



# 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. Arulanantham					
HOD	Dr. H. M. Rajashekharswamy					

### 1. Title of the Award

B.Tech. in Civil Engineering

## 2. Modes of study

**Full-Time** 

# 3. Awarding Institution / Body

Ramaiah University of Applied Sciences - Bengaluru, India

### 4. Joint Award

Not Applicable

### 5. Teaching Institution

Faculty of Engineering and Technology

Ramaiah University of Applied Sciences - Bengaluru, India

# 6. Date of Programme Specifications

February 2018

# 7. Date of Programme Approval by the Academic Council of RUAS

May 2018

### 8. Next Review Date

May 2022

# 9. Programme Approving Regulatory Body and Date of Approval

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### 10. Programme Accrediting Body and Date of Accreditation

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### 11. Grade Awarded by the Accreditation Body

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# 12. Programme Accreditation Validity

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### 13. Programme Benchmark

Not Applicable

### 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.

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 RUAS 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.

### 15. Programme Mission

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.

### 16. Graduate Attributes

- 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 conclusion 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 lifelong learning

### 17. Programme Goal

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.

### 18. Programme Objectives

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.

The objectives of the programme are to enable the students to:

- 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 analyze 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. Intended Learning Outcomes of the Programme

The Intended Learning Outcomes (ILOs) are listed under four headings:

1. Knowledge and Understanding, 2. Cognitive Skills 3. Practical Skills and 4. Capability / Transferable Skills.

### 1. Knowledge and Understanding

After undergoing this programme, a student will be able to:

- **KU1:** Identify and describe the various Civil Engineering structures, components, instruments and construction technologies
- **KU2:** Explain the underlying science and engineering principles that govern the behaviour of the components of structures relevant to Civil Engineering
- **KU3:** Identify various types of loads acting on Civil Engineering structures and explain their effect
- **KU4:** Explain the relevant IS building codes and standard practices applicable

### 2. Cognitive Skills

After undergoing this programme, a student will be able to:

- **CS1:** Design Civil Engineering materials, components and structures
- **CS2:** Model, simulate, analyse and evaluate the behavior of Civil Engineering structures, components and data
- **CS3:** Modify the existing design/processes to meet newer requirements
- **CS4:** Apply science and engineering principles to evaluate performance of Civil engineering systems and answer "what if" questions

### 3. Practical Skills

After undergoing this programme, a student will be able to:

- **PS1:** Construct fabricate, plan and design, prepare drawings, perform estimation and costing of Civil Engineering systems
- **PS2:** Conduct survey for existing, proposed Civil Engineering structures and conduct field tests
- **PS3:** Instrument, test a Civil Engineering system, components or material and evaluate for its performance as per standards
- **PS4:** Prepare reports on materials, components, tests, experiments, environmental impacts of Civil Engineering constructions, water management, flood control and irrigation

### 4. Capability / Transferable Skills

After undergoing this programme, a student will be able to:

- **TS1:** Manage information, develop technical reports and make presentations
- **TS2:**Build, Manage and Lead a team to successfully complete a project and communicate across teams and organizations to achieve professional objectives
- **TS3:** Work under various constraints to meet project targets
- **TS4:** Adopt to the chosen profession by continuously upgrading his/her knowledge and understanding through Life-long Learning philosophy

# 20. Programme Structure

Programme Structure Semester: 1, Physics Cycle

SI. No.	Code	Course Title	Theory (h/W/S)	Tutorials (h/W/S)	Practical (h/W/S)	Total Credits	Max. Marks
1	18BSC101A	Engineering Mathematics-1	3	2	0	4	100
2	18BSC102A	Engineering Physics	3	2	0	4	100
3	18ESC101A	Elements of Mechanical Engineering	3	0	0	3	100
4	18ESC102A	Elements of Electronics Engineering	3	2	0	4	100
5	18ESC103A	Engineering Drawing	1	0	4	3	100
6	18BSL103A	Engineering Physics Laboratory	0	0	2	1	50
7	18ESL104A	Basic Workshop Practice	0	0	2	1	50
8	18ESL105A	Basic Electronics Laboratory	0	0	2	1	50
9	18HST101A	Elements of Social Sciences and Ethics	2	0	0	2	50
	Total			6	10	23	700
-	Total number of contact hours per week						
	Number of cre	dits can be registered	Minimum	18	ľ	Maximum	23

Semester: 2, Chemistry Cycle

SI. No.	Code	Course Title	Theory (h/W/S)	Tutorials (h/W/S)	Practical (h/W/S)	Total Credits	Max. Marks
INO.		Engineering	(11/ 00/3)	(11/ 44/3)	(11/ 00/3)	Credits	IVIAIKS
1	18BSC104A	Mathematics - 2	3 2		0	4	100
2	18BSC105A	Engineering Chemistry 3 0 0		0	3	100	
3	18ESC106A	Engineering Mechanics and Construction Materials	3	2	0	4	100
4	18ESC107A	Elements of Electrical Engineering	3 2 0		0	4	100
5	18ESC108A	Elements of Computer Science and Engineering	3	2	0	4	100
6	18ESL109A	Computer Programming Laboratory	0	0	2	1	50
7	18BSL106A	Engineering Chemistry Laboratory	0	0	2	1	50
8	18ESL110A	Basic Electrical Engineering Laboratory	0	0	2	1	50
9	18HST102A	Professional Communication	2 0 0		2	50	
	Total			8	6	24	700
Tota	l number of co	ntact hours per week	31 hours				
	Number of cre	dits can be registered	Minimum	20	ı	Vlaximum	24

Semester: 1 Chemistry Cycle

SI. No.	Code	Course Title	Theory (h/W/S)	Tutorials (h/W/S)	Practical (h/W/S)	Total Credits	Max. Marks
1	18BSC101A	Engineering Mathematics-1	3	2	0	4	100
2	18BSC105A	Engineering Chemistry	3	0	0	3	100
3	18ESC106A	Engineering Mechanics and Construction Materials	3	2	0	4	100
4	18ESC107A	Elements of Electrical Engineering	electrical 3 2 0		4	100	
5	18ESC108A	Elements of Computer Science and Engineering	3	2	0	4	100
6	18BSL109A	Engineering Chemistry Laboratory	0	0	2	1	50
7	18ESL106A	Basic Electrical Laboratory	0	0	2	1	50
8	18ESL110A	Computer		0	2	1	50
9	18HST102A	Professional Communication	2 0 0		2	50	
	Total			8	6	24	700
	Total number of contact hours per week			20	ı		
	Number of cr	Number of credits can be registered			1	Maximum	24

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	18BSC104A	Engineering Mathematics-2	3	2	0	4	100
2	18BSC102A	Engineering Physics	3	2	0	4	100
3	18ESC101A	Elements of Mechanical Engineering	3	0	0	3	100
4	18ESC102A	Elements of		2	0	4	100
5	18ESC103A	Engineering Drawing	1	0	4	3	100
6	18BSL103A	Engineering Physics Laboratory	0	0	2	1	50
7	18ESL104A	Basic Workshop Practice	0	0	2	1	50
8	18ESL105A	Basic Electronics Laboratory	0	0	2	1	50
9	18HST101A	Elements of Social Science	f Social 2 0		0	2	50
	Total			6	10	23	700
Tota	Total number of contact hours per week						
	Number of cre	dits can be registered	Minimum	18	ľ	Maximum	23

### **SEMESTER 3**

SI. No.	Code	Course Title	Theory (h/W/S)	Tutorials (h/W/S)	Practical (h/W/S)	Total Credits	Max. Marks
1	19MHB201A	Engineering Mathematics - 3	3	1	0	4	100
2	19CEC202A	Mechanics of Solids	2	2	0	4	100
3	19CEC203A	Mechanics of Fluids	2	2	0	4	100
4	19CEC204A	Engineering Survey	3	0	0	3	100
5	19CEC205A	Engineering Geology and Properties of Soils	ngineering Geology 3 0 0		3	100	
6	19CEC206A	Building Materials, Concrete and Construction Technology	Concrete and Construction 3 0 0		3	100	
7	19CEL207A	Material Testing Laboratory	0	0	2	1	50
8	19CEL208A	Survey Practice	0	0	2	1	50
9	19CEL209A	Annlied Engineering		1	50		
10	19CEM210A	<b>Environmental Studies</b>	2	0	0	0	Audit
	Total			05	06	24	750
Total n	umber of conta	ct hours per week	29				
Numbe	er of credits can	be registered	Minimum	19	Maximum	•	24

### **SEMESTER 4**

SI. No.	Code	Course Title	Theory (h/W/S)	Tutorials (h/W/S)	Practical (h/W/S)	Total Credits	Max. Marks
1	19MHB211A	Engineering Mathematics - 4	3	1	0	4	100
2	19CEC212A	Transportation Engineering - I			3	100	
3	19CEC213A	Structural Analysis - I	2	2	0	4	100
4	19CEC214A	Hydraulics and Hydraulic Machines	lydraulics and 3 0 0		3	100	
5	19CEC215A	Environmental Engineering	] 3   0   0		3	100	
6	19CEC216A	Building Planning and Computer Aided Drafting	Building Planning and Computer Aided 1 0 4		3	100	
7	19CEL217A	Hydraulics and Hydraulic Machines Laboratory	0	0	2	1	50
8	19CEL218A	Environmental Engineering Laboratory	0	0	2	1	50
9	19CEL219A	Concrete and Highway Materials Laboratory	0	0	2 1		50
		Total	15	03	10	23	750
Total n	umber of conta	ct hours per week		1	28 hours		
Number of credits can be registered			Minimum	18		Maximum	23

# **SEMESTER 5**

SI. No.	Code	Course Title	(h/W/S) (h/W/S) (h/W/S		Practical (h/W/S)	Total Credits	Max. Marks
1	19CEC301A	Design of RCC Elements	2	2	0	4	100
2	19CEC302A	Structural Analysis - II	2	2	0	4	100
3	19CEC303A	Geotechnical Engineering - I	3	0	0	3	100
4	19CEC304A	Hydrology and Irrigation Engineering	3	3 0 0		3	100
5	19CEC305A	Design & Drawing of Transportation & 0 0 4 Irrigation Structures		2	100		
6	19CEC306A	Drawing of RCC Structures	0	0	2	1	50
7	19CEL307A	Geotechnical Engineering Laboratory	0	0 0		1	50
8	19CEL308A	Extensive Survey Project	0	0 0		1	50
		Total	12	04	10	19	700
Total n	umber of cont	act hours per week	26 hours				
Numbe	r of credits car	n be registered	Minimum	19	Maximum		23

# SEMESTER 6

SI. No.	Code	Course Title	Theory (h/W/S)	Tutorials (h/W/S)	Practical (h/W/S)	Total Credits	Max. Marks
1	19CEC311A	Geotechnical Engineering - II	3	0	0	3	100
2	19CEC312A	Design of Steel Structures	2	2	0	4	100
3	19CEC313A	Estimation—Costing and Engineering Economics			4	100	
4	19CEC314A	DSM & Finite Element Analysis  3 0 0		0	3	100	
5	19CEC315A	Transportation Engineering - II			3	100	
6	19CEC316A	Design & Drawing of Geotechnical & Environmental Structures	0	0	4	2	100
7	19CEL317A	Drawing of Steel Structures	-		2	1	50
8	19CEL318A	CAE Laboratory	0	0	2	1	50
	Total			02	08	21	700
Total	number of co	ntact hours per week	24 hours				
Num	Number of credits can be registered			17			

### **SEMESTER 7**

SI. No.	Code	Course Title	Theory (h/W/S)	Tutorials (h/W/S)	Practical Total (h/W/S) Credits		Max. Marks
1	19CEE41XA	Professional Core Elective - 1	3	0	0	3	100
2	19CEE42XA	Professional Core Elective - 2	3	0	0	3	100
3	19CEO403A	Open Elective	3	0	0	3	100
4	19CEP404A 19CEP405A	I] Project Work – 1 II] Internship (Choose one)	0	0	12	6	100
5	19CEP406A	Seminar	0	0	2	1	50
Total			09	00	14	16	450
Total	Total number of contact hours per week			23 hours			
Number of credits can be registered			Minimum	12	Maximum		16

# **SEMESTER 8**

SI.No.	Code	Course Title	Theory (h/W/S)	Tutorials (h/W/S)	Practical (h/W/S)	Total Credits	Max. Marks
1	19CEE43XA	Professional Core Elective - 3	3	0	0	3	100
2	19CEE44XA	Professional Core Elective - 4	3	0	0	3	100
3	19CEP408A	Project Work - 2	0	0	20	10	100
	Total			00	20	16	300
Total n	Total number of contact hours per week				26 hours		•
Numbe	Number of credits can be registered			12	Maximum		16

# **Professional Core Elective Courses:**

Group		VII	Sem	
	Course code	PCE-1 Course Title	Course code	PCE-2 Course Title
Group 1	19CEE411A	Traffic Engineering	19CEE421A	Pavement Materials,
				Equipment and Construction
Group 2	19CEE412A	Advance Structural Analysis	19CEE422A	Structural Dynamics and
				Earthquake Resistant Design
				of Structures
Group 3	19CEE413A	Advanced Surveying -Remote	19CEE423A	Advanced Hydrology
		Sensing and GIS		
Group 4	19CEE414A	Advanced Concrete Technology	19CEE424A	Modern Construction
				Materials, Equipment and
				Technology
Group 5	19CEE415A	Solid Waste Management	19CEE425A	Industrial Wastewater
				Treatment
Group 6	19CEE416A	Ground Improvement	19CEE426A	Advanced Foundation
		Techniques		Engineering
Common Group	19MTE401A	Probability and Statistics	19CSE421A	Data Sciences Foundation

Group	VIII Sem										
	Course code	PCE-3 Course Name	Course	PCE-4 Course Name							
			code								
Group 1	19CEE431A	Urban Transportation and	19CEE441A	Pavement Design							
		Planning									
Group 2	19CEE432A	Pre-stressed Concrete	19CEE442A	Advanced Design of Reinforced							
		Technology		Concrete Structures							
Group 3	19CEE433A	Water Resources System	19CEE443A	Water Shed Management							
Group 4	19CEE434A	Green Construction and	19CEE444A	Construction Management and							
		Alternate Building Materials		Engineering Economics							
Group 5	19CEE435A	Air Pollution and Control	19CEE445A	Environmental Impact Assessment							
Group 6	19CEE436A	Reinforced Soil Structures	19CEE446A	Soil Dynamics and Machine							
				Foundations							
Common Group	19CSE431A	Data Sciences Algorithms and	19CSE441A	Data Analytics							
		Applications									

### 21. Programme Delivery

As per Time Table

### 22. Teaching and Learning Methods

The module delivery comprises of a combination of few or all of the following:

- 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 Events

### 23. Assessment and Grading

- 1. Every course will be assessed for a weight of 100%
- 2. There are two components-Component-1 and Component-2
- 3. Component-1 (CE) carries a weight of 50% and Component -2 (SEE) carries a weight of 50%
- 4. Component-1 (CE): the course leader will indicate the mode of assessment in consultation and approval of the respective HoD and the faculty Dean, before commencement of the semester. The template for weightage of CE and SEE in percentages for each course is indicated in Table below.

	Bloom's Level of	Continuous As	Semester End Examination,				
	Thinking	CE-1, x%	CE-2, Y%	CE-3, Z %	50% Marks		
Level-1	Remember						
	Understand						
Level-2	Apply						
	Analyse						
Level-3	Evaluate						
	Create						
	Total	100%	100%	100%	100%		

CE – can be from any combination of the following:

Assignments, term Tests, Seminars, Tech Talks, Mini-Projects, Case-Studies, Self-Study, others, if any.

- 5. Component -2 (SEE) is Written Examination 50 % weight.
- 6. Laboratory Examination will have two components
  - I. Component -1(CE): Conduction of Laboratory Exercises and Submission of Report: 50% weight
  - II. Component -2: SEE (Semester End Laboratory Examination): 50% weight
- 7. A minimum of overall 40% is required for a pass with 40% in SEE.
- 8. For courses with a combination of theory and laboratory, the details of assessment for such courses will be indicated in the respective course specifications.
- 9. The marks distribution for each course is given in the programme structure-section 20

10. Other flexibilities (exceptions) as per the programme regulations.

### 24. Attendance

A minimum of 80% attendance compulsory to appear for semester end examinations. Any condoning is as per the programme regulations.

### 25. Award of Class

As per the Academic Regulations for B.Tech. Programme

# 26. Student Support for Learning

Students are given the following support:

- 1. Course notes
- 2. Reference books in the library
- 3. Magazines and Journals
- 4. Internet facility
- 5. Computing facility
- 6. Laboratory facility
- 7. Workshop facility
- 8. Staff support
- 9. Lounges for discussions
- 10. Any other support that enhances their learning

### 27. Quality Control Measures

Following are the Quality Control Measures:

- 1. Review of course notes
- 2. Review of question papers and assignment questions
- 3. Student Feedback
- 4. Moderation of assessed work
- 5. Opportunities for the students to see their assessed work
- 6. Review by external examiners and external examiners reports
- 7. Staff Student Consultative Committee meetings
- 8. Student exit feedback
- 9. Subject Assessment Board (SAB)
- 10. Programme Assessment Board (PAB)

# 28. Curriculum Map

	Intended Learning Out											Outco	comes						
Course Code							Knowledge and Understanding				Cognitive (Thinking) Skills (Critical, Analytical,				Practical skills				
19HST	19BSC	19ESC	19CEC	190EE	19TSH														
а	b	С	d	е	f	KU1	KU2	KU3	KU4	CS1	CS2	CS3	CS4	PS1	PS2	PS3	PS4		
101A	101A	101A	201A	41XA	101B	cd	cd	cd	cd	d	d	d							
102A	102B	102A	202A	42XA	102A	cd	cd	cd	cd			d	d						
	103B	103A	203A	43XA	210B	d	d	d	d	d	d	d	d		b	d	d		
	104A	104A	204A	44XA		d	d			d				С					
	105B	105A	206A			bd	bd	bd	bd				d	d	С	d	d		
	106B	106A	207A			cd	cd	С	С		d	d		d			b		
	207A	107A	208A			cd	cd	cd	cd	d	d	d	d		cd	d	d		
	208A	108A	209A			d	d	cd	cd	d	d	d	d						
		109A	210A			d	d	d	d				d				С		
		110A	211A			d	d	d	d	d	d	d	d		С				
		201A	212A			d	cd		С				d		d				
		202A	213A			d	d	d		d		d	d	d			d		
			214A			d	d						d		d	d	d		
			215A			d	d						d			d	d		
			217A			d	d	d	d	d		d	d						
			218A			d			d	d	d		d	d		d	d		
			301A			d	d	d	d	d	d	d	d						
			302A			d	d	d	d	d	d	d	d						
			303A			d	d	d	d	d	d	d	d						
			304A			d	d	d	d	d		d							
			305A			d	d	d	d				d						
			306A			d	d			d	d	d	d	d					
			307A			d	d	d	d		d	d	d			d	d		
			308A			d	d						d			d	d		
			309A			d	d	d	d	d	d	d	d	d	d	d	d		
			310A			d	d	d		d	d		d						
			311A			d	d	d	d	d	d	d	d	d					
			312A			d	d		d				d	d			d		
			317A			d	d	d	d	d	d	d	d	d	d		d		
			318A			d	d	d	d	d	d	d	d	d	d				
			319A										d	d					
			320A			d	d	d	d		d	d	d			d			
			321A			d	d	d	d	d	d	d	d	d	d				
			322A			d	d	d	d	d	d	d	d	d	d		d		
			323A			d	d	d	d	d	d	d	d	d	d		d		
			324A			d	d	d	d	d	d	d	d				d		
			406A			d	d	d	d	d	d	d	d	d	d	d	d		
			CEE41XA*																
			CEE42XA*																
			CEE43XA*																
			CEE44XA*																
			P41A/42A			d	d	d	d	d	d	d	d	d	d	d	d		
			P43A			d	d	d	d	d	d	d	d	d	d	d	d		
4	26	30	78	12	04				-	Total 1	160 cr	edits							

<sup>\*</sup>Depends on elective Course chosen

# 29. Capability / Transferable Skills Map

Course						Skills										
L9HST	19BSC	19ESC		190EE		GK	SL	wc	ос	Р	В	IM	PM	L	AO	
а	b	С	d	е	f											
101A	101A	101A	201A	41XA	101B	abcdef	abcdef	abcdef	f	f	af	abcdef	abcdef	f	a	
102A	102B	102A	202A	42XA	102A	abcdef	abcdef	abcdef	abcdef	а	a	abcdef	abcdef	af	af	
201A	103B	103A	203A	43XA	201B	abcdef	abcdef	abcdef	b		af	abcdef	abcdef		а	
301A	104A	104A	204A	44XA		abcde	abcde	abcde	C .		a	abcde	abcde		а	
	105B	105A	206A			bcd	bcd	bcd	cd			bcd	bcd			
	106B	106A	207A			bcd	bcd	bcd	bd			bcd	bcd			
	207A	107A	208A			bcd	bcd	bcd	d			bcd	bcd			
	208A	108A	209A			bcd	bcd	bcd	С			bcd	bcd		-	
		109A	210A			cd	cd	cd	С			cd	cd			
		110A	211A			cd	cd	cd	С			cd	cd			
		201A	212A			cd	cd	cd	d			cd	cd		-	
		202A	213A			cd	cd	cd	cd			cd	cd		-	
			214A			d	d	d	d			d	d		-	
			215A			d	d	d	d	٦		d	d		1	
			217A			d	d	d	d	d	٦	d d	d d		1	
			218A			d	d	d	a	d	d				-	
			301A			d	d	d		d d		d	d		-	
$\longrightarrow$			302A			d	d	d		d		d	d		-	
			303A			d	d	d		d		d	d		-	
$\longrightarrow$			304A 305A			d d	d d	d d		d		d d	d d		-	
$\overline{}$			306A			d d	d	d		d		d	d			
$\overline{}$						u d	d	d	d	d	d	d	d			
$\overline{}$			307A 308A			u d	d	d	d	d	d	d	d			
			309A			d	d	d	d	d	d	d	d	d	d	
			310A			d	d	d	u	d	u	d	d	u	u	
			311A			d	d	d		d		d	d			
			311A 312A			d	d	d		d		d	d			
			317A			d	d	d		d		d	d			
			318A			d	d	d		d		d	d			
			319A			d	d	d		d		d	d			
			320A			d	d	d		d		d	d			
			321A			d	d	d		d		d	d			
			322A			d	d	d		d		d	d			
			323A			d	d	d		d		d	d			
			324A			d	d	d	d	d	d	d	d			
			406A			d	d	d	d	d	d	d	d	d	d	
			CEE41XA			d	d	d		d		d	d	Ť	Ť	
			CEE42XA			d	d	d		d		d	d			
			CEE43XA			d	d	d		d		d	d			
			CEE44XA			d	d	d		d		d	d			
			P41A/42A			d	d	d	d	d	d	d	d	d	d	
		ľ	P43A			d	d	d	d	d	d	d	d	d	d	
l l															. ~	

GK: Group Work; SL: Self Learning; WC: Written Communication; OC: Oral Communication P: Presentation; B: Behavioural; 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, symposium, paper writing, attending industry exhibitions, project competitions and related activities to enhance their knowledge and network.

### 31. Cultural and Literary Activities

To remind and ignite the creative endeavours annual cultural festivals held and the students are made to plan and organize the activities.

### 32. Sports and Athletics

Students are encouraged to develop a habit of taking part in outdoor and indoor games on regular basis.

