

# **SHRI RAMDEOBABA COLLEGE OF ENGINEERING AND MANAGEMENT, NAGPUR – 440013**

An Autonomous College affiliated to  
Rashtrasant Tukadoji Maharaj Nagpur University,  
Nagpur, Maharashtra (INDIA)

## **POST GRADUATE ORDINANCES / REGULATIONS**

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ISO 9001 : 2015 CERTIFIED ORGANISATION



### 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 870 candidates for UG programmes, around 336 candidates for PG programmes and 60 candidates for Integrated programme 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 July and ends in December; the 2ndSemester (Even Semester) starts in January and ends in June.

### Departments

The various Departments, Board of Studies and their two-letter codes are given below;

S.No.	Name of Department / Board of studies	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
17	Board of Interdisciplinary Studies	ID
18	Computer Science and Engineering (Data Science)	CD
19	Computer Science and Engineering (A I & M L)	CA
20	Computer Science and Engineering (Cyber Security)	CC
21	Biomedical Engineering	BM



### Programmes Offered

RCOEM Nagpur offers academic programmes namely Engineering and Technology at UG and PG levels, MBA, MCA, and MBA (Integrated). In undergraduate programmes and in MBA (Integrated) 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. Admission to all these programmes are based as per the eligibility criteria laid down by the competent authority.

#### Undergraduate 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 Engg.)	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	
10	Computer Science & Engineering (Data Science)	B.E. (Computer Science & Engineering (Data Science))	CDU	
11	Computer Science & Engineering (A I & M L)	B.E. (Computer Science & Engineering (A I & M L))	CAU	
12	Computer Science & Engineering (Cyber Security)	B. E. (Computer Science & Engineering (Cyber Security))	CCU	
13	Biomedical Engineering	B.E. (Biomedical Engineering)	MBU	

#### Post Graduate Programme

##### A. Masters:

S. 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 (Robotics and Automation)	RAA	
8	Computer Applications	MCA	MCA	
9	Management Technology	MBA	MBA	

#### Integrated Programme in Management

Sr. No.	Department	Programme Title	Programme Code	Eligibility for admission
1	Management Technology	MBA (Integrated)	MBI	Eligibility Criteria as laid down by the competent authority from time to time



### 2.0 ORDINANCES FOR THE P. G. PROGRAMMES 2020

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 PG programme of the Institute.



(xvi)	<b>"Student"</b> shall mean a student registered for PG 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.



## Post Graduate Ordinance / Regulation 2020

	(xxxviii)	"DAPAC" shall mean Departmental Academic Performance Advisory Committee'.
<b>Ordinances</b>	(1)	The Institute shall offer UG/PG 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, provided 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/PG 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/PG 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/PG 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/PG programmes shall be as specified in the regulations.
	(10)	A student admitted to the UG/PG 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/PG programme, the amount and number of scholarship/assistantships and the number of free ships and the procedure thereof.





**M. Tech (Geotechnical Engineering Semester - I**

Sr. No.	Course code	Course Name	L	T	Credit	Maximum Marks			Exam Duration	Category
						Continuous Assessment	Semester End Exam	Total		
1.	CET571	Advanced Soil Mechanics	4	-	4	40	60	100	3 Hrs	PC
2.	CEP571	Advanced Soil Mechanics Lab	-	2	1	25	25	50	-	PC
3.	CET572	Geotechnical Exploration & Investigation	4	-	4	40	60	100	3 Hrs	PC
4.	CEP572	Geotechnical Exploration & Investigation Lab	-	2	1	25	25	50	-	PC
5.	CET595	Engineering Computational Techniques	4	-	4	40	60	100	3 Hrs	FC
<b>TOTAL</b>			12	4	14					

**M. Tech (Geotechnical Engineering Semester - II**

Sr. No.	Course code	Course Name	L	T	Credit	Maximum Marks			Exam Duration	Category
						Continuous Assessment	Semester End Exam	Total		
1.	CET573	Foundation Engineering - I	4	-	4	40	60	100	3 Hrs	PC
2.	CEP573	Foundation Engineering - I Lab	-	2	1	25	25	50	-	PC
3.	CET596	Research Methodology	3	-	3	40	60	100	3 Hrs	FC
4.	CET597	Group Elective - I	4	-	4	40	60	100	3 Hrs	GE
5.	CEP597	Group Elective - I Lab	-	2	1	25	25	50	-	GE
6.	CET599	Open Elective	3	-	3	40	60	100	3 Hrs	OE
<b>TOTAL</b>			14	4	16					

Course Code	Group Elective I (T+P)
CET/ CEP 597-1	Applied Soil Engineering
CET/ CEP 597-2	Finite Element Method
CET/ CEP 597-3	Instrumentation & Material Science
CET/ CEP 597-4	Soil Dynamics



<b>Course Code</b>	<b>Open Elective</b>
CET 599-1	Advanced Construction Materials & Techniques
CET 599-3	Prestressed Concrete Structure

**M. Tech (Geotechnical Engineering Semester - III**

Sr. No.	Course code	Course Name	L	T	Credit	Maximum Marks			Exam Duration	Category
						Continuous Assessment	Semester End Exam	Total		
1.	CET598	Group Elective - II	4	-	4	40	60	100	3 Hrs	GE
2.	CET671	Ground Improvement	4	-	4	40	60	100	3 Hrs	PC
3.	CEP671	Ground Improvement Lab	-	2	1	25	25	50	-	PC
4.	CET672	Earth and Rockfill dams	4	-	4	40	60	100	3 Hrs	PC
5.	CET673	Foundation Engineering - II	4	-	4	40	60	100	3 Hrs	PC
<b>TOTAL</b>			<b>16</b>	<b>2</b>	<b>17</b>					

<b>Course Code</b>	<b>Group Elective II</b>
CET 598-1	Design of Bridges
CET 598-2	Design of Environmental Structures
CET 598-3	Geo-Environmental Engineering
CET 598-4	Soil Structure Interaction

**M. Tech (Geotechnical Engineering Semester - IV**

Sr. No.	Course code	Course Name	L	T	Credit	Maximum Marks			Exam Duration	Category
						Continuous Assessment	Semester End Exam	Total		
1.	CET674	Program Elective I	4	-	4	40	60	100	3 Hrs	PE
2.	CET675	Program Elective II	4	-	4	40	60	100	3 Hrs	PE
3.	CEP676	Project Phase I	-	3	6	50	50	100	-	PC
<b>TOTAL</b>			<b>8</b>	<b>3</b>	<b>14</b>					



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Course Code	Program Elective I (T)
CET 674-1	Special Geotechnical Construction
CET 674-2	Geotechnical Earthquake Engineering

Course Code	Program Elective II (T)
CET 675-1	Pavement Analysis and Design
CET 675-2	Rock Mechanics

### M. Tech (Geotechnical Engineering Semester - V

Sr. No.	Course code	Course Name	L	T	Credit	Maximum Marks			Exam Duration	Category
						Continuous Assessment	Semester End Exam	Total		
1.	CEP771	Project Phase II	-	6	12	100	100	200	-	PC
<b>TOTAL</b>				<b>6</b>	<b>12</b>					

Semester	L	P	Credit	Maximum Marks		
				Continuous Assessment	Semester End Exam	Total
First Semester	12	4	14	170	230	400
Second Semester	14	4	16	210	290	500
Third Semester	16	2	17	185	265	450
Fourth Semester	8	3	14	130	170	300
Fifth Semester	0	6	12	100	100	200
<b>TOTAL</b>	<b>50</b>	<b>19</b>	<b>73</b>	<b>795</b>	<b>1055</b>	<b>1850</b>



**M. Tech (Structural Engineering)  
Semester - I**

Sr. No.	Course code	Course Name	L	P	Credit	Maximum Marks			Exam Duration	Category
						Continuous Assessment	Semester End Exam	Total		
1.	CET595	Engineering Computational Techniques	4	0	4	40	60	100	3	FC
2.	CET551	Matrix Method	4	0	4	40	60	100	3	PC
3.	CEP551	Matrix Method Lab	0	2	1	25	25	50	-	PC
4.	CET552	Structural Dynamics	4	0	4	40	60	100	3	PC
5.	CEP552	Structural Dynamics Lab	0	2	1	25	25	50	-	PC
6.	CET553	Advanced Steel Structures	4	0	4	40	60	100	3	PC
7.	CEP553	Advanced Steel Structures (P)	0	2	1	25	25	50	-	PC
8.	CET554	Programme Elective I	4	0	4	40	60	100	3	PE
<b>TOTAL</b>			<b>20</b>	<b>6</b>	<b>23</b>	<b>275</b>	<b>375</b>	<b>650</b>	<b>15</b>	

Course Code	Program Elective I
CET554-1	Theory of Elasticity & Elastic Stability
CET554-2	Composite Structures

**M. Tech (Structural Engineering)  
Semester - II**

Sr. No.	Course code	Course Name	L	P	Credit	Maximum Marks			Exam Duration	Category
						Continuous Assessment	Semester End Exam	Total		
1.	CET555	Foundation Design	4	0	4	40	60	100	3	PC
2.	CET556	Advanced Concrete Structures	4	0	4	40	60	100	3	PC
3.	CEP557	Computer aided analysis and design Lab	0	2	1	25	25	50	-	PC
4.	CET558	Design of Earthquake Resistance RCC Structures	4	0	4	40	60	100	3	PC
5.	CET596	Research Methodology	3	0	3	40	60	100	3	FC
6.	CET597	Group Elective I	4	0	4	40	60	100	3	GE
7.	CEP597	Group Elective I Lab	0	2	1	25	25	50	-	GE
8.	CET599	Open Elective	3	0	3	40	60	100	3	OE
<b>TOTAL</b>			<b>22</b>	<b>4</b>	<b>24</b>	<b>290</b>	<b>410</b>	<b>700</b>	<b>18</b>	



Course Code	Group Elective I (T + P)
CET/ CEP 597-1	Applied Soil Engineering
CET/ CEP 597-2	Finite Element Method
CET/ CEP 597-3	Instrumentation & Material Science
CET/ CEP 597-4	Soil Dynamics

Course Code	Open Elective
CET 599-2	Geoscience
CET 599-4	Watershed Management

**M. Tech (Structural Engineering)  
Semester - III**

Sr. No.	Course code	Course Name	L	P	Credit	Maximum Marks			Exam Duration	Category
						Continuous Assessment	Semester End Exam	Total		
1.	CET598	Group Elective II	4	0	4	40	60	100	3	GE
2.	CET651	Programme Elective II	4	0	4	40	60	100	3	PE
3.	CEP652	Project Phase I (D)	0	3	6	50	50	100	-	PC
<b>TOTAL</b>			<b>8</b>	<b>3</b>	<b>14</b>	<b>130</b>	<b>170</b>	<b>300</b>	<b>6</b>	

Course Code	Group Elective II
CET 598-1	Design of Bridges
CET 598-2	Design of Environmental Structures
CET 598-3	Geo-Environmental Engineering
CET 598-4	Soil Structure Interaction

Course Code	Programme Elective II
CET651-1	Design of High Rise Structures
CET651-2	Theory of Plates & Shells
CET651-3	Design of Earthquake Resistance Steel Structures



**M. Tech (Structural Engineering)  
Semester - IV**

Sr. No.	Course code	Course Name	L	P	Credit	Maximum Marks			Exam Duration	Category
						Continuous Assessment	Semester End Exam	Total		
1.	CEP653	Project Phase II (D)	0	6	12	100	100	200	-	PC
<b>TOTAL</b>				<b>6</b>	<b>12</b>	<b>100</b>	<b>100</b>	<b>200</b>	-	

Semester	L	P	Credit	Maximum Marks		
				Continuous Assessment	Semester End Exam	Total
First Semester	20	6	23	275	375	650
Second Semester	22	4	24	290	410	070
Third Semester	8	3	14	130	170	300
Fourth Semester	0	6	12	100	100	200
<b>TOTAL</b>	<b>50</b>	<b>19</b>	<b>73</b>	<b>795</b>	<b>1055</b>	<b>1850</b>



**M. Tech (VLSI Design)  
Semester - I**

Sr. No.	Course code	Course Name	L	P	Credit	Maximum Marks			Exam Duration	Category
						Continuous Assessment	Semester End Exam	Total		
1.	ENT551	CMOS Digital Circuit Design	4	0	4	40	60	100	3 Hrs.	PC
2.	ENT552	Digital System Design	4	0	4	40	60	100	3 Hrs.	PC
3.	ENT553	Embedded System and RTOS	4	0	4	40	60	100	3 Hrs.	PC
4.	ENT554	Semiconductor Devices	4	0	4	40	60	100	3 Hrs.	FC
5.	ENP551	CMOS Digital Circuit Design Lab	0	2	1	25	25	50	---	PC
6.	ENP552	Digital System Design Lab	0	2	1	25	25	50	---	PC
7.	ENP553	Embedded System & RTOS Lab	0	2	1	25	25	50	---	PC
8.	ENT555	Programme Elective-I	4	0	4	40	60	100	3 Hrs.	PE
<b>TOTAL</b>			<b>20</b>	<b>6</b>	<b>23</b>					

Course Code	Programme Elective - I
ENT555-1	VLSI Technology
ENT555-2	Advanced computer Architecture
ENT555-3	Advanced Digital Signal Processing

**M. Tech (VLSI Design)  
Semester - II**

Sr. No.	Course code	Course Name	L	P	Credit	Maximum Marks			Exam Duration	Category
						Continuous Assessment	Semester End Exam	Total		
1.	ENT556	Analog IC Design	4	0	4	40	60	100	3 Hrs.	PC
2.	ENT557	System Verilog for Verification	4	0	4	40	60	100	3 Hrs.	PC
3.	ENT558	Research Methodology	3	0	3	40	60	100	3 Hrs.	FC
4.	ENP556	Analog IC Design Lab	0	2	1	25	25	50	---	PC
5.	ENP557	System Verilog for Verification Lab	0	2	1	25	25	50	---	PC
6.	ENT559	Programme Elective-II	4	0	4	40	60	100	3 Hrs.	PE
7.	ENT560	Group Elective-I	4	0	4	40	60	100	3 Hrs.	GE
8.	ENT599	Open Elective-I	3	0	3	40	60	100	3 Hrs.	OE
9.	ENP561	Seminar	0	2	1	50		50	---	PC
<b>TOTAL</b>			<b>22</b>	<b>6</b>	<b>25</b>					



Course Code	Programme Elective - II
ENT559-1	VLSI Signal Processing
ENT559-2	RF Circuit Design
ENT559-3	MEMS

Course Code	Group Elective - I
ENT560	VLSI Design Automation
EET562	Microcontroller Applications in Power Controller
CST561-1	Optimization Techniques in Artificial Intelligence
CST561-2	Social Network Analysis

Course Code	Open Elective - I
ENT599-2	Digital System Design with FPGA

### Semester - III

Sr. No.	Course code	Course Name	L	P	Credit	Maximum Marks			Exam Duration	Category
						Continuous Assessment	Semester End Exam	Total		
1.	ENT651	System-on-Chip	4	0	4	40	60	100	3 Hrs.	PC
2.	ENT652	Programme Elective-III	4	0	4	40	60	100	3 Hrs.	PE
3.	ENP653	Project Phase I	0	3	6	50	50	100	---	PC
<b>TOTAL</b>			<b>8</b>	<b>3</b>	<b>14</b>					

Course Code	Programme Elective - III
ENT652-1	VLSI Testing
ENT652-2	Nanoelectronics
ENT652-3	Low Power VLSI Design

### Semester - IV

Sr. No.	Course code	Course Name	L	P	Credit	Maximum Marks			Exam Duration	Category
						Continuous Assessment	Semester End Exam	Total		
1.	ENP654	Project Phase - II	0	6	12	150	150	300	---	PC
<b>TOTAL</b>			<b>0</b>	<b>6</b>	<b>12</b>					





**M. Tech (Industrial Engineering)  
Semester - I**

Sr. No.	Course code	Course Name	L	P	Credit	Maximum Marks			Exam Duration	Category
						Continuous Assessment	Semester End Exam	Total		
1.	INT551	Operations Research	4	0	4	40	60	100	3	PC
2.	INT552	Statistics & Quality Control	4	0	4	40	60	100	3	PC
3.	INT553	Planning and Control of Manufacturing Systems	4	0	4	40	60	100	3	PC
4.	INP554	Lab Practice-I	0	4	2	25	25	50	-	PC
5.	INT555	Program Elective-I	4	0	4	40	60	100	3	PE
6.	MET556	Research Methodology	3	0	3	40	60	100	3	FC
<b>TOTAL</b>			<b>19</b>	<b>4</b>	<b>21</b>	<b>225</b>	<b>325</b>	<b>550</b>	<b>-</b>	<b>-</b>

Course Code	Programme Elective - I
INT 555-1	Automation In Production
INT 555-2	Financial Management
INT 555-3	Marketing Management
INT 555-4	Human Capital Management

**M. Tech (Industrial Engineering)  
Semester - II**

Sr. No.	Course code	Course Name	L	P	Credit	Maximum Marks			Exam Duration	Category
						Continuous Assessment	Semester End Exam	Total		
1.	INT556	Supply Chain Management	4	0	4	40	60	100	3	PC
2.	INT557	Human Factors Engineering	4	0	4	40	60	100	3	PC
3.	INT558	Maintenance Engineering	4	0	4	40	60	100	3	PC
4.	INP559	Lab Practice-II	0	4	2	25	25	50	-	PC
5.	INT560	Program Elective-II	4	0	4	40	60	100	3	PE
6.	INT561	Advanced Computation Techniques	3	0	3	40	60	100	3	FC
7.	INT599	Open Elective	3	0	3	40	60	100	3	OE
<b>TOTAL</b>			<b>22</b>	<b>4</b>	<b>24</b>	<b>265</b>	<b>385</b>	<b>650</b>	<b>-</b>	<b>-</b>



Course Code	Programme Elective - II
INT 560-1	Materials Management
INT 560-2	Reliability Engineering
INT 560-3	Project Management

Course Code	Open Electives
INT 599-1	Quality Management
INT 599-2	Optimization Techniques
INT 599-3	Fundamentals of financial Management

### M. Tech (Industrial Engineering) Semester - III

Sr. No.	Course code	Course Name	L	P	Credit	Maximum Marks			Exam Duration	Category
						Continuous Assessment	Semester End Exam	Total		
1.	INT 651/MET 651	Group Elective-I	4	0	4	40	60	100	3	GE
2.	INT 652/MET 652	Group Elective-II	4	0	4	40	60	100	3	GE
3.	INP 653	Project Phase-I		3	6	100	100	200	-	-
		<b>TOTAL</b>	<b>8</b>	<b>3</b>	<b>14</b>	<b>180</b>	<b>220</b>	<b>400</b>	<b>-</b>	<b>-</b>

GIM is group head of Industrial and Mechanical Engineering PG Program

Course Code	Group Elective - I
INT 651-1	Total Quality Management
INT 651-2	Value Engineering
INT 651-3	System Design Engineering
INT 651-4	Productivity Improvement Technique
MET651-1	Energy Conservation & Management
MET651-2	Thermal Storage System
MET651-3	Advanced Turbo Machinery





## Post Graduate Ordinance / Regulation 2020

Course Code	Group Elective - II
INT652-1	Computer & Database Management Systems
INT652-2	Manufacturing Economic Analysis
INT652-3	Business Communications
MET652-1	Environmental Pollution and Control
MET652-2	Design of Heat Exchangers
MET652-3	Cryogenics
MET652-4	Advanced IC Engines and Alternative Fuels

### M. Tech (Industrial Engineering) Semester - IV

Sr. No.	Course code	Course Name	L	P	Credit	Maximum Marks			Exam Duration	Category
						Continuous Assessment	Semester End Exam	Total		
1.	INP654	Project Phase - II	0	6	12	200	200	400	-	-
<b>TOTAL</b>			<b>0</b>	<b>6</b>	<b>12</b>	<b>200</b>	<b>200</b>	<b>400</b>	<b>-</b>	<b>-</b>

#### Summary of the Credits

Sr. No.	Semester	Credits
1	I	21
2	II	24
3	III	14
4	IV	12
	<b>Total</b>	<b>71</b>

#### Summary of the Marks

Sr. No.	Semester	Internal Assessment	End Semester Exam	Total Marks
1	I	255	325	550
2	II	265	385	650
3	III	180	220	400
4	IV	200	200	400
	<b>Total</b>	<b>870</b>	<b>1130</b>	<b>2000</b>





**M. Tech (Power Electronics and Power System)  
Semester - I**

Sr. No.	Course code	Course Name	L	P	Credit	Maximum Marks			Exam Duration	Category
						Continuous Assessment	Semester End Exam	Total		
1.	EET551	Advanced Power Electronics	4	0	4	40	60	100	3 Hrs.	PC
2.	EEP551	Advanced Power Electronics Lab.	0	2	1	25	25	50		PC
3.	EET552	Power System Modeling & Analysis	4	0	4	40	60	100	3 Hrs.	PC
4.	EET553	Research Methodology	3	0	3	40	60	100	3 Hrs.	FC
5.	EET554	Processor Applications in Power System	4	0	4	40	60	100	3 Hrs.	PC
6.	EEP554	Processor Lab.	0	2	1	25	25	50		PC
7.	EEP555	Simulation Lab.	0	4	2	25	25	50		FC
8.	EET556	FACTS & HVDC Transmission	4	0	4	40	60	100	3 Hrs.	PC
<b>TOTAL</b>			<b>19</b>	<b>8</b>	<b>23</b>			<b>650</b>		

PC = Program Core, PE = Program Elective, FC = Foundation Course,  
GE = Group Elective, OE = Open Elective

**M. Tech (Power Electronics and Power System)  
Semester - II**

Sr. No.	Course code	Course Name	L	P	Credit	Maximum Marks			Exam Duration	Category
						Continuous Assessment	Semester End Exam	Total		
1.	EET557	Advanced Drives	4	0	4	40	60	100	3 Hrs.	PC
2.	EEP557	Advanced Drives Lab	0	2	1	25	25	50		PC
3.	EET558	Advanced Power System Protection	4	0	4	40	60	100	3 Hrs.	PC
4.	EEP559	Energy Audit Lab	0	2	1	25	25	50		PC
5.	EET560-X	Program Elective - I	4	0	4	40	60	100	3 Hrs.	PE
6.	EET561	Group Elective	4	0	4	40	60	100	3 Hrs.	GE
7.	EET599	Open Elective	3	0	3	40	60	100	3 Hrs.	OE
<b>TOTAL</b>			<b>19</b>	<b>4</b>	<b>21</b>			<b>600</b>		

PC = Program Core, PE = Program Elective, FC = Foundation Course,  
GE = Group Elective, OE = Open Elective





## Post Graduate Ordinance / Regulation 2020

Course Code	Programme Elective - I
EET560-1	Power Quality
EET560-2	Digital Signal Processing

Course Code	Group Elective
EET599	Energy Management System

Course Code	Group Elective
EET562	Microcontroller Application in Power Controller
ENT560	VLSI Design Automation
CST561-1	Optimization Techniques in Artificial Intelligence
CST561-2	Social Network Analysis

### M. Tech (Power Electronics and Power System) Semester - III

Sr. No.	Course code	Course Name	L	P	Credit	Maximum Marks			Exam Duration	Category
						Continuous Assessment	Semester End Exam	Total		
1.	EET651-X	Program Elective II	4	0	4	40	60	100	3 Hrs.	PE
2.	EET652-X	Program Elective III	4	0	4	40	60	100	3 Hrs.	PE
3.	EEP653	Circuit Simulation & Hardware Implementation Lab	0	4	2	25	25	50		PC
4.	EEP654	Project Phase - I	-	3	6	100	100	200	-	Project
<b>TOTAL</b>			<b>8</b>	<b>9</b>	<b>16</b>			<b>450</b>		

PC = Program Core, PE = Program Elective, FC = Foundation Course,  
GE = Group Elective, OE = Open Elective

Course Code	Programme Elective - II
EET651-4	Electrical Power Distribution & Smart Grid
EET651-2	Electric Vehicles
EET651-3	Renewable Power Generation Sources

Course Code	Programme Elective - III
EET652-1	Power System Dynamics & Control
EET652-2	Advanced Control System
EET652-3	Industry offered elective

### M. Tech (Power Electronics and Power System) Semester - IV

Sr. No.	Course code	Course Name	L	P	Credit	Maximum Marks			Exam Duration	Category
						Continuous Assessment	Semester End Exam	Total		
1.	EEP655	Project Phase - II	0	6	12	200	200	400	-	Project
<b>TOTAL</b>			<b>0</b>	<b>6</b>	<b>12</b>	-	-	<b>400</b>	-	





**M. Tech (Computer Science and Engineering)  
Semester - I**

Sr. No.	Course code	Course Name	L	P	Credit	Maximum Marks			Exam Duration	Category
						Continuous Assessment	Semester End Exam	Total		
1.	CST551	Advanced Computer Architecture	4	0	4	40	60	100	3 Hrs	FC
2.	CST552	Software Architecture	4	0	4	40	60	100	3 Hrs	PC
3.	CSP552	Software Architecture Lab	0	2	1	25	25	50	--	PC
4.	CST553	Advancesin Algorithms	4	0	4	40	60	100	3 Hrs	PC
5.	CST554	Advanced Techniques in Data Management	4	0	4	40	60	100	3 Hrs	PC
6.	CSP554	Advanced Techniques in Data Management Lab	0	2	1	25	25	50	--	PC
7.	CST555	Program Elective - I	4	0	4	40	60	100	3 Hrs	PE
8.	CSP555	Software Lab - I	0	2	1	25	25	50	--	PC
<b>TOTAL</b>			<b>20</b>	<b>6</b>	<b>23</b>	<b>275</b>	<b>375</b>	<b>650</b>		

Course Code	Programme Elective - I
CST555-1	Graph Mining
CST555-2	Pattern Recognition
CST555-3	Advance topics in networking

**Category Details**

PC	Programme Core
PE	Programme Elective
GE	Group Elective
OE	Open Elective
FC	Foundation Course





Teaching scheme for Second Year (Semester II) Master of Technology

Sr. No.	Course code	Course Name	L	P	Credit	Maximum Marks			Exam Duration	Category
						Continuous Assessment	Semester End Exam	Total		
1.	CST556	Compiling For High Performance Architecture	4	0	4	40	60	100	3 Hrs	PC
2.	CSP556	Compiling For High Performance Architecture Lab	0	2	1	25	25	50	--	PC
3.	CST557	Advanced Digital Image Processing	4	0	4	40	60	100	3 Hrs	PC
4.	CSP557	Advanced Digital Image Processing Lab	0	2	1	25	25	50	--	PC
5.	CST558	Research Methodology	3	0	3	40	60	100	3 Hrs	FC
6.	CST561	Group Elective - I	4	0	4	40	60	100	3 Hrs	GE
7.	CST599	Open Elective - I	3	0	3	40	60	100	3 Hrs	OE
8.	CSP559	Software Lab - II	0	2	1	25	25	50	--	PC
9.	CSP560	Seminar	0	2	1	50	50	100	--	PC
<b>TOTAL</b>			<b>18</b>	<b>8</b>	<b>22</b>	<b>325</b>	<b>425</b>	<b>750</b>		

Rof Technology

Course Code	Group Elective - I
EET562	Microcontroller Applications in Power Controllers
ENT560	VLSI Design Automation
CST561 - I	Optimization Techniques in Artificial Intelligence
CST561 - 2	Social Network Analysis

Course Code	Group Elective - I
CST599 - I	Advance Programming Techniques

Teaching scheme for Third Year (Semester III) Master of Technology

Sr. No.	Course code	Course Name	L	P	Credit	Maximum Marks			Exam Duration	Category
						Continuous Assessment	Semester End Exam	Total		
1.	CST651	Program Elective -II	4	0	4	40	60	100	3Hrs.	PE
2.	CST652	Program Elective - III	4	0	4	40	60	100	3Hrs.	PE
3.	CSP653	Project Phase-I	0	3	6	50	50	100	--	PC
<b>TOTAL</b>			<b>8</b>	<b>3</b>	<b>14</b>	<b>130</b>	<b>170</b>	<b>300</b>		





Course Code	Programme Elective - II
CST651 - 1	Statistical Machine Learning
CST651 - 2	Cryptography
CST651 - 3	Big Data Analysis
CST651 - 4	Industry Offered Elective

Course Code	Programme Elective - III
CST652-1	Reconfigurable and Cloud Computing
CST652-2	Information Retrieval
CST652-3	Ubiquitous Computing

### Teaching scheme for Fourth Year (Semester IV) Master of Technology

Sr. No.	Course code	Course Name	L	P	Credit	Maximum Marks			Exam Duration	Category
						Continuous Assessment	Semester End Exam	Total		
1.	CSP657	Project Phase - II	0	6	12	200	200	400	-	PC
<b>TOTAL</b>			<b>0</b>	<b>6</b>	<b>12</b>	<b>200</b>	<b>200</b>	<b>400</b>		

Category	PC	PE	GE	OE	FC	Total
Credits	45	12	4	3	7	71

	Theory	Practical	Project	Total
Credits	46	7	18	71







## Scheme of Examination of Master of Technology

### I Semester M. Tech. (Robotics & Automation)

Sr. No.	Subject Code	Subject Name	L	P	Total	Credits	Internal Assessment	Semester Exam	Total
1	MET751	Robot Kinematics and Dynamics	3	-	3	3	40	60	100
2	MET752	Control system theory	3	-	3	3	40	60	100
3	MET753	Robotic drives and actuators	3	-	3	3	40	60	100
4	MET754	Robotic Sensors	3	-	3	3	40	60	100
5	MET755	Program Elective-1	3	-	3	3	40	60	100
6	MEP756	Lab Practice-1	-	4	4	2	25	25	50
7	MEP757	Lab Practice-2	-	4	4	2	25	25	50
8	MEP758	Seminar (Project based learning)	0	2	2	1	50	0	50
9	MET759	Audit course: Professional Practices and Ethics-I	2	0	2	0	0	0	SF/USF
<b>Total</b>			<b>17</b>	<b>10</b>	<b>27</b>	<b>20</b>	<b>300</b>	<b>350</b>	<b>650</b>

Course Code	Program Elective-1
MET755-1	IoT
MET755-2	Integrated advance manufacturing
MET755-3	Field and Service Robots

### II Semester M. Tech. (Robotics & Automation)

Sr. No.	Subject Code	Subject Name	L	P	Total	Credits	Internal Assessment	Semester Exam	Total
1	MET761	Mobile Robots	3	-	3	3	40	60	100
2	MET762	Artificial Intelligence and Machine Learning in robotics	3	-	3	3	40	60	100
3	MET763	Industrial Automation and Flexible Manufacturing System	3	-	3	3	40	60	100
4	MET764	Robot path planning	3	-	3	3	40	60	100
5	MET765	Program Elective -2	3	-	3	3	40	60	100
6	MET766	Open Elective-1	3	-	3	3	40	60	100
7	MEP767	ROS and robot Programming	-	4	4	2	25	25	50
8	MEP768	Lab Practice-3	-	4	4	2	25	25	50
9	MET769	Audit course: Professional Practices and ethics II	2	0	2	0	0	0	SF/USF
<b>Total</b>			<b>20</b>	<b>8</b>	<b>28</b>	<b>22</b>	<b>290</b>	<b>410</b>	<b>700</b>





Course Code	Program Elective - 2
MET765-1	Multibody dynamic system
MET765-2	Robotic Process Automation
MET765-3	Bioinspired robotics

Course Code	Open Elective
MET766-1	Industrial Robotics
MET766-2	Mechatronics
MET766-3	Automobile Engineering

**III Semester M. Tech. (Robotics & Automation)**

Sr. No.	Subject Code	Subject Name	L	P	Total	Credits	Internal Assessment	Semester Exam	Total
1	MET851	Research Methodology	3	-	3	3	40	60	100
2	MET852	Group Elective-1	4	-	4	4	40	60	100
3	MET853	Group Elective-2	4	-	4	4	40	60	100
4	MEP854	Project Phase - I	-	3	3	6	100	100	200
<b>Total</b>			11	3	14	17	220	280	500

OR

1		Research Methodology (MOOC/Any online platform)				3			100
2		Industry Internship / Research Internship / TBI Internship				14	180	220	400
<b>Total</b>						<b>17</b>			<b>500</b>

Course Code	Group Elective - 1
MET852-1	Welding and cutting robot technology
MET852-2	Machine Vision
MET852-3	Industry 4.0
INT651-1	Total Quality Management
INT651-2	Value Engineering
INT651-3	System Design Engineering
INT651-4	Productivity Improvement Techniques





## Post Graduate Ordinance / Regulation 2020

Course Code	Group Elective - 2
MET853-1	Automation in supply chain
MET853-2	MEMS and Microsystems
MET853-4	Wireless Sensor Network for robotics
INT652-1	Computer & Database Management System
INT652-2	Manufacturing Economics and Analysis
INT652-3	Business Communications

### IV Semester M. Tech. (Robotics & Automation)

Sr. No.	Subject Code	Subject Name	L	P	Total	Credits	Internal Assessment	Semester Exam	Total
1	MEP854	Project Phase-II	-	7	7	12	200	200	400
OR									
		Industry Internship /Research Internship / TBI Internship	-	-	-	12	200	200	400

**Total Credits: 20 + 22 + 17 + 12 = 71**





Scheme of Examination of Master in Computer Application  
Semester Pattern  
Master in Computer Application  
Semester - I

Sr. No.	Course code	Course Name	Hours/week			Credits	Maximum marks			ESE duration (Hrs)
			L	T	P		Continuous evaluation	End Sem Exam	Total	
1	MCT540	Introduction to Operating Systems	3	1	0	4	40	60	100	3 Hrs.
2	MCP540	Elective Lab-I	0	0	2	1	25	25	50	-
3	MCT541	Object Oriented Programming	3	0	0	3	40	60	100	3 Hrs.
4	MCP541	Object Oriented Programming Lab	0	0	2	1	25	25	50	-
5	MCT542	Principles of Programming Languages	3	0	0	3	40	60	100	3 Hrs.
6	MCP542	Principles of Programming Languages Lab	0	0	2	1	25	25	50	-
7	MCT543	Concepts in Software Engineering	3	0	0	3	40	60	100	3 Hrs.
8	MCP543	Concepts in Software Engineering Lab	0	0	2	1	25	25	50	-
9	MCT544	Theory of Automata and Formal Languages	3	1	0	4	40	60	100	3 Hrs.
10	MCP544	Elective Lab-II	0	0	2	1	25	25	50	-
11	HUT503	Elective Humanities-I	2	0	0	0	25	-	-	-
<b>TOTAL</b>			<b>17</b>	<b>2</b>	<b>10</b>	<b>22</b>				

Elective Humanities - I	
Course Code	Course Name
HUT503-1	Soft Skills
HUT503-2	Professional Practice & Ethics

Elective Lab - I	
Course Code	Course Name
MCP540-1	Foundations of Data Analytics Lab

Elective Lab - II	
Course Code	Course Name
MCP544-1	Linux System Administration and Maintenance Lab
MCP544-2	Ethical Hacking Lab
MCP544-3	Systems Programming Lab
MCP544-4	Development Frameworks and Virtual Machines
MCP544-5	Multimedia and Its Applications





**Scheme of Examination of Master in Computer Application**  
**Semester Pattern**  
**Master in Computer Application**  
**Semester - II**

Sr. No.	Course code	Course Name	Hours/week			Credits	Maximum marks			ESE duration (Hrs)
			L	T	P		Continuous evaluation	End Sem Exam	Total	
1	MCT545	Database Management Systems	3	0	0	3	40	60	100	3 Hrs.
2	MCP545	Database Management Systems Lab	0	0	2	1	25	25	50	-
3	MCT546	Design and Analysis of Algorithms	3	1	0	4	40	60	100	3 Hrs.
4	MCT547	Computer Networks	3	0	0	3	40	60	100	3 Hrs.
5	MCP547	Computer Networks Lab	0	0	2	1	25	25	50	-
6	MCP548	Full Stack Web Development using MEAN	0	0	4	2	25	25	50	-
7	MCT549	Elective-I	3	0	0	3	40	60	100	3 Hrs.
8	MCT627	Open Elective (Offered by other departments)	4	0	0	4	40	60	100	3 Hrs.
9	HUT504	Elective Humanities-II	2	0	0	0	25	-	-	-
<b>TOTAL</b>			<b>18</b>	<b>1</b>	<b>8</b>	<b>21</b>				

Elective Humanities - II	
Course Code	Course Name
HUT504-1	Business Correspondence and Report Writing
HUT504-2	Constitution of India and Human Rights

Elective - I	
Course Code	Course Name
MCT549-1	Image Processing
MCT549-2	Introduction to Real Time Operating Systems
MCT549-3	Pattern Recognition

Open Elective (Offered by other Departments)*	
Course Code	Course Name
MBT699	Entrepreneurship Development
ENT699	Arduino Playground
HUT599-1	Psychology for Professional Growth
CST699-1	Foundation of Business Intelligence
CST699-2	Mobile Technology





**Scheme of Examination of Master in Computer Application**  
**Semester Pattern**  
**Master in Computer Application**  
**Semester - III**

Sr. No.	Course code	Course Name	Hours/week			Credits	Maximum marks			ESE duration (Hrs)
			L	T	P		Continuous evaluation	End Sem Exam	Total	
1	MCT640	Artificial Intelligence	3	0	0	3	40	60	100	3 Hrs.
2	MCP640	Artificial Intelligence Lab	0	0	2	1	25	25	50	-
3	MCT641	Data Mining	3	0	0	3	40	60	100	3 Hrs.
4	MCP641	Data Mining Lab	0	0	2	1	25	25	50	-
5	MCT642	Cloud Computing	3	0	0	3	40	60	100	3 Hrs.
6	MCP642	Cloud Computing Lab	0	0	2	1	25	25	50	-
7	MCT643	Information Security	3	1	0	4	40	60	100	3 Hrs.
8	MCP644	Elective Lab-III	0	0	2	1	25	25	50	-
9	MCP645	Elective Lab-IV	0	0	4	2	25	25	50	-
<b>TOTAL</b>			<b>12</b>	<b>1</b>	<b>12</b>	<b>19</b>				

Elective Lab - III	
Course Code	Course Name
MCP644-1	Mobile Application Development Lab

Elective Lab - IV	
Course Code	Course Name
MCP645-1	Programming in Python Lab
MCP645-2	PHP programming Lab

**Semester - IV**

Sr. No.	Course code	Course Name	Hours/week			Credits	Maximum marks			ESE duration (Hrs)
			L	T	P		Continuous evaluation	End Sem Exam	Total	
1	MCT646	Elective-II	3	0	0	3	40	60	100	3 Hrs.
2	MCP646	Elective Lab-V	0	0	2	1	25	25	50	-
3	MCT647	Elective-III	3	0	0	3	40	60	100	3 Hrs.
4	MCP647	Elective Lab-VI	0	0	2	1	25	25	50	-
5	MCT648	Elective-IV	3	0	0	3	40	60	100	3 Hrs.
6	MCP649	Elective Lab-VII	0	0	2	1	25	25	50	-
7	MCP650	Project Work	0	0	8	4	75	75	150	-
<b>TOTAL</b>			<b>9</b>	<b>0</b>	<b>14</b>	<b>16</b>				





## Post Graduate Ordinance / Regulation 2020

Elective - II	
Course Code	Course Name
MCT646-1	Introduction to Internet of Things
MCT646-2	Operations Research
MCT646-3	Computer Graphics and its Applications
MCT646-4	High Performance Computing

Elective - III	
Course Code	Course Name
MCT647-1	Compiler Construction
MCT647-2	Soft Computing
MCT647-3	Social Networks

Elective - IV	
Course Code	Course Name
MCT648-1	Advanced Databases
MCT648-2	Distributed Systems
MCT648-3	Information Retrieval

Elective Lab - V	
Course Code	Course Name
MCP646-1	Introduction to Internet of Things Lab
MCP646-2	Computer Graphics and its Applications Lab

Elective Lab - VI	
Course Code	Course Name
MCP647-1	Big Data and Analytics Lab

Elective Lab - VII	
Course Code	Course Name
MCP649-1	API Level Programming Lab
MCP649-2	R Programming Lab





**Scheme of Examination of Master in Computer Application  
Semester Pattern**

**One Year Internship (Semester III and IV)  
Master in Computer Application**

Sr. No.	Course code	Course Name	Hours/sem			Credits	Maximum marks			ESE duration (Hrs)
			L	T	P		Continuous evaluation	End Sem Exam	Total	
1	MCP651-1	Project Work - Full Time (Phase-I)	0	0	36	19	350	300	650	-
2	MCP651-2	Project Work - Full Time (Phase-II)	0	0	32	16	300	300	600	-

**Bridge Program**

Sr. No.	Course code	Course Name	Hours/week			Credits	Maximum marks			ESE duration (Hrs)
			L	T	P		Continuous evaluation	End Sem Exam	Total	
1	MCT550	Computer Architecture and Organization	3	1	0	0	25	-	-	-
2	MCT551	Data Structures	3	1	0	0	25	-	-	-

**Credits Distribution Semester-wise:**

SEM - I	SEM - II	SEM - III	SEM - IV	Total Credits
22	21	19	16	78







**Master of Business Administration  
Semester - I**

Sr. No.	Course code	Course Name	L	P	Credits	Examination Details			Exam Duration
						CE	ESE	Total	
1.	MBT521	Applied Statistics & Quantitative Techniques	3		3	40	60	100	3 Hrs.
2.	MBT522	Organization Behaviour	3	-	3	40	60	100	3 Hrs.
3.	MBT523	Financial Accounting	3		3	40	60	100	3 Hrs.
4.	MBT524	Financial Management	3	-	3	40	60	100	3 Hrs.
5.	MBT525	Marketing Management	3	-	3	40	60	100	3 Hrs.
6.	MBT526	Entrepreneurial Skills	3	-	3	40	60	100	3 Hrs.
7.	MBT527	Project Management	3	-	3	40	60	100	3 Hrs.
8.	MBT528	Principles of Management (MOOCS)	2	-	2	40	60	100	3 Hrs.
9.	MBT529	Research Methodology	2	-	2	40	60	100	3 Hrs.
10.	MBP521	Management Lab Course - 1 (Behavioral Skill Lab)	-	2	1	50	50	100	
11.	MBP522	Management Lab Course - 2 (Business Communication Skills Lab)	-	2	1	50	50	100	
12.	MBT530	Environment Management (Audit)	2						
<b>TOTAL</b>			<b>27</b>	<b>4</b>	<b>27</b>				

**Semester - II**

Sr. No.	Course code	Course Name	L	P	Credits	Examination Details			Exam Duration
						CE	ESE	Total	
1.	MBT531	Cost and Management Accounting	3	-	3	40	60	100	3 Hrs.
2.	MBT532	Operations Management	3	-	3	40	60	100	3 Hrs.
3.	MBT533	Managerial Economics	3	-	3	40	60	100	3 Hrs.
4.	MBT534	Human Resource Management	3	-	3	40	60	100	3 Hrs.
5.	MBT535	Strategic Management	3	-	3	40	60	100	3 Hrs.
6.	MBT536	Blockchain and its Application	2	-	2	40	60	100	3 Hrs.
7.	MBT537	Business Legislation	2	-	2	40	60	100	3 Hrs.
8.	MBT538	MEC-1	2	-	2	40	60	100	3 Hrs.
9.	MBP523	MLC-3 (Rural Community Engagement)	-	2	1	50	50	100	
10.	MBP524	MLC-4	-	2	1	50	50	100	
11.	MBT539	Ethics and Corporate Social Responsibility(MOOCS)	-	-	3	40	60	100	3 Hrs.
<b>TOTAL</b>			<b>21</b>	<b>4</b>	<b>26</b>				





<b>MEC-1 (Select any One Course)</b>	
MBT538-1	Introduction to Fintech
MBT538-2	R-Studio
MBT538-3	Agile Project Management
MBT538-4	Business and Industrial Automation

<b>MEC-4 (Select any One Course)</b>	
MBP524-1	Corporate Grooming Lab
MBP524-2	Marketing Lab
MBP524-3	Financial Modeling Lab
MBP524-4	Quality Control Lab
MBP524-5	Spreadsheet Lab

**Master of Business Administration  
Semester - III**

Course Name	Name of the Course	L	P	Credits	Examination Details			Exam Duration
					CE	ESE	Total	
<b>Specialization 1 ( 4 Papers)</b>								
Four Electives from the Specialization groups offered (Please refer list of electives)	Elective 1	3	-	3	40	60	100	3 Hrs.
	Elective 2	3	-	3	40	60	100	3 Hrs.
	Elective 3	3	-	3	40	60	100	3 Hrs.
	Elective 4 (MOOCs)	3	-	3	40	60	100	3 Hrs.
<b>Specialization 2 ( 4 Papers)</b>								
Four Electives from the Specialization groups offered (Please refer list of electives)	Elective 1	3	-	3	40	60	100	3 Hrs.
	Elective 2	3	-	3	40	60	100	3 Hrs.
	Elective 3	3	-	3	40	60	100	3 Hrs.
	Elective 4(MOOCs)	3	-	3	40	60	100	3 Hrs.
	Field Immersion Programme-1 (4 to 6 weeks)	-	-	6	40	60	100	
	(to be undertaken between 2nd and 3rd semester)			-				
Term Paper		-	6	3	50	50	100	
	<b>TOTAL</b>	<b>24</b>	<b>6</b>	<b>33</b>				





**Master of Business Administration**  
**Semester - III**  
**Winter Term**

Course Name	Types of Course	L	P	Credits	Examination Details			Exam Duration
					CE	ESE	Total	
<b>Specialization 1 (1papers)</b>								
One Elective Courses from the Specialization selected in Semester III. <b>(Please refer list of electives)</b>	Elective 5	3	-	3	40	60	100	3 Hrs
<b>Specialization 2 (1papers)</b>								
One Elective Courses from the Specialization selected in Semester III. <b>(Please refer list of electives)</b>	Elective 5	3	-	3	40	60	100	3 Hrs
	<b>TOTAL</b>	<b>6</b>		<b>6</b>				

Note: Students may avail the Winter Term under Industry Internship Scheme between Sem III and Sem IV. The scheme of examination for Winter Term shall be same as the scheme of examination for Sem IV of Master of Business Administration.

**Industry Internship Scheme**

Note- Students who wish to avail this scheme need to complete the following requirements-

- 1) To opt for winter term, students should have passed all the courses of Ist and IInd Semester.
- 2) To avail full semester internship, following are the requirements-
  - a) He/ She should have successfully completed winter term.
  - b) The application should be accepted and approved by the technical screening committee constituted by the department for approval of the internship.

The student who has successfully completed winter term but did not opt for industry internship scheme or his / her application for industry internship scheme is not accepted by the technical screening committee shall have to opt for Two Elective courses the Specializations selected in Semester III .





Semester - IV

Course Name	Types of Course	L	P	Credits	Examination Details			Exam Duration
					CE	ESE	Total	
<b>Specialization 1 (1 papers)</b>								
One Elective Courses from the Specialization selected in Semester III. <b>(Please refer list of electives)</b>	Elective 5	3	-	3	40	60	100	3 Hrs
<b>Specialization 2 (1 papers)</b>								
One Elective Courses from the Specialization selected in Semester III. <b>(Please refer list of electives)</b>	Elective 5	3	-	3	40	60	100	3 Hrs
Project			10	10	100	100	200	
<b>TOTAL</b>		<b>6</b>	<b>10</b>	<b>16</b>				

**\*Project Assessment**

	Marks	
Viva-Voce	50	Assessment by External Examiner
Project defense through Presentation	50	
Overall Project Valuation	100	Assessment by Internal Examiner
Total Marks	200	

**List of Electives**

Students have to select any two Specializations. In Semester III, students will be taught four Elective Courses from specialization I & II each. In Semester IV students shall be taught one Elective Course from specialization I & II each.

Course Code	Elective
<b>Marketing Management</b>	
MBT621-1	Integrated Marketing Communication
MBT621-2	Brand Management
MBT621-3	Retail Management
MBT621-4	Sales and Distribution Management
MBT621-5	Services Marketing
MBT621-6	Rural Marketing
MBT621-7	Customer Relationship Management
MBT621-8	Industrial Marketing
MBT621-9	International Marketing
MBT621-10	Marketing Analytics

MBT621-11	Social Marketing
MBT621-12	Digital Marketing
MBT621-13	Consumer Behaviour
MBT621-14	Marketing Research
MBT621-15	Green Marketing
MBT621-16	Marketing of Banking & Financial Services
<b>Finance</b>	
MBT622-1	Corporate Taxation
MBT622-2	Security Analysis
MBT622-3	International Finance and Trade
MBT622-4	Derivatives & Risk Management
MBT622-5	Project Planning & Financing





## Post Graduate Ordinance / Regulation 2020

MBT622-6	Commercial Banking in India
MBT622-7	Financial Services & Merchant Banking
MBT622-8	Management Control System
MBT622-9	Portfolio Management
MBT622-10	Mergers & Acquisition and Corporate Restructuring
MBT622-11	Wealth Management
MBT622-12	Insurance Management
MBT622-13	Behavioural Finance
<b>Human Resource Management</b>	
MBT623-1	Advanced Organizational Behavior
MBT623-2	HR Audit & Analytics
MBT623-3	Human Resource planning
MBT623-4	International HRM
MBT623-5	Organization Theory: Structures and Design
MBT623-6	Performance and Compensation Management
MBT623-7	Recent Trends in HRM
MBT623-8	Training & Development
MBT623-9	Organization Development
MBT623-10	Competency Mapping
MBT623-11	Employer Branding
MBT623-12	Industrial Relation
MBT623-13	Labour Laws
MBT623-14	Strategic HRM
<b>Operations Management</b>	
MBT624-1	Operations Planning and Control
MBT624-2	Supply Chain Management
MBT624-3	Services Operation
MBT624-4	Quality Management
MBT624-5	World Class Manufacturing

MBT624-6	ERP
MBT624-7	Advanced Operation research
MBT624-8	Contract Management Practices
MBT624-9	Ergonomics in industrial Health & Safety Management
MBT624-10	Sourcing Management
MBT624-11	Productivity through Design and Measurement of Work
MBT624-12	Design and Analysis of Lean Production Systems.
<b>International Business</b>	
MBT625-1	International Financial Markets
MBT625-2	Foreign Exchange Management
MBT625-3	International Marketing
MBT625-4	Export Import Procedures
MBT625-5	International Economic Organizations
MBT625-6	India's Foreign Trade Policy
MBT625-7	Managing International Business Organizations
MBT625-8	International Logistics Management
<b>Entrepreneurship and Family Business</b>	
MBT626-1	Managing Human Capital
MBT626-2	Product and Brand Management
MBT626-3	Purchase and Material Management
MBT626-4	Advanced Management Accounting
MBT626-5	International Business
MBT626-6	Launching and Managing an Enterprise
MBT626-7	Buying an Existing Business
MBT626-8	Knowledge Entrepreneur
MBT626-9	Family Business Management
MBT626-10	Business Tax Planning
MBT626-11	Entrepreneurial Finance





MBT626-12	Logistics Management
MBT626-13	Social Entrepreneurship
MBT626-14	Technology Appreciation and Intellectual Property Rights
MBT626-15	Entrepreneurial Marketing
MBT626-16	Innovation Technology Management
<b>Management</b>	
MBT 627-1	Creativity and Innovation
MBT 627-2	Leadership Skills
MBT 627-4	Sociology
MBT 627-6	CSR & Sustainability
MBT 627-7	Indian Ethos
<b>Business &amp; Data Analytics</b>	
MBT 628-1	Analytics For Business
MBT 628-2	Technical Analysis & Report Writing
MBT 628-3	Data Visualization for Managers
MBT 628-4	Business Data mining
MBT 628-5	Data Analytics
MBT 628-6	Applied Econometrics
MBT 628-7	Customer Analytics
MBT 628-8	Statistics Using R
MBT 628-9	Data Mining Using Orange
MBT 628-10	Web Analytics
MBT 628-11	Power BI For Managers

<b>Information Technology</b>	
MBT 629-1	Synthesizing and analysing data
MBT 629-2	IT Organisation and Structure Design
MBT 629-3	Critical reasoning and system thinking
MBT 629-4	Costing Products and services
MBT 629-5	Strategic management
MBT 629-6	Bringing Ideas to Market
MBT 629-7	Software Project Management
MBT 629-8	Spreadsheet Essentials
MBT 629-9	Data presentation and visualization
MBT 629-10	Data Management and IT infrastructures
MBT 629-11	Legal aspects of IT Organisations



## Post Graduate Ordinance / Regulation 2020

Regulation No.	Description
<b>R 1. General</b>	
<b>R 1.1</b>	These regulations shall be called as the Regulations for the PG programmes of the Institute.
<b>R 1.2</b>	These regulations shall come into force with effect from the date of its approval by the Academic Council.
<b>R 2. Post Graduate Programmes</b>	
<b>R 2.1</b>	The Institute shall offer Post Graduate programmes as shown in Table 1.
<b>R 2.2</b>	The minimum duration of PG programmes leading to M.Tech. & MBA degree is of four semesters (spread over two years) and MCA degree is of fourth semesters (spread over two years). M. Tech (Part-time) degree is of five semesters (spread over two and half years). The duration for the PG programme may be altered in accordance with the decision of the Competent Authority.
<b>R 2.3</b>	Reservation of seats for admission to PG programmes shall be as per the norms of the Government for Minority Institutions.
<b>R 2.4</b>	Direct admission to second year MCA (lateral entry) shall be made as per norms and procedures of Government for Minority Institutions.
<b>R 2.5</b>	The candidate shall be provisionally admitted to PG programme subject to fulfillment of eligibility criterion as prescribed by the Competent Authority.
<b>R 2.6</b>	In the matter of admissions to the PG programmes, the decision of the Competent Authority shall be final.
<b>R 2.7</b>	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>	
<b>R 3.1</b>	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.
<b>R 3.2</b>	The curriculum may consist of credit course, audit course as recommended by the respective Board of Studies.
<b>R 3.3</b>	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, laboratory classes and field study if required.
<b>R 3.4</b>	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>	
<b>R 4.1</b>	Each PG programme will have a curriculum and course contents (syllabi) for the courses designed by the BOS and approved by Academic Council.
<b>R 4.1</b>	The curriculum for award of degree in various PG programmes is designed to have credits as under : M. Tech : 65-75 credits MBA : 93 credits MCA : 78 credits (Modified in Academic Council Meeting dated 28/08/2020)



## Programme Scheme & Syllabi, MBA (Integrated) Ordinance and Regulations

<b>R 4.3</b>	The total contact hours for PG programmes shall be as per norms prescribed by the Competent Authority.
<b>R 4.4</b>	The medium of instruction, examination and project reports will be English.
<b>R 4.5</b>	Every PG student will have to earn the credits by passing all the credit courses as specified in R6.
<b>R 5. Course and Department Codes</b>	
<b>R 5.1</b>	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) 5-7 for PG Programme. viz. : PG-CET5XX: CE- Civil Engineering, T-Theory, 5-First Year and XX-Course Number.
<b>R 6. Course Credits</b>	
<b>R 6.1</b>	Each credit course shall have an integer number of credits, which reflects its weight. The student earns credits by passing corresponding courses in minimum 'CC' grade. The number of credits of a course in a semester shall normally be calculated as under (however there may be some exceptions); (a) Lectures/ Tutorial: One lecture/ tutorial hour per week shall be assigned one credits. (b) Practical: One laboratory hour per week shall be assigned half credit. Not more than two credits may be assigned to a practical course having only laboratory component. (c) Projects and seminars in the PG programme shall be assigned credits as reflected in the respective schemes approved by the BOS and Academic Council. (Modified in Academic Council Meeting dated 25/04/2016)
<b>R7. Incentive to the Students for Achievement/ Participation in R &amp; D, SRC, Sports, NSS, NCC, TBI, T &amp; P, Swachh Bharat Internship, Co-curricular / Extra-curricular Activities</b>	
<b>R 7.1</b>	The achievement / participation of any undergraduate or postgraduate student (admitted to any UG or PG programme), in various co-curricular/ extra-curricular activities will be treated as additional course and shall be awarded incentive marks and grade points as follows from the academic year 2018-19. For award of incentive marks, student shall be required to submit an application with required proofs/certificates/endorsement received from respective Professor Incharge to the HoD of parent department. Evaluation of student for SRC, NCC/NSS/Sports, TBI, T&P, Swachh Bharat Internship shall be done by Dean-Student Affairs, HoD (Physical Education), Professor Incharge-III Cell, Dean- T&P and Nodal Officer-Swachh Bharat Internship respectively. Evaluation for achievement/participation in remaining activities, compilation of all incentive marks and submission of final incentive marks to CoE shall be done by parent department of the student. Summation of all incentive marks put together for different achievements/activities should not go above 100 marks in a semester. Students will not be eligible for incentive if any of the parameter for which the incentive marks are claimed by student, is a part of curriculum.





## Post Graduate Ordinance / Regulation 2020

The award of grade points based on absolute marks out of 100 shall be made as follows :

Grade Points	Range of Marks
10	91-100
9	81-90
8	71-80
7	61-70
6	51-60
5	41-50
4	31-40
0	Less than 31

The guidelines for award of incentive marks for all above activities are detailed as under:

**(A) R and D activities:** A student participating in Co-curricular Learning, Research and Consultancy is eligible for award of incentives as per the following table

Sr. No.	*Particular	Incentive Marks
<b>A</b>	<b>Co-curricular Learning :</b>	
**1	Offline or online certificate course of minimum 30 Hrs duration offered by IITs/ IIMs/ IIITs/ NITs/Department of Ministries, Govt. of India/MOOCs/ Premier organizations/Professional bodies (Course Passed/Course Attended).	80/60
**2	Offline or online certificate course of minimum 20 Hrs duration offered by IITs/ IIMs/ IIITs/NITs/Department of Ministries, Govt. of India/MOOCs/ Premier organizations/Professional bodies (Course Passed/Course Attended).	60/40
<b>B</b>	<b>Research/Consultancy Projects :</b>	
1	Winner in research/innovation competitions of repute, organized by IITs/IIMs/ IIITs/NITs/other institutes having NIRF rank/Departments of Ministries, Govt. of India/ Premier organizations/Professional bodies.	80
2	Participation in research/innovation competitions of repute, organized by IITs/ IIMs/ IIITs/ NITs/other institutes having NIRF rank/Departments of Ministries, Govt. of India/ Premier organizations/Professional bodies.	60
3	Participation in Research/Consultancy projects of the college.	60
4	Patent filed jointly with RCOEM.	100
<b>C</b>	<b>Research Publications :</b>	
1	Research Paper accepted for publication in journal indexed in Science Citation Index (SCI)/ Scopus / Emerging Sources of Citation Index (ESCI)	100



## Programme Scheme & Syllabi, MBA (Integrated) Ordinance and Regulations

2	Research Paper accepted for publication in Indexed journal other than SCI, SCOPUS, ESCI.	80
3	Research Paper accepted and presented in conference organized by IITs/ IIMs/ IIITs/NITs/other institutes having NIRF rank/Premier organizations/ Professional bodies.	60

- Student will not be eligible for incentive in case, if any of the above stated parameters is a part of curriculum.
- If more than one student is involved, the marks awarded will be divided equally amongst the students.
- \*\* Incentives shall be awarded subject to approval of the online/ offline MOOCs by the concerned department / passing of the examination conducted for that course in the environment created by that department.

**(A) Extra-curricular and T&P activities :** A student participating in extra-curricular activity is eligible for the award of incentives as per the following table:

**Extra-Curricular Activities :** Cultural Activities (For 362 Credit scheme and 160 credit scheme)

Sr. No	Activity	Incentive Marks
1	All office bearers of Departmental societies	40
2	Participation in Inter collegiate competitions (University)	60
3	Winners in Inter collegiate competitions (University)	80
4	SRC team	80
5	Participation in Inter University/National level competitions	100
6	Branch wise student placement coordinators (excluding central student placement committee)	40
7	Central student placement committee members	80

**(C) Sports/NSS/NCC activities:** The student participating in Sports/NSS/NCC related activity etc. is eligible for the award of incentives as per the following :

Sr. No	Parameter	Incentive Marks
1	Participation in Inter collegiate activities/NSS Regular Volunteer/NCC	51-60
2	Securing III/II/I Place in University, Sport -NSS Joint Secretary, Sports -NSS Secretary	71-80
3	West Zone/National level Participation (Sports/NSS/NCC)	100
4	Completion of Swachha Bharat Summer Internship (Allowed once per year)	100



**(D) TBI related activities :** The students participating in TBI related activities are eligible for the award of incentives as per the following.

Sr. No	Parameter	Incentive Marks
<b>A</b>	<b>Incubation Stages :</b>	
	i) Idea Pre-incubation Stage	40
	ii) Incubation Stage	60
	iii) Start-up Phase	80
<b>B</b>	Participation in Inter collegiate BP Competitions organised by IIMs/IITs and any other nationally renowned TBI/ Organization / Professional Bodies	60
	Participation and securing top 3 positions held at IIMs/IITs and any other nationally renowned TBI/ Organization/ Professional Bodies	80
<b>C</b>	i) RCOEM TBI Foundation core Committee	60
	ii) RCOEM TBI Foundation President/Vice President / Secretary/ Jt. Secretary	80
<b>D</b>	<b>Seed Funding Support Received for start-ups in Lakhs :</b>	
	i) 2 to 5 Lakhs	60
	ii) 5 to 10 Lakhs	80
	iii) 10 to 25 Lakhs	100
<b>E</b>	Selection for Incubation/acceleration phase at IIM/IITs/ Nationally Renowned TBI / acquisition by Venture Capatilist	100

**Note :** Incentives for start-up related activities shall be offered subject to fulfilment of the criteria and guidelines decided and revised by RCOEM TBI Foundation from time to time and after due scrutiny by Team TBI on case to case basis. *(Academic Council Meeting dt. 14th July 2018)*

<b>R 7.2 Incentives to the students participating in Industrial/ Corporate Training</b>																							
<b>R 7.2.1</b>	<p>The students admitted to the PG programme undergoing Industrial/Corporate training in listed / reputed companies / organizations having minimum duration of 4 weeks shall be eligible for award of additional grades as per the regulations.</p> <p>Guidelines for incentive credits to the Students Participating in Industrial / Corporate Training. Award of grades based on absolute mark system out of 100 is prepared. The same is converted to grade points and grades as below:</p> <table border="1" style="display: inline-table; margin-right: 20px;"> <thead> <tr> <th>Grade Point</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> </tbody> </table> <table border="1" style="display: inline-table;"> <thead> <tr> <th>Grade Point</th> <th>Range of Marks</th> </tr> </thead> <tbody> <tr> <td>5</td> <td>40-49</td> </tr> <tr> <td>4</td> <td>30-39</td> </tr> <tr> <td>3</td> <td>20-29</td> </tr> <tr> <td>0</td> <td>Below 20</td> </tr> </tbody> </table>	Grade Point	Range of Marks	10	90-100	9	80-89	8	70-79	7	60-69	6	50-59	Grade Point	Range of Marks	5	40-49	4	30-39	3	20-29	0	Below 20
Grade Point	Range of Marks																						
10	90-100																						
9	80-89																						
8	70-79																						
7	60-69																						
6	50-59																						
Grade Point	Range of Marks																						
5	40-49																						
4	30-39																						
3	20-29																						
0	Below 20																						



	<p>Various components for calculating the marks out of 100 are as below:- The students admitted to the PG programme undergoing Industrial/ Corporate training in listed/ reputed companies/ organizations having minimum duration of 4 weeks shall be eligible for award of additional grades as per the following table.</p> <p style="text-align: center;"><b>Industrial &amp; Corporate Training</b></p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Sr. No.</th> <th>Training undertaken at</th> <th>Marks</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>MNC/ Public Sector/ Large Scale Industry</td> <td>30</td> </tr> <tr> <td>2</td> <td>Small and Medium Enterprise</td> <td>20</td> </tr> </tbody> </table> <p><b>Note :-</b> A student must produce a certificate from the enterprise in which he / she has undertaken training, produce a report and give a presentation in order to be eligible for securing the marks.</p>	Sr. No.	Training undertaken at	Marks	1	MNC/ Public Sector/ Large Scale Industry	30	2	Small and Medium Enterprise	20
Sr. No.	Training undertaken at	Marks								
1	MNC/ Public Sector/ Large Scale Industry	30								
2	Small and Medium Enterprise	20								
<p><b>R 8. Academic Council</b> Academic Council shall be constituted as per the guidelines for autonomous colleges prescribed by UGC under plan 11 of para 8.</p>										
<p><b>R 8.1</b></p>	<p>Academic Council shall consist of</p> <ol style="list-style-type: none"> <li>1. Principal (Chairman)</li> <li>2. All Heads of the Departments in the Institute.</li> <li>3. Four teachers of the Institute representing different categories of teaching staff by rotation on the basis of seniority of service in the Institute.</li> <li>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.</li> <li>5. Three nominees of the university.</li> <li>6. A Faculty member nominated by the Principal (Member Secretary).</li> </ol>									
<p><b>R 8.2</b></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. There of, instructional and evaluation arrangements, methods, procedures relevant thereto etc.</li> </ol> <p>provided 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.</p> <ol style="list-style-type: none"> <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 regarding 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 from time to time thought necessary by the Principal and the Board.</li> </ol>									



<b>R 9. Course Coordination Committee</b>	
<b>R 9.1</b>	Every Head of the Department will appoint a coordination committee for each course/course group, which shall contain the senior departmental faculty related to the course/course group and invited members from other departments, institutes and industry, if required.
<b>R 10. Board of Studies (BOS)</b>	
<b>R 10.1</b>	<p>Every department shall have its own Board of Studies (BOS) to look after all matters pertaining to the programme offered by that department.</p> <p>Composition :</p> <ol style="list-style-type: none"> <li>Head of the department concerned (Chairman)</li> <li>The entire faculty of each specialization</li> <li>Two experts in the subject from outside the Institute to be nominated by the Academic Council.</li> <li>One expert to be nominated by the Vice Chancellor from a panel of six, recommended by the Principal.</li> <li>One representative from the industry / corporate sector/allied area relating to placement.</li> <li>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>Expert from outside the college whenever sufficient courses of studies are to be formulated.</li> <li>Other members of staff of the same faculty.</li> </ol> <p><i>Provided that in case of Applied Sciences the Chairman of the Board will be Head of the Department of Physics, Chemistry, Mathematics and Humanities by rotation. Remaining composition of the Board will be the same.</i></p>
<b>R 10.2</b>	<p><b>Functions :</b></p> <p>BOS of a department in the Institute shall :</p> <ol style="list-style-type: none"> <li>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>Suggest methodologies for innovative teaching and evaluation techniques ;</li> <li>Suggest panel of names to the Academic Council for appointment of examiners ; and</li> <li>Coordinate research, teaching, extension &amp; other academic activities in the department / institute.</li> </ol>
<b>R 10.3</b>	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 BOS 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. The Programme/Course Coordinator shall exercise the functions of the Chairman, of such ad-hoc BOS.
<b>R 11. Courses of Special Nature</b>	
<b>R 11.1</b>	<p><b>(a) Project</b></p> <p>A curriculum shall contain project/ mini project/ seminar, offered in the respective semesters of the concerned (M. Tech/ MBA/ MCA) PG programme. Credit component shall be assigned as per the availability of total credits for the respective semester of PG programme. Allotment</p>



	<p>of guide to the individual student shall be carried out by concerned department.</p> <p><b>(b) Offering an Elective</b> An elective course in a department shall run only if minimum of 30% 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>	
<b>R 12.1</b>	<p>(a) The 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) The 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) The 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>	
<b>R 13.1</b>	<p>Every student admitted shall have his/her unique Student ID. The Student ID of a student shall consist of alpha-numerals nnPPPSmmmPPPS where, nn: Indicates year of admission, PPP: Indicates programme, S: Indicates shift and mmm: Indicates serial number in a programme. Example, 15EEU1001EEU1; 15— year of admission, EEU— programme in which admitted, 1 — shift, 001—his serial number, EEU— programme in which admitted and 1 — shift. If his branch is changed to, let us say CS in second shift, then his ID will change as; 15EEU1001CSU2. Advantage of this is the first 9 alpha-numerals remain same throughout the course. Hence, in the software they can be used for his coding.</p>
<b>R 13.2</b>	<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>
<b>R 13.3</b>	<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> <p>In addition to registration at the beginning each year, a student shall, at the beginning of each semester (excluding the first semester), register for the courses opted by him/her within one week of the beginning of the session. <i>(Regulation introduced as approved in Academic Council in its meeting dated 25th April 2016).</i></p>



R 13.4	In-absentia registration may be allowed only in rare cases at the discretion of the Dean Academics in case of circumstances beyond the control of students.																																																							
R 13.5	<p>The number of attempts and promotion rules for all postgraduate programs for existing and incoming batches to be implemented from academic year 2018-19 and onwards shall be as follows. The attempts pattern tabulated below shall be implemented from 2018-19 followed by the implementation of promotion rules from 2019-20.</p> <p><b>(i) M. Tech (Two Year Programme):</b></p> <table border="1" data-bbox="367 520 1456 751"> <thead> <tr> <th>Semester</th> <th>Regular Winter</th> <th>Makeup Winter</th> <th>Regular Summer</th> <th>Makeup Summer</th> </tr> </thead> <tbody> <tr> <td>I</td> <td>Yes</td> <td>Yes</td> <td>---</td> <td>---</td> </tr> <tr> <td>II</td> <td>---</td> <td>---</td> <td>Yes</td> <td>Yes</td> </tr> <tr> <td>III</td> <td>Yes</td> <td>Yes</td> <td>Yes</td> <td>---</td> </tr> <tr> <td>IV</td> <td>Yes*</td> <td>---</td> <td>Yes</td> <td>Yes</td> </tr> </tbody> </table> <p><b>* As ex-student</b></p> <ul style="list-style-type: none"> <li>For being eligible to register for Semester III, student must have secured at least 60% of the total credits (rounded off to nearest lower integer) in first year (Semester I &amp; II together).</li> </ul> <p><b>Note:</b> Odd Semester course examinations will be conducted in odd semester &amp; Even Semester course examinations will be conducted in even semester with effect from 2018- 2019 except for third and fourth semester.</p> <p><b>(ii) M. Tech (Two and Half Year Programme)</b></p> <table border="1" data-bbox="367 1056 1456 1318"> <thead> <tr> <th>Semester</th> <th>Regular Winter</th> <th>Makeup Winter</th> <th>Regular Summer</th> <th>Makeup Summer</th> </tr> </thead> <tbody> <tr> <td>I</td> <td>Yes</td> <td>Yes</td> <td>---</td> <td>---</td> </tr> <tr> <td>II</td> <td>---</td> <td>---</td> <td>Yes</td> <td>Yes</td> </tr> <tr> <td>III</td> <td>Yes</td> <td>Yes</td> <td>---</td> <td>---</td> </tr> <tr> <td>IV</td> <td>Yes*</td> <td>---</td> <td>Yes</td> <td>Yes</td> </tr> <tr> <td>V</td> <td>Yes</td> <td>Yes</td> <td>Yes*</td> <td>---</td> </tr> </tbody> </table> <p><b>* As ex-student</b></p> <ul style="list-style-type: none"> <li>For being eligible to register for Semester III, student must have secured at least 60% of the total credits (rounded off to nearest lower integer) in first year (Semester I &amp; II together).</li> <li>For being eligible to register for Semester V, student must have earned all the credits offered in first year and at least 60% of the total credits (rounded off to nearest lower integer) in second year (Semester III &amp; IV together).</li> </ul>	Semester	Regular Winter	Makeup Winter	Regular Summer	Makeup Summer	I	Yes	Yes	---	---	II	---	---	Yes	Yes	III	Yes	Yes	Yes	---	IV	Yes*	---	Yes	Yes	Semester	Regular Winter	Makeup Winter	Regular Summer	Makeup Summer	I	Yes	Yes	---	---	II	---	---	Yes	Yes	III	Yes	Yes	---	---	IV	Yes*	---	Yes	Yes	V	Yes	Yes	Yes*	---
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## Programme Scheme & Syllabi, MBA (Integrated) Ordinance and Regulations

	<p>* As ex-student</p> <ul style="list-style-type: none"> <li>● For being eligible to register for Semester III, student must have secured at least 60% of the total credits (rounded off to nearest lower integer) in first year (Semester I &amp; II together).</li> </ul> <p style="text-align: right;"><i>(Academic Council Meeting dt. 14th July 2018)</i></p>
<b>R 13.6</b>	The student admitted for regular/part time PG course shall not undertake any course of study in any university/college/institution. The student admitted for regular PG course shall not undertake any full time employment during the period of the programme.
<b>R 13.7</b>	All courses in M. Tech. semester I and MBA semester I shall be compulsory ( a student shall not be allowed to take up additional course(s) or drop certain course(s) during the first semester) (Regulation introduced as approved in Academic Council in its meeting dated 25th April 2015)
<b>R 13.8</b>	<p>A student who has secured all credits offered upto semester - II in M. Tech., MCA Full time programme shall be eligible to take up courses of next semester (semester - III MCA programme) during the Summer Term.</p> <p>He/she shall complete the course work of theory and laboratory courses in the summer term along-with continuous assessment. However, such students will take the End Term or Make-up/Improvement Grade Examination along with other regular students (who have not done summer term), as and when it is conducted by the office of Controller of Examinations.</p> <p>The students undergoing summer term shall have to maintain minimum 75% attendance in the summer term failing which they may be detained and shall have to repeat the semester along-with other regular students. Students successfully completing the summer term shall have an option to undertake one year internship in industry or in reputed research organization or at IITs/IIITs or IISc, Bangalore subject to grant of permission by industry / organization where he/she intends to undertake internship and the approval from Chairman, Board of Studies of the respective board at RCOEM.</p> <p>Summer term shall be offered subject to availability of faculty and any other constraints.</p> <p style="text-align: right;"><i>(Modified in Academic Council Meeting Dt. 16th Sept. 2017)</i></p>
<b>R 13.9</b>	<p>A student who with a maximum CGPA of 6.5 (termed as slow learner) in M. Tech. programme shall have an option to drop maximum one compulsory course offered in the second semester. He/she shall have to take up this course in the forth semester. In case of M. Tech (Geotech), this option can also be exercised in the third semester; he/ she shall have to take up this course in the fifth semester.</p> <p style="text-align: right;"><i>(Modified in Academic Council Meeting dated 25/04/2016)</i></p>
<b>R 14. Equivalence and Absorption of students from University pattern</b>	
<b>R 14.1</b>	The students, from University pattern or non CBCS pattern, desirous of seeking admission to II semester and onwards wherever applicable in autonomous CBCS pattern, has to fulfill the prevailing ATKT norms of the University to become eligible for admission. However, such students have to clear backlog subjects (courses) if any, by appearing for the respective examinations of the college as per the absorption and equivalence scheme. In addition the





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	<p>student also has to register and pass new courses, if any, introduced in earlier semesters of the autonomous CBCS pattern. The norms of absorption/equivalence shall be decided by the Academic Council on the recommendations of the Equivalence Committee from time to time. (Modified in Academic Council Meeting dated 25/04/2016)</p>												
<b>R 14.2</b>	<p>While switching from University pattern/ Non CBCS pattern to autonomous pattern the CGPA of such student shall be calculated as per the table below.</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td>CGPA</td> <td>4.0</td> <td>5.0</td> <td>6.0</td> <td>7.0</td> <td>8.0</td> </tr> <tr> <td>Percentage</td> <td>40</td> <td>50</td> <td>60</td> <td>70</td> <td>80</td> </tr> </table> <p>The intermittent percentages should be calculated based upon the extrapolation of the values in the table. (Modified in Academic Council Meeting dated 25/04/2016)</p>	CGPA	4.0	5.0	6.0	7.0	8.0	Percentage	40	50	60	70	80
CGPA	4.0	5.0	6.0	7.0	8.0								
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<b>R 14.3</b>	<p>When a student switches from a University/ Non CBCS pattern to the CBCS pattern, the additional courses offered in previous semester of that programme in CBCS pattern of the institute and not covered in the corresponding University/ NON CBCS curriculum, such additional courses shall be treated as audit courses and he/ she will have to earn 'Satisfactory Grade' in those courses. Provided that he/ she clears all the equivalent courses in lieu of the backlog subjects in university pattern and earns 'Satisfactory' grade for the additional courses in autonomous pattern, which are not covered in university pattern, prior to switch over. (Modified in Academic Council Meeting dated 25/04/2016)</p>												
<b>R 14.4</b>	<p>For direct admission to second year MCA as well as transfer (lateral entry) for PG courses, the calculation of CGPA and award of credits shall be governed by R 14.2 and R 14.3. Provided, in case of MCA, the percentage of diploma certificate shall be considered for the absolute grading system instead of the first year.</p>												
<b>R 14.5</b>	<p>The students from any University/ NON CBCS Autonomous college desirous of seeking admission to III/V 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. (Modified in Academic Council Meeting dated 25/04/2016)</p>												
<b>R 15. Discipline and Conduct</b>													
<b>R 15.1</b>	<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>												
<b>R 15.2</b>	<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> </ol>												



## Programme Scheme & Syllabi, MBA (Integrated) Ordinance and Regulations

	<p>f) Hacking in Computer system, either hardware or software or both;</p> <p>g) Any other act considered by the Institute as a gross indiscipline.</p>
<b>R 15.3</b>	Any act of student's indiscipline will be addressed by Discipline Committee duly constituted and notified by the Principal. The Committee will enquire into the charges of indiscipline and recommend appropriate measures/punitive action to the Principal. The Discipline committee may inform the recommendations to the students. Decision of the Principal would be final.
<b>R 15.4</b>	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.
<b>R 15.5</b>	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.
<b>R 15.6</b>	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.
<b>R 15.7</b>	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.
<b>R 15.8</b>	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.
<b>R 15.9</b>	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.
<b>R 16. Attendance, Absence, Leave Rules and Dismissals</b>	
<b>R 16.1</b>	All the students are expected to be present in every lecture, practical, NCC/NSS/CSP/Games & Sports/Yoga scheduled for them. Attendance will be closely monitored during a semester as per the guidelines.
<b>R 16.2</b>	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 the Head of the concerned department as the case may be and they in turn will inform the same to the Office of Dean Academics.
<b>R 16.3</b>	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 Head of the Department 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.
<b>R 16.4</b>	A student must have an overall 75% attendance of the total number of classes including lectures/tutorials and practicals. For want of attendance a student is not permitted to appear for the end semester examination in the semester in which the shortfall exists, his/her registration for that semester will be treated as cancelled, and 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.



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<b>R 16.5</b>	<p>Condonation of Attendance: Condonation of attendance can only be considered in case the overall attendance of the student is minimum 60%.</p> <p>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.</p> <p>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. (Modified regulation as approved by Academic Council in its meeting dated 25th April 2015).</p>
<b>R 16.6</b>	<p>In case the overall attendance is below 60 %, his/her attendance in individual courses shall be considered. If in any course his/her attendance is minimum 60%, he/she shall be eligible to appear in end semester examination of that course.</p> <p>However the decision in this matter will be finally taken by the Principal. (Modified regulation as approved by Academic Council in its meeting dated 25th April 2015).</p>
<b>R 16.7</b>	<p>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.</p>
<b>R 17. Withdrawals</b>	
<b>R 17.1</b>	<p>A student who wants to withdraw from a semester shall apply through the Head of the Department 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.</p>
<b>R 17.2</b>	<p>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 Head of the Department for withdrawal from the semester.</p> <p>However, such application shall be made as early as possible and latest before the start of the End Semester Examination.</p>
<b>R 17.3</b>	<p>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 Head of the Department, as early as possible and latest before the beginning of End Semester Examination.</p>
<b>R 17.4</b>	<p>The Maximum duration for completion of a PG degree programme will be of five years for M.Tech / MBA / MCA and M.Tech (Part Time). Final decision will be taken by the competent authority.</p> <p>In case, a student is absorbed in autonomy from university, the maximum duration for completion of PG degree programme will be twice the remaining duration of the programme.</p> <p>In case, the student is unable to complete a programme as per the duration mentioned above, the student may be declared as not fit for Post Graduate technical education on the recommendation of Academic council.</p>



<p><b>R18. Examination Scheme</b></p> <p><b>1) Examination Scheme (For All UG Programs, M.Tech, MCA and MBA(Integrated)):</b></p> <p>In a semester, a student shall be evaluated for his/her academic performance in a theory (Lecture/Tutorial) course through Continuous Evaluation and End Semester Examination. All the examinations shall be conducted as per the syllabi prescribed by the respective BOS and approved by the Academic Council.</p>	
a)	For Theory courses, out of total 100% weightage, 40% shall be based on continuous evaluation of which 30% evaluation shall be through Tests and 10% shall be by Teachers' assessment of students' performance. Remaining 60% evaluation shall be based on End Semester Examination.
b)	For Laboratory courses, out of total 100% weightage, 50% shall be based on continuous evaluation and 50% evaluation shall be based on End Semester Examination or as per scheme.
c)	Teachers' assessment of students' performance covering 10% evaluation shall be done on the basis of any two heads such as home assignment, tutorials, open-book test, seminars, group discussion, project, quizzes etc. The Course Coordinator shall declare the two heads chosen for each course, within the date prescribed by the Dean Academics.
d)	The marks on attendance if awarded as a part of Teachers' assessment, shall be given to those students having attendance more than or equal to 75% in that course. This will be applicable for existing and forthcoming batches with effect from 2018-19.
e)	End Semester examination shall be conducted as per schedule in academic calendar. End Semester examination 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 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><b>2) Examination Scheme (For MBA Program):</b></p> <p>In a semester, a student shall be evaluated for his/her academic performance in a theory (Lecture/Tutorial) course through Continuous Evaluation and End Semester Examination. All the examinations shall be conducted as per the syllabi prescribed by the respective BOS and approved by the Academic Council.</p>	
a)	For Theory courses, out of total 100% weightage, 40% shall be based on continuous evaluation which will be carried out by conducting two internal tests of weightage 20% each and Teachers' assessment of weightage 20%. Best one out of these two tests and Teachers' assessment of 20% weightage shall contribute towards total 40% of continuous assessment. Remaining 60% evaluation shall be based on End Semester Examination.
b)	For Laboratory courses, out of total 100% weightage, 50% shall be based on continuous evaluation and 50% evaluation shall be based on End Semester Examination or as per scheme.
c)	Teachers' assessment of students' shall be done on the basis of any two heads such as home assignment, tutorials, open-book test, seminars, group discussion, project, quizzes etc. The Course Coordinator shall declare the two heads chosen for each course, within the date prescribed by the Dean Academics.



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d)	The marks on attendance if awarded as a part of Teachers' assessment, shall be given to those students having attendance more than or equal to 75% in that course. This will be applicable for existing and forthcoming batches with effect from 2018-19.
e)	End Semester examination shall be conducted as per schedule in academic calendar. End Semester examination 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 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.
<b>R 18.2</b>	A student who skips teachers' assessment or a part thereof shall be awarded zero marks under the respective head.
<b>R 18.3</b>	<p>A student who remains absent for End Semester examination, shall be awarded 'I garde' in end semester examination. A student 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. <b>Make- up examination shall be held for the regular End Semester Examination only.</b></p> <p>However, in exceptional cases, a student who is in the final year of a programme and has cleared semester III and Semester IV (ie He/She has earned all the credits offered in Semester III and Semester IV as well as has secured 'SF' grade in the audit courses offered in these semesters as per the scheme of examination) of M.Tech MCA / MBA programme, but has secured 'FF' or 'I' grade in the preceding semesters, then such student shall be eligible to appear for the Make-up examination conducted for such courses.</p> <p style="text-align: right;"><i>(Modified in Academic Council Meeting dated 21/08/2019)</i></p>
<b>R 18.4</b>	A student shall be evaluated for his / her academic performance in a practical course on the basis of continuous evaluation and end semester practical examination or as per scheme.
a)	Continuous assessment covering 50% evaluation on the basis of his / her performance in each practical examination, journal completion & viva-voce/ objective examination.
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.
<b>R 18.5</b>	The seminar/ open defense wherever applicable, 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.
<b>R 18.6</b>	Project work shall be evaluated by mid-term seminar(s), the quality of work carried out, project report submission and the viva-voce examination.
<b>R 18.7</b>	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.



<b>R 18.8</b>	<p>An examinee securing 'FF' or 'Z' grade in any course of an examination of a 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 in case he/she is appearing for the successive attempts at the examination as an ex-student for that particular course. The option of forego cannot be availed by examinee in an examination in case 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. It cannot be reverted.</p> <p>(Modified regulation as approved by Academic Council in its meeting dated 15th April 2014). 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> <ol style="list-style-type: none"><li>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.</li><li>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.</li></ol> <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 18.9</b>	<p>For Non-CBCS courses (compulsory/ elective/any other course) of PG programmes which were closed before academic year 2017-18, the students will be allowed maximum four consecutive available attempts starting from Regular Winter 2017 examination (as and when conducted) to pass the backlog non-CBCS courses whereas for the non-CBCS courses closed from academic year 2017-18 onwards, maximum four consecutive available attempts starting immediately after the closure of the course (as and when the examination is conducted) will be provided. There after, the end semester evaluation pattern / conduction method shall be decided by the respective board of Studies for such courses only. On successful completion of the course as per the evaluation method decided by BOS, the student shall be awarded grade not higher than 'BC' based on his/her performance.</p> <p>For the courses (compulsory/ elective/any other course) of all PG and UG programmes which are closed by the respective department in a semester before 2017-18 academic session, maximum four consecutive available attempts will be provided starting from Regular Winter 2017 examination (as and when the examination is conducted) to pass these courses. There after, the end semester evaluation pattern / conduction method shall be decided by the respective Board of Studies for such courses only. On successful completion of the course as per the evaluation method decided by BOS, the student shall be awarded grade not higher than 'BC' based on his/her performance.</p> <p>For the courses (compulsory/ elective/any other course) of all PG and UG programmes which are closed by the respective department in a semester from 2017-18 academic session and</p>



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	<p>onwards, after the immediate make-up examination, maximum four consecutive available attempts will be provided (as and when the examination is conducted) to pass these courses. There after, the end semester evaluation pattern / conduction method shall be decided by the respective Board of Studies for such courses only. On successful completion of the course as per the evaluation method decided by BOS, the student shall be awarded grade not higher than 'BC' based on his / her performance.</p> <p style="text-align: right;"><i>(Academic Council Meeting Dt. 16th Sept. 2017 &amp; 14th July 2018)</i></p>
<b>R 19. The Grading System</b>	
<b>R 19.1</b>	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.
<b>R 19.2</b>	The academic performance of a student shall be graded on a ten-point scale following guidelines in Table 2.
<b>R 19.3</b>	The letter Grades (up to 'CC' only) awarded to a student in all the courses shall be converted into a SGPA and CGPA, to be calculated as given in R 28.
<b>R 19.4</b>	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.
<b>R 19.5</b>	A student passing a course in Makeup examination shall be treated as having cleared the course in First Attempt.
<b>R 19.6</b>	In case the 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 20. Grade Moderation Committee</b>	
<b>R 20.1</b>	The Grade Moderation Committee for the programmes 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.
<b>R 21. Award of Degree</b>	
<b>R 21.1</b>	<p>The Grade Moderation Committee for the programmes shall be appointed semester wise by the Chairman, BOS. Chairman BOS shall be the Chairman of Grade Moderation Committee. This committee shall be responsible for adherence to the guidelines for the award of grades and shall include all Professors in the Department, Programme Coordinators/ Departmental Examination Committee (DEC) in-charge and 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.</p> <p><i>(Modified in Academic Council Meeting dated 25/04/2016)</i></p> <p>The degree shall be awarded by Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur along with the name of the college, on the recommendations of Academic Council of RCOEM, Nagpur.</p>



<b>R 22. Grade Card</b>																	
<b>R 22.1</b>	The grade card shall be issued at the end of the semester to each student and will contain the following : a) The credits for each course registered for that semester. b) The grade points and letter grades obtained in each course. c) The total number of credits earned by the student up to the end of that semester in each of the course. d) The SGPA and the CGPA.																
<b>R 22.2</b>	Grade card will not indicate class or division or rank.																
<b>R 22.3</b>	Wherever required the conversion of CGPA to percentage of marks will be done using following table. <table border="1" style="margin-left: auto; margin-right: auto;"> <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
CGPA	4.0	5.0	6.0	7.0	8.0	9.0	10.0										
Percentage	40	50	60	70	80	90	100										
<b>R 23. Minimum Requirements for the Award of the Degree</b>																	
<b>R 23.1</b>	The student should have taken and passed all the prescribed courses including seminar/ open defense and projects under the general institutional and departmental requirements.																
<b>R 23.2</b>	A student who fails to obtain the minimum specified CGPA (as per teaching and Examination scheme of respective programme) required for the award of degree as per norms, he/she 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 17.4 and R 24.1.																
<b>R 23.3</b>	The credits for the courses in which a student has obtained 'CC' 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 24. Extension of Maximum Period for Completion of a programme</b>																	
<b>R 24.1</b>	The maximum duration for any programme may be extended for genuine cases and unavoidable circumstances only, as verified by concerned BOS Chairman and a Special Power Committee at central level and approved by Academic Council. Genuine cases on confirmation of valid reasons may be subjected to the said procedure. The decision of academic bodies will be final. (Modified in Academic Council Meeting Dt. 16th Sept. 2017)																
<b>R 25. Award of Medals/ Scholarships</b>																	
<b>R 25.1</b>	Awards available under excellent performances in sports, cultural, extra-curricular, debate, etc. shall be given to the students as per prevailing norms.																





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<b>R 25.2</b>	The award of scholarships / freships and other benefits will be in accordance with rules framed by the Government of Maharashtra and Govt. of India.
<b>R 25.3</b>	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.
<b>R 25.4</b>	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 25.5</b>	A student availing the option to drop a course under provisions of R 13.9 shall not be eligible for award of merit/medals conferred by the college for academic excellence. <i>(Regulation introduced as approved in Academic Council in its meeting dated 25th April 2015).</i>
<b>R 26. Interpretation of Regulations</b>	
<b>R 26.1</b>	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.
<b>R 27. Academic Calendar</b>	
<b>R 27.1</b>	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.
<b>R 28. Calculation of SGPA and CGPA</b>	
<p>(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.</p> <p>Where,</p> $SGPA = \frac{\sum_{i=1}^n C_i P_i + C_a P_a}{\sum C_i}$ <p><math>C_i</math> = The number of credits offered in the <math>i</math>th course of a semester for which SGPA is to be calculated <math>P_i</math> = Grade Point earned in the <math>i</math> course <math>i = 1, 2, \dots, n</math> represent the number of courses in which a student is registered in the concerned semester <math>C_a = 1</math> ; Incentive credit per activity <math>P_a</math> = Grade point for participating in activities NCC/NSS/Games &amp; sports/Cultural Activities/ACEES. SGPA is rounded up to two decimal places and SGPA shall not exceed 10.</p>	



**(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.

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

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  $j$  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

$C_{br}$ ; Incentive credit in semester

$P_{br}$  = Grade point for participating in industrial/ corporate training.

$r$  = number of semester of participation CGPA is rounded up to two decimal places and shall not exceed 10.

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

Following are the general guidelines for the award of grades:

- (i) In general standard relative grading system will be followed.
- (ii) For each student, evaluation in different components of a course shall be done in absolute marks considering the weightage in scheme.
- (iii) 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.
- (iv) The provisional grades shall be awarded by the Examination Committee. The grades shall be finalized within fifteen working days after the End Semester Examination.
- (v) The grades so awarded shall be moderated by a Grade Moderation committee for that semester of the department 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.
- (vi) 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.





<p><b>R.29.1 Standard</b></p>	<p><b>Relative Grading System</b></p>																					
	<p>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 (<math>\bar{x}</math>)</p> $X = \frac{\sum_{i=1}^n X_i}{n}$ <p>Formula for Standard Deviation(s)</p> $s = \sqrt{\frac{\sum_{i=1}^N (x_i - \bar{x})^2}{N-1}}$ <p>For PG Courses having 30 or more students</p> <table border="1" data-bbox="509 766 1336 1087"> <thead> <tr> <th>Grades</th> <th>Grade Points</th> <th>Range for Grade Calculation</th> </tr> </thead> <tbody> <tr> <td>AA</td> <td>10</td> <td><math>\geq x + 1.5 s</math></td> </tr> <tr> <td>AB</td> <td>9</td> <td><math>&lt; AA \text{ and } \geq x + 1.0 s</math></td> </tr> <tr> <td>BB</td> <td>8</td> <td><math>&lt; AB \text{ and } \geq x + 0.25 s</math></td> </tr> <tr> <td>BC</td> <td>7</td> <td><math>&lt; BB \text{ and } \geq x - 0.5 s</math></td> </tr> <tr> <td>CC</td> <td>6</td> <td><math>&lt; BC \text{ and } \geq x - 1.0 s</math></td> </tr> <tr> <td>FF</td> <td>0</td> <td><math>&lt; x - 1.0 s</math></td> </tr> </tbody> </table>	Grades	Grade Points	Range for Grade Calculation	AA	10	$\geq x + 1.5 s$	AB	9	$< AA \text{ and } \geq x + 1.0 s$	BB	8	$< AB \text{ and } \geq x + 0.25 s$	BC	7	$< BB \text{ and } \geq x - 0.5 s$	CC	6	$< BC \text{ and } \geq x - 1.0 s$	FF	0	$< x - 1.0 s$
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<p><b>R.30 Guidelines</b></p>	<p><b>for Project Evaluation</b></p>																					
<p><b>R.30.1</b></p>	<p><b>M. Tech. :</b></p> <ul style="list-style-type: none"> <li>• 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, software design, fabrication and setup of new equipment.</li> <li>• The PG Coordinator appointed by the department normally assigns the project towards the end of the II semester full time M. Tech course/III semester part time M. Tech. course and the work is done uniformly during the last two semesters of the programme.</li> <li>• The first phase of project work to be carried out in III semester in case of full time M. Tech. which will be assessed at the end of the semester under the project phase-I.              The report of the project work should be submitted by the prescribed date. A panel of examiners will evaluate the report and the presentation of the work carried out at the end of the semester.</li> <li>• The first phase of project work to be carried out in IV semester in case of part time M. Tech. which will be assessed at the end of the semester under the project phase-I.              The report of the project work should be submitted by the prescribed date. A panel of examiners will evaluate the report and the presentation of the work carried out at the end of the semester.</li> </ul>																					





	<ul style="list-style-type: none"><li>• The assessment of the project phase-II work is evaluated on the following basis;<ul style="list-style-type: none"><li>- The 1st stage of progressive project work carries 30% of the total weightage,</li><li>- The 2nd stage of progressive project work carries 30% of the total weightage,</li><li>- The final stage of project work carries 40% weightage,</li><li>- 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.</li></ul></li><li>• 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.</li><li>• Submission of the final project report cannot be postponed beyond the date specified in the calendar. If the final project work cannot be completed due to valid reasons, the course can be dropped in consultation with the Head of the Department, PG 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.</li><li>• Student who does not submit the final project report for assessment by the due date, due to unavoidable circumstances beyond his/her 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 final project report and undergo the examination as per syllabi notified by PG coordinator in consultation with Head of the Department. In case of non-compliance of these provisions, 'I' grade shall automatically be converted into 'F' grade.</li></ul>
<b>R.30.2 MBA</b>	
	<p><b>Project Evaluation Guidelines</b></p> <ul style="list-style-type: none"><li>• Every student has to undertake a project of professional interest. The project has to be related to the area of specialization, the student has opted in Semester III. The project may be related to study and analysis related to the working in the business organizations in the area of Operation Management, Financial Management, Marketing Management, Human Resource Management and other Management related areas. The student is expected to apply appropriate research tools to analyze the data to draw meaningful conclusions and suggestion</li><li>• The first phase of project work will be carried out in 3rd semester by a project defining seminar, where student will define title, scope and objective of the project. The final project report should be submitted by the prescribed date. A panel of examiners will evaluate the report and project defense seminar and viva-voce which will be conducted after the End Semester Examination. The project assessment will be carried out by internal and external examiners. The 50% weightage will be assigned to internal assessment done by Project Guide. The remaining 50% weightage will be assigned to external assessment done by external examiner.</li><li>• <b>Internal Assessment 50%</b> This internal assessment will be carried out by Project Guide based on student's demonstration of initiative, interest, efforts, regularity, research work, data collection, data analysis, statistical tools used and result obtained.</li><li>• <b>External Assessment 50%</b> The external assessment will be done by external examiner for 50% weightage based on project work presentation, defence seminar and oral examination.</li></ul>





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	<ul style="list-style-type: none"><li>• Submission of the project cannot be postponed beyond the date specified in the calendar. If the project could not be completed due to valid reasons, the course can be dropped in consultation with the Head of the Department 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.</li><li>• 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 Head of the Department. In case of non-compliance of these provisions, "I" grade shall automatically be converted into "FF" grade.</li></ul>
<b>R.30.3 MCA</b>	
	<ul style="list-style-type: none"><li>• Every student has to undertake a minor project in III semester and a full time industrial project in III semester 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, software design. The Project Coordinator appointed by the department normally assists in getting industrial project and assigns the project towards the end of the previous semester.</li><li>• The final project report for both III and III semesters should be submitted (along with the certificate from the industry, in case of industrial project) by the prescribed date. A panel of examiners evaluates the report and an oral examination is conducted after the End Semester Examination.</li><li>• The assessment of the project work is done on the following basis.<ul style="list-style-type: none"><li>- The preliminary presentation carries 25% of the total weightage.</li><li>- Another 25% weightage is given for the initiative, interest, effort and regularity shown by the student.</li></ul>The remaining 50% weightage is assigned to the oral examination conducted by the Panel of Examiners.</li><li>• 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 Head of the Department, 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.</li><li>• Student who does not submit the project report for assessment by the prescribed 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 examination as per syllabi notified by project coordinator in consultation with Head of the Department. In case of non-compliance of these provisions, 'I' grade shall automatically be converted into 'FF' grade.</li></ul>





<b>R 32. Indication of attempt on grade card</b>	<p>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'. The student will have to separately apply to the Controller of Examination for the single semester Grade Card with copies of all the intermediate semester Grade Card along with a fees decided by the Finance Committee.</p> <p>M - With Makeup Examination N - Not in the First Attempt IG - Improvement Grade</p>
<b>R 33. (a) Improvement of Grade/CGPA while undertaking a Programme</b>	<p>Student shall be permitted to improve their grade under the following conditions.</p> <ol style="list-style-type: none"><li>1. The examination for improvement of grades shall hereafter be termed as 'Improvement Examination'.</li><li>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.</li><li>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 15th April 2014).</li><li>4. The improvement is possible only in theory papers. No improvement is permissible in practicals/lab courses, projects, workshops and assignments.</li><li>5. The improvement examination shall be conducted along with the Makeup Examination.</li><li>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.</li><li>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.</li><li>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.</li><li>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.</li><li>10. Student having undertaken Improvement Examination will not be eligible for the award of any medal/merit position.</li><li>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.</li><li>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.</li></ol>





## Post Graduate Ordinance / Regulation 2020

<b>R 33. (b) Improvement of Grade/CGPA after successful completion of a Programme</b>	
	<ol style="list-style-type: none"><li>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.</li><li>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.</li><li>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.</li><li>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/her appearance.</li><li>5. A candidate appearing for the improvement of CGPA shall not be entitled to get any prize/ medal/ scholarship/award etc.</li><li>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.</li><li>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.</li><li>8. Candidate will not be allowed to change any paper or papers which he/she had opted for improvement at subsequent reappearances. Further, all the papers of reappearance shall have to be cleared at one and the same sitting.</li><li>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.</li><li>10. Each examination for which candidate appears for improvement shall be considered as one attempt. 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.</li><li>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.</li><li>13. A candidate shall be issued revised grade card only after he/she surrenders his /her original grade cards to the College.</li><li>14. In the revised grade card, mention will be made of the fact that he/she has improved his/her CGPA under this Ordinance.</li><li>15. On award of a fresh grade card under this scheme, his/her previous grade card shall be treated as cancelled.</li><li>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.</li><li>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</li></ol>





## Programme Scheme & Syllabi, MBA (Integrated) Ordinance and Regulations

	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 15th April 2014).</i>
<b>R 34. Emergent Cases</b>	
<b>R 34.1</b>	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.
<b>R 35. Power to Modify</b>	
<b>R 35.1</b>	Notwithstanding all that has been stated above, the Board has the right to modify any of the above regulations from time to time.
<b>R36 Swachha Bharat Summer Internship for UG &amp; PG Students :</b>	
	Student who completes the Swachha Bharat Summer Internship as per the guidelines of Ministry of Human Resource Development, Department of Higher Education, Government of India (as communicated through the websites of UGC, New Delhi and AICTE, New Delhi) and submits a copy of Swachha Bharat Internship Certificate to Head of parent department through Nodal Officer shall be eligible to get incentives as per the regulation.
<b>R 37. One Semester, RCOEM Technology Business Incubation (TBI) Start-up Internship Scheme:</b>	
	<p>RCOEM TBI Foundation Start-up scheme will be available to MBA, MBA (Integrated), MCA students of RCOEM during the last semester of respective programs. For eligibility, students should (i) be eligible for admission in Final semester/year and (ii) had undergone various training sessions/programs organized by RCOEM TBI Foundation and had continually presented/shown progress through predefined time bound activities prior to the commencement of final semester. This scheme will incorporate the Academic component and Start-up component. The academic component will be completed in the respective department of the institute before the student is relieved for Start-up.</p> <p>For students admitted in the program having scheme/curriculum existing before 2018- 19, the academic component will include conduction of classes and internal evaluation of compulsory Theory and Lab courses of Final semester to be held during the Winter Term prior to Final Semester. For students admitted in the program having scheme/curriculum implemented progressively from 2018-19 onwards, the academic component will include conduction of classes and internal evaluation of All the theory and lab courses of Final semester to be held during Winter Term prior to Final Semester. In both cases, minimum 75% student attendance during Winter term shall be mandatory and such students will appear for End Semester Examination along with other regular students of Final semester as per the time-table provided by the institute.</p> <p>The Start-up component will include working on various aspects of startups like, market survey / customer identification, validation / technology / product / service development/business model/business plan/MVP/ detailed project report. It will be conducted and evaluated by RCOEM TBI Foundation in coordination and consultation with the Head of concerned department. For students admitted in the program having scheme/curriculum existing before 2018-19, the Start-up component will cover the Electives and Project work of Final Semester where as for students admitted in the program having</p>







## Post Graduate Ordinance / Regulation 2020

	<p>scheme/curriculum implemented progressively from 2018-19 onwards, the Start-up component will cover only the Project work of Final Semester.</p> <p>There will be one Internal Mentor and One External Advisor assigned for each Start-up. The RCOEM TBI Foundation and Head of respective department will assign an internal mentor who in association with RCOEM TBI Foundation will continually monitor and evaluate the progress of each startup. The External Advisor shall be identified and assigned by RCOEM TBI Foundation.</p> <p>This Startup scheme during Final Semester shall be offered subject to fulfillment of selection criteria by the student as decided and revised by RCOEM TBI Foundation, permission granted by RCOEM TBI Foundation and Head of respective department at RCOEM. The process of selection shall start by submission of application by the student in the beginning of Pre Final Semester (as notified by RCOEM TBI Foundation)</p>
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**Table -1: PG Programmes Leading to Master's Degree**

Sr. No.	Department	Programme Title	Programme Code
1	Civil Engineering	M. Tech. (Geotechnical Engineering) (Part-time)	CEG
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 and Engineering)	CSE
7	Mechanical Engineering	M. Tech. (Robotics and Automation)	RAA
8	Computer Applications	M.C.A.	MCA
9	Management Technology	MBA	MBA

**Table 2: Structure of Relative Grading of Academic Performance (PG)**

Academic Performance	Grades	Grade Points
Outstanding	AA	10
Excellent	AB	9
Very Good	BB	8
Good	BC	7
Average	CC	6
Poor	FF	0
Incomplete	I	--
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.
- For the elective courses in which 'FF' or I 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 absence in End Semester Examination

#### 'W' Grade

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

#### 'X' Grade

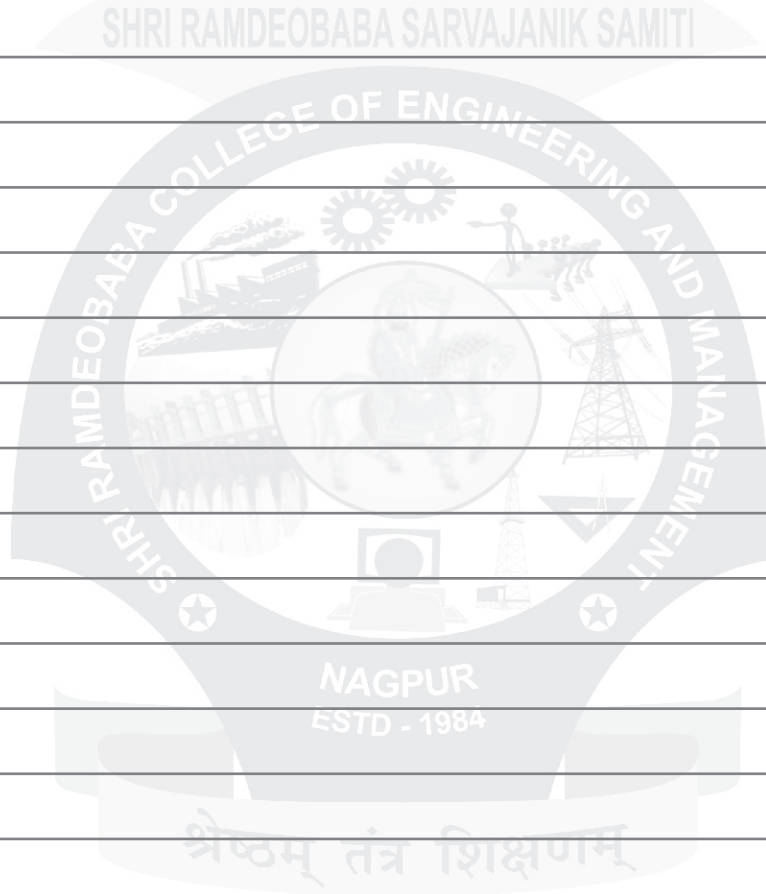
This grade is awarded for incomplete Project work only and will be converted into an earned grade in the subsequent academic session on the completion of the Project work and its evaluation.

#### 'Z' Grade

This grade stands for non-completion of course requirement.



# NOTES



# NOTES

