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

AUGUST2017

Visvesvaraya Technological University, Belagavi

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Definitions of Keywords

The following are the definitions/descriptions that have been followed for the different terms used in the Regulations of B.E/B.Tech. Programmes:

1) **Programme:** Is an educational programme in a particular stream/ branch of Engineering/branch of specialization leading to award of Degree. It involves events/activities, comprising of lectures/ tutorials/ laboratory work/ field work, outreach activities/ project work/ vocational training/ viva/ seminars/ Internship/ assignments/ presentations/ self-study etc., or a combination of some of these.

2) **Branch:** Means Specialization or discipline of B.E/B.Tech. Degree Programme, like Civil Engineering, Mechanical Engineering, Textile Engineering, etc.

3) **Semester:** Refers to one of the two sessions of an academic year (vide: serial number 4), each session being of sixteen weeks duration (with working days greater than or equal to ninety).The odd semester may be scheduled from August and even semester from February of the year.

4) **Academic Year:** Refers to the sessions of two consecutive semesters (odd followed by an even) including periods of vacation.

5) **Course:** Refers to usually referred to as 'papers' and is a component of a programme. All Courses need not carry the same weight. The Courses should define learning objectives and learning outcomes. A Course may be designed to comprise lectures/ tutorials/ laboratory work/ field work/ outreach activities/project work/ vocational training/ viva/ seminars/ term papers/assignments/ presentations/ self-study etc., or a combination of some of these.

6) **Credit:** Referstoa unit by which the Course work is measured. It determines the number of hours of instructions required per week. One credit is equivalent to one hour of lecture or two hours of laboratory/practical Courses/ tutorials/ fieldwork per week etc.

7) **Audit Courses:** Means Knowledge/ Skill enhancing Courses without the benefit of a grade or credit for a Course.

8) **Choice Based Credit System (CBCS):** Refers to customizing the Course work, through Core, Elective and soft skill Courses, to provide necessary support for the students to achieve their goals.

9) **Course Registration:** Refers to formal registration for the Courses of a semester (Credits) by every student under the supervision of a Faculty Advisor (also called Mentor, Counselor etc.,) in each Semester for the Institution to maintain proper record.

10) **Course Evaluation:** Means Continuous Internal Evaluation (CIE) and Semester End Examinations (SEE) to constitute the major evaluations prescribed for each Course. SEE and CIE to carry 60% and 40% respectively, to enable each Course to be evaluated for 100 marks, irrespective of its Credits.

11) **Continuous Internal Evaluation (CIE):** Refers to evaluation of students' achievement in the learning process. CIE shall be by the Course Instructor and includes tests, homework, problem solving, group discussion, quiz, mini-project and seminar throughout the Semester, with weightage for the different components being fixed at the University level.

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12) **Semester end examinations (SEE):** Refers to examination conducted at the University level covering the entire Course Syllabus. For this purpose, Syllabi to be modularized and SEE questions to be set from each module, with a choice confined to the concerned module only. SEE is also termed as university examination.

13) **First Attempt:** Refers to a student who has completed all formalities and has become eligible to attend the SEE and has attended at least one head of passing, such attempt shall be considered as first attempt.

14) **Credit Based System (CBS):** Refers to quantification of Course work, after a student completes teaching – learning process, followed by passing in both CIE and SEE. Under CBS, the requirement for awarding degree is prescribed in terms of total number of credits to be earned by the students.

15) **Credit Representation:** Refers to Credit Values for different academic activities considered, as per the Table.1. Credits for seminar, project phases, project viva–voce and internship shall be as specified in the Scheme of Teaching and Examination (Annexure -1).

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Table 1: Credit Values				
Theory/Lectures (L) **(hours/week/Semester)**	**Tutorials (T)** **(hours/week/Semester)**	**Laboratory/Practical (P)** **(hours/week/Semester)**	**Credits** **(L:T:P)**	**Total** **Credits**
4	0	0	4:0:0	4
3	0	0	3:0:0	3
2	2	0	2:1:0	3
2	0	2	2:0:1	3
2	2	2	2:1:1	4
0	0	6	0:0:3	3
NOTE: Activities like, practical training, study tour and participation in Guest lectures not to carry Credits.				

16) **Letter Grade:** It is an index of the performance of students in a said Course. Grades are denoted by letters S, A, B, C, D, E and F.

17) **Grading:** Grade refers to qualitative measure of achievement of a student in each Course, based on the percentage of marks secured in (CIE plus SEE). Grading is done by Absolute Grading [Refer: 17OB6.0]. The rubric attached to letter grades are as follows:
S – Outstanding, A – Excellent, B – Very Good, C – Good, D – Above Average, E – Average and F – Fail.

18) **Grade Point (GP):** Refers to a numerical weightage allotted to each letter grade on a 10-point scale as under.

Letter Grade and corresponding Grade Points on a typical 10 – Point scale							
Letter Grade	S	A	B	C	D	E	F
Grade Point	10	09	08	07	06	04	00

19) **Passing Standards:** Refers to passing a Course only when getting GP greater than or equal to 04 (as per serial number 18).

20) **Credit Point:** Is the product of grade point (GP) and number of credits for a Course i.e.,
Credit Point (CrP) = GP $\times$ Credits for the Course

21) **Semester Grade Point Average (SGPA):** Refers to a measure of academic performance of student/s in a semester. It is the ratio of total credit points secured by a student in various Courses of a semester and the total Course credits taken during that semester. [Refer:17OB6.0]

22) **Cumulative Grade Point Average (CGPA):** Is a measure of overall cumulative performance of a student over all semesters. The CGPA is the ratio of total credit points earned by a student in various Courses in all semesters and the sum of the total credits of all Courses in all the semesters. It is expressed up to two decimal places. [Refer: 17OB6.0]

23) **Transcript or Grade Card or Certificate:** Refers to a certificate showing the grades earned by a student. A grade certificate shall be issued to all the registered students after every semester. The grade certificate will display the programme details (Course code, title, number of credits, grades secured) along with SGPA of that semester and CGPA earned till that semester.

24) **University:** Visvesvaraya Technological University (VTU), Belagavi.

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Under Choice Based Credit System (CBCS)
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17OB 1.0	**Title, Duration and Credits of the Programme of Study**
17OB 1.1	The programme of study shall be called the degree of Bachelor of Engineering (Subject of Specialization) /Bachelor of Technology (Subject of Specialization), abbreviated as B.E. / B.Tech. (Subject of Specialization).
17 OB1.2	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 programme to which students are admitted to III semester of the programme under lateral entry shall be of three academic year duration divided into six semesters and each semester is of 16 weeks duration. The programme (conducted during evening) to which students are admitted to III semester of the programme under lateral entry shall be of three academic year duration divided into six semesters and each semester is of 16 weeks duration. The deficit contact hours of the programme, conducted during evening on all working days, shall be compensated on all Sundays (except on general holidays).
17 OB 1.3	The calendar of events in respect of the program of study shall be notified by the University in advance.
17 OB 1.4	The University examination in all programs of study shall be conducted at the end of each semester for all the eight semesters.

17 OB 1.5	**Maximum Duration for Programme Completion:**
	
	a)
	   i. Students admitted to I year B.E/ B.Tech 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.
	   ii. Students admitted II Year B.E./B.Tech. under lateral entry scheme shall complete the Programme within a period of six academic years from the date of first admission, failing which he/she has to discontinue the Course.
	
	b)
	   i. 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./B.Tech. with a new University Seat Number but retaining the same year of admission.
	   ii. A student (under lateral entry scheme) who has not obtained the eligibility for V semester even after three academic years from the date of admission to III semester shall discontinue the Programme or get readmitted to III semester of II year B.E./B.Tech. with a new University Seat Number but retaining the same year of admission.

17 OB 1.6	Prescribed Number of Credits for the Programme:
	   (a) The number of credits to be completed by students admitted I semester of B.E./B.Tech. programme shall be 200
	   (b) The number of credits to be completed by students admitted to III semester of B.E./B.Tech. programme under lateral entry scheme shall be 152

17 OB2.0	**Eligibility for Admission**(As per the Government orders issued from time to time)
17 OB2.1	Admission to I year/ I semester Bachelor Degree in Engineering/ shall be open to the students who have passed the II PUC/ XII Standard/ Equivalent Examination with English as one of the Languages and obtained a Minimum of 45% of Marks in aggregate in Physics and Mathematics along with Chemistry / Bio-Technology / Biology / Electronics / Computer. In case of SC/ST, Category -1 and OBC (2A, 2B, 3A and 3B) category students from Karnataka (Karnataka candidates) the minimum marks for eligibility shall be 40 %. With regard to the qualification earned from foreign countries, Equivalence certificate from the Association of Indian Universities is Mandatory for admission to B.E./B.Tech. programme. In case of any dispute about the equivalence in qualification earned from foreign countries, the decision of the Equivalence committee shall be the final in establishing the eligibility of the student. Admission to II year/ III semester Bachelor Degree in Engineering/ Technology (Lateral Entry) shall be open to the Diploma holders and B.Sc. graduates.

17 OB2.2	**(i) Diploma Holders**
	  (a) Must have passed diploma or equivalent examination as recognized by University and secured not less than forty five percentage (45%) marks in the final year examination (fifth and sixth semesters) in the appropriate branch of engineering. In case of SC/ST and OBC students from Karnataka the minimum marks for eligibility shall be forty percent (40%).
	  (b) Those candidates who have completed Diploma from other than Karnataka state shall provide the Equivalence/ Eligibility Certificate from the Director of Technical Education, Karnataka.
	
	(ii) B.Sc. Graduates
	  Must have passed B.Sc. degree from a recognized University under the UGC or equivalent qualification as recognized by University and secured not less than forty five percentage (45%) marks in aggregate (considering the marks of all six semesters). In case of SC/ST and OBC students from Karnataka (Karnataka candidates) the minimum marks for eligibility shall be forty percent (40%). Candidates must have studied Mathematics as subject of study at XII Standard.

	(i) Diploma Holders for the programme conducted during evening
	  A candidate who has passed diploma examination or equivalent examination and obtained an aggregate minimum of 45 % marks taken together in all the subjects of the final year (fifth and sixth semesters) diploma exanimation is eligible to B.E Courses, and 40 % of marks in case of SC/ST and backward classes of Karnataka candidates.
	
	  In addition to this a candidate after passing the diploma, must have minimum of two years full time professional experience as on first September of the year of admission, in a registered firm/company/industry/ educational / Government / Autonomous organizations in the branch of Engineering/ Technology, in which the candidates hold a diploma, and in which admission is sought by him/her.

17 OB2.2 (continued)	Further that employment shall be in an establishment situated within the 15 km from the place of the institution to which the candidate is seeking admission. Professional experience refers to the experience earned as an employee on regular basis in, (a) Government, Government Undertaking, Public Sector Undertaking, Corporation or, (b) In a private company registered under the Directorate of Industries and Commerce or the Directorate of Small Scale Industries or, (c) Government, Government recognized Institutions as technical staff. Provided that the period of apprenticeship undergone shall also be treated as professional experience, if sponsored by the Board of Apprenticeship Training, Southern Region, Chennai or by Government, Government undertakings and Public Sector undertakings. Further, those candidates who have completed Diploma from other than Karnataka state shall provide the Equivalence/ Eligibility Certificate from the Director of Technical Education, Karnataka.
17 OB2.3	Those students, who have passed a qualifying examination other than the PUC II examination of the Pre-University Education Board of Karnataka, have to obtain eligibility certificate for seeking admission to B.E./B.Tech. Degree Programme from Visvesvaraya Technological University, Belagavi.
17 OB3.0	**Courses**
17 OB3.1	There shall be the following types of Courses: a) Humanities and Social Sciences (HSS) including Management. These are mandatory for all disciplines. b) Basic Sciences (BS): Physics, Chemistry and Mathematics. These are mandatory for all disciplines. c) Engineering Sciences (ES): Materials, Workshop, Drawing, and Basics of Electrical/ Electronics/ Instrumentation/ Civil/ Mechanical/ Computer Engineering. These are mandatory for all disciplines. d) Professional Subjects (PS) - Core: Are the professional Core (PC) Courses, relevant to the chosen specialization/ branch. The core Courses are to be compulsorily studied by a student and are mandatory to complete them to fulfill the requirements of a programme. e) Professional Subjects (PS) - Elective: Are the professional Electives (PE), relevant to the chosen specialization/ branch and can be chosen from the pool of papers. It shall be supportive to the discipline providing extended scope/enabling an exposure to some other discipline /domain and nurturing student proficiency skills. f) Open Subjects - Electives (OE): Are from other technical areas and/ or from emerging fields. g) Mini project and Main Project: Carried out at the Institution or at an Industry. h) Seminar: Deliverable at the Institution under the supervision of a Faculty. i) Internship: Preferably at an industry/R and D organization/IT company/ Government organization of significant repute for a specified period mentioned in the Scheme of Teaching and Examination. j) Mandatory Courses (MC): These Courses are mandatory, without the benefit of a grade or credit, for students admitted to B.E./B.Tech. program. A pass in each mandatory Course is required to qualify for Degree award from the University.

17 OB3.1 (continued)	k) Audit Courses (AC): Knowledge/ skill enhancement Courses without the benefit of a grade or credit for a Course. i) The Audit Course/s (other than the Course/s considered for completing the prescribed program credits) can be any Course offered by the program to which the student is admitted to other programs offered in the institution, where the student is studying. ii) The students who are interested in audit Courses can register for one audit Course at a time during III to VIII semesters. Students, who have opted for audit Courses and considered on par with students registered for credit Courses, have to satisfy the attendance and CIE requirements. However, they need not have to appear for SEE. The number of registrations to an audit Course is restricted to 10 % of the AICTE intake. iii) Registration for any audit Course, in writing, shall be completed at the beginning of semesters. The Institution should intimate the Registrar (Evaluation) about the registration at the beginning of the semester and obtain a formal approval for inclusion of the audit Course/s in the Grade cards/ Transcripts issued to the students.
17 OB3.2	The minimum number of students registered to any Elective offered by the Departments shall be not less than ten.
17 OB3.3	A student shall exercise his option in respect of Elective Courses and register for the same at the beginning of the concerned semester. The student may be permitted to opt for a change of Elective Course within 15 days from the date of commencement of the semester as per the calendar of the University.
17 OB3.4	**Course Registration:** Every student shall register for the Courses of a semester (Credits) under the supervision of a Faculty Advisor (also called Mentor, Counselor etc.,) in each Semester for the Institution to maintain proper record.
17OB4.0	**Internship/Professional Practice**
17OB4.1	**Internship / Professional Practice:** 1) The Internship shall be completed during the period specified in the Scheme of Teaching and Examination. 2) The internship can be carried out in any industry/R and D Organization/Research Institute/ Educational institute of repute. 3) (a) The Department/college shall nominate staff member/s to facilitate, guide and supervise students under internship. (b) The Internal Guide has to visit place of internship at least once during the student's internship. 4) The students shall report the progress of the internship to the guide in regular intervals and seek his/her advice. 5) After the completion of Internship, students shall submit a report with completion and attendance certificates to the Head of the Department with the approval of both internal and external guides. 6) There will be 50 marks for CIE (Seminar: 25, Internship report: 25) and 50 marks for Viva – Voce conducted during SEE. The minimum requirement of CIE marks shall be 50% of the maximum marks. [To be read along with 17 OB 8.6] 7) The internal guide shall award the marks for seminar and internship report after evaluation. He/she will also be the internal examiner for Viva – Voce conducted during SEE.

	8) The external guide from the industry shall be an examiner for the viva voce on Internship. Viva-Voce on internship shall be conducted at the college and the date of Viva-Voce shall be fixed in consultation with the external Guide. The Examiners shall jointly award the Viva - Voce marks. 9) In case the external Guide expresses his inability to conduct viva voce, the Chief Superintendent of the institution shall appoint a senior faculty of the Department to conduct viva-voce along with the internal guide. The same shall be informed in writing to the concerned Chairperson, Board of Examiners (BOE). 10) The students are permitted to carry out the internship anywhere in India or abroad. The University will not provide any kind of financial assistance to any student for carrying out the Internship.
17OB4.2	**Failing to undergo Internship:** Internship is one of the head of passing. Completion of internship is mandatory. If any student fails to undergo /complete the internship, he/she shall be considered as failed in that Course and shall not be permitted to appear for SEE in that Course. However, student shall appear for SEE after satisfying the conditions prescribed for Internship. The reappearance shall be considered as an attempt.
17OB5.0	**Seminar and Project**
17OB5.1	**Seminar:** Seminar is one of the head of passing. i) Each candidate shall deliver seminar as per the Scheme of Teaching and Examination on the topics chosen from the relevant fields for about 30 minutes. ii) The Head of the Department shall make arrangements for conducting seminars through concerned faculty members of the Department. The committee constituted for the purpose by the Head of the Department shall award the CIE marks for the seminar. The committee shall consist of three faculty from the Department and the senior most acting as the Chairman/Chairperson. [To be read along with 17 OB 8.6].
17OB5.2	**Project Work:** Project is one of the head of passing. Project work shall preferably be batch wise, the strength of each batch shall not exceed maximum of four students.
17OB5.3	Viva-voce examination in project work shall be conducted batch-wise.
17OB 6.0	**Computation of SGPA and CGPA**
17OB 6.1	(i) The University adopts absolute grading system wherein the marks are converted to grades, and every semester results will be declared with semester grade point average (SGPA) and Cumulative Grade Point Average (CGPA). The CGPA will be calculated for every semester, except for the first semester. (ii) 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)

	(iii) A student obtaining Grade 'F' in a Course shall be considered failed and is required to reappear in subsequent SEE. Whatever the letter grade secured by the student during his / her reappearance shall be retained. However the number of attempts taken to clear a Course shall be indicated in the grade cards/ transcripts.
17OB 6.2	**Computation of SGPA and CGPA (as per UGC Guidelines)** The following procedures shall be used to compute the Semester Grade Point Average (SGPA) and Cumulative Grade Point Average (CGPA) respectively: i) The 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 ith Course and G_i is the grade point scored by the student in the ith Course. ii) The 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 ith semester and C_i is the total number of credits in that semester. The SGPA and CGPA shall be rounded off to 2 decimal places and reported in the transcripts.

17OB 6.2 (continued)	**Illustration for Computation of SGPA and CGPA**

Computation of SGPA

Illustration No.1

Course	Credit	Grade letter	Grade point	Credit Point = (Credit × Grade)
Course 1	4	B	08	4 × 08 = 32
Course 2	4	D	06	4 × 06 = 24
Course 3	4	C	07	4 × 07 = 28
Course 4	3	S	10	3 × 10 = 30
Course 5	3	E	04	3 × 04 = 12
Course 6	3	D	06	3 × 06 = 18
Course 7	2	A	09	2 × 09 = 18
Course 8	2	D	06	2 × 06 = 12
Total	25	--	--	174

Thus, **SGPA= 174/25 = 6.96**

Illustration No.2

Course	Credit	Grade letter	Grade point	Credit Point = (Credit × Grade)
Course 1	4	B	08	4 × 08 = 32
Course 2	4	D	06	4 × 06 = 24
Course 3	4	C	07	4 × 07 = 28
Course 4	3	S	10	3 × 10 = 30
Course 5	3	F	00	3 × 00 = 00
Course 6	3	D	06	3 × 06 = 18
Course 7	2	A	09	2 × 09 = 18
Course 8	2	D	06	2 × 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 × 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 No.3

Course	Credit	Grade letter	Grade point	Credit Point = (Credit x Grade)
Course 1	4	B	08	4 x 08 = 32
Course 2	4	D	06	4 x 06 = 24
Course 3	4	C	07	4 x 07 = 28
Course 4	3	S	10	3 x 10 = 30
Course 5	3	A	09	3 x 04 = 18
Course 6	3	D	06	3 x 06 = 18
Course 7	2	A	09	2 x 09 = 18
Course 8	2	D	06	2 x 06 = 12
Total	25	--	--	189

Thus, **SGPA= 189/25=7.56**

$$CGPA \text{ (from illustrations 2 and 3)} = \frac{25 \times 7.32 + 25 \times 7.56}{50} = 7.44$$

17OB 6.2 (continued)	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

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

17OB 6.3 — **Transcript Format:** Based on the secured letter grades, grade points, SGPA and CGPA, the transcript for each semester and a consolidated transcript indicating the performance in all semesters shall be issued.

17OB 7.0 — **Conversions of Grades into Percentage and Declaration of Class**

17OB 7.1 — Conversion Formula For The Conversion Of CGPA Into Percentage Is Given Below

Percentage Of Marks Secured, $P = [CGPA\ Earned - 0.75] \times 10$

Illustration For A CGPA Of 8.20:

$P = [CGPA\ Earned\ 8.2 - 0.75] \times 10 = 74.5\%$

17OB 7.2 — **Class Declaration:**

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

(i) First Class with Distinction (FCD) if $P \geq 70\%$

(ii) First Class (FC) if $P \geq 60\%$ but $<70\%$ and

(iii) Second Class (SC) if $P < 60\%$.

17OB8.0 — **Continuous Internal Evaluation**

17OB8.1 — 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.

17OB8.2 — 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.

The candidates shall write the Internal Assessment Tests and Assignments/Unit-tests/written Quizzes in Blue Books which shall be preserved by the Principal/ Head of the Department for at least three years after the announcement of University results and shall be made available for verification at the direction of the Registrar (Evaluation).

17OB8.3	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.

17OB8.4	(i) The CIE marks for I year Computer Aided Engineering / Drawing:
	    a) 24 marks for class work (sketching and Computer Aided engineering Drawing).
	    b) 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).
	(ii) 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.

17OB8.5	The CIE marks in the case of projects and seminars in the final year shall be based on the evaluation at the end of VIII semester 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 project / seminar guide.
17OB8.6	i. For theory Courses, there shall not be any minimum requirements of CIE marks. ii. Minimum requirement of CIE marks for Practical/ Internship/Project work shall be 50% of the maximum marks. iii. For seminar, the minimum requirement of CIE marks shall be 40% of the maximum marks.
17OB8.7	i) 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. However, they can appear for University examinations conducted in other Courses of the same semester and backlog Courses if any. Students after satisfying the prescribed minimum CIE marks in the Course/s when offered during subsequent semester shall appear for SEE. ii) 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. iii) The Course/s under 17OB8.6 (ii) and (iii), when repeated are considered as attempts.
17OB8.8	CIE marks of those students, who come under 17OB8.7, shall be sent separately to the Registrar (Evaluation).
17OB8.9	If a student remains absent for all the CIE tests conducted, the CIE Marks shall be marked as AB for the Courses against the University Seat Number (USN) of the student in the marks sheet submitted to the University by the Principal of the College.

17OB8.10	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.

17OB8.11	The final list, incorporating corrections (if any) of CIE marks awarded to the students in the Theory/Practical/Internship/Project work/ Seminar, shall be displayed on the notice board of the college at least seven days before the closure of the semester and a certified copy of the same shall be sent by the Principal to the University Examination Section within the stipulated date. Every page of the CIE marks sheet shall bear the signatures of the concerned Teacher/Teachers, Head of the Department and Principal.
17OB8.12	Any corrections or overwriting of CIE marks shall bear the signature(s) of concerned Teacher(s) and in such cases the Head of the Department shall indicate the number of corrections on every sheet and attest it with his/her signature.

17OB8.13	CIE marks shall reach the University before the commencement of examination as per the notification issued from the office of the Registrar (Evaluation) from time to time. After the submission of CIE marks to the University, any request under any circumstances for change of CIE marks shall not be considered.
17OB 9.0	**Eligibility for Passing and Award of Degree**(To be read along with 17OB4.2, 5.1, 5.2, 8.6 and8.7)
17OB 9.1	(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'.
17OB 9.2	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 (17 OB 4.2, 17 OB 5.1, 17 OB 5.2 and 17 OB 11.2) 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 (other than seminar, Project and Practical's) and times, subject to the provision of 17OB1.5, 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.
17OB 9.3	The students who do not satisfy the provision 17OB9.2 (1) and the students who remain absent for the University examinations shall be deemed to have failed in that Course/s. They have to reappear for the University examination in the subsequent examinations. The CIE marks awarded to the student/s at first attempt in the concerned theory Course/s will be carried forward. Revised CIE marks are considered only in cases under the provisions of 17OB8.7.
17OB 9.4	Students who pass a Course of a semester as per 17OB 9.1 and has earned CGPA equal to or greater than 5.00 shall not be allowed to appear for any individual Course/s again, unless they opt for rejection of results of entire semester as per 17OB 9.5.
17OB9.5	A student may, at his/her desire, reject the total performance of a semester (including CIE marks) or reject only the result of his/her performance in University examination of a semester. The rejection is permitted only once during the entire programme of study.
17OB9.6	The student who desires to reject the results of a semester shall reject performance in all the Courses of the semester, irrespective of whether the student has passed or failed in any Course. However, the rejection of performance of VIII semester project shall not be permitted.

17OB9.7	A student, who desires to reject the total performance of a semester including CIE marks, has to take readmission for that semester.
	Application for approval of readmission shall be sent to the Registrar through the Principal of College within 30 days from the date of the announcement of the results. Late submission of application shall not be accepted for any reasons.
	Readmission to First semester in such cases shall not be considered as fresh admission and therefore the student will continue to have the same University Seat Number, which was allotted earlier. The Course duration (as per 17OB1.5) will be counted with reference to old USN.
17OB9.8	The student, who rejects only the results of University examination of a semester, shall be permitted to re-appear for University examinations of all the Courses of that semester in the subsequent examinations. However, the CIE marks obtained by the student in the rejected semester shall be retained.
	Applications for rejection and approval to reappear for University examination shall be sent to the Registrar (Evaluation) through the Principal of the College within 30 days from the date of announcement of the results. Late submission of applications shall not be accepted for any reasons.
	If the rejection of results of University examination is of odd semester, the student shall be allowed to take admission to the immediate next even semester. However, if the rejection of results of University examination is of even semester, then the student shall not be allowed to take admission to the next odd semester (as per 17OB11.2).
17OB9.9	Students who opt for rejection of results of University examination are eligible for the award of class and distinction, but are not eligible for the award of ranks.
17OB9.10	A student shall be declared to have completed the program of B.E. / B.Tech. 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 as per the provision 17OB1.6, having CGPA ≥ 5 with none of the registered courses remaining with 'F' grade.
17OB10.0	**Attendance Requirement**
17OB10.1	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.
17OB 10.2	The datum for the calculation of attendance shall be the number of Teaching hours prescribed for a Course [50 hours for 04 credit Courses (theory), and 40 hours for 03 credit Courses (theory) counted from the date of commencement of the semester. In case of Laboratories, the number of classes (deemed as teaching hours) is equal to the number of experiments prescribed under main heading].
	In case of late admission, approved by competent authority (DTE/VTU), to I semester/III semester (lateral entry scheme)/ III semester (lateral entry scheme) of Engineering programme conducted during evening the attendance shall be reckoned from the date of admission to the programme.

17OB10.3	The Course Instructor/ Mentor/College shall inform the students as well as their parents about the attendance status periodically. Students who are facing the shortage of attendance be mentored to make up the shortage. Principals shall also notify every month, the list of candidates who are under short of attendance.
17OB10.4	A candidate, who does not satisfy the attendance requirement (in one or more Courses) as mentioned in 17OB10.1 shall not be eligible to appear for the SEE of that semester and shall not be permitted to take admission to next higher semester. The candidate shall be required to repeat that semester during the subsequent year.
17OB 10.5	The list of the candidates falling short of attendance shall be sent to Registrar (Evaluation) at least once in a month and final list shall be sent one week prior to the commencement of the examination. The detained students should obtain permission from Registrar, VTU for readmission to the semester concerned as a repeater.
17OB 11.0	**Promotion and Eligibility**
17OB 11.1	There shall be no restriction for promotion from an odd semester to the next even semester, provided the student has fulfilled the attendance requirement.
17OB 11.2	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. **Illustrations:** 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. **Lateral entry scheme:** a. A student seeking eligibility to V semester should not have failed in more than 4 heads of passing of III and IV semesters considered together. b. A student seeking eligibility to VII semester should have passed in all the subjects of III and IV semesters and should not have failed in more than 4 heads of passing of fifth and sixth semesters considered together.

17OB 11.3	a.	All students admitted to I semester and to III semester under lateral entry scheme to B.E./B.Tech. programme have to undergo the Mandatory non – credit Courses viz., Environmental Studies and English Language. However these Courses shall not be considered for the Eligibility criterion prescribed for promotion, award of Class, calculation of SGPA and CGPA.
	b.	The Courses viz., Advanced Mathematics I and II, to be completed by the candidates (diploma holders) admitted to III semester under lateral entry scheme shall not be considered for the eligibility criterion prescribed for promotion, award of Class, calculation of SGPA and CGPA. However, a pass in the above Courses is mandatory for the completion of the programme and award of degree.
	c.	The Courses Viz., (i) Computer Aided Engineering Drawing (ii) Programming in C and Data structure and (iii) Environmental Studies (if not studied at B.Sc. level), to be completed by the candidates who have passed B.Sc. degree and admitted to III semester of the programme, shall not be considered for the award of Class, calculation of SGPA and CGPA. However, a pass in the above Courses is mandatory for the completion of the programme and award of degree.
17OB 12.0	**Temporary Discontinuation/Break in the Program**	
17OB 12.1	a)	If a candidate, for any reason, temporarily discontinues the Programme or take a break from the programme during any semester intentionally, he/she may be permitted to continue the programme by registering to the same semester of the prevailing scheme. The candidate shall complete all the remaining Course work subject to the provision 17 OB 1.5. Also the Candidates may have to complete additional Course/s, if any, as per the decision of concerned Board of Studies and approval of Dean, Faculty of Engineering, on establishing equivalence between two schemes. A Grade card shall be issued to that effect. Additional Course/s shall not be considered for the eligibility criterion prescribed for promotion. However, based on the individual cases, it is considered to decide the SGPA and CGPA to admit the student for the award of degree. Such candidates shall not be eligible for the award of rank.
	b)	Candidates who takes admission to any semester of the existing scheme from another scheme, as a repeater/fresher because of various reasons have to complete additional Course/s, if any, as per the decision of concerned Board of Studies and approval of Dean, Faculty of Engineering, on establishing equivalence between two schemes. A Grade card shall be issued to that effect. Additional Course/s shall not be considered for the eligibility criterion prescribed for promotion. However, based on the individual cases, it is considered to decide the SGPA and CGPA to admit the student for the award of degree. Such candidate shall not be eligible for the award of rank.

17OB 13.0	**Award of Prizes, Medals and Ranks**
17OB 13.1	For the award of Prizes and Medals, the conditions stipulated by the Donor shall be considered subject to the provisions of the statutes framed by the University for such awards.

17OB 13.2	1) 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.
	
	2) A student shall be eligible for a rank at the time of award of degree of Bachelor of Engineering/ Technology, provided the student,
	  a)
	  (i) Has passed I to VIII semester in all the Courses in first attempt only in case of candidates admitted I 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.
	  b) Is not a repeater in any semester because of rejection of result of a semester/ shortage of attendance etc.
	  c) Has completed all the semesters without any break/discontinuity.
	  d) Has completed all the semesters (I to VIII/III to VIII) in VTU constituent college or in any VTU affiliated non-autonomous college.
	  e) Has not been transferred from autonomous institution affiliated to VTU or from any other University.
	
	3) 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.
	
	4) For award of ranks in a Specialization, a minimum of 10 students should have appeared in the VIII semester examination.
	  Illustration:
	  a. If 1228 students appeared for the VIII semester in Electronics and Communication Engineering programme, the number of ranks to be awarded for Electronics and Communication Engineering shall be 10.
	  b. If 90 students appeared for the VIII semester in Biomedical Engineering, the number of ranks to be awarded for Biomedical Engineering will be 09.
	
	5) In case of fractional number of ranks, it is rounded to higher integer only when the first decimal place value is greater than or equal to 5.

17 OB 13.3	Ranks are awarded based on the merit of the students as determined CGPA. If two or more students get the same CGPA, the tie shall be resolved by considering the number of times a student has obtained higher SGPA. If it is not resolved even at this stage, the number of times a student has obtained higher grades like S, A, B etc., shall be taken into account to decide the order of the rank.

17OB 14.0	**Transfers of Students**

17OB 14.1	Transfer of students from one college to another college within Karnataka state shall be permitted only at the beginning of third, fifth, and seventh semesters, subject to availability of seats within the permitted intake in respective Colleges and subject to the prior approval of the University.
	
	 (a) Transfer of students from one non - autonomous to another non – autonomous college affiliated to VTU is permitted with the approval of the Registrar, VTU subject to the provision 17OB11.2.
	
	 The students seeking transfer shall have to,
	
	    (i) Obtain No Objection certificate for admission from the University and from both the colleges before the commencement of term as notified by VTU.
	    (ii) Complete the programme subject to the provision 17OB1.5.
	
	 (b) Transfer of students from an autonomous to non – autonomous college affiliated to VTU is permitted with the approval of the Registrar, VTU provided the candidates have passed in all the Courses of the previous semesters.
	
	 The students seeking transfer shall have to,
	
	    (i) Obtain No Objection certificate for admission from the University and from both the colleges before commencement of term as notified by VTU.
	    (ii) Complete additional Course/s, if any, as per the decision of concerned Board of Studies and approval of Dean, Faculty of Engineering, on establishing equivalence between two schemes. A Grade card shall be issued to that effect.
	    Additional Course/s shall not be considered for the Eligibility criterion prescribed for promotion, Class, calculation of SGPA and CGPA. However, a pass in the Additional Courses, if any, is mandatory before the completion of Degree.
	    iii) Complete the programme subject to the provision 17OB1.5.
	
	 (c) In the case of students from Universities other than VTU, the students must have passed in all the Courses of I and II semesters for admission to III semester and all the Courses of I to IV semesters for admission to V semester and all the Courses of I to VI semesters for admission to VII semester.
	
	 The students seeking admission from other Universities to VTU shall have to,
	
	    i) Apply for establishment of equivalence with prescribed fees as notified by the VTU and obtain No Objection certificate for admission from the University before commencement of term as notified by VTU.
	    ii) Produce No Objection certificate for admission from both the colleges before commencement of term as notified by VTU.
	    iii) Complete additional Course/s, if any, as per the decision of concerned Board of Studies and approval of Dean, Faculty of Engineering, on establishing equivalence between two schemes. A Grade card shall be issued to that effect.
	    Additional Course/s shall not be considered for the eligibility criterion prescribed for promotion, Class, calculation of SGPA and CGPA. However, a pass in the additional Courses, if any, is mandatory before the completion of Degree.
	    (ii) Complete the programme subject to the provision 17OB1.5.

17 OB 14.2	Transfer of students within the College from one branch to another branch at the start of III semester shall be permitted with the approval of the Registrar, VTU subject to the provisions made by the Government of Karnataka and AICTE in this behalf.
17OB 14.3	The University may prescribe fee for administrative purpose, which shall be notified from time to time, for transfer from one college to another (Change of College) or one branch to another branch (change of branch within the college).

17 OB 15.0	**Applicability and Power to Modify**
17 OB15.1	The regulations governing the Degree of Bachelor of Engineering/Technology of Visvesvaraya Technological University shall be a binding on all concerned.
17 OB15.2	i) Notwithstanding anything contained in the foregoing, the University shall have the power to issue directions/ orders to address any difficulty. ii) Nothing in the foregoing may be construed as limiting the power of the University to amend, modify or repeal any or all of the above.

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					Teaching Hours /Week		Examination				
Sl. No	**Course Code**	**Course Title**	**Teaching Department**	**Board**	**Theory**	**Practical/ Drawing**	**Duration in hours**	**SEE Marks**	**CIE Marks**	**Total Marks**	**Credits**

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

Sl. No	Course Code	Course Title	Teaching Department	Board	Theory	Practical/ Drawing	Duration in hours	SEE Marks	CIE Marks	Total Marks	Credits
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	17ELE15	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)

Sl. No	Course Code	Course Title	Teaching Department	Board	Theory	Practical/ Drawing	Duration in hours	SEE Marks	CIE Marks	Total Marks	Credits
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

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					Teaching Hours /Week		Examination				
Sl. No	**Course Code**	**Course Title**	**Teaching Department**	**Board**	**Theory**	**Practical/ Drawing**	**Duration in hours**	**SEE Marks**	**CIE Marks**	**Total Marks**	**Credits**

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

Sl. No	Course Code	Course Title	Teaching Department	Board	Theory	Practical/ Drawing	Duration in hours	SEE Marks	CIE Marks	Total Marks	Credits
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	17ELN15	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)

Sl. No	Course Code	Course Title	Teaching Department	Board	Theory	Practical/ Drawing	Duration in hours	SEE Marks	CIE Marks	Total Marks	Credits
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**

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III SEMESTER

Sl. No	Course Code	Course	Course Title	Teaching Department	Teaching Hours /Week — Theory	Teaching Hours /Week — Practical/ Drawing	Examination — Duration in hours	Examination — SEE Marks	Examination — CIE Marks	Examination — Total Marks	Credits
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

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.
2. Foundation Course: The courses based upon the content that leads to Knowledge enhancement.
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.
4. Audit Course:
(i) All lateral entry students (except B.Sc candidates) have to register for Additional Mathematics – I which is 04 contact hours per week.
(ii) Language English (Audit Course) be compulsorily studied by all lateral entry students (except B. Sc candidates)

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IV SEMESTER

| Sl. No | Course Code | Course | Course Title | Teaching Department | Teaching Hours /Week | | Examination | | | | |
					Theory	Practical/ Drawing	Duration in hours	SEE Marks	CIE Marks	Total Marks	Credits
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

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.
2. Foundation Course: The courses based upon the content that leads to Knowledge enhancement.
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.
4.Audit Course:
(i) All lateral entry students (except B. Sc candidates) have to register for Additional Mathematics – II which is 04 contact hours per week.
(ii) Language English (Audit Course) be compulsorily studied by all lateral entry students (except B. Sc candidates)

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V SEMESTER

Sl. No	Course Code	Course	Course Title	Teaching Department	Teaching Hours /Week — Theory	Teaching Hours /Week — Practical/ Drawing	Duration in hours	SEE Marks	CIE Marks	Total Marks	Credits
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	

*** 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;

- 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.

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VI SEMESTER

Sl. No	Course Code	Course	Course Title	Teaching Department	Theory	Practical/ Drawing	Duration in hours	SEE Marks	CIE Marks	Total Marks	Credits
						Teaching Hours /Week		Examination			
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;
- 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.

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VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI

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B.E./B.Tech_____

VII SEMESTER

Sl. No	Course Code	Course	Course Title	Teaching Department	Theory	Practical/ Drawing	Duration in hours	SEE Marks	CIE Marks	Total Marks	Credits
					Teaching Hours /Week			**Examination**			
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 andProject 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.

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VIII SEMESTER

Sl. No	Course Code	Course	Course Title	Teaching Department	Theory	Practical/ Drawing	Duration in hours	SEE Marks	CIE Marks	Total Marks	Credits
					Teaching Hours /Week		Examination				
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	

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. Internship/ Professional Practice: To be completed between the V and VI semester vacation and/or VI and VII semester vacation period.