

SCHEME OF TEACHING AND EXAMINATION

DRAFT

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

I SEMESTER Bachelor of Engineering

Three week mandatory non- credit Induction Program

For the UG students entering the Institution, right at the start. Normal classes start only after the Induction program is completed.

Preamble

Engineering Institutions are set up to generate well trained manpower in engineering with a feeling of responsibility towards oneself, one's family, society and Nation. However, often, the aspirants are driven by their parents and society to join engineering without understanding their own interests and talents. As a result, most students fail to link up with the goals of their own.

Students, who enter an Institution, will have diverse thoughts, backgrounds and perceptions. It is important to help them adjust to the new environment, open them up, set a healthy daily routine, create bonding in the batch as well as between faculty and students, develop awareness, sensitivity and understanding of the self, people around them, society at large and nature, and inculcate in them the ethos of the institution with a sense of larger purpose.

The graduating student must have knowledge and skills in the area of his study. Character needs to be nurtured as an essential quality by which he/she would understand and fulfill his/her responsibility as an engineer, a citizen and a human being. Besides the above, several meta-skills and underlying values are needed.

Therefore, a Program is needed to

- Help the newly joined students feel comfortable
- Sensitize them towards exploring their academic interests and activities
- Train them to work for excellence
- Build relations between teachers and students
- Impart a broader view of life
- Build character
- Develop awareness and sensitivity to Human Values
- Create feeling of equality, compassion and oneness
- Develop attention to society and nature

An induction program for the UG students entering the institution, right at the start, serves the purpose. The program also makes them reflect on their relationship with their families and extended family environment in the college (with hostel staff and others). It also connects students with each other and with teachers so that they can share any difficulty they might be facing and seek help.

The Induction Program can also be used to rectify some critical lacunas, for example, English background, for those students who have deficiency in it.

Activities of the induction program

Induction program includes

Physical Activity, Creative Arts, Universal Human Values, Literary, Proficiency Modules, Lectures by Eminent People, Visits to Local Area, Familiarization to Department/Branch and Innovations, etc.

For more details refer to "A Guide to Induction Program", Page – 31, Model Curriculum for Undergraduate Degree Courses in Engineering and Technology, January 2018, Volume I.



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I SEMESTER B.E./B.Tech (PHYSICS GROUP)

Sl. No	Course and Course Code		Course Title	Teaching Department	Paper Setting Board	Teaching Hours /Week			Examination			Credits	
						Theory Lecture	Tutorial	Practical/ Drawing	Duration in hours	SEE Marks	CIE Marks		Total Marks
1	BS	18MAT11	Engineering Mathematics -I	Mathematics	Basic Science	3	1	--	03	60	40	100	4
2	BS	18PHY12	Engineering Physics	Physics	Basic Science	3	1	--	03	60	40	100	4
3	ES	18ELE13	Basic Electrical Engineering	E and E Engineering	E and E Engineering	2	1	--	03	60	40	100	3
4	ES	18CIV14	Civil Engineering and Mechanics	Civil Engineering	Civil Engineering	2	1	--	03	60	40	100	3
5	ES	18EGDL15	Engineering Graphics and Design	ME, Auto, IP, IEM, Mfg Engineering	Mechanical Engineering	1	--	3	03	60	40	100	2.5
6	BS	18PHYL16	Engineering Physics Laboratory	Physics	Basic Science	--	--	3	03	60	40	100	1.5
7	ES	18ELEL17	Basic Electrical Engineering Laboratory	E and E Engineering	E and E Engineering	--	--	2	03	60	40	100	1.0
TOTAL						11	04	08	21	420	280	700	19

Note: BS: Basic Science, ES: Engineering Science.

II SEMESTER B.E./B.Tech (CHEMISTRY GROUP)

Sl. No	Course Code		Course Title	Teaching Department	Paper Setting Board	Teaching Hours /Week			Examination			Credits	
						Theory Lecture	Tutorial	Practical/ Drawing	Duration in hours	SEE Marks	CIE Marks		Total Marks
1	BS	18MAT21	Engineering Mathematics -II	Mathematics	Basic Science	3	1	--	03	60	40	100	4
2	BS	18CHE22	Engineering Chemistry	Chemistry	Basic Science	3	1	--	03	60	40	100	4
3	ES	18CPPS23	C Programming for Problem Solving	Computer Science and Engineering	Computer Science and Engineering	2	1	--	03	60	40	100	3
4	ES	18ELN24	Basic Electronics	ECE/E and I/ TC	E and C Engineering	2	1	--	03	60	40	100	3
5	BS	18CHEL25	Engineering Chemistry Laboratory	Chemistry	Basic Science	--	--	3	03	60	40	100	1.5
6	ES	18CPL26	Computer Programming Laboratory	Computer Science and Engineering	Computer Science and Engineering	--	--	2	03	60	40	100	1
7	ES	18WMPL27	Workshop /Manufacturing Practices	ME, Auto, IP, IEM, Mfg Engineering	Mechanical Engineering	1	--	3	03	60	40	100	2.5
8	Hu	18EGH28	English	Humanities	Humanities	1	--	2	02	60	40	100	2
TOTAL						12	04	10	23	480	320	800	21

Note: BS: Basic Science, ES: Engineering Science, Hu: Humanity and Social Science.

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Sl. No	Course Code		Course Title	Teaching Department	Paper Setting Board	Teaching Hours /Week			Examination				Credits
						Theory Lecture	Tutorial	Practical/ Drawing	Duration in hours	SEE Marks	CIE Marks	Total Marks	
1	BS	18MAT11	Engineering Mathematics -I	Mathematics	Basic Science	3	1	--	03	60	40	100	4
2	BS	18CHE12	Engineering Chemistry	Chemistry	Basic Science	3	1	--	03	60	40	100	4
3	ES	18CPPS13	C Programming for Problem Solving	Computer Science and Engineering	Computer Science and Engineering	2	1	--	03	60	40	100	3
4	ES	18ELN14	Basic Electronics	ECE/E and I/ TC	E and C Engineering	2	1	--	03	60	40	100	3
5	BS	18CHEL15	Engineering Chemistry Laboratory	Chemistry	Basic Science	--	--	3	03	60	40	100	1.5
6	ES	18ECPL16	Computer Programming Laboratory	Computer Science and Engineering	Computer Science and Engineering	--	--	2	03	60	40	100	1
7	ES	18WMPL17	Workshop/ Manufacturing Practices	ME, Auto, IP, IEM, Mfg Engineering	Mechanical Engineering	1		3	03	60	40	100	2.5
TOTAL						11	04	08	21	420	280	700	19

Note: BS: Basic Science, ES: Engineering Science.

II SEMESTER B.E./B.Tech (PHYSICS GROUP)

Sl. No	Course Code		Course Title	Teaching Department	Paper Setting Board	Teaching Hours /Week			Examination				Credits
						Theory Lecture	Tutorial	Practical/ Drawing	Duration in hours	SEE Marks	CIE Marks	Total Marks	
1	BS	18MAT21	Engineering Mathematics -II	Mathematics	Basic Science	3	1	--	03	60	40	100	4
2	BS	18PHY22	Engineering Physics	Physics	Basic Science	3	1	--	03	60	40	100	4
3	ES	18ELE23	Basic Electrical Engineering	E and E Engineering	E and E Engineering	2	1	--	03	60	40	100	3
4	ES	18CIV24	Civil Engineering and Mechanics	Civil Engineering	Civil Engineering	2	1	--	03	60	40	100	3
5	ES	18EGDL25	Engineering Graphics and Design	ME, Auto, IP, IEM, Mfg Engineering	Mechanical Engineering	1	--	3	03	60	40	100	2.5
6	BS	18PHYL26	Engineering Physics Laboratory	Physics	Basic Science	--	--	3	03	60	40	100	1.5
7	ES	18ELEL27	Basic Electrical Engineering Laboratory	E and E Engineering	E and E Engineering	--		2	03	60	40	100	1.0
8	Hu	18EGH28	English	Humanities	Humanities	1		2	02	60	40	100	2
TOTAL						12	04	10	23	480	320	800	21

Note: BS: Basic Science, ES: Engineering Science, Hu: Humanity and Social Science.

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SCHEME OF TEACHING AND EXAMINATION - 2018-19

B.E./B.Tech Name of the programme

CHOICE BASED CREDIT SYSTEM (CBCS)

III SEMESTER

Sl. No	Course (Subject) code	Course (Subject)	Course Title	Teaching Department	Teaching Hours /Week			Examination				Credits
					Theory	Tutorial	Practical/ Drawing	Duration in hours	CIE Marks	SEE Theory/ Practical Marks	Total Marks	
1	18MAT31	BS	Mathematics (Title as per the decision of BoS Basic Sciences)	Mathematics	2	1	--	03	40	60	100	3
2	18XX32	PC	Professional Core-1		3	1	--	03	40	60	100	4
3	18XX33	PC	Professional Core-2		3	0	--	03	40	60	100	3
4	18XX34	PC	Professional Core-3		3	0	--	03	40	60	100	3
5	18XX35	PC	Professional Core-4		3	0	--	03	40	60	100	3
6	18XX36	PC	Professional Core-5		3	0	--	03	40	60	100	3
7	18XXL37	PC	Laboratory		--	1	2	03	40	60	100	2
8	18XXL38	PC	Laboratory		--	1	2	03	40	60	100	2
9	18XX39	Hu	Kannada/CIPH	Hum	1	--	--	02	40	60	100	1
TOTAL					18	04	04	26	360	540	900	24

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

10	18XX	NMC	Advance Mathematics - I	Mathematics	03	--		03	40	60	100	0
<p>(a)The mandatory non – credit courses Advance 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 respective semesters to complete all the formalities of the course and appear for University examination.</p> <p>(b)The mandatory non – credit courses Advance Mathematics I and II, prescribed to lateral entrant Diploma holders admitted to III semester of BE/B.Tech programs, are to be completed to secure eligibility to VII semester. However, they are not considered for vertical progression from II year to III year of the programme.</p>												
Note: BS: Basic Science, PC: Professional core. Hu: Humanities, NMC: Non-credit mandatory course.												

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IV SEMESTER

Sl. No	Course (Subject) code	Course (Subject)	Course Title	Teaching Department	Teaching Hours /Week			Examination				Credits
					Theory	Tutorial	Practical/ Drawing	Duration in hours	CIE Marks	SEE Theory/ Practical Marks	Total Marks	
1	18MAT41	BS	Mathematics (Title as per the decision of BoS Basic Sciences)	Mathe matics	2	1	--	03	40	60	100	3
2	18XX42	PC	Professional Core-1		3	1	--	03	40	60	100	4
3	18XX43	PC	Professional Core-2		3	0	--	03	40	60	100	3
4	18XX44	PC	Professional Core-3		3	0	--	03	40	60	100	3
5	18XX45	PC	Professional Core-4		3	0	--	03	40	60	100	3
6	18XX46	PC	Professional Core-5		3	0	--	03	40	60	100	3
7	18XXL47	PC	Laboratory		--	1	2	03	40	60	100	2
8	18XXL48	PC	Laboratory		--	1	2	03	40	60	100	2
9	18XX49	HU	Kannada/CIPH	Hum	1	--	--	02	40	60	100	1
TOTAL					18	04	04	26	360	540	900	24
Course prescribed to lateral entry Diploma holders admitted to III semester of Engineering programs												
10	18XX	NCMC	Advance Mathematics - II	Mathe matics	03	--		03	40	60	100	0
<p>(a) The mandatory non – credit courses Advance Mathematics-I and II prescribed at III and IV semesters respectively, to lateral entrant Diploma holders admitted to III semester of BE/B.Tech programs shall compulsorily be registered during respective semesters to complete all the formalities of the course and appear for University examination.</p> <p>(b) The mandatory non – credit courses Advance Mathematics I and II, prescribed to lateral entrant Diploma holders admitted to III semester of BE/B.Tech programs, are to be completed to secure eligibility to VII semester. However, they are not considered for vertical progression from II year to III year of the programme.</p>												
Note: BS: Basic Science, PC: Professional core. Hu: Humanities, NCMC: Non-credit mandatory course.												

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B.E./B.Tech Name of the programme
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V SEMESTER

Sl. No	Course (Subject) code	Course (Subject)	Course Title	Teaching Department	Teaching Hours /Week			Examination				Credits
					Theory	Tutorial	Practical/ Drawing	Duration in hours	CIE Marks	SEE Theory/ Practical Marks	Total Marks	
1	18XX51	Hu	Management and Entrepreneurship (title as per BOS decision)	Hu	2	1	--	03	40	60	100	3
2	18XX52	PC	Professional Core-1		3	1	--	03	40	60	100	4
3	18XX53	PC	Professional Core-2		3	1	--	03	40	60	100	4
4	18XX54	PC	Professional Core-3		3	1	--	03	40	60	100	4
5	18XX55	PC	Professional Core-4		3	--	--	03	40	60	100	3
6	18XX56	PC	Professional Core-5		3	--	--	03	40	60	100	3
7	18XXL57	PC	Laboratory		--	1	2	03	40	60	100	2
8	18XXL58	PC	Laboratory		--	1	2	03	40	60	100	2
9	18XX59	NCMC	CIV	Hu	2	--	--	--	--	--	--	0
TOTAL					19	5	4	24	320	480	800	25

Mini-project: To be carried out during the intervening vacations of V and VI semesters. The University examination will be conducted during VI semester. The credit prescribed for mini – project is added to VI semester credits. The mini-project is considered as a head of passing and is considered for the award of degree. Those, who do not take-up/complete the mini-project will be declared as failed and have to complete during subsequent University examination after satisfy the internship requirements. Also, mini-project is considered for eligibility to VII semester.

Note: Hu: Humanities, PC: Professional core, NCMC: Non-credit mandatory course.

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VI SEMESTER

Sl. No	Course (Subject) code	Course (Subject)	Course Title	Teaching Department	Teaching Hours /Week			Examination				Credits
					Theory	Tutorial	Practical/ Drawing	Duration in hours	CIE Marks	SEE Theory/ Practical Marks	Total Marks	
1	18XX61	PC	Professional Core-1	Hum	3	1	--	03	40	60	100	4
2	18XX62	PC	Professional Core-2		3	1	--	03	40	60	100	4
3	18XX63X	PE	Elective -1		2	1	--	03	40	60	100	3
4	18XX64X	PE	Elective -2		3	--	--	03	40	60	100	3
5	18XX65X	OE	Elective -A		3	--	--	03	40	60	100	3
6	18XXL66	PC	Laboratory		--	1	2	03	40	60	100	2
7	18XXL67	PC	Laboratory		--	1	2	03	40	60	100	2
8	18XXMP68	MP	Mini-project	(Completed during the intervening vacations of V and VI semesters)				03	40	60	100	3
9	18XXMI69	INT	Internship	(To be carried out during the intervening vacations of VI and VII semesters)				--	--	--	--	--
TOTAL					14	5	4	24	320	480	800	24

Note: PC: Professional core, PE: Professional Elective, OE: Open Elective, MP: Mini-project, INT: Internship.

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

Electives

Course code	Professional Electives - 1	Open Elective -A
18XX631		Students can select any one of the open electives (Please refer to consolidated list of VTU for open electives) offered by any Department. Candidate may be offered with an open elective, • If the candidate has not studied the same course during the earlier courses of the program. • The syllabus content of open elective is not similar to that of Departmental core courses or professional electives. • A similar course, under any category, is not prescribed in the higher semesters of the programme. Registration to electives shall be documented under the guidance of Programme Coordinator/ Adviser/Mentor.
18XX632		
18XX633		
Course code	Professional Electives -2	
18XX641		
18XX642		
18XX643		

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VII SEMESTER

Sl. No	Course (Subject) code	Course (Subject)	Course Title	Teaching Department	Teaching Hours /Week			Examination				Credits
					Theory	Tutorial	Practical/ Drawing	Duration in hours	CIE Marks	SEE Theory/ Practical Marks	Total Marks	
1	18XX71	PC	Professional Core-1	Hum	4	--	--	03	40	60	100	4
2	18XX72X	PE	Elective -3		3	--	--	03	40	60	100	3
3	18XX73X	PE	Elective -4		3	--	--	03	40	60	100	3
4	18XX74X	OE	Elective -B		3	--	--	03	40	60	100	3
5	18XXL75	PC	Laboratory			--	2	03	40	60	100	1
6	18XXP76	Project	Project Work Phase - 1		--	--	2	03	40	60	100	2
7	18XXI77	INT	Internship	(If not completed after VI semester examinations, it has to be carried out during the intervening vacations of VII and VIII semesters)			--	--	--	--	--	--
TOTAL					13	--	4	24	240	360	600	16

Note: PC: Professional core, PE: Professional Elective, OE: Open Elective, INT: Internship.

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

Electives

Course code	Professional Electives - 3	Open Elective -B
18XX721		Students can select any one of the open electives (Please refer to consolidated list of VTU for open electives) offered by any Department. Candidate may be offered with an open elective, <ul style="list-style-type: none"> If the candidate has not studied the same course during the earlier courses of the program. The syllabus content of open elective is not similar to that of Departmental core courses or professional electives. A similar course, under any category, is not prescribed in the higher semesters of the programme. Registration to electives shall be documented under the guidance of Programme Coordinator/ Adviser/Mentor.
18XX722		
18XX723		
Course code	Professional Electives - 4	
18XX731		
18XX732		
18XX733		

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VIII SEMESTER

Sl. No	Course (Subject) code	Course (Subject)	Course Title	Teaching Department	Teaching Hours /Week			Examination			Credits	
					Theory	Tutorial	Practical/ Drawing	Duration in hours	CIE Marks	SEE Theory/ Practical Marks		Total Marks
1	18XX81	PC	Professional Core-1		4	--	--	03	40	60	100	4
2	18XX82X	PE	Elective -5		3	--	--	03	40	60	100	3
3	18XX83X	OE	Elective -C		3	--	--	03	40	60	100	3
4	18XXP84	Project	Project Work Phase - 2		--	--	2	03	40	60	100	8
5	18XXS85	Seminar	Technical Seminar		--	--	2	03	40	60	100	1
6	18XX186	INT	Internship	(Completed during the intervening vacations of VI and VII semesters and /or VII and VIII semesters.)				03	40	60	100	3
TOTAL					10	--	4	18	240	360	600	22

Note: PC: Professional core, PE: Professional Elective, OE: Open Elective, INT: Internship.

Electives

Course code	Professional Electives - 5	Open Elective -C
18XX821		Students can select any one of the open electives (Please refer to consolidated list of VTU for open electives) offered by any Department. Candidate may be offered with an open elective, <ul style="list-style-type: none"> The candidate has not studied the same course during I to VII semesters of the programme. The syllabus content of open elective is not similar to that of Departmental core courses or professional electives. Registration to electives shall be documented under the guidance of Programme Coordinator/ Adviser/Mentor.
18XX822		
18XX823		