

Item No.3 of the Agenda of the
Extra-ordinary 120th meeting of the
Executive Council to be held on
8-6-2015

**Consideration of Regulations governing Bachelor
of Engineering / Bachelor of Technology as per
CBCS Scheme.**

The Joint Board of Studies Meeting was held on 27-4-2015 in the VTU's Regional Office, Bengaluru. The Regulations governing Bachelor of Engineering / Bachelor of Technology as per CBCS Scheme were finalized and approved.

The approved Regulations are being placed before the Academic Senate and the recommendations of the Academic Senate will be placed on the table.

Resolution No.3

The Executive Council resolved to accept the recommendations of the Academic Senate which recommended to approve the Regulations governing Bachelor of Engineering / Bachelor of Technology as per CBCS Scheme.

Proceedings of the Extra-ordinary 120th Executive Council Meeting held on 8-6-2015



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CHOICE BASED CREDIT SYSTEM (CBCS)
REGULATIONS GOVERNING
THE DEGREE OF BACHELOR OF ENGINEERING / TECHNOLOGY
(B.E./B.Tech.)

DEFINITIONS OF KEY WORDS:

1. **University:** Visvesvaraya Technological University, Belagavi.
2. **Academic Year:** Two consecutive (one odd + one even) semesters constitute one academic year.
3. **Semester:** Each semester will consist of 15-18 weeks of academic work equivalent to 90 actual teaching days. The odd semester may be scheduled from August to January and even semester from February to July.
4. **Choice Based Credit System (CBCS):** The CBCS provides choice for students to select from the prescribed courses (*core, elective and Foundation Courses*).
5. **Credit Based Semester System (CBSS):** Under the CBSS, the requirement for awarding a degree or certificate is prescribed in terms of number of credits to be earned by the students.
6. **Programme:** An educational programme leading to award of a Degree or certificate.
7. **Course:** Usually referred to, as 'papers' is a component of a programme. All courses need not carry the same weightage. 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.
8. **Branch:** Specialization or discipline of B.E./B.Tech. Degree Programme, like Civil Engineering, Textile Engineering, etc.
9. **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.
10. **Grade Point:** It is a numerical weightage allotted to each letter grade on a 10-point scale.
11. **Credit:** A 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 teaching (lecture or tutorial) or two hours of practical work/field work per week.
12. **Credit Point:** It is the product of grade point and number of credits for a course.
13. **Semester Grade Point Average (SGPA):** It is 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 registered in a semester and the total course credits

taken during that semester. It shall be expressed up to two decimal places.

- 14. Cumulative Grade Point Average (CGPA):** It 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.
- 15. First Attempt:** If a student has completed all formalities and become eligible to attend the examinations and has attended at least one head of passing, such attempt (first sitting) shall be considered as first attempt.
- 16. Transcript or Grade Card or Certificate:** Based on the grades earned, a grade certificate shall be issued to all the registered students after every semester. The grade certificate will display the course details (code, title, number of credits, grade secured) along with SGPA of that semester and CGPA earned till that semester.

Choice Based Credit System (CBCS): The CBCS provides choice for students to select from the prescribed courses.

Sequencing Plan for the B.E. / B.Tech. Degree Curriculum

Semesters	Course Coverage
I -II	HSS, BS and ES; Common for all Branches; Mandatory Courses
III-IV	BS Common for all Branches and ES; PS – Core/Elective
V-VII	PS- Core & Electives; Other Electives; Branch-wise Orientation
VIII	PS-Electives/Elective ; Other Electives, Internship, Project work

Abbreviations:

HSS - Humanities and Social Sciences

BS - Basic Sciences

ES - Engineering Sciences

PS - Professional Subjects

Credit Structure for Course Work

Lectures (hrs/wk /Sem)	Tutorial (hrs/wk/ Sem)	Lab. Work (hrs/wk/Sem)	Credits (Lec:instruction:Lab)	Credits (Total)
4	0	0	4:0:0	4
3	0	0	3:0:0	3
0	1	2	0:1:2	2

CHOICE BASED CREDIT SYSTEM (CBCS)
REGULATIONS GOVERNING
THE DEGREE OF BACHELOR OF ENGINEERING / TECHNOLOGY
(B.E./B.Tech.)

15OB 1	TITLE AND DURATION OF THE PROGRAMME OF STUDY
15OB 1.1	The program of study shall be called the degree Program of study in Bachelor of Engineering / Technology, abbreviated as B.E. / B.Tech.
15OB 1.2	The program shall be of four academic years duration divided into eight semesters, each semester having duration of 16 weeks. For evening courses the contact hours are to be satisfied by working extra on afternoons of Saturdays and Sundays.
15OB 1.3	The calendar of events in respect of the program of study shall be fixed by the University from time to time.
15OB 1.4	The examination in all programs of study shall be conducted at the end of each semester for all eight semesters.
15OB 2	ELIGIBILITY FOR ADMISSION (The Government orders issued from time to time in this regard shall prevail).
15OB 2.1	Admission to I year / I semester Bachelor Degree in Engineering / Technology shall be open to the students who have passed the second year Pre-University or XII standard or equivalent examination recognized by the University. For the prerequisite qualification earned from foreign countries, Equivalence certificate from the Association of Indian Universities is Mandatory. The decision of the Equivalence committee shall be final in establishing the eligibility of student.
15OB 2.2	In addition to 15OB 2.1, the student shall have secured not less than forty five percent (45%) marks in the aggregate with Physics and Mathematics as compulsory subjects, along with any one of the following subjects, namely, Chemistry, Bio-Technology, Computer Science, Biology and Electronics or as decided by the Government of Karnataka. Provided that, the minimum marks for the purpose of eligibility shall be forty percent (40%) in optional subjects in case of students belonging to SC/ST and OBC students from Karnataka or as decided by the Government of Karnataka. Provided further that, the student shall have studied and passed English as one of the subjects.
15OB 2.3	Admission to II year/ III semester Bachelor Degree in Engineering/ Technology (Lateral Entry) shall be open to the students Diploma Holders Must have passed diploma or equivalent qualification 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%). • Who have completed their Diploma from other than Karnataka state shall provide the Equivalence/ Eligibility Certificate from the Director of Technical Education, Karnataka. • Who are seeking admission under lateral entry shall also clear prescribed Bridge courses (Advanced Mathematics – III and IV) and Mandatory subjects (CPH and CIV) as specified by the University. B.Sc. Graduates • Must have passed B.Sc. degree from a recognized University as defined by the UGC or equivalent qualification as recognized by University and secured not less than forty five percentage (45%) marks in aggregate (including all six semesters). In case of SC/ST and OBC students from Karnataka the minimum marks for eligibility shall be forty percent (40%). Should have studied Mathematics as subject of study at XII Standard. • Further, all the B.Sc. students seeking admission to lateral entry shall also clear the following subjects before entering into V Semester I. Computer Aided Engineering Drawing (CAED) and II. Programming in C and Data Structures III. CPH and CIV (if not studied at B.Sc. Level).
15OB 2.4	Admission to Evening Programme of study shall be open to a student Who on the first day of the term notified by the University for the year of admission has at least one-year professional experience in the branch of engineering / technology, in which the student holds a diploma. Explanation: Professional experience means employment on regular basis a. in Government, Government undertaking, Public Sector undertaking, Corporations or b. in a private company registered under the Directorate of Industries and Commerce or the Directorate of Small Scale Industries or c. In 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 any Government, Government undertaking or Public Sector undertaking. Provided further that employment shall be in an establishment situated within the urban agglomeration of city in which the professional institution is situated.
15OB 2.5	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 or from the Principal of concerned Engineering College of Karnataka State.
15OB 3	ATTENDANCE REQUIREMENT
15OB 3.1	Each semester is considered as a unit and the student has to put in a minimum attendance of 85% in each Course with a provision of condonation of 10% of the attendance by the Vice-Chancellor on the specific recommendation of the Principal of the college where the student is studying, showing reasonable cause such as medical grounds, participation in University level sports, cultural activities, seminars, workshops, paper presentation, etc.
15OB 3.2	The basis for the calculation of the attendance shall be the number of hours prescribed by the University by its calendar of events. For the first semester students, the same shall be reckoned from the date of admission to the course as per CET allotment.
15OB 3.3	The students shall be informed about their attendance status periodically by the colleges so that the students shall be cautioned to make up the shortage. The Principals of the affiliated Colleges shall submit the list of students who have been detained for shortage of attendance by the end of the semester to the Registrar (Evaluation) with a copy to the Registrar. Provided that mere omission by the college to inform the student about the shortage of attendance shall not entitle him to appear for examination.
15OB 3.4	A student having shortage of attendance in one or more subjects shall have to repeat the whole semester and such students shall not be permitted to take admission to next higher semester. Such students shall take readmission to the same semester in the subsequent academic year.
15OB 3.5	TEMPORARY DISCONTINUATION OF THE PROGRAM: A student, who wishes to temporarily discontinue the program and continue the same subsequently, has to obtain prior permission from the University by applying through the Principal. Such students have to take readmission to the same semester/year in the subsequent academic year. However, the student shall complete the course as per 15OB 6.2.
15OB 4	INTERNAL ASSESSMENT MARKS
15OB 4.1	There shall be a maximum of 20 Internal Assessment Marks in each theory or practical paper. For seminars, the Internal Assessment marks shall be 50.

15OB 4.2	The Internal Assessment marks in a theory paper shall be based on two tests generally conducted at the end of 6 th and 12 th week of each semester. An additional test may be conducted for the desirous students before the end of the semester to give an opportunity to such students to improve their Internal Assessment Marks, subject to the provisions of 15OB 4.13. The test shall be answered in Blue Books with pages serially numbered. These blue books shall be kept in the custody of the Principal of the College until after one month from the date of announcement of the result by the University. These shall be made available to University authorities for verification as per the directions of the Registrar (Evaluation)/ Registrar.
15OB 4.3	Average of the better marks obtained from any two tests shall be the Internal Assessment Marks for the relevant subject.
15OB 4.4	If a student remains absent for all the Internal Assessment tests conducted, the Internal Assessment Marks shall be marked as AB for the subject against the University Seat Number (USN) of the student in the marks sheet submitted to the University by the Principal of the College.
15OB 4.5	In the case of a Practical, the IA marks shall be based on the laboratory journals/reports and one practical test.
15OB 4.6	The IA marks for I year Computer Aided Engineering / Drawing: a) 12 marks for class work (sketching and Computer Aided engineering drawing). b) 08 marks for test in the same pattern as that of the main examination (better of the two tests) ii) The IA marks for other Drawings and Design Drawings offered by various branches shall be based on the evaluation of the sheets and one test in the ratio 60:40.
15OB 4.7	The IA marks in the case of projects and seminars in the final year shall be based on the evaluation at the end of 8 th 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.
15OB 4.8	The final list, incorporating corrections (if any) of IA 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 Principals to the University Examination Section within the stipulated date. Every page of the IA marks sheet shall bear the signatures of the concerned Teacher/Teachers, Head of the Department and Principal.
15OB 4.9	Any corrections or over writing of IA marks shall bear the signature(s) of concerned Teacher(s) and in such cases the Head of the Department shall on every sheet indicate the number of corrections and attest it with his signature.

15OB 4.10 (a)	A student failing to secure a minimum of 50% of the IA marks in Practical/Internship/Project work shall not be eligible for the Practical/Internship/Project of the University examination.
15OB 4.10 (b)	For seminars, the minimum requirement of IA marks shall be 40% of the maximum.
15OB 4.11	Such students as mentioned in 15OB 4.10 shall repeat the laboratory work/Internship/project work during the subsequent semester(s) and secure at least the minimum marks prescribed.
15OB 4.12	For theory subjects, there shall not be any minimum requirements of IA marks.
15OB 4.13	Improvement of IA marks shall not be allowed a. In theory subjects and b. In Laboratory/Workshop/Seminar/ Internship / Project where the student has already secured the minimum required marks.
15OB 4.14	IA marks of those students to whom 15OB 4.11 is applicable, shall be sent separately to the Registrar (Evaluation).
15OB 4.15	IA marks shall reach the University before the commencement of examination as per the notification from the office of the Registrar (Evaluation) from time to time. After the submission of Internal Assessment marks to the University, any request for change of IA marks shall not be considered under any circumstances.
15OB 5	ELIGIBILITY FOR PASSING A student who obtained Grades O to E shall be considered as passed and if a student secured "F" grade in any of the head of passing he /she has to reappear for the examination.
15OB 5.1 (a)	For a pass in a theory subject/drawing, the student shall secure minimum of 35% of the maximum marks prescribed in the University examination and 40% of marks in the aggregate inclusive of the IA marks. i.e. Minimum Passing Grade is "E".
15OB 5.1 (b)	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 in the relevant Practical/Internship/Project/Viva-voce. i.e. Minimum Passing Grade in a course is "E".
15OB 5.1 (c)	For a pass in Seminar, a student shall secure a minimum of 40% of the maximum marks prescribed. i.e. Minimum Passing Grade is "E".
15OB 5.2	The students who do not satisfy the condition 15OB 5.1 and the student who remains absent shall be deemed to have failed in that subject and may reappear for the University examination in the subsequent examinations. However, the IA marks awarded to the student/s at first attempt in the concerned theory subject will be carried forward. In case of Practical/Internship/Projects/Seminar revised marks will be taken as per regulations 15OB 4.10 (a & b) and 15OB 4.11.
15OB 5.3	The student who passes a course of a semester as per 15OB 5.1 shall

	not be allowed to appear for the same again, unless he/she opts for rejection of results as per 15OB 5.4, 5.5, 5.6, 5.7 & 5.8.
OB 5.4	A student may, at his/her desire, reject his/her total performance of a semester (including IA marks) or he/she may reject the result of his/her performance in University examination of a semester only. The rejection is permitted only once during the entire course of study.
15OB 5.5	The student who desires to reject the performance as per 15OB 5.4 shall reject performance in all the courses of the semester, irrespective of whether the student has passed or failed in any subject. However, the rejection of performance of 8 th semester project result shall not be permitted.
15OB 5.6	A student, who desires to reject the total performance of the semester including Internal Assessment, has to take readmission for the relevant semester. Application for such 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 i.e., the student will continue to have the same University Seat Number, which was allotted earlier. The course duration permitted (as per 15OB 6) will be counted as per old USN.
OB 5.7	The student, who desires to reject only the results of University examination of a semester and does not desire readmission, shall be permitted to re-appear for examinations of all the subjects of the semester in the subsequent examinations. However, the IA marks obtained by the student in the rejected semester shall be retained. Applications for such rejection 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 the University examination results of the semester happens to be of the odd semester, the student shall be allowed to take admission to the immediate next even semester. However, if the rejection of the University result is of the even semester, the student shall not be allowed to take admission to the next odd semester (as per 15OB 7.2).
15OB 5.8	Such students who opt for rejection at final year are eligible for the award of class and distinction at the B.E./ B.Tech. degree level, but are not eligible for the award of ranks.
15OB 5.9	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 regulations and has earned at least 200 Credits.
15OB 6	MAXIMUM DURATION FOR COURSE COMPLETION
15OB 6.1	A student who has not obtained the eligibility for third semester after a

6. The remaining period of internship; i.e. 4/3 weeks shall be completed during the initial period of the 8th semester.
7. After completion of Internship, students shall submit a report to the college with the approval of both internal and external guides.
8. There will be 50 IA and 50 External marks for Internship.
9. The guide shall be the internal examiner and IA marks out of 50 are to be awarded by the internal guide after evaluating the Internship Report submitted by the student.
10. 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.
11. Viva-Voce on internship shall be conducted by both internal and external guides and jointly evaluate the internship report for 50 marks. The expenses of external guide are to be borne by the student/college.
12. In case of the non availability of external guide for the conduct of viva-voce, the Principal shall appoint a senior faculty of the department to conduct viva-voce along with the internal guide, and they jointly evaluate the internship report for 50 marks.
13. The students are permitted to carry out the internship outside India with the following conditions:
 - a. The entire expenses are to be borne by the student or college and the University will not give any financial assistance.
 - b. The Internal Guide has to visit at least once during the student's internship; the expenses of the visit are to borne by the student/college.
 - c. The external guide from the industry has to be an examiner for the viva voce on Internship, and the expenses are to be borne by the student/ college.
 - d. The University will not provide any kind of Financial Assistance to any student for internship and for the conduct of Viva-Voce on internship.

15OB9.2	Report on Internship: The College shall facilitate and monitor the student internship program. The internship report of each student shall be submitted to the Head of the Department of the college with the approval of the Guide.																											
15OB9.3	Failing to undergo Internship: Completion of internship is mandatory; if any student fails to complete internship, he/she will not be eligible for the award of degree.																											
15OB9.4	Non-completion of Internship: In such cases, the student has to redo the internship.																											
15OB 10	SEMINAR AND PROJECT																											
15OB 10.1	Seminar topic shall be selected from the emerging technical areas only.																											
15OB 10.2	Project work at 8 th semester shall be completed batch wise, each batch consisting of minimum of two students and maximum four students.																											
15OB 10.3	Viva-voce examination in project work shall be conducted batch-wise.																											
15OB 11	COMPUTATION OF SGPA AND CGPA																											
	i. The VTU 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 every semester, except the first semester. ii. The grading system is with the following letter grades as given below: Grades and Grade Points <table><tr><th>Level</th><th>Out-standing</th><th>Excellent</th><th>Very Good</th><th>Good</th><th>Above Average</th><th>Average</th><th>Poor</th><th>Fail</th></tr><tr><th>Letter Grade</th><td>O</td><td>S</td><td>A</td><td>B</td><td>C</td><td>D</td><td>E</td><td>F</td></tr><tr><th>Grade Points</th><td>10</td><td>9</td><td>8</td><td>7</td><td>6</td><td>5</td><td>4</td><td>00</td></tr></table> iii. A student obtaining Grade "F" shall be considered failed and will be required to reappear in the examination. Such students after passing the failed subject in subsequent examination/s will be awarded with "E" grade irrespective of marks he/she scores in the subsequent examination/s. Number of attempts taken to clear a subject/s shall be shown in the transcripts.	Level	Out-standing	Excellent	Very Good	Good	Above Average	Average	Poor	Fail	Letter Grade	O	S	A	B	C	D	E	F	Grade Points	10	9	8	7	6	5	4	00
Level	Out-standing	Excellent	Very Good	Good	Above Average	Average	Poor	Fail																				
Letter Grade	O	S	A	B	C	D	E	F																				
Grade Points	10	9	8	7	6	5	4	00																				

Grade Points Scale

Level	Out-standing	Excellent	Very Good	Good	Above Average	Average	Poor	Fall
Letter Grade	O	S	A	B	C	D	E	F
Grade Points	10	9	8	7	6	5	4	00
Score (Marks) Range (%)	≥ 90	<90	< 80 ≥70	< 70 ≥60	< 60 ≥50	< 50 ≥45	<45 ≥40	< 40

Computation of SGPA and CGPA

The following procedure to compute the Semester Grade Point Average (SGPA) and Cumulative Grade Point Average (CGPA):

- i. The SGPA is the ratio of sum of the product of the number of credits with the grade points scored by a student in all the courses taken by a student and the sum of the number of credits of all the courses undergone by a student, i.e

$$\text{SGPA (Si)} = \sum(C_i \times G_i) / \sum C_i$$

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.

- 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.

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

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

- iii. The SGPA and CGPA shall be rounded off to 2 decimal places and reported in the transcripts.

Illustration for Computation of SGPA and CGPA

Computation of SGPA

Illustration No.1

Course	Credit	Grade letter	Grade point	Credit Point (Credit x Grade)
Course 1	4	A	8	4x8 = 32
Course 2	4	C	6	4x6 = 24
Course 3	4	B	7	4x7 = 28
Course 4	3	O	10	3x10= 30
Course 5	3	D	4	3x4 = 12
Course 6	3	C	6	3x6 = 18
Course 7	2	S	9	2x9 = 18
Course 8	2	C	6	2x6 = 12
	25			174

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

Illustration No.2

Course	Credit	Grade letter	Grade point	Credit Point (Credit x Grade)
Course 1	4	A	8	4x8 = 32
Course 2	4	C	6	4x6 = 24
Course 3	4	B	7	4x7 = 28
Course 4	3	O	10	3x10= 30
Course 5	3	F	0	3x0 = 00
Course 6	3	C	6	3x6 = 18
Course 7	2	S	9	2x9 = 18
Course 8	2	C	6	2x6 = 12
	25			162

Thus, **SGPA**= $162/25=6.48$

Illustration No.2(a)

Course	Credit	Grade letter	Grade point	Credit Point (Credit x Grade)
Course 5	3	E	4	3x4 =12
	25			Ci (First Attempt)162 + Ci (subsequent attempt) 12= 174

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

Illustration No.3

Course	Credit	Grade letter	Grade point	Credit Point (Credit x Grade)
Course 1	4	A	8	4x8 =32
Course 2	4	C	6	4x6 =24

Course 3	4	B	7	4x7 =28
Course 4	3	O	10	3x10=30
Course 5	3	S	9	3x9 =27
Course 6	3	C	6	3x6 =18
Course 7	2	S	9	2x9 =18
Course 8	2	C	6	2x6 =12
	25			189

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

$$CGPA = \frac{25 \times 6.96 + 25 \times 7.56}{50} = 7.26$$

CGPA after Final Semester

Sem.- 1	Sem. - 2	Sem. - 3	Sem. - 4	Sem. - 5	Sem. - 6	Sem. - 7	Sem. - 8
Credit : 24 SGPA:7	Credit:24 SGPA:8.5	Credit : 27 SGPA:9.2	Credit : 27 SGPA:6.86	Credit :24 SGPA:8.18	Credit : 24 SGPA:7.73	Credit : 24 SGPA:8.68	Credit : 26 SGPA:9.4

Thus, **CGPA= $\frac{24 \times 7 + 24 \times 8.5 + 27 \times 9.2 + 27 \times 6.86 + 24 \times 8.18 + 24 \times 7.73 + 24 \times 8.68 + 26 \times 9.4}{200} = 8.2$**

Transcript (Format): Based on the above recommendations on Letter grades, grade points, SGPA and CCPA, the transcript for each semester and a consolidated transcript indicating the performance in all semesters may be issued.

15OB 12	CONVERSION OF GRADES INTO PERCENTAGE: Conversion formula for the conversion of GPA into Percentage is [CGPA Earned - 0.75] x 10= Percentage of marks scored. Illustration: [CGPA Earned 8.2 - 0.75]x 10 = 74.5%
15OB 13	AWARD OF PRIZES, MEDALS & RANKS
15OB 13.1	For the award of Prizes and Medals, the conditions stipulated by the Donor may be considered subject to the provisions of the statutes framed by the University for such awards.
15OB 13.2	For award of ranks in a branch, a minimum of 10 students should have appeared in the 8th semester examination. The total number of ranks awarded shall be 10% of total number of students appeared in 8th semester or 10 students, whichever is less in that branch. Illustration: 1. If 1028 students appeared for the 8th semester in Electronics and Communication Engineering Branch, the number of ranks to be awarded for Electronics and Communication Engineering will 10. 2. If 90 students appeared for the 8th semester in Biomedical Engineering Branch, the number of ranks to be awarded for Biomedical Engineering will be 09.
15OB 13.3	For award of rank in a branch of Engineering / Technology, the CGPA secured by the student from a) 1st to 8th semester for the students admitted to B.E./B.Tech. Program from 1st year, and

	b) 3rd to 8th semester for the students admitted to B.E./B.Tech. Program from 2nd year (Lateral Entry) shall be considered. A student shall be eligible for a rank at the time of award of degree in each branch of Engineering / Technology, provided the student a. Has passed 1st to 8th (students joining from 1st semester) or 3rd to 8th (in case of lateral entry) semester in all the subjects in first attempt only b. Has not repeated/rejected any of the lower semesters.
15OB 13.4	If two students get the same CGPA, the tie should be resolved by considering the number of times a student has obtained higher SGPA; but, if it is not resolved even at this stage, the number of times a student has obtained higher grades like O, S, A, B etc shall be taken into account in rank ordering of the students in a program.
15OB 14	TRANSFER OF STUDENTS
15OB14.1	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 and the provisions of 15OB 7.2. In the case of students from Universities other than VTU the students should have passed in all the courses of 1st & 2nd semesters for admission to 3rd semester and all the courses of 1st to 4th semesters for admission to 5th semester and all the courses of 1st to 6th semesters for admission to 7th semester. The students seeking admission from Universities other than VTU shall have to a. apply for establishment of equivalence with prescribed fees as notified by the VTU and b. Obtain No Objection for admission from the university before commencement of term as notified by VTU.
15OB14.2	Transfer of students within the College from one branch to another branch at 3rd semester shall be permitted with the prior approval of the VTU and subject to the provisions made by the Government of Karnataka and AICTE in this behalf.
15OB14.3	The University may prescribe fee for administrative purpose (for updating of the records), 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).

NOTE: *These regulations governing the Degree of Bachelor of Engineering/Technology of Visvesvaraya Technological University shall be binding on all and may be modified from time to time.*

PHYSICS GROUP									
Sl. No.	Subject Code	Subject	Teaching Department	Board	Theory /Lab/ Drawing (Hrs/ Week)	Examination Marks			Credits
						Th./Pr.	I.A.	Total	
1	14MAT11	Engineering Maths-I	Maths	Basic Sc.	4 (T)	80	20	100	4
2	14PHY12	Engineering Physics	Physics	Basic Sc.	4 (T)	80	20	100	4
3	14CTV13	Elements of Civil Engg. & Engineering Mechanics	Civil Engg.	Civil Engg.	4 (T)	80	20	100	4
4	14EME14	Elements of Mechanical Engg.	Mech. Engg.	Mech. Engg.	4 (T)	80	20	100	4
5	14ELE15	Basic Electrical Engg.	E & E	E & E	4 (T)	80	20	100	4
6	14WSL16	Workshop Practice	Mech., Auto, IP, IEM, Mfg. Engg.	Mech. Engg.	3(2 hrs lab+ 1 hr instruction)	80	20	100	2
7	14PHYL17	Engg. Physics Lab	Physics	Basic Sc.	3(2 hrs lab+ 1 hr instruction)	80	20	100	2
8	14CIP18	*Constitution of India & Professional Ethics and Human Rights (CPH)	Humanities		2 (Tutorial)	80	20	100	1
9		Language (Kan.)	Humanities		1 (T)	-	-	-	-
		Mandatory learning			29	640	160	800	25

CHOICE BASED CREDIT SYSTEM (CBCS)
SCHEME OF TEACHING AND EXAMINATION 2015-2016

Sl. No.	Subject Code	Subject		Teaching Department	Board	Theory /Lab/ Drawing (Hrs/ Week)	PHYSICS GROUP Examination Marks			Credits
							Th./Pr.	LA.	Total	
1	14MAT11	Engineering Maths-I	BS	Maths	Basic Sc.	4 (T)	80	20	100	4
2	14PHY12	Engineering Physics	BS	Physics	Basic Sc.	4 (T)	80	20	100	4
3	14CIV13	Elements of Civil Engg. & Engineering Mechanics	ES	Civil Engg.	Civil Engg.	4 (T)	80	20	100	4
4	14EME14	Elements of Mechanical Engg.	BS	Mech. Engg.	Mech. Engg.	4 (T)	80	20	100	4
5	14ELE15	Basic Electrical Engg.	ES	E & E	E & E	4 (T)	80	20	100	4
6	14WSL16	Workshop Practice	ES	Mech., Auto, IP, IEM, Mfg. Engg.	Mech. Engg.	3(2 hrs lab+ 1 hr instruction)	80	20	100	2
7	14PHYL17	Engg. Physics Lab	BS	Physics	Basic Sc.	3(2 hrs lab+ 1 hr instruction)	80	20	100	2
8	14CIP18	*Constitution of India & Professional Ethics and Human Rights (CPH)	HS	Humanities		2 (Tutorial)	80	20	100	1
9		Language (Kan.)	Mandatory learning	Humanities		1 (T)	-	-	-	-
						29	640	160	800	25

VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELGAUM
CHOICE BASED CREDIT SYSTEM (CBCS)
SCHEME OF TEACHING AND EXAMINATION 2015-2016

II SEMESTER B.E./B.TECH.

Sl. No.	Subject Code	Subject		Teaching Department	Board	Theory /Lab/ Drawing (Hrs/ Week)	PHYSICS GROUP Examination Marks			Credits
							Th./Pr.	L.A.	Total	
1	14MAT21	Engineering Maths-I	BS	Maths	Basic Sc.	4 (T)	80	20	100	4
2	14PHY22	Engineering Physics	BS	Physics	Basic Sc.	4 (T)	80	20	100	4
3	14CIV23	Elements of Civil Engg. & Engineering Mechanics	ES	Civil Engg.	Civil Engg.	4 (T)	80	20	100	4
4	14EME24	Elements of Mechanical Engg.	ES	Mech. Engg.	Mech. Engg.	4 (T)	80	20	100	4
5	14ELE25	Basic Electrical Engg.	ES	E & E	E & E	4 (T)	80	20	100	4
6	14WSL26	Workshop Practice	ES	Mech., Auto, IP, IBM, Mfg. Engg.	Mech. Engg.	3(2 hrs lab+ 1 hr instruction)	80	20	100	2
7	14PHYL27	Engg. Physics Lab	BS	Physics	Basic Sc.	3(2 hrs lab+ 1 hr instruction)	80	20	100	2
8	14CIP28	*Constitution of India & Professional Ethics and Human Rights	HS	Humanities		2 (Tutorial)	80	20	100	1
9		Language (Eng.)	MNC	Humanities		1 (T)	-	-	-	-
						29	640	160	800	25

CHOICE BASED CREDIT SYSTEM (CBCS)
SCHEME OF TEACHING AND EXAMINATION 2015-2016

I SEMESTER B.E./B.TECH.

Sl. No.	Subject Code	Subject		Teaching Department	Board	Theory /Lab/ Drawing (Hrs/ Week)	CHEMISTRY GROUP Examination Marks			Credits
							Th./Pr.	LA.	Total	
1	14MAT11	Engineering Maths-I	BS	Maths	Basic Sc.	4 (T)	80	20	100	4
2	14CHE12	Engineering Chemistry	BS	Chemistry	Basic Sc.	4 (T)	80	20	100	4
3	14PCD13	Programming in C & Data Structures	ES	Any Engineering Department	CSE	4 (T)	80	20	100	4
4	14CED14	Computer Aided Engineering Drawing	ES	Mech./IP/Auto/ Mfg.Engg./ IEM	Mech. Engg.	6 (2I+ 4P)	80	20	100	4
5	14ELN15	Basic Electronics	ES	B & C / E & E / TC / IT	E & C	4 (T)	80	20	100	4
6	14CPL16	Computer Programming Lab	ES	Any Engineering Department	CSE	3(2 hrs lab+ 1 hr Tutorial)	80	20	100	2
7	14CHEL17	Engg. Chemistry Lab	BS	Chemistry	Basic Sci.	3(2 hrs lab+ 1 hr Tutorial)	80	20	100	2
8	14CIV18	*Environmental Studies	HS	Civil / Environmental	Civil	2 (Tutorial)	80	20	100	1
9		Language (Kan.)	MNC	Humanities		1 (T)	-	-	-	-
Total						31	640	160	800	25

VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELGAUM
CHOICE BASED CREDIT SYSTEM (CBCS)
SCHEME OF TEACHING AND EXAMINATION 2015-2016

II SEMESTER B.E./B.TECH.

CHEMISTRY GROUP

Sl. No.	Subject Code	Subject		Teaching Department	Board	Theory /Lab/ Drawing (Hrs/ Week)	Examination Marks			Credits
							Th./Pr.	L.A.	Total	
1	14MAT21	Engineering Maths-I	BS	Maths	Basic Sc.	4 (T)	80	20	100	4
2	14CHE22	Engineering Chemistry	BS	Chemistry	Basic Sc.	4 (T)	80	20	100	4
3	14PCD23	Programming in C & Data Structures	ES	Any Engineering Department	CSE	4 (T)	80	20	100	4
4	14CED24	Computer Aided Engineering Drawing	ES	Mech./IP/Auto/ Mfg. Engg./ IEM	Mech. Engg.	6 (2I+ 4P)	80	20	100	4
5	14ELN25	Basic Electronics	ES	E & C / E & E / TC / IT	E & C	4 (T)	80	20	100	4
6	14CPL26	Computer Programming Lab	ES	Any Engineering Department	CSE	3(2 hrs lab+ 1 hr Tutorial)	80	20	100	2
7	14CHEL27	Engg. Chemistry Lab	BS	Chemistry	Basic Sc.	3(2 hrs lab+ 1 hr Tutorial)	80	20	100	2
8	14CIV28	Environmental Studies	HS	Civil / Environmental	Civil	2 (Tutorial)	80	20	100	1
9		Language (Eng.)	MNC	Humanities		1 (T)	-	-	-	-
Total						31	640	160	800	25

REGULATIONS GOVERNING
THE DEGREE OF BACHELOR OF PLANNING (B.PLAN)
UNDER CHOICE BASED CREDIT SYSTEM (CBCS)
(WITH EFFECT FROM 2018-19)

DEFINITIONS OF KEY WORDS:

The following definitions/descriptions have been followed for the different terms used in the Regulations Governing B.Plan Programme:

1. **Programme:** An educational programme leading to award of a Degree or Certificate.
2. **Semester:** The B.Plan Degree Programme to be ordinarily of 4 academic years (= 8 Semesters), with the year being divided into two semesters of approximately 15-18 weeks (≥ 90 working days) each for course work, followed by Continuous Internal Evaluation (CIE) in the Semester & Semester End examination (SEE) as reforms in CBCS system for Achievement Testing. The odd semester may be scheduled from August to January and even semester from February to July.
3. **Academic Year:** Two consecutive (one odd + one even) semesters shall constitute one academic year.
4. **Course:** Usually referred to, as 'papers' is a component of a programme. All courses need not carry the same weightage. The courses should define learning objectives and learning outcomes. A course may be designed to comprise studios/ lectures/ tutorial /laboratory works / case studies / field work / thesis / professional training /viva voce / seminars / term papers/assignments/presentations/self-study or a combination of some of these.
5. **Credit:** A unit by which the course work is measured. It indicates the relative importance of a given course subject.
6. **Audit Courses:** Students to be able to register for courses outside the prescribed range of credits for audit only, when interested to supplement their knowledge/skills; Optional for students to appear/pass in CIE, SEE of these courses and/or seek their inclusion in the Grade cards or Transcripts issued (but, not for earning Credit);
7. **Choice Based Credit System (CBCS):** CBCS helps in customizing the course work for a student, through Core and Electives courses;

8. **Course Registration:** Every student to formally register for Courses(Credits) under faculty's advice in each Semester for the Institution to maintain proper record; Helpful for monitoring the CIE, SEE performance in each case and to assist the students by mentoring;
9. **Course Evaluation:** CIE and Semester End Examination (SEE) to constitute the major evaluations prescribed for each course, with only those students maintaining a minimum standard in CIE being permitted to appear in SEE of the Course.
10. **Continuous Internal Evaluation (CIE):** To be normally conducted by the Course Instructor and includes mid-term/weekly/fortnightly class tests, home work, problem solving, reviews/juries, group discussion, periodical submissions, desk-crits, quiz, mini-project & seminar throughout the semester, with weightage for the different components being flexible as decided by the subject teachers. Instructor also to discuss on CIE performance with students. CIE is also termed as 'Internal Assessment.
11. **Semester End Examination (SEE):** Conducted at the University level covering the entire Course Syllabi. For this purpose, Syllabi to be modularized and SEE questions to be set from each module, with choice if any, to be confined to module concerned only. The questions to be comprehensive, emphasizing analysis, synthesis, design, problems & numerical quantities.
12. **First Attempt:** If a student has fulfilled all prerequisites and has become eligible to attend the Examinations and has attended at least one head of passing, such attempt (first sitting) shall be considered as first attempt.
13. **Credit Based System (CBS):** A credit system enables quantification of course work with credits being assigned to each course after a student completes its teaching-learning process, followed by passing in both CIE & SEE. Under the CBS, the requirement for awarding a degree or certificate is prescribed in terms of total number of credits to be earned by the students.
14. **Letter Grade:** It is an index of performance of students in a said course. Grades are denoted by letters S, A, B, C, D, E and F.
15. **Grading:** Represented using Letter Grades as qualitative measure of achievement in each Course i.e., S(Outstanding), A(Excellent), B(Very Good), C(Good), D(Above average), E(Average) & F(Fail), based on the marks(%) scored in (CIE+SEE) of the Course and conversion to Grade done by Absolute Grading;

VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELGAVI**REGULATIONS GOVERNING
THE DEGREE OF BACHELOR OF ARCHITECTURE (B.ARCH.)
UNDER CHOICE BASED CREDIT SYSTEM (CBCS)
(WITH EFFECT FROM 2018-19)**

18OBP1.0	TITLE AND DURATION OF THE PROGRAMME
18OBP1.1	The course shall be called the Degree Course in Bachelor of Planning, abbreviated as B. Plan.
18OBP1.2	The course shall be of four academic years duration and conducted in eight semesters, each semester having duration of 15 to 18 weeks.
18OBP1.3	The academic programme shall be spread over eight semesters, there being two stages viz., Stage 1 and Stage 2. Stage 1 shall constitute First Semester to Sixth Semester and Stage 2 shall constitute Seventh Semester and Eighth Semester. The closure of the 6th semester academic session, each student would be required to undertake a Six week professional training, during summer vacations, in an organization duly approved by the training coordinator of the Department of Physical Planning. The work undertaken during this training shall be presented by the students in the training seminar organized as part of the 'Dissertation and Training seminar' course in the 7th semester. During eighth semester, each student of Bachelor of Planning is required to prepare terminal project on a subject concerning urban, rural or regional development on an approved topic finalized through discussion within the department. The terminal project will provide an opportunity to the student to synthesize the knowledge and skills acquired through the learning of various theories and practices during the course. The students will be required to present their work orally, graphically and through written report. The student will also be required to present her thesis before the external jury appointed by the concerned University / Institute / School.
18OBP1.4	The calendar of events in respect of the programme of study shall be fixed and notified by the University from time to time.
18OBP1.5	The examination in all the subjects of the 8 semesters shall be conducted at the end of each semester (as per the scheme of teaching and examinations) except when there are no candidates taking examination for any subject.
18OBP2.0	ELIGIBILITY FOR ADMISSION University regulations issued from time to time in this regard shall prevail.
18OBP2.1	Admission to the first year of the course shall be open to the students; who have passed the two year Pre-University examination conducted by the Karnataka State Pre-University Board/ the Central Board of Secondary Education (C.B.S.E.) with Mathematics and Physics as a compulsory subject of study along with Chemistry /Engineering Drawing/ computer Science / Biology / Biotechnology/Electronics/Computers .

180BP8.0	COURSES
180BP8.1	The syllabus of B. Plan programme will comprise of following types of courses; a) Planning Subjects (PLN) - These courses include the mandatory course subject i.e., PLANNING Techniques Fundamentals of Urban and Regional Planning, Geo Informatics for Planning, Transportation Planning, Project (Thesis), etc. b) Statistics Subjects (STAT) - This will include statistics oriented subjects i.e., Quantitative Methods. c) Engineering Subjects (ENG) - These courses include Engineering oriented subjects i.e., Site and Land Development etc. d) Humanities Subjects(HUM) - These courses will include subjects like communication skills, constitutional law, etc. e) Electives: In accordance to the objectives of CBCS scheme, the syllabus will provide for options to the students to choose from a list of relevant electives that may be from architecture, art , engineering, humanities or interdisciplinary areas.
180BP 8.2	The minimum number of students to be registered for an elective to be offered shall be not less than ten.
180BP 8.3	A student shall exercise his option in respect of the electives and register for the same at the beginning of the concerned semester. The student may be permitted to opt for change of elective subject within 15 days from the date of commencement of the semester.
180BP 9.0	PROFESSIONAL TRAINING
180BP 9.1	In conformity with provision under 180BP 4.16 , the students shall undergo professional training.
180BP 9.2	The commencement of professional training shall be the date of commencement of respective semester as notified by the University. The duration of professional training shall be counted from the date of commencement of the training.
180BP 9.3	The students shall undergo professional training in one organisation only. The change of office /firm may be permitted only under extraordinary circumstances. However, such change may only be permitted within two weeks of joining the first firm.
180BP 9.4	The college / department shall maintain the record of the students undergoing training in form of joining report, periodical log reports, etc..
180BP 9.5	After the completion of the training the students will produce the Training Completion certificate duly signed by the Head of the firm.

180BP 11.2	<table><tr><th colspan="8">Grade Points Scale</th></tr><tr><th>Level</th><th>Outstanding</th><th>Excellent</th><th>Very Good</th><th>Good</th><th>Above Average</th><th>Average</th><th>Fail</th></tr><tr><th>Letter Grade</th><td>S</td><td>A</td><td>B</td><td>C</td><td>D</td><td>E</td><td>F</td></tr><tr><th>Grade Points</th><td>10</td><td>9</td><td>8</td><td>7</td><td>6</td><td>4</td><td>00</td></tr><tr><th rowspan="2">Score (Marks) Range (%)</th><td>≥ 90</td><td><90 ≥ 80</td><td><80 ≥ 70</td><td><70 ≥60</td><td><60 ≥45</td><td><45 ≥40</td><td><40</td></tr><tr><td>(90-100)</td><td>(80-89)</td><td>(70-79)</td><td>(60-69)</td><td>(45-59)</td><td>(40-44)</td><td>(0-39)</td></tr></table>	Grade Points Scale								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	Score (Marks) Range (%)	≥ 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)
Grade Points Scale																																																
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	(90-100)	(80-89)	(70-79)	(60-69)	(45-59)	(40-44)	(0-39)																																									
180BP11.3	<table><tr><th colspan="2">Computation of SGPA and CGPA</th></tr><tr><td colspan="2">The following procedure shall be used to compute the Semester Grade Point Average(SGPA) and Cumulative Grade Point Average(CGPA) respectively:</td></tr><tr><td colspan="2"> i. The SGPA is the ratio of sum of the product of the number of credits with the grade points scored by a student in all the courses taken by a student and the sum of the number of credits of all the courses undergone by a student, i.e., $SGPA(S_i)= \sum(C_i \times G_i)/ \sum C_i$ 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. 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., $CGPA(C_i)= \sum(C_i \times S_i)/ \sum C_i$ Where S_i is the SGPA of the i th semester and C_i is the number of credits in that semester. iii. The SGPA and CGPA shall be rounded off to 2 decimal points and reported in the transcripts. </td></tr></table>	Computation of SGPA and CGPA		The following procedure 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 scored by a student in all the courses taken by a student and the sum of the number of credits of all the courses undergone by a student, i.e., $SGPA(S_i)= \sum(C_i \times G_i)/ \sum C_i$ 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. 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., $CGPA(C_i)= \sum(C_i \times S_i)/ \sum C_i$ Where S_i is the SGPA of the i th semester and C_i is the number of credits in that semester. iii. The SGPA and CGPA shall be rounded off to 2 decimal points and reported in the transcripts.																																										
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Illustration for Computation of SGPA and CGPA**Computation of SGPA****Illustration No.1(for I Semester)**

Course	Credit	Grade Letter	Grade Point	Credit Point (Credit x Grade)
Course 1	3	S	10	3 x 10 = 30
Course 2	3	A	9	3 x 9 = 27
Course 3	3	C	7	3 x 7 = 21
Course 4	2	B	8	2 x 8 = 16
Course 5	2	D	6	2 x 6 = 12
Course 6	2	S	10	2 x 10 = 20
Course 7	9	A	9	9 x 9 = 81
Course 8	2	B	8	2 x 8 = 16
	ΣC_i 26			$\Sigma(C_i \times G_i)$ 223

Thus, **SGPA = 223/26 = 8.57**

Illustration No.2(for II Semester)

Course	Credit	Grade Letter	Grade Point	Credit Point (Credit x Grade)
Course 1	3	S	10	3 x 10 = 30
Course 2	3	A	9	3 x 9 = 27
Course 3	2	C	7	2 x 7 = 14
Course 4	3	B	8	3 x 8 = 24
Course 5	2	D	6	2 x 6 = 12
Course 6	2	F	0	2 x 0 = 00
Course 7	10	E	4	10 x 4 = 40
	ΣC_i 25			$\Sigma(C_i \times G_i)$ 147

Thus, **SGPA = 147/25 = 5.88**

Illustration No.2(a)(for II Semester - If the student has obtained 'S' grade in course 7 in subsequent attempt).

Course	Credit	Grade Letter	Grade Point	Credit Point (Credit x Grade)
Course 7	02	S	10	2 x 10 = 20
	25			$\Sigma(C_i \times G_i)$ (obtained in First Attempt) 147 + $(C_i \times G_i)$ (of passed subject in Subsequent attempt) 20 = 167
			Total Credits	167

Thus, **SGPA = 167/25 = 6.68**

CGPA of First Year

$$\text{CGPA} = \frac{26 \times 8.57 + 25 \times 6.68}{(26+25)} = 7.64$$

CGPA after Final Semester

Sem 1	Sem 2	Sem 3	Sem 4	Sem 5	Sem 6	Sem 7	Sem 8
Credit : 26	Credit : 25	Credit : 25	Credit : 26	Credit : 25	Credit : 26	Credit : 24	Credit : 23
SGPA: 8.57	SGPA: 6.68	SGPA: 9.20	SGPA: 6.86	SGPA: 8.18	SGPA: 7.73	SGPA: 8.68	SGPA: 9.40

$$\text{Thus, CGPA} = \frac{(26 \times 8.57 + 25 \times 6.68 + 25 \times 9.20 + 26 \times 6.86 + 25 \times 8.18 + 26 \times 7.73 + 24 \times 8.68 + 23 \times 9.40)}{200}$$

$$\text{i.e., CGPA} = 8.14$$

180BP 11.4

Transcript (Format): Based on the above recommendations on letter grades, grade points, SGPA & CGPA, the transcript for each semester and a consolidated transcript indicating the performance in all semesters may be issued.

180BP13.6	If two students get the same CGPA, the tie should be resolved by considering the number of times a student has obtained higher SGPA; But, 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 in Rank ordering of the students.
180BP14.0	TRANSFER OF STUDENTS
180BP14.1	Transfer of students from one college to another college within Karnataka State is 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 and the provisions of 180BP7.2 In the case of candidates from Universities other than VTU they should have passed in all subjects of 1st and 2nd semesters for admission to 3rd semester and all the subjects of 1st to 4th semesters for admission to 5th semester and all the subjects of 1st to 6th semesters for admission to 7th semester. The candidates seeking admission from Universities other than VTU shall have to, a) Apply for establishment of equivalence with prescribed fees as notified by VTU, and b) Obtain No Objection for admission from the University before commencement of term as notified by VTU.
180BP14.2	The University may prescribe fee for administrative purpose (for updating of the records), which shall be notified from time to time, for transfer from one college to another (Change of College).

Visvesvaraya Technological University, Belagavi
Regulations Governing the Degree of Bachelor of Architecture (B. Arch)
Under Outcome Based Education (OBE) and Choice Based Credit System (CBCS)
(Effective from the academic year 2018 – 19)

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Visvesvaraya Technological University, Belagavi
Regulations Governing the Degree of Bachelor of Architecture (B. Arch)
Under Outcome Based Education (OBE) and Choice Based Credit System (CBCS)
(Effective from the academic year 2018 – 19)

- 17) **Grading:** Grade refers to qualitative measure of achievement of a student in each Course, based on the percentage of marks secured in (Progressive Evaluation and SEE). Grading is done by Absolute Grading [Refer: 18OBA5.0]. 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.,
 $\text{Credit points (CrP)} = \text{GP} \times \text{Credits for the Course}$.
- 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: 18OBA5.0]
- 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: 18OBA5.0]
- 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 end examination. 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.



Visvesvaraya Technological University, Belagavi
Regulations Governing the Degree of Bachelor of Architecture (B. Arch)
Under Outcome Based Education (OBE) and Choice Based Credit System (CBCS)
(Effective from the academic year 2018 – 19)

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	Course with Prog. Marks & Theory(SEE)	≥ 90	$< 90 \geq 80$	$< 80 \geq 70$	$< 70 \geq 60$	$< 60 \geq 45$	$< 45 \geq 43$	< 43
	Course with Prog. Marks & Term work	≥ 90	$< 90 \geq 80$	$< 80 \geq 70$	$< 70 \geq 60$	$< 60 \geq 50$	$< 50 \geq 45$	< 45
	Course with Prog. Marks & Viva voce	≥ 90	$< 90 \geq 80$	$< 80 \geq 70$	$< 70 \geq 60$	$< 60 \geq 50$	$< 50 \geq 45$	< 45
	Course with Prog. Marks only	≥ 90	$< 90 \geq 80$	$< 80 \geq 70$	$< 70 \geq 60$	$< 60 \geq 55$	$< 55 \geq 50$	< 50

18OBA5.1
(continued)

(iii) A student obtaining Grade F in a Course shall be considered fail and is required to reappear in the 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 card.

Computation of SGPA and CGPA

The following expressions shall be used to compute the Semester Grade Point Average (SGPA) and Cumulative Grade Point Average (CGPA) respectively:

SGPA

$$= \frac{\sum [\text{Course Credits} \times \text{Grade Points}] \text{ for all the Courses in that Semester}}{\sum [\text{Course Credits}] \text{ for all the Courses in that Semester}}$$

$$CGPA = \frac{\sum [\text{Course Credits} \times \text{Grade Points}] \text{ for all Courses excluding those with F grades until that Semester}}{\sum [\text{Course Credits}] \text{ for all Courses excluding those with F grades until that semester}}$$

The SGPA and CGPA shall be rounded off to 2 decimal points and reported in the grade cards.

Illustration for Computation of SGPA and CGPA

(a) SGPA and CGPA Calculations: An Illustrative Example for one academic year

Semester (Odd: I, Even: II)	Course Number	Credits	Grade	Grade Points	Credit Points	SGPA, CGPA
I	XX101	5:0:0 = 5	B	8	5 × 8	$SGPA = \frac{117}{25} = 4.68$
I	XX102	3:2:0 = 5	Absent(F)	0	5 × 0 = 00	
I	XX103	3:0:0 = 3	A	9	3 × 9 = 27	
I	XX104	0:1:1 = 2	F	0	2 × 0 = 00	
I	XX105	4:1:0 = 5	D	6	5 × 6 = 30	
I	XX106	5:0:0 = 5	E	4	5 × 4 = 20	
Total		25 (18*)	Total	117		

(18*): Total credits of the semester excluding the credits of the courses under F grade. Considered for the calculation of CGPA of the two consecutive semesters under consideration.

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18OBA5.1 (continued)	Illustration for Computation of SGPA and CGPA									
	(a) SGPA and CGPA Calculations: An Illustrative Example for one academic year									
	Semester (Odd:I,Even:II)	Course Number	Credits	Grade	Grade Points	Credit Points	SGPA, CGPA			
	II	XX107	3:1:1 = 5	C	7	5 × 7 = 35	$SGPA = \frac{157}{25} = 6.28$			
	II	XX108	4:0:0 = 4	B	8	4 × 8 = 32				
	II	XX109	3:0:0 = 3	D	6	3 × 6 = 18				
	II	XX110	4:1:0 = 5	E	4	5 × 4 = 20				
	II	XX111	2:1:1 = 4	A	9	4 × 9 = 36	$CGPA = \frac{(117 + 157)}{18 + 23} = \frac{274}{41} = 6.68$			
	II	XX112	2:0:0 = 2	F	0	2 × 0 = 00				
	II	XX113	0:2:0 = 2	B	8	2 × 8 = 16				
	Total		25 (23*)	Total		157				
	(23*): Total credits of the semester excluding the credits of the courses under F grade. Considered for the calculation of CGPA of the two consecutive semesters under consideration.									
	If the Student secures letter grades as detailed below after reappearance to SEE, then the SGPA and CGPA shall be calculated as indicated below.									
	I	XX102	3:2:0 = 5	D	6	5 × 6 = 30	$SGPA (I Semester) = \frac{(117 + 30 + 14)}{25} = 6.44$			
	I	XX104	0:1:1 = 2	C	7	2 × 7 = 14				
	II	XX112	2:0:0 = 2	D	6	2 × 6 = 12	$SGPA (II Semester) = \frac{(157 + 12)}{25} = \frac{169}{25} = 6.76$			
	$CGPA \text{ at the end of the academic year after passing all the Courses of the two consecutive semesters under consideration} = \frac{(6.44 \times 25 + 6.76 \times 25)}{50} = 6.60$									
(b) CGPA Calculation of the Programme:An Illustrative Example										
Semester	I	II	III	IV	V	VI	VII	VIII	IX	X
Credits of the semester	29	29	29	28	28	30	27	26	18	16
SGPA	8.79	8.03	9.20	6.86	8.18	7.73	8.68	9.40	8.53	7.13
$CGPA = \frac{(29 \times 8.79 + 29 \times 8.03 + 29 \times 9.20 + 28 \times 6.86 + 28 \times 8.18 + 30 \times 7.73 + 27 \times 8.68 + 26 \times 9.40 + 18 \times 8.53 + 16 \times 7.13)}{260} = 8.28$										
18OBA5.2	Grade Card: 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.									
18OBA6.0	Conversion of CGPA into Percentage of Marks and Class Equivalence									
18OBA6.1	Formula for the conversion of CGPA into percentage is given below: Percentage of marks secured, P = [CGPA Earned - 0.75] × 10 Illustration for a CGPA Of 8.20: P = [CGPA Earned 8.2 - 0.75]× 10 = 74.5 %									

18OBA5.2 **Grade Card:** 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.

18OBA6.0 **Conversion of CGPA into Percentage of Marks and Class Equivalence**

18OBA6.1 **Formula for the conversion of CGPA into percentage is given below:**
 Percentage of marks secured, $P = [CGPA \text{ Earned} - 0.75] \times 10$
Illustration for a CGPA Of 8.20:
 $P = [CGPA \text{ Earned } 8.2 - 0.75] \times 10 = 74.5 \%$

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18OBA6.2	Class Equivalence: Subsequent to the conversion of final CGPA, after successful completion of the programme, into percentage of marks (P), a graduating student is reckoned 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 $P < 60\%$.
18OBA7.0	Progressive Evaluation and Semester End Examination
18OBA7.1	Progressive Evaluation marks and SEE marks (Theory / Term work / Viva voce marks), shall be as prescribed in Scheme of Teaching and Examination.
18OBA7.2	Progressive Evaluation The minimum Progressive marks to be secured by the students in all the courses shall be 50 % of the maximum marks prescribed for the Progressive Evaluation. (a) In case of theory courses which are mainly lecture based as per the scheme of teaching and examinations, the Progressive Evaluation marks shall be based on the average of three tests conducted covering the entire syllabus. In addition, the teacher may give assignments instead of tests which may include sketching, book reviews, write-ups etc. (b) In case of courses which are mainly studio based as per the scheme of teaching and examinations, the Progressive marks shall be the sum total of marks given to the various drawings (plates) submitted from time to time by a student on tracing sheets / drawing sheets or Computer printouts/sketches/models on the basis of internal reviews / juries / desk crits (criticisms). However, if the course teacher so desires, he/she shall give some weightage for time bound exercises/ problems / tests in these courses for the award of progressive marks. In a semester, two to three such time problems / tests may be conducted. (c) In case of courses which are mainly practical based as per the scheme of teaching and examinations, the Progressive marks shall be based on the assignments submitted by the students. A minimum of three assignments per semester shall be given. (d) In all the above three cases, viz. lectured based, studio based, and term work based courses the concerned teacher shall give a reasonable opportunity to the student to improve his / her Progressive marks for example by re-doing the assignments or attending an additional test etc., within the time frame of the given semester. (e) The Progressive marks in the case of Architectural Design Project (Thesis) of X semester shall be based on the evaluation of the project work (Thesis) through internal reviews/juries and desk crits etc., in accordance to the scheme of teaching and examination.
18OBA7.3	All the relevant records and submissions of students pertaining to Progressive Evaluation shall be preserved by the Principal/ Head of the Department for at least six months after the announcement of University results and shall be made available for verification at the direction of the University authorities.
18OBA7.4	(i) Students failing to secure a minimum of 50 % of the Progressive marks and students who remain absent for all the Progressive Evaluation shall not be eligible for the examination conducted by the University and they shall be considered as fail in that/those Course/s. However, they can appear for University examinations conducted in other Courses of the same semester and backlog Course/s if any. (ii) Improvement in progressive marks shall only be allowed during the subsequent semester when the course is offered as per the scheme of teaching. (The students can register for improvement of marks of odd semester subjects during odd semester only, similarly the registration for improvement of marks of even semester subjects shall be permitted during even semester only) (iii) Students who have satisfied the attendance requirement but not the minimum progressive marks requirements shall be permitted to register afresh and appear for SEE after satisfying the progressive evaluation requirements in the same Course/s when the course is offered during subsequent semester/s.

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18OBA8.2	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.
18OBA8.3	A candidate, who does not satisfy the attendance requirement (in one or more Courses) as mentioned in 18OBA8.1 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.
18OBA8.4	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.
18OBA9.0	Vertical Progression (Promotion/ Eligibility to higher semesters)
18OBA9.1	(a) There shall be no restriction for promotion from an odd semester to the next even semester, provided the student has fulfilled the attendance requirement, except in the case of promotion from IX semester to X semester. (b) A student shall be eligible for promotion from IX semester to X semester provided, he/she has passed the course Professional Training of IX semester. If the candidate has not undergone the training/discontinued after registration to training/not undergone the prescribed training period of 16 weeks/ failed in viva voce examination, he/ she shall repeat the Professional Training during subsequent semester to appear for the SEE.
18OBA9.2	(c) A student shall be declared fail if the candidate (i) Fails to satisfy the minimum progressive marks conditions. (ii) Absents himself / herself to the University examination. (iii) Is held guilty of examination malpractice and for any other reasons, and declared the performance of any Course/s null and void by a competent authority. (iv) If a student secures F grade in any of the Course/s, he/she shall reappear in that Course/s during the subsequent SEE. The progressive marks awarded to the student at first attempt in the concerned Course/s shall be carried forward. Newly earned progressive marks is considered only in cases of 18OBA7.4. Vertical Progression: (a) Each credit Course shall be treated as a head of passing. (b) Students having not more than four F grades in the two semesters of first year of the Programme shall be eligible to move to II Year. (c) Students having not more than four F grades in the four semesters of I and II year shall be eligible to move to III year. (d) Students who have earned all the prescribed credits of I year, and having not more than four F grades in the four semesters of II and III year shall be eligible to move to IV year. (e) Students who have earned all the prescribed credits of I and II years, and having not more than four F grades in the four semesters of III and IV year shall be eligible to move to V year. (f) Students who have earned all the prescribed credits of I and II years, and having not more than four F grades in the four semesters of III and IV year shall be eligible to move to X semester provided they undergo the Professional training and pass in the SEE.
18OBA10.0	Award of Degree
18OBA10.1	(a) Students shall be declared to have completed the B.Arch. programme and shall be eligible for the award of B.Arch. degree, provided the students have undergone the stipulated Course work of all the semesters under the same Scheme of Teaching and Examination and has earned the prescribed number of credits as per the provision 18OBA1.6. [To be read along with 18OBA 11.1 and 11.2.]

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18OBA10.1 (continued)	(b) For the award of degree, a CGPA ≥ 5.00 at the end of Programme shall be mandatory. [to be read with 18OBA10.0 and 11.0]
18OBA10.2	Noncompliance of CGPA ≥ 5.00 at the end of the programme (a) Students who have completed all the courses of the programme but not having a CGPA ≥ 5.00 at the end of the programme, shall not be eligible for the award of the degree. In such cases, students shall be permitted to appear again for SEE in course/s [other than Professional training and Architectural Design Project (Thesis)] of any Semester/s without the rejection of progressive evaluation marks for any number of times, subject to the provision of maximum duration of the programme to make up the CGPA equal to or greater than 5.00 for the award of the Degree. (b) In case, the students earn improved grade/s in all the reappeared course/s, the CGPA shall be calculated considering the improved grade/s. If it is ≥ 5.00, the students shall become eligible for the award of the degree. If CGPA < 5.00, the students shall follow the procedure laid in 18OBA10.2 (a). (c) In case, the students earn improved grade/s in some course/s and the same previously earned pass grade/s in the other reappeared course/s, the CGPA shall be calculated considering the improved grade/s. If it is ≥ 5.00, the students shall become eligible for the award of the degree. If CGPA < 5.00, the students shall follow the procedure laid in 18OBA10.2 (a). (d) In case, the students earn improved grade/s in some courses and fail in the other reappeared course/s, the CGPA shall be calculated by considering the improved grade/s and the previously earned pass grade/s of the reappeared course/s in which the students have failed. If it is ≥ 5.00, the students shall become eligible for the award of the degree. If CGPA < 5.00, the students shall follow the procedure laid in 18OBA10.2 (a). (e) In case, the students fail (i.e., earns F grade) in all the reappeared course/s, pass grade/s of the course/s earned by the students before reappearance shall be retained. In such cases, the students shall follow the procedure laid in 18OBA10.2 (a). (f) Students shall obtain written permission from the Registrar (Evaluation) to reappear in SEE to make up the CGPA equal to or greater than 5.00.
18OBA11.0	Temporary Discontinuation/Break in the Program
18OBA11.1	(a) If a candidate, for any reason, temporarily discontinues the Programme or take a break from the Programme during any semester intentionally, he/she shall 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 18OBA1.5. Also the Candidates may have to complete additional Course/s, if any, as per the decision of Board of Studies in B.Arch and approval of Dean, Faculty of Engineering, on establishing the equivalence between two schemes. A Grade card shall be issued to that effect. Additional Course/s shall not be considered for the eligibility criteria prescribed for promotion. However, based on the individual cases, they shall be 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 take admission to any semester of the existing scheme from another scheme, as a repeater/fresher because of various reasons, including the case of 18OBA11.1 (a), shall attend and complete all the remaining semester/s of the Programme adhering to the regulations of the prevailing scheme, and shall complete additional Course/s, if any, as per the decision of Board of Studies in B.Arch and approval of Dean, Faculty of Engineering, on establishing the equivalence between two schemes. A Grade card shall be issued to that effect. Additional Courses shall not be considered for the eligibility criteria prescribed for promotion. However, based on the individual cases, they shall be 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. (c) The credits to be earned by the candidates under 18OBA11.1 (a and b) and 18OBA13.1 (b) and (c) shall be decided by the University along with the additional Course/s to be completed.

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18OBA11.2	(i) The candidates who have temporarily discontinued the Programme of study or changed the scheme of study from one to another because of various reasons, or transferred from autonomous/other University to non-autonomous VTU affiliated college, shall be eligible for the award of degree provided the credits earned is equal to or greater than the credits decided by the University in the individual cases. (ii) In case, the credits earned is less than the credits decided by the University in the individual cases, after the completion of all the semesters of the Programme under the prevailing scheme, the candidate shall register for a Course or courses not studied earlier and make up the credits earned equal to or greater than the required for the award of degree.
18OBA12.0	Award of Prizes, Medals and Ranks
18OBA12.1	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.
18OBA12.2	(1) For award of rank in B. Arch, the CGPA secured by the students from I to X semester shall be considered. (2) A student shall be eligible for a rank at the time of award of degree of Bachelor of Architecture, provided the student (a) Has passed I to X semester in all the Courses in first attempt only. (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 X) in VTU constituent college or in any VTU affiliated non-autonomous college. (e) Has not been transferred from any autonomous institution affiliated to VTU or from any other University. (3) The total number of ranks awarded shall be 10% of the total number of students appeared in X semester subject to a maximum of 10 ranks. (4) For award of ranks in B. Arch, a minimum of 10 students should have appeared in the X semester examination. Illustration: a) If 1202 students appeared for the X semester B. Arch programme, the number of ranks to be awarded shall be 10. b) If 90 students appeared for the X semester in B. Arch programme, the number of ranks to be awarded shall 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.
18OBA12.3	Ranks are awarded based on the merit of the students as determined by 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.
18OBA13.0	Transfers of Students
18OBA13.1	Transfer of students from one college to another college within the 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 18OBA9.2.

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- 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.
- 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.

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.				

- 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: 18OMT6.0]. 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.,
Credt points (CrP) = GP × 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:18OMT6.0]

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- 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: 18OMT6.0]
- 23) **Grade Card:** Refers to a certificate showing the grades earned by a student. A grade card shall be issued to all the registered students after every semester. The grade card 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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Clause	Particulars
18OMT1.0	Title, Duration and Credits of the Programme of Study
18OMT1.1	The Programme shall be called Master of Technology (Subject of Specialization), abbreviated as M.Tech. (Subject of Specialization).
18OMT1.2	There shall be two categories of Programme: 1) Full-time Programme (FT), and 2) Part-Time Programme (PT)
18OMT1.3	Full-time Programme: The Programme shall extend over a period of four semesters and each semester shall have 16 weeks duration.
18OMT1.4	Part -Time Programme: (a) The Programme shall be of 6 semesters. (b) Each semester shall be 16 weeks duration. (c) First, second, third and fourth semesters shall comprise course work and fifth and Sixth semesters shall be same as that of III and IV Semesters of the Full-time Programme. (d) The candidate shall register for a maximum of three courses per semester. (e) The candidates shall register for Laboratory course and Seminar in first and second semesters along with the regular three courses.
18OMT 1.5	Maximum Duration for Programme Completion: (a) A Full-time candidate shall be allowed a maximum duration of 4 years from the first semester of admission to become eligible for the award of Master's Degree, failing which he/she may discontinue the programme or register once again as a fresh candidate to I semester of the programme. (b) A Part -Time candidate shall be allowed a maximum of 6 years duration from the first semester of admission to become eligible for the award of Master's Degree, failing which he/she may discontinue the programme or register once again as a fresh candidate to I semester of the programme.
18OMT1.6	Prescribed Number of Credits for the Programme: The number of credits to be completed for the award of degree shall be 88.
18OMT1.7	The Calendar of events in respect of the Programme shall be notified by the University in advance.
18OMT2.0	Eligibility for Admission(As per the Government orders issued from time to time)
18OMT2.1	Admission to I year/I semester Master of Technology Programme shall be open to all the candidates who have passed B.E./ B. Tech. Examinations of VTU or any other recognized University/ Institution. The decision of the Equivalence committee shall be the final in establishing the eligibility of candidates for a particular Programme. For the foreign degrees, Equivalence certificate from the Association of Indian Universities shall be a must. The candidates who have completed their degree through the distance mode education from any University (National or International) are not eligible for admission to M.Tech. Programs under any quota.

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18OMT2.9	Subject to the provisions of 18OMT 2.1 and 18OMT 2.2, members working in the State Government/ Central Government/ Quasi Government Organizations/ Public Sector Industries / Reputed Private Industries, who have put in a minimum of 03 years of working experience and sponsored by the concerned Organizations, shall also be eligible to seek admissions to PG Programs against sponsored quota. Preference for admission under 18OMT2.8 and 2.9 shall be given to candidates sponsored by organizations of State and Central Governments.
18OMT2.10	Further that employment of Part-time students shall be in an establishment situated within the 40 km from the place of the institution to which the candidate is seeking admission.
18OMT2.11	Engineering graduates other than the Karnataka candidates shall obtain Eligibility Certificate from VTU to seek admission to P.G. Programme in any of the colleges (Autonomous or Non - Autonomous) affiliated to VTU.
18OMT2.12	Admission to vacant seats: Seats remaining vacant (unfilled), after the completion of PG admission process by Karnataka Examination Authority, shall be filled by the Institution by inviting applications through Press notification. The seats shall be filled by Candidates preferably who have valid GATE/ PG CET score. In the absence of such Candidates, admission shall be based on merit in the entrance test conducted at the Institution level. An Admissions Committee, consisting of the Principal of the College, Head of the concerned Department and the subject experts, shall be in charge of admissions.
18OMT3.0	Courses
18OMT3.1	The curriculum of the Programme shall be any combination of following type of courses: i) One Course on Mathematics supportive to the concerned programme in the first semester. ii) Professional Core Courses (PCC) - relevant to the chosen specialization/ branch [May be split into Hard (no choice) and Soft (with choice), if required]. The core course is to be compulsorily studied by a student and is mandatory to complete the requirements of a programme in a said discipline of study. iii) Professional Electives Courses (PEC) - relevant to the chosen specialization/ branch: these are the courses, which 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 / nurturing student skills. iv) Open Electives Courses (OEC), from other technical and/ or emerging specialization areas. v) Project Work, Seminar. vi) Audit Courses (AC): (a) The Audit course can be any credit course offered by the program to which the Candidate is admitted (other than the courses considered for completing the prescribed program credits) or other programs offered in the institution, where the student is studying.

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18OMT3.1 (continued)	(b) The students who are interested in audit courses can register for one audit course at a time during II and IV semesters. Students who have registered to audit the courses, considered on par with students registered to the same course for credit, have to satisfy attendance and CIE requirements. However, they need not have to appear for SEE. (c) Registration for any audit course, in writing, shall be completed at the beginning of II and IV 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 card issued to the students. vii) Internship: Preferably at an industry/R and D organization/IT company/ Government organization of significant repute for a specified period mentioned in Scheme of Teaching and Examination.
18OMT4.0	Internship
18OMT4.1	Internship: The student shall undergo Internship as per the Scheme of Teaching and Examination. 1. The internship shall be carried out in any industry/R&D Organization/Research Institute/Institute of national and international repute/recognized national and international Professional Bodies, Societies or Organizations. 2. The Department/college shall nominate a faculty to facilitate, guide and supervise students under internship. 3. The students shall report the progress of the internship to the internal guide in regular intervals and seek his/her advise. 4. The Internship shall be completed during the period specified in Scheme of Teaching and Examination. 5. After completion of Internship, students shall submit a report to the Head of the Department with the approval of both internal and external guides. 6. There will be 40 marks for CIE (Seminar: 20, Internship report: 20) and 60 marks for Viva – Voce conducted during SEE. [To be read along with 18OMT8.8 and 8.9] 7. The internal guide shall award the CIE 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 Internship viva-voce examination. 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. (i) In case the external Guide is not available or expresses his inability to conduct viva voce, the Chief Superintendent shall be permitted to make alternate arrangement. The examiner, in the order of preference, shall be an industry person or a faculty of another institution chosen from the list of University examiners. The same shall be intimated to the concerned BOE Chairperson. (ii) In case the external Guide accepts to conduct viva-voce examination from his/her workplace, it shall be arranged via Video/web conferencing/Webinar. The external Examiner shall send the mutually agreed signed marks (evaluated for SEE marks) list, soon after the examination, via email/any electronic media. 10. The students shall be permitted to carry out the internship anywhere in India or abroad. The University shall not provide any kind of Financial Assistance to any student for internship.

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18OMT4.2	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 fail in that Course and shall not be permitted to appear for SEE in that Course. However, such students shall appear for SEE after satisfying the conditions prescribed for Internship. The reappearance shall be considered as an attempt.
18OMT5.0	Seminar and Project
18OMT5.1	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 18OMT8.8]
18OMT5.2	Project Work: Project is one of the head of passing. Project work shall preferably be on individual basis. The candidate shall submit a soft copy (CD) of the dissertation work to the University. The CD should contain the entire Dissertation in monolithic form as a PDF file (not separate chapters). The Guide, after checking the report for completeness shall upload the Dissertation along with name, University Seat Number, address, mobile number of the candidate, etc., as prescribed in the form available on online Dissertation evaluation portal. The guide shall submit a panel of four approved University Examiners for evaluation of dissertation.
18OMT5.3	Plagiarism Check Once the Guide uploads the dissertation, the same shall be linked for plagiarism check. The allowable plagiarism index is less than or equal to 25%. If the check indicates a plagiarism index greater than 25% : • for the first time, the candidate has to resubmit the dissertation, to the Registrar (Evaluation), Regional Center/Head Office, VTU along with the penal fees of Rs. 2000/- (Rupees Two thousand only) in person. • for the second time, the candidate has to resubmit the dissertation along with the penal fees of Rs. 4000/- (Rupees four thousand only) in person. • If the dissertation is rejected again during second resubmission with reference to plagiarism index, the candidate shall redo the project and submit after a semester's time subject to provisions of 18OMT1.5.
18OMT5.4	The dissertation shall be sent through email for evaluation to two examiners - one internal examiner (guide/co-guide) and one external examiner (first) appointed by the University. The evaluation of the dissertation shall be made independently by each examiner.
18OMT5.5	Examiners shall evaluate the dissertation normally within a period of not more than two weeks from the date of receipt of dissertation through email.
18OMT5.6	The examiners shall independently submit the marks through the specified link.
18OMT5.7	Average of the marks awarded by the two Examiners shall be the final evaluation marks for the Dissertation.

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18OMT5.13	Examination fee as fixed from time to time by the University for evaluation of dissertation report and conduct of viva voce shall be remitted through the Head of the Institution as per the instructions of Registrar (Evaluation) from time to time.																																
18OMT5.14	The candidates who fail to submit the dissertation work within the stipulated time have to submit the same at the time of next ensuing examination.																																
18OMT6.0	Computation of SGPA and CGPA																																
18OMT6.1	(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: <table><tr><th>Level</th><th>Outstanding</th><th>Excellent</th><th>Very Good</th><th>Good</th><th>Above Average</th><th>Average</th><th>Fail</th></tr><tr><td>Letter Grade</td><td>S</td><td>A</td><td>B</td><td>C</td><td>D</td><td>E</td><td>F</td></tr><tr><td>Grade Points</td><td>10</td><td>9</td><td>8</td><td>7</td><td>6</td><td>4</td><td>00</td></tr><tr><td>Percentage of Marks Scored in a Course</td><td>≥ 90 (90 -100)</td><td><90 ≥80 (80 - 89)</td><td>< 80 ≥70 (70 - 79)</td><td>< 70 ≥60 (60 - 69)</td><td>< 60 ≥ 55 (55 - 59)</td><td>< 55 ≥50 (50- 54)</td><td>< 50 (0 - 49)</td></tr></table> (iii) A student obtaining Grade F in a Course shall be considered fail 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.	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 -100)	<90 ≥80 (80 - 89)	< 80 ≥70 (70 - 79)	< 70 ≥60 (60 - 69)	< 60 ≥ 55 (55 - 59)	< 55 ≥50 (50- 54)	< 50 (0 - 49)
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 -100)	<90 ≥80 (80 - 89)	< 80 ≥70 (70 - 79)	< 70 ≥60 (60 - 69)	< 60 ≥ 55 (55 - 59)	< 55 ≥50 (50- 54)	< 50 (0 - 49)																										
18OMT6.2	Grade Point Averages: SGPA and CGPA: The credit index can be used further for calculating the Semester Grade Point Average (SGPA) and the Cumulative Grade Point Average (CGPA), both being important academic performance indices of the student. While SGPA is equal to the credit index for a semester divided by the total number of credits registered by the student in that semester, CGPA gives the sum total of credit indices of all the previous semesters divided by the total number of credits registered in all these semesters. Both the equations together facilitate the declaration of academic performance of a student, at the end of a semester and at the end of successive semesters respectively. Thus, $SGPA = \frac{\sum [Course Credits \times Grade Points] \text{ for all the Courses in that Semester}}{\sum [Course Credits] \text{ for all the Courses in that Semester}}$ $CGPA = \frac{\sum [Course Credits \times Grade Points] \text{ for all Courses excluding those with F and transitional grades until that Semester}}{\sum [Course Credits] \text{ for all Courses excluding those with F grades until that semester}}$																																

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18OMT6.2
(continued)

(a) SGPA and CGPA Calculations: An Illustrative Example for one academic year						
Semester (Odd :I, Even: II)	Course Number	Credits	Grade	Grade Points	Credit Points	SGPA, CGPA
I	XX101	5:0:0 = 5	B	8	5 × 8 = 40	$SGPA = \frac{117}{25}$ = 4.68
I	XX102	3:2:0 = 5	Absent(F)	0	5 × 0 = 00	
I	XX103	3:0:0 = 3	A	9	3 × 9 = 27	
I	XX104	0:1:1 = 2	F	0	2 × 0 = 00	
I	XX105	4:1:0 = 5	D	6	5 × 6 = 30	
I	XX106	5:0:0 = 5	E	4	5 × 4 = 20	
Total		25 (18*)	Total		117	
(18*): Total credits of the semester excluding the credits of the courses under F grade. Considered for the calculation of CGPA of the two consecutive semesters under consideration.						
II	XX107	3:1:1 = 5	C	7	5 × 7 = 35	$SGPA = \frac{157}{25}$ = 6.28
II	XX108	4:0:0 = 4	B	8	4 × 8 = 32	
II	XX109	3:0:0 = 3	D	6	3 × 6 = 18	
II	XX110	4:1:0 = 5	E	4	5 × 4 = 20	$CGPA$ $= \frac{(117 + 157)}{18 + 23}$ $= 274/41 = 6.68$
II	XX111	2:1:1 = 4	A	9	4 × 9 = 36	
II	XX112	2:0:0 = 2	F	0	2 × 0 = 00	
II	XX113	0:2:0 = 2	B	8	2 × 8 = 16	
Total		25 (23*)	Total		157	
(23*): Total credits of the semester excluding the credits of the courses under F grade. Considered for the calculation of CGPA of the two consecutive semesters under consideration.						
If the Student secures letter grades as detailed below after reappearance to SEE, then the SGPA and CGPA shall be calculated as indicated below.						
I	XX102	3:2:0 = 5	D	6	5 × 6 = 30	$SGPA (I Semester)$ $= \frac{117 + 30 + 14}{25}$ $= 161/25 = 6.44$
I	XX104	0:1:1 = 2	C	7	2 × 7 = 14	
II	XX112	2:0:0 = 2	D	6	2 × 6 = 12	$SGPA (II Semester)$ $= (157 + 12)/25$ $= 169/25 = 6.76$
$CGPA \text{ at the end of the academic year after passing all the Courses of the two consecutive semesters under consideration} = \frac{(6.44 \times 25 + 6.76 \times 25)}{50} = 6.60 \blacksquare$						
(b) CGPA Calculation of the Programme: An Illustrative Example						
Semester	I	II	III	IV		
Credits of the semester	24	24	20	20		
SGPA	7.00	8.50	9.20	6.86		
$CGPA = \frac{(24 \times 7.00 + 24 \times 8.50 + 20 \times 9.20 + 20 \times 6.86)}{88} = 7.88 \blacksquare$						

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18OMT6.3	Grade Card: Based on the secured letter grades, grade points, SGPA and CGPA, a grade card for each semester and a consolidated grade card indicating the performance in all semesters shall be issued. ■
18OMT7.0	Conversions of Grades into Percentage and Class Equivalence 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: $P = [\text{CGPA Earned } 8.2 - 0.75] \times 10 = 74.5 \%$
18OMT7.1	Class Equivalence: After the conversion of final CGPA into percentage of marks (P), a graduating student is reckoned 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 $P < 60\%$.
18OMT8.0	Continuous Internal Evaluation and Semester End Evaluation
18OMT8.1	For each theory and practical paper, the CIE marks shall be 40. For seminar and Project Phase –I, the CIE marks shall be 100. [To be read along with 18OMT8.8]
18OMT8.2	CIE Marks shall be based on a) Tests (for 20 Marks) and b) Assignments, Quizzes, Simulations, Experimentations, Mini project, oral examinations, field work etc., (for 20 Marks) conducted in respective courses.
18OMT8.3	The CIE marks in a theory course, for 20 marks, shall be based on two tests covering the entire syllabus. An additional test may be conducted for the needy students to provide an opportunity to improve their CIE Marks before the end of the semester. The CIE marks shall be the average of the marks scored in at least two of the above tests. [To be read along with 18OMT8.8]
18OMT8.4	The candidates shall write the Tests in Blue Book/s. The Blue book/s and other documents relating to award of CIE marks under 18OMT8.2 (b) shall be preserved by the Principal / Head of the Department for at least six months from the date of announcement of University results and made available for verification at the directions of the Registrar (Evaluation).
18OMT8.5	Every page of the CIE marks list shall bear the signatures of the concerned Teacher, Head of the Department and the Principal.
18OMT8.6	The CIE marks list shall be displayed on the Notice Board and corrections, if any, shall be incorporated before submitting to the University.
18OMT8.7	The CIE marks shall be sent to the university by the Principals well in advance before the commencement of Semester End Examinations. No corrections of the CIE marks shall be entertained after the submission of marks list to the University.
18OMT8.8	Candidates obtaining less than 50% of the CIE marks in any course (Theory/Laboratory/Seminar/Internship/Project) shall not be eligible to appear for the University examination in that course/s. In such cases, the Head of the Department shall arrange for the improvement of CIE marks in the course/ Laboratory when offered in the subsequent semester subject to the provision of 18OMT1.5.

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18OMT9.7	If the rejection of the University examination results of the semester happens to be of an odd semester, the candidate can take admission to the immediate next even semester. However, if the rejection of the University result is of even semester, the candidate cannot take admission to the next odd semester.
18OMT9.8	Application for rejection shall be submitted to the Registrar (Evaluation) through the Principal of the college, within thirty days from the date of announcement of results.
18OMT9.9	A candidate, who opts for rejection of results of a semester shall be eligible for the award of class and distinction, but shall not be eligible for the award of rank.
18OMT9.10	Eligibility for Award of Degree: A student shall be declared to have completed the degree of Master of Technology, provided the student has undergone the stipulated course work as per the regulations and has earned the prescribed Credits, as per the Scheme of Teaching and Examination, of the programme.
18OMT10.0	Attendance Requirement
18OMT10.1	Registration and Enrolment: i) Except for the first semester, registration for a semester will be done during a specified week before the semester end examination of the previous semester. ii) The registration sheet should have the Candidate details, course name and code, number of credits and category (core/elective/audit) for each course of that semester. iii) The Faculty Adviser, assigned by the Head of the Department, will counsel the students in planning their courses of study and provide guidance, motivation, emotional support, and enable the mentees to reach the desired professional and career goals.
18OMT10.2	Courses of each semester shall be treated as a separate unit for calculation of the attendance.
18OMT10.3	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 recommendation 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 necessary documents in support are to be submitted along with recommendations to condone the shortage.
18OMT10.4	In case of late admission, approved by competent authority (DTE/VTU), to I semester of the programme the attendance shall be reckoned from the date of admission to the programme.
18OMT10.5	A candidate, who does not satisfy the attendance requirement (in one or more Courses) as mentioned in 18OMT10.3 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.
18OMT10.6	Principals of the concerned colleges shall notify regularly, the list of candidates who fall short of attendance.
18OMT10.7	The list of the candidates falling short of attendance shall be sent to the University at least one week prior to the commencement of the examination.
18OMT11.0	Promotion and Eligibility
18OMT11.1	Promotion: There shall be no restriction for promotion from an odd semester to the next even semester, provided the student has fulfilled the attendance requirement.

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18OMT13.2 (continued)	(b) If 84 students appeared for the IV semester in Nano Technology, the number of ranks to be declared for Nano Technology will be 08. (c) 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. (5) Students under Part-time Programme are not considered for Rank declaration.
18OMT13.3	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.
18OMT14.0	Applicability and Power to Modify
18OMT14.1	The regulations governing the Degree of Master of Technology of Visvesvaraya Technological University shall be binding on all concerned.
18OMT14.2	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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- 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.

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

- 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: 18OMB6.0]. 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.,
Credt points (CrP) = GP × 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:18OMB6.0]
- 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: 18OMB6.0]
- 23) **Grade Card:** Refers to the certificate showing the grades earned by a student. A grade card shall be issued to all the registered students after every semester end examination. The grade card will

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18OMB2.5	Admission to vacant seats: Seats remaining vacant (unfilled), after the completion of PG admission process by Karnataka Examination Authority, shall be filled by the Institution by inviting applications through Press notification. The seats shall be filled by Candidates preferably who have PG CET score. In the absence of such Candidates, admission shall be based on merit in the entrance test conducted at the Institution level. An Admissions Committee, consisting of the Principal of the College, Head of the concerned Department and the subject experts, shall be in charge of admissions.
18OMB3.0	Courses
18OMB3.1	The curriculum of the Programme shall be any combination of following type of courses: i) Professional Core Courses (PC) - relevant to the chosen specialization/ branch [May be split into Hard (no choice) and Soft (with choice), if required]. The core course is to be compulsorily studied by a student and is mandatory to complete the requirements of a programme in a said discipline of study. ii) Professional Electives Courses (PE) - relevant to the chosen specialization/ branch: these are the courses, which 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 / nurturing student skills. iii) Open Electives Courses (OE) - from other technical and/ or emerging specialization areas. iv) Project Work, Seminar. v) Audit Courses (AC): (a) The Audit course can be any credit course offered by the program to which the Candidate is admitted (other than the courses considered for completing the prescribed program credits). (b) The students interested in audit courses can register for one audit course at a time during II to IV semester. Students who have registered to audit courses, considered on par with students registered to the same course for credit, have to satisfy attendance and CIE requirements. However, they need not have to appear for SEE. (c) Registration for any audit course, in writing, shall be completed at the beginning of each semester. 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. vi) Professional training/Internship (referred to as Internship): Preferably at an industry/ R and D organization/IT company/ Government organization/Business organization of significant repute for a specified period mentioned in Scheme of Teaching and Examination.
18OMB3.2	A candidate shall exercise his /her option in respect of the electives and register for the same before the beginning of the concerned semester. The candidate may be permitted to opt for change of elective subject within 10 days from the date of commencement of the semester as per the calendar of the University.

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18OMB5.12	The marks awarded by both the Examiners at the viva voce Examination shall be sent jointly to the University immediately after the examination.																																
18OMB5.13	Examination fee as fixed from time to time by the University for evaluation of dissertation report and conduct of viva voce shall be remitted through the Head of the Institution as per the instructions of Registrar (Evaluation) from time to time.																																
18OMB5.14	The candidates who fail to submit the dissertation work within the stipulated time have to submit the same at the time of next ensuing examination.																																
18OMB6.0	Computation of SGPA and CGPA																																
18OMB6.1	(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: <table><tr><th>Level</th><th>Outstanding</th><th>Excellent</th><th>Very Good</th><th>Good</th><th>Above Average</th><th>Average</th><th>Fail</th></tr><tr><td>Letter Grade</td><td>S</td><td>A</td><td>B</td><td>C</td><td>D</td><td>E</td><td>F</td></tr><tr><td>Grade Points</td><td>10</td><td>9</td><td>8</td><td>7</td><td>6</td><td>4</td><td>00</td></tr><tr><td>Percentage of Marks Scored in a Course</td><td>≥ 90 (90 -100)</td><td><90 ≥80 (80 - 89)</td><td>< 80 ≥70 (70 - 79)</td><td>< 70 ≥60 (60 - 69)</td><td>< 60 ≥ 55 (55 - 59)</td><td>< 55 ≥50 (50- 54)</td><td>< 50 (0 - 49)</td></tr></table> (iii) A student obtaining Grade F in a Course shall be considered fail 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.	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 -100)	<90 ≥80 (80 - 89)	< 80 ≥70 (70 - 79)	< 70 ≥60 (60 - 69)	< 60 ≥ 55 (55 - 59)	< 55 ≥50 (50- 54)	< 50 (0 - 49)
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 -100)	<90 ≥80 (80 - 89)	< 80 ≥70 (70 - 79)	< 70 ≥60 (60 - 69)	< 60 ≥ 55 (55 - 59)	< 55 ≥50 (50- 54)	< 50 (0 - 49)																										
18OMB6.2	Computation of SGPA and CGPA The following expressions shall be used to compute the Semester Grade Point Average (SGPA) and Cumulative Grade Point Average (CGPA) respectively: $SGPA = \frac{\sum [Course Credits \times Grade Points] \text{ for all the Courses in that Semester}}{\sum [Course Credits] \text{ for all the Courses in that Semester}}$$CGPA = \frac{\sum [Course Credits \times Grade Points] \text{ for all Courses excluding those with F grades until that Semester}}{\sum [Course Credits] \text{ for all Courses excluding those with F grades until that semester}}$																																

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18OMB6.2 (continued)	(a) SGPA and CGPA Calculations: An Illustrative Example for one academic year						
	Semester (Odd :I, Even: II)	Course Number	Credits	Grade	Grade Points	Credit Points	SGPA, CGPA
	I	XX101	5:0:0 = 5	B	8	5 × 8 = 40	$SGPA = \frac{117}{25}$ $= 4.68$
	I	XX102	3:2:0 = 5	Absent(F)	0	5 × 0 = 00	
	I	XX103	3:0:0 = 3	A	9	3 × 9 = 27	
	I	XX104	0:1:1 = 2	F	0	2 × 0 = 00	
	I	XX105	4:1:0 = 5	D	6	5 × 6 = 30	
	I	XX106	5:0:0 = 5	E	4	5 × 4 = 20	
	Total		25 (18*)	Total		117	
	(18*): Total credits of the semester excluding the credits of the courses under F grade. Considered for the calculation of CGPA of the two consecutive semesters under consideration.						
	II	XX107	3:1:1 = 5	C	7	5 × 7 = 35	$SGPA = \frac{157}{25}$ $= 6.28$
	II	XX108	4:0:0 = 4	B	8	4 × 8 = 32	
	II	XX109	3:0:0 = 3	D	6	3 × 6 = 18	
	II	XX110	4:1:0 = 5	E	4	5 × 4 = 20	
	II	XX111	2:1:1 = 4	A	9	4 × 9 = 36	$CGPA$ $= \frac{(117 + 157)}{18 + 23}$ $= 274/41 = 6.68$
	II	XX112	2:0:0 = 2	F	0	2 × 0 = 00	
	II	XX113	0:2:0 = 2	B	8	2 × 8 = 16	
	Total		25 (23*)	Total		157	
	(23*): Total credits of the semester excluding the credits of the courses under F grade. Considered for the calculation of CGPA of the two consecutive semesters under consideration.						
	If the Student secures letter grades as detailed below after reappearance to SEE, then the SGPA and CGPA shall be calculated as indicated below.						
	I	XX102	3:2:0 = 5	D	6	5 × 6 = 30	$SGPA (I Semester)$ $= \frac{117 + 30 + 14}{25}$ $= 161/25 = 6.44$
	I	XX104	0:1:1 = 2	C	7	2 × 7 = 14	
	II	XX112	2:0:0 = 2	D	6	2 × 6 = 12	$SGPA (II Semester)$ $= (157 + 12)/25$ $= 169/25 = 6.76$
$CGPA \text{ at the end of the academic year after passing all the Courses of the two consecutive semesters under consideration} = \frac{(6.44 \times 25 + 6.76 \times 25)}{50} = 6.60 \blacksquare$							
(b) CGPA Calculation of the Programme: An Illustrative Example							
Semester	I	II	III	IV			
Credits of the semester	24	24	28	24			
SGPA	7.00	8.50	9.20	6.86			
$CGPA = \frac{(24 \times 7.00 + 24 \times 8.50 + 28 \times 9.20 + 24 \times 6.86)}{100} = 7.94 \blacksquare$							

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18OMB9.7	Application for rejection shall be submitted to the Registrar (Evaluation) through the Principal of the college, within thirty days from the date of announcement of results.
18OMB9.8	A candidate, who opts for rejection of results of a semester shall be eligible for the award of class and distinction, but shall not be eligible for the award of rank.
18OMB9.9	Eligibility for Award of Degree: A student shall be declared to have completed the degree of MBA, provided the student has undergone the stipulated course work as per the regulations and has earned the prescribed Credits, as per the Scheme of Teaching and Examination, of the programme.
18OMB10.0	Attendance Requirement
18OMB10.1	Registration and Enrolment: i) Except for the first semester, registration for a semester will be done during a specified week before the semester end examination of the previous semester. ii) The registration sheet shall have the Candidate details, course name and code, number of credits and category (core/elective/audit) for each course of that semester. iii) The Faculty Adviser, assigned by the Head of the Department, will counsel the students in planning their courses of study and provide guidance, motivation, emotional support, and enable the mentees to reach the desired professional and career goals.
18OMB10.2	Courses of each semester shall be treated as a separate unit for calculation of the attendance.
18OMB 10.3	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 recommendation 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 necessary documents in support are to be submitted along with recommendations to condone the shortage.
18OMB10.4	In case of late admission, approved by competent authority (Karnataka Examination Authority/VTU), to I semester of the programme the attendance shall be reckoned from the date of admission to the programme.
18OMB10.5	A candidate, who does not satisfy the attendance requirement (in one or more Courses) as mentioned in 18OMB10.3 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.
18OMB10.6	Principals of the concerned colleges shall notify regularly, the list of candidates who fall short of attendance.
18OMB10.7	The list of the candidates falling short of attendance shall be sent to the University at least one week prior to the commencement of the examination.
18OMB11.0	Promotion and Eligibility
18OMB11.1	Promotion: There shall be no restriction for promotion from an odd semester to the next even semester, provided the student has fulfilled the attendance requirement.

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18OMB14.0	Applicability and Power to Modify
18OMB14.1	The regulations governing the Degree of MBA of Visvesvaraya Technological University shall be binding on all concerned.
18OMB14.2	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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- 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.

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

- 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: 18OMC7.0]. 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 points (CrP) = GP × 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:18OMC7.0]
- 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: 18OMC7.0]

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- 23) **Grade Card:** 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 end examination. 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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18OMC1.0	Title, Duration and Credits of the Programme of Study
18OMC1.1	The Programme shall be called Master of Computer Applications, abbreviated as MCA. ■
18OMC1.2	(i) The program to which students are admitted to I semester of the programme shall be of three academic year duration divided into six semesters and each semester shall be of 16 weeks duration. (ii) The programme to which students are admitted to III semester of the programme, under lateral entry scheme, shall be of two academic year duration divided into four semesters and each semester is of 16 weeks duration. The four semesters of II and III year of the programme are common to students admitted under (i) and (ii). ■
18OMC1.3	Maximum Duration for Programme Completion: (a) Candidates admitted to I year of the programme shall be allowed a maximum duration of six years to become eligible for the award of MCA degree, failing which he/she may discontinue the programme or register once again as a fresh candidate to I semester. (b) Candidates admitted to II year of the programme under lateral entry scheme shall complete the course within four academic years from the year of first admission, failing which he /she has to discontinue the programme or register once again as a fresh candidate to III semester. ■
18OMC1.4	Prescribed Number of Credits for the Programme: The number of credits to be completed for the award of degree shall be 132. ■
18OMC1.5	The Calendar of events in respect of the Programme shall be notified by the University in advance. ■
18OMC2.0	Eligibility for Admission (As per the Government orders issued from time to time)
18OMC2.1	Admission to I year /I semester MCA: A candidate who has passed any recognized under graduate examination or equivalent examination with Mathematics or Statistics or Computer Science or Computer Applications or Computer Programming or Business Mathematics or Business Statistics as one of the optional subjects and obtained an aggregate minimum of 50% marks taken together in all the subjects in all the years of the Degree Examination is eligible for admission to MCA courses and 45% of marks in qualifying examination (QE) in case of SC, ST and Category-I of Karnataka candidates. Provided that in respect of candidate who has studied and passed one of the subjects specified above in Pre-University Course with fifty percent of marks in that subject shall also be considered for admission. 45% of marks in case of SC, ST and Category-I of Karnataka candidates. Admission to II year /III semester MCA(Lateral entry): A candidate who has passed recognized Bachelor's Degree of minimum of 3 years duration in BCA, B.Sc (I.T. / Computer Science) with Mathematics at 10 + 2 level or at Graduate Level and obtained an aggregate minimum of 50% marks taken together in all the subjects in all the years of the Degree Examination is eligible for admission to MCA courses (45% of marks in QE in case of SC, ST and Category-I of Karnataka candidates) Reservation is applicable only for Karnataka Candidates.

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18OMC3.1 (continued)	iii) Open Electives Courses (OE), from other technical and/ or emerging specialization areas. iv) Project Work, Seminar. v) Audit Courses (AC): (a) The Audit course can be any credit course offered by the program to which the Candidate is admitted (other than the courses considered for completing the prescribed program credits). (b) The students admitted to I semester and interested in audit courses can register for one audit course at a time during II to VI semester. The students admitted to III semester under lateral entry scheme and interested in audit courses can register for one audit course at a time during IV to VI semester. Students who have registered to audit courses, considered on par with students registered to the same course for credit, have to satisfy attendance and CIE requirements. However, they need not have to appear for SEE. (c) Registration for any audit course, in writing, shall be completed at the beginning of each semester. 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. vi) Professional training/Internship (referred to as Internship): Preferably at an industry/R and D organization/IT company/ Government organization/Business organization of significant repute for a specified period mentioned in Scheme of Teaching and Examination. ■
18OMC3.2	A candidate shall exercise his/her option in respect of the electives and register for the same before the beginning of the concerned semester. The candidate may be permitted to opt for change of elective subject within 10 days from the date of commencement of the semester as per the calendar of the University. ■
18OMC3.3	The minimum number of students to be registered for an Elective to be offered shall not be less than ten. However, the above condition shall not be applicable when the class strength is less than ten. ■
18OMC4.0	Internship
18OMC4.1	Internship: The student shall undergo Internship for the specified period as per the Scheme of Teaching and Examination. 1. The internship shall be carried out in any industry/R&D Organization/Business Organization /Research Institute/Institute of national and international repute Business organization/ recognized national and international Professional Bodies, Societies or Organizations. 2. The Department/college shall nominate a faculty to facilitate, guide and supervise students under internship. 3. The students shall report the progress of the internship to the internal guide in regular intervals and seek his/her advise. 4. The Internship shall be completed during the period specified in Scheme of Teaching and Examination. 5. After completion of Internship, students shall submit a report to the Head of the Department with the approval of both internal and external guides.

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18OMC6.3	Plagiarism Check Once the Guide uploads the dissertation, the same shall be linked for plagiarism check. The allowable plagiarism index is less than or equal to 25%. If the check indicates a plagiarism index greater than 25% : • for the first time, the candidate has to resubmit the dissertation, to the Registrar (Evaluation), Regional Center/Head Office, VTU along with the penal fees of Rs. 2000/- (Rupees Two thousand only). • for the second time, the candidate has to resubmit the dissertation along with the penal fees of Rs. 4000/- (Rupees four thousand only). • If the dissertation is rejected again during second resubmission with reference to plagiarism index, the candidate shall redo the project and submit after a semester's time subject to provisions of 18OMC1.3. ■
18OMC6.4	The dissertation shall be sent through email for evaluation to two examiners - one internal examiner (guide/co-guide) and one external examiner (first) appointed by the University. The evaluation of the dissertation shall be made independently by each examiner. ■
18OMC6.5	Examiners shall evaluate the dissertation normally within a period of not more than two weeks from the date of receipt of dissertation through email. ■
18OMC6.6	The examiners shall independently submit the marks through the specified link. ■
18OMC6.7	Average of the marks awarded by the two Examiners shall be the final evaluation marks for the Dissertation. ■
18OMC6.8	(a) Viva-voce examination of the candidate shall be conducted as per 18OMC6.10, if the dissertation work and the reports are accepted by the external examiner (first). (b) If the external examiner (first) finds that the dissertation work and the report are not up to the expected standard and the minimum passing marks cannot be awarded, the dissertation shall not be accepted for SEE. The external examiner (first) can recommend for modifications/suggestions of dissertation or totally reject the dissertation. The examiner shall offer suggestions for improvement of the dissertation for resubmission or list the reasons for rejection of the dissertation. (c) The resubmitted Dissertation incorporating the modifications/suggestions [as per 18OMC6.8 (b)] of the external examiner (first) and satisfying the provision 18OMC6.3 shall be sent again to the external examiner (first) for evaluation. If the dissertation and the report are accepted by the external examiner (first), Viva-voce examination of the candidate shall be conducted as per 18OMC6.10. (d) In case of rejection of Dissertation by the external examiner (first), the same will be sent to a Second Examiner (external) approved by the University. The decision of the Second Examiner (external) is final. If the dissertation and the report are accepted by the Second Examiner (external), Viva-voce examination of the candidate shall be conducted as per 18OMC6.10. If the Second Examiner (external) rejects the dissertation and the report, the candidate shall have to carry out the dissertation work once again and submit the dissertation subject to provisions of 18OMC1.3. In such cases of rejection, the candidate shall redo the entire procedure starting from the submission of Dissertation in soft copy. (e) In case of rejection of Dissertation, with reasons, by the external examiner (first) [as per 18OMC6.8 (b)], the same will be sent to a Second Examiner (external)[not necessarily the same examiner considered under 18OMC6.8 (d)] approved by the University. The decision of the Second Examiner (external) is final. If the dissertation and the report are accepted by the Second Examiner (external), Viva-voce examination of the candidate shall be conducted as per 18OMC6.10.

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18OMC6.8 (continued)	If the Second Examiner (external) rejects the dissertation and the report, the candidate shall have to carry out the dissertation work once again and submit the dissertation subject to provisions of 18OMC1.3. In such cases of rejection, the candidate shall redo the entire procedure starting from the submission of Dissertation in soft copy. ■																																							
18OMC6.9	The candidate, whose Dissertation is rejected, can rework on the same topic or choose another topic of dissertation under the same Guide or new Guide if necessary. In such an event, the report shall be submitted subject to provisions of 18OMC1.3. ■																																							
18OMC6.10	Viva-voce examination of the candidate shall be conducted by the external examiner and internal examiner/ guide. Internal examiner as per the direction of the University shall have to arrive at a mutually convenient date for the conduct of viva-voce examination of the concerned candidate with an intimation to the Registrar (Evaluation). In case one of the examiners expresses his/her inability to attend the viva-voce, the Registrar (Evaluation) shall appoint a substitute examiner in his/her place. ■																																							
18OMC6.11	The relative weights for the evaluation of dissertation and the performance at the viva voce shall be as per the scheme of teaching & examination.																																							
18OMC6.12	The marks awarded by both the Examiners at the viva voce Examination shall be sent jointly to the University immediately after the examination.																																							
18OMC6.13	Examination fee as fixed from time to time by the University for evaluation of dissertation report and conduct of viva voce shall be remitted through the Head of the Institution as per the instructions of Registrar (Evaluation) from time to time.																																							
18OMC6.14	The candidates who fail to submit the dissertation work within the stipulated time have to submit the same at the time of next ensuing examination.																																							
18OMC7.0	Computation of SGPA and CGPA																																							
18OMC7.1	(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: <table><tr><td>Level</td><td>Outstanding</td><td>Excellent</td><td>Very Good</td><td>Good</td><td>Above Average</td><td>Average</td><td>Fail</td></tr><tr><td>Letter Grade</td><td>S</td><td>A</td><td>B</td><td>C</td><td>D</td><td>E</td><td>F</td></tr><tr><td>Grade Points</td><td>10</td><td>9</td><td>8</td><td>7</td><td>6</td><td>4</td><td>00</td></tr><tr><td rowspan="2">Percentage of Marks Scored in a Course</td><td>≥ 90</td><td><90 ≥80</td><td>< 80 ≥70</td><td>< 70 ≥60</td><td>< 60 ≥ 55</td><td>< 55 ≥50</td><td>< 50</td></tr><tr><td>(90 -100)</td><td>(80 - 89)</td><td>(70 - 79)</td><td>(60 - 69)</td><td>(55 - 59)</td><td>(50- 54)</td><td>(0 - 49)</td></tr></table> (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.	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 ≥ 55	< 55 ≥50	< 50	(90 -100)	(80 - 89)	(70 - 79)	(60 - 69)	(55 - 59)	(50- 54)	(0 - 49)
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 ≥ 55	< 55 ≥50	< 50																																	
	(90 -100)	(80 - 89)	(70 - 79)	(60 - 69)	(55 - 59)	(50- 54)	(0 - 49)																																	

Visvesvaraya Technological University, Belagavi
Regulations Governing the Degree of Master of Computer Applications (MCA)
Under Outcome Based Education (OBE) and Choice Based Credit System (CBCS) Scheme
Effective from academic year 2018 -19

18OMC7.2

Computation of SGPA and CGPA

The following expressions shall be used to compute the Semester Grade Point Average (SGPA) and Cumulative Grade Point Average (CGPA) respectively:

$$SGPA = \frac{\sum [Course Credits \times Grade Points] \text{ for all the Courses in that Semester}}{\sum [Course Credits] \text{ for all the Courses in that Semester}}$$
$$CGPA = \frac{\sum [Course Credits \times Grade Points] \text{ for all Courses excluding those with F grades until that Semester}}{\sum [Course Credits] \text{ for all Courses excluding those with F grades until that semester}}$$

(a) SGPA and CGPA Calculations: An Illustrative Example for one academic year						
Semester (Odd :I, Even: II)	Course Number	Credits	Grade	Grade Points	Credit Points	SGPA, CGPA
I	XX101	5:0:0 = 5	B	8	5 × 8 = 40	$SGPA = \frac{117}{25}$ $= 4.68$
I	XX102	3:2:0 = 5	Absent(F)	0	5 × 0 = 00	
I	XX103	3:0:0 = 3	A	9	3 × 9 = 27	
I	XX104	0:1:1 = 2	F	0	2 × 0 = 00	
I	XX105	4:1:0 = 5	D	6	5 × 6 = 30	
I	XX106	5:0:0 = 5	E	4	5 × 4 = 20	
Total		25 (18*)	Total	117		
(18*): Total credits of the semester excluding the credits of the courses under F grade. Considered for the calculation of CGPA of the two consecutive semesters under consideration.						
II	XX107	3:1:1 = 5	C	7	5 × 7 = 35	$SGPA = \frac{157}{25}$ $= 6.28$
II	XX108	4:0:0 = 4	B	8	4 × 8 = 32	
II	XX109	3:0:0 = 3	D	6	3 × 6 = 18	
II	XX110	4:1:0 = 5	E	4	5 × 4 = 20	
II	XX111	2:1:1 = 4	A	9	4 × 9 = 36	$CGPA = \frac{(117 + 157)}{18 + 23}$ $= \frac{274}{41} = 6.68$
II	XX112	2:0:0 = 2	F	0	2 × 0 = 00	
II	XX113	0:2:0 = 2	B	8	2 × 8 = 16	
Total		25 (23*)	Total	157		
(23*): Total credits of the semester excluding the credits of the courses under F grade. Considered for the calculation of CGPA of the two consecutive semesters under consideration.						
If the Student secures letter grades as detailed below after reappearance to SEE, then the SGPA and CGPA shall be calculated as indicated below.						
I	XX102	3:2:0 = 5	D	6	5 × 6 = 30	$SGPA (I Semester)$ $= \frac{117 + 30 + 14}{25}$ $= 161/25 = 6.44$
I	XX104	0:1:1 = 2	C	7	2 × 7 = 14	
II	XX112	2:0:0 = 2	D	6	2 × 6 = 12	$SGPA (II Semester)$ $= (157 + 12)/25$ $= 169/25 = 6.76$

Visvesvaraya Technological University, Belagavi
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Under Outcome Based Education (OBE) and Choice Based Credit System (CBCS) Scheme
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18OMC7.2 (continued)	<i>CGPA at the end of the academic year after passing all the Courses of the two consecutive semesters under consideration</i> = $\frac{(6.44 \times 25 + 6.76 \times 25)}{50} = 6.60$ ■					
	(b) CGPA Calculation of the Programme: An Illustrative Example					
	Semester	I	II	III	IV	V
	Credits of the semester	21	23	21	23	22
	SGPA	7.08	6.08	7.92	9.24	8.75
	<i>Thus CGPA</i> = $\frac{(21 \times 7.08 + 23 \times 6.08 + 21 \times 7.92 + 23 \times 9.24 + 22 \times 8.75 + 22 \times 9.60)}{132} = 8.11$					
18OMC7.3	Grade Card: Based on the secured letter grades, grade points, SGPA and CGPA, a grade card for each semester and a consolidated grade card indicating the performance in all semesters shall be issued. ■					
18OMC8.0	Conversions of Grades into Percentage and Class Equivalence					
18OMC8.1	Conversions of Grades into Percentage 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: $P = [\text{CGPA Earned } 8.2 - 0.75] \times 10 = 74.5 \%$					
18OMC8.2	Class Equivalence: After the conversion of final CGPA into percentage of marks (P), a graduating student is reckoned 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 $P < 60\%$.					
18OMC9.0	Continuous Internal Evaluation and Semester End Evaluation					
18OMC9.1	There shall be a maximum of 40 CIE Marks in each theory and practical paper. A candidate shall obtain not less than 50% of the maximum marks prescribed for the CIE of each Theory course/ Laboratory/ Internship /Project/Dissertation. [To be read along with 18OMC9.8]					
18OMC9.2	CIE Marks shall be based on a) Tests (for 20 Marks) and b) Assignments, Quiz, Simulation, Experimentation, Mini project, oral examination, field work etc., (for 20 Marks) conducted in respective courses.					
18OMC9.3	The CIE marks in a theory course, for 20 marks, shall be based on two tests covering the entire syllabus. An additional test may be conducted for the needy students to provide an opportunity to improve their CIE Marks before the end of the semester. The CIE marks shall be the average of the marks scored in at least two of the above tests.					
18OMC9.4	The candidates shall write the Tests in Blue Book/s. The Blue book/s and other documents relating to award of CIE marks under 18OMC9.2 (b) shall be preserved by the Principal / Head of the Department for at least six months from the date of announcement of University results and made available for verification at the directions of the Registrar (Evaluation).					

Visvesvaraya Technological University, Belagavi
Regulations Governing the Degree of Master of Computer Applications (MCA)
Under Outcome Based Education (OBE) and Choice Based Credit System (CBCS) Scheme
Effective from academic year 2018 -19

18OMC11.4	In case of late admission, approved by competent authority (Karnataka Examination Authority/VTU), to I/III semester of the programme the attendance shall be reckoned from the date of admission to the programme.
18OMC11.5	A candidate, who does not satisfy the attendance requirement (in one or more Courses) as mentioned in 18OMC11.3 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 academic year.
18OMC11.6	Principals of the concerned colleges shall notify regularly, the list of candidates who fall short of attendance.
18OMC11.7	The list of the candidates falling short of attendance shall be sent to the University at least one week prior to the commencement of the examination.
18OMC12.0	Promotion and Eligibility
18OMC12.1	Promotion: There shall be no restriction for promotion from an odd semester to the next even semester, provided the student has fulfilled the attendance requirement.
18OMC12.2	A candidate shall be eligible for promotion from an even semester to the odd semester (i.e. to the next academic year) if the candidate has not failed in more than four heads of passing of the immediately preceding two semesters put together and has passed in all the courses of all the lower semester examinations. A theory or practical shall be treated as a head of passing. Illustrations: Case: 1 Candidates admitted to I year/I semester of the programme. a. A candidate seeking eligibility to III semester should not have failed in more than 4 heads of passing of first and second semesters taken together. b. A candidate seeking eligibility to V semester should have passed in all the courses of I and II semesters and should not have failed in more than 4 heads of passing of III and IV semesters taken together Case: 2 Candidates admitted to II year/III semester of the programme under lateral entry scheme. 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.
18OMC12.3	The Mandatory non – credit courses, if any, 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 before the completion of Degree.
18OMC13.0	Temporary Discontinuation/Break in the Program
18OMC13.1	(a) If a candidate, for any reason, temporarily discontinues the Programme or take a break from programme during any semester, he/she may be permitted to continue in 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 18OMC1.3. 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 candidate shall not be eligible for the award of rank.

VISVEVARAYA TECHNOLOGICAL UNIVERSITY, Belagavi
Regulations governing
THE DEGREE OF MASTER OF ARCHITECTURE (M. Arch.)
Under Outcome Based Education (OBE)
and
Choice Based Credit System (CBCS) Scheme
(Full-time)
(Effective from academic year 2018 -19)

Definitions of Keywords:

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

- 1) **Programme:** Is an educational programme in a particular stream/ branch of Architecture/branch of specialization leading to award of the Degree. It involves events/activities, comprising of lectures/ tutorials/ studio projects/ field work, outreach activities/ project work/ professional training/ viva voce/ seminars/ term papers (research paper) / assignments/ presentations/ self-study etc., or a combination of some of these.
- 2) **Branch:** Means specialization or discipline of study that provides specific domain knowledge in M. Arch Degree Programme, like M. Arch in Urban Design, M. Arch in Habitat Design 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 and even semesters shall be as per the University academic calendar.
- 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 comprising of lectures/ tutorials/ studio projects/ field work, outreach activities/ project work/ professional training/ viva voce/ seminars/ term papers (research paper) / assignments/ presentations/ self-study etc., or a combination of some of these.
- 6) **Credit:** Refers to a unit by which the Course work is measured. It indicates the relative importance of a course.
- 7) **Audit Courses:** Means the 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.

18OMA10.6	Plagiarism Check The dissertation guide/s and head of the department shall ensure and certified the authenticity and originality of contents constituting the dissertation. All cited content shall be duly acknowledged. The text content of the dissertation shall be subjected to plagiarism check. The allowable plagiarism index is less than or equal to 25%. If the check indicates a plagiarism index >25% : • For the first time, the candidate has to resubmit the dissertation, to the Registrar (Evaluation), VTU along with the penal fees of Rs. 2000/- (Rupees Two thousand only) in person. • For the second time, the candidate has to resubmit the dissertation along with the penal fees of Rs. 4000/- (Rupees four thousand only) in person. • If the dissertation is rejected again during second resubmission with reference to plagiarism index, the candidate shall redo the project and submit after a semester's time or subject to the provision 18 OMA 2.3.
18OMA10.7	The date of submission of the dissertation may be extended without exceeding the duration specified in regulation 18OMA2.3 for full-time candidates.
18OMA10.8	The dissertation shall be evaluated by three examiners comprising of one internal examiner (guide/co-guide) and two external examiners appointed by the University. The evaluation of the dissertation shall be made independently by each examiner.
18OMA10.9	Average of the marks awarded by the three Examiners shall be the final dissertation marks of the candidate.
18OMA10.10	The IV semester Full-time candidates who have satisfied the progressive assessment of III semester Dissertation Seminar, but having backlog courses are permitted to complete dissertation report and to appear for SEE. The IV semester grade card shall be released only when the candidate completes all the backlog courses and become eligible for the award of degree.
18OMA10.11	A Student who has not satisfied progressive assessment in the subject Dissertation Seminar during III semester is not eligible to take up Dissertation in the IV Semester.
18OMA 11.0	ELIGIBILITY FOR PASSING AND AWARD OF DEGREE
18OMA 11.1	(1) A student who obtains any grade S to E shall be considered as passed and if a student secures F grade in any of the head of passing he/she has to reappear in that head for the SEE. (2) A student will be declared successful at the end the programme on obtaining CGPA ≥ 5.00, with none of the Courses registered in a Semester or for the Degree Award remaining with F Grade. (3) In case, the CGPA fall below 5.00, the student shall be permitted to appear again for SEE for required number of courses (other than seminar and Practical) and times, subject to the provision of 18OMA2.3, to make up CGPA ≥ 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.
18OMA11.2	For a pass in a theory course, the student shall secure minimum of 40% of the maximum marks prescribed in the Semester End Examination and 50% of marks in Internal Assessment and 50 % in the aggregate of progressive marks and SEE marks. The minimum

	Passing Grade in a course is “E”.
18OMA 11.3	For a pass in Professional Training/ Practical/ Project/ Dissertation /Viva-voce examinations, a student shall secure a minimum of 50 % of the maximum marks prescribed for the SEE in Professional Training/Practical/Project /Dissertation /Viva-voce. The Minimum Passing Grade in a course is “E”.
18OMA11.4	Promotion: There shall be no restriction for promotion from an odd semester to the next even semester, provided the student has fulfilled the attendance requirement.
18OMA 11.5	Candidates, under full-time programme, with a maximum of two backlog courses of first year shall be eligible for taking admission to second year(III semester).
18OMA 11.6	A candidate may at his/her desire reject his/her latest semester results of University examination in respect to all courses of that semester. However, in the 4th semester the rejection shall not include the Dissertation result. Rejection shall be permitted only once during the entire Programme. The Internal Assessment marks of the rejected semester shall remain the same. Rejection including Internal Assessment is not permitted.
18OMA 11.7	If the rejection of the University examination results of the semester happens to be of an odd semester, the candidate can take admission to the immediate next even semester. However, if the rejection of the University result is of even semester, the candidate cannot take admission to the next odd semester.
18OMA 11.8	Application for rejection shall be submitted to the Registrar (Evaluation) through the Principal of the College, within thirty days from the date of announcement of results.
18OMA 11.9	A candidate, who opts for rejection of results of a semester shall be eligible for the award of class and distinction, but shall not be eligible for the award of rank.
18OMA11.10	A student shall be declared to have completed the degree of Master of Architecture, provided the student has undergone the stipulated course work as per the regulations and has earned the prescribed Credits of the programme.
18OMA 12.0	COMPUTATION OF SGPA AND CGPA
18OMA 12.1	(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 here under;

Level		Outstanding	Excellent	Very Good	Good	Above Average	Average	Fail
Letter Grade		S	A	B	C	D	E	F
Grade points Points		10	9	8	7	6	4	00
Percentage of Marks Scored in	Course with Prog marks & theory (SEE) *	≥ 90	<90 ≥80	< 80 ≥70	< 70 ≥60	< 60 ≥ 55	< 55 ≥50	< 50
	Course with Prog marks & VIVA VOCE	≥ 90	<90 ≥80	< 80 ≥70	< 70 ≥60	< 60 ≥ 55	< 55 ≥50	< 50
	Course with Prog Marks only	≥ 90	<90 ≥80	< 80 ≥70	< 70 ≥60	< 60 ≥ 55	< 55 ≥50	< 50
* For a pass in a theory course, the student shall secure minimum of 40% of the maximum marks prescribed in the Semester End Examination and 50% of marks in Internal Assessment and 50 % in the aggregate of progressive marks and SEE marks. The minimum Passing Grade in a course is “E”. (18OMA11.2) (iii) A student obtaining Grade F in a Course shall be considered fail 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.								
18OMA 12.2		Grade Point Averages: SGPA and CGPA: The credit index can be used further for calculating the Semester Grade Point Average (SGPA) and the Cumulative Grade Point Average (CGPA), both being important academic performance indices of the student. While SGPA is equal to the credit index for a semester divided by the total number of credits registered by the student in that semester, CGPA gives the sum total of credit indices of all the previous semesters divided by the total number of credits registered in all these semesters. Both the equations together facilitate the declaration of academic performance of a student, at the end of a semester and at the end of successive semesters respectively. Thus, $SGPA = \frac{\sum [Course Credits \times Grade Points] \text{ for all the Courses in that Semester}}{\sum [Course Credits] \text{ for all the Courses in that Semester}}$ $CGPA = \frac{\sum [Course Credits \times Grade Points] \text{ for all Courses excluding those with F and transitional grades until that Semester}}{\sum [Course Credits] \text{ for all Courses excluding those with F grades until that semester}}$						

18OMA12.2
(continued)

(a) SGPA and CGPA Calculations: An Illustrative Example for one academic year

er (Odd :I, Even:	Course Number	Credits	Grade	Grade Points	Credit Points	SGPA, CGPA
I	XX101	5:0:0 = 5	B	8	5 × 8	$SGPA = \frac{117}{25}$ $= 4.68$
I	XX102	3:2:0 = 5	Absent(	0	5 × 0 = 00	
I	XX103	3:0:0 = 3	A	9	3 × 9 = 27	
I	XX104	0:1:1 = 2	F	0	2 × 0 = 00	
I	XX105	4:1:0 = 5	D	6	5 × 6 = 30	
I	XX106	5:0:0 = 5	E	4	5 × 4 = 20	
Total		25 (18*)	Total		117	

(18*): Total credits of the semester excluding the credits of the courses under F grade. Considered for the calculation of CGPA of the two consecutive semesters under consideration.

II	XX107	3:1:1 = 5	C	7	5 × 7 = 35	$SGPA = \frac{157}{25}$ $= 6.28$
II	XX108	4:0:0 = 4	B	8	4 × 8 = 32	
II	XX109	3:0:0 = 3	D	6	3 × 6 = 18	
II	XX110	4:1:0 = 5	E	4	5 × 4 = 20	
II	XX111	2:1:1 = 4	A	9	4 × 9 = 36	$CGPA$ $= \frac{(117 + 157)}{18 + 23}$ $= 274/41 = 6.68$
II	XX112	2:0:0 = 2	F	0	2 × 0 = 00	
II	XX113	0:2:0 = 2	B	8	2 × 8 = 16	
Total		25 (23*)	Total	157		

(23*): Total credits of the semester excluding the credits of the courses under F grade. Considered for the calculation of CGPA of the two consecutive semesters under consideration.

If the Student secures letter grades as detailed below after reappearance to SEE then the SGPA and CGPA shall be calculated as indicated below.

I	XX102	3:2:0 = 5	D	6	5 × 6 = 30	$SGPA (I Semester)$ $= \frac{117 + 30 + 14}{25}$ $= 161/25$ $= 6.44$
I	XX104	0:1:1 = 2	C	7	2 × 7 = 14	
II	XX112	2:0:0 = 2	D	6	2 × 6 = 12	$SGPA (II Semester)$ $= (157 + 12)/25$ $= 169/25$ $= 6.76$

CGPA at the end of the academic year after passing all the Courses of the two consecutive semesters under consideration = $\frac{(6.44 \times 25 + 6.76 \times 25)}{50} = 6.60$ ■

(b) CGPA Calculation of the Programme: An Illustrative Example

Semester	I	II	III	IV
Credits of the	25	24	26	25
SGPA	7.00	8.50	9.20	6.80

18OMA 12.3	Grade Card: Based on the secured letter grades, grade points, SGPA and CGPA, a grade card for each semester and a consolidated grade card indicating the performance in all semesters shall be issued.
18OMA 12.4	Conversions of Grades into Percentage and Class Equivalence 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: $P = [\text{CGPA Earned } 8.2 - 0.75] \times 10 = 74.5 \%$
18OMA12.5	Class Equivalence: After the conversion of final CGPA into percentage of marks (P), a graduating student is reckoned 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 $P < 60\%$.
18OMA 13.0	Award of Prizes, Medals and Ranks
18OMA 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.
18OMA 13.2	Award of Ranks i) For award of rank in a Specialization of Master of Architecture, the CGPA secured by the student on completion of the programme is considered. ii) A student shall be eligible for a rank at the time of award of degree of Master of Architecture, provided the student: a) Is not a repeater in any semester, b) Has not rejected the results of any semester, and c) Has passed 1st to 4th semester in all the courses in first attempt only. iii) The Total number of ranks awarded shall be 10% of total number of students appeared in 4th semester subject to a maximum of 10 ranks in a Specialization. iv) For award of ranks in a Specialization, a minimum of 10 students should have appeared in the 4th semester examination. v) 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.
18OMA 13.3	Ranks are awarded based on the merit of the students as determined by 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.
18OMA 14.0	Applicability and Power to Modify
18OMA 14.1	The regulations governing the Degree of Master of Technology of Visvesvaraya Technological University shall be binding on all concerned.
18OMA 14.2	POWER TO MODIFY: 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.



Visvesvaraya Technological University

"Jnana Sangama", Belagavi - 590 018, Karnataka State

Prof. A. S. Deshpande B.E. M.Tech, Ph.D.
REGISTRAR

Phone : (0831) 2498100
Fax : (0831) 2405467

Ref VTU/BGM/Aca-OS/Gen-Cirs/2019-20/ 3013

Date : 21 AUG 2019

NOTIFICATION

Sub: Regulations Governing the Degree of B.E./ B.Tech.
under OBE and **CBS** (Revised-2018) - reg...

Ref: Executive Council Resolution. No. 2.2.1 dt: 30th May, 2019

Pursuant to the aforesaid Executive Council Resolution, the "Regulations Governing the Degree of B.E./ B.Tech. under outcome Based Education and Choice Based Credit System - (Revised - 2018) " are hereby notified.

These Regulations are applicable for the following students:

1. Admitted to I semester/I year from the academic year 2018-19 (i.e. USN XXX18XXXXX)
2. Admitted to III semester/II year from the academic year 2019-20 (i.e. USN XXX19XX4XX)

You are hereby directed to bring the same to the notice of all the concerned and to follow them scrupulously.

The previous regulations in this regard published on VTU website and printed in syllabus books are treated as null and void.

Encl: as above

BY ORDER

01.08.2019
REGISTRAR

To,

The of Principals of All Engineering Colleges under the ambit of VTU, Belagavi

Copy to:

1. Hon'ble Vice-Chancellor through the Secretary to VC, VTU, Belagavi for kind information
2. The Registrar (Evaluation), VTU, Belagavi
3. The Regional Directors (I/C) of all the Regional Offices of VTU for circulation
4. The Computer Network Centre, VTU, Belagavi- to upload on VTU website
5. PS to Registrar, VTU, Belagavi
6. All the concerned Special Officer and Case-workers of Academic Section, VTU, Belagavi

**Regulations Governing the Degree of Bachelor of Engineering/Technology (B.E./B.Tech.)
Under Outcome Based Education (OBE) and Choice Based Credit System (CBCS)
Effective from the Academic Year 2018 – 19**

- 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 the 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 Examinations.
- 16) **Letter Grade:**

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.

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 and SEE. Grading is done by Absolute Grading [Refer: 18 OB 6.0]. The rubrics 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 GP and number of credits for a Course i.e.,
Credit points (CrP) = GP × Credits for the Course.
- 21) **Semester Grade Point Average (SGPA):** Refers to the measure of academic performance of student/s in a semester. [Refer:18OB6.2]
- 22) **Cumulative Grade Point Average (CGPA):** Is a measure of overall cumulative performance of a student over all semesters. [Refer:18OB6.2]
- 23) **Grade Card:** Refers to the certificate showing the grades earned by a student. A grade card shall be issued to all the registered students after every semester end examination. The grade card 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.

**Regulations Governing the Degree of Bachelor of Engineering/Technology (B.E./B.Tech.)
Under Outcome Based Education (OBE) and Choice Based Credit System (CBCS)
Effective from the Academic Year 2018 - 19**

Extract from the Academic Year 2018 - 19

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 two senior faculty members of the Department and the senior must acting as the Chairperson. [To be read along with 18OB8.2 (e)]

18OB 5.2 **Project: Project (Mini and Main) is one of the head of passing.**
Mini Project Work and Main Project Work shall preferably be batch wise, the strength of each batch shall not exceed a maximum of four students. [To be read along with 18OB 8.2 (f), (g) 18OB8.9 (f) and the details mentioned in Scheme of Teaching and Examinations.]

18OB 5.3 Examinations in Mini Project Work and Main Project Work shall be conducted batch-wise.

18OB 6.0 **Computation of SGPA and CGPA**

18OB 6.1 (i) The University adopts absolute grading system wherein the marks are converted to grades, and every semester results shall be declared in terms of Semester Grade Point Average (SGPA) considering all the courses appeared in that Semester End Examinations including backlog course/s/arrear papers (refers to courses other than the current semester courses that have not yet been completed) 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 shall be as given below:

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

(iii) A student obtaining Grade F in a Course shall be considered fail and is required to reappear in the subsequent SEE. Whatever the letter grade secured by the student during his/her reappearance shall be awarded. The number of attempts taken to clear Course/s shall be indicated in the grade card.

18OB6.2 **Computation of SGPA and CGPA**

The following expressions shall be used to compute the Semester Grade Point Average (SGPA) and Cumulative Grade Point Average (CGPA) respectively:

$$SGPA = \frac{\sum [Course Credits \times Grade Points] \text{ for all the Courses in that Semester}}{\sum [Course Credits] \text{ for all the Courses in that Semester}}$$

$$CGPA = \frac{\sum [Course Credits \times Grade Points] \text{ for all Courses excluding those with F grades until that Semester}}{\sum [Course Credits] \text{ for all Courses excluding those with F grades until that semester}}$$

The SGPA and CGPA shall be rounded off to 2 decimal points and reported in the grade cards.

(a) SGPA and CGPA Calculations: An Illustrative Example for one academic year

Semester (Odd II, Even: II)	Course Code	Credits	Grade	Grade Points (GP)	Credit Points (CrP)	SGPA, CGPA
1	XX101	5:0:0 = 5	B	8	5x8=40	$SGPA = \frac{117}{25}$ $= 4.68$
1	XX102	3:2:0 = 5	Absent(F)	0	5x0=00	
1	XX103	3:0:0 = 3	A	9	3x9=27	
1	XX104	0:1:1 = 2	F	0	2x0=00	

**Regulations Governing the Degree of Bachelor of Engineering/Technology (B.E./B.Tech.)
Under Outcome Based Education (OBE) and Choice Based Credit System (CBCS)
Effective from the Academic Year 2018 – 19**

18OB14.3	The University may prescribe fee for administration 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).
18OB15.0	Applicability and Power to Modify
18OB15.1	The regulations governing the Degree of Bachelor of Engineering/Technology of Visvesvaraya Technological University shall be a binding on all concerned.
18OB15.2	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




REGISTRAR
Visvesvaraya Technological University,
BELAGAVI - 590 018.



ವಿಶ್ವೇಶ್ವರಯ್ಯ ತಾಂತ್ರಿಕ ವಿಶ್ವವಿದ್ಯಾಲಯ

ವಿಜಯಪುರಿಯುಗುಣಿ "ಎ" ರೂರಿಯಲ್ಲಿಕರ್ನಾಟಕಸರ್ಕಾರದಿಂದಸ್ಥಾಪಿತವಾದರಾಜ್ಯವಿಶ್ವವಿದ್ಯಾಲಯ

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

State University of Government of Karnataka Established as per the VTU Act, 1994 "InanaSangama" Belagavi-590018, Karnataka, India

Prof. B. E. Rangaswamy, Ph.D

Phone: (0831) 2498100

REGISTRAR

Fax: (0831) 2405467

REF: VTU/BGM/Aca/BoS/2023/ 611

DATE: 2 MAY 2023

NOTIFICATION

Subject: Regulations Governing the award of B.E./B.Tech., (2022 scheme) regarding...

Reference: JBOS 10.02.2023 and 171st EC meeting Proceeding no. 2.2.1 dated: 23.02.2023

Pursuant to the aforesaid Executive Council Proceedings the Regulations Governing the award of a degree in Bachelor of Engineering /Technology under Outcome-based education and choice-based credit system (2022) are hereby notified.

These regulations are applicable to students

- who are admitted to the 1st semester (1st year) of the B.E./B.Tech., programs from the academic year 2022-23 and onward.
- who are admitted to 3rd semester (2nd year) through lateral entry in the academic year 2023-24 and onward

The previous regulations in this regard are treated as null and void.

All the Principals of the Engineering Colleges are hereby informed to bring the content of this Notification to the notice of the all concerned

Sd/-

Registrar

To,

1. All the Principals of Engineering Colleges under the ambit of the VTU Belagavi
2. The Chairperson and Program Coordinator, PG Centres VTU Belagavi where B.E./B.Tech., programs are being offered.

Copy to

1. To the Hon'ble Vice-Chancellor through the secretary to VC for information
2. The Registrar (Evaluation) for information and needful
3. The Director (I/c) ITI SMU VTU Belagavi for information and make arrangements to upload it on the VTU web portal.
4. The Special Officer QPDS Examination section VTU Belagavi
5. The Coordinator IQAC VTU Belagavi
6. Office Copy

Rar 02/05/23 RE
REGISTRAR
[Signature]



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REGULATIONS

PREAMBLE:

The quality of Technical Education depends on many factors but largely on- outcome based socially and industrially relevant curriculum, good quality motivated faculty, teaching learning process, effective industry internship and evaluation of students based on desired outcomes. To regulate, in an orderly manner, the process of admission, registration of students, conduct of classes, teaching –learning, Assessment, Evaluation and Grading processes to award Bachelor of Engineering/ Technology degree in Visvesvaraya Technological University, Belagavi and the Colleges affiliated to it, with due consideration to the NEP-2020 policy, and applicable Regulations of UGC and AICTE, in exercise of the powers conferred under Section 22 of UGC Act 1956 and under Sections [7(2) and 8(1,2, & 4) of the VTU Act 1994, the University hereby makes the following Regulations, namely:-

1. SHORT TITLE, APPLICATION AND COMMENCEMENT:

- 1.1. These Regulations may be called the Visvesvaraya Technological University [Award of Bachelor of Engineering/ Technology Degree] Regulations, 2022.
- 1.2. These Regulations shall apply to all the B.E./ B.Tech. Programmes conducted at the Visvesvaraya Technological University, its constituent Colleges and all other Colleges affiliated to it.
- 1.3. They shall come into force with effect from the date of their notification by the Visvesvaraya Technological University, Belagavi.
- 1.4. These Regulations shall be applicable to the batch of students admitted from the academic year 2022-23 and later and will be in force until revised or withdrawn by a notification.

2. DEFINITION OF KEY WORDS:

In these Regulations, unless the context otherwise requires:

- 2.1. **Academic Bank of Credits (ABC):** The Academic Bank of Credits (ABC), is a National-level facility that will promote the flexibility of the curriculum framework and interdisciplinary/multidisciplinary academic mobility of students across the Higher Educational Institutions in the country with an appropriate "credit transfer" mechanism.
- 2.2. **Academic Year:** Two consecutive semesters (odd followed by an even), including intervening periods constitute one Academic Year.



2.10. Credit Point: This is the product of grade point and the number of credits for a Course.

2.11. Credit Representation: Refers to the Credit Values for different academic activities considered, as per Table 1. Credits for the project phases, project viva-voce and internship shall be as specified in the Scheme of Teaching and Examinations.

Table 1: Credit Values				
Theory/Lectures (L) (hours/ week/ Sem)	Tutorials (T) (hours/week/Sem)	Laboratory/ Practical (P) (hours/ week/ Sem)	Credits (L:T:P)	Total Credits
4	0	0	4:0:0	4
3	0	2	3:0:1	4
2	2	2	2:1:1	4
3	0	0	3:0:0	3
2	2	0	2:1:0	3
2	0	2	2:0:1	3
0	0	6	0:0:3	3
2	0	0	2:0:0	2
1	0	0	1:0:0	1
0	0	2	0:0:1	1

2.12. Choice-Based Credit System (CBCS): The education model refers to customizing the Coursework, Core, Professional Elective, Open Electives, Skill-based ability Enhancement Courses, Non-Credit Mandatory Courses, and Internships to provide the necessary support for the students to achieve their goals.

2.13. Continuous Internal Evaluation (CIE)(also known as Formative Assessment): Refers to the evaluation of student's performance in the course during the teaching-learning process. CIE shall be done by the faculty teaching course and evaluation components may include tests, assignments, group discussion, quizzes, course-specific projects, field surveys, seminars, etc., conducted during the semester tenure with a weightage for different activities as specified by the University.

2.14. Course Evaluation: This represents the measurement of the impact of the



Regulations governing Minor Degree Programme. A student shall be eligible to register to a Minor programme if he/she fulfills the conditions as per the Regulations

- 2.28. **Multiple Entry and Multiple Exit (MEME):** The multiple entries and exit points in the academic programmes would remove rigid boundaries and create new possibilities for students. To facilitate flexible learning within the stipulated period (eight years for regular students and 06 years for lateral entry students), multiple-entry and multiple-exit options are offered to needy students.
- 2.29. **Passing Standards:** Refers to passing a course only when GP is greater than or equal to 04.
- 2.30. **Principal:** The Head of the College or a Higher Educational Institution (HEI). In the case of programmes offered at University campuses, it shall be the Head/ Chairperson of the Department offering the programme.
- 2.31. **Programme:** A planned series of events/activities comprising of a combination of courses leading to the award of degree.
- 2.32. **Semester:** One of the two sessions of an Academic Year, each session being of sixteen weeks duration (with not less than 90 working days). The odd and even semesters shall be as per the University academic calendar.
- 2.33. **Semester End Examinations (SEE) (also called Summative Assessment):** Also called summative assessment, which refers to the examinations conducted by the University covering the entire course syllabus. For this purpose, syllabi shall be modularized, and SEE questions shall be set from each module as specified by the University.
- 2.34. **Semester Grade Point Average (SGPA):** It is a measure of academic performance of a student in a semester. It is the weighted average or weighted mean of the grade points obtained by a student in the various courses of any semester. It results in a number that lies between 0 and 10. It shall be expressed up to two decimal places.
- 2.35. **Teacher:** A member of the regular faculty at the levels of Professor, or Associate Professor or Assistant Professor; and includes adjunct faculty and faculty on a long-term contract of not less than three years.



- 2.36. Transcript, Grade Certificate and Grade Card:** Grade card shall be issued to candidates indicating the programme details (Course code, title, number of credits, grade secured and grade points) for all the registered courses after every semester. On successful completion of all courses/earning credits, specified in a semester, the grade certificate is issued indicating the programme details along with SGPA of that semester and CGPA earned till that semester. Transcripts to the successful candidates shall be issued after completion of the programme.
- 2.37. University:** Visvesvaraya Technological University (VTU), Belagavi, established under the Karnataka State Act as defined in the University Grants Commission Act, 1956.

REGULATIONS

22OB 1.0. TITLE AND DURATION OF THE PROGRAMME

22OB 1.1: The Programme of study, which is an undergraduate Programme, shall be called the degree of Bachelor of Engineering/Bachelor of Technology, abbreviated as B.E./B.Tech., followed by specialization indicated within brackets.

22OB 1.2: The duration of the Programme for B.E./ B.Tech. degree shall be four academic years, organized in eight semesters, with each semester having duration of 16-18 weeks, having provision for Multiple-Entry-Multiple-Exit and award of Honours degree or Minor degrees.

22OB 1.3: The annual academic calendar of events in respect of the Programme of study approved by the Academic Council, shall be notified at least a month before the commencement of each academic year. It is mandatory for students/ faculty members to strictly adhere to the Academic Calendar for completion of academic activities. Academic Calendar shall be displayed on the Academic Office homepage of the University website.

22OB 2.0. ACADEMIC ELIGIBILITY FOR ADMISSION

The rules specified in the following clauses shall be followed for admission to B.E./ B.Tech. Programmes, but the orders issued from the Government/the regulatory bodies from time to time shall prevail.



- (a) Humanities and Social Sciences
- (b) Basic Sciences
- (c) Engineering Sciences
- (d) Professional Core Courses
- (e) Professional Elective Courses
- (f) Open Elective Courses
- (g) Skill development Courses
- (h) Ability Enhancement Courses
- (i) Non-Credit Mandatory Courses

(j) Project work:

Based on the ability/abilities of the student/s and recommendations of the mentor, a disciplinary or an inter-disciplinary major project can be assigned to a group having not more than 4 students. The main project work needs to be taken up within the institute/ research laboratory/industry. It is desirable, that the outcome of the project work may be published/patented.

(k) Mini Project work:

A Mini Project is a laboratory/ societal/ Industry-oriented work that will provide a platform for students to enhance their practical knowledge and skills through the development of small systems/ applications based on the ability/abilities of the student/s and recommendations of the mentor, a disciplinary or an inter-disciplinary mini-project can be assigned to a group having not more than 4 students.

(l) Internship:

The internship is an extended period of work experience undertaken by the students aspiring to supplement their degree with professional development. The students are allowed to prepare themselves for the workplace and develop practical skills. The Internship shall be completed during the period specified in the Scheme of Teaching and Evaluation.

The institution shall encourage students to take up,

- (i) an interdisciplinary Research Internship or Industry internship and
- (ii) a rural internship, a work-based activity carried out to learn practical experiences in rural areas, for the upliftment of living standards.

With the consent of the internal guide and Principal of the Institution,



shall have credits and be considered as a head of passing for vertical progression. The credits fixed for the courses are awarded to the students on passing the courses registered by him.

- 1) The total number of credits to be earned for the award of B.E./ B.Tech. degree by students admitted to the first semester of the four year B.E./B.Tech. programme shall be **160**.
- 2) The total number of credits to be earned for the award of B.E./ B.Tech. degree by students admitted under lateral entry scheme to the third semester of the four year B.E./B.Tech. programme shall be **120**.
- 3) A student shall be awarded B.E./ B.Tech. degree with **Honours or Minor**, if he/she earns a minimum of **additional 18 credits**, satisfying the conditions specified in "VTU (Award of B.E./B.Tech. Honors/ Minors Degree) Regulations, 2022".

220B 3.4. Curriculum Framework

The structure of UG programme in Engineering shall have essentially the following types of courses with the breakup of credits as shown against them:

Table - 3.4 : Credit Breakup for a Programme			
Sl. No.	Category	Credits *	% of total Credits
1	Humanities and Social Sciences including Management courses, including AE	16	10.00
2	Basic Science courses	22	13.75
3	Engineering Science courses including workshop, drawing, basics of electrical/mechanical/computer/ PL/ET etc.	24	15.00
4	Professional Core courses relevant to chosen specialization/branch	59	36.88
5	Professional Elective courses relevant to chosen specialization/branch	12	7.50
6	Open subjects – Electives from other technical and /or emerging subjects	12	7.50
7	Project work and internship in industry or elsewhere	15	9.37
8	Mandatory Courses	(non-credit)	0.00





	[Environmental Sciences, Induction Program, Indian Constitution, Essence of Indian Knowledge Tradition]		
	Total	160	100.00

*Minor variation is allowed as per need of the respective disciplines on approval of the University.

22OB 3.5. Scheme of Teaching and Evaluation

- 1) The Scheme of Teaching and Evaluation shall be framed by distributing the total credits over eight semesters as follows:

Table – 3.5 : Semester-wise Allocation of Credits				
	Semester	Credits	Total Credits	• Lecture(L): one hour/week : 1 credit • Tutorial(T): Two hours/week: 1 credit • Practical/ Lab/ Drawing (P): Two hours/ week: 1 credit • Project, Mini-project, Internship: credits as recommended by the University. • Credit for the Seminars shall be part of the courses.
I year	1	20	40	
	2	20		
II Year	3	20	40	
	4	20		
III Year	5	20	40	
	6	20		
IV Year	7	20	40	
	8	20		
Total:		160		

2) Course Load:

Every student to register for a set of *Courses* in each *Semester*, with the total number of their *Credits* being limited by considering the permissible *weekly Contact Hours* (typically: 35 hours/Week); For this, an average *Course Load* of 18-24 *Credits/Semester* (e.g., 6-7 *Courses*) generally acceptable; to also include 2 or 3 *Units of Non-Credit Mandatory Courses* in some Semesters.

3) Teaching-Learning Process

The theory courses shall be designed to have the syllabus spanning over one semester depending on the credits allocated for them. That is, Four-credit theory courses shall



22OB 4.1 Assessment and Evaluation Process:

- 1) CIE and SEE constitute the major evaluations prescribed for each course, with only those students maintaining a minimum standard in CIE are permitted to appear in the SEE of the course.
- 2) In such cases where a laboratory is attached to the course, CIE marks shall be awarded separately for both theory and the laboratory. However, the laboratory may or may not have the SEE component in the evaluation.
- 3) In such cases where a laboratory carries more credits and is not part of the theory, they are listed separately in the Scheme of Teaching and Evaluation. Hence, they are treated as separate "heads of passing" which are assessed and evaluated independently.
- 4) CIE and SEE to carry 50% weightage each, to enable the course to be evaluated for a total of 100 marks, irrespective of its credits.
- 5) The evaluation system of the programme is comprehensive and continuous during the entire period of the Semester, by the faculty who is teaching the course. For a course, the evaluation and grading will be on the following parameters:

A	Continuous and Comprehensive Evaluation (CCE)	25 marks
B	Internal Assessment Tests (IAT)	25 marks
	Total of CIE (A+B)	50 marks
C	Semester End Examination (SEE)	50 marks
	Total of CIE and SEE (A + B + C)	100 marks

22OB 4.2. Continuous Internal Evaluation (CIE)

- 1) For a theory course, with an L-T-P distribution of L-0-0, the CIE will carry a maximum of 50% weightage of the total marks of a course. Before the start of the Academic session of each semester, a faculty may choose for his course **Internal Assessment Test** and a **minimum of two of the following assessment methods** with suitable weightage for each.
 - i) Assignments (Individual and/or Group)
 - ii) Seminars
 - iii) Oral/Online Quizzes



- iv) Group Discussions
 - v) Case studies/Case lets
 - vi) Practical orientation on Design Thinking, Creativity & Innovation
 - vii) Participatory & Industry-integrated learning
 - viii) Practical activities / problem solving exercises
 - ix) Class presentations
 - x) Analysis of Industry/Technical/Business Reports
 - xi) Reports on Guest Lectures / Webinars / Industrial Visits
 - xii) Industrial / Social / Rural projects
 - xiii) Participation in Seminars/ Academic Events/Symposia, etc.
 - xiv) Any other academic activity
- 2) The faculty will submit the 'CCE Assessment Plan' to the Principal/Dean/HOD for approval and notify the same along with the course syllabus before the start of semester. The total marks of the above two assessment components shall be scaled down to 25 marks/ 25% of total marks of the respective course (i.e., A).
- 3) To assess the students in a course under IAT component, two tests shall be conducted in a semester. Each test will be conducted for 25 marks. The average marks obtained in these two tests will be taken as IAT Marks (i.e., B).
- 4) The CIE marks awarded to students at different stages during the course shall be displayed on the notice board of the Department concerned to enable the students to point out any discrepancies.
- 5) The student shall obtain a minimum of 40% of marks allotted for CIE in each course (i.e., A+B) to be eligible to appear for the SEE in that course.
- 6) When a laboratory is part of a theory course, with L-T-P distribution of L-0-P, the student shall obtain a minimum of 40% marks in CIE of the laboratory to be eligible to appear for SEE in that course. This is in addition to the requirement specified under (5) above for the theory part of the course. The CIE marks obtained by a student in the laboratory, if it is equal to or greater than 40%, shall be retained until the end of that academic year till he passes the SEE. Otherwise, he shall re-register for the course when offered next.
- 7) If a student is unable to secure a minimum of 40% in CIE marks in any course, he shall



not be eligible to take up SEE/ viva-voce examination in that particular course. It shall be the responsibility of Principal/Dean to scrutinize the list of candidates and permit only the eligible students to take up SEE/ viva-voce. In the event of an ineligible student inadvertently being allowed to appear for the theory/viva voce examination, the result of the concerned student shall be withdrawn forthwith by the University.

- 8) The list of such students, who have not secured the minimum in CIE marks, shall be sent to the Registrar (Evaluation) along with the submission of CIE marks of the successful students.
- 9) After the submission of CIE marks to the Registrar (Evaluation) of the University, any request for changes in the marks by the Principal/Dean shall be considered only after due approval of the Vice-Chancellor obtained through the Registrar (Evaluation).
- 10) The students not obtaining 40% marks in CIE shall re-register for the course during the subsequent semester whenever it is offered.

22OB 4.3. Semester-End Examination:

- 1) Only those students who satisfy the attendance requirement as per 22OB3.7 and CIE requirement as per 22OB4.2 shall be eligible to appear for SEE of that course.
- 2) University examination for all courses under SEE shall be conducted for a maximum of 100 Marks. The marks secured by the students for 100 marks shall be proportionately scaled down to a maximum of 50 marks to add the same with the CIE marks for the award of the letter grade.

Notes:

A	Continuous and Comprehensive Evaluation (CCE)	25 marks
B	Internal Assessment Tests (IAT)	25 marks
	Total of CIE (A+B)	50 marks
C	Semester End Examination (SEE)	50 marks
	Total of CIE and SEE (A + B + C)	100 marks
Table A [Regulation 22OB 4.1]		

- 3) The Semester End Examination for all the courses offered during the semester shall be conducted at the end of each semester except when there are no students taking examinations for any course as per the Scheme of Teaching and Evaluation.
- 4) Only those students who satisfy the attendance requirement as per 22OB 3.7 and CIE requirement as per 22OB 4.2 shall be eligible to appear for SEE of that course.



- 5) University examination for all courses under SEE shall be conducted for a maximum of 100 Marks. The marks secured by the students for 100 marks shall be proportionately scaled down to a maximum of 50 marks to add the same with the CIE marks for the award of the letter grade. (except for the project work the total SEE marks are 100)
- 6) The University examinations for all the Programmes of study shall be conducted at the end of each semester.
- 7) Students having no backlog courses, may not have more than one examination scheduled on the same day. However, students having backlog course may face a situation where they may have,
 - a) Two examinations scheduled at the same time of the day,
 - b) To take two examinations on the same day, one during the morning session and the other in the afternoon session, and
 - c) Examinations on consecutive days.

The students shall be prepared to appear for the examinations specified above under (b) and (c) cases. However, the University shall take utmost care to avoid scheduling as specified under (a) as far as possible. But in view of time constraint to complete the examinations and announce results on time, if it becomes unavoidable, the students shall choose to appear for the examination as per the advice of their Mentor. As changing the examination date is not an option, the examination time table shall not be modified/ altered/ adjusted in any of the above three cases.

- 8) The passing standards in CIE, SEE, a course and a semester for all types of the courses in which grades are awarded shall be as per the clause 22OB 6.3.
- 9) A student securing an 'F' grade in any courses, shall reappear for that course during the subsequent SEE. The CIE marks awarded to the student at the first attempt in the concerned course shall be carried forward. Revised CIE marks are considered only for courses where grade DX was awarded.
- 10) For a pass ('P' grade), sum total of CIE and SEE marks must be 40% of the maximum marks prescribed for a course as per the Scheme of Teaching and Evaluation.





22OB 4.4. Makeup Examination:

- 1) The makeup examination facility shall be available to those students who have appeared and failed in the SEE in one or more courses in a semester. However, the students passing in the makeup examination shall lose their eligibility to be considered for the award of Ranks.
- 2) If a student has satisfactory attendance in a course and has secured a minimum of 40% in CIE but could not appear in SEE for valid and convincing reasons as specified under 22OB 3.7.1, shall be eligible to appear for the makeup examination, after due recommendation by the Principal/ Dean and approval from the University.
- 3) Following may be considered as other valid reasons for semester end makeup examination:
 - a) Serious illness/ personal accident in the case of the student himself.
 - b) Serious illness/ Accident/ Death of parent /guardian.
- 4) Students claiming semester end makeup examination on the above reasons are required to apply to the Principal/ Dean, on or before the prescribed last date for registration for such makeup examination announced in the Academic Calendar, along with proper medical certificate issued by a competent Authority. In the event of death and/ or serious illness/ accident of parent or guardian, the application should be supported by adequate evidence of the same/ appropriate documents. Decision of the Vice Chancellor is final in these matters.
- 5) The Makeup Examinations for both the semesters shall be conducted once in a year at the end of the even semester.

22OB 4.5. Maintenance of Examination Records

- 1) The candidate shall write tests, assignments/unit-tests /written quizzes in Blue Books, which shall be preserved by the Principal/ Head of the Department for at least 3 years after the announcement of University results and shall be made available for verification as per the direction of the Registrar (Evaluation).
- 2) Any corrections or overwriting of CIE marks on the blue book/drawing sheet laboratory record etc., where CIE marks are awarded, shall bear the signature(s) of the concerned Teacher(s) and the Head of the Department.



courses may be specified, so the leaving student has decent skills), and

(iii) A minimum CGPA of 5.0.

2) B.Sc. in Respective Programmes of Engineering

A student who exit the end of III year of the programme shall be awarded a B.Sc. degree, if he/she successfully passes the registered courses and earns:

- (i) Atleast 75% of the credit requirements of B.E./B.Tech. programme (i.e. 120 credits); and completed atleast 3 years (80 credits and 2 years respectively for lateral admission candidates) in the programme.
- (ii) 100% of programme professional core courses
- (iii) A minimum CGPA of 5.0.

With B.Sc., the student is eligible for entry into programmes which take B.Sc. as admission eligibility criteria.

3) Re-entry to complete the programme

A student exiting with a certificate or B.Sc. should be entitled to re-enrol in the programme. All the credits will be transferred, if the student enrolls back within a limited period of 3 years of exiting. In case a student enrolls after that, then the transfer of credits should be examined by looking at the change in the curriculum from what the student did. Exits are permitted by the University within 15 days of announcement of II year and III year University results, on written request for the award of certificate and B.Sc. degree by a student when he/she is eligible. Corresponding to these two exits, a maximum of two re-entries are permitted with the condition that he/she complete the programme within the maximum specified duration.

4) Programme Completion in another Institution

The University permits a student to earn a certificate/B.Sc. in one institution and complete the degree programme in another. This will enhance the value of certificates and the B.Sc. Degree.

220B 5.2. Maximum Duration for Programme Completion

The minimum duration of the program is four academic years for regular students and three years for lateral entry students. Students admitted to first-semester B.E./B. Tech.,



shall be eligible for the award of degree provided the total credits earned at that stage are equal to or greater than the credits prescribed by the University under clause 22OB 3.3. and satisfy all other conditions of this Regulations.

- 7) In case, the forecasted or estimated credits are going to be less than that of the credits prescribed by the University on the completion of all the semesters of the programme under the prevailing scheme, the candidate shall register for a course or courses not studied earlier and make up the credits which are equal to or greater than the University prescribed credits.

Letter Grade and corresponding Grade Points on a typical 10 – Point scale								
Letter Grade	O	A+	A	B+	B	C	P	F
	Outstanding	Excellent	Very Good	Good	Above Average	Average	Pass	Fail
Grade Point	10	9	8	7	6	5	4	0
% of Marks Secured	90-100	80-89	70-79	60-69	55-59	50-54	40-49	0-39

- 8) In case of any difficulty, Vice-Chancellor shall decide on individual cases, which shall be final.

22OB 6.0. GRADING AND VERTICAL PROGRESSION

22OB 6.1. Award of Grades:

- 1) The University adopts absolute grading system wherein the marks are converted to grades, and every semester result will be declared with semester grade point average (SGPA) on successful completion of all courses of that semester.
- 2) The total marks obtained by the student in CIE and SEE of a course is expressed as a percentage to compute the grade points and the letter grade is awarded as indicated in the table below:
- 3) If there is no SEE for a course, then the CIE marks alone will be the basis for the determination of letter grade.

22OB 6.2. Other Letter Grades:





The letter grades specified in 22OB 6.1 are used as student performance measures in all kinds of assessments. However, the following letter grades are also awarded under the circumstances defined below (Letter Grade: Grade Point - Circumstances).

- 1) DX: 0 - Credits are not included in CGPA, Attendance below 75%, hence Repeat the course (In case of electives, course change is permitted)
- 2) AU: 0 - Satisfactory in an Audit course
- 3) AB: Absent for the Course
- 4) PP: 0 - Passed in Non-credit course
- 5) NP: 0 - Not Passed in Non-credit course
- 6) IC: No credits - Incomplete (a place holder; gets converted to an appropriate grade after clearing SEE examination else converted to 'F') else automatically converted to 'F'.
- 7) W: No credits - Dropped/ withdrawn (W is not a grade but only a place holder indicating that the course has been dropped/withdrawn and it must be cleared in subsequent semesters).

22OB 6.3. Passing Standards

1) Maximum and Minimum CIE Marks:

The maximum weightage of CIE mark shall be 50. To appear for the SEE, the minimum CIE marks to be secured in each of the courses shall be 40 % of the maximum marks of CIE.

2) Maximum and Minimum SEE Marks:

The maximum weightage of SEE marks shall be 50 and marks to be secured for passing shall be 35 % of the maximum marks of SEE.

3) Eligibility for Passing a Course:

The overall passing marks shall be 40% of the maximum marks (the sum of the CIE and SEE should be 40% of the maximum marks) of the course. That is, minimum passing grade in a course (head of passing) shall be "P".

4) Semester Passing Standards:

- a) A student shall be declared successful or 'passed' in the entire undergraduate programme, only when he secures a Grade Point of 4 ("P" Grade) or above in every registered course in each Semester during the entire programme for the Degree



only on clearing all the temporary grades specified in the Grade Card.

- (3) **Transcripts:** Transcript is the consolidated statement of the academic performance of a student for all the semesters since joining the programme and is generally given to a student on successful completion of the programme along with the degree certificate.
- (4) For those students who have taken multiple attempts to clear a course, the transcript given on successful completion of the programme will only contain earned pass grade ['O' to 'E', AU and PP]; the courses cleared subsequently will however be shown in the respective semester with Month and Year in which the student has finally cleared the course. The transcript will show only the overall CGPA based on all the courses taken by the student. Credits earned beyond the requirement for the award of the degree shall be shown as additional courses separately, indicating the grade earned by the student. Additional copies of the transcript can be obtained if needed, on request submitted along with payment of applicable fee.
- (5) Students who have not yet completed the programme can obtain an interim Transcript at the end of any semester, if needed, on request and upon payment of applicable fee. The interim Transcript includes failed courses, which have not been cleared at the time of issue.

22OB 6.9.1. Mandatory Earning of Activity points:

Sl. No.	Student Category	Activity Points prescribed
1	Regular Students admitted to the 4 year Degree Programme	100
2	Students entering 4 year Degree Programme through lateral entry	75
3	Students transferred from other Universities. To the 5 th Semester	50

The Activity Points earned shall be reflected on the student's eighth semester Grade Card.

- (i) Activity Points (non-credit) have no effect on SGPA/CGPA.

In case a student fails to earn the prescribed activity Points before the





commencement of 8th semester examinations, the Eighth Semester Grade Card shall be issued only after earning the required activity Points. Students shall be admitted for the award of the degree only after the release of the Eighth Semester Grade Card.

- (ii) The Guidelines and suggestive activities under Activity points are listed in Annexure -VII

22OB 7.0. ELIGIBILITY FOR AWARD OF DEGREE, PRIZES, MEDALS, AND RANKS

22OB 7.1. B.E./B.Tech. degree

- (a) Students shall be declared to have completed the undergraduate Programme of B.E./B.Tech. degree and is eligible for the award of degree provided they have undergone the stipulated course work of all the semesters under the Scheme of Teaching and Examinations and have earned the prescribed number of credits as per clause 22OB 3.3 within the permitted maximum duration specified under clause 22OB 5.2.
- (b) For the award of degree, completion of bridge courses, if any, as applicable is compulsory.

22OB 7.2. B.E./B.Tech. (Honors) Degree

- (a) Students shall be declared to have completed the undergraduate Programme of B.E./B.Tech., degree with Honours, provided they have,
 - (i) Been declared eligible for the award of the degree as per clause 22OB 7.1,
 - (ii) Earned additional 18 or more credits through University-approved online courses, and
 - (iii) Satisfied the conditions of "VTU (Award of Honours/ Minor at B.E./B.Tech. Degree Programmes) Regulations, 2022".

22OB 7.3. B.E./B.Tech. with Minor Degree

- a) Students shall be declared to have completed the undergraduate Programme of B.E./B.Tech., degree with Minors, provided they have,
 - (i) Been declared eligible for the award of the degree as per clause 22OB 7.1,
 - (ii) has earned additional 18 or more credits through University-approved online courses, and



- (iii) Satisfied the conditions of "VTU (Award of Honors/Minor at B.E./B.Tech. Degree Programmes) Regulations, 2022".

22OB 7.4. Award of Degree for an Extraordinary Student:

- 1) The University through college can offer a fast-track degree for an extraordinary student. The same is done by offering courses of his/ her choice to fulfill the requirement of the programme in three and half years.
- 2) However, the degree shall be awarded on completion of 04 years.
- 3) The course completion letter shall be issued jointly by the University and the College immediately after completion of the programme, not withstanding the minimum duration.
- 4) The extraordinary student is one with a CGPA ≥ 9 in 2nd and 3rd semesters and continue to maintain the same in all the semesters. Otherwise, his/her registration shall stand canceled automatically.
- 5) Aspirant students shall register with the University through the Principal of the college at the 4th semester level, with the prescribed registration fee as fixed by the University from time to time. Such students shall register for more credits, other than the regular semester credits, along with the 5th semester registration.

22OB 7.5. Noncompliance Cases

1) Noncompliance of Mini-project

The mini-project shall be considered as a head of passing and shall be considered for the award of degree. Those, who do not take up/complete the mini-project shall be declared fail in that course and shall have to complete the same during subsequent University examinations after satisfying the Mini-project requirements.

2) Noncompliance of Major-project

The Project Work shall be considered as a head of passing and shall be considered for the award of degree. Those, who do not take up/complete the Major-project shall be declared fail in that course and shall have to complete the same during subsequent University examinations after satisfying the Major-project requirements.

**22OB 10.0. MISCELLANEOUS**

- 1) Guidelines for using Online content in courses at the University and Colleges [Annexure-IV].
- 2) The Regulations Governing the Academic Bank of Credits shall be followed [Annexure-V]

22OB 11.0. Applicability and Power to Modify

- i) The regulations governing the degree of Bachelor of Engineering/ Technology of Visvesvaraya Technological University shall be binding on all concerned.
- ii) Notwithstanding anything contained in the foregoing, the University shall have the power to issue directions/ orders to address and removal of any difficulty.
- iii) 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.

Annexure - I

An illustrative example to calculate SGPA and CGPA for one academic year:

(a) SGPA and CGPA Calculations: An Illustrative Example for one academic year						
Semester (Odd :I, Even: II)	Course Code	Credits	Grade	Grade Points (GP)	Credit Points (CrP)	SGPA, CGPA
I	XX11	3	B	8	3x8=24	$SGPA = \frac{101}{20} = 5.05$
I	XX12	3	Absent(F)	0	3x0=00	
I	XX13	3	A+	9	3x9=27	
I	XX14	3	F	0	3x0=00	
I	XX15	3	B	6	3x6=18	
I	XX16	1	C	5	1x5=05	
I	XX17	1	A+	9	1x9=09	
I	XX18	2	B	6	2x6=12	
I	XX19	1	B	6	1x6 = 06	
Total		20(14*)		Total	101	
(14*): Total credits of the semester excluding the credits of the courses under F grade. Considered for the calculation of CGPA of the two consecutive semesters under consideration.						
II	XX21	3	B+	7	3x7=21	$SGPA = \frac{178}{26} = 6.85$
II	XX22	3	A	8	3x8=24	
II	XX23	3	B	6	3x6=18	
II	XX24	3	C	5	3x5=15	
II	XX25	3	A+	9	3x9=27	
II	XX26	1	F	0	1x0=00	CGPA
II	XX27	1	A	8	1x8=08	



II	XX28	2	A+	9	2x9=18	$= \frac{(101 + 178)}{14 + 25}$ $= \frac{279}{39} = 7.15$
II	XX29	1	A	8	1x8=08	
I semester						
I	XX12	3	B	6	3x6=18	
I	XX14	3	B+	7	3x7=21	
Total		26(25*)	Total		178	

(25*): Total credits of the semester excluding the credits of the courses under F grade. Considered for the calculation of CGPA of the two consecutive semesters under consideration.

(b) CGPA Calculation of the Program: An Illustrative Example

Semester	I	II	III	IV	V	VI	VII	VIII
Credits of the semester	20	20	20	20	20	20	24	16
SGPA	5.0	6.73	9.20	6.86	8.18	7.73	9.18	9.40
ΣCrP	100	175	220	165	204	185	184	169

$$CGPA = \frac{[100 + 175 + 220 + 165 + 204 + 185 + 184 + 169]}{160} = \frac{[1402]}{160} = 8.76$$

For Lateral Entry Students

$$CGPA = \frac{[220 + 165 + 204 + 185 + 184 + 169]}{120} = \frac{[1127]}{120} = 9.39$$
Annexure - II

The Regulations Governing the Change of College:

(@ <https://vtu.ac.in/wp-content/uploads/2021/01/Notified-COC-Regulations.pdf>)

Annexure - III

The Regulations Governing the Change of Branch:

(@ <https://vtu.ac.in/wp-content/uploads/2021/01/Notified-COB-Regulations.pdf>)





Annexure – IV

Guidelines for Using Online Content in Courses at the University and Colleges.

1.0. Background

A lot of online high quality content is available today either free or at a low cost. Besides the Government supported NPTEL, there are companies who aggregate courses from several Universities (and even private commercial organizations) and offer them to students all over the world. There are other companies who offer courses designed and developed by them. Further, a lot of companies have online content available to students.

On the other hand, most of the Computer Science (and related) departments face serious shortage of faculty, particularly in areas where there is a significant demand in the industry.

So, on one hand, we have quality content available for free or low cost, and on the other hand, we don't have faculty to teach such courses. The natural solution is to find ways to use online content for the courses in the curriculum (with credits). This way, either a knowledgeable faculty can "teach" a much larger class, or a faculty member with inadequate background in the topic can still "teach" the course better than what he/she would have done without the support of such online content.

1.1. Issues

The online content has been around for several years. The regulatory bodies have also been encouraging use of such content (particularly, NPTEL). And yet, the online content has not been integrated with the curriculum in most colleges. The pandemic has allowed people to take a fresh look at online content and the mental barriers to using such content in the curriculum have been breached. At this time, it is felt that a lot of colleges would want to use this content. However, there are two primary academic issues that need to be addressed (besides logistics, financial, and HR issues). These are:

1. How do we decide what material to use? This has two sub-issues. One, what content would be equivalent to the content that is mentioned in our curriculum (course mapping). Note this is a challenge because there may not be a single module which covers all parts of the curriculum. So we may need to select more than one module. Two, given the plethora of content, which content is of reasonable quality.
2. How would a college do evaluation of students in order to assign marks/grades?



3	Screen Mode	Evaluations	All lectures, Home works, Projects	Place reasonable limit on the number of credits that can be earned in this mode. Use in cases where there is faculty shortage in critical areas.
4	Fully online	--	All lectures, evaluations, Projects, Tests	Place reasonable limit on the number of credits that can be earned in this mode. Advised not to repeat this model for the same course more than two times. Local faculty also to register and go through the course. Official score/grade to be suitably added to the student transcript.

1.3. Course Mapping

Each course in the curriculum has course outcomes and the content defined by the University. Typically, we may have some course outcomes which are important ones and may be some outcome which is desirable or optional. Similarly, the curriculum may also define the rough duration of each topic. Sometimes the curriculum will also include the kind of projects or assignments that the student shall be asked to do in the course.

The key to course mapping is to realize that any two individuals defining a course will have some differences and we must be flexible to accept differences to some extent. The committee trying to do course mapping should have an understanding of what are the important components (in all three: outcomes, topics, and projects) and should ensure that the online content meets all the important requirements. But looking for identical course would be usually futile.

Also, what is noticed is that typical online courses are often available in smaller modules than a typical 4- credit course in our curriculum. And therefore, one may need to consider more than one online courses together to be equivalent to one course in the college. It may also be noted that just like some small aspects of the course may not be present in the modules chosen, there may be some aspects of the online modules which were not part of the college course. This amount of flexibility should be acceptable to the college. Typically, if the online content covers 80% of the college course, it may be accepted.

While autonomous colleges and Universities do have this flexibility, the affiliated colleges may not have the flexibility of not teaching even 20% of the content. In case of affiliated colleges, one will have to either be stricter in course mapping or find a way to cover the gaps through a local faculty or a visiting faculty. It is assumed that it is easier to find a visiting faculty for a small part of the course and



hence it is still a useful mode.

It may also be noted here that for Core courses, the overlap needs to be significantly higher while for the elective courses, the overlap could be relaxed somewhat. It is because the core courses typically are pre-requisites for other courses. Also, core courses have been defined to be such because it is assumed that content is more important for the graduates than what is taught in electives.

However, course mapping is still not an easy thing to do. It requires an understanding of important versus less important components, and quality of content among the plethora of options available. It may require someone to go through the content patiently.

And hence it is recommended that for courses recommended in the curriculum, a course mapping may be suggested for the benefit of colleges by the University.

1.4. Evaluation

In Modes 1, 2, and 3, the complete evaluation is local, and hence there is no issue. In Mode 4, we need to consider an external evaluation and use that internally. This is a challenge. There is a difference in how to handle this in a University versus an affiliating college. In a University, a simple way of handling this would be to assign a Pass/Fail grade to the student. In case of an affiliating college, where only the internal marks need to be forwarded to the University, one could consider the external evaluation since it impacts only 30% of the marks, and the University will anyway have its own exam of 70% marks.

There are other models like normalizing the external evaluation to the college's internal policy or average distribution of marks in other courses.

It is assumed that in Mode 4, there is a formal way of communicating performance of the student by the provider of the online courses since colleges/Universities will not accept screen shots, emails, etc.

1.5. Other Issues

- a) **Financial:** If there is a fee to be paid for online content, the college should have a policy on that. Typically, if the savings due to reduced faculty requirements are significant, then the fees for the online provider shall be reimbursed by the college.
- b) **Teaching Load:** Faculty member supporting the course whether by taking a few discussion sessions (in Mode 2) or by evaluating the students (in Mode 3) is still putting in substantial effort in managing the course, and an appropriate credit should be given to the faculty member when his/her teaching load is computed.



- c) **Training the teacher:** When a course is being done in Mode 3, the local faculty member should also be expected to register for the course and go through the course (with load being appropriately counted). After a faculty member has gone through the course in two academic sessions, he/she would be well prepared to teach the course in the class in a much better way. Even if the course is being offered in Mode 4, there is no harm in asking a faculty member to register for the course and go through it. Some responsible person in the college would know the level of the course and what exactly students have done, and again, after two such sessions, the faculty member would be well prepared to teach the course. Hence this mode will also lead to better training of the teachers.
- d) **Limits on Credits:** The University recommends that there should be a limit on the number of credits students can earn through online courses. In case of Mode 4, where even the evaluation is done by the online course provider, the proposed limit is 8 credits only. As the technology for online exams or the processes for evaluation by online providers improve over a period of time, this limit may be increased. In case of Mode 3 where the content is delivered online but evaluation is local, the limit can be high. For Mode 3 and Mode 4 combined, the limit can be what the regulatory bodies like UGC have announced for online courses, which is currently 40% of the total credits. In Modes 1 and 2 where the online content is really the reference material, there is no need for any limit.

Another constraint the committee would want the colleges to consider is that in a sequence of courses in one stream of Computer Science, at least one course should be in class. For example, if we consider the sequence of systems courses – Operating Systems, Databases, Networks, Architecture, at least one course should be in class. This is to ensure that if there were some gaps in online courses, the faculty in the face to face class can try to cover that to some extent.

- e) **Faculty Incentive:** There is a need to provide some incentive to faculty members who would manage the course that is being taught in the online mode. If a course is being taught in Mode 2, the load on the faculty is only marginally less than the load of teaching an in person course. So the full teaching load should be considered for the faculty. In Mode 3, the load is much less, and in Mode 4, the load is only that we are asking the faculty to also go through the course along with the students. In these two modes, the college may consider this as reduced load. However, their learning the course may be treated as equivalent to having done a Faculty Development Program when it comes to their appraisal and promotions.



- f) **Consideration in NBA Accreditation:** One of the prime reasons why online courses haven't become popular with colleges is that they must recruit faculty with a certain faculty to student ratio for accreditation and ranking. And once they have recruited faculty, one would always want the faculty to teach and not keep them under-loaded. If one can consider online courses as equivalent to faculty strength while deciding faculty-to-student ratio, then colleges would be attracted to online courses. A typical faculty member teaches about 100 students in a semester (across 2-3 courses). If 100 students do a course in Mode 4, we may consider this as equivalent to having one additional full time equivalent (FTE) faculty member on the rolls of the college for that semester. Similarly, if 200 students do a course in Mode 3, we may consider this as equivalent to having one additional FTE faculty member for that semester.

g) Online offering of AICTE Model Curriculum Courses by Experts

It is known that a significant number of colleges do not have adequately qualified faculty to teach the courses in the model curriculum properly. This proposal tries to alleviate this challenge by utilizing our newly acquired comfort level with online education. Essentially, the suggestion is that AICTE incentivizes top faculty to offer the AICTE model courses online and publishes a calendar of such courses well in advance, so colleges/HEIs can use them for teaching the AICTE curriculum.

The following would be the salient features of the proposed scheme.

1. All the identified core courses and later on some key electives of the AICTE curriculum may offered regularly (maybe every semester) with a predefined calendar enabling colleges to plan to use them for their students.
2. For each course AICTE identifies through a process a set of "Distinguished National Technical Teachers" who are subject experts and who also have experience teaching the course at the undergraduate level.
3. These "Distinguished Teachers" are offered financial reward for offering one course online once every 2 to 3 years. The reward must be substantial to make it prestigious as well as attractive. Suitable funding is also made available to the instructor for engaging TAs for help sessions as well as laboratory exercises.
4. AICTE can also recognize industry professionals in the panel of distinguished faculty as they can make these courses more interesting and industry oriented. They could teach jointly with



academics appointed as Distinguished Teachers and handle certain components of the course. The Distinguished Teachers will be encouraged to actively invite guest faculty from industry and/or professional associations (e.g., ACM) to give lectures in these courses to make them more interesting and industry oriented.

5. There is a registration procedure for colleges (not individual students) to register for making this course available to their students. They should also commit to assigning an instructor for coordinating classes including infrastructure, conducting assessments, help in grading etc.
6. Colleges may be asked to pay a reasonable amount as registration charges so that the scheme is self-sustaining.
7. This will be an AICTE scheme for teaching its model curriculum courses by experts. It can be managed by AICTE directly, or it can offer it to another institutions/consortium to manage them. Any platform (e.g., NPTEL) can be used to deliver these courses.

This approach differs from the currently available online courses from NPTEL and other platforms substantially.

1. Syllabus for each course is the approved AICTE syllabus.
2. The courses would be available against a set calendar each semester making it possible for colleges to rely on them.
3. It empowers the college rather than individual students to make use of the online course in a "mixed" mode and thus addresses the deficiency of expertise in specific areas in that college.
4. With suitable incentive (both prestige and financial) top experts may be motivated to offer these courses.



Annexure – VI:

ASSESSMENT AND EVALUATION IN SPECIFIC COURSES

[Recommendations of the Joint Board of Studies]

22OB A6.1. CIE and SEE Assessment in Specific Courses:

Examination and Evaluation for all the courses shall be done as specified under Sections 22OB 4.1, 22OB 4.2 and 22OB 4.3 of this Regulations for SEE and CIE. However, for some specific courses, the procedure is made clear in the following sections.

22OB A6.1.1. CAED

The CIE marks for CAED course offered in the 1st year shall be assessed as follows:

- 1) The CIE marks awarded in the case of Drawing shall be based on weekly evaluation of the classwork (sketching and computer- aided drawing) with each drawing evaluated as mentioned module-wise in the syllabus. The marks for all the drawing sheets are added and scaled down to **30 marks**.
- 2) One class test similar to SEE will be conducted after completion of the syllabus for 100 marks and scaled down to **20 marks**.
- 3) CIE marks (out of 50) scored by the student is the sum of classwork evaluation and test marks.

22OB A6.1.2. Engineering Graphics/ Drawing /Field Works

1) Engineering Graphics and Drawing (Laboratory Course)

- a) The CIE marks awarded for higher semester Engineering Graphics/ Drawings/ Design Drawings offered by various branches shall be based on the evaluation of the sheets and one test in the ratio 80:20. Method of assessing the CIE for such courses shall as per the scheme of Teaching and Evaluation of the course.
- b) The SEE shall be conducted and evaluated for a maximum of marks 100. Marks obtained shall be accounted for SEE final marks, reducing it by 50%.
 - (i) SEE will be conducted by the two examiners of the same institute appointed by the Principal.
 - (ii) Question paper shall be set jointly by both the Examiners and made available for each batch as per schedule. Examiners may refer question bank for this purpose.



appointed by the University.

- 3) All laboratory experiments are to be included for practical examination.
- 4) Breakup of marks and the instructions printed on the cover page of the answer script are to be strictly adhered to by the examiners. **OR**
Based on the course requirement, a split-up of marks for evaluation shall be decided jointly by the examiners.
- 5) Students shall pick one question (experiment) from the questions pool prepared by the examiners jointly.
- 6) Evaluation of write-up/ conduction procedure and result/viva will be conducted jointly by the examiners.
- 7) The split-up of maximum allocated marks for SEE are:
 - (i) procedure/ writeup 20%,
 - (ii) Conduction and result 60%,
 - (iii) Viva-voce 20%
- 8) SEE for the practical course shall be evaluated for 100 marks and scored marks shall be scaled down to 50 marks.
- 9) Change of experiment is allowed only once and 20% Marks allotted to the procedure/write-up part to be made zero (Evaluation is to be carried out for 80% of total maximum marks).
- 10) The duration of SEE shall be three hours.

22OB A6.1.4. Internship

- 1) The Internship shall be taken up during the period specified in the Scheme of Teaching and Examinations.

The Department/ College shall nominate faculty member/s to facilitate, Guide, and supervise students under an internship.

The students shall report the progress of the internship to the Guide in regular intervals and seek his/her advice. The Guide shall maintain the progress record of the candidates undergoing internship. Duration of the internship shall be as mentioned in the scheme of Teaching and Examination.

The Internship examination shall be conducted at the end of the internship period.



- 2) **Report evaluation:** Internship shall be evaluated for 50% maximum marks. The split-up of marks suggested for report evaluation shall be based on,
- a) Report formatting (20% of marks of CIE for report)
 - b) Presentation of the outcomes in the report (40% of marks for CIE for report) and
 - c) Technical content of the report (40% of marks for CIE for report)
- Weightage shall be given for paper publication in reputed journals/refereed journals/ Conferences/Product developed/ Patent filed – only for Industry/ Research Internship.
- 3) **Viva-Voce** shall be conducted for 50% of marks of CIE. The split-up of marks suggested are:
- a) For demonstration of (soft) skills/Engineering Knowledge gained (50% of marks of CIE for Viva-voce).
 - b) The question-answer session will check for the understanding of the fundamentals and concepts (40% of CIE marks for Viva-voce)
 - c) Clarity in answering the questions (10% of CIE marks for Viva-voce)
- Viva-voce shall be conducted by the Mentor/ Guide and Head of the Department/ one of the senior faculty assigned by the Head of the department.
- 4) Those who do not complete the internship shall be declared Fail and shall complete it during subsequent University examinations after satisfying the internship requirements during subsequent semesters.

220B A6.1.5. Seminar

- 1) The maximum marks prescribed for the Seminar and the evaluation process shall be notified by the University/ College before offering the course.
- 2) The Seminar performance evaluation shall be a part of CIE only in a course where required.
- 3) The Seminar shall be assessed as indicated below.
 - a) The Head of the Department shall make arrangements for the conduct of seminars through a committee of 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 senior faculty members of the Department and the most senior among them shall be the Chairperson.

- b) The marks awarded for Seminar shall be based on the evaluation of the Seminar Report, Presentation skill, and Viva-voce (Question & Answer session) in the ratio of 50:25:25.
- c) Split up Marks to be assessed as follows:
 - (i) Report marks to be allotted by the seminar guide/s(50% of the maximum marks)
 - A). Formatting of the report (10% of maximum marks)
 - B). Literature survey (20% of maximum Marks) and
 - C). Technical content of the report (20% of maximum marks)
 - (ii) Seminar Presentation skill marks to be allotted by the committee: (25% of the maximum marks)
 - (iii) Viva-Voce marks to be allotted by the committee: (25% of the maximum marks)
 - A). Understanding of fundamentals and concepts (15%)
 - B). Clarity in answering the questions (10%)

220B A6.1.6. Mini-Project

- 1) The Mini-Project performance of a student shall be evaluated under CIE only. The maximum marks rescribed for CIE shall be as mentioned in the Scheme of Teaching and Evaluation.
- 2) The Head of the Department shall make arrangements for the conduct of viva-voce evaluation of the mini-project. The committee shall consist of a Faculty guide/mentor and two senior faculty members of the Department and the most senior among them shall be the Chairperson.
- 3) The CIE marks awarded for Mini-Project, shall be based on the evaluation of the Mini-Project Report, Project Presentation skill, and Viva-Voce (Question and Answer session) in the ratio of 50:25:25.
- 4) The marks awarded for the Mini-Project report shall be the same for all the students of the batch. The faculty guide/ mentor guiding the Mini-project shall Evaluate the performance for 50% of the maximum marks of CIE for the



report.

- 5) This committee shall evaluate Mini-project Work for the rest of 50% of the maximum marks considering performance in project presentation and Viva-Voce (question-answer session).
 - a) Project presentation: 25% of maximum marks
 - b) Viva-Voce (Question and answer session): 25% of maximum marks

22OB A6.1.7. Project Work

- 1) The project work shall be evaluated considering both CIE and SEE; The CIE and SEE marks shall be as mentioned in the Scheme of Teaching and Evaluation.
- 2) The CIE marks awarded for Project Work shall be based on the evaluation of the Project Report, Project Presentation skill, and Viva-voce in the ratio of 50:25:25.
- 3) The marks awarded for the Project report shall be the same for all the students of the batch.
- 4) The Head of the Department shall make arrangements for the conduct of Viva-Voce for evaluation of the project work. The committee shall consist of the faculty guide/mentor and two senior faculty members of the Department and the most senior among them shall be the Chairperson.
- 5) The faculty guide/ mentor guiding the project shall Evaluate the performance for 50% of the maximum marks of CIE for the report.
- 6) This committee shall evaluate Project Work for 50% of the maximum marks considering the project presentation and question-answer session.
 - a) Project presentation: 25% of maximum marks
 - b) Question and answer session: 25% of maximum marks

22OB A6.2. SEE Assessment in Specific Courses:

22OB A6.2.1. Theory Course with 4, 3 and 2 Credits

The SEE for theory courses shall be conducted by the University as per the scheduled timetable for all, with common question papers for the course. The duration of examination shall be three hours.

- 1) The question paper will have ten questions. Each question is set for 20 marks.



The medium of the question paper shall be ENGLISH unless otherwise it is mentioned.

- 2) There will be 2 questions from each module. Each of the two questions under a module (with a maximum of 3 sub-questions), should have a mix of topics under that module.
- 3) The students have to answer 5 full questions, selecting one full question from each module.
- 4) Marks scored will be proportionally scaled down to 50 marks.

22OB A6.2.2. Integrated Course (I/c) /Integrated Professional Core Courses (IPCC)

For a course where theory is integrated with Laboratory course, the SEE duration for the theory part shall be three hours, as specified in section 22OB 4.3. However, the question paper in the SEE examination shall include at least one question from the Laboratory component.

22OB A6.2.3.Theory Course with 1 Credit

The SEE question paper shall have MCQ(multiple choice questions) set for 50 questions, each carrying one mark. The time duration for SEE is one hour.

22OB A6.2.6. Practical Work Courses

- 1) The SEE marks for the practical courses shall be 50 Marks.
- 2) SEE shall be conducted jointly by the two examiners of the University/ College appointed by the University.
- 3) All laboratory experiments are to be included for practical examination.
- 4) Breakup of marks and the instructions printed on the cover page of the answer script are to be strictly adhered to by the examiners. **OR**
Based on the course requirement, a split-up of marks for evaluation shall be decided jointly by the examiners.
- 5) Students shall pick one question (experiment) from the questions pool prepared by the examiners jointly.
- 6) Evaluation of write-up/ conduction procedure and result/viva will be conducted jointly by the examiners.
- 7) The split-up of maximum allocated marks for SEE are:
 - a) procedure/ writeup 20%,



- b) Conduction and result in 60%,
- c) Viva-voce 20%
- 8) SEE for the practical course shall be evaluated for 100 marks and scored marks shall be scaled down to 50 marks.
- 9) Change of experiment is allowed only once and 20% Marks allotted to the procedure/write-up part to be made zero (Evaluation is to be carried out for 80% of total maximum marks).
- 10) The duration of SEE shall be two or three hours.

22OB A6.2.7. Internship

- 1) SEE shall be conducted by the Internal and external examiners approved by the University. The internal examiner shall be the guide for SEE. The external Guide for the Internship shall be the external examiner for SEE.
- 2) Examination for internship shall be conducted at the college and the date shall be fixed in consultation with the external Guide. The Examiners shall jointly award the SEE marks.
- 3) In case the external Guide expresses his inability to conduct the Examination at the last moment, the Principal /Chief Superintendent appointed by the University for the concerned examination of the Institute shall appoint a senior faculty of the Department to conduct the Examination along with the internal Guide.
- 4) Split up of marks for evaluation may be the same as suggested for CIE or Internal and external examiners shall devise split up of marks for SEE and the same may be submitted to the University along with evaluation marks.

22OB A6.2.8. Project Work

- 1) The project work shall be evaluated for 200 marks with CIE of 100 marks and SEE of 100 marks.
- 2) The Project Work will be conducted by the two examiners one internal and one external examiner appointed by university.
- 3) SEE marks for the project shall be awarded using appropriate Rubrics based on the quality of work& report, presentation skills, and viva- voce in the ratio 50:25:25 respectively.

**Annexure-VIII****Evaluation Methods Illustrated using L:T:P**

Programme Name:						
Scheme of Teaching and Evaluation: First Semester						
Sl. No.	Code	Course	Category of Course	Teaching Faculty	Contact Hours/ week	Credits L-T-P = Total
1	3BAS1 101					
2	3BAS1 102	Data Structures	DCC-2		3	3- 0 - 0 = 3
3	3BAS1 103	Programming for Problem Solving	DCC-3		5	3- 0 - 1 = 4
4	3BAS1 104					
5	3BAS1 105					
Total:						20 - 0 - 0 = 20
Table B: First Semester Template						

Programme Name:						
Scheme of Teaching and Evaluation: First Semester						
Sl. No.	Code	Course	Category of Course	Teaching Faculty	Contact Hours/ week	Credits L-T-P = Total
1	3BAS1 101					
2	3BAS1 102					
3	3BAS1 103	Programming for Problem Solving	DCC-3		3	3- 0 - 0 = 3
4	3BAS1 104					
5	3BAS1 105					
6	3BAS1 106	Programming for Problem Solving Lab	DCC-3		4	0- 0 - 2 = 2
Total:						20 - 0 - 0 = 20
Table C: First Semester Template						

Example Cases: A) L-T-P = 3-0-0 = 3 credits (3 contact hours)

B) L-T-P = 3-0-1 = 4 credits (5 contact hours)

C) L-T-P = 3-0-2 = 5 credits (7 Contact hours)

A. Possible Situations: { All are under 'Heads of passing'}

Case A1: 3-0-0 (Table B)



- Case B1:** 3-0-1. (Table B) [Integrated case]
Case B2: 3-0-0 and 0-0-1. [SEE internally for lab]
Case C1: 3-0-2 (Table C) [To be shown as separate Head of passing]
: 3-0-0 and 0-0-2. [SEE by University]

1) **Case A1:** 3-0-0 (Table B)

Theory CIE = $A + B = (25+25) = 50$. [22OB 4.2(1)= 22 OB 4.2(2) $\leftarrow$ A; 22OB 4.2 (3) $\leftarrow$ B]

If CIE $\geq 40\%$, then eligible for SEE. [22OB 4.2(5)]

CIE + SEE $\geq 40\%$ for a Pass ('P' Grade)

2) **Case B1:** 3-0-1. (Integrated case) (Table B)

Theory CIE (T) = $A + B = (5+20) = 25$. [22OB 4.2(1)= 22 OB 4.2(2) $\leftarrow$ A; 22OB 4.2 (3) $\leftarrow$ B]

If CIE (T) $\geq 40\%$, then eligible for SEE. [22OB 4.2(5)]

Lab CIE (L) = $A + B = (15+10) = 25$ [22OB 4.2(1)= 22 OB 4.2(2) $\leftarrow$ A; 22OB 4.2 (3) $\leftarrow$ B]

If CIE (L) $\geq 40\%$, then eligible for SEE. [22OB 4.2(6)]

CIE + SEE $\geq 40\%$ for a Pass ('P' Grade)

3) **Case B2:** 3-0-1 (Not Integrated case) (Table B)

Theory CIE (T) = $A + B = (25+25) = 50$. [22OB 4.2(1)= 22 OB 4.2(2) $\leftarrow$ A; 22OB 4.2 (3) $\leftarrow$ B]

If CIE $\geq 40\%$, then eligible for SEE. [22OB 4.2(5)]

Lab CIE (L) = $A + B = (25+25) = 50$ [22OB 4.2(1)= 22 OB 4.2(2) $\leftarrow$ A; 22OB 4.2 (3) $\leftarrow$ B]

If CIE (L) $\geq 40\%$, then eligible for SEE. [22OB 4.2(6)]

CIE + SEE $\geq 40\%$ for a Pass ('P' Grade)

4) **Case C1:** 3-0-2 (Table C) [Shown as separate Head of passing 3-0-0 and 0-0-2] [SEE for theory and Lab conducted by University]

Theory CIE (T) = $A + B = (25+25) = 50$. [22OB 4.2(1)= 22 OB 4.2(2) $\leftarrow$ A; 22OB 4.2 (3) $\leftarrow$ B]

If CIE $\geq 40\%$, then eligible for SEE. [22OB 4.2(5)]

Lab CIE (L) = $A + B = (25+25) = 50$ [22OB 4.2(1)= 22 OB 4.2(2) $\leftarrow$ A; 22OB 4.2 (3) $\leftarrow$ B] If





CIE (L) $\geq$ 40%, then eligible for SEE. [22OB 4.2(6)]

CIE + SEE $\geq$ 40% for a Pass ('P' Grade)

IPCC-Case B1: 3-0-1. (Integrated case) (Table B)

Theory CIE (T) = A + B = (25+25) = 50. [22OB 4.2(1)= 22 OB 4.2(2) $\leftarrow$ A; 22OB 4.2 (3) $\leftarrow$ B]

If CIE (T) $\geq$ 40%, then eligible for SEE. [22OB 4.2(5)]

Lab CIE (L) = A + B = (25+25) = 50 [22OB 4.2(1)= 22 OB 4.2(2) $\leftarrow$ A; 22OB 4.2 (3) $\leftarrow$ B]

If CIE (L) $\geq$ 40%, then eligible for SEE. [22OB 4.2(6)]

CIE + SEE $\geq$ 40% for a Pass ('P' Grade)

Assessment Details (both CIE and SEE)

I Para: ---

$$\begin{aligned} \text{CIE} + \text{SEE} &= 50\% + 50\% = 100\% \\ &= 40\% (20/50) + \geq 35\% (18/50), \\ \text{CIE} + \text{SEE} &\geq 40\% (40/100), \end{aligned}$$

II Para: CIE (T) = (50)

$$\text{CIE(T)} = \text{A+B} = 25 + 25 = 50$$

$$(25) = > 20 + 20$$

Theory CIE (T) = A + B = (25+25) = 50. [22OB 4.2(1)= 22 OB 4.2(2) $\leftarrow$ A; 22OB 4.2 (3) $\leftarrow$ B]

If CIE (T) $\geq$ 40%, then eligible for SEE. [22OB 4.2(5)]

Lab CIE (L) = A + B = (25+25) = 50 [22OB 4.2(1)= 22 OB 4.2(2) $\leftarrow$ A; 22OB 4.2 (3) $\leftarrow$ B]

If CIE (L) $\geq$ 40%, then eligible for SEE. [22OB 4.2(6)]

CIE + SEE $\geq$ 40% for a Pass ('P' Grade)