



Visvesvaraya Technological University, Belagavi

Regulations Governing The Degree of Bachelor of Engineering/ Technology (B.E/B.Tech)

Under Choice Based Credit System (CBCS)
Effective from the academic year 2017 – 18

Anjuman Institute of Technology and Management, Bhatkal

About the Programme

- ❖ The programme of study shall be called the degree of Bachelor of Engineering (Subject of Specialization), abbreviated as B.E. (Subject of Specialization).
 - ❖ e.g. Bachelor of Engineering (Civil Engineering)
- ❖ The program to which students are admitted to I semester of the programme shall be of **four** academic year duration divided into **eight** semesters and each semester is of 16 weeks duration.
- ❖ The number of credits to be completed by students admitted I semester of B.E. programme shall be 200

Maximum Duration for Programme Completion

- ❖ Students admitted to I year B.E. shall complete the programme within a period of eight academic years from the date of first admission, failing which they have to discontinue the Course.
- ❖ A student who has not obtained the eligibility for III semester even after three academic years from the date of admission to I semester shall discontinue the Programme or get readmitted to I semester of first year B.E. with a new University Seat Number but retaining the same year of admission.

Courses

There shall be the following types of Courses:

- a) Humanities and Social Sciences (HSS) including Management.
- b) Basic Sciences (BS): Physics, Chemistry and Mathematics.
- c) Engineering Sciences (ES)
- d) Professional Subjects (PS) – Core
- e) Professional Subjects (PS) – Elective
- f) Open Subjects - Electives (OE)
- g) Mini project and Main Project
- h) Seminar
- i) Internship

Internship / Professional Practice, Project Work and Seminar

Internship:

- ❖ The Internship shall be completed during the period specified in the Scheme of Teaching and Examination.
- ❖ The internship can be carried out in any industry/R and D Organization/Research Institute/ Educational institute of repute.

Project Work:

- ❖ Project work shall preferably be batch wise, the strength of each batch shall not exceed maximum of four students.

Seminar:

- ❖ Each candidate shall deliver seminar on the topics chosen from the relevant fields for about 30 minutes.

Grading System

❖ The grading system with the letter grades and the assigned range of marks under absolute grading system are as given below:

Level	Outstanding	Excellent	Very Good	Good	Above Average	Average	Fail
Letter Grade	S	A	B	C	D	E	F
Grade Points	10	9	8	7	6	4	00
Percentage of Marks Scored in a Course	≥ 90	< 90 ≥ 80	< 80 ≥ 70	< 70 ≥ 60	< 60 ≥ 45	< 45 ≥ 40	< 40
	(90 - 100)	(80 - 89)	(70 - 79)	(60 - 69)	(45 - 59)	(40 - 44)	(0 - 39)

Computation of SGPA and CGPA

- ❖ The Semester Grade Point Average (SGPA) is the ratio of sum of the product of the number of credits with the grade points secured by a student in all the Courses taken by him/her and the sum of the number of credits of all the Courses undergone by a student, i.e.,

$$SGPA = \frac{\sum (C_i \times G_i)}{\sum C_i}$$

Where C_i is the number of credits of the i^{th} Course and G_i is the grade point scored by the student in the i^{th} Course.

- ❖ The Cumulative Grade Point Average (CGPA) is also calculated in the same manner taking into account all the Courses undergone by a student over all the semesters of a programme, i.e.,

$$CGPA = \frac{\sum (C_i \times S_i)}{\sum C_i}$$

Where S_i is the SGPA of the i^{th} semester and C_i is the total number of credits in that semester.

Illustration for Computation of SGPA

Illustration No.1				
Course	Credit	Grade letter	Grade point	<i>Credit Point = (Credit × Grade)</i>
Course 1	4	B	08	$4 \times 08 = 32$
Course 2	4	D	06	$4 \times 06 = 24$
Course 3	4	C	07	$4 \times 07 = 28$
Course 4	3	S	10	$3 \times 10 = 30$
Course 5	3	E	04	$3 \times 04 = 12$
Course 6	3	D	06	$3 \times 06 = 18$
Course 7	2	A	09	$2 \times 09 = 18$
Course 8	2	D	06	$2 \times 06 = 12$
Total	25	--	--	174
Thus, SGPA = $174/25 = 6.96$				

Illustration for Computation of SGPA (continued)

Illustration No.2				
Course	Credit	Grade letter	Grade point	Credit Point = (Credit × Grade)
Course 1	4	B	08	$4 \times 08 = 32$
Course 2	4	D	06	$4 \times 06 = 24$
Course 3	4	C	07	$4 \times 07 = 28$
Course 4	3	S	10	$3 \times 10 = 30$
Course 5	3	F	00	$3 \times 00 = 00$
Course 6	3	D	06	$3 \times 06 = 18$
Course 7	2	A	09	$2 \times 09 = 18$
Course 8	2	D	06	$2 \times 06 = 12$
Total	25	--	--	162
Thus, SGPA= 162/25=6.48				

If a Student secures letter grade C during reappearance then the SGPA is Calculated as shown below.

Illustration No. 2(a)				
Course	Credit	Grade letter	Grade point	Credit Point = (Credit × Grade)
Course 5	3	C	07	$7 \times 03 = 21$
Total Credit Points = Credit Points of first Attempt) + Credit Points of subsequent attempt =162 + 21 = 183				
Total credits of the semester = 25				
Thus, SGPA= 183/25=7.32				

Illustration for Computation of CGPA

Semester	I	II	III	IV	V	VI	VII	VIII
Credits of the semester	24	24	27	27	24	24	24	26
SGPA	7.00	8.50	9.20	6.86	8.18	7.73	8.68	9.40

Thus CGPA

$$= \frac{(24 \times 7.00 + 24 \times 8.50 + 27 \times 9.20 + 27 \times 6.86 + 24 \times 8.18 + 24 \times 7.73 + 24 \times 8.68 + 26 \times 9.40)}{200} = 8.20$$

Conversions of Grades into Percentage and Declaration of Class

❖ Conversion formula for the conversion of CGPA into Percentage is given below

Percentage of Marks Secured, **$P = [\text{CGPA earned} - 0.75] \times 10 \%$**

❖ Illustration for a CGPA Of 8.20:

$$P = [\text{CGPA earned } 8.20 - 0.75] \times 10 = 74.5\%$$

❖ After the conversion of final CGPA into percentage of marks (P), a graduating student is declared to have passed in

- First Class with Distinction (FCD) if $P \geq 70\%$
- First Class (FC) if $P \geq 60\%$ but $<70\%$ and
- Second Class (SC) if $P < 60\%$

Course Evaluation

- ❖ The course evaluation shall be carried in the ratio 60 and 40 for SEE (Semester End Examination) and CIE (Continuous Internal Evaluation) respectively.
- ❖ The SEE will be conducted for 100 marks and proportionally reduced to 60 marks.
- ❖ The CIE is prescribed for maximum of 40 marks.

Continuous Internal Evaluation

- ❖ For each theory and practical paper, the CIE marks shall be 40.
- ❖ For Technical seminar, the CIE marks shall be 100.
- ❖ For Internship/ Professional Practice, the CIE marks shall be 50.
- ❖ For Project Phase –I and Project seminar and Project Phase –II, the CIE shall be 100 respectively.

Continuous Internal Evaluation (continued)

- ❖ CIE Marks in each theory Course shall be the sum of marks prescribed for test and assignment.
- ❖ Marks prescribed for test shall be 30 and that for assignment is 10.
- ❖ The CIE marks for test in a theory Course shall be based on three tests generally conducted at the end of fifth, tenth and fourteenth week of each semester. Each test shall be conducted for a maximum of 30 marks and the final marks shall be the average of three tests.
- ❖ The remaining 10 marks shall be awarded based on the evaluation of Assignments/Unit tests/written Quizzes that support to cover some of the Course/program outcomes.
- ❖ Final CIE marks awarded shall be the sum of these two out of maximum of 40 marks.

Continuous Internal Evaluation (continued)

- ❖ In the case of a Practical, the CIE marks shall be based on the laboratory journals/ records (30 Marks on continuous evaluation based on conduct of experiment, viva and report writing) and one practical test (10 Marks) to be conducted at the end of the semester.
- ❖ The CIE marks for I year Computer Aided Engineering / Drawing:
 - ❖ 24 marks for class work (sketching and Computer Aided engineering Drawing).
 - ❖ 16 marks for test conducted in the same pattern as that of SEE (The marks secured can be taken as best of the two tests).
- ❖ The CIE marks for other Drawings/ Design Drawings offered by various branches shall be based on the evaluation of the sheets and one test in the ratio 60:40.

Minimum Requirement of CIE Marks

- ❖ For theory Courses, there shall not be any minimum requirements of CIE marks.
- ❖ Minimum requirement of CIE marks for Practical/ Internship/Project work shall be **50%** of the maximum marks.
- ❖ For seminar, the minimum requirement of CIE marks shall be **40%** of the maximum marks.
- ❖ Students failing to secure a minimum of 50% of the CIE marks in Practical/ Internship/Project work shall not be eligible for the Practical / Internship/Project examination conducted by the University and they shall be considered as failed in that/those Course/s.
- ❖ Students after satisfying the prescribed minimum CIE marks in the Course/s when offered during subsequent semester shall appear for SEE.
- ❖ If any student fails to secure a minimum of 40% of the maximum CIE marks in seminar/ fails to deliver the seminar, he/she shall be considered as failed in that Course and shall not be eligible for the award of degree. However, the student shall become eligible for the award of degree after satisfying the requirements prescribed for seminar during the subsequent semester/s.

Minimum Requirement of CIE Marks (continued)

- ❖ Improvement of CIE marks shall not be allowed in
 - a. Theory Courses and
 - b. Laboratory/Workshop/Seminar/Internship/Project where the student has already secured the minimum required marks.

Eligibility for Passing

- (a) For a pass in a theory Course/Drawing, the student shall secure minimum of **35%** of the maximum marks prescribed in the University examination and in total **40%** of the maximum marks (i.e., prescribed for SEE and CIE) including the CIE marks secured by the student.
- (b) The Minimum Passing letter grade in a Course is 'E'.
- (c) For a pass in a Practical/Internship/Project/Viva-voce examination, a student shall secure a minimum of **40%** of the maximum marks prescribed for the University Examination. The Minimum Passing Grade in a Course is 'E'.

Eligibility for Passing (continued)

- 1) A student who obtain any grade from 'S' to 'E' shall be considered as passed.
- 2) If a student secure F grade in any of the head of passing he/she has to reappear in that head for the SEE.
- 3) A student will be declared successful at the end of academic year if he/she has not more than four 'F' grades in the immediate preceding two semesters.
- 4) A student will be declared successful at the end of program, when he/she has none of the Courses remaining with F grade and shall have CGPA of greater than or equal to 5.00.
- 5) In case, the CGPA falls below 5.00 at the end of the program, the student shall be permitted to appear again for SEE in full or part of the previous semester Courses by rejecting the performance for required number of Course/s, to make up CGPA equal to or greater than 5.0. The student should reject the SEE results of the previous attempt and obtain written permission from the Registrar (Evaluation) to reappear in the subsequent SEE.

Eligibility for Passing (continued)

Illustration 1:

- ❖ If a student has scored 75 marks out of 100 marks in SEE, it will be proportionally reduced to 45 (out of 60) marks.
- ❖ If CIE marks scored are 35 out of 40, the total marks in the subject will be $45 + 35 = 80$ marks
- ❖ The student **passes** in that subject.

Illustration 2:

- ❖ If a student has scored 35 marks out of 100 marks in SEE, it will be proportionally reduced to 21 (out of 60) marks.
- ❖ If CIE marks scored are 19 out of 40, the total marks in the subject will be $21 + 19 = 40$ marks
- ❖ The student **passes** in that subject.

Eligibility for Passing (continued)

Illustration 3:

- ❖ If a student has scored 35 marks out of 100 marks in SEE, it will be proportionally reduced to 21 (out of 60) marks.
- ❖ If CIE marks scored are 18 out of 40, the total marks in the subject will be $21 + 18 = 39$ marks
- ❖ The student **fails** in that subject.

Illustration 4:

- ❖ If a student has scored 34 marks out of 100 marks in SEE, irrespective of CIE marks, the student **fails** in that subject.

Course Completion

- ❖ A student shall be declared to have completed the program of B.E. degree, provided the student has undergone the stipulated Course work as per the Scheme of Teaching and Examination and has earned the prescribed number of credits, having CGPA ≥ 5 with none of the registered courses remaining with 'F' grade.

Attendance Requirement

- ❖ Courses of each semester shall be treated as a separate unit for calculation of the attendance.
- ❖ The candidate has to put in a minimum attendance of **85%** in each Course with a provision to condone **10%** of the attendance by the Vice-Chancellor on the specific recommendations of the Principal of the college where the candidate is studying, based on medical grounds, participation in University/State/ National/ International level sports and cultural activities, seminars, workshops, paper presentation etc., of significant value.
- ❖ The supporting documents for condoning the shortage of attendance are to be submitted along with the recommendations.

Promotion and Eligibility

- ❖ There shall be no restriction for promotion from an odd semester to the next even semester, provided the student has fulfilled the attendance requirement.
- ❖ A student shall be eligible for promotion from an even semester to next odd semester if the student has not failed in more than **four** heads of passing of the immediately preceding two semesters and has passed in all the Courses of all the lower semester examinations. Each credit Course shall be treated as a head of passing.

Promotion and Eligibility (continued)

- a) A student seeking eligibility to III semester should not have failed in more than 4 heads of passing of I and II semesters considered together.
- b) A student seeking eligibility to V semester should have passed in all the subjects of I and II semesters and should not have failed in more than 4 heads of passing of III and IV semesters considered together.
- c) A student seeking eligibility to VII semester should have passed in all the subjects up to IV semester and should not have failed in more than 4 heads of passing of V and VI semesters considered together.

Award of Ranks

- ❖ For award of rank in a Specialization of Bachelor of Engineering/ Technology, the CGPA secured by the students from III to VIII semester is considered.
- ❖ A student shall be eligible for a rank at the time of award of degree of Bachelor of Engineering/ Technology, provided the student,
 - ❖ (i) Has passed I to VIII semester in all the Courses in first attempt only in case of candidates admitted 1 year.
 - ❖ (ii) Has passed III to VIII semester in all the Courses in first attempt only in case of candidates admitted under lateral entry scheme.
 - ❖ (iii) Has completed all the prescribed Audit/mandatory Courses.
- ❖ The total number of ranks awarded shall be 10% of total number of students appeared in VIII semester subject to a maximum of 10 ranks in a Specialization.

VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI
Scheme of Teaching and Examination 2017-2018
Choice Based Credit System (CBCS)

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

Sl. No	Course Code	Course Title	Teaching Department	Board	Teaching Hours /Week		Examination			Credits	
					Theory	Practical/ Drawing	Duration in hours	SEE Marks	CIE Marks		Total Marks
1	17MAT11	Engineering Mathematics -I	Mathematics	Basic Science	04	--	03	60	40	100	4
2	17PHY12	Engineering Physics	Physics	Basic Science	04	--	03	60	40	100	4
3	17CIV13	Elements of Civil Engineering and Mechanics	Civil Engineering	Civil Engineering	04	--	03	60	40	100	4
4	17EME14	Elements of Mechanical Engineering	Mechanical Engineering	Mechanical Engineering	04	--	03	60	40	100	4
5	17ELE17	Basic Electrical Engineering	E and E Engineering	E and E Engineering	04	--	03	60	40	100	4
6	17WSL16	Workshop Practice	ME, Auto, IP, IEM, Mfg Engineering	Mechanical Engineering	01Hour Instruction 02Hour Practical		03	60	40	100	2
7	17PHYL17	Engineering Physics Laboratory	Physics	Basic Science	01Hour Instruction 02Hour Practical		03	60	40	100	2
8	17ENG18	Language – English (Audit Course)	Humanities	--	01		--	--	--	--	--
TOTAL					Theory:21 hours Practical: 06 hours		21	420	280	700	24

II SEMESTER B.E./B.Tech. (CHEMISTRY GROUP)											
1	17MAT21	Engineering Mathematics -II	Mathematics	Basic Science	04	--	03	60	40	100	4
2	17CHE22	Engineering Chemistry	Chemistry	Basic Science	04	--	03	60	40	100	4
3	17PCD23	Programming in C and Data Structures	Any Engineering Department	Computer Science and Engineering	04	--	03	60	40	100	4
4	17CED24	Computer Aided Engineering Drawing	ME, Auto, IP, IEM, Mfg Engineering	Mechanical Engineering	02Hour Instruction 04-Hour Practice		03	60	40	100	4
5	17ELN25	Basic Electronics	ECE/EEE/TC/E and I.	E and C Engineering	04	--	03	60	40	100	4
6	17CPL26	Computer Programming Laboratory	Any Engineering Department	Computer Science and Engineering	01Hour Tutorial 02Hour Practical		03	60	40	100	2
7	17CHEL27	Engineering Chemistry Laboratory	Chemistry	Basic Science	01Hour Tutorial 02Hour Practical		03	60	40	100	2
8	17CIV28	Environmental Studies (Audit Course)	Civil/ Environmental Engineering	Civil Engineering	01Tutorial		--	30	20	50	--
TOTAL					Theory:21 hours Practical: 08 hours		21	450	300	750	24

VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI

Scheme of Teaching and Examination 2017-2018

Choice Based Credit System (CBCS)

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

Sl. No	Course Code	Course Title	Teaching Department	Board	Teaching Hours /Week		Examination				Credits
					Theory	Practical/ Drawing	Duration in hours	SEE Marks	CIE Marks	Total Marks	
1	17MAT11	Engineering Mathematics -I	Mathematics	Basic Science	04	--	03	60	40	100	4
2	17PHY12	Engineering Chemistry	Chemistry	Basic Science	04	--	03	60	40	100	4
3	17PCD13	Programming in C and Data Structures	Any Engineering Department	Computer Science and Engineering	04	--	03	60	40	100	4
4	17CED14	Computer Aided Engineering Drawing	ME, Auto, IP, IEM, Mfg Engineering	Mechanical Engineering	02Hour Instruction 04Hour Practice		03	60	40	100	4
5	17ELN17	Basic Electronics	ECE/EEE/TC/E and I.	E and C Engineering	04	--	03	60	40	100	4
6	17CPL16	Computer Programming Laboratory	Any Engineering Department	Computer Science and Engineering	01Hour Tutorial 02Hour Practical		03	60	40	100	2
7	17CHEL17	Engineering Chemistry Laboratory	Chemistry	Basic Science	01Hour Tutorial 02Hour Practical		03	60	40	100	2
8	17CIV18	Environmental Studies (Audit Course)	Civil/ Environmental Engineering	Civil Engineering	01HourTutorial		--	30	20	50	--
TOTAL					Theory:21 hours Practical: 08 hours		21	450	300	750	24

II SEMESTER B.E./B. Tech (PHYSICS GROUP)											
1	17MAT21	Engineering Mathematics -II	Mathematics	Basic Science	04	--	03	60	40	100	4
2	17PHY22	Engineering Physics	Physics	Basic Science	04	--	03	60	40	100	4
3	17CIV23	Elements of Civil Engineering and Mechanics	Civil Engineering	Civil Engineering	04	--	03	60	40	100	4
4	17EME24	Elements of Mechanical Engineering	Mechanical Engineering	Mechanical Engineering	04	--	03	60	40	100	4
5	17ELE25	Basic Electrical Engineering	E and E Engineering	E and E Engineering	04	--	03	60	40	100	4
6	17WSL26	Workshop Practice	ME, Auto, IP, IEM, Mfg Engineering	Mechanical Engineering	01-Hour Instruction 02-Hour Practical		03	60	40	100	2
7	17PHYL27	Engineering Physics Laboratory	Physics	Basic Science	01-Hour Instruction 02-Hour Practical		03	60	40	100	2
8	17ENG28	Language – English (Audit Course)	Humanities	--	01		--	--	--	--	--
					TOTAL	Theory:21 hours Practical: 06 hours	21	420	280	700	24

III SEMESTER											
Sl. No	Course Code	Course	Course Title	Teaching Department	Teaching Hours /Week		Examination				Credits
					Theory	Practical/ Drawing	Duration in hours	SEE Marks	CIE Marks	Total Marks	
1	17MAT31	Core Course	Engineering Mathematics-III		04	--	03	60	40	100	4
2	17XX32	Core Course			04	--	03	60	40	100	4
3	17XX33	Core Course			04	--	03	60	40	100	4
4	17XX34	Core Course			04	--	03	60	40	100	4
5	17XX35	Core Course			04	--	03	60	40	100	4
6	17XX36	Foundation Course			03	--	03	60	40	100	3
7	17XXL37	Laboratory			01-Hour Instruction 02-Hour Practical		03	60	40	100	2
8	17XXL38	Laboratory			01-Hour Instruction 02-Hour Practical		03	60	40	100	2
9	17KL/CPH39/49	Core Course	Kannada/Constitution of India, Professional Ethics and Human Rights	Humanities	01		01	30	20	50	01
TOTAL					Theory:24hours Practical: 06 hours		25	510	340	850	28
<p>1. Core Course: This is the course, which is to be compulsorily studied by a student as a core requirement to complete the requirement of a programme in a said discipline of study.</p> <p>2. Foundation Course: The courses based upon the content that leads to Knowledge enhancement.</p> <p>3. Kannada/Constitution of India, Professional Ethics and Human Rights: 50 % of the programs of the Institution have teach Kannada/ Constitution of India, Professional Ethics and Human Rights in cycle based concept during III and IV semesters.</p> <p>4. Audit Course:</p> <p>(i) All lateral entry students (except B.Sc candidates) have to register for Additional Mathematics – I which is 04 contact hours per week.</p> <p>(ii) Language English (Audit Course) be compulsorily studied by all lateral entry students (except B. Sc candidates)</p>											

IV SEMESTER											
Sl. No	Course Code	Course	Course Title	Teaching Department	Teaching Hours /Week		Examination				Credits
					Theory	Practical/ Drawing	Duration in hours	SEE Marks	CIE Marks	Total Marks	
1	17MAT41	Core Course	Engineering Mathematics-IV		04	--	03	60	40	100	4
2	17XX42	Core Course			04	--	03	60	40	100	4
3	17XX43	Core Course			04	--	03	60	40	100	4
4	17XX44	Core Course			04	--	03	60	40	100	4
5	17XX45	Core Course			04	--	03	60	40	100	4
6	17XX46	Foundation Course			03	--	03	60	40	100	3
7	17XXL47	Laboratory			01-Hour Instruction 02-Hour Practical		03	60	40	100	2
8	17XXL48	Laboratory			01-Hour Instruction 02-Hour Practical		03	60	40	100	2
9	17KL/CPH39/49	Core Course	Kannada/Constitution of India, Professional Ethics and Human Rights	Humanities	01		01	30	20	50	01
TOTAL					Theory: 24hours Practical: 06 hours		25	510	340	850	28
<p>1. Core Course: This is the course, which is to be compulsorily studied by a student as a core requirement to complete the requirement of a programme in a said discipline of study.</p> <p>2. Foundation Course: The courses based upon the content that leads to Knowledge enhancement.</p> <p>3. Kannada/Constitution of India, Professional Ethics and Human Rights: 50 % of the programs of the Institution have teach Kannada/ Constitution of India, Professional Ethics and Human Rights in cycle based concept during III and IV semesters.</p> <p>4. Audit Course:</p> <p>(i) All lateral entry students (except B. Sc candidates) have to register for Additional Mathematics – II which is 04 contact hours per week.</p> <p>(ii) Language English (Audit Course) be compulsorily studied by all lateral entry students (except B. Sc candidates)</p>											

V SEMESTER											
Sl. No	Course Code	Course	Course Title	Teaching Department	Teaching Hours /Week		Examination				Credits
					Theory	Practical/ Drawing	Duration in hours	SEE Marks	CIE Marks	Total Marks	
1	17XX51	Core Course	Management and Entrepreneurship Excluding CSE, ISE and EV Programs. (The course must be related to Management and Entrepreneurship. However, the title and syllabus content can be as per the programme requirement).		04	--	03	60	40	100	4
2	17XX52	Core Course			04	--	03	60	40	100	4
3	17XX53	Core Course			04	--	03	60	40	100	4
4	17XX54	Core Course			04	--	03	60	40	100	4
5	17XX55X	Professional Elective			03	--	03	60	40	100	3
6	17XX56Y	Open Elective			03	--	03	60	40	100	3
7	17XXL57	Laboratory			01-Hour Instruction 02-Hour Practical		03	60	40	100	2
8	17XXL58	Laboratory			01-Hour Instruction 02-Hour Practical		03	60	40	100	2
TOTAL					Theory:22hours Practical: 06 hours		24	480	320	800	26
Electives											
Professional Elective				Open Elective^{***} Offered by the Department of							
Courses under Code 17XX55X		Course Title		Courses under Code 17XX56Y		Course Title					
17XX551				17XX561							
17XX552				17XX562							
17XX553				17XX563							
17XX554				17XX564							
<p>*** Students can select any one of the open electives offered by any Department (Please refer to consolidated list of VTU for open electives). Selection of an open elective is not allowed provided;</p> <ul style="list-style-type: none"> The candidate has pre – requisite knowledge. The candidate has not studied during I and II year 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. <p>Registration to electives shall be documented under the guidance of Programme Coordinator and Adviser.</p>											
<p>1. Core subject: This is the course, which is to be compulsorily studied by a student as a core requirement to complete the requirement of a programme in a said discipline of study.</p> <p>2. Professional Elective: Electives relevant to chosen specialization/ branch.</p> <p>3. Open Elective: Electives from other technical and/ or emerging subject areas.</p>											

VI SEMESTER												
Sl. No	Course Code	Course	Course Title	Teaching Department	Teaching Hours /Week		Examination				Credits	
					Theory	Practical/ Drawing	Duration in hours	SEE Marks	CIE Marks	Total Marks		
1	17XX61	Core Course	Management and Entrepreneurship Excluding CSE, ISE and EV Programs. (The course must be related to Management and Entrepreneurship. However, the title and syllabus content can be as per the programme requirement).		04	--	03	60	40	100	4	
2	17XX62	Core Course			04	--	03	60	40	100	4	
3	17XX63	Core Course			04	--	03	60	40	100	4	
4	17XX64	Core Course			04	--	03	60	40	100	4	
5	17XX65X	Professional Elective			03	--	03	60	40	100	3	
6	17XX66Y	Open Elective			03	--	03	60	40	100	3	
7	17XXL67	Laboratory			01-Hour Instruction 02-Hour Practical		03	60	40	100	2	
8	17XXL68	Laboratory			01-Hour Instruction 02-Hour Practical		03	60	40	100	2	
TOTAL					Theory:22hours Practical: 06 hours		24	480	320	800	26	
Electives												
Professional Elective				Open Elective^{***} Offered by the Department of _____								
Courses under Code 17XX65X		Course Title		Courses under Code 17XX66Y		Course Title						
17XX651				17XX661								
17XX652				17XX662								
17XX653				17XX663								
17XX654				17XX664								
^{***} Students can select any one of the open electives offered by any Department (Please refer to consolidated list of VTU for open electives). Selection of an open elective is not allowed provided; <ul style="list-style-type: none"> • The candidate has pre – requisite knowledge. • The candidate has not studied during I and II year 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. Registration to electives shall be documented under the guidance of Programme Coordinator and Adviser.												
1. Core subject: This is the course, which is to be compulsorily studied by a student as a core requirement to complete the requirement of a programme in a said discipline of study. 2. Professional Elective: Electives relevant to chosen specialization/ branch. 3. Open Elective: Electives from other technical and/ or emerging subject areas.												

VII SEMESTER											
Sl. No	Course Code	Course	Course Title	Teaching Department	Teaching Hours /Week		Examination				Credits
					Theory	Practical/ Drawing	Duration in hours	SEE Marks	CIE Marks	Total Marks	
1	17XX71	Core Course			04	--	03	60	40	100	4
2	17XX72	Core Course			04	--	03	60	40	100	4
3	17XX73	Core Course			04	--	03	60	40	100	4
4	17XX74 X	Professional Elective			03	--	03	60	40	100	3
5	17XX75Y	Professional Elective			03	--	03	60	40	100	3
6	17XXL76	Laboratory			01-Hour Instruction 02-Hour Practical		03	60	40	100	2
7	17XXL77	Laboratory			01-Hour Instruction 02-Hour Practical		03	60	40	100	2
8	17XXP78	Core Course	Project Phase – I and Project seminar			03	--	--	100	100	2
TOTAL					Theory:18 hours Practical and Project: 09 hours		21	420	380	800	24

Electives

Professional Elective		Professional Elective	
Courses under Code 17XX74X	Course Title	Courses under Code 17XX75Y	Course Title
17XX741		17XX751	
17XX742		17XX752	
17XX743		17XX753	
17XX744		17XX754	

1. **Core subject:** This is the course, which is to be compulsorily studied by a student as a core requirement to complete the requirement of a programme in a said discipline of study.

2. **Professional Elective:** Electives relevant to chosen specialization/ branch.

3. **Project Phase – I and Project seminar:** Comprises of Literature Survey, Problem identification, Objectives and Methodology. CIE marks shall be based on the report covering Literature Survey, Problem identification, Objectives and Methodology and seminar presentation skill.

VIII SEMESTER											
Sl. No	Course Code	Course	Course Title	Teaching Department	Teaching Hours /Week		Examination			Credits	
					Theory	Practical/ Drawing	Duration in hours	SEE Marks	CIE Marks		Total Marks
1	17XX81	Core Course			04	--	03	60	40	100	4
2	17XX82	Core Course			04	--	03	60	40	100	4
3	17XX83X	Professional Elective			03	--	03	60	40	100	3
4	17XX84	Core Course	Internship/ Professional Practice		Working hours of the place of Internship		03	50	50	100	2
5	17XXP85	Core Course	Project work Phase -II		--	06	03	100	100	200	6
6	17XXS86	Core Course	Technical Seminar		--	04	--	--	100	100	1
TOTAL					Theory:11 hours Project and Seminar: 10 hours		15	390	310	700	20
Professional Electives											
Courses under Code 17XX83X		Course Title									
17XX831											
17XX832											
17XX833											
17XX834											
<p>1. Core subject: This is the course, which is to be compulsorily studied by a student as a core requirement to complete the requirement of a programme in a said discipline of study.</p> <p>2. Professional Elective: Electives relevant to chosen specialization/ branch.</p> <p>3. Internship/ Professional Practice: To be completed between the V and VI semester vacation and/or VI and VII semester vacation period.</p>											