

**COURSE STRUCTURE
AND
DETAILED SYLLABUS
for
B.Tech Four Year Degree Course
in
CIVIL ENGINEERING
(CE)**

(Applicable for the batches admitted from 2017-2018)



SREENIDHI INSTITUTE OF SCIENCE AND TECHNOLOGY
(An Autonomous Institution approved by UGC and affiliated to JNTUH)
(Accredited by NAAC with 'A' Grade and Accredited by NBA of AICTE)
Yamnampet, Ghatkesar, Malkajigiri Medchal District -501 301.

July, 2017

SREENIDHI INSTITUTE OF SCIENCE AND TECHNOLOGY
DEPARTMENT OF CIVIL ENGINEERING

B.Tech Course Structure – Autonomous Regulation: 2017-18

I Year I Semester

Sr. No	Subject Code	Subject	L	T	P/D	C	Max Marks	
							CIE	SEE
1	6H101	English – I	2	-	-	2	25	75
2	6H111	Engineering Mathematics – I	3	2	-	3	25	75
3	6H121	Engineering Physics – I	3	1	-	3	25	75
4	6H131	Engineering Chemistry	2	1	-	2	25	75
5	6F101	Computer Programming	3	1	-	3	25	75
6	6B101	Engineering Drawing – I	1	1	4	3	25	75
7	6H171	English Language Communication skills lab	-	-	2	1	25	75
8	6H181	Engineering Physics Lab – I	-	-	2	1	25	75
9	6H186	Engineering Chemistry Lab	-	-	2	1	25	75
10	6F171	C Programming Lab	-	-	4	2	25	75
11	6B171	Engineering Workshop – I	-	-	2	1	25	75
12	6F172	IT Workshop – I	-	-	2	1	25	75
13	6K191	Seminar on Current affairs / Technical Topic	-	-	2	1	100	-
Total :			14	5	20	24	400	900

I Year II Semester

Sr. No	Subject Code	Subject	L	T	P/D	C	Max Marks	
							CIE	SEE
1	6H202	English – II	2	2	-	2	25	75
2	6H213	Engineering Mathematics – II	3	2	-	3	25	75
3	6E201	Data Structures	3	1	-	3	25	75
4	6B202	Engineering Drawing – II	1	1	2	2	25	75
5	6H232	Environmental and Applied Chemistry	2	1	-	2	25	75
6	6BC03	Engineering Mechanics	3	1	-	3	25	75
7	6H224	Applied Physics – II	3	1	-	3	25	75
8	6ZC03	Gender Sensitization, Values, Ethics and Yoga	1	1	-	1	25	75
9	6E271	Data Structures Lab (C, C++)	-	-	4	2	25	75
10	6B272	Engineering Workshop-II	-	-	2	1	25	75
11	6H282	Applied Physics– II Lab	-	-	2	1	25	75
12	6K292	Seminar on Science and its Impact/Technical Topic	-	-	2	1	100	-
Total:			18	9	12	24	375	825

II Year I Semester

Sr. No	Subject Code	Subject	L	T	P/D	C	Max Marks	
							CIE	SEE
1	6H373	Functional Communicative English	1	2	-	1	25	75
2	6H316	Engineering Mathematics - III	3	2	-	3	25	75
3	6K301	Strength of Materials - I	3	1	-	3	25	75
4	6K302	Fluid Mechanics (FM-I)	3	1	-	3	25	75
5	6K303	Surveying	3	1	-	3	25	75
6	6ZC01	Managerial Economics and Financial Analysis	2	1	-	2	25	75
7	6BC66	Basic Mechanical Engineering	2	1	-	2	25	75
8	6EC70	Java Programming	2	2	-	2	25	75
9	6K371	Strength of Materials Lab	-	-	3	2	25	75
10	6K372	Surveying – I Lab	-	-	3	1	25	75
11	6K373	Computer Aided Drafting of Buildings Lab	-	-	3	2	25	75
Total :			19	10	9	24	275	825

II Year II Semester

Sr. No	Subject Code	Subject	L	T	P/D	C	Max Marks	
							CIE	SEE
1	6HC18	Probability and Statistics	3	2		3	25	75
2	6K401	Strength of Materials - II	3	1	-	3	25	75
3	6K402	Structural Analysis – I	3	1	-	3	25	75
4	6K403	Open Channel Flow and Hydraulic Machinery (FM-II)	3	1	-	3	25	75
5	6K404	Building Materials and Construction Planning	3	-	-	3	25	75
6	6K405	Engineering Geology	3	-	-	2	25	75
7	6K471	Fluid Mechanics Lab	-	-	3	2	25	75
8	6K472	Surveying – II Lab	-	-	3	2	25	75
9	6K473	Engineering Geology Lab	-	-	3	2	25	75
10	6K494	Survey Camp with Seminar	-	-	2	1	100	-
Total :			18	4	11	24	325	675

III Year I Semester

Sr. No	Subject Code	Subject	L	T	P/D	C	Max Marks	
							CIE	SEE
1	6K501	Reinforced Concrete Design	3	1	-	3	25	75
2	6K502	Structural Analysis - II	3	1	-	3	25	75
3	6K503	Environmental Engineering	3	1	-	3	25	75
4	6K504	Geotechnical Engineering	3	1	-	3	25	75
5		Professional Elective – I	3	-	-	3	25	75
6		Open Elective – I	2	1	-	2	25	75
7	6K571	Geographic Information Systems Lab	-	-	3	2	25	75
8	6K573	Environmental Engineering Lab	-	-	3	2	25	75
9	6K574	Geotechnical Engineering Lab	-	-	3	2	25	75
10	6H576	Quantitative Aptitude	1	1	-	1	25	75
		Total:	18	6	9	24	250	750

Professional Elective – I: List of Subjects (III-I)

Sr. No	Name of Stream	Subject Code	Subject Name
1	Construction Technology	6KC51	Construction Technology & Project Management
2	Structural Engineering	6KC52	Structural Dynamics
3	Water Resources and Environmental Engineering Stream	6KC53	Advanced Environmental Engineering
4	GIS, Surveying, and Transportation Stream	6KC54	Geographic Information Systems
5	Geotechnical & Geo-environmental Engineering Stream	6KC55	Foundation Engineering

Open Elective – I: List of Subjects (III-I)

Sr. No	Name of Stream	Subject Code	Subject Name
1	Entrepreneurship Stream	6ZC22	Basics of Entrepreneurship.
2	Social Sciences Stream	6ZC25	Basics of Indian Economy.
3	Technology Entrepreneurship Stream	6ZC20	Product and Services.
4	Finance Stream	6ZC05	Banking Operations, Insurance and Risk Management.

III Year II Semester

Sr. No	Subject Code	Subject	L	T	P/D	C	Max Marks	
							CIE	SEE
1		Professional Elective – II	3	-	-	3	25	75
2	6K601	Design of Steel Structures	3	1	-	3	25	75
3	6K602	Irrigation and Water Resources Engineering	3	1	-	3	25	75
4	6K603	Transportation Engineering	3	1	-	3	25	75
5		Open Elective – II	2	1	-	2	25	75
6		Open Elective– III	2	1	-	2	25	75
7	6K673	Transportation Engineering Lab	-	-	3	2	25	75
8	6K672	Hydraulics and Hydraulic Machinery Lab	-	-	3	2	25	75
9	6K671	MATLAB Programming Lab	-	-	3	2	25	75
10	6HC74	Effective English communication & Soft Skills	1	-	-	1	25	75
11	6H677	Logical Reasoning	1	1	-	1	25	75
Total:			17	7	11	24	275	825

Professional Elective – II: List of Subjects (III-II)

Sr. No	Name of Stream	Subject Code	Subject Name
1	Construction Technology	6KC61	Advanced Construction Techniques
2	Structural Engineering	6KC62	Earthquake resistant design of buildings
3	Water Resources and Environmental Engineering Stream	6KC63	Ground Water Hydrology
4	GIS, Surveying, and Transportation Stream	6KC64	Digital Image Processing
5	Geotechnical & Geo-environmental Engineering Stream	6KC65	Soil Dynamics

Open Elective – II: List of Subjects (III-II)

Sr. No	Name of Stream	Subject Code	Subject Name
1	Entrepreneurship Stream	6ZC24	Innovation and Design Thinking
2	Social Sciences Stream	6ZC26	Basics of Polity and Ecology
3	Technology Entrepreneurship Stream	6ZC24	Innovation and Design Thinking
4	Finance Stream	6ZC19	Entrepreneurship Project Management and Structured Finance

Open Elective – III: List of Subjects (III-II)

Sr. No	Name of Stream	Subject Code	Subject Name
1	Entrepreneurship Stream	6ZC23	Advanced Entrepreneurship
2	Social Sciences Stream	6ZC27	Indian History, Culture and Geography
3	Technology Entrepreneurship Stream	6ZC21	General Management and Entrepreneurship
4	Finance Stream	6ZC15	Financial Institutions, Markets and Services

IV Year I Semester

Sr. No	Subject Code	Subject	L	T	P/D	C	Max Marks	
							CIE	SEE
1	6K701	Structural Engineering Design & Detailing (Concrete)	3	1	-	3	25	75
2	6K702	Concrete Technology	3	1	-	3	25	75
3	6K703	Estimation and Valuation	3	1	-	3	25	75
4	6K704	Finite Element Method for Civil Engineers	3	1	-	3	25	75
5		Professional Elective – III	3	-	-	3	25	75
6		Professional Elective – IV	3	-	-	3	25	75
7	6K772	Concrete Technology Lab	-	-	4	2	25	75
8	6K774	Computer Applications in Civil Engineering Lab	-	-	4	2	25	75
9	6K780	Project Phase – I	-	1	3	3	100	-
10	6GC49	Intellectual Property Rights	1	-	-	1	25	75
11	6K777	Industry Oriented Mini Project (3_2 & 4_1 break)	-	-	-	2	25	75
		Total:	19	5	11	28	350	750

Professional Elective – III: List of Subjects (IV-I)

Sr. No	Name of Stream	Subject Code	Subject Name
1	Construction Technology	6KC71	Services, Maintenance and Repair of Buildings
2	Structural Engineering	6KC72	Health Monitoring and Retrofitting of Structures
3	Water Resources and Environmental Engineering Stream	6KC73	Water Resources Systems Planning and Management
4	GIS, Surveying, and Transportation Stream	6KC74	Land and Water applications of Remote sensing
5	Geotechnical & Geo-environmental Engineering Stream	6KC75	Ground Improvement Techniques

Professional Elective – IV: List of Subjects (IV-I)

Sr. No	Name of Stream	Subject Code	Subject Name
1	Construction Technology	6KC81	Alternative Building Materials and Technologies
2	Structural Engineering	6KC82	Pre-stressed Concrete Structures
3	Water Resources and Environmental Engineering Stream	6KC83	Applied Hydrology and Meteorology
4	GIS, Surveying, environmental Engineering and Transportation Stream	6KC84	GIS Analysis and Modelling
5	Geotechnical & Geo- Stream	6KC85	Elements of Geo-Environmental Engineering

IV Year II Semester

Sr. No	Subject Code	Subject	L	T	P/D	C	Max Marks	
							CIE	SEE
1	6K801	Design and Detailing of Hydraulic Structures	3	1	-	3	25	75
2		Professional Elective – V	3	-	-	3	25	75
3	6K898	Technology Review and Seminar	-	-	2	1	100	-
4	6K883	Comprehensive Viva Voce - II	-	-	-	1	50	50
6	6K880	Project - Final Phase	-	-	20	12	50	150
		Total:	6	1	22	20	250	350

Professional Elective – V: List of Subjects (IV-II)

Sr. No	Name of Stream	Subject Code	Subject Name
1	Construction Technology	6KC91	Urban Planning and Sustainable Development
2	Structural Engineering	6KC92	High Rise Buildings
3	Water Resources and Environmental Engineering Stream	6KC93	Disaster Mitigation & Management
4	GIS, Surveying, and Transportation Stream	6KC94	Intelligent Transportation Systems
5	Geotechnical & Geo-environmental Engineering Stream	6KC95	Flow and Transport through porous media

L: Lecture T: Tutorial P/D: Practical / Drawing C: Credits

CIE: Continuous Internal Evaluation SEE: Semester End

Examination