

**R. V. COLLEGE OF ENGINEERING, BENGALURU – 59.**

*(An Autonomous Institution affiliated to VTU, Belgavi)*

**DEPARTMENT OF CIVIL ENGINEERING**

**SCHEME OF TEACHING AND EXAMINATION**

THIRD SEMESTER								
Sl. No.	Course Code	Course Title	BoS	Credit Allocation				Total Credits
				Lecture	Tutorial	Practical	SS (EL)	
1	16MA31C	Applied Mathematics-III	Maths	3	1	0	0	4
2	16EM32A	Engineering Materials	CV	2	0	0	0	2
3	16CV33	Strength of Materials	CV	3	0	1	0	4
4	16CV34	Concrete Technology	CV	3	0	1	1	5
5	16CV35	Fluid Mechanics	CV	3	0	1	1	5
6	16CV36	Water supply and Treatment Engineering	CV	3	0	0	1	4
7	16DMA37	Bridge Course Mathematics*	Maths	2	0	0	0	0
		Total No. of Credits						24
		No. of Hrs.		17+2	2	6	12**	25

\*Mandatory Audit course for lateral entry diploma students

\*\* Non-contact hours

**1Hr. Theory= 1 credit**

**2Hrs. Practical=1credit**

**2Hrs. Tutorial=1 credit**

**4Hrs. SS(EL) = 1 Credit**

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FOURTH SEMESTER								
Sl. No	Course Code	Course Title	BOS	Credit Allocation				Total Credits
				Lecture	Tutorial	Practical	SS (EL)	
1	16MA41C	Applied Mathematics IV	Maths	3	1	0	0	4
2	16ET42	Environmental Technology	BT	2	0	0	0	2
3	16CV43	Theory of Structures	CV	3	0	0	1	4
4	16CV44	Building Construction and Planning	CV	3	0	1	1	5
5	16CV45	Surveying	CV	3	0	1	0	4
6	16CV46	Waste Water Engineering	CV	3	0	1	1	5
7	16HS47	Professional Practice-II (Communication Skills and Professional Ethics) \$	HSS	0	0	0	0	1
8	16DCS48	Bridge Course C Programming *	CSE	2	0	0	0	0
9	16CV49	Water Resources Engineering	CV	3	0	0	0	3
		Total No. of Credits						28
		No. of Hrs.		20+2	2	6	12**	28

\*Mandatory Audit course for lateral entry diploma students \*\*Non contact hours

\$ 3 days (18 Hrs) in 3<sup>RD</sup> semester and 3 days (18 Hrs) in 4<sup>th</sup> semester, in the event of student not able to take the regular allotment, may have to complete this credit by attending other branch program.

**1Hr. Theory= 1 credit**

**2Hrs. Practical=1credit**

**2Hrs. Tutorial=1 credit**

**4Hrs. SS(EL) = 1 Credit**

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FIFTH SEMESTER								
Sl. No	Course Code	Course Title	BOS	Credit Allocation				Total Hours
				Lecture	Tutorial	Practical	SS (EL)	
1	16HEM51	Foundations of Management and Economics	HSS	2	0	0	0	2
2	16CV52	Structural Analysis	CV	3	1	0	0	4
3	16CV53	Design and Drawing of RCC Structures	CV	3	0	1	1	5
4	16CV54	Highway Engineering	CV	3	0	1	0	4
5	16CV55	Irrigation and Hydraulic Structures	CV	3	0	0	1	4
6	16CV5AX	Elective A (PE)	CV	3	0	0	1	4
7	16G5BXX	Elective B (OE)	CV	4	0	0	0	4
		Total No. of Hours						27
		No. of Hrs.		21	2	4	12**	27

\*\*Non-contact hours

Elective A (PE)	
16CV5A1	Numerical methods in Civil Engineering
16CV5A2	Environmental Impact Assessment
16CV5A3	Ground Water Hydrology
16CV5A4	Alternative Building Materials And Technologies

## Elective B (OE)

<b>Slno</b>	<b>Course</b>	<b>Course Code</b>	<b>Offering Dept.</b>
1.	Bioinformatics	16G5B01	Biotechnology
2.	Fuel Cell Technology	16G5B02	Chemical Engineering
3.	Geoinformatics	16G5B03	Civil Engineering
4.	Graph Theory	16G5B04	Computer Science Engineering
5.	Artificial Neural Networks & Deep Learning	16G5B05	Electronics & Communication Engineering
6.	Hybrid Electric Vehicles	16G5B06	Electrical & Electronics Engineering
7.	Optimization Techniques	16G5B07	Industrial & Management Engineering
8.	Sensors & Applications	16G5B08	Electronics & Instrumentation Engineering
9.	Introduction To Management Information Systems	16G5B09	Information Science Engineering
10.	Industrial Automation	16G5B10	Mechanical Engineering
11.	Telecommunication Systems	16G5B11	Telecommunication Engineering
12.	Computational advanced numerical methods	16G5B12	Maths

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<b>SIXTH SEMESTER</b>								
<b>Sl. No.</b>	<b>Course Code</b>	<b>Course Title</b>	<b>BOS</b>	<b>Credit Allocation</b>				<b>Total Hours</b>
				<b>Lecture</b>	<b>Tutorial</b>	<b>Practical</b>	<b>SS (EL)</b>	
1	16HSI61	IPR & Entrepreneurship	HSS	3	0	0	0	3
2	16CV62	Geotechnical Engineering	CV	3	1	1	0	5
3	16CV63	Prestressed Concrete Structures	CV	3	0	0	1	4
4	16CV64	Transportation Engineering	CV	3	0	0	0	3
5	16CV6CX	Elective C (PE)	CV	3	0	0	1	4
6	16CV6DX	Elective D (PE)	CV	3	0	0	1	4
7	16G6EXX	Elective E(OE)	CV	3	0	0	0	3
8	16HS68	Professional Practice-III (Employability Skills and Professional Development of Engineers)\$\$	HSS	1	0	0	0	1
		Total No. of Hours						27
		No. of Hrs.		22	2	2	12**	26

\$\$ 3 days (18 Hrs) in 5<sup>th</sup> semester and 3 days (18 Hrs) in 6<sup>th</sup> semester \*\*Non contact hours

Elective C (PE)	Elective Title	Elective D (PE)	Elective Title
16CV6C1	Structural Masonry	16CV6D1	Structural Dynamics
16CV6C2	Traffic Engineering and transportation Planning	16CV6D2	Remote sensing & GIS
16CV6C3	Air pollution & control Engineering	16CV6D3	Construction Management
16CV6C4	Watershed Management	16CV6D4	Advanced Concrete Technology

Sl no	Course	Course Code	Offering Dept.
1.	Bioinspired Engineering	16GE6E01	Biotechnology
2.	Green Technology	16GE6E02	Chemical Engineering
3.	Solid Waste Management	16GE6E03	Civil Engineering
4.	Introduction To Web Programming	16GE6E04	Computer Science Engineering
5.	Automotive Electronics	16GE6E05	Electronics & Communication Engineering
6.	Industrial Electronics	16GE6E06	Electrical & Electronics Engineering
7.	Project Management	16GE6E07	Industrial & Management Engineering
8.	Virtual Instrumentation	16GE6E08	Electronics & Instrumentation Engineering
9.	Introduction To Mobile Application Development	16GE6E09	Information Science Engineering
10.	Automotive Engineering	16GE6E10	Mechanical Engineering
11.	Mobile Network System And Standards	16GE6E11	Telecommunication Engineering
12.	Partial Differential Equations	16GE6E12	Maths

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SEVENTH SEMESTER								
Sl. No	Course Code	Course Title	BOS	Credit Allocation				Total Hours
				Lecture	Tutorial	Practical	SS (EL)	
1	16CV71	Design and Drawing of Steel Structures	CV	3	0	1	0	4
2	16CV72	Foundation Engineering	CV	3	0	0	0	3
3	16CV73	Estimation and Costing	CV	3	0	0	0	3
4	16CV74	Extensive Survey Project *	CV	0	0	3	0	3
5	16CV7FX	Elective F (PE)	CV	4	0	0	0	4
6	16CV7GX	Elective G(PE)	CV	4	0	0	0	4
7	16GH7XX	Elective H (OE)	CV	3	0	0	0	3
		Total No. of Hours						24
		No. of Hrs.		20	0	5	0	25

\* Extensive Survey Camp during VI and VII Semester vacation for 11 days.

PE - PROFESSIONAL ELECTIVE			
Elective F (PE)	Elective Title	Elective G (PE)	Elective Title
16CV7F1	Bridge Engineering	16CV7G1	Advanced Design of RCC Structures
16CV7F2	Solid waste Engineering	16CV7G2	Pavement Analysis and Design
16CV7F3	Ground Improvement Techniques	16CV7G3	Rock Mechanics
16CV7F4	Urban Water Engineering and Management	16CV7G4	Valuation Engineering

Other electives (OE)

GROUP H

<b>Slno</b>	<b>Course</b>	<b>Course Code</b>	<b>Offering Dept.</b>
1.	Nanotechnology	16G7H01	Biotechnology
2.	Industrial Safety and Risk Management	16G7H02	Chemical Engineering
3.	Intelligent Transportation Systems	16G7H03	Civil Engineering
4.	Intelligent Systems	16G7H04	Computer Science Engineering
5.	Image Processing & Machine Learning	16G7H05	Electronics & Communication Engineering
6.	Design of Renewable Energy Systems	16G7H06	Electrical & Electronics Engineering
7.	Systems Engineering	16G7H07	Industrial & Management Engineering
8.	MEMS and Applications	16G7H08	Electronics & Instrumentation Engineering
9.	Introduction to Internet of Things	16G7H09	Information Science Engineering
10.	Industry 4.0 – Smart Manufacturing For The Future	16G7H10	Mechanical Engineering
11.	Space Technology And Applications	16G7H11	Telecommunication Engineering

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<b>EIGHTH SEMESTER</b>								
<b>Sl. No.</b>	<b>Course Code</b>	<b>Course Title</b>	<b>BOS</b>	<b>Credit Allocation</b>				<b>Total Hours</b>
				<b>Lecture</b>	<b>Tutorial</b>	<b>Practical</b>	<b>EL</b>	
1	16CVP81	Major Project		0	0	16	0	16
2	16CVS82	Technical Seminar		0	0	2	0	2
3	16HSS83	Innovation and Social Skills	HSS	0	0	2	0	2
		Total No. of Hours						20
		No. of Hrs.		0	0	40	0	