

13. Courses of Study and Scheme of Assessment

BE CIVIL ENGINEERING

(2019 Regulations)
(Minimum credits to be earned: 165)

Course Code	Course Title	Periods / week				Maximum Marks			
		Lecture	Tutorial	Practical	Credits	CA	FE	Total	CAT
SEMESTER 1									
19C101	Calculus and its Applications	3	1	0	4	50	50	100	BS
19C102	Physics	3	0	0	3	50	50	100	BS
19C103	Applied Chemistry	3	0	0	3	50	50	100	BS
19C104	Engineering Geology	3	0	0	3	50	50	100	ES
19G105	English Language Proficiency	2	1	0	3	50	50	100	HS
19C110	Basic Sciences Laboratory I	0	0	4	2	50	50	100	BS
19C111	C Programming Laboratory	0	0	4	2	50	50	100	ES
19IP15	Induction Programme **	0	0	0	0	-	-	-	MC
Total 24 periods		14	2	8	20	350	350	700	
SEMESTER 2									
19C201	Complex Variables and Transforms	3	1	0	4	50	50	100	BS
19C202	Engineering Mechanics	3	1	0	4	50	50	100	ES
19C203	Applied Physics	2	0	0	2	50	50	100	BS
19C204	Chemistry of Engineering Materials	2	0	0	2	50	50	100	BS
19C___	Language Elective	0	0	4	2	50	50	100	HS
19C210	Engineering Graphics	0	0	4	2	50	50	100	ES
19C211	Engineering Practices	0	0	2	1	50	50	100	ES
19C212	Basic Sciences Laboratory II	0	0	4	2	50	50	100	BS
19C215	Activity Point Programme *	-	-	-	Grade	-	-	-	MC
Semester 2- Summer Term									
19C213	Internship €	0	0	0	2£	100	0	100	EEC
Total 26 periods		10	2	14	21	500	400	900	

** As per norms

* As per AICTE Norms; Total 60 hrs; Grade : Completed / Not Completed; Not Counted for CGPA

CA Continuous Assessment

FE Final Examination

€ This course will be conducted prior to the commencement of the third semester for a period of 3 weeks

£ For internship, one credit is equivalent to minimum 40 hours of work as per norms

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Course Code	Course Title	Periods / week			Maximum Marks				
		Lecture	Tutorial	Practical	Credits	CA	FE	Total	CAT
SEMESTER 3									
19C301	Numerical Methods	2	1	0	3	50	50	100	BS
19C302	Mechanics of Solids I	3	1	0	4	50	50	100	ES
19C303	Civil Engineering Materials and Construction	3	0	0	3	50	50	100	PC
19C304	Mechanics of Fluids	3	0	0	3	50	50	100	ES
19C305	Surveying	3	0	0	3	50	50	100	PC
19O306	Economics for Engineers	3	0	0	3	50	50	100	HS
19C310	Strength of Materials Laboratory	0	0	2	1	50	50	100	ES
19C311	Survey Practice	0	0	4	2	50	50	100	PC
19K312	Environmental Science **	2	0	0	0	-	-	-	MC
19C315	Activity Point Programme *	-	-	-	Grade	-	-	-	MC
Total 27 periods		19	2	6	22	400	400	800	
SEMESTER 4									
19C401	Probability and Statistics	2	1	0	3	50	50	100	BS
19C402	Mechanics of Solids II	3	1	0	4	50	50	100	ES
19C403	Hydraulics and Hydraulic Machinery	3	0	0	3	50	50	100	ES
19C404	Basic Structural Steel Design	3	0	0	3	50	50	100	PC
19C405	Concrete Technology	3	0	0	3	50	50	100	PC
19C406	Highway and Railway Engineering	3	0	0	3	50	50	100	PC
19C410	Hydraulics and Hydraulic Machinery Laboratory	0	0	2	1	50	50	100	ES
19C411	Concrete Technology and Highway Laboratory	0	0	4	2	50	50	100	PC
19O412	Indian Constitution **	2	0	0	0	-	-	-	MC
19Q413	Soft Skills Development	0	0	2	1	100	0	100	EEC
19C415	Activity Point Programme *	-	-	-	Grade	-	-	-	MC
Total 29 periods		19	2	8	23	500	400	900	

** As per norms

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Course Code	Course Title	Periods / week			Maximum Marks				
		Lecture	Tutorial	Practical	Credits	CA	FE	Total	CAT
SEMESTER 5									
19C501	Structural Analysis I	3	1	0	4	50	50	100	PC
19C502	Design of RC Elements	3	0	0	3	50	50	100	PC
19C503	Geotechnical Engineering I	3	0	0	3	50	50	100	PC
19C504	Design of Steel Structures	3	0	0	3	50	50	100	PC
19C505	Water Supply Engineering	3	0	0	3	50	50	100	PC
19_____	Open Elective I	3	0	0	3	50	50	100	OE
19C510	Geotechnical Engineering Laboratory	0	0	2	1	50	50	100	PC
19C511	Industrial Visit	0	0	4	2	50	50	100	EEC
19Q513	Business and Managerial Communications	0	0	2	1	100	0	100	EEC
19C515	Activity Point Programme *	-	-	-	Grade	-	-	-	MC
Total 27 periods		18	1	8	23	500	400	900	
SEMESTER 6									
19C601	Structural Analysis II	3	1	0	4	50	50	100	PC
19C602	Construction Project Management	3	0	0	3	50	50	100	PC
19C603	Waste Water Engineering	3	0	0	3	50	50	100	PC
19C604	Geotechnical Engineering II	3	0	0	3	50	50	100	PC
19C605	Estimation and Costing	2	1	0	3	50	50	100	PC
19C606	Hydrology and Water Resources Engineering	3	0	0	3	50	50	100	PC
19C610	Environmental Engineering Laboratory	0	0	4	2	50	50	100	PC
19C611	Building Planning and Drafting Laboratory	0	0	2	1	50	50	100	PC
19C620	Innovation Practices	0	0	4	2	50	50	100	EEC
19Q613	Quantitative and Reasoning Skills	0	0	2	1	100	0	100	EEC
19C615	Activity Point Programme *	-	-	-	Grade	-	-	-	MC
Total 31 periods		17	2	12	25	550	450	1000	

At the end of 6th semester, the students are required to earn the minimum number of activity points from the AICTE mandated ACTIVITY POINT PROGRAMME to qualify for the award of BE/BTech degree (Refer Section 4 (vii) (c) of 2019 Regulations)

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Course Code	Course Title	Periods / week				Maximum Marks				
		Lecture	Tutorial	Practical	Credits	CA	FE	Total	CAT	
SEMESTER 7										
19____	Open Elective II	3	0	0	3	50	50	100	OE	
19C____	Professional Elective I	3	0	0	3	50	50	100	PE	
19C____	Professional Elective II	3	0	0	3	50	50	100	PE	
19C____	Professional Elective III	3	0	0	3	50	50	100	PE	
19C____	Professional Elective IV	3	0	0	3	50	50	100	PE	
19C710	Design and Detailing of Structures	0	0	4	2	50	50	100	EEC	
19C711	Computer Analysis and Design Laboratory	0	0	4	2	50	50	100	EEC	
19C720	Project Work I	0	0	4	2	50	50	100	EEC	
Total 27 periods		15	0	12	21	400	400	800		
SEMESTER 8										
19C____	Professional Elective V	3	0	0	3	50	50	100	PE	
19C____	Professional Elective VI	3	0	0	3	50	50	100	PE	
19C820	Project Work II	0	0	8	4	50	50	100	EEC	
Total 14 periods		6	0	8	10	150	150	300		

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PROFESSIONAL ELECTIVES

STRUCTURAL ENGINEERING

19C001	Advanced Reinforced Concrete Design
19C002	Advanced Steel Design
19C003	Basics of Structural Dynamics and Earthquake Resistant Design
19C004	Bridge Engineering
19C005	Design of Energy Efficient Buildings
19C006	Disaster Management and Mitigation
19C007	Repair and Rehabilitation of Structures
19C008	Industrial Structures
19C009	Prestressed Concrete Structures
19C010	Finite Element Analysis
19C011	Prefabricated Structures

HYDROLOGY AND WATER RESOURCES ENGINEERING

19C015	Groundwater Engineering
19C016	Irrigation Engineering

ENVIRONMENTAL ENGINEERING

19C021	Environmental Impact Assessment
19C022	Industrial Waste Management
19C023	Solid Waste Management

GEOTECHNICAL ENGINEERING

19C026	Geosynthetics in Civil Engineering
19C027	Ground Improvement Techniques
19C028	Pavement Engineering

URBAN SYSTEM ENGINEERING

19C031	Airport Docks and Harbour Engineering
19C032	Housing Planning and Management
19C033	Traffic Engineering, Safety and Management

SURVEY AND REMOTE SENSING

19C036	Cartography
19C037	Geographic Information Systems
19C038	Remote Sensing Techniques and Applications

ONE-CREDIT COURSES

CIVIL ENGINEERING

19CF01	Safety in Construction
19CF02	Concepts of Smart City

ENGLISH

19GF01	Interpersonal and Organizational Communication
19GF02	Human Values Through Literature

HUMANITIES

19OFA1	Export – Import practices
19OFA2	Insurance - Concepts and Practices
19OFA3	Public Finance
19OFA4	Security Analysis and Portfolio Management
19OFA5	Social Entrepreneurship

LANGUAGE ELECTIVES

19G001	Communication Skills for Engineers
19G002	German- Level A1.1
19G003	French Language Level 1
19G004	Basic Japanese

Summary of Credit Distribution

BE CIVIL ENGINEERING										
S. No	Course Category	Credits Per Semester								Total Credits
		1	2	3	4	5	6	7	8	
1	HS	3	2	3	0	0	0	0	0	8
2	BS	12	10	3	3	0	0	0	0	28
3	ES	5	7	8	8	0	0	0	0	28
4	PC	0	0	8	11	17	22	0	0	58
5	PE	0	0	0	0	0	0	12	6	18
6	OE	0	0	0	0	3	0	3	0	6
7	EEC	0	0+2 [£]	0	1	3	3	6	4	19
8	MC	-	-	-	-	-	-	-	-	-
	TOTAL	20	19+2[£]	22	23	23	25	21	10	165

£ Summer Term Course(s)

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