	25	50	3	1
11.	ES 155 ME	Engineering Workshop I	0	0	2	25	50	3	1
12.	MC 156 EG	Engineering English Lab	0	0	2	25	50	3	1
		Total	18	2	14	355	720		25

BS: Basic Sciences

PC: Professional Course

OE: Open Elective

ES: Engineering Sciences

HS: Humanities and Sciences

CIE: Continuous Internal Evaluation

MC: Mandatory Course

PE: Professional Elective

SEE: Semester End Examination(Univ.Exam)

L: Lectures T: Tutorials

Note: 1) Each contact hour is a Clock Hour

2) The practical class can be of two and half hour (clock hours) duration as per the requirement of a particular laboratory.

SCHEME OF INSTRUCTION & EXAMINATION
B.E. II - SEMESTER
(ELECTRICAL & ELECTRONICS ENGINEERING)

S. No	Course Code	Course Title	Scheme of Instructions (Contact Hrs/Wk)			Scheme of Examination			Credits
			L	T	Pr/Drg	CIE	SEE	Duration in Hrs	
Theory Courses									
1.	BS 201 MT	Engineering Mathematics II	3	1	0	30	70	3	3
2.	BS 202 PH	Engineering Physics II	3	0	0	30	70	3	3
3.	BS 203 CH	Engineering Chemistry II	3	0	0	30	70	3	3
4.	HS 204 EG	Business Communication and Presentation Skills	3	0	0	30	70	3	3
5.	ES 965 ME	Elements of Mechanical Engineering	3	0	0	30	70	3	3
6.	ES 933 EC	Electronic Engineering-I	3	0	0	30	70	3	3
Practical / Laboratory Courses									
7.	BS 251 PH	Engineering Physics Lab II	0	0	2	25	50	3	1
8.	BS 252 CH	Engineering Chemistry Lab II	0	0	2	25	50	3	1
9.	ES 930 CS	Computer Skills Lab	0	0	2	25	50	3	1
10.	HS 253 EG	Communication Skills Lab	0	0	2	25	50	3	1
11.	ES 255 ME	Engineering Workshop-II	0	0	2	25	50	3	1
		Total	18	1	10	305	670		23

BS: Basic Sciences

ES: Engineering Sciences

MC: Mandatory Course

PC: Professional Course

HS: Humanities and Sciences

PE: Professional Elective

OE: Open Elective

CIE: Continuous Internal Evaluation

SEE: Semester End Examination (Univ.Exam)

L: Lectures T: Tutorials

Note: 1) Each contact hour is a Clock Hour

2) The practical class can be of two and half hour (clock hours) duration as per the requirement of a particular laboratory.

FACULTY OF ENGINEERING
Scheme of Instruction & Examination
and
Syllabi

B.E. III-Semester & IV-Semester
of
Four Year Degree Programme

In

Electrical & Electronics Engineering

(With effect from the academic year 2017 – 2018)

(As approved in Faculty Meeting held on 26 June 2017)



Issued by
Dean, Faculty of Engineering
Osmania University, Hyderabad
July 2017

SCHEME OF INSTRUCTION & EXAMINATION
B.E. III – Semester
(ELECTRICAL AND ELECTRONICS ENGINEERING)

S. No.	Course Code	Course Title	Scheme of Instruction				Scheme of Examination			Credits
			L	T	Pr/Drg	Contact Hrs/Wk	CIE	SEE	Duration in Hrs	
Theory Courses										
1.	BS301MT	Engineering Mathematics – III	3	1	-	4	30	70	3	3
2.	ES322EC	Electronic Engineering-II	3	-	-	3	30	70	3	3
3.	ES323ME	Prime Movers & Pumps	3	-	-	3	30	70	3	3
4.	PC301EE	Electrical Circuits – I	3	1	-	4	30	70	3	3
5.	PC302EE	Electromagnetic Fields	3	1	-	4	30	70	3	3
6.	PC303EE	Digital Electronics & Logic Design	3	-	-	3	30	70	3	3
7.	MC916CE	Environmental Sciences	3	-	-	3	30	70	3	3
Practical / Laboratory Courses										
8.	ES361ME	Mechanical Engineering Lab.	-	-	2	2	25	50	3	1
9.	ES 362 EC	Electronic Engineering Lab	-	-	2	2	25	50	3	1
			21	3	4	28	260	590		23

Engineering Service Courses offered to other Departments

S. No.	Course Code	Course Title	Scheme of Instruction				Scheme of Examination			Credits
			L	T	Pr/Drg	Contact Hrs/Wk	CIE	SEE	Duration in Hrs	
Theory Courses										
1.	ES321EE	Part - A Electrical Technology (For Civil Engg)	2	-	-	2	15	35	2	2
2.	ES323EE	Automotive Electrical and Electronics Engineering (Automobile Engg.)	3	-	-	3	30	70	3	3
Practical /Laboratory Courses										
3.	ES361EE	Electrical Engineering Lab (For ECE and CSE)	-	-	2	2	25	50	3	1
4.	ES362EE	Electrical Wiring and Microprocessor Lab (AE)	-	-	2	2	25	50	3	1

BS: Basic Sciences

ES: Engineering Sciences MC: Mandatory Course

PC: Professional Course HS: Humanities and Sciences

L: Lectures T: Tutorials Pr : Practicals Drg: Drawing

CIE: Continuous Internal Evaluation

SEE: Semester End Examination (Univ. Exam)

Note: 1) Each contact hour is a Clock Hour

2) The practical class can be of two and half hour (clock hours) duration as per the requirement of a particular laboratory.

3) Students admitted into B.E./B.Tech. courses under lateral entry scheme (through ECET) from the academic year 2017-18 should undergo the following bridge course subjects at III Semester (CBCS).

(1) ES 154 CS Computer Programming Lab

(2) MC 156 EG Engineering English Lab

SCHEME OF INSTRUCTION & EXAMINATION
B.E. IV – Semester
(ELECTRICAL AND ELECTRONICS ENGINEERING)

S. No.	Course Code	Course Title	Scheme of Instruction				Scheme of Examination			Credits
			L	T	Pr/Drg	Contact Hrs/Wk	CIE	SEE	Duration in Hrs	
Theory Courses										
1.	BS401MT	Engineering Mathematics-IV	3	1	-	4	30	70	3	3
2.	PC401EE	Electrical Circuits - II	3	1	-	4	30	70	3	3
3.	PC402EE	Electrical Machines-I	3	1	-	4	30	70	3	3
4.	PC403EE	Power Systems-I	3	-	-	3	30	70	3	3
5.	PC404EE	Power Electronics	3	1	-	4	30	70	3	3
6.	PC405EE	Linear Integrated Circuits	3	-	-	3	30	70	3	3
7.	HS401BM	Managerial Economics & Accountancy	3	-	-	3	30	70	3	3
Practical / Laboratory Courses										
8.	PC451EE	Digital Electronics and Integrated Circuits Lab	-	-	2	2	25	50	3	1
9.	PC452EE	Computer Aided Electrical Drawing Lab.	-	-	2	2	25	50	3	1
			21	04	04	29	260	590		23

Engineering Service Courses Offered to other Departments

S. No.	Course Code	Course Title	Scheme of Instruction				Scheme of Examination			Credits
			L	T	Pr/Drg	Contact Hrs/Wk	CIE	SEE	Duration in Hrs	
Theory Courses										
1.	ES422EE	Electrical Circuits & Machines (For ME & PE)	3	-	-	3	30	70	3	3
Practical / Laboratory Courses										
2.	ES461EE	Electrical Circuits & Machines Lab (For ME & PE)	-	-	2	2	25	50	3	1

BS: Basic Sciences ES: Engineering Sciences MC: Mandatory Course
 PC: Professional Course HS: Humanities and Sciences
 L: Lectures T: Tutorials Pr : Practicals Drg: Drawing
CIE: Continuous Internal Evaluation **SEE:** Semester End Examination (Univ. Exam)

Note: 1) Each contact hour is a Clock Hour
 2) The practical class can be of two and half hour (clock hours) duration as per the requirement of a particular laboratory.

III Year EEE 1604-16; 1604-17

Faculty of Engineering, O.U

CBCS

With effect from Academic Year 2018 - 2019

FACULTY OF ENGINEERING
Scheme of Instruction & Examination
and
Syllabi
B.E. V and VI Semesters
of
Four Year Degree Programme
in
ELECTRICAL & ELECTRONICS ENGINEERING

(With effect from the Academic Year 2018 – 2019)
(As approved in the Faculty Meeting held on 26th June 2018)



Issued by
Dean, Faculty of Engineering
Osmania University, Hyderabad
July 2018

SCHEME OF INSTRUCTION & EXAMINATION
B.E. V – Semester
(ELECTRICAL AND ELECTRONICS ENGINEERING)

S. No.	Course Code	Course Title	Scheme of Instruction				Scheme of Examination			Credits
			L	T	P/D	Contact Hrs/Wk	CIE	SEE	Duration in Hrs	
Theory Course										
1.	PC501EE	Power Systems-II	3	-	-	3	30	70	3	3
2.	PC502EE	Electrical Machines-II	3	-	-	3	30	70	3	3
3.	PC503EE	Electrical Measurements and Instrumentation	3	1	-	4	30	70	3	3
4.	PC504EE	Linear Control Systems	3	1	-	4	30	70	3	3
5.	PC505EE	Digital Signal Processing and Applications	3	1	-	4	30	70	3	3
6.	PE-1	Professional Elective-I	3	-	-	3	30	70	3	3
7.	MC901EG	Gender Sensitization	3	-	-	3	30	70	3	0
Practical / Laboratory Course										
8.	PC551EE	Electrical Machines Lab-1	-	-	2	2	25	50	3	1
9.	PC552EE	Power Electronics Lab	-	-	2	2	25	50	3	1
10.	PC553EE	Circuits & Measurements Lab	-	-	2	2	25	50	3	1
		Total	21	3	6	30	285	640		21

Professional Elective-1

PE501EE	Programmable Logic controllers
PE502EE	Electronic Instrumentation
PE503EE	FACTS Devices

PC: Professional Course **PE:** Professional Elective **MC:** Mandatory Course
L: Lecture **T:** Tutorial **P:** Practical **D:** Drawing
CIE: Continuous Internal Evaluation **SEE:** Semester End Examination (Univ. Exam)

Note:

1. Each contact hour is a Clock Hour
2. The duration of the practical class is two clock hours, however it can be extended wherever necessary, to enable the student to complete his experiment

SCHEME OF INSTRUCTION & EXAMINATION
B.E. VI – Semester
(ELECTRICAL AND ELECTRONICS ENGINEERING)

S. No.	Course Code	Course Title	Scheme of Instruction				Scheme of Examination			Credits
			L	T	P/D	Contact Hrs/Wk	CIE	SEE	Duration in Hrs	
Theory Courses										
1.	PC601EE	Electrical Machines-III	3	1	-	4	30	70	3	3
2.	PC602EE	Microprocessors and Microcontrollers	3	1	-	4	30	70	3	3
3.	PC603EE	Switchgear and Protection	3	-	-	3	30	70	3	3
4.	PC604EE	Renewable Energy Technologies	3	-	-	3	30	70	3	3
5.	PE-II	Professional Elective-II	3	-	-	3	30	70	3	3
6.	OE-I	Open Elective-I	3	-	-	3	30	70	3	3
Practical / Laboratory Courses										
7.	PC651EE	Electrical Machines lab-II	-	-	2	2	25	50	3	1
8.	PC652EE	Digital signal Processing Lab	-	-	2	2	25	50	3	1
9	PC653EE	Control systems lab	-	-	2	2	25	50	3	1
10	MC	Mandatory Course	-	-	3	3	50	-	3	0
11	SI	Summer Internship*								
Total			18	2	9	29	305	570		21

PC: Professional Course **PE:** Professional Elective **MC:** Mandatory Course **OE:** Open Elective
HS: Humanities and Social Sciences **SI:** Summer Internship
L: Lectures **T:** Tutorial **P:** Practical **D:** Drawing
CIE: Continuous Internal Evaluation **SEE:** Semester End Examination (Univ. Exam)

Note -1:

1. Each contact hour is a Clock Hour
2. The duration of the practical class is two clock hours, however it can be extended wherever necessary, to enable the student to complete his experiment

Note-2:

- * The students have to undergo a Summer Internship of four weeks duration after VI semester and credits will be awarded in VII semester after evaluation.
- ** Subject is not offered to the students of Electrical and Electronics Engineering and Electronics & Instrumentation Engineering Departments.

Open Elective-I:		
S.No	Course Code	Course Title
1	OE601CE	Disaster Management
2	OE602CE	GeoSpatial Techniques
3	OE601CS	Operating Systems
4	OE602CS	OOP using Java
5	OE601IT	Database Systems
6	OE601EC	Principles of Embedded Systems
7	OE602EC	Digital System Design using HDL Verilog
8	OE601EE	Reliability Engineering**
9	OE602EE	Basics of Power Electronics**
10	OE601ME	Industrial Robotics
11	OE602ME	Material Handling
12	OE632AE	Automotive Safety & Ergonomics

Professional Elective – II		
S.No	Course Code	Course Title
1	PE601EE	AI Techniques
2	PE602EE	Electric Distribution System
3	PE603EE	Digital Control systems

Mandatory Course		
S.No	Course Code	Course Title
1	MC951SP	Yoga Practice
2	MC952SP	National Service Scheme
3	MC953SP	Sports

IV year EEE 1604-16; 1604-17
CBCS

FACULTY OF ENGINEERING

Scheme of Instruction & Examination

(CBCS Curriculum for the Academic Year 2019-2020)

and

Syllabi

B.E. VII and VIII Semester

of

Four Year Degree Programme

In

Electrical and Electronics Engineering

(With effect from the academic year 2019– 2020)

(As approved in the faculty meeting held on 25-06-2019)



Issued by

Dean, Faculty of Engineering

Osmania University, Hyderabad – 500 007

2019

SCHEME OF INSTRUCTION & EXAMINATION
B.E. VII - Semester
(ELECTRICAL AND ELECTRONICS ENGINEERING)

S. No.	Course Code	Course Title	Scheme of Instruction				Scheme of Examination			Credits
			L	T	P/D	Contact Hrs/Wk	CIE	SEE	Duration in Hrs	
Theory Courses										
1	PC 701 EE	Power System Operation and Control	3	1	-	4	30	70	3	3
2	PC 702 EE	Electric Drives and Static Control	3	1	-	4	30	70	3	3
3	PC 703 EE	Electrical Machine Design	3	1	-	4	30	70	3	3
4		Open Elective – II	3	-	-	3	30	70	3	3
5		Open Elective – III	3	-	-	3	30	70	3	3
Practical/ Laboratory Courses										
6	PC 751 EE	Electrical Simulation Lab	-	-	2	2	25	50	3	1
7	PC 752 EE	Microprocessor and Microcontrollers Lab	-	-	2	2	25	50	3	1
8	PW 761 EE	Project Work – I	-	-	4	4	50	-	-	2
9	PW 762 EE	Summer Internship	-	-	-	-	50	-	-	2
			15	03	08	26	300	450		21

Open Elective – II			Open Elective – III		
S. No.	Course Code	Course Title	S. No.	Course Code	Course Title
1	OE 771 CE	Green Building Technologies	1	OE 781 CE	Road Safety Engineering
2	OE 772 CS	Data Science Using R Programming	2	OE 782 IT	Software Engineering
3	OE 773 EC	Fundamentals of IoT	3	OE 783 EC	Principles of Electronic Communications
4	OE 774 EE**	Non-Conventional Energy Sources	4	OE 784 EE**	Illumination and Electric Traction systems
5	OE 775 ME	Entrepreneurship	5	OE 785 ME	Mechatronics

PC: Professional Course

PE: Professional Elective

L: Lectures

T: Tutorials

P: Practical

D: Drawing

CIE: Continuous Internal Evaluation

SEE: Semester End Examination (Univ. Exam)

Note: 1) Each contact hour is a Clock Hour

2) The practical class can be of two and half hour (clock hours) duration as per the requirement of a particular laboratory.

Note-2: * The students have to undergo a Summer Internship of four weeks' duration after VI semester and credits will be awarded in VII semester after evaluation.

** Subject is not offered to the students of EEE and EIE Department.

SCHEME OF INSTRUCTION & EXAMINATION
B.E. VIII - SEMESTER
(ELECTRICAL AND ELECTRONICS ENGINEERING)

S. No.	Course Code	Course Title	Scheme of Instruction				Scheme of Examination			Credits
			L	T	P/D	Contact Hrs/Wk	CIE	SEE	Duration in Hrs	
Theory Courses										
1	PC 801 EE	Utilization of Electrical Energy	3	-	-	3	30	70	3	3
2		Professional Elective – III	3	-	-	3	30	70	3	3
3		Professional Elective – IV	3	-	-	3	30	70	3	3
4		Professional Elective – V	3	-	-	3	30	70	3	3
Practical/ Laboratory Courses										
5	PC 851 EE	Power Systems Lab	-	-	2	2	25	50	3	1
6	PW 961 EE	Project Work – II	-	-	16	16	50	100	-	8
			12	-	18	30	195	430		21

Professional Elective – III			Professional Elective – IV		
S. No.	Course Code	Course Title	S. No.	Course Code	Course Title
1	PE 821 EE	Power System Reliability	1	PE 831 EE	Advanced Control Systems
2	PE 822 EE	Electric Vehicle and Hybrid Electric Vehicle	2	PE 832 EE	Electrical Estimation Costing & Safety
3	PE 823 EE	Machine Modelling Analysis	3	PE 833 EE	Advanced Power Electronics
4	PE 824 EE	High Voltage DC Transmission	4	PE 834 EE	Power Quality
Professional Elective – V					
1	PE 841 EE	Smart Grid Technologies			
2	PE 842 EE	Energy Management Systems and SCADA			
3	PE 843 EE	Special Electrical Machines			
4	PE 844 EE	Power Electronics Applications to Renewable Energy			
5	PE 845 EE	Electrical Substation Design and Equipment			

PC: Professional Course

PE: Professional Elective

L: Lectures

T: Tutorials

P: Practical

D: Drawing

CIE: Continuous Internal Evaluation

SEE: Semester End Examination (Univ. Exam)

Note: 1) Each contact hour is a Clock Hour

2) The duration of the practical class is two clock hours, however it can be extended wherever necessary, to enable the student to complete the experiment

SCHEME OF INSTRUCTION & EXAMINATION

B.E. I - SEMESTER

(Civil Engineering, Computer Science & Engineering,
Electronics & Communication Engineering, Electrical & Electronics Engineering,
and Electronics & Instrumentation Engineering)

S. No	Course Code	Course Title	Scheme of Instructions (Contact Hrs/Wk)			Scheme of Examination			Credits
			L	T	Pr/Drg	CIE	SEE	Duration in Hrs	
Theory Courses									
1.	BS 101 MT	Engineering Mathematics I	3	1	0	30	70	3	3
2.	BS 102 PH	Engineering Physics I	3	0	0	30	70	3	3
3.	BS 103 CH	Engineering Chemistry I	3	0	0	30	70	3	3
4.	ES 104 CE	Engineering Mechanics I	3	1	0	30	70	3	3
5.	ES 105 CS	Computer Programming and Problem Solving	3	0	0	30	70	3	3
6.	MC 106 EG	Engineering English	3	0	0	30	70	3	3
Practical / Laboratory Courses									
7.	BS 151 PH	Engineering Physics Lab I	0	0	2	25	50	3	1
8.	BS 152 CH	Engineering Chemistry Lab I	0	0	2	25	50	3	1
9.	ES 153 CE	Engineering Graphics I	0	0	2 x 2	50	50	3	2
10.	ES 154 CS	Computer Programming Lab	0	0	2	25	50	3	1
11.	ES 155 ME	Engineering Workshop I	0	0	2	25	50	3	1
12.	MC 156 EG	Engineering English Lab	0	0	2	25	50	3	1
		Total	18	2	14	355	720		25

BS: Basic Sciences

ES: Engineering Sciences

MC: Mandatory Course

PC: Professional Course

HS: Humanities and Sciences

PE: Professional Elective

OE: Open Elective

CIE: Continuous Internal Evaluation

SEE: Semester End Examination(Univ Exam)

L: Lectures T: Tutorials

Note: 1) Each contact hour is a Clock Hour

2) The practical class can be of two and half hour (clock hours) duration as per the requirement of a particular laboratory.

CBCS.

1604-16; 1604-17

ECE

2016-17

First Year

II Sem

FACULTY OF ENGINEERING

Scheme of Instruction & Examination

and

Syllabi

B.E. II Semester

of

Four Year Degree Programme

in

Electronics & Communication Engineering

(With effect from the academic year 2016-17)

(As approved in Faculty Meeting held on 18 June 2016)



Issued by

**Dean, Faculty of Engineering
Osmania University, Hyderabad**

July 2016

SCHEME OF INSTRUCTION & EXAMINATION
B.E. II - SEMESTER
(ELECTRONICS & COMMUNICATION ENGINEERING)

S. No	Course Code	Course Title	Scheme of Instructions (Contact Hrs/Wk)			Scheme of Examination			Credits
			L	T	Pr/Drg	CIE	SEE	Duration in Hrs	
Theory Courses									
1.	BS 201 MT	Engineering Mathematics II	3	1	0	30	70	3	3
2.	BS 202 PH	Engineering Physics II	3	0	0	30	70	3	3
3.	BS 203 CH	Engineering Chemistry II	3	0	0	30	70	3	3
4.	HS 204 EG	Business Communication and Presentation Skills	3	0	0	30	70	3	3
5.	PC 205 EC	Basic Circuit Analysis	3	1	0	30	70	3	3
6.	ES 949 EE	Electrical Technology	3	0	0	30	70	3	3
Practical / Laboratory Courses									
7.	BS 251 PH	Engineering Physics Lab II	0	0	2	25	50	3	1
8.	BS 252 CH	Engineering Chemistry Lab II	0	0	2	25	50	3	1
9.	ES 930 CS	Computer Skills Lab	0	0	2	25	50	3	1
10.	HS 254 EG	Communication Skills Lab	0	0	2	25	50	3	1
11.	PC 945 EC	Electronic Workshop Lab	0	0	2	25	50	3	1
		Total	18	2	10	305	670		23

BS: Basic Sciences

ES: Engineering Sciences

MC: Mandatory Course

PC: Professional Course

HS: Humanities and Sciences

PE: Professional Elective

OE: Open Elective

CIE: Continuous Internal Evaluation

SEE: Semester End Examination (Univ.Exam)

L: Lectures T: Tutorials

Note: 1) Each contact hour is a Clock Hour

2) The practical class can be of two and half hour (clock hours) duration as per the requirement of a particular laboratory.

FACULTY OF ENGINEERING
Scheme of Instruction & Examination

and

Syllabi

B.E. III-Semester & IV-Semester

of

Four Year Degree Programme

In

Electronics & Communication Engineering

(With effect from the academic year 2017 – 2018)

(As approved in faculty meeting held on 26 July 2017)



Issued by

Dean, Faculty of Engineering
Osmania University, Hyderabad
July 2017

SCHEME OF INSTRUCTION & EXAMINATION
B.E. III – Semester
(ELECTRONICS AND COMMUNICATION ENGINEERING)

S. No.	Course Code	Course Title	Scheme of Instruction				Scheme of Examination			Credits
			L	T	Pr/Drg	Contact Hrs/Wk	CIE	SEE	Duration in Hrs	
Theory Courses										
1.	BS 301MT	Engineering Mathematics - III	3	1	-	4	30	70	3	3
2.	ES 965ME	Elements of Mechanical Engineering	3	-	-	3	30	70	3	3
3.	PC 302 EC	Electronic Devices	3	1	-	4	30	70	3	3
4.	PC 303 EC	Switching Theory and Logic Design	3	1	-	4	30	70	3	3
5.	PC 304 EC	Signal Analysis and Transform Techniques	3	1	-	4	30	70	3	3
6.	PC 305 EC	Network Analysis and Synthesis	3	1	-	4	30	70	3	3
Practical / Laboratory Courses										
7.	ES 361 EE	Electrical Engg. Lab	-	-	2	2	25	50	3	1
8.	PC 351 EC	Electronic Devices and Logic Design Lab	-	-	2	2	25	50	3	1
			18	5	4	27	230	520		20

Engineering Service Courses offered to other Departments

S. No.	Course Code	Course Title	Scheme of Instruction				Scheme of Examination			Credits
			L	T	Pr/Drg	Contact Hrs/Wk	CIE	SEE	Duration in Hrs	
Theory Courses										
1.	ES 322EC	Electronic Engineering –II (For EEE & EIE)	3	-	-	3	30	70	3	3
2.	ES 934EC	Basic Electronics (For CSE)	3	-	-	3	30	70	3	3
Practical /Laboratory Courses										
3.	ES 362EC	Electronic Engineering Lab (For EEE & EIE)	-	-	2	2	25	50	3	1
4.	ES 955EC	Basic Electronics Lab (For CSE)	-	-	2	2	25	50	3	1

BS: Basic Sciences ES: Engineering Sciences MC: Mandatory Course

PC: Professional Course HS: Humanities and Sciences

L: Lectures T: Tutorials Pr : Practicals Drg: Drawing

CIE: Continuous Internal Evaluation SEE: Semester End Examination (Univ. Exam)

Note: 1) Each contact hour is a Clock Hour

2) The practical class can be of two and half hour (clock hours) duration as per the requirement of a particular laboratory.

3) Students admitted into B.E./B.Tech. courses under lateral entry scheme (through ECET) from the academic year 2017-18 should undergo the following bridge course subjects at III Semester (CBCS).

(1) ES 154 CS Computer Programming Lab

(2) MC 156 EG Engineering English Lab

SCHEME OF INSTRUCTION & EXAMINATION
B.E. IV – Semester
(ELECTRONICS AND COMMUNICATION ENGINEERING)

S. No.	Course Code	Course Title	Scheme of Instruction				Scheme of Examination			Credits
			L	T	Pr/Drg	Contact Hrs/Wk	CIE	SEE	Duration in Hrs	
Theory Courses										
1.	BS 405 MT	Applied Mathematics	3	1	-	4	30	70	3	3
2.	PC 401 EC	Analog Electronic Circuits	3	1	-	4	30	70	3	3
3.	PC 402 EC	Pulse, Digital and Integrated Circuits	3	1	-	4	30	70	3	3
4.	PC 403 EC	Probability Theory and Stochastic Process	3	1	-	4	30	70	3	3
5.	PC 404 EC	Electromagnetic Theory and Transmission Lines	3	1	-	4	30	70	3	3
6.	MC 916CE	Environmental Sciences	3	-	-	3	30	70	3	3
Practical / Laboratory Courses										
7.	PC 451 EC	Analog Electronic Circuits Lab	-	-	2	2	25	50	3	1
8.	PC 452 EC	Pulse, Digital and Integrated Circuits Lab	-	-	2	2	25	50	3	1
			18	05	04	27	230	520		20

Engineering Service Courses Offered to other Departments

S. No.	Course Code	Course Title	Scheme of Instruction				Scheme of Examination			Credits
			L	T	Pr/Drg	Contact Hrs/Wk	CIE	SEE	Duration in Hrs	
Theory Courses										
1.	ES934EC	Basic Electronics (For ME & PE)	3	-	-	3	30	70	3	3
2.	ES422EC	Signals & System Analysis (For CSE)	3	-	-	3	30	70	3	3
Practical / Laboratory Courses										
3.	ES955EC	Basic Electronics Lab (For ME & PE)	-	-	2	2	25	50	3	1

BS: Basic Sciences ES: Engineering Sciences MC: Mandatory Course
 PC: Professional Course HS: Humanities and Sciences
 L: Lectures T: Tutorials Pr : Practicals Drg: Drawing
CIE: Continuous Internal Evaluation **SEE:** Semester End Examination (Univ. Exam)

Note: 1) Each contact hour is a Clock Hour
 2) The practical class can be of two and half hour (clock hours) duration as per the requirement of a particular laboratory.

FACULTY OF ENGINEERING
Scheme of Instruction & Examination
and
Syllabi
B.E. V and VI Semesters
of
Four Year Degree Programme
in
ELECTRONICS & COMMUNICATION ENGINEERING
(With effect from the Academic Year 2018 - 2019)
(As approved in the Faculty Meeting held on 26 June 2018)



Issued by
Dean, Faculty of Engineering
Osmania University, Hyderabad – 500 007
2018

SCHEME OF INSTRUCTION & EXAMINATION
B.E. V- Semester
(ELECTRONICS AND COMMUNICATION ENGINEERING)

S. No.	Course Code	Course Title	Scheme of Instruction				Scheme of Examination			Credits
			L	T	P/D	Contact Hrs/Wk	CIE	SEE	Duration in Hrs	
Theory Course										
1	PC501EC	Linear ICs and Applications	3	1	-	4	30	70	3	3
2	PC502EC	Analog Communication	3	-	-	3	30	70	3	3
3	PC503EC	Digital Signal Processing	3	1	-	4	30	70	3	3
4	PC504EC	Automatic Control Systems	3	1	-	4	30	70	3	3
5	PC505EC	Computer Organization & Architecture	3	1	-	4	30	70	3	3
6	PC506EC	Digital System Design with Verilog HDL	3	-	-	3	30	70	3	3
7	MC901EG	Gender Sensitization	3	-	-	3	30	70	3	0
Practical/Laboratory Course										
8	PC551EC	IC Applications lab	-	-	2	2	25	50	3	1
9	PC552EC	Systems and Signal Processing Lab	-	-	2	2	25	50	3	1
10	PC553EC	Industrial Visit	-	-	-	-	G	-	-	-
Total			21	4	4	29	260	590		20

PC: Professional Course

MC: Mandatory Course

L: Lecture T: Tutorial P: Practical

D: Drawing G: Grade (E/VG/G/S/U)

CIE: Continuous Internal Evaluation

SEE: Semester End Examination (Univ. Exam)

Note:

1. Each contact hour is a Clock Hour
2. The duration of the practical class is two clock hours, however it can be extended wherever necessary, to enable the student to complete the experiment

SCHEME OF INSTRUCTION & EXAMINATION
B.E. VI - Semester
(ELECTRONICS AND COMMUNICATION ENGINEERING)

S. No.	Course Code	Course Title	Scheme of Instruction				Scheme of Examination			Credits
			L	T	P/D	Contact Hrs/Wk	CIE	SEE	Duration in Hrs	
Theory Courses										
1	PC601EC	Digital Communication	3	1	-	4	30	70	3	3
2	PC602EC	Antennas and wave propagation	3	1	-	4	30	70	3	3
3	PC603EC	Microprocessor and Microcontroller	3	1	-	4	30	70	3	3
4	HS901MB	Managerial Economics & Accountancy	3	-	-	3	30	70	3	3
5	PE – I	Professional Elective-I	3	-	-	3	30	70	3	3
6	OE – I	Open Elective-I	3	-	-	3	30	70	3	3
Practical/Laboratory Courses										
7	PC651EC	Communication Lab	-	-	2	2	25	50	3	1
8	PC652EC	Microprocessor and Microcontroller Lab	-	-	2	2	25	50	3	1
9	MC	Mandatory Course	-	-	3	3	50	-	3	0
10	SI 671EC	Summer Internship*	-	-	-	-	50	-	-	-
Total			18	3	7	28	330	520	-	20

PC: Professional Course

PE: Professional Elective

OE: Open Elective

MC: Mandatory Course

SI: Summer Internship

HS: Humanities and Social

Sciences

L: Lecture

T: Tutorial

P: Practical

D: Drawing

CIE: Continuous Internal Evaluation

SEE: Semester End Examination (Univ. Exam)

Note-1:

- Each contact hour is a Clock Hour
- The duration of the practical class is two clock hours, however it can be extended wherever necessary, to enable the student to complete the experiment

Note-2:

*The students have to undergo a Summer Internship of four weeks duration after VI semester and credits will be awarded in VII semester after evaluation.

** Subject is not offered to the students of Electronics and Communication Engineering Department.

Open Elective-I:		
S.No	Course Code	Course Title
1	OE601CE	Disaster Management
2	OE602CE	GeoSpatial Techniques
3	OE601CS	Operating Systems
4	OE602CS	OOP using Java
5	OE601IT	Database Systems
6	OE601EC	Principles of Embedded Systems**
7	OE602EC	Digital System Design using HDL Verilog **
8	OE601EE	Reliability Engineering
9	OE602EE	Basics of Power Electronics
10	OE601ME	Industrial Robotics
11	OE602ME	Material Handling
12	OE632AE	Automotive Safety & Ergonomics

Professional Elective – I		
S.No.	Course Code	Course Title
1	PE671EC	Digital Image Processing
2	PE672EC	Data Communication and computer networking
3	PE673EC	Optical Communication
4	PE674EC	Digital TV Engineering

Mandatory Course		
S.No.	Course Code	Course Title
1	MC951SP	Yoga Practice
2	MC952SP	National Service Scheme
3	MC953SP	Sports

IV Year ECE 1604-16j 1604-17
CBCS

FACULTY OF ENGINEERING

Scheme of Instruction & Examination

(CBCS Curriculum for the Academic Year 2019-2020)

and

Syllabi

B.E. VII and VIII Semester

of

Four Year Degree Programme

In

Electronics and Communication Engineering

(With effect from the academic year 2019– 2020)

(As approved in the faculty meeting held on 25-06-2019)



Issued by

Dean, Faculty of Engineering
Osmania University, Hyderabad – 500 007
2019

SCHEME OF INSTRUCTION & EXAMINATION
B.E. VII - Semester
(ELECTRONICS AND COMMUNICATION ENGINEERING)

S. No.	Course Code	Course Title	Scheme of Instruction				Scheme of Examination			Credits
			L	T	P/D	Contact Hrs/Wk	CIE	SEE	Duration in Hrs	
Theory Courses										
1	PC 701 EC	Embedded System	3	-	-	3	30	70	3	3
2	PC 702 EC	VLSI Design	3	-	-	3	30	70	3	3
3	PC 703 EC	Microwave Techniques	3	-	-	3	30	70	3	3
4	ES 707 ME	Industrial Administration and Financial Management	3	-	-	3	30	70	3	3
5		Professional Elective – II	3	-	-	3	30	70	3	3
6		Open Elective – II	3	-	-	3	30	70	3	3
7		Open Elective – III	3	-	-	3	30	70	3	3
8	MC 771 EG	Human Values and Professional Ethics	2	-	-	2	30	70	3	-
Practical/ Laboratory Courses										
9	PC 751 EC	Microwave Lab	-	-	2	2	25	50	3	1
10	PC 752 EC	Electronic Design & Automation Lab	-	-	2	2	25	50	3	1
11	PW 761 EC	Project Work – I	-	-	4	4	50	-	-	2
12	SI 762 EC	Summer Internship	-	-	-	-	50	-	-	2
			23	-	08	31	390	660		27

Professional Elective – II			Open Elective – II		
S. No.	Course Code	Course Title	S. No.	Course Code	Course Title
1	PE 721 EC	Mobile and Cellular Communications	1	OE 771 CE	Green Building Technologies
2	PE 722 EC	Speech Signal Processing	2	OE 772 CS	Data Science Using R Programming
3	PE 723 EC	Electronic Measurements and Instrumentation	3	OE 773 EC**	Fundamentals of IoT
4	PE 724 EC	Digital Signal Processor Architectures	4	OE 774 EE	Non-Conventional Energy Sources
			5	OE 775 ME	Entrepreneurship
Open Elective – III					
S. No.	Course Code	Course Title			
1	OE 781 CE	Road Safety Engineering			
2	OE 782 IT	Software Engineering			
3	OE 783 EC**	Principles of Electronic Communications			
4	OE 784 EE	Illumination and Electric Traction systems			
5	OE 785 ME	Mechatronics			

PC: Professional Course
PE: Professional Elective
L: Lectures T: Tutorials
P: Practical D: Drawing
CIE: Continuous Internal Evaluation
SEE: Semester End Examination (Univ. Exam)

Note: 1) Each contact hour is a Clock Hour

2) The practical class can be of two and half hour (clock hours) duration as per the requirement of a particular laboratory.

Note-2: * The students have to undergo a Summer Internship of four weeks' duration after VI semester and credits will be awarded in VII semester after evaluation.

** Subject is not offered to the students of ECE Department.

SCHEME OF INSTRUCTION & EXAMINATION
B.E. VIII - SEMESTER
(ELECTRONICS AND COMMUNICATION ENGINEERING)

S. No.	Course Code	Course Title	Scheme of Instruction				Scheme of Examination			Credits
			L	T	P/D	Contact Hrs/Wk	CIE	SEE	Duration in Hrs	
Theory Courses										
1		Professional Elective – III	3	-	-	3	30	70	3	3
2		Professional Elective – IV	3	-	-	3	30	70	3	3
3		Professional Elective – V	3	-	-	3	30	70	3	3
Practical/ Laboratory Courses										
5	PW961 EC	Project Work – II	-	-	16	16	50	100	-	8
			09	-	16	25	140	310		17

Professional Elective – II			Professional Elective – III		
S. No.	Course Code	Course Title	S. No.	Course Code	Course Title
1	PE 821 EC	Field Programmable Gate Arrays	1	PE 831 EC	Wireless Sensor Networks
2	PE 822 EC	Internet of Things	2	PE 832 EC	Global Navigational Satellite Systems
3	PE 823 EC	Neural Networks	3	PE 833 EC	System Verilog
4	PE 824 EC	Satellite Communications	4	PE 834 EC	Multirate Signal Processing
Professional Elective – IV					
1	PE 841 EC	Real Time Operating Systems			
2	PE 842 EC	Fuzzy Logic And Applications			
3	PE 843 EC	Radar Systems			
4	PE 844 EC	Digital Fault Tolerant Systems			

PC: Professional Course

PE: Professional Elective

L: Lectures

T: Tutorials

P: Practical

D: Drawing

CIE: Continuous Internal Evaluation

SEE: Semester End Examination (Univ. Exam)

Note: 1) Each contact hour is a Clock Hour

2) The duration of the practical class is two clock hours, however it can be extended wherever necessary, to enable the student to complete the experiment

SCHEME OF INSTRUCTION & EXAMINATION
B.E. I - SEMESTER
(MECHANICAL ENGINEERING, PRODUCTION ENGINEERING, &
AUTOMOBILE ENGINEERING)

S. No	Course Code	Course Title	Scheme of Instructions (Contact Hrs/Wk)			Scheme of Examination			Credits
			L	T	Pr/Drg	CIE	SEE	Duration in Hrs	
Theory Courses									
1.	BS 101 MT	Engineering Mathematics I	3	1	0	30	70	3	3
2.	BS 102 PH	Engineering Physics I	3	0	0	30	70	3	3
3.	BS 103 CH	Engineering Chemistry I	3	0	0	30	70	3	3
4.	ES 104 CE	Engineering Mechanics I	3	1	0	30	70	3	3
5.	ES 105 CS	Computer Programming and Problem Solving	3	0	0	30	70	3	3
6.	MC 106 EG	Engineering English	3	0	0	30	70	3	3
Practical / Laboratory Courses									
7.	BS 151 PH	Engineering Physics Lab I	0	0	2	25	50	3	1
8.	BS 152 CH	Engineering Chemistry Lab I	0	0	2	25	50	3	1
9.	ES 157 ME	Engineering Drawing I	0	0	2 x 2	50	50	3	2
10.	ES 154 CS	Computer Programming Lab	0	0	2	25	50	3	1
11.	ES 155 ME	Engineering Workshop I	0	0	2	25	50	3	1
12.	MC 156 EG	Engineering English Lab	0	0	2	25	50	3	1
Total			18	2	14	355	720		25

BS: Basic Sciences

ES: Engineering Sciences

MC: Mandatory Course

PC: Professional Course

HS: Humanities and Sciences

PE: Professional Elective

OE: Open Elective

CIE: Continuous Internal Evaluation

SEE: Semester End Examination(Univ.Exam)

L: Lectures T: Tutorials

Note: 1) Each contact hour is a Clock Hour

- 2) The practical class can be of two and half hour (clock hours) duration as per the requirement of a particular laboratory.

SCHEME OF INSTRUCTION & EXAMINATION
B.E. II - SEMESTER
(MECHANICAL ENGINEERING, PRODUCTION ENGINEERING, &
AUTOMOBILE ENGINEERING)

S. No	Course Code	Course Title	Scheme of Instructions (Contact Hrs/Wk)			Scheme of Examination			Credits
			L	T	Pr/Drg	CIE	SEE	Duration in Hrs	
Theory Courses									
1.	BS 201 MT	Engineering Mathematics II	3	1	0	30	70	3	3
2.	BS 202 PH	Engineering Physics II	3	0	0	30	70	3	3
3.	BS 203 CH	Engineering Chemistry II	3	0	0	30	70	3	3
4.	HS 204 EG	Business Communication and Presentation Skills	3	0	0	30	70	3	3
5.	ES 205 CE	Engineering Mechanics-II	3	1	0	30	70	3	3
Practical / Laboratory Courses									
6.	BS 251 PH	Engineering Physics Lab II	0	0	2	25	50	3	1
7.	BS 252 CH	Engineering Chemistry Lab II	0	0	2	25	50	3	1
8.	ES 930 CS	Computer Skills Lab	0	0	2	25	50	3	1
9.	HS 253 EG	Communication Skills Lab	0	0	2	25	50	3	1
10.	ES 254 ME	Engineering Graphics-II	0	0	2x2	50	50	3	2
11.	ES 255 ME	Engineering Workshop-II	0	0	2	25	50	3	1
		Total	15	2	14	325	650		22

BS: Basic Sciences

PC: Professional Course

OE: Open Elective

ES: Engineering Sciences

HS: Humanities and Sciences

CIE: Continuous Internal Evaluation

MC: Mandatory Course

PE: Professional Elective

SEE: Semester End Examination (Univ.Exam)

L: Lectures T: Tutorials

Note: 1) Each contact hour is a Clock Hour

2) The practical class can be of two and half hour (clock hours) duration as per the requirement of a particular laboratory.

FACULTY OF ENGINEERING
Scheme of Instruction & Examination
and
Syllabi
B.E. III-Semester & IV-Semester
of
Four Year Degree Programme
In
Mechanical Engineering
(With effect from the academic year 2017 – 2018)
(As approved in Faculty Meeting held on 26 July 2017)



Issued by
Dean, Faculty of Engineering
Osmania University, Hyderabad
July 2017

SCHEME OF INSTRUCTION & EXAMINATION
B.E. III - Semester
(MECHANICAL ENGINEERING)

S. No	Course Code	Course Title	Scheme of Instruction				Scheme of Examination			Credits
			L	T	Pr/Drg	Contact Hrs/Wk	CIE	SEE	Duration in Hrs	
Theory Courses										
1.	BS301MT	Engineering Mathematics-III	3	1	-	4	30	70	3	3
2.	ES321CE	Mechanics of Materials	3	1	-	4	30	70	3	3
3.	PC301ME	Engineering Thermodynamics	4	-	-	4	30	70	3	4
4.	PC302ME	Metallurgy & Material Science	4	-	-	4	30	70	3	4
5.	PC303ME	Fluid Mechanics	4	-	-	4	30	70	3	4
6.	MC916CE	Environmental Sciences	3	-	-	3	30	70	3	3
Practical/Laboratory Courses										
7.	ES361CE	Mechanics of Materials Lab.	-	-	2	2	25	50	3	1
8.	PC351ME	Machine Drawing	-	-	2	2	25	50	3	1
9.	PC352ME	Metallurgy Lab.	-	-	2	2	25	50	3	1
Total			21	2	6	29	255	570		24

Engineering Service Courses offered to other Departments

S. No	Course Code	Course Title	Scheme of Instruction				Scheme of Examination			Credits
			L	T	Pr/Drg	Contact Hrs/Wk	CIE	SEE	Duration in Hrs	
Theory Courses										
1.	ES321ME	Part-B: Mechanical Technology (for CE)	2	-	-	2	15	35	2	2
2.	ES323ME	Prime Movers & Pumps (for EEE & EIE)	3	-	-	3	30	70	3	3
3.	ES965ME	Elements of Mechanical Engineering (for ECE)	3	-	-	3	30	70	3	3
Practical/Laboratory Courses										
4.	ES361ME	Mechanical Engg. Lab. (for EEE & EIE)	-	-	2	2	25	50	3	1

BS: Basic Sciences

ES: Engineering Sciences

MC: Mandatory Course

PC: Professional Course

HS: Humanities and Sciences

L: Lectures T: Tutorials

Pr : Practicals

Drg: Drawing

CIE: Continuous Internal Evaluation**SEE:** Semester End Examination (Univ. Exam)**Note:** 1) Each contact hour is a Clock Hour

2) The practical class can be of two and half hour (clock hours) duration as per the requirement of a particular laboratory.

3) Students admitted into B.E./B.Tech. courses under lateral entry scheme (through ECET) from the academic year 2017-18 should undergo the following bridge course subjects at III Semester (CBCS).

(1) ES 154 CS Computer Programming Lab

(2) MC 156 EG Engineering English Lab

SCHEME OF INSTRUCTION & EXAMINATION
B.E. IV - Semester
(MECHANICAL ENGINEERING)

S. No	Course Code	Course Title	Scheme of Instruction				Scheme of Examination			Credits
			L	T	Pr/Drg	Contact Hrs/Wk	CIE	SEE	Duration in Hrs	
Theory Courses										
1.	BS401MT	Engineering Mathematics-IV	3	1	-	4	30	70	3	3
2.	ES422EE	Electrical Circuits & Machines	3	-	-	3	30	70	3	3
3.	ES934EC	Basic Electronics	3	-	-	3	30	70	3	3
4.	PC401ME	Applied Thermodynamics	4	-	-	4	30	70	3	4
5.	PC402ME	Kinematics of Machines	4	1	-	5	30	70	3	4
6.	PC403ME	Design of Machine Elements	4	-	-	4	30	70	3	4
Practical/Laboratory Courses										
7.	ES461EE	Electrical Circuits & Machines Lab.	-	-	2	2	25	50	3	1
8.	ES955EC	Basic Electronics Lab.	-	-	2	2	25	50	3	1
9.	PC451ME	Applied Thermodynamics Lab.	-	-	2	2	25	50	3	1
Total			21	2	6	29	255	570		24

BS: Basic Sciences ES: Engineering Sciences MC: Mandatory Course
PC: Professional Course HS: Humanities and Sciences
L: Lectures T: Tutorials Pr : Practicals Drg: Drawing
CIE: Continuous Internal Evaluation **SEE:** Semester End Examination (Univ. Exam)

Note: 1) Each contact hour is a Clock Hour
2) The practical class can be of two and half hour (clock hours) duration as per the requirement of a particular laboratory.

III Year Mech. 1604-16; 1604-17

Faculty of Engineering, O.U. CBCS. with effect from Academic Year 2018-2019

**FACULTY OF ENGINEERING
Scheme of Instruction & Examination**

and

Syllabi

B.E. V and VI Semesters

of

Four Year Degree Programme

in

MECHANICAL ENGINEERING

(With effect from the Academic Year 2018– 2019)
(As approved in the Faculty Meeting held on 26th June 2018)



Issued by
Dean, Faculty of Engineering
Osmania University, Hyderabad 500 007
2018

SCHEME OF INSTRUCTION & EXAMINATION
B.E. V - Semester
(MECHANICAL ENGINEERING)

S.No	Course Code	Course Title	Scheme of Instruction				Scheme of Examination			Credits
			L	T	P/D	Contact Hr/Wk	CIE	SEE	Duration in Hours	
Theory Courses										
1.	PC501ME	Dynamics of Machines	4	-	-	4	30	70	3	4
2.	PC502ME	Manufacturing Processes	3	-	-	3	30	70	3	3
3.	PC503ME	Machine Design	4	-	-	4	30	70	3	4
4.	PC504ME	Heat Transfer	3	1	-	4	30	70	3	3
5.	PC505ME	Operations Research	3	-	-	3	30	70	3	3
6.	PC506ME	CAD/CAM	3	-	-	3	30	70	3	3
7.	MC901EG	Gender Sensitization	3	-	-	3	30	70	3	0
Practical / Laboratory Courses										
8.	PC551ME	Computer Aided Production Drawing & CAM Lab	-	-	2	2	25	50	3	1
9	PC552ME	Manufacturing Processes Lab	-	-	2	2	25	50	3	1
10	PC553ME	Dynamics Lab	-	-	2	2	25	50	3	1
Total			23	1	6	30	285	640		23

PC: Professional Course MC: Mandatory Course
L: Lecture T: Tutorial P: Practical D: Drawing
CIE: Continuous Internal Evaluation SEE: Semester End Examination (Univ. Exam)

Note:

1. Each contact hour is a Clock Hour
2. The duration of the practical class is two clock hours, however it can be extended wherever necessary, to enable the student to complete the experiment

SCHEME OF INSTRUCTION & EXAMINATION
B.E. VI - Semester
(MECHANICAL ENGINEERING)

S.No	Course Code	Course Title	Scheme of Instruction				Scheme of Examination			Credits
			L	T	P/D	Contact Hr/Wk	CIE	SEE	Duration in Hours	
Theory Courses										
1.	PC601ME	Metal Cutting & Machine Tools	3	-	-	3	30	70	3	3
2.	PC602ME	Refrigeration & Air Conditioning	4	-	-	4	30	70	3	4
3.	PC603ME	Hydraulic Machinery & Systems	4	-	-	4	30	70	3	4
4.	PC604ME	Metrology & Instrumentation	3	-	-	3	30	70	3	3
5.	PC605ME	Automobile Engineering	3	-	-	3	30	70	3	3
6.	PE – I	Professional Elective–I	3	-	-	3	30	70	3	3
7.	OE – I	Open Elective – I	3	-	-	3	30	70	3	3
Practical / Laboratory Courses										
7.	PC651ME	Metrology & Machine Tools Lab			2	2	25	50	3	1
8.	PC652ME	Hydraulic Machinery Lab			2	2	25	50	3	1
9.	MC	Mandatory Course	-	-	3	3	50	-	3	0
10.	SI 671ME	Summer Internship*								
Total			23		7	30	310	590		25

PE: Professional Elective **MC:** Mandatory Course **OE:** Open Elective **SI:** Summer Internship
L: Lecture **T:** Tutorial **P:** Practical **D:** Drawing
CIE: Continuous Internal Evaluation **SEE:** Semester End Examination (Univ. Exam)

Note -1:

- Each contact hour is a Clock Hour
- The duration of the practical class is two clock hours, however it can be extended wherever necessary, to enable the student to complete the experiment

Note-2:

- * The students have to undergo a Summer Internship of four weeks duration after VI semester and credits will be awarded in VII semester after evaluation.
- ** Subject is not offered to the students of Mechanical Engineering, Production Engineering and Automobile Engineering Department.

Open Elective-I:		
S.No	Course Code	Course Title
1	OE601CE	Disaster Management
2	OE602CE	Geo Spatial Techniques
3	OE601CS	Operating Systems
4	OE602CS	OOP using Java
5	OE601IT	Database Systems
6	OE601EC	Principles of Embedded Systems
7	OE602EC	Digital System Design using Verilog HDL
8	OE601EE	Reliability Engineering
9	OE602EE	Basics of Power Electronics
10	OE601ME	Industrial Robotics**
11	OE602ME	Material Handling**
12	OE632AE	Automotive Safety & Ergonomics**

Professional Elective – I		
S.No	Course Code	Course Title
1	PE601ME	Non-Conventional Energy Sources
2	PE602ME	Modern Machining and Forming Methods

Mandatory Course		
S.No	Course Code	Course Title
1	MC951SP	Yoga Practice
2	MC952SP	National Service Scheme
3	MC953SP	Sports

IV Year Mech. 1604-16; 1604-17

CBCS.

FACULTY OF ENGINEERING

Scheme of Instruction & Examination

(CBCS Curriculum for the Academic Year 2019-2020)

and

Syllabi

B.E. VII and VIII Semester

of

Four Year Degree Programme

In

Mechanical Engineering

(With effect from the academic year 2019– 2020)

(As approved in the faculty meeting held on 25-06-2019)



Issued by

Dean, Faculty of Engineering
Osmania University, Hyderabad – 500 007
2019

SCHEME OF INSTRUCTION & EXAMINATION
B.E. VII - Semester
(MECHANICAL ENGINEERING)

S. No.	Course Code	Course Title	Scheme of Instruction				Scheme of Examination			Credits
			L	T	P/D	Contact Hrs/Wk	CIE	SEE	Duration in Hrs	
Theory Courses										
1	PC 701 ME	Thermal Turbo Machines	3	1	-	4	30	70	3	3
2	PC 702 ME	Finite Element Analysis	3	1	-	4	30	70	3	3
3	PC 703 ME	Industrial Engineering	3	-	-	3	30	70	3	3
4	PC 704 ME	Production And Operations Management	3	-	-	3	30	70	3	3
5	HS 901 MB	Managerial Economics and Accountancy	3	-	-	3	30	70	3	3
6		Open Elective-II								
7		Open Elective-III	3	-	-	3	30	70	3	3
Practical/ Laboratory Courses										
8	PC 751 ME	Thermal Engineering Lab	-	-	2	2	25	50	3	1
9	PC 752 ME	CAE Lab	-	-	2	2	25	50	3	1
10	PW 761 ME	Project Work – I	-	-	4	4	50	-	-	2
11	SI 762 ME	Summer Internship	-	-	-	-	50	-	-	2
			21	02	08	31	360	590		27

Open Elective – II			Open Elective – III		
S. No.	Course Code	Course Title	S. No.	Course Code	Course Title
1	OE 771 CE	Green Building Technologies	1	OE 781 CE	Road Safety Engineering
2	OE 772 CS	Data Science Using R Programming	2	OE 782 IT	Software Engineering
3	OE 773 EC	Fundamentals of IoT	3	OE 783 EC	Principles of Electronic Communications
4	OE 774 EE	Non-Conventional Energy Sources	4	OE 784 EE	Illumination and Electric Traction systems
5	OE 775 ME**	Entrepreneurship	5	OE 785 ME**	Mechatronics

PC: Professional Course

PE: Professional Elective

L: Lectures

T: Tutorials

P: Practical

D: Drawing

CIE: Continuous Internal Evaluation

SEE: Semester End Examination (Univ. Exam)

Note: 1) Each contact hour is a Clock Hour

2) The practical class can be of two and half hour (clock hours) duration as per the requirement of a particular laboratory.

Note-2: * The students have to undergo a Summer Internship of four weeks' duration after VI semester and credits will be awarded in VII semester after evaluation.

** Subject is not offered to the students of Mechanical Engineering Department.

**SCHEME OF INSTRUCTION & EXAMINATION
B.E. VIII - SEMESTER
(MECHANICAL ENGINEERING)**

S. No.	Course Code	Course Title	Scheme of Instruction				Scheme of Examination			Credits
			L	T	P/D	Contact Hrs/Wk	CIE	SEE	Duration in Hrs	
Theory Courses										
1		Professional Elective – II	3	-	-	3	30	70	3	3
2		Professional Elective – III	3	-	-	3	30	70	3	3
3		Professional Elective – IV	3	-	-	3	30	70	3	3
4		Professional Elective – V	3	-	-	3	30	70	3	3
Practical/ Laboratory Courses										
5	PW 961 ME	Project Work – II	-	-	16	16	50	100	-	8
			12	-	16	28	170	380		20

Professional Elective – II			Professional Elective – III		
S. No.	Course Code	Course Title	S. No.	Course Code	Course Title
1	PE 821 ME	Design of Solar Energy System	1	PE 826 ME	Power Plant Engineering
2	PE 822 ME	Mechanical Vibrations	2	PE 827 ME	Robotic Engineering
3	PE 823 ME	Composite Materials	3	PE 828 ME	Tool Design
4	PE 824 ME	Non-Destructive Testing	4	PE 829 ME	Product Design And Process Planning
Professional Elective – IV			Professional Elective – V		
1	PE 831 ME	Intellectual Property Rights	1	PE 841 ME	Energy Conservation and Management
2	PE 832 ME	Additive Manufacturing Technology	2	PE 842 ME	Advanced Propulsion and Space Science
3	PE 833 ME	Machine Tool Engineering and Design	3	PE 843 ME	Waste Heat Recovery and Co-Generation
4	PE 834 ME	Entrepreneurship Development	4	PE 844 ME	Aerodynamic Design of Thermal Turbines

PC: Professional Course

PE: Professional Elective

L: Lectures

T: Tutorials

P: Practical

D: Drawing

CIE: Continuous Internal Evaluation

SEE: Semester End Examination (Univ. Exam)

Note: 1) Each contact hour is a Clock Hour

2) The duration of the practical class is two clock hours, however it can be extended wherever necessary, to enable the student to complete the experiment

SCHEME OF INSTRUCTION & EXAMINATION**B.E. I - SEMESTER**

(Civil Engineering, Computer Science & Engineering,
Electronics & Communication Engineering, Electrical & Electronics Engineering,
and Electronics & Instrumentation Engineering)

S. No	Course Code	Course Title	Scheme of Instructions (Contact Hrs/Wk)			Scheme of Examination			Credits
			L	T	Pr/Drg	CIE	SEE	Duration in Hrs	
Theory Courses									
1.	BS 101 MT	Engineering Mathematics I	3	1	0	30	70	3	3
2.	BS 102 PH	Engineering Physics I	3	0	0	30	70	3	3
3.	BS 103 CH	Engineering Chemistry I	3	0	0	30	70	3	3
4.	ES 104 CE	Engineering Mechanics I	3	1	0	30	70	3	3
5.	ES 105 CS	Computer Programming and Problem Solving	3	0	0	30	70	3	3
6.	MC 106 EG	Engineering English	3	0	0	30	70	3	3
Practical / Laboratory Courses									
7.	BS 151 PH	Engineering Physics Lab I	0	0	2	25	50	3	1
8.	BS 152 CH	Engineering Chemistry Lab I	0	0	2	25	50	3	1
9.	ES 153 CE	Engineering Graphics I	0	0	2 x 2	50	50	3	2
10.	ES 154 CS	Computer Programming Lab	0	0	2	25	50	3	1
11.	ES 155 ME	Engineering Workshop I	0	0	2	25	50	3	1
12.	MC 156 EG	Engineering English Lab	0	0	2	25	50	3	1
Total			18	2	14	355	720		25

BS: Basic Sciences

ES: Engineering Sciences

MC: Mandatory Course

PC: Professional Course

HS: Humanities and Sciences

PE: Professional Elective

OE: Open Elective

CIE: Continuous Internal Evaluation

SEE: Semester End Examination(Univ.Exam)

L: Lectures T: Tutorials

Note: 1) Each contact hour is a Clock Hour

2) The practical class can be of two and half hour (clock hours) duration as per the requirement of a particular laboratory.

SCHEME OF INSTRUCTION & EXAMINATION
B.E. II - SEMESTER
(COMPUTER SCIENCE & ENGINEERING)

S. No	Course Code	Course Title	Scheme of Instructions (Contact Hrs/Wk)			Scheme of Examination			Credits
			L	T	Pr/Drg	CIE	SEE	Duration in Hrs	
Theory Courses									
1.	BS 201 MT	Engineering Mathematics II	3	1	0	30	70	3	3
2.	BS 202 PH	Engineering Physics II	3	0	0	30	70	3	3
3.	BS 203 CH	Engineering Chemistry II	3	0	0	30	70	3	3
4.	HS 204 EG	Business Communication and Presentation Skills	3	0	0	30	70	3	3
5.	PC 205 CS	Object Oriented Programming using C++	3	1	0	30	70	3	3
6.	ES 950 EE	Basic Electrical Engg.	3	0	0	30	70	3	3
Practical / Laboratory Courses									
7.	BS 251 PH	Engineering Physics Lab II	0	0	2	25	50	3	1
8.	BS 252 CH	Engineering Chemistry Lab II	0	0	2	25	50	3	1
9.	ES 930 CS	Computer Skills Lab	0	0	2	25	50	3	1
10.	HS 253 EG	Communication Skills Lab	0	0	2	25	50	3	1
11.	PC 254 CS	C++ Programming Lab	0	0	2	25	50	3	1
		Total	18	2	10	305	670		23

BS: Basic Sciences

ES: Engineering Sciences

MC: Mandatory Course

PC: Professional Course

HS: Humanities and Sciences

PE: Professional Elective

OE: Open Elective

CIE: Continuous Internal Evaluation

SEE: Semester End Examination (Univ.Exam)

L: Lectures T: Tutorials

Note: 1) Each contact hour is a Clock Hour

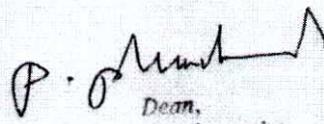
2) The practical class can be of two and half hour (clock hours) duration as per the requirement of a particular laboratory.

II Year IT 1604-16, 1604-16
CBCS

**SCHEME OF INSTRUCTION
BE (INFORMATION TECHNOLOGY)
Proposed scheme with effect from the academic year 2017-2018**

Semester - III

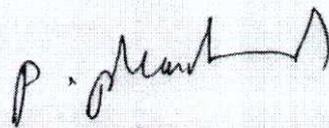
S.No	Course Code	Course	Scheme of Instruction			Scheme of Examination			Credit
			Hours Per Week			Contact Hrs/Wk	Maximum Marks		
			L	T	P		CIE	SEE	
THEORY									
1	PC 301 IT	Discrete Mathematics	3	1	0	4	30	70	3
2	PC 302 IT	Microelectronics	3	1	0	4	30	70	3
3	PC 303 IT	Digital Electronics & Logic Design	3	1	0	4	30	70	3
4	PC 304 IT	Data Structures	3	1	0	4	30	70	3
5	PC 305 IT	Probability and Random Processes	3	1	0	4	30	70	3
6	MC 322 HS	Environmental Studies	3	0	0	3	30	70	3
PRACTICALS									
7	PC 331 IT	Data Structures Lab	0	0	4	2	25	50	2
8	PC 332 IT	Basic Electronics Lab	0	0	2	2	25	50	1
9	PW333 IT	Mini Project - I	0	0	4	2	25	50	1
TOTAL			18	5	6	29	255	570	22


 Dean,
 Faculty of Informatics,
 Osmania University

SCHEME OF INSTRUCTION
BE (INFORMATION TECHNOLOGY)
 Proposed scheme with effect from the academic year 2017-2018

Semester – IV

S.No	Course Code	Course	Scheme of Instruction			Scheme of Examination			Credits
			Periods Per week			Contact	Maximum Marks		
			L	T	P	Hrs/Wk	CIE	SEE	
THEORY									
1	PC 401 EC	Signals and Systems	3	1	0	4	30	70	3
2	PC 402 IT	Computer Organisation & Microprocessor	3	1	0	4	30	70	3
3	PC 403 IT	Scripting Languages	3	1	0	4	30	70	3
4	PC 404 IT	OOPS USING JAVA	3	1	0	4	30	70	3
5	PC 405 IT	Data Communications	3	1	0	4	30	70	3
6	MC411BM	Managerial Economics and Accountancy	3	0	0	3	30	70	3
PRACTICALS									
7	PC 431 IT	Microprocessor Lab	0	0	2	2	25	50	1
8	PC 432 IT	JAVA Lab	0	0	4	2	25	50	2
9	PW 433 IT	Mini Project - II	0	0	4	2	25	50	2
TOTAL			18	5	6	29	255	570	23



Dean,
 Faculty of Informatics,
 Osmania University

III Year BT . 1604-16 ; 1604-17

Faculty of Engineering, OU

CBCS

With effect from the Academic Year 2018-2019

FACULTY OF ENGINEERING
Scheme of Instruction & Examination
and
Syllabi
B.E. V and VI Semesters
of
Four Year Degree Programme
in
INFORMATION TECHNOLOGY

(With effect from the academic year 2018 - 2019)
As approved in the faculty meeting held on 26th July 2018



Issued by
Dean, Faculty of Engineering
Osmania University, Hyderabad - 500 007
2018

SCHEME OF INSTRUCTION & EXAMINATION
B.E. V - Semester
(INFORMATION TECHNOLOGY)

S. No.	Course Code	Course Title	Scheme of Instruction				Scheme of Examination			Credits
			L	T	D/P	Contact Hrs/Wk	CIE	SEE	Duration in Hrs	
Theory Course										
1.	PC 501 IT	Software Engineering	3	1	-	4	30	70	3	3
2.	PC 502 IT	Database Systems	3	1	-	4	30	70	3	3
3.	PC 503 IT	Operating Systems	3	1	-	4	30	70	3	3
4.	PC 504 IT	Automata Theory	3	1	-	4	30	70	3	3
5.	PC 505 IT	Computer Networks	3	1	-	4	30	70	3	3
6.	PE-I	Professional Elective - I	3	-	-	3	30	70	3	3
7.	MC 901 EG	Gender Sensitization	3	-	-	3	30	70	3	0
Practical/Laboratory Course										
8.	PC531 IT	Computer Networks and Operating Systems Lab	-	-	2	2	25	50	3	1
9.	PC532 IT	Database Systems Lab	-	-	2	2	25	50	3	1
10..	PW533 IT	Mini Project – III	-	-	2	2	25	50	3	1
Total			21	05	06	32	285	640	-	21

Profession Elective - I	
Course Code	Course Title
PE 511 IT	Artificial Intelligence
PE 512 IT	Computer Graphics
PE 513 IT	Multimedia Technologies

PC: Professional Course **PE:** Professional Elective **MC:** Mandatory Course
PW: Project Work
L: Lecture **T:** Tutorial **P:** Practical **D:** Drawing
CIE: Continuous Internal Evaluation, **SEE:** Semester End Examination (Univ. Exam)

Note:

- Each contact hour is a Clock Hour
- The duration of the practical class is two clock hours, however it can be extended wherever necessary, to enable the student to complete the experiment

SCHEME OF INSTRUCTION & EXAMINATION
B.E. VI - Semester
(INFORMATION TECHNOLOGY)

S. No	Course Code	Course Title	Scheme of Instruction				Scheme of Examination			Credits
			L	T	D/P	Contact Hrs/Wk	CIE	SEE	Duration in Hrs/Wk	
Theory Course										
1.	PC 601 IT	Web Application Development	3	1	-	4	30	70	3	3
2.	PC 602 IT	Compiler Construction	3	1	-	4	30	70	3	3
3.	PC 603 IT	Embedded System	3	1	-	4	30	70	3	3
4.	PC 604 IT	Design and Analysis of Algorithms	3	1	-	4	30	70	3	3
5.	PE -II	Professional Elective -II	3	-	-	3	30	70	3	3
6.	OE - 1	Open Elective -I	3	-	-	3	30	70	3	3
Practical/Laboratory Course										
7.	PC631 IT	Embedded System Lab	-	-	2	2	25	50	3	1
8.	PC632 IT	Web Application Development Lab	-	-	2	2	25	50	3	1
9.	PW633 IT	Mini Project – IV	-	-	2	2	25	50	3	1
10.	MC	Mandatory Course	-	-	3	3	50	-	-	0
11.	SI 671 IT	Summer Internship*	-	-	-	-	-	-	-	-
Total			18	4	9	29	305	570	-	21

PC: Professional Course

PE: Professional Elective

MC: Mandatory Course

OE: Open Elective

PW: Project Work

SI: Summer Internship

L: Lecture

T: Tutorial

P: Practical

D: Drawing

CIE: Continuous Internal Evaluation

SEE: Semester End Examination (Univ. Exam)

Note-1:

- Each contact hour is a Clock Hour
- The duration of the practical class is two clock hours, however it can be extended wherever necessary, to enable the student to complete the experiment

Note-2:

* The students have to undergo a Summer Internship of four weeks duration after VI semester and credits will be awarded in VII semester after evaluation.

** Subject is not offered to the students of CSE and IT Department.

Open Elective-I:		
S.No	Course Code	Course Title
1	OE601CE	Disaster Management
2	OE602CE	Geo Spatial Techniques
3	OE601CS	Operating Systems**
4	OE602CS	OOP using Java**
5	OE601IT	Database Systems**
6	OE601EC	Principles of Embedded Systems
7	OE602EC	Digital System Design using HDL Verilog
8	OE601EE	Reliability Engineering
9	OE602EE	Basics of Power Electronics
10	OE601ME	Industrial Robotics
11	OE602ME	Material Handling
12	OE632AE	Automotive Safety & Ergonomics

Professional Elective – II		
S.No.	Course Code	Course Title
1	PE 611 IT	Data Mining
2	PE 612 IT	Software Quality & Testing
3	PE 613 IT	Internet of Things
4	PE 614 IT	Image Processing

Mandatory Course		
S.No.	Course Code	Course Title
1	MC951SP	Yoga Practice
2	MC952SP	National Service Scheme
3	MC953SP	Sports

IV Year IT 1604-16; 1604-17

CBCS

FACULTY OF ENGINEERING

Scheme of Instruction & Examination

(CBCS Curriculum for the Academic Year 2019-2020)

and

Syllabi

B.E. VII and VIII Semester

of

Four Year Degree Programme

In

Information Technology

(With effect from the academic year 2019– 2020)

(As approved in the faculty meeting held on 25-06-2019)



Issued by

Dean, Faculty of Engineering

Osmania University, Hyderabad – 500 007

2019

SCHEME OF INSTRUCTION & EXAMINATION
B.E. VII - Semester
(INFORMATION TECHNOLOGY)

S. No.	Course Code	Course Title	Scheme of Instruction				Scheme of Examination			Credits
			L	T	P/D	Contact Hrs/Wk	CIE	SEE	Duration in Hrs	
Theory Courses										
1	PC 701 IT	VLSI Design	3	1	-	4	30	70	3	3
2	PC 702 IT	Big Data Analytics	3	1	-	4	30	70	3	3
3	PC 703 IT	Wireless Mobile Communication	3	1	-	4	30	70	3	3
4	PC 704 IT	Network Security and Cryptography	3	1	-	4	30	70	3	3
5		Open Elective – II	3	-	-	3	30	70	3	3
6		Open Elective – III	3	-	-	3	30	70	3	3
Practical/ Laboratory Courses										
7	PC 751 IT	VLSI Design Lab	-	-	2	2	25	50	3	1
8	PC 752 IT	Big Data Analytics Lab	-	-	2	2	25	50	3	1
9	PW 761 IT	Project Work – I	-	-	4	4	50	-	-	2
10	SI 762 IT	Summer Internship	-	-	-	-	50	-	-	2
			18	04	08	30	330	520		24

Open Elective – II			Open Elective – III		
S. No.	Course Code	Course Title	S. No.	Course Code	Course Title
1	OE 771 CE	Green Building Technologies	1	OE 781 CE	Road Safety Engineering
2	OE 772 CS**	Data Science Using R Programming	2	OE 782 IT**	Software Engineering
3	OE 773 EC	Fundamentals of IoT	3	OE 783 EC	Principles of Electronic Communications
4	OE 774 EE	Non-Conventional Energy Sources	4	OE 784 EE	Illumination and Electric Traction systems
5	OE 775 ME	Entrepreneurship	5	OE 785 ME	Mechatronics

PC: Professional Course

PE: Professional Elective

L: Lectures

T: Tutorials

P: Practical

D: Drawing

CIE: Continuous Internal Evaluation

SEE: Semester End Examination (Univ. Exam)

Note: 1) Each contact hour is a Clock Hour

2) The practical class can be of two and half hour (clock hours) duration as per the requirement of a particular laboratory.

Note-2: * The students have to undergo a Summer Internship of four weeks' duration after VI semester and credits will be awarded in VII semester after evaluation.

** Subject is not offered to the students of CSE and IT Departments.

SCHEME OF INSTRUCTION & EXAMINATION
B.E. VIII - SEMESTER
(INFORMATION TECHNOLOGY)

S. No.	Course Code	Course Title	Scheme of Instruction				Scheme of Examination			Credits
			L	T	P/D	Contact Hrs/Wk	CIE	SEE	Duration in Hrs	
Theory Courses										
1		Professional Elective – III	3	-	-	3	30	70	3	3
2		Professional Elective – IV	3	-	-	3	30	70	3	3
3		Professional Elective – V	3	-	-	3	30	70	3	3
Practical/ Laboratory Courses										
4	PW961 IT	Project Work – II	-	-	16	16	50	100	-	8
			09	-	16	25	140	310		17

Professional Elective – III			Professional Elective – IV		
S. No.	Course Code	Course Title	S. No.	Course Code	Course Title
1	PE 821 IT	Distributed Systems	1	PE 825 CS	Computational Intelligence
2	PE 824 CS	Web Services and Architecture	2	PE 832 IT	Adhoc and Sensor Networks
3	PE 833 CS	Machine Learning	3	PE 834 CS	Natural Language Processing
4	PE 835 CS	Data Science Using R Programming	4	PE 834 IT	Information Storage and Management
Professional Elective – V					
1	PE 832 CS	Information Retrieval System			
2	PE 841 IT	Advanced Database Management systems			
3	PE 842 IT	Cloud Computing			
4	PE 843 CS	Human Computer Interaction			

PC: Professional Course

PE: Professional Elective

L: Lectures

T: Tutorials

P: Practical

D: Drawing

CIE: Continuous Internal Evaluation

SEE: Semester End Examination (Univ. Exam)

Note: 1) Each contact hour is a Clock Hour

2) The duration of the practical class is two clock hours, however it can be extended wherever necessary, to enable the student to complete the experiment

SCHEME OF INSTRUCTION & EXAMINATION
B.E. I - SEMESTER
(MECHANICAL ENGINEERING, PRODUCTION ENGINEERING, &
AUTOMOBILE ENGINEERING)

S. No	Course Code	Course Title	Scheme of Instructions (Contact Hrs/Wk)			Scheme of Examination			Credits
			L	T	Pr/Drg	CIE	SEE	Duration in Hrs	
Theory Courses									
1.	BS 101 MT	Engineering Mathematics I	3	1	0	30	70	3	3
2.	BS 102 PH	Engineering Physics I	3	0	0	30	70	3	3
3.	BS 103 CH	Engineering Chemistry I	3	0	0	30	70	3	3
4.	ES 104 CE	Engineering Mechanics I	3	1	0	30	70	3	3
5.	ES 105 CS	Computer Programming and Problem Solving	3	0	0	30	70	3	3
6.	MC 106 EG	Engineering English	3	0	0	30	70	3	3
Practical / Laboratory Courses									
7.	BS 151 PH	Engineering Physics Lab I	0	0	2	25	50	3	1
8.	BS 152 CH	Engineering Chemistry Lab I	0	0	2	25	50	3	1
9.	ES 157 ME	Engineering Drawing I	0	0	2 x 2	50	50	3	2
10.	ES 154 CS	Computer Programming Lab	0	0	2	25	50	3	1
11.	ES 155 ME	Engineering Workshop I	0	0	2	25	50	3	1
12.	MC 156 EG	Engineering English Lab	0	0	2	25	50	3	1
		Total	18	2	14	355	720		25

BS: Basic Sciences ES: Engineering Sciences MC: Mandatory Course
 PC: Professional Course HS: Humanities and Sciences PE: Professional Elective
 OE: Open Elective CIE: Continuous Internal Evaluation SEE: Semester End Examination(Univ.Exam)

L: Lectures T: Tutorials

Note: 1) Each contact hour is a Clock Hour

2) The practical class can be of two and half hour (clock hours) duration as per the requirement of a particular laboratory.

SCHEME OF INSTRUCTION & EXAMINATION
B.E. II - SEMESTER
(MECHANICAL ENGINEERING, PRODUCTION ENGINEERING, &
AUTOMOBILE ENGINEERING)

S. No	Course Code	Course Title	Scheme of Instructions (Contact Hrs/Wk)			Scheme of Examination			Credits
			L	T	Pr/Drg	CIE	SEE	Duration in Hrs	
Theory Courses									
1.	BS 201 MT	Engineering Mathematics II	3	1	0	30	70	3	3
2.	BS 202 PH	Engineering Physics II	3	0	0	30	70	3	3
3.	BS 203 CH	Engineering Chemistry II	3	0	0	30	70	3	3
4.	HS 204 EG	Business Communication and Presentation Skills	3	0	0	30	70	3	3
5.	ES 205 CE	Engineering Mechanics-II	3	1	0	30	70	3	3
Practical / Laboratory Courses									
6.	BS 251 PH	Engineering Physics Lab II	0	0	2	25	50	3	1
7.	BS 252 CH	Engineering Chemistry Lab II	0	0	2	25	50	3	1
8.	ES 930 CS	Computer Skills Lab	0	0	2	25	50	3	1
9.	HS 253 EG	Communication Skills Lab	0	0	2	25	50	3	1
10.	ES 254 ME	Engineering Graphics-II	0	0	2x2	50	50	3	2
11.	ES 255 ME	Engineering Workshop-II	0	0	2	25	50	3	1
		Total	15	2	14	325	650		22

BS: Basic Sciences
 PC: Professional Course
 OE: Open Elective

ES: Engineering Sciences
 HS: Humanities and Sciences
 CIE: Continuous Internal Evaluation

MC: Mandatory Course
 PE: Professional Elective
 SEE: Semester End Examination (Univ.Exam)

L: Lectures T: Tutorials

Note: 1) Each contact hour is a Clock Hour

2) The practical class can be of two and half hour (clock hours) duration as per the requirement of a particular laboratory.

FACULTY OF ENGINEERING
Scheme of Instruction & Examination
and
Syllabi

B.E. III-Semester & IV-Semester
of

Four Year Degree Programme

In

Production Engineering

(With effect from the academic year 2017 – 2018)

(As approved in faculty meeting held on 26 July 2017)



Issued by
Dean, Faculty of Engineering
Osmania University, Hyderabad
July 2017

SCHEME OF INSTRUCTION & EXAMINATION
B.E. III - Semester
(PRODUCTION ENGINEERING)

S. No	Course Code	Course Title	Scheme of Instruction				Scheme of Examination			Credits
			L	T	Pr/Drg	Contact Hrs/Wk	CIE	SEE	Duration in Hrs	
Theory Courses										
1.	BS301MT	Engineering Mathematics-III	3	1	-	4	30	70	3	3
2.	ES321CE	Mechanics of Materials	3	1	-	4	30	70	3	3
3.	PC301ME	Engineering Thermodynamics	4	-	-	4	30	70	3	4
4.	PC302ME	Metallurgy & Material Science	4	-	-	4	30	70	3	4
5.	PC303ME	Fluid Mechanics	4	-	-	4	30	70	3	4
6.	MC916CE	Environmental Sciences	3	-	-	3	30	70	3	3
Practical/Laboratory Courses										
7.	ES361CE	Mechanics of Materials Lab.	-	-	2	2	25	50	3	1
8.	PC351ME	Machine Drawing	-	-	2	2	25	50	3	1
9.	PC352ME	Metallurgy Lab.	-	-	2	2	25	50	3	1
Total			21	2	6	29	255	570		24

BS: Basic Sciences

ES: Engineering Sciences

MC: Mandatory Course

PC: Professional Course

HS: Humanities and Sciences

L: Lectures T: Tutorials

Pr : Practicals

Drg: Drawing

CIE: Continuous Internal Evaluation**SEE:** Semester End Examination (Univ. Exam)**Note:** 1) Each contact hour is a Clock Hour

2) The practical class can be of two and half hour (clock hours) duration as per the requirement of a particular laboratory.

3) Students admitted into B.E./B.Tech. courses under lateral entry scheme (through ECET) from the academic year 2017-18 should undergo the following bridge course subjects at III Semester (CBCS).

(1) ES 154 CS Computer Programming Lab

(2) MC 156 EG Engineering English Lab

SCHEME OF INSTRUCTION & EXAMINATION
B.E. IV - Semester
(PRODUCTION ENGINEERING)

S. No	Course Code	Course Title	Scheme of Instruction				Scheme of Examination			Credits
			L	T	Pr/Drg	Contact Hrs/Wk	CIE	SEE	Duration in Hrs	
Theory Courses										
1.	BS401MT	Engineering Mathematics-IV	3	1	-	4	30	70	3	3
2.	ES422EE	Electrical Circuits & Machines	3	-	-	3	30	70	3	3
3.	ES934EC	Basic Electronics	3	-	-	3	30	70	3	3
4.	PC401MP	Applied Thermodynamics & Heat Transfer	4	-	-	4	30	70	3	4
5.	PC402ME	Kinematics of Machines	4	1	-	5	30	70	3	4
6.	PC403ME	Design of Machine Elements	4	-	-	4	30	70	3	4
Practical/Laboratory Courses										
7.	ES461EE	Electrical Circuits & Machines Lab.	-	-	2	2	25	50	3	1
8.	ES955EC	Basic Electronics Lab.	-	-	2	2	25	50	3	1
9.	PC453MP	Applied Thermodynamics & Heat Transfer Lab.	-	-	2	2	25	50	3	1
Total			21	2	6	29	255	570		24

BS: Basic Sciences

ES: Engineering Sciences

MC: Mandatory Course

PC: Professional Course

HS: Humanities and Sciences

L: Lectures T: Tutorials

Pr : Practicals

Drg: Drawing

CIE: Continuous Internal Evaluation

SEE: Semester End Examination (Univ. Exam)

Note: 1) Each contact hour is a Clock Hour

2) The practical class can be of two and half hour (clock hours) duration as per the requirement of a particular laboratory.

III Year Progn. 1604-16; 1604-17

Faculty of Engineering, O.U

CBCS

With effect from Academic Year 2018-2019

FACULTY OF ENGINEERING
Scheme of Instruction & Examination
and
Syllabi
B.E. V and VI Semesters
of
Four Year Degree Programme
in
PRODUCTION ENGINEERING

(With effect from the Academic Year 2018 – 2019)
(As approved in the Faculty Meeting held on 26th June 2018)



Issued by
Dean, Faculty of Engineering
Osmania University, Hyderabad 500 007
2018

SCHEME OF INSTRUCTION & EXAMINATION
B.E. V - Semester
(PRODUCTION ENGINEERING)

S.No	Course Code	Course Title	Scheme of Instruction				Scheme of Examination			Credits
			L	T	P/D	Contact Hrs/Wk	CIE	SEE	Duration in Hrs	
Theory Courses										
1.	PC501MP	Metal Forming Technology	3	-	-	3	30	70	3	3
2.	PC502MP	Machine Tool Engineering	4	-	-	4	30	70	3	4
3.	PC501ME	Dynamics of Machines	4	-	-	4	30	70	3	4
4.	PC503ME	Machine Design	4	-	-	4	30	70	3	4
5.	PC505ME	Operations Research	3	-	-	3	30	70	3	3
6.	PC506ME	CAD/CAM	3	-	-	3	30	70	3	3
7.	MC901EG	Gender Sensitization	3	-	-	3	30	70	3	0
Practical/Laboratory Courses										
8.	PC551MP	Metal Forming Technology Lab	-	-	2	2	25	50	3	1
9.	PC552MP	Computer aided Production Drawing Lab	-	-	2	2	25	50	3	1
10.	PC553ME	Dynamics Lab	-	-	2	2	25	50	3	1
Total			24	-	6	30	285	640		24

PC: Professional Course **MC:** Mandatory Course
L: Lecture **T:** Tutorial **P:** Practical **D:** Drawing
CIE: Continuous Internal Evaluation **SEE:** Semester End Examination (Univ. Exam)

Note:

1. Each contact hour is a Clock Hour
2. The duration of the practical class is two clock hours, however it can be extended wherever necessary, to enable the student to complete his experiment

SCHEME OF INSTRUCTION & EXAMINATION
B.E. VI – Semester
(PRODUCTION ENGINEERING)

S.No	Course Code	Course Title	Scheme of Instruction				Scheme of Examination			Credits
			L	T	P/D	Contact Hr/Wk	CIE	SEE	Duration in Hours	
Theory Course										
1.	PC601MP	Metal Casting & Welding	3	-	-	3	30	70	3	3
2.	PE602ME	Modern Machining and Forming Methods	4	-	-	4	30	70	3	4
3.	PC602ME	Refrigeration and Air conditioning	4	-	-	4	30	70	3	4
4.	PC604ME	Metrology and Instrumentation	3	-	-	3	30	70	3	3
5.	PE – I	Professional Elective-I	3	-	-	3	30	70	3	3
6.	OE – I	Open Elective-I	3	-	-	3	30	70	3	3
Practical / Laboratory Course										
7.	PC651MP	Metal Casting & Welding Lab	-	-	2	2	25	50	3	1
8.	PC651ME	Metrology and Machine Tools Lab	-	-	2	2	25	50	3	1
9.	MC	Mandatory Course	-	-	3	3	50	-	3	0
10.	SI 671PE	Summer Internship*								
Total			20	0	7	27	280	520		22

PC: Professional Course

PE: Professional Elective

OE: Open Elective

MC: Mandatory Course

SI: Summer Internship

L: Lecture T: Tutorial

P: Practical D: Drawing

CIE: Continuous Internal Evaluation

SEE: Semester End Examination (Univ. Exam)

Note -1:

1. Each contact hour is a Clock Hour
2. The duration of the practical class is two clock hours, however it can be extended wherever necessary, to enable the student to complete his experiment

Note-2:

- * The students have to undergo a Summer Internship of four weeks duration after VI semester and credits will be awarded in VII semester after evaluation.

** Subject is not offered to the students of Automobile, Mechanical and Production Engineering Department.

Open Elective-I:		
S.No	Course Code	Course Title
1	OE601CE	Disaster Management
2	OE602CE	Geo Spatial Techniques
3	OE601CS	Operating Systems
4	OE602CS	OOP using Java
5	OE601IT	Database Systems
6	OE601EC	Principles of Embedded Systems
7	OE602EC	Digital System Design using HDL Verilog
8	OE601EE	Reliability Engineering
9	OE602EE	Basics of Power Electronics
10	OE601ME	Industrial Robotics**
11	OE602ME	Material Handling**
12	OE632AE	Automotive Safety & Ergonomics**

Professional Elective – I		
S.No	Course Code	Course Title
1	PE611MP	Flexible Manufacturing System
2	PE612ME	Control Systems Theory

Mandatory Course		
S.No	Course Code	Course Title
1	MC951SP	Yoga Practice
2	MC952SP	National Service Scheme
3	MC953SP	Sports

IV Year Prodn. 1604-16; 1604-17

CBCS.

FACULTY OF ENGINEERING

Scheme of Instruction & Examination

(CBCS Curriculum for the Academic Year 2019-2020)

and

Syllabi

B.E. VII and VIII Semester

of

Four Year Degree Programme

In

Production Engineering

(With effect from the academic year 2019– 2020)

(As approved in the faculty meeting held on 25-06-2019)



Issued by

Dean, Faculty of Engineering

Osmania University, Hyderabad – 500 007

2019

SCHEME OF INSTRUCTION & EXAMINATION
B.E. VII - Semester
(PRODUCTION ENGINEERING)

S. No.	Course Code	Course Title	Scheme of Instruction				Scheme of Examination			Credits
			L	T	P/D	Contact Hrs/Wk	CIE	SEE	Duration in Hrs	
Theory Courses										
1	PC 701 MP	Tool Design	3	1	-	4	30	70	3	3
2	PC 702 ME	Finite Element Analysis	3	1	-	4	30	70	3	3
3	PC 703 ME	Industrial Engineering	3	-	-	3	30	70	3	3
4	PC 704 ME	Production And Operations Management	3	-	-	3	30	70	3	3
5	HS 901 MB	Managerial Economics and Accountancy	3	-	-	3	30	70	3	3
6		Open Elective-II								
7		Open Elective-III	3	-	-	3	30	70	3	3
Practical/ Laboratory Courses										
8	PC 751 MP	CAME Lab	-	-	2	2	25	50	3	1
9	PC 752 ME	CAE Lab	-	-	2	2	25	50	3	1
10	PW 761 MP	Project Work – I	-	-	4	4	50	-	-	2
11	SI 762 MP	Summer Internship					50	-	-	2
			21	02	08	31	360	590		27

Open Elective – II			Open Elective – III		
S. No.	Course Code	Course Title	S. No.	Course Code	Course Title
1	OE 771 CE	Green Building Technologies	1	OE 781 CE	Road Safety Engineering
2	OE 772 CS	Data Science Using R Programming	2	OE 782 IT	Software Engineering
3	OE 773 EC	Fundamentals of IoT	3	OE 783 EC	Principles of Electronic Communications
4	OE 774 EE	Non-Conventional Energy Sources	4	OE 784 EE	Illumination and Electric Traction systems
5	OE 775 ME**	Entrepreneurship	5	OE 785 ME**	Mechatronics

PC: Professional Course

L: Lectures

T: Tutorials

CIE: Continuous Internal Evaluation

PE: Professional Elective

P: Practical

D: Drawing

SEE: Semester End Examination (Univ. Exam)

Note: 1) Each contact hour is a Clock Hour

2) The practical class can be of two and half hour (clock hours) duration as per the requirement of a particular laboratory.

Note-2: * The students have to undergo a Summer Internship of four weeks' duration after VI semester and credits will be awarded in VII semester after evaluation.

** Subject is not offered to the students of Mechanical Engineering Department.

SCHEME OF INSTRUCTION & EXAMINATION
B.E. VIII - SEMESTER
(PRODUCTION ENGINEERING)

S. No.	Course Code	Course Title	Scheme of Instruction				Scheme of Examination			Credits
			L	T	P/D	Contact Hrs/Wk	CIE	SEE	Duration in Hrs	
Theory Courses										
1		Professional Elective – II	3	-	-	3	30	70	3	3
2		Professional Elective – III	3	-	-	3	30	70	3	3
3		Professional Elective – IV	3	-	-	3	30	70	3	3
4		Professional Elective – V	3	-	-	3	30	70	3	3
Practical/ Laboratory Courses										
5	PW 961 MP	Project Work – II	-	-	16	16	50	100	-	8
			12	-	16	28	170	380		20

Professional Elective – II			Professional Elective – III		
S. No.	Course Code	Course Title	S. No.	Course Code	Course Title
1	PE 821 ME	Design of Solar Energy System	1	PE 822 ME	Mechanical Vibrations
2	PE 822 MP	Total Quality Management	2	PE 826 MP	Rapid Prototyping Technologies
3	PE 823 ME	Composite Materials	3	PE 827 ME	Robotic Engineering
4	PE 824 ME	Non-Destructive Testing	4	PE 829 ME	Product Design And Process Planning
Professional Elective – IV			Professional Elective – V		
1	PE 831 ME	Intellectual Property Rights	1	PE 841 ME	Energy Conservation and Management
2	PE 832 MP	Plastic Engineering and Technology	2	PE 842 ME	Advanced Propulsion and Space Science
3	PE 833 ME	Machine Tool Engineering and Design	3	PE 843 ME	Waste Heat Recovery and Co-Generation
4	PE 834 ME	Entrepreneurship Development	4	PE 844 ME	Aerodynamic Design of Thermal Turbines

PC: Professional Course

PE: Professional Elective

L: Lectures

T: Tutorials

P: Practical

D: Drawing

CIE: Continuous Internal Evaluation

SEE: Semester End Examination (Univ. Exam)

Note: 1) Each contact hour is a Clock Hour

2) The duration of the practical class is two clock hours, however it can be extended wherever necessary, to enable the student to complete the experiment

SCHEME OF INSTRUCTION & EXAMINATION

B.E. I - SEMESTER

(Civil Engineering, Computer Science & Engineering,
Electronics & Communication Engineering, Electrical & Electronics Engineering,
and Electronics & Instrumentation Engineering)

S. No	Course Code	Course Title	Scheme of Instructions (Contact Hrs/Wk)			Scheme of Examination			Credits
			L	T	Pr/Drg	CIE	SEE	Duration in Hrs	
Theory Courses									
1.	BS 101 MT	Engineering Mathematics I	3	1	0	30	70	3	3
2.	BS 102 PH	Engineering Physics I	3	0	0	30	70	3	3
3.	BS 103 CH	Engineering Chemistry I	3	0	0	30	70	3	3
4.	ES 104 CE	Engineering Mechanics I	3	1	0	30	70	3	3
5.	ES 105 CS	Computer Programming and Problem Solving	3	0	0	30	70	3	3
6.	MC 106 EG	Engineering English	3	0	0	30	70	3	3
Practical / Laboratory Courses									
7.	BS 151 PH	Engineering Physics Lab I	0	0	2	25	50	3	1
8.	BS 152 CH	Engineering Chemistry Lab I	0	0	2	25	50	3	1
9.	ES 153 CE	Engineering Graphics I	0	0	2 x 2	50	50	3	2
10.	ES 154 CS	Computer Programming Lab	0	0	2	25	50	3	1
11.	ES 155 ME	Engineering Workshop I	0	0	2	25	50	3	1
12.	MC 156 EG	Engineering English Lab	0	0	2	25	50	3	1
		Total	18	2	14	355	720		25

BS: Basic Sciences

ES: Engineering Sciences

MC: Mandatory Course

PC: Professional Course

HS: Humanities and Sciences

PE: Professional Elective

OE: Open Elective

CIE: Continuous Internal Evaluation

SEE: Semester End Examination(Univ.Exam)

L: Lectures T: Tutorials

Note: 1) Each contact hour is a Clock Hour

2) The practical class can be of two and half hour (clock hours) duration as per the requirement of a particular laboratory.

SCHEME OF INSTRUCTION & EXAMINATION
B.E. II - SEMESTER
(ELECTRONICS & INSTRUMENTATION ENGINEERING)

S. No	Course Code	Course Title	Scheme of Instructions (Contact Hrs/Wk)			Scheme of Examination			Credits
			L	T	Pr/Drg	CIE	SEE	Duration in Hrs	
Theory Courses									
1.	BS 201 MT	Engineering Mathematics II	3	1	0	30	70	3	3
2.	BS 202 PH	Engineering Physics II	3	0	0	30	70	3	3
3.	BS 203 CH	Engineering Chemistry II	3	0	0	30	70	3	3
4.	HS 204 EG	Business Communication and Presentation Skills	3	0	0	30	70	3	3
5.	ES 965 ME	Elements of Mechanical Engineering	3	0	0	30	70	3	3
6.	ES 933 EC	Electronic Engineering-I	3	0	0	30	70	3	3
Practical / Laboratory Courses									
7.	BS 251 PH	Engineering Physics Lab II	0	0	2	25	50	3	1
8.	BS 252 CH	Engineering Chemistry Lab II	0	0	2	25	50	3	1
9.	ES 930 CS	Computer Skills Lab	0	0	2	25	50	3	1
10.	HS 253 EG	Communication Skills Lab	0	0	2	25	50	3	1
11.	ES 255 ME	Engineering Workshop-II	0	0	2	25	50	3	1
		Total	18	1	10	305	670		23

BS: Basic Sciences

ES: Engineering Sciences

MC: Mandatory Course

PC: Professional Course

HS: Humanities and Sciences

PE: Professional Elective

OE: Open Elective

CIE: Continuous Internal Evaluation

SEE: Semester End Examination (Univ.Exam)

L: Lectures T: Tutorials

Note: 1) Each contact hour is a Clock Hour

2) The practical class can be of two and half hour (clock hours) duration as per the requirement of a particular laboratory.

II year EIE 1604-16; 1604-17

Faculty of Engineering, O.U

CBCS.

With effect from Academic Year 2017 - 2018

FACULTY OF ENGINEERING
Scheme of Instruction & Examination

and

Syllabi

B.E. III-Semester & IV-Semester

of

Four Year Degree Programme

In

Electronics & Instrumentation Engineering

(With effect from the academic year 2017 – 2018)

(As approved in Faculty Meeting held on 26 June 2017)



Issued by

Dean, Faculty of Engineering
Osmania University, Hyderabad
July 2017

SCHEME OF INSTRUCTION & EXAMINATION
B.E. III – Semester
(ELECTRONICS AND INSTRUMENTATION ENGINEERING)

S. No.	Course Code	Course Title	Scheme of Instruction				Scheme of Examination			Credits
			L	T	Pr/Drg	Contact Hrs/Wk	CIE	SEE	Duration in Hrs	
Theory Courses										
1.	BS301MT	Engineering Mathematics - III	3	1	-	4	30	70	3	3
2.	ES322EC	Electronic Engineering-II	3	-	-	3	30	70	3	3
3.	ES323ME	Prime Movers & Pumps	3	-	-	3	30	70	3	3
4.	PC302EE	Electromagnetic Fields	3	1	-	4	30	70	3	3
5.	PC303EE	Digital Electronics & Logic Design	3	-	-	3	30	70	3	3
6.	PC304EE	Network Theory	3	1	-	4	30	70	3	3
7.	MC916CE	Environmental Sciences	3	-	-	3	30	70	3	3
Practical /Laboratory Courses										
8.	ES361ME	Mechanical Engineering Lab	-	-	2	2	25	50	3	1
9.	ES362EC	Electronic Engineering Lab.	-	-	2	2	25	50	3	1
			21	3	4	28	260	590		23

BS: Basic Sciences

ES: Engineering Sciences

MC: Mandatory Course

PC: Professional Course

HS: Humanities and Sciences

L: Lectures

T: Tutorials

Pr : Practicals

Drg: Drawing

CIE: Continuous Internal Evaluation**SEE:** Semester End Examination (Univ. Exam)**Note:** 1) Each contact hour is a Clock Hour

2) The practical class can be of two and half hour (clock hours) duration as per the requirement of a particular laboratory.

3) Students admitted into B.E./B.Tech. courses under lateral entry scheme (through ECET) from the academic year 2017-18 should undergo the following bridge course subjects at III Semester (CBCS).

(1) ES 154 CS Computer Programming Lab

(2) MC 156 EG Engineering English Lab

SCHEME OF INSTRUCTION & EXAMINATION
B.E. IV – Semester
(ELECTRONICS AND INSTRUMENTATION ENGINEERING)

S. No.	Course Code	Course Title	Scheme of Instruction				Scheme of Examination			Credits
			L	T	Pr/Drg	Contact Hrs/Wk	CIE	SEE	Duration in Hrs	
Theory Courses										
1.	BS401MT	Engineering Mathematics - IV	3	1	-	4	30	70	3	3
2.	PC404EE	Power Electronics	3	1	-	4	30	70	3	3
3.	PC405EE	Linear Integrated Circuits	3	-	-	3	30	70	3	3
4.	PC406EE	Transducer Engineering	3		-	3	30	70	3	3
5.	PC407EE	Electrical Machines	3	1	-	4	30	70	3	3
6.	PC408EE	Signal and Systems	3	1	-	4	30	70	3	3
7.	HS401BM	Managerial Economics & Accountancy	3	-	-	3	30	70	3	3
Practical /Laboratory Courses										
8.	PC451EE	Digital Electronics and Integrated Circuits Lab	-	-	2	2	25	50	3	1
9.	PC453EE	Computer Aided Instrumentation Drawing Lab.	-	-	2	2	25	50	3	1
			21	04	04	29	260	260		23

BS: Basic Sciences ES: Engineering Sciences MC: Mandatory Course
PC: Professional Course HS: Humanities and Sciences
L: Lectures T: Tutorials Pr : Practicals Drg: Drawing
CIE: Continuous Internal Evaluation SEE: Semester End Examination (Univ. Exam)

Note: 1) Each contact hour is a Clock Hour
2) The practical class can be of two and half hour (clock hours) duration as per the requirement of a particular laboratory.

III Year EIE 1604-16; 1604-17

Faculty of Engineering, O.U

CBCS

With effect from Academic Year 2018 - 2019

FACULTY OF ENGINEERING
Scheme of Instruction & Examination
and
Syllabi
B.E. V & VI Semesters
Of
Four Year Degree Programme
in

ELECTRONICS & INSTRUMENTATION ENGINEERING

(With effect from the Academic Year 2018 – 2019)

(As approved in the Faculty Meeting held on 26th June 2018)



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Dean, Faculty of Engineering
Osmania University, Hyderabad
July 2018

SCHEME OF INSTRUCTION & EXAMINATION
B.E. V - Semester
(ELECTRONICS AND INSTRUMENTATION ENGINEERING)

S.No	Course Code	Course Title	Scheme of Instruction			Contact Hrs/Wk	Scheme of Examination			Credits
			L	T	P/D		CIE	SEE	Duration in Hrs	
Theory Courses										
1	PC503EE	Electrical Measurements and Instrumentation	3	1	-	4	30	70	3	3
2	PC504EE	Linear Control Systems	3	1	-	4	30	70	3	3
3	PC505EE	Digital Signal Processing and Applications	3	1	-	4	30	70	3	3
4	PC506EE	Power Plant Instrumentation	3	-	-	3	30	70	3	3
5	PC507EE	Instrumentation Systems	3	-	-	3	30	70	3	3
6	PE-I	Professional Elective-I	3	-	-	3	30	70	3	3
7	MC901EG	Gender Sensitization	3	-	-	3	30	70	3	0
Practical /Laboratory Courses										
8	PC552EE	Power Electronics Lab	-	-	2	2	25	50	3	1
9	PC554EE	Transducer Lab	-	-	2	2	25	50	3	1
10	PC555EE	Circuits and Measurement Lab	-	-	2	2	25	50	3	1
Total			21	03	06	30	285	640	-	21

Professional Elective-I

S. No.	Course Code	Course Title
1	PE504EE	Building Automation Systems
2	PE505EE	Principle of Communication Engineering
3	PE506EE	Advanced Sensors

PC: Professional Course **PE:** Professional Elective **MC:** Mandatory Course
L: Lecture **T:** Tutorial **P:** Practical **D:** Drawing
CIE: Continuous Internal Evaluation **SEE:** Semester End Examination (Univ. Exam)

Note:

1. Each contact hour is a Clock Hour
2. The duration of the practical class is two clock hours, however it can be extended wherever necessary, to enable the student to complete the experiment

SCHEME OF INSTRUCTION & EXAMINATION
B.E. VI – Semester
(ELECTRONICS AND INSTRUMENTATION ENGINEERING)

S. No.	Course Code	Course Title	Scheme of Instruction				Scheme of Examination			Credits
			L	T	P/D	Contact Hrs/Wk	CIE	SEE	Duration in Hrs	
Theory Courses										
1	PC602EE	Microcontroller & Microprocessor	3	1	-	4	30	70	3	3
2.	PC605EE	Biomedical Instrumentation	3	-	-	3	30	70	3	3
3.	PC606EE	Process Control	3	-	-	3	30	70	3	3
4.	PC607EE	Electronics Instrumentation Systems	3	-	-	3	30	70	3	3
5	PE-II	Professional Elective-I	3	-	-	3	30	70	3	3
6.	OE-I	Open Elective-I	3	-	-	3	30	70	3	3
Practical /Laboratory Courses										
7	PC651EE	Electrical Machine Lab	-	-	2	2	25	50	3	1
8	PC652EE	Digital Signal Processing Lab	-	-	2	2	25	50	3	1
9	PC653EE	Control System Lab	-	-	2	2	25	50	3	1
10	MC	Mandatory Course	-	-	3	3	50	-	-	0
11	SI 671EE	Summer Internship**	-	-	-	-	-	-	-	-
Total			18	01	09	28	305	570		21

PC: Professional Course

PE: Professional Elective

MC: Mandatory Course

SI: Summer Internship

L: Lecture

T: Tutorial

P: Practical

D: Drawing

CIE: Continuous Internal Evaluation

SEE: Semester End Examination (Univ. Exam)

Note 1:

1. Each contact hour is a Clock Hour
2. The duration of the practical class is two clock hours, however it can be extended wherever necessary, to enable the student to complete the experiment

Note 2:

* The students have to undergo a Summer Internship of four weeks duration after VI semester and credits will be awarded in VII semester after evaluation.

** Subject not offered to the students of Electronics and Instrumentation Engineering Department.

Open Elective-I:		
S.No	Course Code	Course Title
1	OE601CE	Disaster Management
2	OE602CE	Geo Spatial Techniques
3	OE601CS	Operating Systems
4	OE602CS	OOP using Java
5	OE601IT	Database Systems
6	OE601EC	Principles of Embedded Systems
7	OE602EC	Digital System Design using HDL Verilog
8	OE601EE	Reliability Engineering**
9	OE602EE	Basics of Power Electronics**
10	OE601ME	Industrial Robotics
11	OE602ME	Material Handling
12	OE632AE	Automotive Safety & Ergonomics

Professional Elective – II		
S.No.	Course Code	Course Title
1	PE604EE	Instrumentation in Aerospace and Navigation
2	PE605EE	Piping and Instrumentation Diagrams
3	PE606EE	Instrumentation and Control in Petrochemical industry

Mandatory Course		
S.No.	Course Code	Course Title
1	MC951SP	Yoga Practice
2	MC952SP	National Service Scheme
3	MC953SP	Sports

IV Year EIE 1604-16; 1604-17

CBCS

FACULTY OF ENGINEERING

Scheme of Instruction & Examination

(CBCS Curriculum for the Academic Year 2019-2020)

and

Syllabi

B.E. VII and VIII Semester

of

Four Year Degree Programme

In

Electronics and Instrumentation Engineering

(With effect from the academic year 2019– 2020)

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Issued by

Dean, Faculty of Engineering

Osmania University, Hyderabad – 500 007

2019

SCHEME OF INSTRUCTION & EXAMINATION
B.E. VII - Semester
(ELECTRONICS AND INSTRUMENTATION ENGINEERING)

S. No.	Course Code	Course Title	Scheme of Instruction				Scheme of Examination			Credits
			L	T	P/D	Contact Hrs/Wk	CIE	SEE	Duration in Hrs	
Theory Courses										
1	PC 711 EE	Opto-Electronic Instrumentation	3	-	-	3	30	70	3	3
2	PC 712 EE	Virtual Instrumentation	3	-	-	3	30	70	3	3
3	PC 713 EE	Analytical Instrumentation	3	-	-	3	30	70	3	3
4		Open Elective – II	3	-	-	3	30	70	3	3
5		Open Elective – III	3	-	-	3	30	70	3	3
Practical/ Laboratory Courses										
6	PC 752 EE	Microprocessor and Microcontrollers Lab	-	-	2	2	25	50	3	1
7	PC 753 EE	Instrumentation Simulation Lab	-	-	2	2	25	50	3	1
8	PW 761 EE	Summer Internship	-	-	4	4	50	-	-	2
9	SI 762 EE	Project Work – I	-	-	-	-	50	-	-	2
			15	-	08	23	300	450		21

Open Elective – II			Open Elective – III		
S. No.	Course Code	Course Title	S. No.	Course Code	Course Title
1	OE 771 CE	Green Building Technologies	1	OE 781 CE	Road Safety Engineering
2	OE 772 CS	Data Science Using R Programming	2	OE 782 IT	Software Engineering
3	OE 773 EC	Fundamentals of IoT	3	OE 783 EC	Principles of Electronic Communications
4	OE 774 EE**	Non-Conventional Energy Sources	4	OE 784 EE**	Illumination and Electric Traction systems
5	OE 775 ME	Entrepreneurship	5	OE 785 ME	Mechatronics

PC: Professional Course

PE: Professional Elective

L: Lectures

T: Tutorials

P: Practical

D: Drawing

CIE: Continuous Internal Evaluation

SEE: Semester End Examination (Univ. Exam)

Note: 1) Each contact hour is a Clock Hour

2) The practical class can be of two and half hour (clock hours) duration as per the requirement of a particular laboratory.

Note-2: * The students have to undergo a Summer Internship of four weeks' duration after VI semester and credits will be awarded in VII semester after evaluation.

** Subject is not offered to the students of EEE and EIE Department.

SCHEME OF INSTRUCTION & EXAMINATION
B.E. VIII - SEMESTER
(ELECTRONICS AND INSTRUMENTATION ENGINEERING)

S. No.	Course Code	Course Title	Scheme of Instruction				Scheme of Examination			Credits
			L	T	P/D	Contact Hrs/Wk	CIE	SEE	Duration in Hrs	
Theory Courses										
1	PC 802 EE	Advance Programmable Logic Controller	3	-	-	3	30	70	3	3
2		Professional Elective – III	3	-	-	3	30	70	3	3
3		Professional Elective – IV	3	-	-	3	30	70	3	3
4		Professional Elective – V	3	-	-	3	30	70	3	3
Practical/ Laboratory Courses										
5	PC 852 EE	Process Instrumentation Lab	-	-	2	2	25	50	3	1
6	PW 961 EE	Project Work – II	-	-	16	16	50	100	-	8
			12	-	18	30	195	430		21

Professional Elective – III			Professional Elective – IV		
S. No.	Course Code	Course Title	S. No.	Course Code	Course Title
1	PE 825 EE	Digital Control Systems	1	PE 834 EE	Power Quality
2	PE 826 EE	Automation in Process Control	2	PE 835 EE	Advance Digital Signal Processing
3	PE 827 EE	Hydraulic & Pneumatics	3	PE 836 EE	Biomedical Signal Processing
4	PE 828 EE	Software Design tools for Sensing & Control	4	PE 837 EE	Power plant design and safety management
Professional Elective – V					
1	PE 842 EE	Energy Management Systems and SCADA			
2	PE 846 EE	Neural Networks and Fuzzy Logic			
3	PE 847 EE	Instrumentation for Agricultural and Food Processing Industries			
4	PE 848 EE	Digital Image Processing			

PC: Professional Course

PE: Professional Elective

L: Lectures

T: Tutorials

P: Practical

D: Drawing

CIE: Continuous Internal Evaluation

SEE: Semester End Examination (Univ. Exam)

Note: 1) Each contact hour is a Clock Hour

2) The duration of the practical class is two clock hours, however it can be extended wherever necessary, to enable the student to complete the experiment

DEPARTMENT OF CIVIL ENGINEERING

**Scheme of Instruction and Syllabus
of
M.E. (Civil Engineering)**

**Full time / Part time
(2015-16)**



**UNIVERSITY COLLEGE OF ENGINEERING
(Autonomous)
Osmania University
Hyderabad – 500 007, TS, INDIA**

Scheme of Instruction & Examination
M.E. (Civil Engineering) 4 Semesters (Full Time)

Sl. No	Subject	Periods per Week		Duration (Hrs)	Max. Marks		Credits
		L/T	D/P		SEE	CIE	
Semester - I							
1.	Core	3	--	3	70	30	3
2.	Core	3	--	3	70	30	3
3.	Core / Elective	3	--	3	70	30	3
4.	Core / Elective	3	--	3	70	30	3
5.	Elective	3	--	3	70	30	3
6.	Elective	3	--	3	70	30	3
7.	Laboratory – I	--	2½	2½	--	50	2
8.	Seminar – I	--	2½	2½	--	50	2
	Total	18	5	23	420	280	22
Semester - II							
1.	Core	3	--	3	70	30	3
2.	Core	3	--	3	70	30	3
3.	Core / Elective	3	--	3	70	30	3
4.	Core / Elective	3	--	3	70	30	3
5.	Elective	3	--	3	70	30	3
6.	Elective	3	--	3	70	30	3
7.	Laboratory – II	--	2½	2½	--	50	2
8.	Seminar – II	--	2½	2½	--	50	2
	Total	18	5	23	420	280	22
Semester - III							
1.	Project+ Seminar*	--	4	4	--	100**	8
Semester – IV							
1.	Dissertation	--	6	6	200	-	16

Note: Six core subjects, six elective subjects, Two Laboratory Courses and Two Seminars should normally be completed by the end of semester II.

* One project seminar presentation.

** 50 marks to be awarded by guide and 50 marks to be awarded by viva-voice committee comprising Guide and two internal senior faculty members (subject experts)



DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Scheme of Instruction

and

Syllabi of

M.Tech(Computer Science and Engineering)

2017-2018



UNIVERSITY COLLEGE OF ENGINEERING

(AUTONOMOUS)

OSMANIA UNIVERSITY

HYDERABAD – 500 007, TELANGANA

SCHEME OF INSTRUCTION
M.TECH (COMPUTER SCIENCE AND ENGINEERING)
Proposed from the Academic year 2017-18

SEMESTER - I

S.No	Course Code	Course Title	Scheme of Instruction		Contact Hrs/Wk	Scheme of Examination		Credits
			L/T	P		CIE	SEE	
1.	# Core	Core	3	--	3	30	70	3
2.	# Core	Core	3	--	3	30	70	3
3.	# Core/ *Elective	Core / Elective	3	--	3	30	70	3
4.	# Core/ *Elective	Core / Elective	3	--	3	30	70	3
5.	*Elective	Elective	3	--	3	30	70	3
6.	*Elective	Elective	3	--	3	30	70	3
Departmental Requirements								
7.	CS 5121	Software Lab - I	--	3	3	--	--	2
8.	CS 5122	Seminar - I	--	3	3	--	--	2
Total			18	6	24	280	420	22

SEMESTER - II

S.No	Course Code	Course Title	Scheme of Instruction		Contact Hrs/Wk	Scheme of Examination		Credits
			L/T	P		CIE	SEE	
1.	# Core	Core	3	--	3	30	70	3
2.	# Core	Core	3	--	3	30	70	3
3.	# Core/ *Elective	Core / Elective	3	--	3	30	70	3
4.	# Core/ *Elective	Core / Elective	3	--	3	30	70	3
5.	*Elective	Elective	3	--	3	30	70	3
6.	*Elective	Elective	3	--	3	30	70	3
Departmental Requirements								
7.	CS 5123	Software Lab - II	--	3	3	--	--	2
8.	CS 5124	Seminar - II	--	3	3	--	--	2
Total			18	6	24	280	420	22

SCHEME OF INSTRUCTION
M.TECH (COMPUTER SCIENCE AND ENGINEERING)
Proposed from the Academic year 2017-18

SEMESTER III

S.No	Course Code	Course Title	Scheme of Instruction		Contact Hrs/Wk	Scheme of Examination		Credits
			L/T	P		CIE	SEE	
1.	CS5125	Project Seminar	--	4	4	100**	--	8
Total			--	4	4	100		8

***Project Seminar Evaluation: 50 marks to be awarded by Supervisor and 50 marks to be awarded by Viva-Voce committee comprising Head, Supervisor and an Examiner.*

SEMESTER – IV

S.No	Course Code	Course Title	Scheme of Instruction		Contact Hrs/Wk	Scheme of Examination		Credits
			L/T	P		CIE	SEE	
1.	CS5126	Dissertation	--	6	6	---	200	16
Total			--	6	6	---	200	16

Note: Six Core subjects, Six Elective subjects, Two Laboratory Courses and Two Seminars must be offered in Semester I and II.

Faculty of Engineering

DEPARTMENT OF ELECTRICAL ENGINEERING

Scheme and Syllabi

of

M.E. (ELECTRICAL ENGG.)

(Full-Time)

Power Electronic Systems

(With effect from the Academic Year 2015-2016)



August 2015

Osmania University

Hyderabad - 500 007

SCHEME OF INSTRUCTION & EXAMINATION
M.E. (Electrical) 4 Semesters (Full Time)

S.No.	Course Title	Scheme of Instruction		Contact Hrs/wk	Scheme of Examination		Credits
		L/T	P		CIE	SEE	
Semester - I							
1.	Core	3	--	3	30	70	3
2.	Core	3	--	3	30	70	3
3.	Core / Elective	3	--	3	30	70	3
4.	Core / Elective	3	--	3	30	70	3
5.	Elective	3	--	3	30	70	3
6.	Elective	3	--	3	30	70	3
7.	Laboratory - I	--	3	3	50	--	2
8.	Seminar - I	--	3	3	50	--	2
	Total	18	6	24	280	420	22
Semester - II							
1.	Core	3	--	3	30	70	3
2.	Core	3	--	3	30	70	3
3.	Core / Elective	3	--	3	30	70	3
4.	Core / Elective	3	--	3	30	70	3
5.	Elective	3	--	3	30	70	3
6.	Elective	3	--	3	30	70	3
7.	Laboratory - II	--	3	3	50	--	2
8.	Seminar - II	--	3	3	50	--	2
	Total	18	6	24	280	420	22
Semester - III							
1.	(Dissertation + Dissertation Seminar)*	--	4	4	100**		8
Semester - IV							
1.	Dissertation	--	6	6		200	16

CIE: Continuous Internal Evaluation; SEE: Semester End Evaluation

Note: Six Core subjects, Six Elective subjects, Two Laboratory Courses and Two Seminars should normally be completed by the end of semester II* One Dissertation seminar presentation.

** 50 marks to be awarded by Supervisor and 50 marks to be awarded by viva-voice committee comprising Supervisor and two internal faculty members

**DEPARTMENT OF
MECHANICAL ENGINEERING**

**Scheme of Instruction and Syllabus
of
M.E. (Mechanical)**

Specialization:

CAD/CAM

**Full time / Part time
(2015-16)**



**UNIVERSITY COLLEGE OF ENGINEERING
(Autonomous)
Osmania University
Hyderabad – 500 007, Telangana, INDIA**

Scheme of Instruction & Examination
M.E. (Mechanical Engineering) 4 Semesters (Full Time)

Sl. No	Subject	Hours per week		Duration (Hrs)	Max. Marks		Credits
		L/T	D/P		SEE	CIE	
Semester - I							
1.	Core	3	--	3	70	30	3
2.	Core	3	--	3	70	30	3
3.	Core / Elective	3	--	3	70	30	3
4.	Core / Elective	3	--	3	70	30	3
5.	Elective	3	--	3	70	30	3
6.	Elective	3	--	3	70	30	3
7.	Laboratory - I	--	2½	2½	--	50	2
8.	Seminar - I	--	2½	2½	--	50	2
	Total	18	5	23	420	280	22
Semester - II							
1.	Core	3	--	3	70	30	3
2.	Core	3	--	3	70	30	3
3.	Core / Elective	3	--	3	70	30	3
4.	Core / Elective	3	--	3	70	30	3
5.	Elective	3	--	3	70	30	3
6.	Elective	3	--	3	70	30	3
7.	Laboratory - II	--	2½	2½	--	50	2
8.	Seminar - II	--	2½	2½	--	50	2
	Total	18	5	23	420	280	22
Semester - III							
1.	Project+ Seminar*	--	4	4	--	100**	8
Semester - IV							
1.	Dissertation	--	6	6	200		16

Note: Six core subjects, six elective subjects, two laboratory courses and two seminars should normally be completed by the end of semester II.

* One project seminar presentation.

** 50 marks to be awarded by guide and 50 marks to be awarded by viva-voice committee comprising Guide and two internal senior faculty members (subject experts)