

VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI
Scheme of Teaching and Examination 2018 – 19
Outcome Based Education(OBE) and Choice Based Credit System (CBCS)
(Effective from the academic year 2018 – 19)

III SEMESTER (CIVIL ENGINEERING)

Sl. No	Course and Course Code		Course Title	Teaching Department	Teaching Hours /Week			Examination			Credits	
					Theory Lecture	Tutorial	Practical/ Drawing	Duration in hours	CIE Marks	SEE Marks		Total Marks
					L	T	P					
1	BSC	18MAT31	Mathematics (Title as per the decision of BoS in Sciences)	Mathematics	2	2	--	03	40	60	100	3
2	PCC	18CV32	Strength of Materials	Civil Engg.	3	2	--	03	40	60	100	4
3	PCC	18CV33	Fluid Mechanics	Civil Engg.	3	0	--	03	40	60	100	3
4	PCC	18CV34	Basic Materials and Construction	Civil Engg.	3	0	--	03	40	60	100	3
5	PCC	18CV35	Basic Surveying	Civil Engg.	3	0	--	03	40	60	100	3
6	PCC	18CV36	Engineering Geology	Civil Engg.	2	0	2	03	40	60	100	3
7	PCC	18CVL37	Survey Practice I	Civil Engg.	--	1	--	03	40	60	100	2
8	PCC	18CVL38	Basic Material Testing Lab	Civil Engg.	--	1	3	03	40	60	100	2
9	HSMC	18KAN39	Communication Kannada	HSMC	1	--	--	--	100	--	100	1
		OR	OR									
		18CPH39	Constitution of India, Professional Ethics and Human Rights		1	--	--	02	40	60		
TOTAL					18	04	08	26	420	480	900	24
									OR	OR		
									360	540		

CIE procedure for Communication Kannada: A committee constituted by the Head of the Department of Humanities and Social Science shall award the CIE marks for the Course Communication Kannada. The committee shall consist of two senior faculty members of the Department and the senior most acting as the Chairman/Chairperson.

Course prescribed to lateral entry Diploma holders admitted to III semester of Engineering programs

10	NCMC	18MATDIP31	Additional Mathematics - I	Mathematics	02	01	--	03	40	60	100	0
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(a) The mandatory non – credit courses Additional Mathematics I and II prescribed at III and IV semesters respectively, to lateral entry Diploma holders admitted to III semester of BE/B.Tech programs, shall compulsorily be registered during the respective semesters to complete all the formalities of the course and appear for the University examination.

(b) The mandatory non – credit courses Additional Mathematics I and II, shall be completed to secure eligibility to VII semester. However, these Courses shall not be considered for vertical progression from II year to III year but considered as head of passing along with credit courses of the programme for eligibility to VII semester.

Courses prescribed to lateral entry B. Sc degree holders admitted to III semester of Engineering programs

Lateral entrant students from B.Sc. Stream, shall clear the non-credit audit courses Engineering Graphics / Elements of Civil Engineering and Mechanics of the First Year Engineering Programme. These Courses shall not be considered for vertical progression from II year to III year but considered as head of passing along with credit courses of the programme for eligibility to VII semester.

Note: BSC: Basic Science, PCC: Professional Core, HSMC: Humanity and Social Science, NCMC: Non-credit mandatory course.

18CV36 Engineering Geology: The subject includes 2 hours of theory and 2 hours of Laboratory work per week. The evaluation of laboratory component is included in CIE Marks (30 Marks for Test and 10 Marks for Laboratory).

Last date for fee payment 15/10/2018

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IV SEMESTER (CIVIL ENGINEERING)

Sl. No	Course and Course code		Course Title	Teaching Department	Teaching Hours /Week			Examination			Credits	
					Theory Lecture	Tutorial	Practical/ Drawing	Duration in hours	CIE Marks	SEE Marks		Total Marks
					L	T	P					
1	BSC	18MAT41	Mathematics (Title as per the decision of BoS in Sciences)	Mathematics	2	2	--	03	40	60	100	3
2	PCC	18CV42	Analysis of Determinate Structures	Civil Engg.	3	2	--	03	40	60	100	4
3	PCC	18CV43	Applied Hydraulics	Civil Engg.	3	0	--	03	40	60	100	3
4	PCC	18CV44	Concrete Technology	Civil Engg.	3	0	--	03	40	60	100	3
5	PCC	18CV45	Advanced Surveying	Civil Engg.	3	0	--	03	40	60	100	3
6	PCC	18CV46	Water Supply & Treatment Engineering	Civil Engg.	3	0	--	03	40	60	100	3
7	PCC	18CVL47	Survey Practice II	Civil Engg.	--	1	3	03	40	60	100	2
8	PCC	18CVL48	Fluid Mechanics and Hydraulic Machines Lab	Civil Engg.	--	1	3	03	40	60	100	2
9	HSMC	18KAN49	Communication Kannada	HSMC	1	--	--	--	100	--	100	1
		OR										
		18CPH49	Constitution of India, Professional Ethics and Human Rights		1	--	--	02	40	60		
TOTAL					18	04	06	26	420	480	900	24
									OR	OR		
									360	540		

CIE procedure for Communication Kannada: A committee constituted by the Head of the Department of Humanities and Social Science shall award the CIE marks for the Course Communication Kannada. The committee shall consist of two senior faculty members of the Department and the senior most acting as the Chairman/Chairperson.

Course prescribed to lateral entry Diploma holders admitted to III semester of Engineering programs

10	NCMC	18MATDIP41	Additional Mathematics - II	Mathematics	02	01	--	03	40	60	100	0
<p>(a) The mandatory non – credit courses Additional Mathematics I and II prescribed at III and IV semesters respectively, to lateral entry Diploma holders admitted to III semester of BE/B.Tech programs, shall compulsorily be registered during the respective semesters to complete all the formalities of the course and appear for the University examination.</p> <p>(b) The mandatory non – credit courses Additional Mathematics I and II, shall be completed to secure eligibility to VII semester. However, these Courses shall not be considered for vertical progression from II year to III year but considered as head of passing along with credit courses of the programme for eligibility to VII semester.</p>												

Courses prescribed to lateral entry B. Sc degree holders admitted to III semester of Engineering programs

Lateral entrant students from B.Sc. Stream, shall clear the non-credit audit courses Engineering Graphics / Elements of Civil Engineering and Mechanics of the First Year Engineering Programme. These Courses shall not be considered for vertical progression from II year to III year but considered as head of passing along with credit courses of the programme for eligibility to VII semester.

Note: BSC: Basic Science, PCC: Professional Core, HSMC: Humanity and Social Science, NCMC: Non-credit mandatory course.

Last date for registration: 15/10/2018

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V SEMESTER (CIVIL ENGINEERING)

Sl. No	Course and Course code		Course Title	Teaching Department	Teaching Hours /Week			Examination			Credits	
					Theory Lecture	Tutorial	Practical/ Drawing	Duration in hours	CIE Marks	SEE Marks		Total Marks
					L	T	P					
1	HSMC	18CV51	Construction Management & Entrepreneurship	Civil Engg.	2	2	--	03	40	60	100	3
2	PCC	18CV52	Analysis of Indeterminate Structures	Civil Engg.	3	2	--	03	40	60	100	4
3	PCC	18CV53	Design of RC Structural Elements	Civil Engg.	3	2	--	03	40	60	100	4
4	PCC	18CV54	Basic Geotechnical Engineering	Civil Engg.	3	--	--	03	40	60	100	3
5	PCC	18CV55	Municipal & Industrial Wastewater Engineering	Civil Engg.	3	--	--	03	40	60	100	3
6	PCC	18CV56	Highway Engg	Civil Engg.	3	--	--	03	40	60	100	3
7	PCC	18CVL57	Computer Aided Bldg Plan & Drawing	Civil Engg.	--	1	3	03	40	60	100	2
8	PCC	18CVL58	Environmental Engineering Lab.	Civil Engg.	--	1	3	03	40	60	100	2
9	HSMC	18CIV59	Environmental Studies	Civil/ Environmental [Paper setting: Civil Engineering Board]	1	--	--	02	40	60	100	1
TOTAL					18	9	5	26	360	540	900	25

Note: PCC: Professional Core, HSMC: Humanity and Social Science

Last date for feedback 15-10-2018 register@vtu.ac.in copy to aswamin@vtu.ac.in

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VI SEMESTER (CIVIL ENGINEERING)

Sl. No	Course and Course code		Course Title	Teaching Department	Teaching Hours /Week			Examination			Credits	
					Theory Lecture	Tutorial	Practical/ Drawing	Duration in hours	CIE Marks	SEE Marks		Total Marks
					L	T	P					
1	PCC	18CV61	Design of Steel Structural Elements	Civil Engg.	3	2	--	03	40	60	100	4
2	PCC	18CV62	Applied Geotechnical Engineering	Civil Engg.	3	2	--	03	40	60	100	4
3	PCC	18CV63	Hydrology and Irrigation Engineering	Civil Engg.	3	2	--	03	40	60	100	4
4	PEC	18CV64X	Professional Elective -1	Civil Engg.	3	--	--	03	40	60	100	3
5	OEC	18CV65X	Open Elective -A	Civil Engg.	3	--	--	03	40	60	100	3
6	PCC	18CVL66	Geotechnical Engineering Lab	Civil Engg.	--	1	3	03	40	60	100	2
7	PCC	18CVL67	Highway & Concrete Lab	Civil Engg.	--	1	3	03	40	60	100	2
8	MP	18CVMP68	Extensive Survey (Mini project)	Civil Engg.	--	1	3	03	40	60	100	2
9	INT	--	Internship	(To be carried out during the intervening vacations of VI and VII semesters)				--	--	--	--	--
TOTAL					15	09	09	24	320	480	800	24

Note: PCC: Professional core, PEC: Professional Elective, OE: Open Elective, MP: Mini-project, INT: Internship.

Internship: All the students admitted to III year of BE/B.Tech shall have to undergo mandatory internship of 4 weeks during the vacation of VI and VII semesters and /or VII and VIII semesters. A University examination shall be conducted during VIII semester and the prescribed credit shall be included in VIII semester. Internship shall be considered as a head of passing and shall be considered for the award of degree. Those, who do not take-up/complete the internship shall be declared as failed and shall have to complete during subsequent University examination after satisfy the internship requirements.

Professional Elective -1

Course code under 18XX64X	Course Title
18CV641	Matrix Method of Structural Analysis
18CV642	Solid Waste Management
18CV643	Alternate Building Materials
18CV644	Ground Improvement Technique
18CV645	Railway, Harbours, Tunneling and Airports

Open Elective -A

Course code under 18XX65X	Course Title
18CV651	Remote Sensing & GIS
18CV652	Traffic Engineering
18CV653	Occupational Health and Safety
18CV653	Sustainability Concepts in Civil Engineering

Students can select any one of the open electives offered by any Department(Please refer to the list of open electives under 18XX65X). Selection of an open elective is not allowed provided,

- The candidate has studied the same course during the previous semesters of the programme.
- The syllabus content of open elective is similar to that of Departmental core courses or professional electives.
- A similar course, under any category, is prescribed in the higher semesters of the programme.

Registration to electives shall be documented under the guidance of Programme Coordinator/ Adviser/Mentor.

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VII SEMESTER (CIVIL ENGINEERING)

Sl. No	Course and Course code		Course Title	Teaching Department	Teaching Hours /Week			Examination			Credits	
					Theory Lecture	Tutorial	Practical/ Drawing	Duration in hours	CIE Marks	SEE Marks		Total Marks
					L	T	P					
1	PCC	18CV71	Quantity Surveying & Contract Management		4	--	--	03	40	60	100	4
2	PCC	18CV72	Design of RCC and Steel Structural Elements		4	--	--	03	40	60	100	4
3	PEC	18CV73X	Professional Elective - 2		3	--	--	03	40	60	100	3
4	PEC	18CV74X	Professional Elective - 3		3	--	--	03	40	60	100	3
5	OEC	18CV75X	Open Elective -B		3	--	--	03	40	60	100	3
6	PCC	18CVL76	Computer Aided Detailing of Structures		--	--	2	03	40	60	100	1
7	Project	18CVP77	Project Work Phase - 1		--	--	4	--	100	--	100	2
8	INT	--	Internship	(If not completed during the vacation of VI and VII semesters, it has to be carried out during the intervening vacations of VII and VIII semesters)				--	--	--	--	--
TOTAL					17	--	04	18	340	360	700	20

Note: PCC: Professional core, PEC: Professional Elective, OEC: Open Elective, INT: Internship.

CIE procedure for Project Work Phase - 1: The CIE marks shall be awarded by a committee consisting of the Head of the concerned Department and two senior faculty members of the Department, one of whom shall be the Guide.

The CIE marks awarded for project work phase -1, shall be based on the evaluation of project work phase -1 Report, Project Presentation skill and Question and Answer session in the ratio 50:25:25. The marks awarded for the Project report shall be the same for all the batch mates.

Internship: All the students admitted to III year of BE/B.Tech shall have to undergo mandatory internship of 4 weeks during the vacation of VI and VII semesters and /or VII and VIII semesters. A University examination shall be conducted during VIII semester and the prescribed credit shall be included in VIII semester. Internship shall be considered as a head of passing and shall be considered for the award of degree. Those, who do not take-up/complete the internship shall be declared as failed and shall have to complete during subsequent University examination after satisfy the internship requirements.

Professional Elective - 2

Course code under 18XX73X	Course Title
18CV731	Theory of Elasticity
18CV732	Air Pollution and Control
18CV733	Pavement Materials and Construction
18CV734	Ground Water Hydraulics
18CV735	Masonry Structures

Professional Electives - 3

Course code under 18XX74X	Course Title
18CV741	Earthquake Engineering
18CV742	Design Concepts of Building Services
18CV743	Reinforced Earth Structures
18CV744	Design of Hydraulic Structures
18CV745	Urban Transport Planning

Open Elective -B

Course code under 18XX75X	Course Title
18CV751	Finite Element Method
18CV752	Numerical Methods and Applications
18CV753	Environmental Protection and Management
18CV754	Water Resources Management

Students can select any one of the open electives offered by any Department(Please refer to the list of open electives under 18XX75X). Selection of an open elective is not allowed provided,

- The candidate has studied the same course during the previous semesters of the programme.
- The syllabus content of open elective is similar to that of Departmental core courses or professional electives.
- A similar course, under any category, is prescribed in the higher semesters of the programme.

Registration to electives shall be documented under the guidance of Programme Coordinator/ Adviser/Mentor.

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VIII SEMESTER (CIVIL ENGINEERING)

Sl. No	Course and Course code		Course Title	Teaching Department	Teaching Hours /Week			Examination			Credits	
					Theory Lecture	Tutorial	Practical/ Drawing	Duration in hours	CIE Marks	SEE Marks		Total Marks
					L	T	P					
1	PCC	18CV81	Design of PSC		3	--	--	03	40	60	100	3
2	PEC	18CV82X	Professional Elective - 4		3	--	--	03	40	60	100	3
3	Project	18CVP83	Project Work Phase - 2		--	--	16	03	40	60	100	8
4	Seminar	18CVS84	Technical Seminar		--	--	2	03	100	--	100	1
5	INT	18CVI85	Internship	(Completed during the intervening vacations of VI and VII semesters and /or VII and VIII semesters.)				03	40	60	100	3
TOTAL					06	--	18	15	260	240	500	18

Note: PCC: Professional Core, PEC: Professional Elective, OEC: Open Elective, INT: Internship.

Professional Electives - 4

Course code under 18XX82X	Course Title
18CV821	Bridge Engineering
18CV822	Prefabricated Structures
18CV823	Advanced Foundation Engineering
18CV824	Rehabilitation & Retrofitting
18CV825	Pavement Design

CIE procedure for Technical Seminar: The CIE marks shall be awarded by a committee consisting of the Head of the concerned Department and two senior faculty members of the Department, one of whom shall be the Guide.

The CIE marks awarded for Technical Seminar, shall be based on the evaluation of Seminar Report, Presentation skill and Question and Answer session in the ratio 50:25:25.

Internship: Those, who have not pursued /completed the internship will be declared as failed and have to complete during subsequent University examination after satisfy the internship requirements.

Last date for feedback 15/10/2018 register@vtu.ac.in Copy to avasamu@gmail.com

NOTE:

- Request all the faculty to review the scheme.
- It is **mandatory** for all the civil engineering departments to conduct a faculty meeting and review the scheme. HOD's are requested to coordinate on priority and send a report/feedback to the registrar with a copy to the BOS chairman before the last date. The same will be checked at the time of VTU LIC visit
- AICTE and VTU guidelines must be followed in the teaching process.
- Your feedback is highly appreciated on the implementation of **Outcome Based Education(OBE) and Choice Based Credit System (CBCS)**
- Please suggest the teaching process for the tutorials.
- Specific suggestions are invited on internship contents
- Send your feedback before 15-10-2018 to registrar@vtu.ac.in and a copy to aswathmu@gmail.com, academic.vtu@gmail.com

Thank you for your support in advance.

