ವಿಶ್ವೇಶ್ವರಯ್ಯ ತಾಂತ್ರಿಕ ವಿಶ್ವವಿದ್ಯಾಲಯ

ವಿಟಿಯುಅಧಿನಿಯಮೂ ೯೯೪" ರಅಡಿಯಲ್ಲಿಕರ್ನಾಟಕಸರ್ಕಾರದಿಂದಸ್ಥಾಪಿತವಾದರಾಜ್ಯವಿಶ್ವವಿದ್ಯಾಲಯ

VISVESVARAYA TECHNOLOGICAL UNIVERSITY
State University of Government of Karnataka Established as per the VTU Act, 1994"JnanaSangama" Belagavi-590018, Karnataka, India

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REGISTRAR

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REF: VTU/BGM/Aca/BoS/2023/ 7581

DATE: **2 9 MAR 2023**

NOTIFICATION

Subject: Regulations Governing the award of MCA (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 Master of Computer Applications 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) ofthe MCA program from the academic year 2022-23. The previous regulations in this regard are treated as null and void.

Sd/-
Registrar

To,

All the Principals of Engineering Colleges where MCA programs being offered,

Copy to

1. To the Hon'ble Vice-Chancellor through the secretary to VC for information
2. The Registrar (Evaluation) for information
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. Office Copy

REGISTRAR

Visvesvaraya Technological University, Belagavi

Jnana Sangama, Belagavi – 590 018, Karnataka
Phone: 0831 -2498100/2405468   Fax;2405467
E – Mail: registrar@vtu.ac.in, Web: www.vtu.ac.in

REGULATIONS GOVERNING
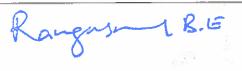**THE DEGREE OF MASTER OF COMPUTER APPLICATIONS (MCA)**
Under Outcome Based Education (OBE)
AND
Choice-Based Credit System (CBCS) Scheme
Effective from the academic year 2022-23

CONTENTS

Rangus~ B.E

Definitions of Keywords

The followings are the definitions/descriptions that have been followed for the different terms used in the Regulations o the MCA Program:

(1) Program: An educational program in a particular stream/ branch of specialization leading to the award of a degree. It involves events/activities, comprising of lectures/ tutorials/ laboratory work/ field work, outreach activities/ project work/ vocational training/ viva/ seminar Internships/ assignments/ presentations/ self-study etc., or a combination of some of these.

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

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

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

(5) Credit: Refers to 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 lecture or two hours of laboratory/practical Courses/ tutorials/ fieldwork per week etc.

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

(7) 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.

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

(9) Course Evaluation: This means Continuous Internal Evaluation (CIE) and Semester End Examinations (SEE) to constitute the major evaluations prescribed for each Course. CIE and SEE to carry a weightage of 50 % and 50 % respectively, to enable each Course to be evaluated for 100 marks, irrespective of its Credits.

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

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

(12) 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.

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

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

(15) Letter Grade: It is an index of the performance of students in a said Course. Grades are

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	2	0:0:1	1

denoted by letters O, A+, A, B+, B, C and F

(16) Grading: Grade refers to the 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 to 22OMC7.0]. The rubric attached to letter grades are as follows:
O – Outstanding, A+ – Excellent, A – Very Good, B+ – Good, B – Average, C – Pass and F – Fail.

(17) 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	O	A+	A	B+	B	C	F
Grade Point	10	09	08	07	06	05	OO

(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 to 22OMC7.0]

(22) **Cumulative Grade Point Average (CGPA):** This is a measure of the 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 the semesters. It is expressed up to two decimal places. [Refer to 22OMC7.0]

(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.

22OMC1.0	Title, Duration and Credits of the Programme of Study
22OMC1.1	**Title** The Programme shall be called Master of Computer Applications, abbreviated as
22OMC1.2	**Minimum Duration** The Programme shall be a full-time programme extended over a period of two academic year duration divided into four semesters and each semester shall be of 16 weeks duration.■
22OMC1.3	A Faculty/ Employee working on Full Time basis in an Institution/ Organization and pursuing/ pursued any Full Time Course for the same duration as that of Regular Shift shall be considered as ineligible for the purpose of employment/ higher studies. ■
22OMC1.4	**Maximum Duration for Programme Completion:** A candidate shall be allowed a maximum duration of 4 years from the first semester of admission to become eligible for the award of the Degree, failing which he/she may discontinue the program or register once again as a fresh candidate to I semester. ■
22OMC1.5	**Prescribed Number of Credits for the Programme:** The number of credits to be completed for the award of degree shall be 100. ■
22OMC1.6	**Definition of Credits:** 01 hour Lecture (L) per week per semester =1 Credit 02 hour Tutorial (T) per week per semester =1 Credit 02 hour Practical/Laboratory/Drawing (P) per week per semester =1 Credit. **Note:** (i) Four credit Courses are designed for 50 hours Teaching – Learning process. (ii) Three credit Courses are designed for 40 hours Teaching – Learning process.■
22OMC1.7	The Calendar of events in respect of the Programme shall be notified by the University in advance. ■
22OMC2.0	**Eligibility for Admission (As per the Government orders issued from time to time)**
22OMC2.1	Passed BCA/ Bachelor Degree in Computer Science Engineering or equivalent Degree. OR Passed B.Sc./ B.Com./ B.A. with Mathematics at 10+2 level or at Graduation Level (with additional bridge Courses as per the norms of the concerned University). <u>Obtained at least 50% marks (45% marks in case of candidates belonging to reserved</u>
22OMC2.2	**For admissions under PGCET qualification and Roaster system of the Government of Karnataka:** There shall be an Entrance Examination (PGCET) for admission to the MCA programme. A candidate seeking admission to MCA Programme offered in any of the Engineering Colleges affiliated to VTU shall appear for this Examination. For admission under Government quota, ranks obtained in PGCET entrance exam, conducted by Karnataka Examination Authority (KEA), shall be considered. **For admissions under Management Quota:** The candidates should have appeared for theEntrance Examination conducted by KEA (PGCET)/Karnataka Management Aptitude Test (KMAT) or appeared and qualified under any approved entrance examination conducted by the authority recognized by Government of Karnataka/VTU /any other University of Karnataka state. Further, there shall be an Admissions Committee for the MCA Program consisting of the Principal of the College as the Chairman, Head of the concerned Department and one senior staff member of the concerned Department. The Admissions Committee conducts the interview and selects the candidates for admission. ■

22OMC2.3	**(i)** The candidates from Universities other than the Universities of Karnataka shall have to obtain Eligibility Certificate from the VTU to seek admission to MCA program in any of the colleges affiliated to VTU. **(ii)** The candidates from foreign countries shall have to obtain Eligibility Certificate from the VTU to seek admission to MCA program in any of the college affiliated to VTU. Further, they have to produce an equivalence certificate from the association of Indian Universities. ∎
22OMC2.4	The intake under various categories shall be as sanctioned by the AICTE, State Government and VTU, from time to time. ∎
22OMC2.5	**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 PGCET scores. 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. ∎
22OMC3.0	**Courses**
22OMC3.1	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). Audit course/s are non-credit courses opted by students for self – enrichment. Though, the CIE and SEE are not required, the attendance to be compulsorily satisfied, for the audit course/s to find a place in the grade card without the mention of letter grade and credit. **(vi)** Professional training/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. ∎ **(vii) On-Line Courses:** These mandatory online courses are ability enhancement courses or skill development courses or emerging technology courses or bridge courses or advanced learning courses. These courses are suggested by the concerned board of studies. These courses are notified on the university portal. The students have to opt for these courses with the help of a mentor/ staff coordinator. These courses are not counted for vertical progression, however to qualify for the award of degree the students has to pass these courses.

22OMC3.2	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. ∎
22OMC3.3	Students shall be allowed to choose the elective/s, depending on their career plans, and there shall not be any restriction to the minimum number of students to be registered for an elective course. ∎
22OMC4.0	**Internship**
22OMC4.1	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. **(6)**There shall be 100 marks for CIE (Presentation: 50 marks, Report: 50 marks) and shall be evaluated by the internal panel. **(7)**The students are permitted to carry out the internship anywhere in India or abroad. The University will not provide any kind of Financial Assistance to any student for internship. ∎
22OMC4.2	Failing to undergo Internship: Internship is one of the head of passing. Completion of Internship is mandatory. If any student fails to undergo/complete the Internship, he/she shall be considered as failed in that Course and the prescribed credits shall not be awarded in that Course. The student, however, can submit the project dissertation and appear for viva voce. The student shall be eligible for the internship credits only after satisfying the conditions prescribed for the same during the subsequent academic year. The reappearance shall be considered as an attempt. ∎
22OMC5.0	**Seminar**
22OMC5.1	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 22OMC10.3] ∎

22OMC6.0	Project
22OMC6.1	**Project work and Dissertation:** Each candidate shall carry out the project work independently as per Scheme of Teaching and Examinations under the guidance of one of the faculty members of the Department in the Institution of study. If the project is of inter-disciplinary nature, a co-guide shall be taken from the other concerned department. The topic and title of the dissertation shall be chosen by the candidate in consultation with the guide and co-guide, if any, before the commencement of IV semester. The subject and topic of the dissertation shall be from the major field of studies of the candidate. Modification of only the title but not the field of work may be permitted at the time of final submission of dissertation report during fourth semester. If dissertation has to be carried out in any industry/R&D labs, outside the campus, permission shall be taken from the Principal to that effect. The Principal, shall submit to the University a list showing the name of the student, University Seat Number, title of the project, name/s of the guide/co-guide, at the time of submission of project report to the University. ■
22OMC6.2	Project is one of the head of passing. The candidate shall submit a soft copy (CD) of the dissertation work to the University. The CD shall 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. ■
22OMC6.3	**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% : **(i)**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/- (RupeesTwo thousand only). **(ii)**for the second time, the candidate has to resubmit the dissertation along with the penal fees of Rs. 4000/- (Rupees four thousand only). **(iii)**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 22OMC1.4. ■
22OMC6.4	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. ■
22OMC6.5	Examiners shall evaluate the dissertation normally within a period of not more than two weeks from the date of receipt of dissertation through email. ■
22OMC6.6	The examiners shall independently submit the marks through the specified link.■
22OMC6.7	Average of the marks awarded by the two Examiners shall be the final evaluation marks for the Dissertation. ■
22OMC6.8	**(a)** Viva-voce examination of the candidate shall be conducted as per 22OMC6.10, 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.

22OMC6.8 (continued)	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 22OMC6.8 (b)] of the external examiner (first) and satisfying the provision 22OMC6.3 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 22OMC6.10.
	(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 22OMC6.10. 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 22OMC1.4. 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 22OMC6.8 (b)], the same will be sent to a Second Examiner (external)[not necessarily the same examiner considered under 22OMC6.8 (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 22OMC6.10. ■ 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 22OMC1.4. In such cases of rejection, the candidate shall redo the entire procedure starting from the submission of Dissertation in soft copy. ■
22OMC6.9	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 22OMC1.4. ■
22OMC6.10	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 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. ■
22OMC6.11	The relative weights for the evaluation of dissertation and the performance at the viva voce shall be as per the scheme of teaching & examination.■
22OMC6.12	The marks awarded by both the Examiners at the viva voce Examination shall be sent jointly to the University immediately after the examination.■
22OMC6.13	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. ■
22OMC6.14	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.■

22OMC7.0	Computation of SGPA and CGPA
22OMC7.1	**(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 colspan="8">Letter Grade and corresponding Grade Points on a typical 10 – Point scale</td></tr>
<tr><td>Letter Grade</td><td>O</td><td>A+</td><td>A</td><td>B+</td><td>B</td><td>C</td><td>F</td></tr>
<tr><td></td><td>Outstanding</td><td>Excellent</td><td>Very Good</td><td>Good</td><td>Average</td><td>Pass</td><td>Fail</td></tr>
<tr><td>Grade Point</td><td>10</td><td>9</td><td>8</td><td>7</td><td>6</td><td>5</td><td>0</td></tr>
<tr><td>% of Marks secured</td><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. ■
22OMC7.2	**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, $$SGPA = \frac{\sum[Course\ Credits \times Grade\ Points]\ for\ all\ the\ Courses\ in\ that\ Semester}{\sum[Course\ Credits\ ]\ for\ all\ the\ Courses\ in\ that\ Semester}$$ $$CGPA = \frac{\sum[Course\ Credits \times Grade\ Points]\ for\ all\ Courses\ excluding\ those\ with\ F\ and\ transitional\ grades\ until\ that\ Semester}{\sum[Course\ Credits\ ]\ for\ all\ Courses\ excluding\ those\ with\ F\ grades\ until\ that\ semester}\ ■$$

22OMC7.2 (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	$5 \times 8 = 40$	
I	XX102	3:2:0 = 5	Absent(F)	0	$5 \times 0 = 00$	$SGPA = \dfrac{117}{25}$
I	XX103	3:0:0 = 3	A	9	$3 \times 9 = 27$	$= 4.68$
I	XX104	0:1:1 = 2	F	0	$2 \times 0 = 00$	
I	XX105	4:1:0 = 5	D	6	$5 \times 6 = 30$	
I	XX106	5:0:0 = 5	E	4	$5 \times 4 = 20$	
	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.

Semester	Course Number	Credits	Grade	Grade Points	Credit Points	SGPA, CGPA
II	XX107	3:1:1 = 5	C	7	5×7	$SGPA = \dfrac{157}{25}$
II	XX108	4:0:0 = 4	B	8	4×8	$= 6.28$
II	XX109	3:0:0 = 3	D	6	3×6	
II	XX110	4:1:0 = 5	E	4	5×4	$CGPA$
II	XX111	2:1:1 = 4	A	9	4×9	$= \dfrac{(117 + 157)}{18 + 23}$
II	XX112	2:0:0 = 2	F	0	2×0	$= 274/41 = 6.68$
II	XX113	0:2:0 = 2	B	8	2×8	
	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.

Semester	Course Number	Credits	Grade	Grade Points	Credit Points	SGPA, CGPA
I	XX102	3:2:0 = 5	D	6	$5 \times 6 = 30$	$SGPA\ (I\ Semester)$ $= \dfrac{117 + 30 + 14}{25}$
I	XX104	0:1:1 = 2	C	7	$2 \times 7 = 14$	$= 161/25 = 6.44$
II	XX112	2:0:0 = 2	D	6	$2 \times 6 = 12$	$SGPA\ (II\ Semester)$ $= (157 + 12)/25$ $= 169/25 = 6.76$

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

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

Semester	I	II	III	IV
Credits of the	24	26	24	26
SGPA	7.00	8.50	9.20	6.86

$$CGPA = \frac{(24 \times 7.00 + 26 \times 8.50 + 24 \times 9.20 + 26 \times 6.86)}{100} = 7.88 \ ∎$$

22OMC7.3	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. ∎
22OMC8.0	**Conversions of Grades into Percentage and Class Equivalence**
22OMC8.1	**Conversions of Grades into Percentage** Conversion formula for the conversion of CGPA into percentage is given below. Percentage of marks secured, P = [CGPA Earned] × 10 **Illustration for a CGPA of 8.20:** P = [CGPA Earned 8.2]× 10 = 82.0 %∎
22OMC8.2	**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 ≥ 70% **(ii)** First Class (FC) if P ≥ 60% but <70% and **(iii)** Second Class (SC) if P < 60%. And >50% ∎
22OMC9.0	**Continuous Internal Evaluation and Semester End Evaluation**
22OMC9.1	**Continuous Internal Evaluation** The Weightage for CIE is 50% of the maximum 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 22OMC9.8]
22OMC9.2	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.∎
22OMC9.3	The CIE marks in a theory course, for 20 marks, shall be based on three 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 three tests.∎
22OMC9.4	The candidates shall write the Tests in Blue Book/s. The Blue book/s and other documents relating to award of CIE marks under 22OMC9.2 (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
22OMC9.5	Every page of the CIE marks list shall bear the signatures of the concerned Teacher, Head of the Department and the Principal.∎
22OMC9.6	The CIE marks list shall be displayed on the Notice Board and corrections, if any, shall be incorporated before submitting to the University.∎
22OMC9.7	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.∎
22OMC9.8	Candidates obtaining less than 50% of the CIE marks in any course (Theory/Laboratory/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 academic year subject to the provision of 22OMC1.4.∎

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22OMC9.9	Semester End Evaluation: The weightage for the SEE is 50% of the maximum marks of each of the theory and practical. There shall be a University examination at the end of each semester. Setting Theory Question Papers and Evaluation: Question papers in theory courses shall be set by the Examiners appointed by the University.■
22OMC9.10	There shall be double valuation of theory papers. The theory Answer booklets shall be valued independently by two examiners appointed by the University.■
22OMC9.11	If the difference between the marks awarded by the two Examiners is not more than 15 per cent of the maximum marks, the marks awarded to the candidate shall be the average of two evaluations.■
22OMC9.12	If the difference between the marks awarded by the two Examiners is more than 15 per cent of the maximum marks, the answer booklet shall be evaluated by a third Examiner appointed by the university. The average of the marks of nearest two valuations shall be considered as the marks secured by the candidate. In case, if one of the three marks falls exactly midway between the other two, then the highest two marks shall be taken for averaging.■
22OMC10.0	Eligibility for Passing and Award of Degree
22OMC10.1	(1) A student who obtains any grade O to C 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 shall be declared successful at the end of the Programme for the award of Degree only on obtaining CGPA $\geq$ 5.00, with none of the Courses remaining with F Grade.
22OMC10.2	For a pass in a theory and laboratory(practical) course, the student shall secure minimum of 40 % of the maximum marks prescribed in the Semester End Examination(SEE) and 50 % of marks in CIE and 50 % in the aggregate of CIE and SEE marks. The Minimum Passing Grade in a course is C.■
22OMC10.3	For a pass in Internship/Seminar/ Project/Dissertation/Viva-voce examination, a student shall secure a minimum of 50 % of the maximum marks prescribed for the SEE in Internship/Seminar /Project/Dissertation/Viva-voce. The Minimum Passing Grade in a course is E.■
22OMC10.4	IV semester candidates having backlog courses are permitted to upload the 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. ■
22OMC10.5	A candidate may at his/her desire reject his/her latest semester, except the IV semester, results of University examination in respect to all courses of that semester. Rejection shall be permitted only once during the entire Programme. The CIE marks of the rejected semester shall remain the same. Rejection of results of the University examination including CIE marks is not permitted. ■
22OMC10.6	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.■

22OMC10.7	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.■
22OMC10.8	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.■
22OMC10.9	**Eligibility for Award of Degree:** A student shall be declared to have completed the degree of Master of Computer Applications, 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.■
22OMC11.0	**Attendance Requirement**
22OMC11.1	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.■
22OMC11.2	Courses of each semester shall be treated as a separate unit for calculation of the attendance.■
22OMC11.3	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 NSS/NCC/Red Cross/ Republic Day and Independence Day parades/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.■
22OMC11.4	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.■
22OMC11.5	A candidate, who does not satisfy the attendance requirement (in one or more Courses) as mentioned in 22OMC11.3 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.■
22OMC11.6	Principals of the concerned colleges shall notify regularly, the list of candidates who fall short of attendance.■
22OMC11.7	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.■
22OMC12.0	**Promotion and Eligibility (Vertical Progression)**
22OMC12.1	There shall be no restriction for promotion from an odd semester to the next even semester, provided the student has fulfilled the attendance requirement.■
22OMC12.2	**(a)** Candidates, with a maximum of four backlog courses of first year shall be eligible for taking admission to second year. **(b)** Each credit course shall be treated as a head of passing.■

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22OMC12.3	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
22OMC12.4	Passing ONLINE courses is mandatory for the award of a degree. ON-LINE courses are not considered under vertical progression; however, the student has to pass these courses before the completion of the maximum duration of the program. If a student fails in a selected ON-LINE course in a semester then he/she can pass the course in the next semester by taking the same course(if offered online) or other university-approved available courses during that session. The title of the course/s in which he/she qualify shall be mentioned in the grade card with letter PP.
22OMC13.0	**Temporary Discontinuation/Break in the Program**
22OMC13.1	**(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 22OMC1.4. 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, 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. ■ **(b)** Candidates who takes admission to any semester of the existing scheme from another scheme, as a repeater/fresher because of various reasons have to complete additional course/s, if any, as per the decision of concerned Board of Studies and approval of Dean, 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.■
22OMC14.0	**Award of Prizes, Medals and Ranks**
22OMC14.1	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.■

22OMC14.2	**(1)** For award of rank in Master of Computer Applications, the CGPA secured by the student on completion of the programme is considered. **(2)** A student shall be eligible for a rank at the time of award of degree of Master of Computer Applications, provided the student **(a)** Is not a repeater in any semester **(b)** Has not rejected the results of any semester. **(c)** Has passed I to IV semester in all the courses in first attempt only **(3)** The total number of ranks awarded shall be 10 % of total number of students appeared in IV semester subject to a maximum of 10 ranks. **Illustration:** **(a)** If 150 students appeared for the IVsemester, the number of ranks to be declared will be 10. **(b)** If 84 students appeared for the IV semester, the number of ranks to be declared 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. ■ 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. ■
22OMC15.0	**Applicability and Power to Modify**
22OMC15.1	The regulations governing the Degree of Master of Computer Applications of Visvesvaraya Technological University shall be binding on all concerned.■
22OMC15.2	**(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. ■