



# SHRI RAMDEOBABA COLLEGE OF ENGINEERING AND MANAGEMENT, NAGPUR

An Autonomous College of Rashtrasant Tukadoji Maharaj  
Nagpur University, Nagpur, Maharashtra, India

## UNDER GRADUATE ORDINANCES / REGULATIONS

2014 - 2015



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ISO 9001 : 2008 CERTIFIED ORGANISATION

## 1. INTRODUCTION

### 1.1 PREAMBLE

Shri Ramdeobaba College of Engineering and Management (RCOEM), situated in the heart of Nagpur city, was established in 1984 by Shri Ramdeobaba Sarvajanic Samiti, a trust which has been involved in community service for over four decades. RCOEM has established a strong foundation in technical education in Central India. Journey of a student in this institute has always involved comprehensive knowledge building through practical skills, technical knowledge and personality development, which gives them a head start in their career. The institute on an average annually admits around 810 candidates for UG programmes, around 381 candidates for PG programmes and 60 candidates for Dual Degree Course in Management.

The curriculum provides broad knowledge, builds a thorough professional life long process of learning and exploring. At undergraduate level, a student needs to do compulsory foundation courses in the areas of basic sciences, humanities, social sciences and engineering apart from departmental requirements. Departmental courses (core and electives) constitute minimum 50% of the total curriculum. Further, students have to undertake electives including interdisciplinary ones to develop broad specialized and inter-disciplinary knowledge. At the PG level students are encouraged to look beyond their area of specialization to broaden their horizons through a wide variety of courses and electives.

The Institute follows a credit based semester system for its academic programmes with English as the medium of instruction. An academic year runs from July through June next year and is comprised of two semesters. Typically, the 1st semester (Odd Semester) starts in the July and ends in December; the 2nd Semester (Even Semester) starts in January and ends in June.

## 1.2 Departments

The various Departments and their two-letter codes are given below;

S.No.	Name of Department	Department Code
1	Civil Engineering	CE
2	Computer Science and Engineering	CS
3	Electrical Engineering	EE
4	Electronics and Communication Engineering	EC
5	Electronics Design Technology	ED
6	Electronics Engineering	EN
7	Industrial Engineering	IN
8	Information Technology	IT
9	Mechanical Engineering	ME
10	Management Technology	MB
11	Computer Applications	MC
12	Mathematics	MA
13	Physics	PH
14	Chemistry	CH
15	Humanities	HU
16	Physical Education	PE

## 1.3 Programmes Offered

RCOEM Nagpur offers academic programmes namely Engineering and Technology at UG and PG levels, MBA, MCA, Integrated Course in Engineering & Management and Dual Degree Course in Management. In undergraduate programmes and in Dual Degree Course in Management, students are admitted after 10+2 schooling while for all postgraduate programmes, students are admitted after they have obtained at least a college level Bachelor's degree. For Master of Technology Management, candidates are selected from total sanctioned UG engineering intake (all UG engineering programmes in first shift). For Academic year 2014-15, the selection of candidates for MTM programme shall be done at the start of semester III, UG engineering programme on programme wise merit of first year (Semester I & II) results. Admission to all these programmes are based as per the eligibility criteria laid down by the competent authority.

**1.3.1 Under Graduate Programmes:****A. Bachelor of Engineering : (B.E.)**

Sr. No.	Department	Programme Title	Programme Code	Eligibility for admission
1	Civil Engineering	B.E. (Civil Engineering)	CEU	Eligibility Criteria as laid down by the competent authority from time to time
2	Computer Science and Engineering	B.E. (Computer Science and Engineering)	CSU	
3	Electrical Engineering	B.E. (Electrical Engineering)	EEU	
4	Electronics and Communication Engineering	B.E. (Electronics and Communication Engineering)	ECU	
5	Electronics Design Technology	B.E. (Electronics Design Technology)	EDU	
6	Electronics Engineering	B.E. (Electronics Engineering)	ENU	
7	Industrial Engineering	B.E. (Industrial Engineering)	INU	
8	Information Technology	B.E. (Information Technology)	ITU	
9	Mechanical Engineering	B.E. (Mechanical Engineering)	MEU	

**1.3.2 Post Graduate Programmes****A. Masters:**

Sr. No.	Department	Programme Title	Programme Code	Eligibility for admission
1	Civil Engineering	M. Tech. (Geotechnical Engineering) (Part time)	CEG	Eligibility Criteria as laid down by the competent authority from time to time
2	Civil Engineering	M. Tech. (Structural Engineering)	CES	
3	Electronics Engineering	M. Tech. (Very Large Scale Integration Design)	ENV	
4	Industrial Engineering	M. Tech. (Industrial Engineering)	IND	
5	Electrical Engineering	M. Tech. (Power Electronics & Power System)	EEP	
6	Computer Science and Engineering	M. Tech. (Computer Science & Engineering)	CSE	
7	Mechanical Engineering	M. Tech. (Heat Power Engineering)	HPE	
8	Computer Applications	MCA	MCA	
9	Management Technology	MBA	MBA	

### 1.3.3 Integrated Course in Engineering & Management

Sr. No.	Department	Programme Title	Programme Code	Eligibility for admission
1	Management Technology	Masters of Technology Management	MTM	Eligibility Criteria as laid down by the competent authority from time to time

### 1.3.4 Dual Degree Course in Management

Sr. No.	Department	Programme Title	Programme Code	Eligibility for admission
1	Management Technology	Bachelor's Degree in Management	BM	Eligibility Criteria as laid down by the competent authority from time to time
2		Bachelor's Degree in Applied Management	BAM	
3		Master's Degree in Applied Management	MAM	

## 2. ORDINANCES FOR THE U.G. PROGRAMMES 2014

The Board of Management of the Institute prescribes the following ordinances in respect of the different academic undergraduate programmes at Shri Ramdeobaba College of Engineering and Management, Ramdeo Tekdi, Gittikhadan, Katol Road, Nagpur- 440013 on the recommendation of the Academic Council. The details in respect of the ordinances issued for UG Programmes are as follows.

<b>Short Title and Commencement</b>	(i)	These ordinances shall be hereafter called as the Ordinances for the Undergraduate (UG) Programmes of RCOEM.
	(ii)	These ordinances shall come into force with effect from the date of its approval by the Board of Management.
<b>Definitions</b>		Unless the context requires otherwise;
	(i)	<b>"Government"</b> shall mean the Government of Maharashtra/ Government of India as may be applicable.
	(ii)	<b>"DTE"</b> shall mean Director of Technical Education, Government of Maharashtra.
	(iii)	<b>"University"</b> shall mean Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur.
	(iv)	<b>"Regulating Authority"</b> shall mean any regulatory or controlling body for the Technical Education in India.
	(v)	<b>"UGC"</b> shall mean University Grants Commission, Government of India, New Delhi.
	(vi)	<b>"AICTE"</b> shall mean the All India Council for Technical Education, New Delhi.
	(vii)	<b>"Institute"</b> shall mean Shri Ramdeobaba College of Engineering and Management, Ramdeo Tekdi, Gittikhadan, Katol Road, Nagpur 440013.
	(viii)	<b>"Board"</b> shall mean the Board of Management of the Institute constituted as per the XI plan guidelines of UGC for autonomous colleges read with Direction no. 4/1999 of the University.
	(ix)	<b>"Principal"</b> shall mean the Principal of the Institute.
	(x)	<b>"Vice-Chancellor"</b> shall mean the Vice-Chancellor of the University.
	(xi)	<b>"APEC"</b> shall mean the Institute level Academic Programme Evaluation Committee formed by the Principal as and when required. If any academic program is to be evaluated based on factors like importance, academic content, industrial significance, financial viability, sustainability etc., the decision of this body must be taken into consideration.
	(xii)	<b>"Finance Committee"</b> shall mean the Finance committee of the Institute constituted as per the guidelines of UGC for autonomous colleges.
	(xiii)	<b>"BOS"</b> shall mean the Board of Studies of the department, constituted as per the Guidelines of UGC for autonomous colleges.

	(xiv)	<b>"Degree"</b> shall mean the Bachelor of Engineering (B. E.) or Master of Technology (M. Tech.) Master of Business Administration (MBA), Master of Computer Applications (MCA) and other degrees of the Institute as may be approved by the Board/University/UGC/Government.
	(xv)	<b>"Applicant"</b> shall mean an individual who applies for admission to any UG programme of the Institute.
	(xvi)	<b>"Student"</b> shall mean a student registered for UG programme for studies leading to any degree course offered by the Institute and sought final admission to the degree programme.
	(xvii)	<b>"Direct Admission Student"</b> shall mean a student who is admitted directly to second year of the B.E. degree program after completion of the appropriate Diploma Course and registered for undergraduate program for full time study leading to the respective B.E. degree.
	(xviii)	<b>"Course"</b> shall mean a curricular component identified by a designated number and title.
	(xix)	<b>"Programme"</b> Programme shall mean the stream in which the degree is awarded.
	(xx)	<b>"Scheme of Teaching and Examination"</b> shall mean the scheme of teaching and examination for a programme of study as approved by the Academic Council.
	(xxi)	<b>"Course Coordinator"</b> shall mean a faculty member who shall have full responsibility for the course, coordinating the work of other faculty member(s) involved in that course, including examinations and the award of grades.
	(xxii)	<b>"Departmental Faculty Board (DFB)"</b> shall mean the committee of the faculty members involved in teaching a course or a group of courses of technically relevant subjects.
	(xxiii)	<b>"Grade Moderation Committee"</b> shall mean the committee appointed by the Academic Council to moderate grades awarded by the examiner, if required.
	(xxiv)	<b>"SGPA"</b> shall mean the Semester Grade Point Average.
	(xxv)	<b>"CGPA"</b> shall mean the Cumulative Grade Point Average.
	(xxvi)	<b>"Academic Council"</b> shall mean the Academic Council constituted as per the XI plan guidelines of UGC for autonomous colleges read with Direction no. 4/1999 of the University.
	(xxvii)	<b>"EXC"</b> shall mean Examination committee constituted as per the Direction No. 4/1999 of the University for autonomous colleges.
	(xxviii)	<b>"COE"</b> shall mean the Controller of Examinations appointed as per the Guidelines of UGC for autonomous colleges.



	(xxix)	" <b>ISV</b> " shall mean In-charge of Spot Valuation, appointed by the Principal.
	(xxx)	" <b>OIC</b> " shall mean Officer In-charge of the End Semester Examination.
	(xxxi)	" <b>DEC</b> " shall mean the Departmental Examination Committee.
	(xxxii)	" <b>Guide</b> " shall mean a person who is qualified to supervise a project/dissertation work of students and is approved by the Academic Council.
	(xxxiii)	" <b>RCC</b> " shall mean Departmental Research Coordination Committee.
	(xxxiv)	" <b>GRC</b> " shall mean Grievance Redressal Committee formed by the Academic Council.
	(xxxv)	" <b>Competent Authority</b> " shall mean the Board of Management/Academic Council of the Institute/ University/Government/UGC/Regulating Authority as the case may be.
	(xxxvi)	" <b>Equivalence Committee</b> " shall mean the Equivalence Committee appointed by the Academic Council.
	(xxxvii)	" <b>APAC</b> " shall mean Academic Performance Advisory Committee.
	(xxxviii)	" <b>DAPAC</b> " shall mean Departmental Academic Performance Advisory Committee'.
<b>Ordinances</b>	(1)	The Institute shall offer UG programmes as the Board/ University/ Government may approve on the recommendation of the Academic Council either on its own or on the initiative of a Department and / or on the direction of the Board / Government.  <i>Provided</i> that an interdisciplinary programme may be proposed by a Department or by a committee appointed by the Principal for the consideration of the Academic Council and the Board/Government.
	(2)	The procedure for starting a new programme/temporarily suspending a programme/phasing out a programme shall be as per the guidelines laid down by the competent authority.
	(3)	The minimum qualifications and procedure for admission to the first year UG programmes as well as direct second year admission to UG programme shall be as per the norms prescribed.
	(4)	A student shall be required to earn minimum credits through various academic courses of a curriculum as provided in the regulations and scheme given in Annexure-I
	(5)	The award of the UG degree to an eligible candidate shall be made in accordance with the procedure laid down in the regulations. A student shall have to complete all the requirements for the award of the degree within such period as may be specified in the regulations, including those credits earned at such other institutions as have been recognized by the Institute for this purpose.

	(6)	The date of initial registration for the programme shall normally be the date, on which the student formally registers i.e. takes final admission for the first time. This date shall be considered as the date of joining the programme for all intents and purposes.
	(7)	A student shall be required to attend every lecture, tutorial and practical class. However, for late registration, sickness or other such exigencies, absence may be allowed as provided in the regulations.
	(8)	A student may be granted such scholarship / assistantship / stipend, etc. and awarded medals as may be specified in the regulations or in accordance with the directions of the Government and / or the decision of the Board from time to time. The overall topper(s) amongst all branches shall not be declared however on the basis of CGPA branch toppers may be declared as per norms.
	(9)	The procedure for the withdrawal from an UG programme, rejoining the programme, award of grades and SGPA / CGPA, the examination and all such matters as may be connected with the running of UG programmes shall be as specified in the regulations.
	(10)	A student admitted to the UG programme shall abide by the code of conduct for students issued by the Institute from time to time. This code of conduct shall deal with the discipline of the students in the hostels, departments, the Institute premises and outside. It may also deal with such other matters as are considered necessary for the general conduct of the students, co-curricular and extra-curricular activities. It shall be approved by the Academic Council on the recommendations of the Dean Students Affairs.
	(11)	The minimum duration of UG programmes shall be of four years (Organized in 8 semesters of six months each including vacation period).
	(12)	The tuition fees structure will be governed by the rules and regulations as prescribed by the competent authority.
	(13)	The fees other than the tuition fees will be governed by the rules and regulations framed and recommended by the Finance Committee and duly approved by the Board.
	(14)	Notwithstanding anything contained in the above Ordinances, no regulations shall be made in contradiction of the decision of the Board and /or the direction of the Government, in regard to the duration of the UG programme, the amount and number of scholarship/assistantships and the number of free ships and the procedure thereof.

## ANNEXURE - I

## Teaching Scheme for First Year (Semester I and II) Bachelor of Engineering

## GROUP 1: SEMESTER I / GROUP 2: SEMESTER II

Sr. No.	Code	Course	L	T	P	Credits	Maximum Marks			Exam Duration
							Internal Assessment	End Sem Exam	Total	
1	MAT101/ MAT102	Engineering Mathematics-I/II	4	1	0	9	40	60	100	3 Hrs.
2	CHT101	Engineering Chemistry	4	1	0	9	40	60	100	3 Hrs.
3	CHP101	Engineering Chemistry lab	0	0	3	3	25	25	50	-
4	EET101	Electrical Engineering	3	1	0	7	40	60	100	3 Hrs.
5	EEP101	Electrical Engineering lab	0	0	2	2	25	25	50	-
6	CST101	Computer Programming	2	0	0	4	40	60	100	3 Hrs.
7	CSP101	Computer Programming lab	0	0	2	2	25	25	50	-
8	HUT101	Communication Skills	2	0	0	4	40	60	100	3 Hrs.
9	HUP101	Communication Skills lab	0	0	2	2	25	25	50	-
10	PEP101	Sports/Yoga	0	0	2	0	-	-	-	-
		<b>TOTAL</b>	<b>15</b>	<b>3</b>	<b>11</b>	<b>42</b>	<b>300</b>	<b>400</b>	<b>700</b>	

## Teaching Scheme for First Year (Semester I and II) Bachelor of Engineering

## GROUP 1 : SEMESTER II / GROUP 2 : SEMESTER I

Sr. No.	Code	Course	L	T	P	Credits	Maximum Marks			Exam Duration
							Internal Assessment	End Sem Exam	Total	
1	MAT102/ MAT101	Engineering Mathematics-II/I	4	1	0	9	40	60	100	3 Hrs.
2	PHT101	Engineering Physics	4	1	0	9	40	60	100	3 Hrs.
3	PHP101	Engineering Physics lab	0	0	3	3	25	25	50	-
4	CET101	Engineering Mechanics	3	1	0	7	40	60	100	3 Hrs.
5	CEP101	Engineering Mechanics lab	0	0	2	2	25	25	50	-
6	INT101	Engineering Drawing	3	0	0	6	40	60	100	4 Hrs.
7	INP101	Engineering Drawing lab	0	0	3	3	25	25	50	-
8	HUT102	Social Skills	2	0	0	4	40	60	100	3 Hrs.
9	INP102	Workshop	0	0	2	2	25	25	50	-
		<b>TOTAL</b>	<b>16</b>	<b>3</b>	<b>10</b>	<b>45</b>	<b>300</b>	<b>400</b>		

**Scheme of Examination of Bachelor of Engineering (Civil Engineering)  
Semester Pattern  
III Semester, B.E. (Civil Engineering)**

Sr. No.	Subject Code	Subject Name	L	T	P	Credits	Maximum Marks			Exam Duration
							Internal Assessment	End Sem Exam	Total	
1	MAT201	Engineering Mathematics -III	3	1	0	7	40	60	100	3 Hrs.
2	CET201	Strength of Materials	3	1	0	7	40	60	100	3 Hrs.
3	CEP201	Strength of Materials	0	0	2	2	25	25	50	--
4	CET202	Fluid Mechanics-I	3	1	0	7	40	60	100	3 Hrs.
5	CEP202	Fluid Mechanics-I	0	0	2	2	25	25	50	--
6	CET203	Geotechnical Engineering-I	3	1	0	7	40	60	100	3 Hrs.
7	CEP203	Geotechnical Engineering-I	0	0	2	2	25	25	50	--
8	CET204	Engineering Geology	3	1	0	7	40	60	100	3 Hrs.
9	CEP204	Engineering Geology	0	0	2	2	25	25	50	--
10	CHT201	Environmental Studies-I	2	0	0	0	-	-	-	-
		<b>Total</b>	<b>17</b>	<b>5</b>	<b>8</b>	<b>43</b>				

**Scheme of Examination of Bachelor of Engineering (Civil Engineering)  
Semester Pattern  
IV Semester, B.E. (Civil Engineering)**

Sr. No.	Subject Code	Subject Name	L	T	P	Credits	Maximum Marks			Exam Duration
							Internal Assessment	End Sem Exam	Total	
1	CET205	Structural Analysis-I	3	1	0	7	40	60	100	3 Hrs.
2	CEP205	Structural Analysis-I	0	0	2	2	25	25	50	--
3	CET206	Building Construction & Materials	3	1	0	7	40	60	100	3 Hrs.
4	CET207	Environmental Engineering-I	3	1	0	7	40	60	100	3 Hrs.
5	CEP207	Environmental Engineering-I	0	0	2	2	25	25	50	--
6	CET208	Concrete Technology	3	1	0	7	40	60	100	3 Hrs.
7	CEP208	Concrete Technology	0	0	2	2	25	25	50	--
8	CET209	Surveying-I	3	1	0	7	40	60	100	3 Hrs.
9	CEP209	Surveying-I	0	0	3	3	25	25	50	--
10	CHT202	Environmental Studies-II	2	0	0	0	-	-	-	-
		<b>Total</b>	<b>17</b>	<b>5</b>	<b>9</b>	<b>44</b>				

**Scheme of Examination of Bachelor of Engineering (Civil Engineering)  
Semester Pattern  
V Semester, B.E. (Civil Engineering)**

Sr. No.	Subject Code	Subject Name	L	T	P	Credits	Maximum Marks			Exam Duration
							Internal Assessment	End Sem Exam	Total	
1	CET301	Steel Structures	3	1	0	7	40	60	100	4 Hrs.
2	CEP301	Steel Structures	0	0	2	2	25	25	50	--
3	CET302	Environmental Engineering-II	3	1	0	7	40	60	100	3 Hrs.
4	CET303	Surveying- II	3	1	0	7	40	60	100	3 Hrs.
5	CEP303	Surveying- II	0	0	2	2	25	25	50	--
6	CET304	Transportation Engineering-I	3	1	0	7	40	60	100	3 Hrs.
7	CEP304	Transportation Engineering-I	0	0	2	2	25	25	50	--
8	CET305	Building Design & Drawing	1	1	0	3	25	25	50	3 Hrs.
9	CEP305	Building Design & Drawing	0	0	2	2	25	25	50	--
10	CET306	Hydrology & Water Resources	4	1	0	9	40	60	100	3 Hrs.
11	CEP307	Technical Writing	0	0	2	0	-	-	-	-
		<b>Total</b>	<b>17</b>	<b>6</b>	<b>10</b>	<b>48</b>				

**Scheme of Examination of Bachelor of Engineering (Civil Engineering)  
Semester Pattern  
VI Semester B.E. (Civil Engineering)**

Sr. No.	Subject Code	Subject Name	L	T	P	Credits	Maximum Marks			Exam Duration
							Internal Assessment	End Sem Exam	Total	
1	CET308	Estimating & Costing	3	1	0	7	40	60	100	4 Hrs.
2	CEP308	Estimating & Costing	0	0	2	2	25	25	50	--
3	CET309	RCC Structures	3	1	0	7	40	60	100	4 Hrs.
4	CEP309	RCC Structures	0	0	2	2	25	25	50	--
5	CET310	Geotechnical Engineering-II	3	1	0	7	40	60	100	3 Hrs.
6	CET311	Fluid Mechanics-II	3	1	0	7	40	60	100	3 Hrs.
7	CEP311	Fluid Mechanics-II	0	0	2	2	25	25	50	--
8	CEP312	Computer Application in Civil Engineering	0	0	3	3	50	50	100	--
9	CEP313	Site Visits	0	0	2	2	-	-	-	-
10	CET314	Open Elective	3	1	0	7	40	60	100	3 Hrs.
		<b>Total</b>	<b>15</b>	<b>5</b>	<b>11</b>	<b>46</b>				

Course Code	Open Elective
CET314-1	Environmental Pollution
CET314-2	Green Building and Vastu Concepts

Compulsory one month training after VI<sup>th</sup> Semester examination to sites such as flat skim, bridges, roads, surveying, software etc. to be evaluated as a part of CEP 406 i.e. project and seminar.

**Scheme of Examination of Bachelor of Engineering (Civil Engineering)  
Semester Pattern  
VII Semester B.E. (Civil Engineering)**

Sr. No.	Code	Course	L	T	P	Credits	Maximum Marks			Exam Duration
							Internal Assessment	End Sem Exam	Total	
1	CET 401	Advance Concrete Structures	3	1	0	7	40	60	100	4 Hrs.
2	CEP 401	Advance Concrete Structures	0	0	2	2	25	25	50	--
3	CET402	Irrigation Engineering	3	1	0	7	40	60	100	3 Hrs.
4	CEP 402	Irrigation Engineering	0	0	2	2	25	25	50	--
5	CET 403	Contract, Accounts & Works Management	3	1	0	7	40	60	100	3 Hrs.
6	CET 404	Elective - I	3	1	0	7	40	60	100	3 Hrs.
7	CET 405	Structural Analysis II	3	1	0	7	40	60	100	3 Hrs.
8	CEP 405	Structural Analysis II	0	0	2	2	25	25	50	--
9	CEP 406	Project & Seminar	0	0	2	4	50		50	--
		<b>Total</b>	<b>15</b>	<b>5</b>	<b>8</b>	<b>45</b>				

Course Code	Elective I
CET 404 - 1	Advanced Construction Materials
CET 404 - 2	Maintenance & Rehabilitation of Civil Engineering Structures
CET 404 - 3	Advanced Hydraulics
CET 404 - 4	Advanced Geotechnical Engineering

**Scheme of Examination of Bachelor of Engineering (Civil Engineering)  
Semester Pattern  
VIII Semester B.E. (Civil Engineering)**

Sr. No.	Code	Course	L	T	P	Credits	Maximum Marks			Exam Duration
							Internal Assessment	End Sem Exam	Total	
1	CET 407	Transportation Engineering II	3	1	0	7	40	60	100	3 Hrs.
2	CET 408	Construction Management	3	1	0	7	40	60	100	3 Hrs.
3	CET 409	Elective II	3	1	0	7	40	60	100	3 Hrs.
4	CET 410	Elective III	3	1	0	7	40	60	100	3 Hrs.
5	CET 411	Elective IV	3	1	0	7	40	60	100	3 Hrs.
6	CEP 411	Elective IV	0	0	2	2	25	25	50	--
7	CEP 412	Project	0	0	6	12	75	75	150	--
		<b>Total</b>	<b>15</b>	<b>5</b>	<b>8</b>	<b>49</b>				

Course Code	Elective II	Course Code	Elective III	Course Code	Elective IV
CET 409 - 1	Water Power Engineering	CET 410 - 1	Advanced Steel Design	CET 411 - 1	Remote Sensing & GIS
CET 409 - 2	Earth & Earth Retaining Structures	CET 410 - 2	Advanced RCC	CET 411 - 2	Traffic Engineering
CET 409 - 3	Air Pollution & Solid Waste Management	CET 410 - 3	Bridge Engineering	CET 411 - 3	Water & Waste Water Treatment
CET 409 - 4	Multi Storied Structures	CET 410 - 4	Pavement Design	CET 411 - 4	Water Transmission & Distribution System



Scheme of Examination of Bachelor of Engineering (Computer and Engineering) Semester Pattern - III Semester B.E. (Computer and Engineering)										
Sr. No.	Code	Course	L	T	P	Credits	Maximum Marks			Exam Duration
							Internal Assessment	End Sem Exam	Total	
1	MAT202	Applied Mathematics-III	3	1	0	7	40	60	100	3 Hrs.
2	CST201	Data Structure and Program design	4	1	0	9	40	60	100	3 Hrs.
3	CSP201	Data Structure and Program design lab	0	0	2	2	25	25	50	--
4	CST202	Digital Circuits & Fund. of Microprocessor	3	1	0	7	40	60	100	3 Hrs.
5	CSP202	Digital Circuits & Fund. of Microprocessor lab	0	0	2	2	25	25	50	--
6	CST203	Business Data Processing	3	1	0	7	40	60	100	3 Hrs.
7	CSP203	Business Data Processing lab	0	0	2	2	25	25	50	--
8	CST204	Computer Architecture and Organization	3	1	0	7	40	60	100	3 Hrs.
9	CSP205	Computer Workshop-1 lab	0	0	2	2	25	25	50	--
10	CHT201	Environmental Studies - I (Audit Course)	2	0	0	00	--	--	--	--
<b>Total</b>			<b>18</b>	<b>05</b>	<b>08</b>	<b>45</b>	<b>300</b>	<b>400</b>	<b>700</b>	

Scheme of Examination of Bachelor of Engineering (Computer and Engineering) Semester Pattern - IV Semester B.E. (Computer and Engineering)										
Sr. No.	Code	Course	L	T	P	Credits	Maximum Marks			Exam Duration
							Internal Assessment	End Sem Exam	Total	
1	MAT245	Discrete Mathematics	3	1	0	7	40	60	100	3 Hrs.
2	CST206	Object oriented programming	4	1	0	9	40	60	100	3 Hrs.
3	CSP206	Object Oriented Programming lab	0	0	2	2	25	25	50	--
4	CST207	Operating Systems	3	1	0	7	40	60	100	3 Hrs.
5	CSP207	Operating Systems lab	0	0	2	2	25	25	50	--
6	CST208	Theoretical Foundations of Computer Science	4	1	0	9	40	60	100	3 Hrs.
7	HUT201	Technical Communication	3	1	0	7	40	60	100	3 Hrs.
8	CSP209	Computer Workshop-2 lab	0	0	2	2	25	25	50	--
9	CHT202	Environmental Studies-II (Audit Course)	2	0	0	0	--	--	--	--
<b>Total</b>			<b>19</b>	<b>05</b>	<b>06</b>	<b>45</b>	<b>275</b>	<b>375</b>	<b>650</b>	



**Scheme of Examination of Bachelor of Engineering (Computer and Engineering)  
Semester Pattern - V Semester B.E. (Computer and Engineering)**

Sr. No.	Code	Course	L	T	P	Credits	Maximum Marks			Exam Duration
							Internal Assessment	End Sem Exam	Total	
1	CST301	Systems Programming	3	1	0	7	40	60	100	3 Hrs.
2	CST302	Computer Graphics and GUI Design Technologies	4	1	0	9	40	60	100	3 Hrs.
3	CSP302	Computer Graphics and GUI Design Technologies Lab	0	0	2	2	25	25	50	--
4	CST303	Software Engineering.	3	1	0	7	40	60	100	3 Hrs.
5	CSP303	Software Engineering lab	0	0	2	2	25	25	50	--
6	CST304	Microprocessor & interfacing	3	1	0	7	40	60	100	3 Hrs.
7	CST305	Computer Networks	3	1	0	7	40	60	100	3 Hrs.
8	CSP305	Computer Networks lab	0	0	2	2	25	25	50	--
9	CSP306	Software Tech. Lab-I lab	0	0	3	3	25	25	50	--
		<b>Total</b>	<b>16</b>	<b>05</b>	<b>09</b>	<b>46</b>	<b>300</b>	<b>400</b>	<b>700</b>	

**Scheme of Examination of Bachelor of Engineering (Computer and Engineering)  
Semester Pattern - VI Semester B.E. (Computer and Engineering)**

Sr. No.	Code	Course	L	T	P	Credits	Maximum Marks			Exam Duration
							Internal Assessment	End Sem Exam	Total	
1	CST307	Design and Analysis of Algorithms	4	1	0	9	40	60	100	3 Hrs.
2	CSP307	Design and Analysis of Algorithm Lab	0	0	2	2	25	25	50	--
3	CST308	Database Management System	4	1	0	9	40	60	100	3 Hrs.
4	CSP308	Database Management System lab	0	0	2	2	25	25	50	--
5	CST309	Introduction to Wireless Communication system	3	1	0	7	40	60	100	3 Hrs.
6	CST310	Open Elective	3	1	0	7	40	60	100	3 Hrs.
7	CST311	Artificial Intelligence	3	1	0	7	40	60	100	3 Hrs.
8	CSP312	Software Tech Lab-II lab	0	0	3	3	25	25	50	--
		<b>Total</b>	<b>17</b>	<b>05</b>	<b>07</b>	<b>46</b>	<b>275</b>	<b>375</b>	<b>650</b>	

Course Code	Open Elective
CST310-1	Introduction to Mainframes
CST310-2	Foundation of Business Intelligence
CST310-3	Salesforce Technology
CST310-4	Business Intelligence and Its Applications
CST310-5	Mobile Technology

Scheme of Examination of Bachelor of Engineering (Computer and Engineering) Semester Pattern - VII Semester B.E. (Computer and Engineering)										
Sr. No.	Code	Course	L	T	P	Credits	Maximum Marks			Exam Duration
							Internal Assessment	End Sem Exam	Total	
1	CST401	Distributed Systems	4	1	0	9	40	60	100	3 Hrs.
2	CSP401	Distributed Systems lab	0	0	2	2	25	25	50	--
3	CST402	Language Processors	4	1	0	9	40	60	100	3 Hrs.
4	CSP402	Language Processors lab	0	0	2	2	25	25	50	--
5	CST403	ELECTIVE-I	4	1	0	9	40	60	100	3 Hrs.
6	CST404	ELECTIVE-II	4	1	0	9	40	60	100	3 Hrs.
7	CSP405	PROJECT & SEMINAR	0	0	2	4	25	25	50	--
		<b>Total</b>	<b>16</b>	<b>04</b>	<b>06</b>	<b>44</b>	<b>235</b>	<b>315</b>	<b>550</b>	

Course Code	Elective -I	Course Code	Elective - II
CST403-1	Web Architecture and Technologies	CST404-1	Internetworking and TCP/IP
CST403-2	Grid and Cloud Computing	CST404-2	Machine Learning
CST403-3	Advanced Object Oriented Technologies	CST404-3	Optimization Techniques in Computing

**Scheme of Examination of Bachelor of Engineering (Computer and Engineering)  
Semester Pattern - VIII Semester B.E. (Computer and Engineering)**

Sr. No.	Code	Course	L	T	P	Credits	Maximum Marks			Exam Duration
							Internal Assessment	End Sem Exam	Total	
8	CST406	Data Warehousing and Mining	4	1	0	9	40	60	100	3 Hrs.
9	CSP406	Data Warehousing and Mining lab	0	0	2	2	25	25	50	--
10	CST407	Information Security	4	1	0	9	40	60	100	3 Hrs.
11	CSP407	Information Security lab	0	0	2	2	25	25	50	--
12	CST408	ELECTIVE-III	3	2	0	8	40	60	100	3 Hrs.
13	CST409	ELECTIVE-IV	3	1	0	7	40	60	100	3 Hrs.
14	CSP410	PROJECT & SEMINAR	0	0	6	12	75	75	150	--
		<b>Total</b>	<b>14</b>	<b>05</b>	<b>10</b>	<b>49</b>	<b>285</b>	<b>365</b>	<b>650</b>	

Course Code	Elective -III	Course Code	Elective - IV
CST408-1	Natural Language Processing	CST409-1	Web Intelligence and Big Data
CST408-2	Distributed and Parallel Database	CST409-2	Wireless Application Programming
CST408-3	Human Computer Interaction	CST409-3	Design Patterns

**Scheme of Examination of Bachelor of Engineering (Industrial Engineering)  
Semester Pattern  
III Semester, B.E. (Electrical Engineering)**

Sr. No.	Subject Code	Subject Name	L	T	P	Credits	Maximum Marks			Exam Duration
							Internal Assessment	End Sem Exam	Total	
1	MAT203	Engineering Mathematics-III	3	1	0	7	40	60	100	3 Hrs.
2	EET201	Elements of Electromagnetic	4	1	0	9	40	60	100	3 Hrs.
3	EET202	Electrical Measurement and Measuring Instruments.	4	1	0	9	40	60	100	3 Hrs.
4	EEP202	Electrical Measurement and Measuring Instruments.	0	0	2	2	25	25	50	--
5	CST212	Introduction to Computer Concepts	3	1	0	7	40	60	100	3 Hrs.
6	CSP212	Introduction to Computer Concepts	0	0	2	2	25	25	50	--
7	ENT206	Electronic Devices & Circuits	4	1	0	9	40	60	100	3 Hrs.
8	ENP206	Electronic Devices & Circuits	0	0	2	2	25	25	50	--
9	CHT201	Environmental studies I	2	0	0	0	-	-	-	
		<b>TOTAL</b>	<b>20</b>	<b>5</b>	<b>6</b>	<b>47</b>				

**Scheme of Examination of Bachelor of Engineering (Industrial Engineering)  
Semester Pattern  
IV Semester, B.E. (Electrical Engineering)**

Sr. No.	Subject Code	Subject Name	L	T	P	Credits	Maximum Marks			Exam Duration
							Internal Assessment	End Sem Exam	Total	
1	MAT242	Electrical Engineering Mathematics	3	1	0	7	40	60	100	3 Hrs.
2	HUT202	Principles of Economics and Management	3	1	0	7	40	60	100	3 Hrs.
3	ENT207	Digital and Linear Electronic Circuits	4	1	0	9	40	60	100	3 Hrs.
4	ENP207	Digital and Linear Electronic Circuits	0	0	2	2	25	25	50	--
5	EET203	Electrical Machines-I	4	1	0	9	40	60	100	3 Hrs.
6	EEP203	Electrical Machines-I	0	0	2	2	25	25	50	--
7	EET204	Network Analysis	4	1	0	9	40	60	100	3 Hrs.
8	EEP204	Network Analysis	0	0	2	2	25	25	50	--
9	CHT202	Environmental studies II	2	0	0	0	-	-	-	
		<b>TOTAL</b>	<b>20</b>	<b>5</b>	<b>6</b>	<b>47</b>				

**Scheme of Examination of Bachelor of Engineering (Industrial Engineering)  
Semester Pattern  
V Semester, B.E. (Electrical Engineering)**

Sr. No.	Subject Code	Subject Name	L	T	P	Credits	Maximum Marks			Exam Duration
							Internal Assessment	End Sem Exam	Total	
1	EET301	Power Station Practice	3	1	0	7	40	60	100	3 Hrs
2	EET316	Microprocessor & Interfacing	4	1	0	9	40	60	100	3 Hrs
3	EET316	Microprocessor & Interfacing	0	0	2	2	25	25	50	--
4	EET302	Electrical Machines- II	4	1	0	9	40	60	100	3 Hrs
5	EET302	Electrical Machines- II	0	0	2	2	25	25	50	--
6	EET303	Electrical Power Systems-I	3	1	0	7	40	60	100	3 Hrs
7	EET304	Elective-I	3	1	0	7	40	60	100	3 Hrs
8	EET305	Electrical Engg. Workshop	0	0	2	2	25	25	50	--
9	EET306	Industrial Visit and Case Study	0	0	2	0	-	-	-	--
<b>TOTAL</b>			<b>17</b>	<b>5</b>	<b>8</b>	<b>45</b>				

Course Code	Elective-I
EET304-1	Electrical Machine Design
EET304-2	Entrepreneurship Development
EET304-3	Energy Management and Audit
EET304-4	PLC and SCADA System

**Scheme of Examination of Bachelor of Engineering (Industrial Engineering)  
Semester Pattern  
VI Semester B.E. (Electrical Engineering)**

Sr. No.	Subject Code	Subject Name	L	T	P	Credits	Maximum Marks			Exam Duration
							Internal Assessment	End Sem Exam	Total	
1	EET307	Control System Engineering	4	1	0	9	40	60	100	3 Hrs.
2	EET307	Control System Engineering	0	0	2	2	25	25	50	--
3	EET308	Electrical Drives & Their Control	3	1	0	7	40	60	100	3 Hrs.
4	EET309	Power Electronics	4	1	0	9	40	60	100	3 Hrs.
5	EET309	Power Electronics	0	0	2	2	25	25	50	--
6	EET310	Instrumentation	3	1	0	7	40	60	100	3 Hrs.
7	EET313	Open Elective	3	1	0	7	40	60	100	3 Hrs.
8	EET311	Comp. Aided Electrical. Engineering Drawing	0	0	2	2	25	25	50	--
9	EET312	Mini project	0	0	2	0	-	-	-	--
<b>TOTAL</b>			<b>17</b>	<b>5</b>	<b>8</b>	<b>45</b>				

Course Code	Open Elective
EET313-1	Automation
EET313-2	Industrial Drives
EET313-3	Energy Management and Audit

**Scheme of Examination of Bachelor of Engineering (Industrial Engineering)  
Semester Pattern - VII Semester B.E. (Electrical Engineering)**

Sr. No.	Code	Course	L	T	P	Credits	Maximum Marks			Exam Duration
							Internal Assessment	End Sem Exam	Total	
1	EET401	Power System-II	4	1	0	9	40	60	100	3 Hrs.
2	EET402	High Voltage Engineering.	4	1	0	9	40	60	100	3 Hrs.
3	EEP402	High Voltage Engineering.	0	0	2	2	25	25	50	--
4	EET403	Elective -II	3	1	0	7	40	60	100	3 Hrs.
5	EET404	PSBD	3	1	0	07	40	60	100	3 Hrs.
6	EET405	Switchgear & Protection	4	1	0	09	40	60	100	3 Hrs.
7	EEP405	Switchgear & Protection	0	0	2	02	25	25	50	--
8	EEP406	Project Phase I	0	0	4	04	100	--	--	--
		<b>TOTAL</b>	<b>18</b>	<b>5</b>	<b>8</b>	<b>49</b>				

Course Code	Elective-II
EET403-1	EHVAC & HVDC Transmission
EET403-2	Utilization of Electrical Energy
EET403-3	Advanced Control System

**Scheme of Examination of Bachelor of Engineering (Industrial Engineering)  
Semester Pattern - VIII Semester B.E. (Electrical Engineering)**

Sr. No.	Code	Course	L	T	P	Credits	Maximum Marks			Exam Duration
							Internal Assessment	End Sem Exam	Total	
1	EET407	Electrical Installation Design & Practice	3	1	0	07	40	60	100	3 Hrs.
2	EET408	Comp. Appl. in Power System	4	1	0	09	40	60	100	3 Hrs.
3	EEP408	Comp. Appl. in Power System	0	0	2	02	25	25	50	--
4	EET409	Elective -III	3	1	0	07	40	60	100	3 Hrs.
5	EET410	Elective- IV	3	1	0	07	40	60	100	3 Hrs.
6	EEP411	Project Phase II	0	0	4	08	100	100	200	--
7	EEP412	Seminar	0	0	2	02	100	--	100	--
		<b>TOTAL</b>	<b>13</b>	<b>4</b>	<b>08</b>	<b>42</b>				

Course Code	Elective-III	Course Code	Elective-IV
EET409-1	Embedded Systems	EET410-1	Flexible AC Transmission Systems
EET409-2	Power Quality	EET410-2	Digital Signal Processing
EET409-3	Fuzzy Logic and Neural Networks	EET410-3	EHV Substation Design & Erection

**Scheme of Examination of Bachelor of Engineering (Electronics and Communication Engineering)  
Semester Pattern - III Semester B. E. (Electronics and Communication Engineering)**

Sr. No.	Code	Course	L	T	P	Credits	Maximum Marks			Exam Duration
							Internal Assessment	End Sem Exam	Total	
1	MAT203	Mathematics - III	3	1	0	7	40	60	100	3 Hrs.
2	EET205	Network Theory	3	1	0	7	40	60	100	3 Hrs.
3	ECT201	Electronic Devices	4	1	0	9	40	60	100	3 Hrs.
4	ECP201	Electronic Devices Lab.	0	0	2	2	25	25	50	-
5	ECT202	Digital Logic Design	4	1	0	9	40	60	100	3 Hrs.
6	ECP202	Digital Logic Design Lab	0	0	2	2	25	25	50	-
7	PHT201	Electronic Engineering Materials and IC Fabrication	3	1	0	7	40	60	100	3 Hrs.
8	CSP211	Object Oriented Data Structure	0	0	2	2	25	25	50	-
9	CHT201	Environmental Studies - I	2	0	0	00	-	-	-	-
		<b>Total</b>	<b>19</b>	<b>5</b>	<b>6</b>	<b>45</b>				

**Scheme of Examination of Bachelor of Engineering (Electronics and Communication Engineering)  
Semester Pattern - IV Semester B. E. (Electronics and Communication Engineering)**

Sr. No.	Code	Course	L	T	P	Credits	Maximum Marks			Exam Duration
							Internal Assessment	End Sem Exam	Total	
1	MAT243	Mathematics - IV	3	1	0	7	40	60	100	3 Hrs.
2	ECT203	Electromagnetic Fields	4	1	0	9	40	60	100	3 Hrs.
3	ECT204	Analog Circuits	4	1	0	9	40	60	100	3 Hrs.
4	ECP204	Analog Circuits Lab	0	0	2	2	25	25	50	-
5	ECT205	Electronic Circuits	3	1	0	7	40	60	100	3 Hrs.
6	ECP205	Electronic Circuits Lab.	0	0	2	2	25	25	50	-
7	ECT206	Electronic Measurement and Instrumentation	3	1	0	7	40	60	100	3 Hrs.
8	ECP206	Electronic Measurement and Instrumentation Lab.	0	0	2	2	25	25	50	-
9	CHT202	Environmental Studies- II	2	0	0	00	-	-	-	
		<b>Total</b>	<b>19</b>	<b>5</b>	<b>6</b>	<b>45</b>				

**Scheme of Examination of Bachelor of Engineering (Electronics and Communication Engineering)  
Semester Pattern - V Semester B. E. (Electronics and Communication Engineering)**

Sr. No.	Code	Course	L	T	P	Credits	Maximum Marks			Exam Duration
							Internal Assessment	End Sem Exam	Total	
1	HUT301	Principles of Economics and Management	3	1	0	7	40	60	100	3 Hrs.
2	EET314	Control System Engineering	4	1	0	9	40	60	100	3 Hrs.
3	ECT301	Fundamentals of Communication Engineering	4	1	0	9	40	60	100	3 Hrs.
4	ECP301	Fundamentals of Communication Engineering Lab.	0	0	2	2	25	25	50	-
5	ECT302	Microprocessor and Interfacing	4	1	0	9	40	60	100	3 Hrs.
6	ECP302	Microprocessor and Interfacing Lab.	0	0	2	2	25	25	50	-
7	ECT303	Computer Organization	3	1	0	7	40	60	100	3 Hrs.
8	ECP304	System Simulation	0	0	2	0	-	-	-	-
		<b>Total</b>	<b>18</b>	<b>5</b>	<b>6</b>	<b>45</b>				

**Scheme of Examination of Bachelor of Engineering (Electronics and Communication Engineering)  
Semester Pattern - VI Semester B. E. (Electronics and Communication Engineering)**

Sr. No.	Code	Course	L	T	P	Credits	Maximum Marks			Exam Duration
							Internal Assessment	End Sem Exam	Total	
1	ECT305	Departmental Elective - I	3	1	0	7	40	60	100	3 Hrs.
2	ECT306	Waves and Radiating Systems	4	1	0	9	40	60	100	3 Hrs.
3	ECT307	Statistical Signal Analysis	4	1	0	9	40	60	100	3 Hrs.
4	ECT308	Embedded Systems	4	1	0	9	40	60	100	3 Hrs
5	ECP308	Embedded Systems Lab.	0	0	2	2	25	25	50	-
6	ECT309	Open Elective	3	1	0	7	40	60	100	3 Hrs
7	ECP310	Electronics Workshop	0	0	2	2	25	25	50	-
		<b>Total</b>	<b>18</b>	<b>5</b>	<b>4</b>	<b>45</b>				

Course Code	Departmental Elective - I	Course Code	Open Elective
ECT305 - 1	Switching Theory and Finite Automata	ECT309 - 1	Telecommunication Engineering
ECT305 - 2	Television Engineering	ECT309 - 2	Introduction to Instrumentation System and Transducers

**Scheme of Examination of Bachelor of Engineering (Electronics and Communication Engineering)  
Semester Pattern - VII Semester B. E. (Electronics and Communication Engineering)**

Sr. No.	Code	Course	L	T	P	Credits	Maximum Marks			Exam Duration
							Internal Assessment	End Sem Exam	Total	
1	ECT401	Digital Communication	3	1	0	7	40	60	100	3 Hrs.
2	ECT402	Computer Communication Networks	4	0	0	8	40	60	100	3 Hrs.
3	ECT403	Digital Signal Processing	4	1	0	9	40	60	100	3 Hrs.
4	ECP403	Digital Signal Processing Lab.	0	0	2	2	25	25	50	-
5	ECT404	Digital System Design with HDL	3	1	0	7	40	60	100	3 Hrs.
6	ECP404	Digital System Design with HDL Lab.	0	0	2	2	25	25	50	-
7	ECT405	Departmental Elective - II	4	0	0	8	40	60	100	3 Hrs.
8	ECP406	Project Phase - I	0	0	4	8*	50	50	100	-
		<b>Total</b>	<b>18</b>	<b>3</b>	<b>8</b>	<b>51</b>				

Course Code	Departmental Elective – II
ECT405 – 1	Pattern Recognition
ECT405 – 2	Advanced Microprocessor
ECT405 – 3	Advanced Microcontrollers

**Scheme of Examination of Bachelor of Engineering (Electronics and Communication Engineering)  
Semester Pattern - VIII Semester B. E. (Electronics and Communication Engineering)**

Sr. No.	Code	Course	L	T	P	Credits	Maximum Marks			Exam Duration
							Internal Assessment	End Sem Exam	Total	
1	ECT407	Wireless Communication	3	1	0	7	40	60	100	3 Hrs.
2	ECT408	Microwave Engineering	4	1	0	9	40	60	100	3 Hrs.
3	ECP408	Microwave Engineering Lab	0	0	2	2	25	25	50	-
4	ECT409	Departmental Elective - III	4	0	0	8	40	60	100	3 Hrs.
5	ECT410	Departmental Elective - IV	4	0	0	8	40	60	100	3 Hrs.
6	ECP411	Communication and Networking Lab	0	0	2	2	25	25	50	-
7	ECP412	Project Phase - II	0	0	4	8*	50	50	100	-
		<b>Total</b>	<b>15</b>	<b>2</b>	<b>8</b>	<b>44</b>				

\*For Project Phase – I and II, credits are assigned as: 1 Contact Hour = 2 Credits.

Course Code	Departmental Elective - III	Course Code	Departmental Elective - IV
ECT409 - 1	Optical and Satellite Communication	ECT410 - 1	Digital Image Processing
ECT409 - 2	CMOS VLSI Design	ECT410 - 2	RF Circuit Design



**Scheme of Examination of Bachelor of Engineering (Electronics Design Technology)  
Semester Pattern - III Semester B. E. (Electronics Design Technology)**

Sr. No.	Code	Course	L	T	P	Credits	Maximum Marks			Exam Duration
							Internal Assessment	End Sem Exam	Total	
1	MAT203	Mathematics III	3	1	0	7	40	60	100	3 Hrs
2	EET205	Network Theory	3	1	0	7	40	60	100	3Hrs
3	EDT201	Electronic Devices	4	1	0	9	40	60	100	3Hrs
4	EDP201	Electronic Devices Lab	0	0	2	2	25	25	50	--
5	EDT202	Digital Logic Design	4	1	0	9	40	60	100	3Hrs
6	EDP202	Digital Logic Design Lab	0	0	2	2	25	25	50	--
7	PHT201	Electronic Engineering Materials & IC Fabrication	3	1	0	7	40	60	100	3Hrs
8	CSP211	Object Oriented Data Structure Lab	0	0	2	2	25	25	50	--
9	CHT201	Environmental Studies I	2	0	0					
		<b>Total</b>	<b>19</b>	<b>5</b>	<b>6</b>	<b>45</b>	<b>275</b>	<b>375</b>	<b>650</b>	

**Scheme of Examination of Bachelor of Engineering (Electronics Design Technology)  
Semester Pattern - IV Semester B. E. (Electronics Design Technology)**

Sr. No.	Code	Course	L	T	P	Credits	Maximum Marks			Exam Duration
							Internal Assessment	End Sem Exam	Total	
1	MAT243	Mathematics IV	3	1	0	7	40	60	100	3Hrs
2	EDT203	Electromagnetic Fields	4	1	0	9	40	60	100	3Hrs
3	EDT204	Analog Circuits	4	1	0	9	40	60	100	3Hrs
4	EDP204	Analog Circuits Lab	0	0	2	2	25	25	50	--
5	EDT205	Electronic Circuits	3	1	0	7	40	60	100	3Hrs
6	EDP205	Electronic Circuits Lab	0	0	2	2	25	25	50	--
7	EDT206	Electronic Measurement & Instrumentation	3	1	0	7	40	60	100	3Hrs
8	EDP206	Electronic Measurement & Instrumentation Lab	0	0	2	2	25	25	50	--
9	CHT202	Environmental Studies II	2	0	0					
		<b>Total</b>	<b>19</b>	<b>5</b>	<b>6</b>	<b>45</b>	<b>275</b>	<b>375</b>	<b>650</b>	

**Scheme of Examination of Bachelor of Engineering (Electronics Design Technology)  
Semester Pattern - V Semester B. E. (Electronics Design Technology)**

Sr. No.	Code	Course	L	T	P	Credits	Maximum Marks			Exam Duration
							Internal Assessment	End Sem Exam	Total	
1	HUT301	Principles of Economics & Management	3	1	0	7	40	60	100	3Hrs
2	EDT301	Digital Systems Design with HDL	3	1	0	7	40	60	100	3Hrs
3	EDP301	Digital Systems Design with HDL Lab	0	0	2	2	25	25	50	--
4	EDT302	Statistical Signal Analysis	3	1	0	7	40	60	100	3Hrs
5	EDT303	PCB Technology	4	1	0	9	40	60	100	3Hrs
6	EDP303	PCB Technology Lab	0	0	2	2	25	25	50	--
7	EDT304	Microprocessor & Interfacing	4	1	0	9	40	60	100	3Hrs
8	EDP304	Microprocessor & Interfacing Lab	0	0	2	2	25	25	50	--
9	EDP305	Circuit Simulation-I lab	0	0	2					--
		<b>Total</b>	<b>17</b>	<b>5</b>	<b>8</b>	<b>45</b>	<b>275</b>	<b>375</b>	<b>650</b>	

**Scheme of Examination of Bachelor of Engineering (Electronics Design Technology)  
Semester Pattern - VI Semester B. E. (Electronics Design Technology)**

Sr. No.	Code	Course	L	T	P	Credits	Maximum Marks			Exam Duration
							Internal Assessment	End Sem Exam	Total	
1	EDT306	Field & Radiating System	3	1	0	7	40	60	100	3Hrs
2	EET315	Control System Engineering	3	1	0	7	40	60	100	3Hrs
3	EDT307	Microcontroller based Design	3	1	0	7	40	60	100	3Hrs
4	EDP307	Microcontroller based Design Lab	0	0	2	2	25	25	50	--
5	EDT308	Computer Organization	3	0	0	6	40	60	100	3Hrs
6	EDT309	Analog communication Engineering	3	1	0	7	40	60	100	3Hrs
7	EDP309	Analog communication Engineering Lab	0	0	2	2	25	25	50	--
8	EDP310	Electronic Product Design lab	0	0	2	2	25	25	50	--
9	EDT311	Open Elective - I	3	1	0	7	40	60	100	3Hrs
10	EDP312	Circuit Simulation-II lab	0	0	2					--
		<b>Total</b>	<b>18</b>	<b>5</b>	<b>8</b>	<b>47</b>	<b>315</b>	<b>435</b>	<b>750</b>	

Course Code	Open Elective - I
EDT311-1	Industrial Electronic system Design

**Scheme of Examination of Bachelor of Engineering (Electronics Design Technology)  
Semester Pattern - VII Semester B. E. (Electronics Design Technology)**

Sr. No.	Code	Course	L	T	P	Credits	Maximum Marks			Exam Duration
							Internal Assessment	End Sem Exam	Total	
1	EDT401	Design of Electronic Equipments	4	1	0	9	40	60	100	3Hrs
2	EDT402	CMOS VLSI Design	3	1	0	7	40	60	100	3Hrs
3	EDP402	CMOS VLSI Design Lab	0	0	2	2	25	25	50	--
4	EDT403	Digital Signal Processing	3	1	0	7	40	60	100	3Hrs
5	EDP403	Digital Signal Processing Lab	0	0	2	2	25	25	50	--
6	EDT404	Elective -I	4	0	0	8	40	60	100	3Hrs
7	EDT405	Elective -II	4	0	0	8	40	60	100	3Hrs
8	EDP406	Project Phase -1	0	0	4	8	100	--	100	--
9	EDP407	FPGA Based Implementation	0	0	2	0				--
		<b>Total</b>	<b>18</b>	<b>3</b>	<b>10</b>	<b>51</b>	<b>350</b>	<b>350</b>	<b>700</b>	

Course Code	Elective - I
EDT404-1	Electronic System Design
EDT404-2	Wireless communication
EDT404-3	Digital Communication

Course Code	Elective - II
EDT405-1	Power Electronics & Industrial Automation
EDT405-2	Optical Communication
EDT405-3	Micro Electro Mechanical Systems

**Scheme of Examination of Bachelor of Engineering (Electronics Design Technology)  
Semester Pattern - VIII Semester B. E. (Electronics Design Technology)**

Sr. No.	Code	Course	L	T	P	Credits	Maximum Marks			Exam Duration
							Internal Assessment	End Sem Exam	Total	
1	EDT408	Reliability of Electronic equipments	3	1	0	7	40	60	100	3Hrs
2	EDT409	Advanced Processors & Embedded Systems	4	1	0	9	40	60	100	3Hrs
3	EDP409	Advanced Processors & Embedded Systems Lab	0	0	2	2	25	25	50	--
4	EDT410	Elective -III	4	0	0	8	40	60	100	3Hrs
5	EDT411	Elective -IV	4	0	0	8	40	60	100	3Hrs
6	EDP412	Project Phase II	0	0	4	8	50	50	100	--
7	HUT402	Technical Communication	2	0	0	0				
		<b>Total</b>	<b>17</b>	<b>2</b>	<b>6</b>	<b>42</b>	<b>235</b>	<b>315</b>	<b>550</b>	

Course Code	Elective - III
EDT410-1	Advanced Digital Signal Processing
EDT410-2	CMOS & RF Design
EDT410-3	Switching Theory & Finite Automata

Course Code	Elective - IV
EDT411-1	Design For Testability
EDT411-2	EMI /EMC
EDT411-3	Computer Communication Networks

**Scheme of Examination of Bachelor of Engineering (Electronics Engineering)  
Semester Pattern - III Semester B.E. (Electronics Engineering)**

Sr. No.	Code	Course	L	T	P	Credits	Maximum Marks			Exam Duration
							Internal Assessment	End Sem Exam	Total	
1	MAT203	Mathematics III	3	1	0	7	40	60	100	3Hrs
2	EET205	Network Theory	3	1	0	7	40	60	100	3Hrs
3	ENT201	Electronic Devices	4	1	0	9	40	60	100	3Hrs
4	ENP201	Electronic Devices lab	0	0	2	2	25	25	50	--
5	ENT202	Digital Logic Design	4	1	0	9	40	60	100	3Hrs
6	ENP202	Digital Logic Design lab	0	0	2	2	25	25	50	--
7	PHT201	Electronic Engineering Materials & IC Fabrication	3	1	0	7	40	60	100	3Hrs
8	CSP211	Object Oriented Data Structure lab	0	0	2	2	25	25	50	--
9	CHT201	Environmental Studies I	2	0	0	0				
		<b>Total</b>	<b>19</b>	<b>5</b>	<b>6</b>	<b>45</b>				

**Scheme of Examination of Bachelor of Engineering (Electronics Engineering)  
Semester Pattern IV Semester B.E. (Electronics Engineering)**

Sr. No.	Code	Course	L	T	P	Credits	Maximum Marks			Exam Duration
							Internal Assessment	End Sem Exam	Total	
1	MAT243	Mathematics IV	3	1	0	7	40	60	100	3Hrs
2	ENT203	Electromagnetic Fields	4	1	0	9	40	60	100	3Hrs
3	ENT204	Analog Circuits	4	1	0	9	40	60	100	3Hrs
4	ENP204	Analog Circuits lab	0	0	2	2	25	25	50	--
5	ENT205	Electronic Circuits	3	1	0	7	40	60	100	3Hrs
6	ENP205	Electronic Circuits lab	0	0	2	2	25	25	50	--
7	ENT208	Electronic Measurement & Instrumentation	3	1	0	7	40	60	100	3Hrs
8	ENP208	Electronic Measurement & Instrumentation lab	0	0	2	2	25	25	50	--
9	CHT202	Environmental Studies II	2	0	0	0				
		<b>Total</b>	<b>19</b>	<b>5</b>	<b>6</b>	<b>45</b>				

Scheme of Examination of Bachelor of Engineering (Electronics Engineering) Semester Pattern V Semester B.E. (Electronics Engineering)										
Sr. No.	Code	Course	L	T	P	Credits	Maximum Marks			Exam Duration
							Internal Assessment	End Sem Exam	Total	
1	HUT301	Principles of Economics & Management	3	1	0	7	40	60	100	3Hrs
2	ENT301	Digital System Design with HDL	3	1	0	7	40	60	100	3Hrs
3	ENP301	Digital System Design with HDL lab	0	0	2	2	25	25	50	--
4	ENT302	Statistical Signal Analysis	4	1	0	9	40	60	100	3Hrs
5	ENP302	Statistical Signal Analysis lab	0	0	2	2	25	25	50	--
6	ENT303	Field & Radiating System	3	1	0	7	40	60	100	3Hrs
7	ENT304	Microprocessor & Interfacing	4	1	0	9	40	60	100	3Hrs
8	ENP304	Microprocessor & Interfacing lab	0	0	2	2	25	25	50	--
9	ENP305	Circuit Simulation lab	0	0	2	0				
		<b>Total</b>	<b>17</b>	<b>5</b>	<b>8</b>	<b>45</b>				

Scheme of Examination of Bachelor of Engineering (Electronics Engineering) Semester Pattern VI Semester B.E. (Electronics Engineering)										
Sr. No.	Code	Course	L	T	P	Credits	Maximum Marks			Exam Duration
							Internal Assessment	End Sem Exam	Total	
1	ENT306	Microwave Engineering	3	1	0	7	40	60	100	3Hrs
2	ENP306	Microwave Engineering lab	0	0	2	2	25	25	50	--
3	EET315	Control System Engineering	3	1	0	7	40	60	100	3Hrs
4	ENT307	Microcontroller Based Design	3	1	0	7	40	60	100	3Hrs
5	ENT308	Computer Organization	3	0	0	6	40	60	100	3Hrs
6	ENT309	Analog Communication Engg.	3	1	0	7	40	60	100	3Hrs
7	ENP309	Analog Communication Engineering lab	0	0	2	2	25	25	50	--
8	ENP310	Electronic Product Design lab	0	0	2	2	25	25	50	--
9	ENT311	Open Elective I	3	1	0	7	40	60	100	3Hrs
10	EDP313	PCB Design	0	0	2					
		<b>Total</b>	<b>18</b>	<b>5</b>	<b>8</b>	<b>47</b>				

Corse Code	Open Elective
ENT311-1	Consumer Electronics
ENT311-2	IC Design Techniques

**Scheme of Examination of Bachelor of Engineering (Electronics Engineering)  
Semester Pattern VII Semester B.E. (Electronics Engineering)**

Sr. No.	Code	Course	L	T	P	Credits	Maximum Marks			Exam Duration
							Internal Assessment	End Sem Exam	Total	
1	ENT401	Digital Communication	3	1	0	7	40	60	100	3Hrs
2	ENT402	CMOS VLSI Design	3	1	0	7	40	60	100	3Hrs
3	ENP402	CMOS VLSI Design Lab	0	0	2	2	25	25	50	--
4	ENT403	Digital Signal Processing	3	1	0	7	40	60	100	3Hrs
5	ENP403	Digital Signal Processing Lab	0	0	2	2	25	25	50	--
6	ENT404	Elective -I	4	0	0	8	40	60	100	3Hrs
7	ENT405	Elective -II	4	0	0	8	40	60	100	3Hrs
8	ENP406	Project Phase-I	0	0	4	8	100		100	--
9	HUT401	Technical Communication	2	0	0	0				
		<b>Total</b>	<b>19</b>	<b>3</b>	<b>8</b>	<b>49</b>				

Course Code	Elective-I	Course Code	Elective-II
ENT404-1	Electronic System Design	ENT405-1	Power Electronics & Industrial Automation
ENT404-2	Wireless Communication	ENT405-2	Optical Communication
ENT404-3	Medical Electronics	ENT405-3	Micro Electro Mechanical Systems

**Scheme of Examination of Bachelor of Engineering (Electronics Engineering)  
Semester Pattern VIII Semester B.E. (Electronics Engineering)**

Sr. No.	Code	Course	L	T	P	Credits	Maximum Marks			Exam Duration
							Internal Assessment	End Sem Exam	Total	
1	ENT407	Computer Communication Networks	3	1	0	7	40	60	100	3Hrs
2	ENP407	Communication and Networking Lab	0	0	2	2	25	25	50	--
3	ENT408	Advanced Processors & Embedded Systems	4	1	0	9	40	60	100	3Hrs
4	ENP408	Advanced Processors & Embedded Systems Lab	0	0	2	2	25	25	50	--
5	ENT409	Elective -III	4	0	0	8	40	60	100	3Hrs
6	ENT410	Elective -IV	4	0	0	8	40	60	100	3Hrs
7	ENP411	Project Phase-II	0	0	4	8	50	50	100	--
8	EDT413	Industrial Design & Reliability of Electronic Equipments	2	0	0					
		<b>Total</b>	<b>17</b>	<b>2</b>	<b>8</b>	<b>44</b>				

Course Code	Elective-III	Course Code	Elective-IV
ENT409-1	Advanced Digital Signal Processing	ENT410-1	Design for Testability
ENT409-2	CMOS & RF Design	ENT410-2	Mechatronics
ENT409-3	Switching Theory & Finite Automata	ENT410-3	Digital Image Processing

**Scheme of Examination of Bachelor of Engineering (Industrial Engineering)  
Semester Pattern  
III Semester, B.E. (Industrial Engineering)**

Sr. No.	Subject Code	Subject Name	L	T	P	Credits	Maximum Marks			Exam Duration
							Internal Assessment	End Sem Exam	Total	
1	MAT204	Quantitative Methods-I	3	1	0	7	40	60	100	3 Hrs
2	INT201	Thermal Engineering	4	1	0	9	40	60	100	3 Hrs
3	INT202	Principal of Management & Managerial Economics	4	0	0	8	40	60	100	3 Hrs
4	INT203	Metal Working processes	4	1	0	9	40	60	100	3 Hrs
5	INP203	Metal Working Processes Lab	0	0	2	2	25	25	50	--
6	CST210	Data Structures & File handling using C	3	0	0	6	40	60	100	3 Hrs
7	CSP210	Data Structures & File handling using C Lab	0	0	2	2	25	25	50	--
8	INP204	M/c. Drawing & Computer Aided Drafting	0	0	2	2	25	25	50	--
9	INP205	Industrial Visit	0	0	2	2	Grade A to D (Marks)			--
10	CHT201	Environmental Studies- I	2	0	0	0	-	-	-	--
		<b>TOTAL</b>	<b>20</b>	<b>3</b>	<b>8</b>	<b>47</b>				

**Scheme of Examination of Bachelor of Engineering (Industrial Engineering)  
Semester Pattern  
IV Semester, B.E. (Industrial Engineering)**

Sr. No.	Subject Code	Subject Name	L	T	P	Credits	Maximum Marks			Exam Duration
							Internal Assessment	End Sem Exam	Total	
1	MAT244	Quantitative Methods- II	3	1	0	7	40	60	100	3 Hrs
2	INT206	Theory of Machines	4	0	0	8	40	60	100	3 Hrs
3	INT207	Methods Engineering	4	1	0	9	40	60	100	3 Hrs
4	INP207	Methods Engineering Lab	0	0	2	2	25	25	50	--
5	INT208	Facilities Planning	4	1	0	9	40	60	100	3 Hrs
6	INT209	Instrumentation & Metrology	4	1	0	9	40	60	100	3 Hrs
7	INP209	Instrumentation & Metrology Lab	0	0	2	2	25	25	50	--
8	CHT202	Environmental Studies- II	2	0	0	0	-	-	-	-
		<b>TOTAL</b>	<b>21</b>	<b>4</b>	<b>4</b>	<b>46</b>				



**Scheme of Examination of Bachelor of Engineering (Industrial Engineering)  
Semester Pattern  
V Semester, B.E. (Industrial Engineering)**

Sr. No.	Subject Code	Subject Name	L	T	P	Credits	Maximum Marks			Exam Duration
							Internal Assessment	End Sem Exam	Total	
1	INT301	Operations Research- I	4	1	0	9	40	60	100	3 Hrs
2	INP301	Operations Research-I Lab	0	0	2	2	25	25	50	--
3	INT302	Fluid Power Engineering	3	1	0	7	40	60	100	3 Hrs
4	INT303	Machine Design	4	0	0	8	40	60	100	3 Hrs
5	INT304	Productivity Measurement and Improvement	4	1	0	9	40	60	100	3 Hrs
6	INP304	Productivity Measurement and Improvement Lab	0	0	2	2	25	25	50	--
7	INT305	Elective-I	3	1	0	7	40	60	100	3 Hrs
8	INT306	Modeling and Simulation	2	0	0	0	-	-	-	-
		<b>TOTAL</b>	<b>20</b>	<b>4</b>	<b>4</b>	<b>44</b>				

Course Code	Elective - I
INT305-1	System Dynamics
INT305-2	Human Resource Management
INT305-3	Object Oriented Programming
INT305-4	Energy Management

**Scheme of Examination of Bachelor of Engineering (Industrial Engineering)  
Semester Pattern  
VI Semester B.E. (Industrial Engineering)**

Sr. No.	Subject Code	Subject Name	L	T	P	Credits	Maximum Marks			Exam Duration
							Internal Assessment	End Sem Exam	Total	
1	INT307	Operations Research- II	3	1	0	7	40	60	100	3 Hrs.
2	INP307	Operations Research- II Lab	0	0	2	2	25	25	50	--
3	INT308	Metal Removal Processes	3	1	0	7	40	60	100	3 Hrs.
4	INP308	Metal Removal Processes Lab	0	0	2	2	25	25	50	--
5	INT309	Production Planning and Control	3	1	0	7	40	60	100	3 Hrs.
6	INT310	Supply Chain Management	3	1	0	7	40	60	100	3 Hrs.
7	INT311	Open Elective	3	1	0	7	40	60	100	3 Hrs.
8	INP312	Entrepreneurship Development	0	0	2	0	-	-	-	-
9	INP313	Project	0	0	4	8	50	-	-	-
		<b>TOTAL</b>	<b>15</b>	<b>5</b>	<b>10</b>	<b>47</b>				

Course Code	Open Elective
INT311-1	Six Sigma
INT311-2	Decision Modeling
INT311-3	Organizational Behaviour and Development

**Scheme of Examination of Bachelor of Engineering (Industrial Engineering)  
Semester Pattern - VII Semester B.E. (Industrial Engineering)**

Sr. No.	Subject Code	Subject Name	L	T	P	Credits	Maximum Marks			Exam Duration
							Internal Assessment	End Sem Exam	Total	
1	INT401	Quality Engineering	4	1	0	9	40	60	100	3 Hrs.
2	INP401	Quality Engineering Lab	0	0	2	2	25	25	50	--
3	INT402	Database Management System	4	0	0	8	40	60	100	3 Hrs.
4	INP402	Database Management System Lab	0	0	2	2	25	25	50	--
5	INT403	Ergonomics & Value Engineering	4	1	0	9	40	60	100	3 Hrs.
6	INP403	Ergonomics & Value Engineering Lab	0	0	2	2	25	25	50	--
7	INT404	Engineering Economy & Cost Control	4	1	0	9	40	60	100	3 Hrs.
8	INP405	Project Seminar	0	0	4	4	25	25	50	--
9	INT406	Knowledge Management System	2	0	0	0	-	-	-	-
		<b>Total</b>	<b>18</b>	<b>3</b>	<b>10</b>	<b>45</b>				

**Scheme of Examination of Bachelor of Engineering (Industrial Engineering)  
Semester Pattern - VIII Semester B.E. (Industrial Engineering)**

Sr. No.	Subject Code	Subject Name	L	T	P	Credits	Maximum Marks			Exam Duration
							Internal Assessment	End Sem Exam	Total	
1	INT407	Industrial Automation	4	1	0	9	40	60	100	3 Hrs.
2	INT408	Management Information System	4	1	0	9	40	60	100	3 Hrs.
3	INP408	Management Information System Lab	0	0	2	2	25	25	50	--
4	INT409	Organizational Behavior	2	0	0	0	-	-	-	-
5	INT410	Elective II	3	1	0	7	40	60	100	3 Hrs.
6	INT411	Elective III	3	1	0	7	40	60	100	3 Hrs.
7	INP412	Project	0	0	6	12	75	75	150	--
		<b>Total</b>	<b>16</b>	<b>4</b>	<b>8</b>	<b>46</b>				

Course Code	Elective II
INT410-1	Creativity and Innovation
INT410-2	Research Methodology
INT410-3	Web Technologies
INT410-4	Non Linear Optimization Technique

Course Code	Elective III
INT411-1	Materials Management
INT411-2	Reliability and Maintenance Engineering
INT411-3	Enterprise Resource Planning
INT411-4	Mechatronics



**Scheme of Examination of Bachelor of Engineering (Information Technology)  
Semester Pattern - III Semester B. E. (Information Technology)**

Sr. No.	Subject Code	Subject Name	L	T	P	Credits	Maximum Marks			Exam Duration
							Internal Assessment	End Sem Exam	Total	
1	MAT202	Engineering Mathematics-III	3	1	0	7	40	60	100	3 Hrs.
2	HUT203	Principles of Management	3	0	0	6	40	60	100	3 Hrs.
3	ITT201	Data Structures and Program Design	4	1	0	9	40	60	100	3 Hrs.
4	ITP201	Data Structures and Program Design	0	0	3	3	25	25	50	-
5	ITT202	Digital Circuits and Fundamentals of Microprocessor	4	1	0	9	40	60	100	3 Hrs.
6	ITP202	Digital Circuits and Fundamentals of Microprocessor	0	0	3	3	25	25	50	-
7	ITT203	Business Information System	4	1	0	9	40	60	100	3 Hrs.
8	CHT201	Environmental Studies-I (Audit Course)	2	0	0	0	-	-	-	-
		<b>TOTAL</b>	<b>20</b>	<b>4</b>	<b>6</b>	<b>46</b>			<b>600</b>	

**Scheme of Examination of Bachelor of Engineering (Information Technology)  
Semester Pattern - IV Semester B. E. (Information Technology)**

Sr. No.	Subject Code	Subject Name	L	T	P	Credits	Maximum Marks			Exam Duration
							Internal Assessment	End Sem Exam	Total	
1	MAT245	Discrete Mathematics	3	1	0	7	40	60	100	3 Hrs.
2	ITT204	Computer Architecture and Organization	4	1	0	9	40	60	100	3 Hrs.
3	ITT205	Object Oriented Programming	4	1	0	9	40	60	100	3 Hrs.
4	ITP205	Object Oriented Programming	0	0	3	3	25	25	50	-
5	ITT206	IT Infrastructure Services	4	1	0	9	40	60	100	3 Hrs.
6	ITP206	IT Infrastructure Services	0	0	3	3	25	25	50	-
7	HUT201	Technical Communication	3	0	0	6	40	60	100	3 Hrs.
8	CHT202	Environmental Studies-II (Audit Course)	2	0	0	0	-	-	-	-
		<b>TOTAL</b>	<b>20</b>	<b>4</b>	<b>6</b>	<b>46</b>			<b>600</b>	

**Scheme of Examination of Bachelor of Engineering (Information Technology)  
Semester Pattern - V Semester B. E. (Information Technology)**

Sr. No.	Subject Code	Subject Name	L	T	P	Credits	Maximum Marks			Exam Duration
							Internal Assessment	End Sem Exam	Total	
1	ITT301	Microprocessor and Interfacing	4	1	0	9	40	60	100	3 Hrs.
2	ITP301	Microprocessor and Interfacing	0	0	2	2	25	25	50	-
3	ECT311	Digital Communications	3	1	0	7	40	60	100	3 Hrs.
4	ITT302	System Software	4	1	0	9	40	60	100	3 Hrs.
5	ITT303	Theory of Computation	4	1	0	9	40	60	100	3 Hrs.
6	ITT304	Software Engineering	4	1	0	9	40	60	100	3 Hrs.
7	ITP304	Software Engineering	0	0	2	2	25	25	50	-
		<b>TOTAL</b>	<b>19</b>	<b>5</b>	<b>4</b>	<b>47</b>			<b>600</b>	

**Scheme of Examination of Bachelor of Engineering (Information Technology)  
Semester Pattern - VI Semester B. E. (Information Technology)**

Sr. No.	Subject Code	Subject Name	L	T	P	Credits	Maximum Marks			Exam Duration
							Internal Assessment	End Sem Exam	Total	
1	ITT305	Design and Analysis of Algorithms	4	1	0	9	40	60	100	3 Hrs.
2	ITT306	Database Management Systems	4	1	0	9	40	60	100	3 Hrs.
3	ITP306	Database Management Systems	0	0	2	2	25	25	50	-
4	ITT307	Elective - I	3	1	0	7	40	60	100	3 Hrs.
5	ITT308	Operating Systems	4	1	0	9	40	60	100	3 Hrs.
6	ITP308	Operating Systems	0	0	2	2	25	25	50	-
7	ITT309	Open Elective	3	1	0	7	40	60	100	3 Hrs.
8	ITP310	Animation Workshop (Audit Course)	0	0	4	0	-	-		-
		<b>TOTAL</b>	<b>18</b>	<b>5</b>	<b>08</b>	<b>45</b>			<b>600</b>	

Course Code	Elective - I	Course Code	Open Elective
ITT307-1	Software Project Management	ITT309-1	Internet Technologies
ITT307-2	Computer Graphics	ITT309-2	Information Systems
ITT307-3	Electronic Commerce		

**Scheme of Examination of Bachelor of Engineering (Information Technology)  
Semester Pattern - VII Semester B. E. (Information Technology)**

Sr. No.	Subject Code	Subject Name	L	T	P	Credits	Maximum Marks			Exam Duration
							Internal Assessment	End Sem Exam	Total	
1	ITT401	Computer Networks	4	1	0	9	40	60	100	3 Hrs.
2	ITP401	Computer Networks	0	0	2	2	25	25	50	-
3	ITT402	Compiler	4	1	0	9	40	60	100	3 Hrs.
4	ITP402	Compiler	0	0	2	2	25	25	50	-
5	ITT403	Virtualization & Cloud Computing	4	1	0	9	40	60	100	3 Hrs.
6	ITT404	Elective - II	4	0	0	8	40	60	100	3 Hrs.
7	ITP405	Project Phase-I and Seminar-I	0	0	2	4	50	50	100	-
8	ITP406	Software Lab (Audit Course)	0	0	2	0	-	-		-
<b>TOTAL</b>			<b>16</b>	<b>3</b>	<b>8</b>	<b>43</b>			<b>600</b>	

Course Code	Elective - II
ITT404-1	Data Warehousing & Mining
ITT404-2	Mobile Computing
ITT404-3	Artificial Intelligence

**Scheme of Examination of Bachelor of Engineering (Information Technology)  
Semester Pattern - VIII Semester B. E. (Information Technology)**

Sr. No.	Subject Code	Subject Name	L	T	P	Credits	Maximum Marks			Exam Duration
							Internal Assessment	End Sem Exam	Total	
1	ITT407	Introduction to Distributed Systems	4	1	0	9	40	60	100	3Hrs.
2	ITT408	Computer System Security	4	1	0	9	40	60	100	3Hrs.
3	ITP408	Computer System Security	0	0	2	2	25	25	50	-
4	ITT409	Elective - III	4	0	0	8	40	60	100	3Hrs.
5	ITT410	Elective - IV	4	0	0	8	40	60	100	3Hrs.
6	ITP411	Project Phase-II and Seminar-II	0	0	6	12	75	75	150	
<b>TOTAL</b>			<b>16</b>	<b>2</b>	<b>8</b>	<b>48</b>			<b>600</b>	

Course Code	Elective - III	Course Code	Elective - IV
ITT409-1	Mobile Apps Development	ITT410-1	Enterprise Resource Planning
ITT409-2	Business Intelligence	ITT410-2	Web Technologies
ITT409-3	Soft Computing	ITT410-3	Information Retrieval

**Scheme of Examination of Bachelor of Engineering (Mechanical Engineering)  
Semester Pattern - III Semester B. E. (Mechanical Engineering)**

Sr. No.	Subject Code	Subject Name	L	T	P	Credits	Maximum Marks			Exam Duration
							Internal Assessment	End Sem Exam	Total	
1	MET201	Kinematics of Machinery	4	0	0	8	40	60	100	3 Hrs.
2	MET202	Fluid Mechanics	4	0	0	8	40	60	100	3 Hrs.
3	MET203	Manufacturing Science- I	3	1	0	7	40	60	100	3 Hrs.
4	MEP203	Manufacturing Science- I	0	0	2	2	25	25	50	--
5	MET204	Engineering Metallurgy	4	0	0	8	40	60	100	3 Hrs.
6	MEP204	Engineering Metallurgy	0	0	2	2	25	25	50	--
7	MAT206	Engineering Mathematics - III	3	1	0	7	40	60	100	3 Hrs.
8	CHT201	Environmental Studies-I	2	0	0	0	-	-	-	-
9	MEP205	Industrial visit	0	0	2	0	-	-	SF/USF	--
		<b>TOTAL</b>	<b>20</b>	<b>2</b>	<b>6</b>	<b>42</b>				

**Scheme of Examination of Bachelor of Engineering (Mechanical Engineering)  
Semester Pattern - IV Semester B. E. (Mechanical Engineering)**

Sr. No.	Subject Code	Subject Name	L	T	P	Credits	Maximum Marks			Exam Duration
							Internal Assessment	End Sem Exam	Total	
1	MET206	Strength of Materials	3	1	0	7	40	60	100	3 Hrs.
2	MET207	Engineering Thermodynamics	3	1	0	7	40	60	100	3 Hrs.
3	MET208	Dynamics of Machinery	3	1	0	7	40	60	100	3 Hrs.
4	MEP208	Dynamics of Machinery	0	0	2	2	25	25	50	--
5	MET209	Hydraulic Machines	3	1	0	7	40	60	100	3 Hrs.
6	MEP209	Hydraulic Machines	0	0	2	2	25	25	50	--
7	MAT246	Engineering Mathematics - IV	3	1	0	7	40	60	100	3 Hrs.
8	CHT202	Environmental Studies-II	2	0	0	0	-	-	-	-
9	MEP210	Mini Project	0	0	2	2	50	0	50	--
		<b>TOTAL</b>	<b>17</b>	<b>5</b>	<b>6</b>	<b>41</b>				

Scheme of Examination of Bachelor of Engineering (Mechanical Engineering) Semester Pattern - V Semester B. E. (Mechanical Engineering)										
Sr. No.	Subject Code	Subject Name	L	T	P	Credits	Maximum Marks			Exam Duration
							Internal Assessment	End Sem Exam	Total	
1	MET301	Design of Machine Elements - I	4	0	0	8	40	60	100	3 Hrs.
2	MET302	Heat Transfer	3	1	0	7	40	60	100	3 Hrs.
3	MEP302	Heat Transfer	0	0	2	2	25	25	50	--
4	MET303	Mechanical Measurements	3	1	0	7	40	60	100	3 Hrs.
5	MEP303	Mechanical Measurements	0	0	2	2	25	25	50	--
6	MET304	Production Technology	3	1	0	7	40	60	100	3 Hrs.
7	MEP304	Production Technology	0	0	2	2	25	25	50	--
8	INT313	Operations Research	3	1	0	7	40	60	100	3 Hrs.
9	MEP305	Technical Seminar	0	0	2	2	50	0	50	--
<b>TOTAL</b>			<b>16</b>	<b>4</b>	<b>8</b>	<b>44</b>				

Scheme of Examination of Bachelor of Engineering (Mechanical Engineering) Semester Pattern - VI Semester B. E. (Mechanical Engineering)										
Sr. No.	Subject Code	Subject Name	L	T	P	Credits	Maximum Marks			Exam Duration
							Internal Assessment	End Sem Exam	Total	
1	MET306	Thermal Engineering - I	3	1	0	7	40	60	100	3 Hrs.
2	MET307	Automatic Control	4	0	0	8	40	60	100	3 Hrs.
3	MET308	Manufacturing Science- II	4	0	0	8	40	60	100	3 Hrs.
4	MEP308	Manufacturing Science- II	0	0	2	2	25	25	50	--
5	MET309	Open Elective	3	1	0	7	40	60	100	3 Hrs.
6	MCT321	Computer Applications	3	1	0	7	40	60	100	3 Hrs.
7	MCP321	Computer Applications	0	0	2	2	25	25	50	--
8	MEP310	Machine Drawing	0	0	4	4	50	50	100	--
9	MEP311	Industrial Case Study	0	0	2	2	50	0	50	--
<b>TOTAL</b>			<b>17</b>	<b>3</b>	<b>10</b>	<b>47</b>				

Course Code	Open Elective
MET309-1	Automobile Engineering
MET309-2	Robotics



**Scheme of Examination of Bachelor of Engineering (Mechanical Engineering)  
Semester Pattern - VII Semester B. E. (Mechanical Engineering)**

Sr. No.	Subject Code	Subject Name	L	T	P	Credits	Maximum Marks			Exam Duration
							Internal Assessment	End Sem Exam	Total	
1	MET401	Thermal Engineering-II	4	0	0	8	40	60	100	3 Hrs.
2	MEP401	Thermal Engineering-II	0	0	2	2	25	25	50	--
3	MET402	Design of Machine Elements - II	3	1	0	7	40	60	100	3 Hrs.
4	MEP402	Design of Machine Elements - II	0	0	2	2	25	25	50	--
5	MET403	Elective -I	4	0	0	8	40	60	100	3 Hrs.
6	MET404	Elective- II	3	1	0	7	40	60	100	3 Hrs.
7	MEP404	Elective- II	0	0	2	2	25	25	50	--
8	INT413	Productivity Improvement Techniques	3	1	0	7	40	60	100	3 Hrs.
9	MEP405	Project Phase-I	0	0	2	4	25	25	50	--
		<b>TOTAL</b>	<b>17</b>	<b>3</b>	<b>8</b>	<b>47</b>				

Course Code	Elective I	Course Code	Elective II (With Lab.)
MET403-1	Advanced Manufacturing Techniques	MET404-1	Finite Element Methods
MET403-2	Synthesis of Mechanisms	MET404-2	Stress Analysis
MET403-3	Advanced I. C. Engines	MET404-3	Refrigeration and Air-conditioning
MET403-4	Advanced Material Handling Systems	MET404-4	Modeling and simulation
MET403-5	Composite Materials	MET404-5	Mechatronics
MET403-6	Energy Conservation and Management		

**Scheme of Examination of Bachelor of Engineering (Mechanical Engineering)  
Semester Pattern - VIII Semester B. E. (Mechanical Engineering)**

Sr. No.	Subject Code	Subject Name	L	T	P	Credits	Maximum Marks			Exam Duration
							Internal Assessment	End Sem Exam	Total	
1	MET406	Automation in Production	3	1	0	7	40	60	100	3 Hrs.
2	MEP406	Automation in Production	0	0	2	2	25	25	50	--
3	MET407	Computer Aided Design	3	1	0	7	40	60	100	3 Hrs.
4	MEP407	Computer Aided Design	0	0	2	2	25	25	50	--
5	MET408	Elective -III	3	1	0	7	40	60	100	3 Hrs.
6	MET409	Elective-IV	3	1	0	7	40	60	100	3 Hrs.
7	MEP409	Elective-IV	0	0	2	2	25	25	50	--
8	INT414	Industrial Management & Entrepreneurship Development	4	0	0	8	40	60	100	3 Hrs.
9	MEP410	Project Phase- II	0	0	6	12	75	75	150	--
		<b>TOTAL</b>	<b>16</b>	<b>4</b>	<b>12</b>	<b>54</b>				

Course Code	Elective III	Course Code	Elective IV (With Lab.)
MET408-1	Tool Design	MET409-1	Industrial Robotics
MET408-2	Automobile Engineering	MET409-2	Renewable Energy Systems
MET408-3	Vibrations in Mechanical Systems	MET409-3	Mechanical system design
MET408-4	Power Plant Engineering	MET409-4	Simulation of Manufacturing Systems
MET408-5	Optimization Techniques	MET409-5	Industrial fluid power
MET408-6	Cryogenics		

**Scheme of Examination of Open Electives Offered by Non-Engineering  
Departments to Bachelor of Engineering Semester Pattern  
VI Semester**

Sr. No.	Subject Code	Subject Name	L	T	P	Credits	Maximum Marks			Exam Duration
							Internal Assessment	End Sem Exam	Total	
1	PHT301	Quantum Mechanics for Engineers	3	1	0	7	40	60	100	3 Hrs.
2	PHT302	Nano Technology	3	1	0	7	40	60	100	3 Hrs.
3	PHT303	Solid State Lighting	3	1	0	7	40	60	100	3 Hrs.
4	MAT301	Combinatorial Theories	3	1	0	7	40	60	100	3 Hrs.
5	MAT302	Numerical Techniques	3	1	0	7	40	60	100	3 Hrs.
6	CHT300-1	Corrosion Science	3	1	0	7	40	60	100	3 Hrs.
7	CHT300-2	Non Conventional Energy Sources and Environmental Pollution	3	1	0	7	40	60	100	3 Hrs.
8	HUT300-1	Employability Skills	3	1	0	7	40	60	100	3 Hrs.
9	HUT300-2	Challenges of HRD	3	1	0	7	40	60	100	3 Hrs.
10	MBT610-1	Financial Management	3	1	0	7	40	60	100	3 Hrs.
11	MBT610-2	Entrepreneurship Development	3	1	0	7	40	60	100	3 Hrs.
12	MCT708	Advanced Data Structures	3	1	0	7	40	60	100	3 Hrs.

**REGULATIONS FOR THE UNDERGRADUATE PROGRAMMES 2014**

<b>Regulation No.</b>	<b>Description</b>
<b>R 1. General</b>	
R 1.1	These regulations shall be called as the Regulations for the UG programmes of the Institute.
R 1.2	These regulations shall come into force with effect from the date of its approval by the Academic Council.
<b>R 2. Undergraduate Programmes</b>	
R 2.1	The Institute shall offer Undergraduate programmes as shown in Table 1.
R 2.2	The minimum duration of UG programmes leading to B. E. degree is eight semesters (spread over four years). The duration for the UG programme may be altered in accordance with the decision of the Competent Authority.
R 2.3	Reservation of seats for admission to UG programmes shall be as per the norms of the Government for Minority Institutions.
R 2.4	Direct second year UG admission (lateral entry) shall be made as per norms and procedures of Government for Minority Institutions.
R 2.5	The candidate shall be provisionally admitted to UG programme subject to fulfillment of eligibility criterion as prescribed by the Competent Authority.
R 2.6	In the matter of admissions to the UG programmes, the decision of the competent authority shall be final.
R 2.7	A student should have obtained the eligibility certificate from the University in the first semester at the time of admission.
<b>R 3. Semester System</b>	
R 3.1	The academic programmes in the Institute shall be based on semester system; two semesters (July - December and January - June) in a year with winter and summer vacations.
R 3.2	The curriculum shall consist of credit and audit (non-credit) courses.
R 3.3	Each credit course shall have a certain number of credits assigned to it depending upon the academic load of the course, which would be assessed on the basis of weekly contact hours of theory lecture, tutorial, laboratory classes and field study if required.
R 3.4	The courses, practicals, seminars and projects offered in a semester shall be continuously assessed and evaluated to judge the performance of a student.

<b>R 4. Curriculum Structure</b>	
R 4.1	<p>The programmes will consist of:</p> <ul style="list-style-type: none"> <li>(a) Courses comprising of basic sciences, engineering sciences, humanities and management;</li> <li>(b) Engineering core courses introducing the student to the foundations of engineering in his / her branch;</li> <li>(c) Electives enabling the students to take up a group of courses of interest to him/her; <b>Note:</b> <i>In general, subjects offered as open electives shall not be offered as departmental electives.</i></li> <li>(d) Minor and major projects, and seminar approved by the Department and</li> <li>(e) Other technical industry oriented audit courses/ Environmental Engineering Courses / Industrial visits / Case study / Mini Projects / Site visits / Yoga / Professional skills.</li> </ul>
R 4.2	Each UG programme will have a curriculum and course contents (syllabi) for the courses designed by the BOS and approved by Academic Council.
R 4.3	The curriculum of any UG programme is designed to have credits of 362 for award of the degree.
R 4.4	The total contact hours for UG programmes shall be as per norms prescribed by the Competent Authority.
R 4.5	The medium of instruction, examination and project reports will be English.
R 4.6	Every UG student will have to earn the credits by passing all the credit courses as specified in R 6 and will have to earn 'SF' grade in all the audit courses to become eligible for award of the Degree.
<b>R 5. Course and Department Codes</b>	
R 5.1	<p>Each course offered shall have an alphanumeric course code consisting of a string of six characters. The first two characters in a course code shall be capital letters identifying the respective department offering the course, Third letter will indicate nature of the course i.e. Theory (T) or Practical (P). and next digit will indicate the (year of the course) 1-4 for UG Programme. viz. : <b>UG-CET4XX:</b> CE- Civil Engineering, T-Theory, 4-Fourth Year and XX-Course Number.</p>

<b>R 6. Course Credits</b>																			
R 6.1	<p>Each credit course shall have an integer number of credits, which reflects its weight. The student earns credits by passing corresponding courses in minimum 'CD' grade in theory course examination and in minimum 'CC' grade in practical course examination. The number of credits of a course in a semester shall normally be calculated as under (however there may be some exceptions):-</p> <p>(a) Lectures: One lecture hour per week shall be assigned two credits.</p> <p>(b) Practical/Tutorial: One laboratory/Tutorial hour per week shall also be assigned one credit. Not more than four credits may be assigned to a practical course having only laboratory component.</p> <p>(c) Major Project: One project hour will be assigned two credits.</p> <p>(d) Special courses like minor and major projects, seminar, general proficiency in the UG programme shall be treated as any other practical course and shall be assigned such number of credits as reflected in the respective scheme approved by the BOS and Academic Council.</p>																		
<b>R 7. Incentive credits to the students participating in NCC / NSS / Games &amp; Sports / Cultural Activities / ACEES.</b>																			
R 7.1	<p>The students admitted to the B.E. programme participating in NCC / NSS / Games &amp; Sports / Cultural Activities / ACEES as per norms of the University will be treated as additional courses and shall be awarded grades as shown below :</p> <p>However these will not be the compulsory courses.</p> <p>Guidelines for calculation of Grade point for participating in activities NCC/NSS/ Games &amp; Sports/Cultural Activities/ACEES in the semester.</p> <p>Award of grades and conversion to Grade points shall be done as below</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Grade Points</th> <th>Range of Marks</th> </tr> </thead> <tbody> <tr> <td>10</td> <td>90-100</td> </tr> <tr> <td>9</td> <td>80-89</td> </tr> <tr> <td>8</td> <td>70-79</td> </tr> <tr> <td>7</td> <td>60-69</td> </tr> <tr> <td>6</td> <td>50-59</td> </tr> <tr> <td>5</td> <td>40-49</td> </tr> <tr> <td>4</td> <td>30-39</td> </tr> <tr> <td>0</td> <td>Less than 30</td> </tr> </tbody> </table>	Grade Points	Range of Marks	10	90-100	9	80-89	8	70-79	7	60-69	6	50-59	5	40-49	4	30-39	0	Less than 30
Grade Points	Range of Marks																		
10	90-100																		
9	80-89																		
8	70-79																		
7	60-69																		
6	50-59																		
5	40-49																		
4	30-39																		
0	Less than 30																		

<b>VARIOUS COMPONENTS FOR CALCULATING THE MARKS OUT OF 100 ARE AS BELOW:-</b>			
<b>Sr. No.</b>	<b>Components of marks</b>	<b>Eligibility</b>	<b>Marks</b>
1	Attendance / Consistency	All students	5
2	Physical fitness Test / Post holder (University / College team Captain, secretary, branch secretary)	I & II Semester/ III to VIII	5
3	Behavior on field or during competition / event	All students	5
4	Participation in Intra Collegiate / inter branch activities (1st, 2nd, 3rd position).	All students	5 (5, 3, 1)
5	Participation in Inter Collegiate activities.	All team members	30
6	Securing 1st, 2nd, 3rd position in inter collegiate activities.	All team members	50
7	Participation in University / State level activities	All team members	70
8	National / International level activities	All team members	80

Evaluation of student for NCC/NSS/GAMES & SPORTS/ACEES activities shall be done by HOD of Physical Education Department. Evaluation of student for CULTURAL/LITERARY activities shall be done by Dean SRC. Evaluation of co-curricular activities like technical paper presentation / model project exhibition etc. shall be done by H.O.D. of respective department. However compilation of student data for all the activities shall be the responsibility of H.O.D. Physical Education.

Students shall be assessed for the marks mentioned in serial number 5, 6 & 7 of above table and best of three items should only be awarded. Serial No. 1, 2, 3 & 4 are add-on marks that should be added with the marks received by students for serial number 5, 6 & 7.

R 7.2	Community Service Programme (CSP) will be announced by the Sports/Humanities/ NSS department time to time at the start of academic year. The students should register in the concerned department and shall participate in the CSP conducted during that academic year.
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**R 8. Academic Council**

Academic Council shall be constituted as per the guidelines for autonomous colleges prescribed by UGC under plan 11 of para 8.

R 8.1	Academic Council shall consist of 1. Principal (Chairman) 2. All Heads of the Departments in the Institute. 3. Four teachers of the Institute representing different categories of teaching staff by rotation on the basis of seniority of service in the Institute. 4. Not less than four experts from outside the Institute representing such areas as Industry, Commerce, Law, Education, Medicine, Engineering etc. to be nominated by the Board. 5. Three nominees of the University. 6. A Faculty member nominated by the Principal (member secretary).
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<p>R 8.2</p>	<p>Without prejudice to the generality of functions mentioned the Academic Council will have powers to:</p> <ol style="list-style-type: none"> <li>a) Scrutinize and approve the proposals with or without modifications of the Board of Studies with regard to course of study, academic regulations, curricula, syllabi and modifications. Thereof, instructional and evaluation arrangements, methods, procedures relevant thereto etc. <i>provided</i> that where the Academic Council differs on any proposal, it will have to return the right to any matter for reconsideration to the Board of Studies concerned or reject it, after giving reasons to do so.</li> <li>b) Make regulations regarding the admission of students to different programmes of study in the college.</li> <li>c) Make regulations for sports, extra-curricular activities, and proper maintenance and functioning of the playgrounds and hostels.</li> <li>d) Recommend to the Board proposals for institution of new programmes of study.</li> <li>e) Recommend to the Board of scholarships, studentship, fellowships, prizes and medals, and to frame regulations for the award of the same.</li> <li>f) Advise to the Board on suggestion(s) pertaining to academic affairs made by it.</li> <li>g) Perform such other functions as may be assigned by the Board.</li> <li>h) Any other matters time to time thought necessary by the Principal and the Board.</li> </ol>
<p><b>R 9. Course Coordination Committees</b></p>	
<p>R 9.1</p>	<p>Every HOD will appoint a coordination committee for each subject group which shall contain the senior departmental faculty related to the subject/group and invited members from other departments and industry if required.</p>
<p><b>R 10. Board of Studies (BOS)</b></p>	
<p>R 10.1</p>	<p>Every programme shall have its own Board of Studies (BOS) to look after all matters pertaining to that particular programme.</p> <p><b>Composition :</b></p> <ol style="list-style-type: none"> <li>a) Head of the department concerned (Chairman)</li> <li>b) The entire faculty of each specialization</li> <li>c) Two experts in the subject from outside the Institute to be nominated by the Academic Council.</li> <li>d) One expert to be nominated by the Vice Chancellor from a panel of six recommended by the Principal.</li> <li>e) One representative from the industry/ corporate sector/allied area relating to placement.</li> <li>f) One post graduate meritorious alumnus to be nominated by the Principal.</li> </ol> <p>The Chairman BOS, may with the approval of the Principal, co-opt</p> <ol style="list-style-type: none"> <li>i. Expert from outside the college whenever sufficient courses of studies are to be formulated.</li> <li>ii. Other members of staff of the same faculty.</li> </ol> <p><i>Provided</i> that in case of Applied sciences the Chairman of the Board will be HOD of Physics, Chemistry, Mathematics and Humanities by rotation. Remaining composition of the Board will be the same.</p>



<p>R 10.2</p>	<p><b>Functions :</b> BOS of a department in the Institute shall :</p> <ul style="list-style-type: none"> <li>a) Prepare syllabi for various courses keeping in view the objectives of the Institute, interest of the stakeholders and national requirement for consideration and approval of the Academic Council ;</li> <li>b) Suggest methodologies for innovative teaching and evaluation techniques ;</li> <li>c) Suggest panel of names to the Academic Council for appointment of examiners ; and</li> <li>d) Coordinate research, teaching, extension and other academic activities in the department/Institute.</li> </ul>
<p>R 10.3</p>	<p>The Principal of the Institute shall appoint the BOS in consultation with the respective Head of the Department. In case of vacancies in BOS replacement shall be done by Chairman BOS with the approval of the Principal. For an interdisciplinary programme, an ad-hoc board shall be constituted by Dean Academics. A Programme Coordinator shall be appointed by the Principal in consultation with the Dean Academics and the Heads of the concerned Departments to look after all the administrative and academic matters related to the interdisciplinary programme.</p> <p>The Programme/Course Coordinator shall exercise the functions of the Chairman, of such ad-hoc Boards.</p>
<p><b>R 11. Courses of Special Nature</b></p>	
<p>R 11.1</p>	<p><b>(a) Minor-Project</b></p> <p>A curriculum may contain a minimum 2-credit course on minor project, which may be offered in fifth/sixth semester onwards to carry out a design, fabrication, site visits, market survey, etc. Not more than four students may carry out the minor project together.</p> <p><b>(b) Major Project</b></p> <p>A curriculum shall contain (4 + 12) a 16-credit component of project seminar and major project, offered in the seventh (4 credits) and eighth semester (12 credits) of the UG programme. Not more than four students may carry out the major project together. The batch formation norms and allotment of guide shall be carried out by concerned Department.</p> <p><b>(c) Offering an Elective</b></p> <p>An elective course in a department shall run only if minimum of 15 students register for it in a regular semester. However, under special circumstances, a course may run with fewer students with prior permission of the Chairman, Board of Studies. If additional full time faculty is required, approval of the Principal is necessary.</p>

<b>R 12. Starting a New Programme</b>	
R 12.1	<p>(a) An Institute is free to start diploma (UG and PG) or certificate courses without the prior approval of the university. Diplomas and certificates shall be issued under the seal of the college.</p> <p>(b) An Institute is free to start a new degree or postgraduate programme with the approval of the academic council. Such programmes shall fulfill the minimum standards prescribed by the University/UGC in terms of number of hours, curricular content and the university shall be duly informed of such programmes.</p> <p>(c) An Institute may rename the existing programme after restructuring/ redesigning it with the approval of the academic council as per UGC norms. The university should be duly informed of such proceedings so that it may award new degrees in place of the old.</p> <p>(d) An interdisciplinary programme may be proposed by a Department in consultation with other participating Department(s), or by a group of Department(s), or by a Committee appointed by the Principal.</p> <p>(e) A new programme proposed by Department(s) shall be placed before the APEC and the Academic Council for their recommendation to the Board / Government /AICTE for obtaining its approval.</p>
<b>R 13. Registration</b>	
R 13.1	<p>Every student admitted shall have his/her unique Student ID. The Student ID of a student shall consist of ten alpha-numerals BEnnYYYmmm where</p> <p>nn :Indicates Year of Admission.                      YYY: Indicates Programme code.                      mmm: Indicates Serial Number in a programme.  <b>viz: BE11CEU001</b> indicates Serial No. 001 of BE Civil student admitted in 2011.                      In case of change of branch the Student ID of the students earlier allotted will be frozen and a new number will be allotted as per norms.</p>
R 13.2	<p>Registration at the beginning of each year, on the prescribed dates announced from time to time, by payment of the stipulated fees along with duly filled in admission form is compulsory for every student till he/she completes the Programme.</p>
R 13.3	<p>Registration, according to rules, should be carried out on the first four days of each year. Late registration may be permitted only for valid reasons and on payment of a late registration fee. In any case, registration must be completed before the prescribed last date for registration, failing which his/her studentship is liable to be cancelled. Students having outstanding dues to the Institute or hostel shall be permitted to register only after clearing the dues.</p>
R 13.4	<p>In-absentia registration may be allowed only in rare cases at the discretion of the Dean Academic in case of circumstances beyond the control of students.</p>

<p>R 13.5</p>	<p>For admission to III Semester the student must have earned all the credits of I semester (i.e. He/ she shall have to secure passing grade in all the courses offered in I semester) and at least 60% of the total credits (rounded off to nearest lower integer) of immediate last year (i.e. I &amp; II Semester put together) failing which he/she shall not be eligible for admission to III semester.</p> <p>For admission to V Semester the student must have earned all the credits of I, II and III semester (i.e. He/ she shall have to secure passing grade in all the courses offered in I, II and III semester) and at least 60% of the total credits (rounded off to nearest lower integer) of immediate last year (i.e. III &amp; IV Semester put together) failing which he/she shall not be eligible for admission to V semester.</p> <p>For admission to VII Semester the student must have earned all the credits of I, II, III, IV and V semester (i.e. He/ she shall have to secure passing grade in all the courses offered in I, II, III, IV and V semester) and at least 60% of the total credits (rounded off to nearest lower integer) of immediate last year (i.e. V &amp; VI Semester put together) failing which he/she shall not be eligible for admission to VII semester.</p>																
<p><b>R 14. Equivalence and Absorption of students</b></p>																	
<p>R 14.1</p>	<p>The students from University pattern, desirous of seeking admission to III, V and VII semester in autonomous pattern, has to fulfill the prevailing ATKT norms of University, to become eligible for admission. However, such students have to clear backlog subjects (courses) if any, by appearing for the respective examinations of University. In addition the student also has to register and pass new courses, if any, introduced in earlier semesters of the autonomous pattern in three attempts. The norms of absorption/equivalence shall be decided by the Academic Council on the recommendations of the Equivalence Committee from time to time.</p>																
<p>R 14.2</p>	<p>The student, desirous of seeking readmission to II, IV, VI and VIII semester in particular academic year (because of detention in university pattern) will have to register and pass in I, III, V and VII semester of the same academic year for all such courses which have not been covered (fully or partially) in previous semester in university pattern.</p>																
<p>R 14.3</p>	<p>While switching from University pattern to autonomous pattern the CGPA of such student shall be calculated as per the table below.</p> <table border="1" data-bbox="376 1576 1316 1677"> <tr> <td>CGPA</td> <td>4.0</td> <td>5.0</td> <td>6.0</td> <td>7.0</td> <td>8.0</td> <td>9.0</td> <td>10.0</td> </tr> <tr> <td>Percentage</td> <td>40</td> <td>50</td> <td>60</td> <td>70</td> <td>80</td> <td>90</td> <td>100</td> </tr> </table> <p>The intermittent percentages should be calculated based upon the extrapolation of the values in the table.</p>	CGPA	4.0	5.0	6.0	7.0	8.0	9.0	10.0	Percentage	40	50	60	70	80	90	100
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R 14.4	<p>When a student switches from a University to the Institute, the additional courses offered in previous semester of that programme in Autonomous pattern of the institute and not covered in the corresponding University curriculum, such additional courses shall be treated as audit courses and he/she will have to earn 'Satisfactory Grade' in those courses.</p> <p>Provided that the/she clears all the backlog subjects in a university and earns 'Satisfactory' grade for the additional course/s in the institute, which is/are not covered in university curriculum, prior to switch over.</p> <p>Provided further that, for a student/s seeking transfer from an autonomous college to the Institute will have to clear all the backlogs of his parent institute and all those additional courses offered in previous semester/s of the Institute.</p>
R 14.5	<p>For direct admission to second year (lateral entry)/transfer the calculation of CGPA and award of credits shall be governed by R 14.3 and R 14.4, In that case percentage of the diploma certificate shall be considered for the absolute grading system instead of the first year.</p>
R 14.6	<p>The students from any University/ Autonomous college desirous of seeking admission to III/ V/ VII semester is eligible to take admission as per norms laid down by the Equivalence Committee of the college after obtaining the permission from the competent authority.</p>
<p><b>R 15. Change of Branch</b></p>	
R 15.1	<p>A student seeking change of branch at III semester must have earned all the credits of I and II semesters.</p> <p>The change of branch shall be effected as per the rules and norms approved by the Government from time to time.</p>
<p><b>R 16. Discipline and Conduct</b></p>	
R 16.1	<p>Every student is required to observe discipline and decorous behavior both inside and outside the campus and not to indulge in any activity, which will tend to bring down the prestige of the Institute.</p>
R 16.2	<p>The following acts of omission and/or commission by the students within or outside the college campus shall constitute gross violation of 'Code of Conduct' punishable as indiscipline.</p> <ol style="list-style-type: none"> <li>a) Lack of courtesy and decorum, as well as indecent behavior;</li> <li>b) Willful damage of property of Institute/ Hostel or of fellow students;</li> <li>c) Possession/ Consumption/ Distribution of alcoholic drink and banned drugs;</li> <li>d) Mutilation or unauthorized possession of library materials like books, journals etc.</li> <li>e) Noisy and Unseemly behavior disturbing peace in Institute and Hostel;</li> <li>f) Hacking in Computer system, either hardware or software or both;</li> <li>g) Any other act considered by the Institute as a gross indiscipline.</li> </ol>

R 16.3	<p>Any act of indiscipline of a student reported to the Dean, Student Affairs, will be discussed in a Complaint Redressal Committee constituted by the Academic Council.</p> <p>The Committee will enquire into the charges and recommend suitable punishment if the charges are substantiated. The concerned Heads of the Departments/ First Year Coordinator will consider the recommendations of the Complaint Redressal Committee and authorize the Dean, Student Affairs to take appropriate action.</p> <p>Also the Academic Council will duly and transparently form a Grievance Redressal Committee. In case of any issue the student has to submit his grievance in writing with a copy to the Dean Student Affairs.</p> <p>The committee will look into the matter and forward the action taken to the Dean Student Affairs and the student.</p>
R 16.4	<p><b>Appeal :</b> The student may appeal to the Chairman, Academic Council whose decision will be final; and will be conveyed to the Dean, Student Affairs. The Dean, Student Affairs will report the action taken at the next meeting of the Academic Council.</p>
R 16.5	<p>If the student while studying in the Institute is found indulging in anti-national activities contrary to the provisions of acts and laws enforced by Government he / she will be liable to be expelled from the Institute without any notice.</p>
R 16.6	<p>If a student is involved in any kind of ragging, the student shall be liable for strict action as per Maharashtra anti-ragging act 1999, which is in effect from 15th May 1999.</p>
R 16.7	<p>If any statement/information supplied by the student in connection with his/her admission is found to be false/ incorrect at any time, his/ her admission shall be cancelled and he/she shall be expelled from the Institute and fees paid shall be forfeited.</p>
R 16.8	<p>Student once admitted in the Institute has to follow dress code, if any, as well as other instructions issued by the administration from time to time, failing which disciplinary action shall be initiated against such student.</p>
R 16.9	<p>If a student is found guilty of overall misconduct during his/her stay in the Institute, he/she will be punished as per the recommendations of the Dean, Student Affairs. The maximum punishment may be expulsion from the Institute.</p>
R 16.10	<p>If a student is found guilty of malpractice in examination he/she will be punished as per the recommendations of the COE in consultation with EXC.</p>

<b>R 17. Attendance, Absence, Leave Rules and Dismissals</b>	
R 17.1	All the students are expected to be present in every lecture, tutorial, practical, NCC / NSS / CSP /Games & Sports / Yoga scheduled for them. Attendance will be closely monitored during a semester as per the guidelines.
R 17.2	If a student is continuously absent from the classes for more than four weeks without informing the Course Coordinator, the Coordinator shall immediately bring it to the notice of First Year Coordinator/ the Head of the concerned department as the case may be and they in turn will inform the same to the Office of Dean Academic.
R 17.3	The names of the students who have remained absent, for more than 25% of the actual classes held in a course will be intimated by the Course Coordinator himself on the last teaching day of each month of the respective semester, to the students in the class with written intimation to the HOD / First Year Coordinator, who will arrange to consolidate the list for all such students for all the courses and display it on the notice board of the department with an intimation to Dean Academics.
R 17.4	A student must have an overall 75 % attendance of the total number of classes including lectures/ tutorials and practicals.  Student is not permitted to appear for the end semester examination if the shortfall of attendance exists. He/ She shall be awarded 'Z' grade in that semester. This grade shall appear in the grade card till the successful completion of course requirements in that semester. The decision in this regard taken by the Academic Council will be final.
R 17.5	Condonation of Attendance: A deficiency of overall attendance to the extent of 15% may be condoned by the Principal on the recommendation of Head of the Department/ First Year Incharge on being satisfied that the same deficiency in attendance was due to circumstances beyond the control of the student.  For availing such condonation, a student will have to apply to the Head of concerned department along with requisite documents. However the decision in this matter will be finally taken by the Principal. <i>(Modified regulation as approved by Academic Council in its meeting dated 15th April 2014).</i>
R 17.6	In case if even after considering condonation of attendance, the overall attendance of a student falls below 60%, his/her attendance in individual courses shall be considered. If in any course his/her attendance is above 60%, he/she shall be eligible to appear in end semester examination of that course.  However the decision in this matter will be finally taken by the Principal.
R 17.7	Student who is not permitted to appear for the end semester examinations due to shortfall in attendance in a course shall be awarded 'Z' grade in that course. This grade shall appear on the Grade Card till the successful completion of course requirements in that course.

<b>R 18. Withdrawals</b>	
R 18.1	A student who wants to withdraw from a semester shall apply through the HOD to the Principal, on a prescribed form within one week from the end of the Test I Examination and it will be recorded in the registration record of the student. The student will be awarded a withdrawal grade 'W' at the end of the semester.
R 18.2	In case a student is unable to attend classes for more than four weeks in a semester, he/she may apply to the Principal through HOD for withdrawal from the semester.  However, such application shall be made as early as possible and latest before the start of the End Semester Examination.
R 18.3	In case the period of absence on medical grounds is more than fourteen working days during the semester, a student may apply for withdrawal from the semester, if he/she so desires. But such an application must be made to the Principal through HOD, as early as possible and latest before the beginning of End Semester Examination.
R 18.4	The maximum duration for completion of a UG degree programme will be six years. Otherwise the student may be declared as not fit for technical education on the recommendations of Academic Council.
<b>R 19. Examination Scheme</b>	
In a semester a student shall be evaluated for his/her academic performance in a theory (Lecture / Tutorial) course through two Examinations (Test-I and Test-II), Teachers' Assessment and one End Semester Examination. All the examinations shall be conducted as per the syllabi prescribed by the respective BOS and approved by the Academic Council.	
R .19.1	<p>a) The two test examinations covering 15% evaluation each will be conducted as per schedule in an Academic Calendar. Test examination will be normally of one-hour duration. The duration examination may vary as per the need of the theory course. Valued answer books shall be shown to the students within six working days after the last day of the theory examination. Grievances, if any, shall be addressed by the HOD on application of the students within next two days. Correction in marks, if any, should be communicated to the office of COE in the format prescribed within ten working days after the day of examination.</p> <p>b) Teachers' assessment of students' performance covering 10% evaluation shall be done on the basis of any two heads such as home assignments, tutorials, open book tests, seminars, group discussions, projects, quizzes etc. The course coordinator shall declare the two heads chosen for each course, within the date prescribed by the Dean Academics.</p> <p>c) End Semester Examination shall be conducted as per schedule in academic calendar. End semester examinations will be of three-hour duration. The duration of examination may vary as per the need of the theory course. Valued answer books shall be shown to the students within six working days after the last day of the theory examination. Grievances, if any, shall be addressed by the HOD on application of the students within next two days. Correction in marks, if any, should be communicated to the office of COE in the format prescribed within ten working days after the day of examination.</p>

R 19.2	The students who remain absent for Test I and/or Test II may appear for absentee test of 15 marks which shall be conducted by the course coordinator before the end semester examination. In case the student is absent for both the Test I and Test II then also his absentee test will be evaluated from 15 marks only. This provision is made only for situations in which the absence is due to reason of illness and circumstances beyond control of the student. To avail of this provision, the student is required to apply to the HOD with recommendation from Course Coordinator with relevant documents. It is the discretion of the HOD and Course Coordinator to consider applications.
R 19.3	A student who skips teachers' assessment or a part thereof shall be awarded zero marks under the respective head.
R 19.4	A student who remains absent for End Semester examination, shall be awarded zero marks in end semester examination. If a student is eligible for 'FF' or 'I' grade shall be allowed to appear for the make-up examination. The make-up examination shall be conducted within one month from the declaration of results of the end semester examination. Make up examination shall be for end semester examination of that academic year only.
R 19.5	<p>A student shall be evaluated for his/ her academic performance in a practical course on the basis of continuous evaluation and one end semester practical examination.</p> <p>a) Continuous assessment covering 50% evaluation on the basis of his/ her performance in each practical examination, journal completion and viva-voce/objective examination.</p> <p>b) There shall be one end semester practical examination covering 50% evaluation. In case of performance oriented practical, the evaluation shall be done on the basis of performance in practical examination and viva-voce/objective test. Mode of examination for non-performance type of practical shall be declared by the course coordinator in the beginning of the session. Type of practical course i.e. performance type or non performance type shall be decided by the respective BOS.</p>
R 19.6	The seminar shall be evaluated through the quality of work carried out, the report submission and presentation/s as per the guidelines prescribed by the respective BOS from time to time.
R 19.7	Project work shall be evaluated by mid-term seminar/s, the quality of work carried out, project report submission and the viva-voce examination.
R 19.8	Notwithstanding contained in above, any specific norms in respect of examination, criterion of passing, results, valuation, grading, discipline, award of degree, attendance will be prepared by the respective departmental faculty board, approved by BOS and Academic Council, if required.



R 19.9	<p>An examinee securing 'FF' or 'Z' grade in any course of an examination of an Under Graduate programme shall have an option to forego his/her continuous assessment marks in a course or courses. In such cases he/she shall be examined for a total marks comprising theory/practical end semester examination and continuous assessment together, at his/her successive attempt at the examination such an option can be availed by an examinee incase he/she is appearing for the successive attempts at the examination as ex-student for that particular course. The Option of forego cannot be availed by examinee in an examination incase he/she is appearing for the examination as regular student for that particular course. A student who is detained from appearing in an examination in a course(s) for lack of attendance can exercise the option of forego in successive attempts at the examination.</p> <p>To avail this, the examinee would indicate the same in his or her 'Application for the examination' and the option once exercised, shall be 'Final and Binding' on the examinee concerned for all the subsequent examinations in that course. <i>(Modified regulation as approved by Academic Council in its meeting dated 15<sup>th</sup> April 2014).</i></p> <p>For the examinee opting for forego, his/her marks in continuous assessment shall be ascertained proportionately on the basis of his/her marks in the end semester examination of that course.</p> <p>a. For example, in case of a theory course wherein out of a total of 100 marks, 60 marks and 40 marks are allotted to end semester examination and continuous assessment respectively, the proportion would be 1.5:1 i.e. for every 1.5 marks scored in end semester examination, 1 mark would be assigned to continuous assessment.</p> <p>b. For example, in case of a practical course wherein out of a total of 50 marks, 25 marks each are allotted to end semester practical examination and continuous assessment respectively, the proportion would be 1:1 i.e. for every 1 mark scored in end semester practical examination, 1 mark would be assigned to continuous assessment.</p> <p>An examinee can opt for forego of his/her marks in continuous assessment of a practical course only after submission of 'Term work completion' certificate issued by the concerned head of the department along with the 'Application for the examination'.</p>
<b>R 20. The Grading System</b>	
R 20.1	<p>For every course taken by a student he/she is assigned a grade based on his/her combined performance in all components of evaluation scheme of a course/practical. The grade indicates a qualitative assessment of the student's performance and is associated with equivalent number called a grade point.</p>
R 20.2	<p>The academic performance of a student shall be graded on a ten-point scale following guidelines Table 2.</p>

R 20.3	The letter Grades (up to 'CD' only in theory courses and up to 'CC' grade in practical courses) awarded to a student in all the credit courses shall be converted into a SGPA and CGPA, to be calculated as given in R 28.
R 20.4	For computation of Standard Relative Grades, for the evaluation of the academic performance of an examinee in a course, in Makeup Examination, the Mean and the Standard Deviation would be the same as the Mean and Standard Deviation in the End Semester Examination for which the Makeup Examination was conducted.
R 20.5	A student passing a course in Makeup examination shall be treated as having cleared the course in First Attempt.
R 20.6	In case, an ex-student appears for examination of the course along with regular students appearing in that course then the cut-off marks of the regular examination shall be applicable.  In all other cases the cut-off marks of the previous regular examination shall be applicable.
<b>R 21. Grade Moderation Committee</b>	
R 21.1	The Grade Moderation Committee for the programmes except those for the first year shall be appointed semester wise by the Chairman, BOS. This committee shall be responsible for adherence to the guidelines for the award of grades and shall include all the concerned Course Coordinators. The Chairman, Grade Moderation Committee shall be responsible for the display of grades in the department and for forwarding the final grades to the COE.
R 21.2	The Grade Moderation Committee for the first and second semester (first year) shall consist of all the Course Coordinators of the courses offered to the first and second semester students in a semester, with the Coordinator (First year In-charge) as the Chairman. The Chairman, Grade Moderation Committee shall be responsible for the display of grades and for forwarding the final grades to the COE.
<b>R 22. Award of Degree</b>	
R 22.1	The Degrees shall be awarded by the Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur along with the name of College, on recommendations of the Academic Council/ Board.

<b>R 23. Grade Card</b>																	
R 23.1	<p>The grade card shall be issued at the end of the semester to each student and will contain the following:</p> <ol style="list-style-type: none"> <li>The credits for each course registered for that semester.</li> <li>The grade points and letter grades obtained in each course.</li> <li>The total number of credits earned by the student up to the end of that semester in each of the course.</li> <li>The SGPA and the CGPA.</li> </ol> <p>Refer R. 28 and R. 31 for computation of grades from the marks and conversion to the SGPA &amp; CGPA.</p>																
R 23.2	Grade card will not indicate class or division or rank.																
R 23.3	<p>Wherever required the conversion of CGPA to percentage of marks will be done using following table.</p> <table border="1" data-bbox="361 961 1414 1073"> <tbody> <tr> <td>CGPA</td> <td>4.0</td> <td>5.0</td> <td>6.0</td> <td>7.0</td> <td>8.0</td> <td>9.0</td> <td>10.0</td> </tr> <tr> <td>Percentage</td> <td>40</td> <td>50</td> <td>60</td> <td>70</td> <td>80</td> <td>90</td> <td>100</td> </tr> </tbody> </table> <p>The intermittent percentages should be calculated based upon the extrapolation of the values in the table.</p>	CGPA	4.0	5.0	6.0	7.0	8.0	9.0	10.0	Percentage	40	50	60	70	80	90	100
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<b>R 24. Minimum Requirements for the Award of the Degree</b>																	
R 24.1	The student should have taken and passed all the prescribed courses including seminar and projects under the general institutional and departmental requirements.																
R 24.2	A student, who has earned all the credits for the degree but fails to obtain the minimum specified CGPA for this purpose, shall take additional courses or repeat the courses mentioned in program till the minimum CGPA is attained subject to maximum duration of program as specified in R 18.4 and R 25.1.																
R 24.3	The credits for the courses in which a student has obtained 'CD' grade or higher shall be counted as credits earned by him/her. The grades awarded for successful and unsuccessful completion shall be 'Satisfactory' and 'Unsatisfactory' respectively. The grades shall be denoted by 'SF' and 'USF' respectively. The student should also have 'Satisfactory' grade in all the audit courses otherwise he/she will have to repeat the audit course provided that a student should have no case of indiscipline pending against him/her.																

<b>R 25. Extension of Maximum Period for Completion of a programme</b>	
R 25.1	The maximum duration for any programme may be extended by at the most one semester for genuine cases and unavoidable circumstances as verified by the BOS and approved by Academic Council and the Board. Genuine cases on confirmation of valid reasons may be subjected to the said procedure. The decision of the administrative bodies will be final.
<b>R 26. Award of Medals / Scholarships</b>	
R 26.1	Awards available under excellent performances in sports, cultural, extra-curricular, debate, etc. shall be given to the students as per prevailing norms.
R 26.2	The award of scholarships / freships and other benefits will be in accordance with rules framed by the Government of Maharashtra and Govt. of India.
R 26.3	The award of merit scholarships / Medals, if any, to the students will be governed by the regulations framed by the Board / Academic Council from time to time.
R 26.4	Students clearing all courses offered in a programme in regular examination in first attempt shall be considered for the award of merit / medal. In case, a student has cleared any course offered in a programme in Makeup examination he / she shall not considered for the award of merit / medal.
<b>R 27. Academic Calendar</b>	
R 27.1	The Academic Calendar will be designed, updated and followed up by Dean Academics from time to time. The academic activities of the Institute are regulated by Academic Calendar approved by the Principal on the recommendation of Dean Academics from time to time and made available to the students/ Faculty members and all other concerned in printed and electronics form. It is mandatory for students / Faculty to strictly adhere to the Academic Calendar for completion of academic activities until and unless permitted by the competent authorities.

**R 28. Calculation of SGPA and CGPA**

(i) Calculation of Semester Grade Point Average (SGPA)

The performance of a student in a semester is indicated by a number called SGPA. The SGPA is the weighted average of the grade points obtained in all the courses registered by the student during the semester. The Grades as specified in R 20.3 will be used for calculating the CGPA and SGPA.

$$SGPA = \frac{\sum_{i=1}^n C_i P_i + C_a P_a}{\sum C_i}$$

Where,

$C_i$  = The number of credits offered in the  $i^{th}$  course of a semester for which SGPA is to be calculated

$P_i$  = Grade Point earned in the  $i^{th}$  course

$i = 1, 2, \dots, n$  represent the number of courses in which a student is registered in the concerned semester

$C_a = 1$  ; Incentive credit per activity

$P_a$  = Grade point for participating in activities NCC/NSS/Games & sports/Cultural Activities/ACEES.

SGPA is rounded up to two decimal places and SGPA shall not exceed 10.

**(ii) Calculation of Cumulative Grade Point Average (CGPA)**

Up-to-date assessment of the overall performance of a student from the time of his first registration is obtained by calculating a number called CGPA, which is weighted average of the grade points obtained in all the courses registered by the student since he/she entered the Institute.

$$CGPA = \frac{\sum_{j=1}^m C_j P_j + \sum_{l=0}^k C_{al} P_{al}}{C_j}$$

Where,

$C_j$  = The number of credits offered in the  $j^{th}$  course up to the semester for which CGPA is to be calculated

$P_j$  = Grade point earned in the  $j^{th}$  course.

$j = 1, 2, \dots, m$  represent the number of courses in which a student is registered up to the semester for which the CGPA is to be calculated

$C_{al}$  ; Incentive credit in semester

$P_{al}$  = Grade point for participating in activities NCC/NSS/Games & Sports/Cultural Activities/ACEES in the semester.

$l$  = number of semester of participation

CGPA is rounded up to two decimal places and shall not exceed 10.

**R 29. Guidelines for Award of Grades**

Following are the general guidelines for the award of grades:

- (i) In general standard relative grading system will be followed.
- (ii) In case of subject if the number of students offering a given elective is less than 30, the grades will be awarded as per absolute grading system.
- (iii) For each student, evaluation in different components of a course shall be done in absolute marks considering the weightage in the scheme.
- (iv) The marks of various components shall be added to get total marks secured on a 100-points scale. The rounding off shall be done on the higher side.
- (v) The provisional grades shall be awarded by the Examination Committee. The grades shall be finalized within fifteen working days after the End Semester Examination.
- (vi) If required, the grades so awarded shall be moderated by a Grade Moderation committee within next three working days. This committee will finalize the grades and display a copy of the grades awarded on the Notice Board of the Department. All the final grades shall be communicated to the Controller of Examinations within three working days from the date of display of grades.

The procedures for evaluation and award of grades for project, training, seminar and group discussion shall be decided by the respective DFB.

- (vii) In case of audit courses the students would be awarded grades as follows
  - i. Satisfactory
  - ii. Unsatisfactory

The grades shall be awarded by the course coordinators and communicated to the controller of examinations. The course coordinator shall decide and declare the mode of evaluation for the audit courses within the date prescribed by the Dean Academics.

**R 29.1 Standard Relative Grading System**

Computation of Standard Relative Grades

The Mean and Standard Deviation would be calculated for the course based upon the marks obtained by the students in that course

Formula for Mean ( $\bar{X}$ )

$$\bar{X} = \frac{\sum_{i=1}^n X_i}{n}$$

Formula for standard Deviation(s)

$$s = \sqrt{\frac{\sum_{i=1}^N (x_i - \bar{x})^2}{N-1}}$$

For UG Courses having 30 or more students

Grades	Grade Points	Range for Grade Calculation
AA	10	$\geq \bar{x} + 1.5 s$
AB	9	$< AA$ and $\geq \bar{x} + 1.0 s$
BB	8	$< AB$ and $\geq \bar{x} + 0.25 s$
BC	7	$< BB$ and $\geq \bar{x} - 0.5 s$
CC	6	$< BC$ and $\geq \bar{x} - 1.0 s$
CD	5	$< CC$ and $\geq \bar{x} - 1.5 s$
FF	0	$< \bar{x} - 1.5 s$

**R 30. Guidelines for Project Evaluation**

- Every student has to undertake a project of professional interest. The project may be related to a theoretical analysis, an experimental investigation, a proto-type design, a new correlation and analysis of data, fabrication and setup of new equipment. The Project Coordinator appointed by the department normally assigns the project towards the end of the pre-final year and the work is done uniformly during both the semesters of the final year.
- The first phase of project work to be carried out in seventh semester and will be assessed at the end of the semester under the head of seminar.
- The assessment of the project phase-II work is evaluated on the following basis;
  - The 1<sup>st</sup> stage of progressive project work carries 50% of the total weightage,
  - The final stage of project work carries 50% weightage,
  - At each stage of progressive project work, a report should be submitted and the

work should be presented which will be assessed by the panel of examiners as an internal assessment.

- The final project report should be submitted by the prescribed date. The final project report and the work should be presented, which will be assessed by the examiner at the End Semester Examination.
- Submission of the project cannot be postponed beyond the date specified in the calendar. If the project cannot be completed due to valid reasons, the course can be dropped in consultation with the project co-coordinator and the guide on or before the last date for dropping of courses. Re-registration for the same is required in the following semester in which it should be completed.
- Student who does not submit the project report for assessment by the due date due to unavoidable circumstances beyond his control, will be temporarily awarded 'I' grade at the time of finalization of grades.

The 'I' grade will be converted to a performance grade when he/she submits the report and undergo the oral examination as per syllabi notified by project coordinator in consultation with HOD. In case of non-compliance of these provisions, 'I' grade shall automatically be converted into 'FF' grade.

**R 31. Award of Grade Based on Absolute Marks System (Equivalence of University scheme)**

The award of grades based on absolute marks out of 100 shall be made as follows for transfer of marks of university scheme to the Grades. Grade points will be computed as earlier.

Percentage of Marks	Grade
≥ 90 %	AA
80-89 %	AB
70-79 %	BB
60-69 %	BC
50-59 %	CC
40-49 %	CD
Less than 40 %	FF



**R 32. Indication of Attempt on Grade Card**

The following Characters will be displayed in the Grade Card to indicate the attempts. The Degree will not have any such indication. Single Grade Card will be provided for the regular and makeup examinations. The Grade Cards of successive attempts will be separately provided. However a single Grade Card for a semester may be provided after all the subjects of that semester are passed in more than one attempt. But it will be marked 'N' as already said. The student will have to separately apply to the Controller of Examinations for the single semester Grade Card with copies of all the intermediate semester Grade Card along with a fees decided by the Finance Committee.

M - With Makeup Examination

N - Not in the First Attempt

IG - Improvement Grade

**R 33. (a) Improvement of Grade/CGPA while undertaking a Programme**

Student shall be permitted to improve their grade under the following conditions.

1. The examination for improvement of grades shall hereafter be termed as 'Improvement Examination'.
2. A candidate admitted to the institute prior to the commencement of this ordinance, shall also be allowed to avail provisions as per this ordinance.
3. The facility for improvement of grades will be available to the students having CGPA below **6.00** (*Modified regulation as approved by Academic Council in its meeting dated 15<sup>th</sup> April 2014*).
4. The improvement is possible only in theory papers. No improvement is permissible in practicals/lab courses, projects, workshops and assignments.
5. The improvement examination shall be conducted along with the Makeup Examination.
6. The Improvement Examination can be undertaken only for the courses in which a candidate had appeared as a regular student in the end term examination for which the Makeup is being conducted.
7. Additional examination fees will be paid by the student for appearing in the examination for improvement in the grade. The fee payable shall be as prescribed by the Finance Committee.
8. After the improvement examination result of the course taken for improvement of grade, better of the two grades, that is grade already awarded and the grade secured in the improvement examination will be considered.
9. A candidate who has reappeared for the above examinations under the provision of this ordinance and fails to improve his/her grade, his/her performance at such reappearance shall be ignored.
10. Student having undertaken Improvement Examination will not be eligible for the award of any medal/merit position.

11. The student shall be issued a fresh replacement grade card indicating the new grade with a mark which shall be explained as 'Improved Grade' only if he/she has improved the grades.
12. For calculation of standard relative grade for evaluation of the academic performance of an examinee in a course in improvement examination, the mean and standard deviation of that course in the regular examination shall be applicable.

**R 33. (b) Improvement of Grade/CGPA after successful completion of a Programme**

1. The facility of improving CGPA at Bachelors' Degree Level through re-appearance shall be available only to the candidates who have earned all credits offered in the programme and have secured not less than 5 CGPA similarly at Masters' Degree Level through re-appearance shall be available only to the candidates who have earned all credits offered in the programme and secured not less than 6 CGPA.
2. A Candidate who desires to improve the CGPA will be permitted at his / her option to reappear again for the courses of his/ her choice.
3. A candidate will be allowed to reappear for the examination for improvement of CGPA within a period of two years from the date of his/her passing Bachelor's /Master's degree examination.
4. A candidate shall have to reappear for any number of theory courses offered in the programme as per the scheme prevalent at the time of his appearance.
5. A candidate appearing for the improvement of CGPA shall not be entitled to get any prize/ medal/ scholarship/award etc.
6. A candidate who desires to apply for improvement of CGPA should submit his/her examination application form prescribed for improvement of CGPA from the College along with the prescribed fee for improvement and relevant documents.
7. A person eligible to take the examination under the provisions of this Ordinance shall pass the entire examination in maximum three attempts within two years from the date he/she first applies for improvement of CGPA.
8. Candidate will not be allowed to change any paper or papers which he had opted for improvement at subsequent reappearances. Further, all the papers of reappearance shall have to be cleared at one and the same sitting.
9. If an applicant fails in any of the papers opted for improvement, he/she will have to appear again for all those papers he/she had applied for improvement including the papers in which he/she had already passed during re-appearance.
10. Each examination for which candidate appears for improvement shall be considered as one attempt.

	<p>11. The result of the candidate appearing for improvement of CGPA shall be declared and communicated to him/her even if he/she does not obtain the required CGPA higher than the CGPA he/she already possesses.</p> <p>12. A candidate who has reappeared for the examination under the provision of this Ordinance for improvement of his / her CGPA and improves his CGPA by such re-appearance, he / she shall have to return the original grade cards to the College, within one month from the date of declaration of result.</p> <p>13. A candidate shall be issued revised grade card only after he/she surrenders his /her original grade cards to the College.</p> <p>14. In the revised grade card, mention will be made of the fact that he/she has improved his/her CGPA under this Ordinance.</p> <p>15. On award of a fresh grade card under this scheme, his/her previous grade card shall be treated as cancelled.</p> <p>16. A candidate who has re-appeared for the above examination/s under the provision of this Ordinance and fails to improve his / her CGPA, his / her performance at such re-appearance shall be ignored.</p> <p>17. Candidate, who has passed his/her degree examination under the old course / syllabus or scheme of examination which is not in existence, shall have to seek absorption/equivalence certificate regarding the absorption/equivalence of old courses with the existing ones from the respective Board of Studies. <i>(Regulation introduced as directed by Academic Council in its meeting dated 15<sup>th</sup> April 2014).</i></p>
<p><b>R 34. Emergent Cases</b></p>	
<p>R. 34.1</p>	<p>Notwithstanding anything contained in the above regulations, the Chairman of the Academic Council may, in emergent situations, take action on behalf of the Academic Council as he thinks necessary and shall at the earliest opportunity, report it in the next meeting of the Academic Council.</p>
<p><b>R 35. Interpretation of Regulations</b></p>	
<p>R.35.1</p>	<p>In case of any dispute, difference of opinion in interpretation of these regulations or any other matter not covered in these regulations, the decision of the Chairman, Academic Council shall be final and binding.</p>
<p><b>R 36. Power to Modify</b></p>	
<p>R.36.1</p>	<p>Notwithstanding all that has been stated above, the Board has the right to modify any of the above regulations from time to time.</p>

**TABLE-1: UG PROGRAMMES LEADING TO BACHELOR'S DEGREE**

Sr. No.	Branch	Degree	Code
1	Civil Engineering	B.E. (Civil Engineering)	CEU
2	Computer Science & Engineering	B.E. (Computer Science & Engineering)	CSU
3	Electrical Engineering	B.E. (Electrical Engineering)	EEU
4	Electronics Engineering	B.E. (Electronics Engineering)	ENU
5	Electronics Designing Technology	B.E. (Electronics Design Technology)	EDU
6	Electronics and Communication Engineering	B.E. (Electronics and Communication Engineering)	ECU
7	Information Technology	B.E. (Information Technology)	ITU
8	Industrial Engineering	B.E. (Industrial Engineering)	INU
9	Mechanical Engineering	B.E. (Mechanical Engineering)	MEU

**TABLE 2: STRUCTURE OF GRADING OF ACADEMIC PERFORMANCE (UG)**

Academic Performance	Grades	Grade Points
Outstanding	AA	10
Excellent	AB	9
Very Good	BB	8
Good	BC	7
Satisfactory	CC	6
Average	CD	5
Poor	FF	0
Incomplete	I	Subsequently to be changed into the grade earned.
Withdrawal	W	-
Non completion of course requirement	Z	-
Extension (in projects only)	X	-

**Explanation :****'FF' Grade**

- The 'FF' grade denotes poor performance amounting to failure.
- A student has to repeat all courses in which he/ she obtains 'FF' grade, till a passing grade is obtained within the prescribed duration.
- For the elective courses in which 'FF' grade has been obtained, the student may take the same course or any other course from the same elective group. If the course is not offered / available in the current semester he will have to take it whenever it is offered by the department and then appear for the examination.

**'I' Grade**

This grade indicates an 'Incomplete' course requirement due to absence in End Semester Examination. The grade is required to be converted into a regular letter grade as per the regulations.

**'W' Grade**

This refers to withdrawal from the course as per the regulations.

**'X' Grade**

This grade is awarded for incomplete Project work and will be converted to a regular grade on the completion of the Project work and its evaluation.

**'Z' Grade**

This grade stands for non-completion of course requirement.