

# **RNS INSTITUTE OF TECHNOLOGY**

Autonomous Institution Affiliated to VTU, Recognized by GOK, Approved by AICTE  
(NAAC 'A+ Grade' Accredited, NBA Accredited (UG - CSE, ECE, ISE, EIE and EEE)  
Channasandra, Dr. Vishnuvardhan Road, Bengaluru - 560 098  
Ph:(080)28611880,28611881 URL: [www.rnsit.ac.in](http://www.rnsit.ac.in)

## **DEPARTMENT OF MASTER OF COMPUTER APPLICATIONS**



Estd : 2001

### **AUTONOMOUS REGULATIONS GOVERNING THE DEGREE OF MASTER OF COMPUTER APPLICATIONS(MCA)**

**Effective from the academic year 2024 - 25**

**Autonomous Institution Affiliated to VTU**

**[www.rnsit.ac.in](http://www.rnsit.ac.in)**

**Published by:**

**THE PRINCIPAL**

**R N S Institute of Technology Channasandra, Dr. Vishnuvardhan Road,**

**Bengaluru - 560098,**

**KARNATAKA**

**15-08-2024**

## **Vision of the Institution**

“Building RNSIT into a World Class Institution”

## **Mission of the Institution**

- To impart high quality education in Engineering, Technology and Management with a difference, enabling students to excel in their career by
- Attracting quality Students and preparing them with a strong foundation in fundamentals so as to achieve distinctions in various walks of life leading to outstanding contributions.
- Imparting value based, need based, choice based and skill based professional education to the aspiring youth and carving them into disciplined, World class Professionals with social responsibility
- Promoting excellence in Teaching, Research and Consultancy that galvanizes academic consciousness among Faculty and Students
- Exposing Students to emerging frontiers of knowledge in various domains and make them suitable for Industry, Entrepreneurship, Higher studies, and Research & Development
- Providing freedom of action and choice for all the Stakeholders with better visibility

## **Department of Master of Computer Applications**

### **Vision of the Department**

“Synergizing Computer Applications for Real World.”

### **Mission of the Department**

- Produce technologists of the highest calibre to engage in design research and development, so as to enable the nation to be self-reliant
- Give conceptual orientation in basic computer applications and mathematics, motivate the students for lifelong learning
- Integrate project experiences at every level of the post graduate curriculum to give a firm practical foundation.

## 1. Short Titles and Commencement

**1.1** These shall be called R N S Institute of Technology Guidelines and norms for implementation of Academic Autonomy in the Institution Keeping in view the latest Regulations of VTU/UGC/AICTE-2022. Applicable from the academic year 2024-25.

**1.2** These Guidelines and norms shall come into effect from the date of approval by the Academic Council of the Institution.

## 2. Definitions:

**2.1.** Academic Autonomy means freedom granted by the University to a College in all aspects of conducting its programmes for promoting excellence.

**2.2.** Autonomous College means a College notified as an Autonomous College by the University as per the prevailing VTU Statutes on Autonomous Colleges and that may be further amended from time to time as per UGC/AICTE Regulations.

**2.3.** Commission means University Grants Commission.

**2.4.** Council means All India Council for Technical Education.

**2.5.** Statutes means VTU statutes on Autonomous Colleges (Amended) 2022 and further amended from time to time.

**2.6.** University means Visvesvaraya Technological University.

**2.7.** Teacher means the teaching staff of the college appointed by following the specified rules of the University and/or of the council.

## Preamble:

A number of Engineering Colleges within the jurisdiction of VTU have been granted the autonomous status in accordance with the statutes framed in this regard keeping in view the regulations of UGC/AICTE in order to implement the academic autonomy so that, they could derive full benefit and be able to meet the 21<sup>st</sup> century challenges faced by the technical education system in the country like:

- (i) Ever increasing influence of science and technology and their impact on human society.
- (ii) Shrinking time scale of new developments and the high rate of obsolescence in the older practices.

- (iii) Penetration of Information Technology in all sectors of human activity and economic development.
- (iv) Service sector becoming a major avenue for employment of technical professionals and also for economic gains.
- (v) Emergence of knowledge as a key driver for the progress of nation and for increasing their influence on the world scenario.

As engineers have to convert these challenges into opportunities, it is expected that the 21<sup>st</sup> century engineers will be required to have:

- Strong foundation in the basics of mathematics, science and engineering discipline.
- Command over the chosen area of specialization.
- Capacity to apply the professional knowledge and skills acquired.
- Good competence to learn a subject on one's own without major external help.
- Expertise in analysis, design, modelling and simulation of complex systems.
- Scaling up mass production, system operation and maintenance.
- Estimation of costs and time factors in an assignment.
- Ability for rational, logical, orderly and objective thinking.
- Skill in personnel management and human relations, and
- Leadership qualities including spirit of tolerance, patience and team work.

Therefore, in view of the above, it is desirable that each autonomous college gets fully prepared to take the following steps based on the statutes.

## Academic Norms:

The Autonomous Institute shall follow University Regulations for the following as notified from time to time.

- a) Research Programmes
- b) Postgraduate programmes for award of Degree
- c) Undergraduate programmes for award of Degree
- d) Undergraduate Degree with Honours Minors
- e) Post Graduate Diploma
- f) Post Graduate Certificate

<b>INDEX</b>		
<b>Regulation Clause</b>	<b>Title</b>	<b>Page Number</b>
	Definitions of Keywords	06
<b>24RNMC1.0</b>	Title, Duration and Credits of the Programme of Study	09
<b>24RNMC2.0</b>	Eligibility for Admission (As per the Government orders issued from time to time)	09
<b>24RNMC3.0</b>	Courses	10
<b>24RNMC4.0</b>	Internship	11
<b>24RNMC5.0</b>	Seminar	12
<b>24RNMC6.0</b>	Project	12
<b>24RNMC7.0</b>	Computation of SGPA and CGPA	14
<b>24RNMC8.0</b>	Conversions of Grades into Percentage and Class	16
<b>24RNMC9.0</b>	Continuous Internal Evaluation and Semester End	17
<b>24RNMC10.0</b>	Eligibility for Passing and Award of Degree	18
<b>24RNMC11.0</b>	Attendance Requirement	19
<b>24RNMC12.0</b>	Promotion and Eligibility (vertical Progression)	20
<b>24RNMC13.0</b>	Temporary Discontinuation/Break in the Program	21
<b>24RNMC14.0</b>	Award of Prizes, Medals and Ranks	21
<b>24RNMC15.0</b>	Applicability and Power to Modify	22
<b>ANNEXURE I</b>	Examples of SGPA and CGPA calculations	24
<b>ANNEXURE II</b>	Guidelines for using online content in courses	25
<b>ANNEXURE III</b>	Assessment and Evaluation in Specific Courses	30
<b>ANNEXURE IV</b>	The regulations governing the Academic Bank of Credits	30
<b>ANNEXURE V</b>	Guidelines and Suggestive Activities under AICTE Activity Points	35

## Definitions of Keywords

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

**(1) Programme:** 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. **Branch :** Means MCA Degree Programme

**(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:** This 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, Core, Elective, and soft skill Courses, to provide the 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 (also called Mentor, Counsellor etc.,) in each Semester for the Institution to maintain proper records.

**(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, Assignment, problem-solving, group discussion, quizzes, mini-project, and seminars throughout the Semester, with weightage for the different components being fixed at the University level.

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

**(12) First Attempt:** Refers to a student who has completed all requirements and has become eligible to attend the SEE and has attended at least one head of passing, such attempt shall be considered as a 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 denoted by letters **O, A+, A, B+, B, C and F**

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

**(16) Grading:** Grade refers to the qualitative measure of performance 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 24RNMC7.0. The rubric attached to letter grades is 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	O	A+	A	B+	B	C	F
Grade Point	10	09	08	07	06	05	<5

**(18) Passing Standards:** Refers to passing a Course only when getting GP greater than or equal to 05 (as per serial number 17).

**(19) Credit Point:** Are the product of grade point (GP) and number of credits for a Course i.e.,  
Credit points (CrP) = GP × Credits for the Course.

**(20) 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 24RNMC7.0]

**(21) 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 24RNMC7.0]

**(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.





<b>24RPMC1.0</b>	<b>Title, Duration and Credits of the Programme of Study</b>
<b>24RPMC1.1</b>	<b>Title</b> The Programme shall be called Master of Computer Applications, abbreviated as MCA.
<b>24RPMC1.2</b>	<b>Minimum Duration</b> The Programme shall be a full-time programme extended over a period of two academic years , duration divided into 4 semesters and each semester shall be of 19 weeks each, followed by the supplementary semester of 8 weeks.
<b>24RPMC1.3</b>	<b>A Faculty/ Employee</b> working on Full Time basis in an institution/Organization and pursuing 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.
<b>24RPMC1.4</b>	<b>Maximum Duration for Programme Completion:</b> 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.
<b>24RPMC1.5</b>	<b>Prescribed Number of Credits for the Programme:</b> The number of credits to be completed for the award of degree shall be 80.
<b>24RPMC1.6</b>	<b>Definition of Credits:</b> 01-hour Lecture (L) per week per semester =1 Credit 02 hour Tutorial (T) per week per semester =1 Credit 02 hour Practical/Laboratory per week per semester =1 Credit. <b>Note:</b> (i) Four credit Courses are designed for 50 hours Teaching – Learning process. (ii) Three credit Courses are designed for 40 hours Teaching – Learning process. (iii) Two credit courses are designed for 25 hours of Teaching – Learning process.
<b>24RPMC1.7</b>	<b>The Calendar of events:</b> The calendar of events in respect of the Programme shall be notified by the Institute in advance.
<b>24RPMC2.0</b>	<b>Eligibility for Admission</b> <b>(As per the Government orders issued from time to time)</b>
<b>24RPMC2.1</b>	<b>Eligibility for Admission:</b> Passed BCA/ Bachelor’s 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

	<p>concerned University).</p> <p>Obtained at least 50% marks (45% marks in case of candidates belonging to reserved category, applies to not only Karnataka State Students) in the qualifying Examination.</p>
<b>24RNMC2.2</b>	<p><b>For admissions under the PG CET qualification and Roaster system of the Government of Karnataka:</b></p> <p>There shall be an Entrance Examination (PGCET) for admission to the MCA programme. A candidate seeking admission to MCA Programme offered at RNSIT 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.</p> <p><b>For admissions under Management Quota:</b></p> <p>The candidates should have appeared for the entrance 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 the Government of Karnataka/VTU /any other University of Karnataka state.</p> <p>Further, there shall be an Admissions Committee for the MCA Programme consisting of the Principal of the College as the Chairman, the Head of the concerned Department, and one senior staff member of the concerned Department. The Admissions Committee conducts the entrance Examination /interview and selects the candidates for admission.</p>
<b>24RNMC2.3</b>	<p><b>Eligibility for candidates other than the Universities of Karnataka</b></p> <p>There shall not be any transfer or migration from college to college</p>
<b>24RNMC2.4</b>	<p><b>Intake under various categories:</b></p> <p>The intake under various categories shall be as sanctioned by the AICTE, State Government and VTU, from time to time.</p>
<b>24RNMC2.5</b>	<p><b>Admission to vacant seats:</b></p> <p>Guidelines to be followed as per the Notification issued by the Government of Karnataka from time to time for filling of the vacant seats. OR 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, the Head of the concerned Department, and the subject experts, shall be in charge of admissions.</p>
<b>24RNMC3.0</b>	<b>Courses</b>
<b>24RNMC3.1</b>	<p><b>Type of courses:</b></p> <p>The curriculum of the Programme shall be any combination of the following type of courses:</p>

- (i) **Basic Science Courses (BSC)** – Mathematics to be a mandatory course.
- (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) **Integrated Professional Core Courses (IPCC)** – It refers to professional theory core course integrated with practical of the same course. Credits for IPCC can be 04 considering L:T:P as 3:0:2. For an IPCC the theory component shall be evaluated by both CIE and SEE and the practical component is evaluated by CIE only (There shall be no SEE for Practical component).
- (iv) **Project Based Learning Course PCC (PB)**: Project Based Learning course is a professional core Course only Students have to complete a project out of learning from the course and SEE will be viva voce on project work.
- (v) **Professional Core Course Laboratory (PCCL)**: Practical courses who's CIE will be evaluated by the class teacher and SEE will be evaluated by the two examiners.
- (vi) **None Credit Mandatory Course (NCMC)**: It refers to an online MOOC course where students have to take up the course which has quiz and tests. Once upon completion the certificates will be generated.
- (vii) **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.
- (viii) **Open Electives Courses (OEC)**, from other technical and/ or emerging specialization areas.
- (ix) **Project Work (PROJ)**: Project work should be independently carried out by student industry/institution under the guidance of faculty member of the department.
- (x) **Technical Seminar (TSM)**: Each candidate will deliver seminar on a technical topic under the guidance of faculty member of the department.
- (xi) **Audit Courses (AUC)**: 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.
- (xii) **Professional Training/Internship (PT)**: 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.
- (xiii) **On-Line Courses (OL)**: These mandatory online courses are ability enhancement courses or skill development courses or emerging technology

	<p>courses or bridge courses or advanced learning courses. These courses are suggested by the concerned board of studies.</p> <p>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 a degree the students have to pass these courses.</p>
<b>24RNMC3.2</b>	<p><b>Elective Choice:</b></p> <p>(i) 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 Institute.</p> <p>(ii) Students shall be allowed to choose the elective/s, depending on their career plans.</p>
<b>24RNMC4.0</b>	<b>Internship</b>
<b>24RNMC4.1</b>	<p><b>Internship:</b> The student shall undergo Internship for the specified period as per the Scheme of Teaching and Examination.</p> <ol style="list-style-type: none"> <li>1) The internship shall be carried out in any industry/ R&amp;D Organization/Business Organization/Research Institute/Institute of national and international repute Business organization/ recognized national and international Professional Bodies, Societies or Organizations.</li> <li>2) The Department/college shall nominate a faculty to facilitate, guide and supervise students under internship.</li> <li>3) The students shall report the progress of the internship to the internal guide at regular intervals and seek his/her advice.</li> <li>4) The Internship shall be completed during the period specified in the Scheme of Teaching and Examination.</li> <li>5) After completion of the Internship, students shall submit a report to the Head of the Department with the approval of both internal and external guides.</li> <li>6) There shall be 100 marks for CIE (Presentation: 50 marks, Report: 50 marks) and shall be evaluated by the internal panel.</li> <li>7) The students are permitted to carry out the internship anywhere in the world . The Institute will not provide any kind of Financial Assistance to any student for an internship.</li> </ol>
<b>24RNMC4.2</b>	<p><b>Failing to undergo Internship:</b></p> <p>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 semester. The reappearance shall be considered as an attempt.</p>

<b>24RNMC5.0</b>	<b>Seminar</b>
<b>24RNMC5.1</b>	<p><b>Seminar:</b> Seminar is one of the heads of passing.</p> <p>Each candidate shall deliver a seminar as per the Scheme of Teaching and Examination on the topics chosen from the relevant fields for about 30 minutes.</p> <p>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 <b>24RNMC10.3</b></p>
<b>24RNMC6.0</b>	<b>Project</b>
<b>24RNMC6.1</b>	<p><b>Project work and Dissertation:</b></p> <p>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.</p> <p>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&amp;D labs, outside the campus, permission shall be taken from the Principal to that effect.</p> <p>The Head of the Department, shall submit to the COE 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 COE.</p>
<b>24RNMC6.2</b>	<p><b>Project is one of the head of passing.</b></p> <p>The candidate shall submit a soft copy of the dissertation work to the COE RNSIT. The soft copy shall contain the entire Dissertation in monolithic form as a PDF file (not separate chapters).</p> <p>The Guide, after checking the report for completeness shall upload the Dissertation along with the name, University Seat Number, address, mobile number of the candidate, etc., as prescribed in the form available on online Dissertation evaluation portal.</p>
<b>24RNMC6.3</b>	<p><b>Plagiarism Check</b></p> <p>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%.</p> <p>If the check indicates a plagiarism index greater than 25% :</p> <ul style="list-style-type: none"> <li><b>(i)</b> For the first time, the candidate has to resubmit the dissertation, to the COE, along with the penal fees of Rs. 2000/- (Rupees Two thousand only).</li> <li><b>(ii)</b> For the second time, the candidate has to resubmit the dissertation along with the penal fees of Rs. 4000/- (Rupees four thousand only).</li> </ul>

	<b>(iii)</b> 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 <b>24RNMC1.4</b> .
<b>24RNMC6.4</b>	<b>Dissertation Evaluation</b> The dissertation shall be sent to two examiners for evaluation - one internal examiner (guide/co-guide) and one external examiner (first) appointed by the COE. The evaluation of the dissertation shall be made independently by each examiner.
<b>24RNMC6.5</b>	Examiners shall evaluate the dissertation normally within a period of not more than two weeks from the date of receipt of the dissertation.
<b>24RNMC6.6</b>	The examiners shall independently submit the marks.
<b>24RNMC6.7</b>	The average of the marks awarded by the two Examiners shall be the final evaluation marks for the Dissertation.
<b>24RNMC6.8</b>	<b>Acceptance and rejection of Dissertation</b> <b>a)</b> Viva-voce examination of the candidate shall be conducted as per 24RNMC6.10, if the dissertation work and the reports are accepted by the external examiner (first). <b>b)</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 the 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. <b>c)</b> The resubmitted Dissertation incorporating the modifications/suggestions [as per 24RNMC6.8 (b)] of the external examiner (first) and satisfying the provision 24RNMC6.3 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 24RNMC6.10.

<p><b>24RNMC6.8</b> <b>Continued</b></p>	<p><b>d)</b> In case of rejection of Dissertation by the external examiner (first), the same will be sent to a Second Examiner (external) approved by the COE. 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 24RNMC6.10. 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 24RNMC1.4. In such cases of rejection, the candidate shall redo the entire procedure starting from the submission of Dissertation.</p> <p><b>e)</b> In case of rejection of Dissertation, with reasons, by the external examiner (first) , the same will be sent to a Second Examiner (external) approved by the COE. 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 24RNMC6.10.</p> <p>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 24RNMC1.4. In such cases of rejection, the candidate shall redo the entire procedure starting from the submission of Dissertation in soft copy.</p>
<p><b>24RNMC6.9</b></p>	<p><b>f)</b> 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 24RNMC1.4.</p>
<p><b>24RNMC6.10</b></p>	<p><b>Viva-voce examination:</b></p> <p>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 COE shall arrive at a mutually convenient date for the conduct of viva-voce examination of the concerned candidate with an intimation to the COE. In case one of the examiners expresses his/her inability to attend the viva-voce, the COE shall appoint a substitute examiner in his/her place.</p>
<p><b>24RNMC6.11</b></p>	<p>The relative weights for the evaluation of dissertation and the performance at the viva voce shall be as per the scheme of teaching &amp; examination.</p>
<p><b>24RNMC6.12</b></p>	<p>The marks awarded by both the Examiners at the viva voce Examination shall be sent jointly to the COE immediately after the examination.</p>
<p><b>24RNMC6.13</b></p>	<p><b>Dissertation evaluation and Viva-voce Examination fee:</b></p> <p>Examination fee as fixed from time to time by the COE for evaluation of dissertation report and conduct of viva voce shall be remitted through the Head of the Institution as per the instructions of COE from time to time.</p>
<p><b>24RNMC6.14</b></p>	<p>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/ subsequent semester exam.</p>
<p><b>24RNMC7.0</b></p>	<p><b>Computation of SGPA and CGPA</b></p>

<p><b>24RNMC7.1</b></p>	<p>(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.</p> <p>(ii) The grading system with the letter grades and the assigned range of marks under absolute grading system are as given below:</p> <table border="1" data-bbox="344 517 1458 898"> <thead> <tr> <th colspan="8">Letter Grade and Corresponding Grade Points on atypical 10 - Point scale</th> </tr> <tr> <th>Letter Grade</th> <th>0</th> <th>A+</th> <th>A</th> <th>B+</th> <th>B</th> <th>C</th> <th>F</th> </tr> </thead> <tbody> <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><b>10</b></td> <td><b>9</b></td> <td><b>8</b></td> <td><b>7</b></td> <td><b>6</b></td> <td><b>5</b></td> <td><b>0</b></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> </tbody> </table> <p>(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.</p>	Letter Grade and Corresponding Grade Points on atypical 10 - Point scale								Letter Grade	0	A+	A	B+	B	C	F		Outstanding	Excellent	Very Good	Good	Average	Pass	Fail	Grade Point	<b>10</b>	<b>9</b>	<b>8</b>	<b>7</b>	<b>6</b>	<b>5</b>	<b>0</b>	% of Marks secured	90-100	80-89	70-79	60-69	55-59	50-54	0-49
Letter Grade and Corresponding Grade Points on atypical 10 - Point scale																																									
Letter Grade	0	A+	A	B+	B	C	F																																		
	Outstanding	Excellent	Very Good	Good	Average	Pass	Fail																																		
Grade Point	<b>10</b>	<b>9</b>	<b>8</b>	<b>7</b>	<b>6</b>	<b>5</b>	<b>0</b>																																		
% of Marks secured	90-100	80-89	70-79	60-69	55-59	50-54	0-49																																		
<p><b>24RNMC7.2</b></p> <p><b>24RNMC7.2 (Continued)</b></p>	<p><b>Grade Point Averages:</b></p> <p><b>SGPA and CGPA:</b> 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,</p> $SGPA = \frac{\sum[\text{Course Credits} \times \text{Grade Points}] \text{ for all the Courses in that Semester}}{\sum[\text{Course Credits}] \text{ for all the Courses in that Semester}}$ $CGPA = \frac{\sum[\text{Course Credits} \times \text{Grade Points}] \text{ for all the Courses excluding Those with F and Transitional grades until that Semester}}{\sum[\text{Course Credits}] \text{ for all the Courses excluding Those with F grades until that semester}}$ <table border="1" data-bbox="344 1778 1422 2045"> <thead> <tr> <th colspan="7">(a) SGPA and CGPA Calculations: An Illustrative Example for one academic year</th> </tr> <tr> <th>Semester (Odd: I, Even: II)</th> <th>Course Number</th> <th>Credits</th> <th>Grade</th> <th>Grade Points</th> <th>Credit Points</th> <th>SGPA, CGPA</th> </tr> </thead> <tbody> <tr> <td>I</td> <td>XX101</td> <td>5:0:0 = 5</td> <td>A</td> <td>8</td> <td>5 × 8 = 40</td> <td rowspan="3">SGPA = <math>\frac{117}{25}</math></td> </tr> <tr> <td>I</td> <td>XX102</td> <td>3:2:0 = 5</td> <td>Absent(F)</td> <td>0</td> <td>5 × 0 = 00</td> </tr> <tr> <td>I</td> <td>XX103</td> <td>3:0:0 = 3</td> <td>A+</td> <td>9</td> <td>3 × 9 = 27</td> </tr> </tbody> </table>	(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	A	8	5 × 8 = 40	SGPA = $\frac{117}{25}$	I	XX102	3:2:0 = 5	Absent(F)	0	5 × 0 = 00	I	XX103	3:0:0 = 3	A+	9	3 × 9 = 27							
(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	A	8	5 × 8 = 40	SGPA = $\frac{117}{25}$																																			
I	XX102	3:2:0 = 5	Absent(F)	0	5 × 0 = 00																																				
I	XX103	3:0:0 = 3	A+	9	3 × 9 = 27																																				



24RNMC7.3	I	XX104	0:1:1 = 2	F	0	2 × 0 = 00	= 4.68	
	I	XX105	4:1:0 = 5	B	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	B+	7	5 × 7	SGPA = $\frac{162}{25}$	
	II	XX108	4:0:0 = 4	A	8	4 × 8		
	II	XX109	3:0:0 = 3	B	6	3 × 6		
	II	XX110	4:1:0 = 5	C	5	5 × 5	CGPA = $\frac{(117+162)}{18+23}$ = 279/41=6.80	
	II	XX111	2:1:1 = 4	A+	9	4 × 9		
	II	XX112	2:0:0 = 2	F	0	2 × 0		
	II	XX113	0:2:0 = 2	A	8	2 × 8		
	Total		25 (23*)	Total		162		
	(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	B	6	5 × 6 = 30	SGPA(I Semester) = $\frac{117+30+14}{25}$ = 161/25= 6.44	
	I	XX104	0:1:1 = 2	B+	7	2 × 7 = 14		
	II	XX112	2:0:0 = 2	B	6	2 × 6 = 12	=(162 + 12) / 25 =169/25 = 6.96	
	Consecutive Semesters under consideration= $\frac{(6.44 \times 25 + 6.96 \times 25)}{50}$ = 6.70							
	<b>(b) CGPA Calculation of the Programme: An Illustrative Example</b>							
	<b>Semester</b>		<b>I</b>	<b>II</b>	<b>III</b>	<b>IV</b>		
	Credits of the		25	25	25	25		
	SGPA		6.44	6.96	9.20	6.86		
CGPA = $\frac{(25 \times 6.44 + 25 \times 6.96 + 25 \times 9.20 + 25 \times 6.86)}{100}$ = 7.37								
<b>Grade Card:</b> 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.								
<b>24RNMC8.0</b>		<b>Conversions of Grades into Percentage and Class Equivalence</b>						
<b>24RNMC8.1</b>		<b>Conversions of Grades into Percentage</b>						
There is no formula for the conversion of CGPA into the percentage of marks. However, the following formula for conversion of the CGPA on a 10-point scale into the percentage of marks (M) for employment / higher studies, etc may be used; Percentage of marks secured, P = [CGPA Earned] × 10								

	<p><b>Illustration for a CGPA of 8.20:</b></p> $P = [\text{CGPA Earned } 8.2] \times 10 = 82.0 \%$
<b>24RNMC8.2</b>	<p><b>Class Equivalence:</b></p> <p>After the conversion of final CGPA into percentage of marks (P), a graduating student is reckoned to have passed in</p> <p><b>(i)</b> First Class with Distinction (FCD) if P = 70%</p> <p><b>(ii)</b> First Class (FC) if P = 60% but &lt;70% and</p> <p><b>(iii)</b> Second Class (SC) if P &lt; 60%. And &gt;50%</p>
<b>24RNMC9.0</b>	<p><b>Continuous Internal Evaluation</b></p>
<b>24RNMC9.1</b>	<p><b>Continuous Internal Evaluation</b></p> <p>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.</p> <p>[To be read along with 24RNMC9.8]</p>
<b>24RNMC9.2</b>	<p><b>Component of CIE Marks</b></p> <p>CIE Marks shall be based on</p> <p><b>(a)</b> Tests marks</p> <p><b>(b)</b> Quiz, assignments, Simulation, Experimentation, Mini project, oral examination, Research paper etc., conducted in respective courses.</p>
<b>24RNMC9.3</b>	<p><b>Continuous Internal Evaluation Procedure:</b></p> <p><b>(a) The CIE marks in theory course,</b></p> <p><b>(i) Three Unit Tests covering the entire syllabus each of 50 Marks</b>  <b>(duration 1 hour 30 minutes)</b>  First test at the end of 5th week of the semester  Second test at the end of the 10th week of the semester  Third test at the end of the 15th week of the semester  The sum of total marks of three tests /average will be <b>scaled down to 30 Marks.</b></p> <p><b>(ii) Quiz/Seminar each of 10 Marks (duration 10 Minutes)</b>  First quiz at the end of 5th week of the semester along with test1  Second quiz at the end of 10th week of the semester along with test2  Third quiz at the end of 15th week of the semester along with test3  The sum of best of two Quiz will be <b>scaled down to 10 Marks.</b></p> <p><b>(iii) Two assignments each of 10 Marks</b>  First assignment at the end of 4th week of the semester  Second assignment at the end of 9th week of the semester  The sum of two Assignments will be <b>scaled down to 10 Marks.</b></p> <p><b>Final Theory CIE = (i) + (ii) + (iii) = 30+10+10 = 50 Marks</b></p>
<b>24RNMC9.3</b> (Continued)	

	<p><b>(b) The CIE marks in Laboratory course,</b></p> <p>The CIE marks awarded in the case of the Practical component shall be based on the <b>continuous evaluation</b> of the laboratory report.</p> <p>(i) Each experiment report can be evaluated for 10 marks. Marks of all experiments' write-ups are added and <b>scaled down to 30 marks.</b></p> <p>(ii) The laboratory test (duration 03 hours) at the end of the 15<sup>th</sup> week of the semester /after completion of all the experiments (whichever is early) shall be conducted for 50 marks and <b>scaled down to 20 marks.</b></p> <ul style="list-style-type: none"> <li>The <b>15 marks</b> are for conducting the experiment and preparation of the laboratory record, the other <b>05 marks shall be for the test</b> conducted at the end of the semester.</li> </ul> <p style="text-align: center;"><b>Final CIE = (i) + (ii) = 30+20 = 50 Marks</b></p> <p><b>(c) The CIE marks in IPCC</b></p> <p>(i) CIE of Theory component is evaluated as per the clause (a)</p> <p>(ii) CIE of Lab component is evaluated as per the clause (b)</p> <p style="text-align: center;"><b>Final CIE = (i) + (ii) = 50+50 = 100 Marks is scaled down to 50 marks.</b></p>
<b>24RPMC9.4</b>	The candidates shall write the Tests in Blue Book/s. The Blue book/s and other documents relating to award of CIE marks under 24RPMC9.2 (b) shall be preserved by the Principal / Head of the Department for at least six months from the date of announcement of results and made available for verification at the directions of the <b>COE</b>
<b>24RPMC9.5</b>	Every page of the CIE marks list shall bear the signatures of the concerned Teacher, Head of the Department and the Principal.
<b>24RPMC9.6</b>	The CIE marks list shall be displayed on the Notice Board and corrections, if any, shall be incorporated before submitting to the COE.
<b>24RPMC9.7</b>	The CIE marks shall be sent to the COE by the Head of the Department 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 COE.
<b>24RPMC9.8</b>	<b>Candidates obtaining less than 50% of the CIE marks</b> Candidates obtaining less than 50% of the CIE marks in any course (Theory/Laboratory/Internship/Project) shall not be eligible to appear for the SEE 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 24RPMC1.4.
<b>24RPMC9.9</b>	<b>Semester End Evaluation</b> <b>The weightage for the SEE:</b> The weightage for the SEE is 50% of the maximum marks of each of the theory and practical. There shall be an 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 COE.
<b>24RNMC9.10</b>	<b>Valuation of SEE theory papers:</b> There shall be double valuation of theory papers. The theory Answer booklets shall be valued independently by two examiners appointed by the COE Or as per the guidelines issued/notified by the COE office.
<b>24RNMC9.11</b>	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.
<b>24RNMC9.12</b>	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 COE. 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.
<b>24RNMC10.0</b>	<b>Eligibility for Passing and Award of Degree</b>
<b>24RNMC10.1</b>	<b>(1)</b> 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. <b>(2)</b> 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.
<b>24RNMC10.2</b>	<b>For a pass in a theory and laboratory(practical) course,</b> 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.
<b>24RNMC10.3</b>	<b>For a pass in Internship/Seminar/ Project/Dissertation/Viva-voce examination:</b> 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 C.
<b>24RNMC10.4</b>	<b>Uploading the dissertation report for backlog students:</b> 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.
<b>24RNMC10.5</b>	<b>Rejection of the semester by student:</b> A candidate may at his/her desire reject his/her latest semester, except 4th semester, results of university examination in respect to all courses of that semester. Rejection shall be permitted only once during 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.
<b>24RNMC10.6</b>	If the rejection of the 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 examination result is of even semester, the candidate cannot take admission to the next odd semester.
<b>24RNMC10.7</b>	Application for rejection shall be submitted to the <b>COE</b> through the Principal of the college, within thirty days from the date of announcement of results.
<b>24RNMC10.8</b>	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.
<b>24RNMC10.9</b>	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.
<b>24RNMC10.10</b>	<b>Eligibility for Award of Degree:</b> 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.
<b>24RNMC11.0</b>	<b>Attendance Requirement</b>
<b>24RNMC11.1</b>	<b>Registration and Enrolment</b> 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. <b>(i)</b> 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. <b>(ii)</b> 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.
<b>24RNMC11.2</b>	Courses of each semester shall be treated as a separate unit for calculation of the Attendance
<b>24RNMC11.3</b>	The candidate has to put in a minimum attendance of 85% in each course with a provision to condone 15% of the attendance by the <b>Principal</b> on the specific recommendation of the <b>Head of the Department</b> 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
<b>24RNMC11.4</b>	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.
<b>24RNMC11.5</b>	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
<b>24RNMC11.6</b>	<b>HoD</b> shall notify regularly, the list of candidates who fall short of attendance.
<b>24RNMC11.7</b>	The list of the candidates falling short of attendance shall be sent to the COE at least one week prior to the commencement of the examination.
<b>24RNMC12.0</b>	<b>Promotion and Eligibility (Vertical Progression)</b>
<b>24RNMC12.1</b>	There shall be no restriction for promotion from an odd semester to the next even semester, provided the student has fulfilled the attendance requirement.
<b>24RNMC12.2</b>	<p><b>(a)</b> Candidates, with a maximum of four backlog credits courses of first year shall be eligible for taking admission to second year.</p> <p><b>(b)</b> Each credit course shall be treated as a head of passing.</p>
<b>24RNMC12.3</b>	<p><b>Mandatory Non – Credit course</b></p> <p>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.</p>
<b>24RNMC12.4</b>	<p><b>ONLINE courses</b></p> <p>Passing ONLINE courses is mandatory for the award of a degree. ON-LINE courses are not considered under vertical progression; however, the student must 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 COE-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.</p>
<b>24RNMC13.0</b>	<b>Temporary Discontinuation/Break in the Program</b>
<b>24RNMC13.1</b>	<p><b>(a)</b> 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 24RNMC1.4. 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.</p> <p><b>(b)</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</p>

	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>24RNMC14.0</b>	<b>Award of Prizes, Medals and Ranks</b>
<b>24RNMC14.1</b>	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 Institute for such awards.
<b>24RNMC14.2</b>	<p><b>(1)</b> For award of rank in Master of Computer Applications, the CGPA secured by the student on completion of the programme is considered.</p> <p><b>(2)</b> A student shall be eligible for a rank at the time of award of degree of Master of Computer Applications, provided the student</p> <p><b>(a)</b> Is not a repeater in any semester</p> <p><b>(b)</b> Has not rejected the results of any semester.</p> <p><b>(c)</b> Has passed I to IV semester in all the courses in first attempt only</p> <p><b>(3)</b> 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.</p> <p><b>Illustration:</b></p> <p><b>(a)</b> If 150 students appeared for the IV semester, the number of ranks to be declared will be 10.</p> <p><b>(b)</b> If 84 students appeared for the IV semester, the number of ranks to be declared will be 08.</p> <p><b>(c)</b> 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.</p> <ul style="list-style-type: none"> <li>▪ 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.</li> </ul>
<b>24RNMC15.0</b>	<b>Applicability and Power to Modify</b>
<b>24RNMC15.1</b>	<ul style="list-style-type: none"> <li>▪ The regulations governing the degree of Master of computer applications of VTU shall be binding on all concerned.</li> </ul>
<b>24RNMC15.2</b>	<ul style="list-style-type: none"> <li>▪ Notwithstanding anything contained in the foregoing, the university shall have the power to issue directions/orders to address any difficulty</li> <li>▪ 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</li> </ul>

## Annexure-I

An illustrative example to calculate SGPA and CGPA for one Academic year is shown in Table I

Table I: An illustrative example of SGPA and CGPA calculations for one Academic year								
Odd Sem								
Semester (Odd:I, Even:II)	Course Code	Credits	Grade	Earned Credits	Grade Points (GP)	Credit Points (CP)	SGPA, CGPA	
I	XX11	3	B	3	6	3x6=18	<b>SGPA=118/24 = 4.91</b>	
I	XX12	4	AB (F)	0	0	4x0=00		
I	XX13	4	A+	4	9	4x9=36		
I	XX14	3	F	0	0	3x0=00		
I	XX15	4	B	4	6	4x6=24		
I	XX16	2	C	2	5	2x5=10		
I	XX17	2	A+	2	9	2x9=18		
I	XX18	2	B	2	6	2x6=12		
I	XX110	0	0	0	6	0x6=00		
<b>Total</b>		<b>24</b>		<b>17</b>		<b>118</b>		
Even Sem								
II	XX21	3	B+	3	7	3x7=21	<b>SGPA=206/33 = 6.24</b>	
II	XX22	3	A	3	8	3x8=24		
II	XX23	4	B	4	6	4x6=24		
II	XX25X	3	A+	3	9	3x9=27	<b>CGPA = (118+206) / (17+30) =6.89</b>	
II	XX26X	3	F	0	0	3x0=00		
II	XX27	2	A	2	8	2x8=16		
II	XX28	2	A+	2	9	2x9=18		
II	XX29	2	A	2	8	2x8=16		
1 <sup>st</sup> Sem								
I	XX12	4	B	4	6	4x6=24		
I	XX14	3	B+	3	7	3x7=21		
<b>Total</b>		<b>33</b>		<b>30</b>		<b>206</b>		
II	XX24	4	C	4	5	3x5=15		



An illustrative example to calculate CGPA of the program is shown in Table II.

Semester	I	II	III	IV
Credits of Semester (C <sub>i</sub> )	24	26	26	24
SGPA (S <sub>i</sub> )	6.44	6.96	9.20	6.86
$\sum_{i=1}^n \frac{C_i S_i}{C_i}$	<b>154.56</b>	<b>180.96</b>	<b>239.2</b>	<b>164.64</b>

$$\text{CGPA} = \frac{(24 \times 6.44 + 26 \times 6.96 + 26 \times 9.20 + 24 \times 6.86)}{100} = 7.37$$

## Annexure-II

### Guidelines for Using Online Content in Courses

#### 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.

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;

How do we decide what material to use? This has two sub-issues. One, what content would

- 1) 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?

## 1.2 Modes of Learning

There are several ways of using the online content in the curriculum.

The simplest mode (Mode 1) is to use online content as additional reference material. In this mode, the normal teaching is anyway being done and the faculty is referring to online content in the same way he/she would refer to a book. This mode requires no change or suggestions and hence is outside the scope of this document.

The next mode (Mode 2) is the flipped classroom model where the students go through the online content (including writing programs, small quizzes, etc.), and the local faculty takes discussion sessions and does all the evaluations. This mode still requires knowledgeable faculty member to be the course teacher. However, given that we can now reduce the contact hours for the students and faculty, the same faculty can handle a much larger class (or multiple sections in case there is an upper limit on the size of the class).

The next mode (Mode 3) is that the students are studying only through the online mode and there is very little interaction with the faculty at the college. May be there can be some sessions once in a while, but mostly, the role of a local faculty is only to handle evaluation (exams, assignments, projects, etc.). This partially addresses the issue of lack of faculty in certain areas since the expertise required for handling evaluation is arguably lesser than the expertise required to teach the course.

The last mode (Mode 4) is where the online provider does everything, including evaluations. We don't need any faculty member at the college to offer this course. We only need to decide how to translate the evaluation done by an outsider to an equivalent grade/mark on the college transcript.

The Table III below illustrates the four models in brief:

Sl. No.	Model	Local Part	Online Part	Guidelines
1	Reference Mode	All Lectures, Home-works, Evaluations	Additional reference material	No recommendations.
2	Flipped Mode	Discussion sessions, Evaluations	Lectures, Home-works, Quizzes, Project options	Requires local faculty with some knowledge in the subject area. Large sections/ class sizes can be handled.
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 of faculty shortage in critical areas.
4	Fully Online	-	All Lectures, Projects, Tests, Evaluations	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.

## 1.0 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 optimal. 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 understood 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 course 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 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.

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 that 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 students and faculty members by the Board of studies.

### 1.3 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 should 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 exactly what 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:** There should be a limit on the number of credits the students can earn through online courses. In case of Mode 4, where even the evaluation is done by online course provider, the proposed limit is 8 credits only. As the technology for online exams or the processes for the 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 college shall consider is that in a sequence<sup>3</sup> of courses in one stream of Computer Science, at least one course should happen 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 the faculty is asked to 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 Programme 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 faculty member typically teaches about 100 students in a semester (across 2- 3 courses). If 100 students do a course in Mode 4, this may be considered 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, this may be considered as equivalent to having one additional FTE faculty member for that semester.
- g) **Online offering of AICTE Model Curriculum Courses by Experts:** This is to alleviate the challenge of shortage of adequately qualified faculty members in the college, by utilizing 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 be offered regularly (may be 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 (ex; ACM, IEEE) to give lectures in these courses to make them more interesting and industry oriented.
  - 5) There shall be a registration procedure for colleges (not individual students) to register for making these courses 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 institution/consortium to manage them. Any platform (ex; 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 colleges 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-III**

The regulations governing the Academic Bank of Credits (to be framed)

### **Annexure IV**

#### **24RNMC A4.0. ASSESSMENT AND EVALUATION IN SPECIFIC COURSES**

## 24RNMCA A4.1. CIE and SEE Assessment in Specific Courses

Examination and Evaluation for all the courses shall be done as specified under clauses of **24RNMCA9.0** of this Regulations for SEE and CIE. However, for some specific courses, the procedure is made clear in the following clauses.

### 24RNMCA A4.1.1. Practical Courses

#### 1) CIE for Practical work courses

a) CIE marks for a practical course shall be 50 marks. The split-up of CIE marks for record/journal and test to be split in the ratio 60:40.

- (i) Each experiment to be evaluated for conduction with observation sheet and record write-up. Split-up of marks for the evaluation of the journal/write-up for hardware/software experiments designed by the faculty who is handling the laboratory session and shall be made known to students at the beginning of the practical session.
- (ii) Record shall contain all the specified experiments in the syllabus and each experiment write-up be evaluated for 10 marks.
- (iii) Total marks scored shall be scaled down to 30 marks (60% of maximum marks)
- (iv) Weightage to be given for neatness and submission of record/write-up on time.
- (v) Two class tests; one in the mid of the semester, and another at the end of the semester will be conducted for 100 marks each and scaled down to 20 marks (40% of maximum marks).
- (vi) In test write-up, conduction of experiment, acceptable result, and procedural knowledge shall carry a weightage of 60% and rest 40% for viva-voce.
- (vii) The suitable split-up of marks can be designed to evaluate each student's performance and learning ability.

The sum of scaled-down marks scored in the report write-up/journal and marks of the test shall be the total CIE marks scored by the student.

- b) Two Internal tests for laboratory courses with software experiments shall be conducted for a total of 100 marks, jointly by the concerned teacher and a senior faculty nominated by the Principal/COE/HoD. In this evaluation, observation, write-up of procedure/algorithm/program, and execution of experiment shall be assessed for 80 marks and the viva-voce for 20 marks.

Marks scored out of 100 shall be scaled down to 50 marks.

#### 2) SEE for Practical Work Courses

- a) The SEE marks for the practical courses shall be for 50 marks.
- b) SEE shall be conducted jointly by the two examiners of the Institution appointed by COE/Principal.
- c) All laboratory experiments are to be included for practical examination.
- d) 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.

e) Students shall pick one question (experiment) from the questions pool prepared by the examiners jointly.

f) Evaluation of write-up/conduction procedure and result/viva will be conducted jointly by the examiners.

g) The split-up of maximum allocated marks for SEE are:

- (i) Procedure/write-up: 20%
- (ii) Conduction and result: 60%
- (iii) Viva-voce: 20%

h) SEE for the practical course shall be evaluated for 100 marks and scored marks shall be scaled down to 50 marks.

i) 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).

j) The duration of SEE shall be three hours.

#### 24RNMC A4.1.4. Internship

1) The internship shall be taken up during the period specified in the Scheme of Teaching and Evaluation. The department shall nominate faculty member/s to facilitate, guide and supervise students under an internship. The student 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 Evaluation. The internship examination shall be conducted at the end of the internship period.

2) **Report evaluation:** Internship shall be evaluated for 50% of 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 members assigned by the HOD.
- 4) Those who do not complete the internship shall be declared fail and shall complete it during subsequent SEE after satisfying the internship requirements during subsequent semester.

#### 24RNMC A4.1.5. Seminar

- 1) The maximum marks prescribed for the seminar and the evaluation process shall be notified by the Institution 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 conduction 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-answers), in the ratio of 50:25:25.
  - c) Split-up of assessment marks are 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%).

#### 24RNMC A4.1.6. Project Work Phase-I

- 1) The Project Work Phase-I project performance of a student shall be evaluated under CIE only. The maximum marks prescribed for CIE shall be as mentioned in the Scheme of Teaching and Evaluation.
- 2) The Head of the department shall make arrangements for the conduction of viva-voce evaluation of the Project Work Phase-I. 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 the mini-project shall be based on the evaluation of mini-project report, project presentation skill, and viva-voce (question- answers) in the ratio of 50:25:25.
- 4) The marks awarded for the Project Work Phase-I 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-answers).
  - a) Project presentation (25% of maximum marks)
  - b) Viva-voce, a question-answer session (25% of the maximum marks)

#### 24RNMCA4.1.7. Project Work Phase-II

- 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 conduction of viva-voce for evaluation of the project work. 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.
- 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)

#### 24RNMCA4.2. SEE Assessment in Specific Courses 24RNMCA4.2.1.

##### Theory courses with 4, 3 and 2 credits

The SEE for theory courses shall be conducted by the Institution as per the scheduled time-table put up Controller of Examinations. The question paper shall be common for students appearing for a particular course. The duration of examination shall be three hours.

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

- 2) There will be two questions from each module. Each of the two questions under a module (with a maximum of 3 sub-questions), shall 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.

#### 24RNMC A4.2.2. Integrated Professional Core Courses (IPC)

For a course wherein, theory is integrated with laboratory course, the SEE duration for the theory part shall be three hours, as specified in clause 24RNMC9.9. However, the question paper in the SEE examination shall include at least one question from the laboratory component.

#### 24RNMC A4.2.3. 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, one internal and the other external, appointed by COE/Principal.
- 3) In case the external examiner expresses his/her inability to conduct the examination at the last moment, the Principal/COE shall appoint a senior faculty member of the department to conduct the examination along with the already appointed internal examiner.
- 4) All laboratory experiments are to be included for practical examination.
- 5) 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.
- 6) Students shall pick one question (experiment) from the questions pool prepared by the examiners jointly.
- 7) Evaluation of write-up / conduction procedure and result / viva will be conducted jointly by the examiners.
- 8) The split-up of maximum allocated marks for SEE are:
  - a) Procedure/write-up (20 % of maximum marks)
  - b) Conduction and result (60% of maximum marks)
  - c) Viva-voce (20% of maximum marks)
- 9) SEE for the practical course shall be evaluated for 100 marks and scored marks shall be scaled down to 50 marks.
- 10) 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).
- 11) The duration of SEE shall be two or three hours.

#### 24RNMC A4.2.4. Internship

- 1) SEE shall be conducted by the Internal and External examiners approved by COE/Principal. 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/her inability to conduct the examination at the last moment, the Principal/COE shall appoint a senior faculty member 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 COE office along with the evaluation marks.

#### 24RNMC A4.2.5. Project Work Phase-II

- 1) The Project Work Phase-II 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 COE/Principal.
- 3) SEE marks for the project shall be awarded using appropriate Rubrics based on the quality of work and report, presentation skills, and viva-voce in the ratio 50:25:25 respectively.

#### **Annexure-V**

Guidelines and Suggestive Activities under AICTE Activity Points ( shall be framed)