

Programme Specifications

B. Tech. Programme



Programme: Civil Engineering
Department: Civil Engineering

Faculty of Engineering & Technology
M. S. Ramaiah University of Applied Sciences

University House, New BEL Road, MSR Nagar, Bangalore – 560 054

www.msruas.ac.in

PROGRAMME SPECIFICATIONS: CIVIL ENGINEERING

Faculty	Engineering and Technology (FET)
Department	Civil Engineering
Programme	Civil Engineering
Dean of Faculty	Prof. H. K. Narahari
Head of Department	Prof. H.M. Rajashekhar Swamy

1	Title of the Award B. Tech. in Civil Engineering
2	Mode of Study Full Time
3	Awarding Institution /Body M.S. Ramaiah University of Applied Sciences
4	Joint Award Not Applicable
5	Teaching Institution Faculty of Engineering and Technology, M.S. Ramaiah University of Applied Sciences
6	Date of Programme Specifications February 2014
7	Date of Programme Approval by the Academic Council of MSRUAS June 2014
8	Next Review Date: March 2018
9	Programme Approving Regulating Body and Date of Approval --
10	Programme Accredited Body and Date of Accreditation --
11	Grade Awarded by the Accreditation Body --
12	Programme Accreditation Validity --
13	Programme Benchmark N/A
14	Rationale for the Programme Civil Engineering is primarily infrastructure development involving planning, design, construction, and operation of facilities essential to modern life, ranging from transit systems to offshore structures to space satellites. Major disciplines within Civil Engineering that are closely interrelated are Structural, Environmental, Geotechnical, Water Resources, Transportation, Construction and Urban planning. Until recently Civil Engineering teaching was limited to planning, analysis, design and execution of different types of infrastructure like buildings, roads, bridges, dams and power plants. However, increasing technological sophistication and demand for higher living standards fuelled by economic growth and concerns about environmental impact have changed the scope of Civil Engineering curriculum. The challenges of today's Civil Engineering infrastructure are much more complex including reducing carbon emission and interdependencies between resources.

	<p>Even though there are a large number of institutions world over which are producing Civil Engineers, there is a shortage of quality Civil Engineering graduates. The FET at MSRUAS would like to offer Civil Engineering programme to produce imaginative, creative and innovative Civil Engineers who are effective and efficient problem solvers providing economical and sustainable infrastructural solutions.</p>
15	<p>Programme Mission</p> <p>The purpose of the programme is creation of innovative problem solvers in multi-disciplinary settings, entrepreneurs and leaders applying the knowledge, understanding, cognitive abilities practical skills and transferrable skills gained through systematic, flexible and rigorous learning in the chosen academic domain</p>
16	<p>Graduate Attributes</p> <ol style="list-style-type: none"> 1. Ability to apply knowledge of mathematics, science, and Engineering fundamentals to solve complex problems in engineering 2. Ability to analyse engineering problems, interpret data and arrive at meaningful conclusions involving mathematical inferences 3. Ability to design an engineering system, component, or process to meet desired needs considering public health and safety, and the cultural, societal, and environmental considerations 4. Ability to understand and solve complex engineering problems by conducting experimental investigations 5. Ability to apply appropriate tools and techniques and understand utilization of resources appropriately to complex engineering activities 6. Ability to understand the effect of engineering solutions on legal, cultural, social and public health and safety aspects 7. Ability to develop sustainable solutions and understand their effect on society and environment 8. Ability to apply ethical principles to engineering practices and professional responsibilities 9. Ability to work as a member of a team, to plan and to integrate knowledge of various engineering disciplines and to lead teams in multidisciplinary settings 10. Ability to make effective oral presentations and communicate technical ideas to a broad audience using written and oral means 11. Ability to lead and manage multidisciplinary teams by applying engineering and management principles 12. Ability to adapt to the changes and advancements in technology and engage in independent and life-long learning
17	<p>Programme Goal</p> <p>The programme goal is to produce graduates with critical, analytical and problem solving skills, and ability to think independently, to pursue a career in Civil Engineering.</p>

18	<p>Programme Objectives</p> <p>The programme will impart knowledge of Civil structures, Geotechnical interactions, Construction Engineering and Technology, Environmental Engineering, Hydrology, Irrigation and Water Management. It enhances the understanding of underlying engineering principles that govern the behavior of Civil Engineering systems. It teaches analytical modelling, simulation and analysis to study the behavior of Civil Engineering systems. It provides the skills to design, build and test Civil Engineering systems. It also trains students on personality development and interactive skills with professionals and feel for the society.</p> <p>The specific objectives of the programme are:</p> <ol style="list-style-type: none"> 1. To impart knowledge on Civil Engineering systems and their subsystems 2. To enhance the understanding of the underlying engineering principles of Civil Engineering systems 3. To model, simulate and analyse the behavior of Civil Engineering systems to predict and improve their performance 4. To design and build Civil Engineering systems to meet the specific needs 5. To impart training on instrumentation and testing of Civil Engineering systems 6. To train students on commercial software tools to design, model, simulate civil engineering systems 7. To build and test Civil Engineering systems 8. To impart training on professional ethics, history, economics, social sciences and interactive skills relevant to professional practice 9. To provide a general perspective on lifelong learning and opportunities for a career in industry, business and commerce
19	<p>Programme Intended Learning Outcomes</p> <p>The intended learning outcomes are listed under four headings:</p> <ol style="list-style-type: none"> 1. Knowledge and Understanding, 2. Cognitive skills 3. Practical skills and 4. Capability / Transferable skills. <p>Knowledge and Understanding</p> <p>After undergoing this programme, a student will be able to</p> <p>KU1: Identify and describe the various Civil Engineering structures, components, instruments and construction technologies</p> <p>KU2: Explain the underlying science and engineering principles that govern the behaviour of the components of structures relevant to Civil Engineering</p> <p>KU3: Identify various types of loads acting on Civil Engineering structures and explain their effect</p> <p>KU4: Explain the relevant IS building codes and standard practices applicable</p>

<p>Cognitive Skills</p> <p>After undergoing this programme, a student will be able to</p> <p>CS1: Design Civil Engineering structures, components or materials</p> <p>CS2: Model, simulate, analyse and evaluate the behavior of Civil Engineering structures, components and data</p> <p>CS3: Modify the existing design and processes to meet newer requirements</p> <p>CS4: Apply science and engineering principles to evaluate performance of Civil Engineering systems and answer what if questions</p> <p>Practical Skills</p> <p>After undergoing this programme, a student will be able to</p> <p>PS1: Construct fabricate, plan and design, prepare drawings, perform estimation and costing of Civil Engineering systems</p> <p>PS2: Conduct survey for existing, proposed Civil Engineering structures and conduct field tests</p> <p>PS3: Instrument, test a Civil Engineering system, components or material and evaluate for its performance as per standards</p> <p>PS4: Prepare reports on materials, components, tests, experiments, environmental impacts of Civil Engineering constructions, water management, flood control and irrigation</p> <p>Capability Skills / Transferrable Skills</p> <p>After undergoing the programme, a student will be able to-</p> <p>TS1: Manage information, develop technical reports and make presentations</p> <p>TS2: Build, Manage and Lead a team to successfully complete a project and communicate across teams and organizations to achieve professional objectives</p> <p>TS3: Work under various constraints to meet project targets</p> <p>TS4: Adopt to the chosen profession by continuously upgrading his/her knowledge and understanding through Life-long Learning philosophy</p>
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20 Programme Structure							
Semester -1, Physics Cycle							
S.No.	Code	Course Title	Theory (h/W/S)	Tutorials (h/W/S)	Practical (h/W/S)	Total Credits	Max. Marks
1	BSC101A	Engineering Mathematics-1	3	2	0	4	100
2	BSC102B	Engineering Physics	3	2	0	4	100
3	ESC101A	Elements of Mechanical Engineering	3	0	0	3	100
4	ESC102A	Elements of Electronics Engineering	3	2	0	4	100
5	ESC103A	Engineering Drawing	1	0	4	3	100
6	BSC103B	Engineering Physics Laboratory	0	0	2	1	50
7	ESC104A	Basic Workshop Practice	0	0	2	1	50
8	ESC105A	Basic Electronics Laboratory	0	0	2	1	50
9	HSC101B	Sociology and Elements of Indian History	2	0	0	2	50
10	MCC101B	Technical Communication and Soft Skills	2	0	0	2	50
Total			17	6	10	25	750
Total number of contact hours per week			33 hours				
Number of credits can be registered			Minimum	20	Maximum	25	
Semester -2 Chemistry Cycle							
S.No.	Code	Course Title	Theory (h/W/S)	Tutorials (h/W/S)	Practical (h/W/S)	Total Credits	Max. Marks
1	BSC104A	Engineering Mathematics-2	3	2	0	4	100
2	BSC105B	Engineering Chemistry	4	0	0	4	100
3	ESC106A	Construction Materials and Engineering Mechanics	3	2	0	4	100
4	ESC107A	Elements of Electrical Engineering	3	2	0	4	100
5	ESC108A	Elements of Computer Science and Engineering	3	2	0	4	100
6	ESC109A	Computer Programming Laboratory	0	0	2	1	50
7	BSC106B	Engineering Chemistry Laboratory	0	0	2	1	50
8	ESC110A	Basic Electrical Laboratory	0	0	2	1	50
9	HSC102B	Business Communication and Presentation Skill	2	0	0	2	50
10	MCC102A	Environmental Studies	2	0	0	2	50
Total			20	08	6	27	750
Total number of contact hours per week			34 hours				
Number of credits can be registered			Minimum	22	Maximum	27	

Semester -1, Chemistry Cycle

S.No.	Code	Course Title	Theory (h/W/S)	Tutorials (h/W/S)	Practical (h/W/S)	Total Credits	Max. Marks
1	BSC101A	Engineering Mathematics-1	3	2	0	4	100
2	BSC105B	Engineering Chemistry	4	0	0	4	100
3	ESC106A	Construction Materials and Engineering Mechanics	3	2	0	4	100
4	ESC107A	Elements of Electrical Engineering	3	2	0	4	100
5	ESC108A	Elements of Computer Science and Engineering	3	2	0	4	100
6	ESC109A	Computer Programming Laboratory	0	0	2	1	50
7	BSC106B	Engineering Chemistry Laboratory	0	0	2	1	50
8	ESC110A	Basic Electrical Laboratory	0	0	2	1	50
9	HSC102B	Business Communication and Presentation Skill	2	0	0	2	50
10	MCC102A	Environmental Studies	2	0	0	2	50
Total			20	08	6	27	750
Total number of contact hours per week			34 hours				
Number of credits can be registered			Minimum	22	Maximum	27	

Semester -2, Physics Cycle

S.No.	Code	Course Title	Theory (h/W/S)	Tutorials (h/W/S)	Practical (h/W/S)	Total Credits	Max. Marks
1	BSC104A	Engineering Mathematics-2	3	2	0	4	100
2	BSC102B	Engineering Physics	3	2	0	4	100
3	ESC101A	Elements of Mechanical Engineering	3	0	0	3	100
4	ESC102A	Elements of Electronics Engineering	3	2	0	4	100
5	ESC103A	Engineering Drawing	1	0	4	3	100
6	BSC103B	Engineering Physics Laboratory	0	0	2	1	50
7	ESC104A	Basic Workshop Practice	0	0	2	1	50
8	ESC105A	Basic Electronics Laboratory	0	0	2	1	50
9	HSC101B	Sociology and Elements of Indian History	2	0	0	2	50
10	MCC101B	Technical Communication and	2	0	0	2	50
Total			17	6	10	25	750
Total number of contact hours per			33 hours				
Number of credits can be			Minimum	20	Maximum	25	

Semester-3

S.No.	Code	Course Title	Theory (h/W/S)	Tutorials (h/W/S)	Practical (h/W/S)	Total Credits	Max. Marks
1	BSC207A	Engineering Mathematics-3	3	2	0	4	100
2	CEC201A	Mechanics of Solids	3	2	0	4	100
3	CEC202A	Mechanics of Fluids	3	2	0	4	100
4	CEC203A	Surveying – I	3	0	0	3	100
5	CEC204A	Engineering Geology and Properties of Soils	3	0	0	3	100
6	CEC205A	Concrete and Construction Technology	3	0	0	3	100
7	CEC206A	Strength of Materials Laboratory	0	0	2	1	50
8	CEC207A	Surveying laboratory-1	0	0	2	1	50
9	CEC208A	Applied Engineering Geology Laboratory	0	0	2	1	50
10	MCC201B	Human Rights and Legislative Procedures	2	0	0	2	50
Total			20	6	6	26	800
Total number of contact hours per week			32 hours				
Number of credits can be registered			Minimum	21	Maximum	26	

Semester-4

S.No.	Code	Course Title	Theory (h/W/S)	Tutorials (h/W/S)	Practical (h/W/S)	Total Credits	Max. Marks
1	BSC208A	Engineering Mathematics-4	3	2	0	4	100
2	CEC209A	Transportation Engineering-1	3	0	0	3	100
3	CEC210A	Building Planning and Computer Aided Drafting	1	0	4	3	100
4	CEC211A	Structural Analysis -1	3	2	0	4	100
5	CEC212A	Surveying-2	3	0	0	3	100
6	CEC213A	Hydraulics and Hydraulic Machines	3	0	0	3	100
7	HSC201A	Law for Engineers	2	0	0	2	50
8	CEC214A	Survey Laboratory-2	0	0	2	1	50
9	CEC215A	Hydraulics and Hydraulic Machinery Laboratory	0	0	2	1	50
10	CEC216A	Computer Laboratory for Basic Applications	0	0	2	1	50
Total			18	4	10	25	800
Total number of contact hours per week			32 hours				
Number of credits can be registered			Minimum	20	Maximum	25	

Semester- 5

S.No.	Code	Course Title	Theory (h/W/S)	Tutorials (h/W/S)	Practical (h/W/S)	Total Credits	Max. Marks
1	CEC301A	Design of RCC Structures	3	0	2	4	100
2	CEC302A	Structural Analysis-2	3	2	0	4	100
3	CEC303A	Geotechnical Engineering-1	2	2	0	3	100
4	CEC304A	Hydrology and Irrigation Engineering	3	0	0	3	100
5	HSC301A	Economics for Engineers	2	0	0	2	50
6	CEC305A	Transportation Engineering-2	3	0	0	3	100
7	CEC306A	Environment Engineering	3	0	0	3	100
8	CEC307A	Geotechnical Engineering Laboratory	0	0	2	1	50
9	CEC308A	Environmental Engineering Laboratory	0	0	2	1	50
10	CEC309A	Extensive Survey Camp Viva Voce	0	0	2	1	50
Total			19	06	06	25	800
Total number of contact hours per week			31 hours				
Number of credits can be registered			Minimum	20	Maximum	25	

Semester-6

S.No.	Code	Course Title	Theory (h/W/S)	Tutorials (h/W/S)	Practical (h/W/S)	Total Credits	Max. Marks
1	CEC310A	Geotechnical Engineering-2	2	2	0	3	100
2	CEC311A	Design of Steel Structures	2	0	2	3	100
3	CEC312A	Estimation and Costing	2	0	2	3	100
4	CEEXXA	Professional Core Elective-1	3	0	0	3	100
5	CEC313A	Hydraulic Structures and Irrigation Drawing	2	0	2	3	100
6	CEC314A	Environmental Engineering Design and Drawing	0	0	2	1	100
7	CEC315A	Transportation Design and Drawing	1	0	2	2	100
8	CEC316A	Concrete and High way Material Testing Laboratory	0	0	2	1	50
9	CECP31A	Project Work – 1 /Internship/	0	0	16	8	50
Total			12	02	28	27	800
Total number of contact hours per week			42 hours				
Number of credits can be registered			Minimum	22	Maximum	27	

Note: Internship can be in any Industry, Business, University or Research organization in India or abroad.

Semester-7

S.No.	Code	Course Title	Theory (h/W/S)	Tutorials (h/W/S)	Practical (h/W/S)	Total Credits	Max. Marks	
1	CEC401A	Direct Stiffness Method and Finite Element Analysis	3	2	0	4	100	
2	CEC402A	Design and Drawing of RCC Steel Structures	3	0	2	4	100	
3	CEC403A	Advanced Concrete Technology	3	0	0	3	100	
4	CEEXXA	Professional Core Elective-2	3	0	0	3	100	
5	OEC401A	Open Elective-1	3	0	0	3	100	
6	OEC402A	Open Elective-2	3	0	0	3	100	
7	CEC404A	Computer Aided Design Laboratory	0	0	2	1	50	
8	CEC405A	Geotechnical Engineering Design and Drawing	1	0	2	2	100	
9	CEC406A	Seminar	0	0	2	1	50	
Total			19	02	08	24	800	
Total number of contact hours per week			29 hours					
Number of credits can be registered			Minimum	19	Maximum	24		

Semester-8

S.No.	Code	Course Title	Theory (h/W/S)	Tutorials (h/W/S)	Practical (h/W/S)	Total Credits	Max. Marks	
1	CEEXXA	Professional Core Elective-3	3	0	0	3	100	
2	OEC403A	Open Elective-3	3	0	0	3	100	
3	OEC404A	Open Elective-4	3	0	0	3	100	
4	CECP42A	Project Work -2	0	0	24	12	100	
Total			9	0	24	21	400	
Total number of contact hours per week			33 hours					
Number of credits can be registered			Minimum	16	Maximum	21		

Professional Core Electives:**1. Semester 6 group**

- 1) CEE301A - Structural Dynamics
- 2) CEE302A - Ground Improvement Techniques
- 3) CEE303A - Traffic Engineering
- 4) CEE304A - Building Technology
- 5) CEE305A - Advanced Design of RC Structures
- 6) CEE306A - Solid Waste Management

2. Semester 7 group

- 1) CEE401A - Air Pollution and Control
- 2) CEE402A - Pre-stressed Concrete Structures
- 3) CEE403A - Advanced Foundation Design
- 4) CEE404A - Pavement Design
- 5) CEE405A - Earthquake Resistant Design of Structures
- 6) CEE406A - Construction Management & Engineering Economics

	<p>3. Semester 8 group</p> <ol style="list-style-type: none"> 1) CEE407A - Industrial Waste Water Treatment 2) CEE408A - Reinforced Earth Structures 3) CEE409A - Urban Transport Planning 4) CEE410A - Advanced Design of Steel Structures 5) CEE411A - Water Resources Engineering 6) CEE412A - Environmental Impact Assessment <p>Open Electives:</p> <p>A number of electives from faculty of engineering, management and commerce, art and design, hospitality management and catering technology, pharmacy, dental sciences will be announced</p>
21	<p>Programme Delivery</p> <p>As per the time Table</p>
22	<p>Teaching and Learning Methods</p> <ol style="list-style-type: none"> 1. Face to Face Lectures using Audio-Visuals 2. Workshops-Group Discussions, Debates, Presentations 3. Demonstrations 4. Guest Lectures 5. Laboratory-work/Field work/Workshop 6. Industry Visit 7. Seminars 8. Group Exercises 9. Project Work 10. Project Exhibitions 11. Technical Festivals
23	<p>Assessment and Grading</p> <ol style="list-style-type: none"> 1. Every course will be assessed for a weight of 100 2. There are two components-Component-1 and Component-2 3. Component-1 carries a weight of 50% and Component -2 carries a weight of 50% 4. Component -1 (CE) is subdivided into Tests and Assignments, tests carry 25% weight and Assignments carry 25 % weight. 5. Component -2 is a written examination (SEE) carries 50% weight 6. Laboratory Examination will have two components: <ul style="list-style-type: none"> Component -1(CE): Conduction of Laboratory Exercises and Submission of Report: 50% weight Component -2: SEE (Semester End Laboratory Examination): 50% weight 7. A minimum of overall 40% is required for a pass with 40% in each of the Components 8. The marks distribution for each course is given in the programme structure- section 20 9. Other flexibilities (exceptions) are as per the Academic Regulations of B. Tech. Programme.
24	<p>Attendance</p> <p>A minimum of 85% attendance is compulsory to appear for semester end examinations. Condoning of attendance shortage is as per the Academic Regulations of B.Tech. Programme.</p>
25	<p>Award of Class</p> <p>As per the Academic Regulations of B.Tech. Programme</p>

26	Student Support for Learning <ol style="list-style-type: none">1. Course Notes2. Reference Books in the Library3. Magazines and Journals4. Internet Facility5. Computing Facility6. Laboratory Facility7. Workshop facility8. Staff support9. Lounges for Discussions10. Any other support that enhances their learning
27	Quality Control Measures <ol style="list-style-type: none">1. Review of Course Notes2. Review of Question Papers and Assignment Questions3. Student Feedback4. Moderation of Assessed Work5. Opportunities for Students to See their Assessed Work6. Review by External Examiners and External Examiners Reports7. Staff Student Consultative Committee Meetings8. Student Exit Feedback9. Subject Assessment Board (SAB)10. Programme Assessment Board (PAB)

28	Curriculum Map						Intended Learning Outcomes											
							Knowledge and Understanding				Cognitive (Thinking) Skills (Critical, Analytical, Problem Solving)				Practical skills			
	HSC	BSC	ESC	CEC	OEC	MCC	KU1	KU2	KU3	KU4	CS1	CS2	CS3	CS4	PS1	PS2	PS3	PS4
	a	b	c	d	e	f												
	101B	101A	101A	201A	401A	101B	cd	cd	cd	c	d	d	d	d				
	102B	102B	102A	202A	402A	102A	cd	cd	cd	cd		d		d				
	201A	103B	103A	203A	403A	201B	d								d	d		
	301A	104A	104A	204A	404A		d	d							c			
		105B	105A	205A			bd	bd	bd	bd	d		d	d		c		
		106B	106A	206A			cd	cd	cd	cd		d		d	d		d	bd
		107A	107A	207A			cd	c	c	c					d	d		d
		208A	108A	208A			d	d	c	c				d	d	d	d	d
			109A	209A			d	d	d	d	d	d	d					c
			110A	210A			d			d				d	c			
			201A	211A			d	d	d		d		d					
			202A	212A			d							d	d			
				213A			d	d	d			d	d					
				214A			d							d	d			d
				215A			d	d				d		d			d	d
				216A			d	d			d			d				d
				301A			d	d	d	d	d	d	d					
				302A			d	d	d			d		d				
				303A			d	d				d						
				304A			d	d				d						
				305A			d	d	d	d	d	d	d					
				306A			d	d			d	d		d				
				307A			d	d				d		d			d	d
				308A			d	d				d						d
				309A			d			d		d					d	d
				310A			d	d	d	d	d	d	d					
				311A			d	d	d	d	d	d	d	d				
				312A			d			d					d			d
				313A			d	d	d	d	d	d	d	d				
				314A			d	d	d	d	d	d	d	d				
				315A			d	d	d	d	d	d	d	d				
				316A			d				d	d	d	d	d	d		d
				401A			d	d	d			d		d				
				402A			d	d	d	d	d	d	d	d				
				403A			d	d		d	d			d				
				404A			d		d	d	d	d	d	dc	d			d
				405A			d	d	d	d	d	d	d	d				
				406A			d	d	d	d	d	d	d	d	d	d	d	d
				CEE1*														
				CEE2*														
				CEE3*														
				P31A			d	d	d	d	d	d	d	d	d	d	d	d
				P42A			d	d	d	d	d	d	d	d	d	d	d	d
	10	26	30	118	16	06	Total 206 credits											

*Depends on elective course chosen

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Capability / Transferable Skills Map

Course Code						Skills									
HSC	BSC	ESC	CEC	OEC	MCC	GK	SL	WC	OC	P	B	IM	PM	L	AO
a	b	c	d	e	f										
101B	101A	101A	201A	401A	101B	abcdef	abcdef	abcdef	f	f	af	abcdef	abcdef	f	a
102B	102B	102A	202A	402A	102A	abcdef	abcdef	abcdef	abcdef	a	a	abcdef	abcdef	af	af
201A	103B	103A	203A	403A	201B	abcdef	abcdef	abcdef	b		af	abcdef	abcdef		a
301A	104A	104A	204A	404A		abcde	abcde	abcde	c		a	abcde	abcde		a
	105B	105A	205A			bcd	Bcd	bcd	cd			bcd	bcd		
	106B	106A	206A			bcd	Bcd	bcd	Bd			bcd	bcd		
	207A	107A	207A			bcd	Bcd	bcd	d			bcd	bcd		
	208A	108A	208A			bcd	Bcd	bcd	c			bcd	bcd		
		109A	209A			cd	Cd	cd	c			cd	cd		
		110A	210A			cd	Cd	cd	c			cd	cd		
		201A	211A			cd	Cd	cd	d			cd	cd		
		202A	212A			cd	Cd	cd	cd			cd	cd		
			213A			d	D	d	d			d	d		
			214A			d	D	d	d			d	d		
			215A			d	D	d	d			d	d		
			301A			d	D	d				d	d		
			302A			d	D	d				d	d		
			303A			d	D	d				d	d		
			304A			d	D	d				d	d		
			305A			d	d	d				d	d		
			306A			d	d	d				d	d		
			307A			d	d	d	d			d	d		
			308A			d	d	d	d			d	d		
			309A			d	d	d	d			d	d		
			310A			d	d	d				d	d		
			311A			d	d	d				d	d		
			312A			d	d	d				d	d		
			313A			d	d	d	d			d	d		
			314A			d	d	d	d			d	d		
			315A			d	d	d	d						
			316A			d	d	d	d	d	d	d	d	d	d
			401A			d	d	d				d	d		
			402A			d	d	d				d	d		
			403A			d	d	d				d	d		
			404A			d	d	d	d			d	d		
			405A			d	d	d				d	d		
			406A			d	d	d	d	d	d	d	d		d
			MEE1A			d	d	d				d	d		
			MEE2A			d	d	d				d	d		
			MEE3A			d	d	d				d	d		
			MEE4A			d	d	d				d	d		
			P31A			d	d	d	d	d	d	d	d	d	d
			P42A			d	d	d	d	d	d	d	d	d	d

GK: Group Work, SL: Self Learning, WC: Written Communication, OC: Oral Communication, P: Presentation, B: Behavioral, IM: Information Management, PM: Personal Management, L: Leadership, AO: Any Other

30	Co-curricular Activities Students are encouraged to take part in co-curricular activities like seminars, conferences, symposia, paper writing, attending industrial exhibitions, project competitions and related activities for enhancing their knowledge and networking.
31	Cultural and Literary Activities Annual cultural festivals are held to showcase the creative talents in students. They are involved in planning and organizing the activities.
32	Sports and Athletics Students are encouraged to take part in sports and athletic events regularly. Annual sports meet will be held to demonstrate sportsmanship and competitive spirit.

