



ACADEMIC RULES & REGULATIONS

REGULATIONS GOVERNING

THE DEGREE OF

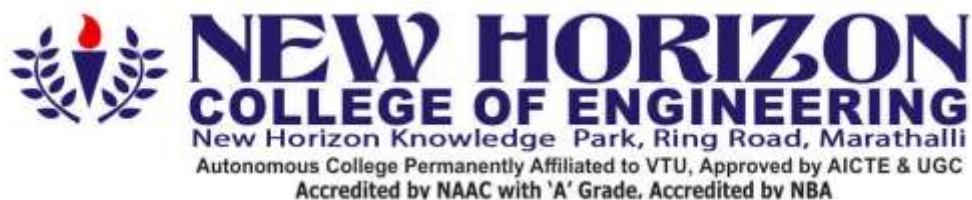
MASTER OF COMPUTER APPLICATIONS (MCA)

Under Outcome Based Education (OBE)

AND

Choice Based Credit System (CBCS) Scheme

Effective from the academic year 2024 -25



VISION

To emerge as an institute of eminence in the fields of engineering, technology, and management that serves the industry and the nation by empowering students with a high degree of technical, managerial, and practical competence.

MISSION

- To strengthen the theoretical, practical and ethical dimensions of the learning process by fostering a culture of research and innovation among faculty members and students.
- To encourage long-term interaction between academia and the IT industry through their involvement in the design of the curriculum and its hands-on implementation.
- To strengthen and mould students in professional, ethical, social and environmental dimensions by encouraging participation in co-curricular and extracurricular activities.

QUALITY POLICY

To provide educational services of the highest quality, both curricular and co-curricular, to enable students to integrate skills and serve the industry and society equally well at the global level.

VALUES

- | | |
|---------------------------|--------------------------------|
| • Academic Freedom | • Innovation |
| • Integrity | • Professionalism |
| • Inclusiveness | • Social Responsibility |

DEPARTMENT OF MCA

VISION

To emerge as a department of eminence in the field of computer applications and serve the information technology industry and the nation by empowering students with a high degree of technical, managerial, and practical competence.

MISSION

- To strengthen the theoretical, practical and ethical aspects of the learning while inculcating a culture of research, innovation and practical applications amongst faculty and students.
- To encourage long-term interactions between the department and the IT Industry through rich involvement of the Industry in the design of the curriculum and its hands-on implementation.
- To strengthen and mould students in professional, ethical, social and environmental dimensions by encouraging participation in co-curricular and extracurricular activities.

QUALITY POLICY

To provide high-quality curricular and co-curricular services that enable our students to integrate their skills and effectively serve the industry and society on a global scale.

CONTENTS		
Regulation Clause	Title	Page Number
--	DEFINITIONS OF KEYWORDS	5
1	PROFILE OF THE INSTITUTION ABOUT NHCE MANAGEMENT COMMITTEE INFRASTRUCTURE LIBRARY AND INFORMATION CENTRE LABORATORIES HUMAN RESOURCE DEVELOPMENT TRANSPORTATION FACILITIES CULTURAL, SPORTS AND RECREATION FACILITIES INDUSTRY INSTITUTE INTERACTION CELL FACULTY ACADEMIC PROGRAMMES OFFERED UNDERGRADUATE PROGRAMMES POSTGRADUATE PROGRAMMES STUDY ABROAD PROGRAMME PROFESSIONAL SOCIETIES SCHOLARSHIP FACILITY INDUSTRY INSTITUTE INTERACTION CELL ACHIEVEMENTS AND ACCOLADES	8
2	SEMESTER SCHEME	17
3	CREDIT SYSTEMS	20
4. 24OMC1.0	TITLE, DURATION AND CREDITS OF THE PROGRAMME OF STUDY	21
24OMC2.0	ELIGIBILITY FOR ADMISSION	22
24OMC3.0	COURSES	24
24OMC4.0	INTERNSHIP	25
24OMC5.0	SEMINAR	26
24OMC6.0	PROJECT	27
24OMC7.0	COMPUTATION OF SGPA AND CGPA	30
24OMC8.0	CONVERSIONS OF GRADES INTO PERCENTAGE AND CLASS EQUIVALENCE	34
24OMC9.0	CONTINUOUS INTERNAL EVALUATION AND SEMESTER-END EVALUATION	34
24OMC10.0	ELIGIBILITY FOR PASSING AND AWARD OF DEGREE	36
24OMC11.0	ATTENDANCE REQUIREMENT	37
24OMC12.0	PROMOTION AND ELIGIBILITY (VERTICAL PROGRESSION)	38
24OMC13.0	TEMPORARY DISCONTINUATION/BREAK IN THE PROGRAMME	39
24OMC14.0	AWARD OF PRIZES, MEDALS AND RANKS	39
24OMC15.0	APPLICABILITY AND POWER TO MODIFY	40
5	DISCIPLINARY MEASURES	40
6	COUNSELING CENTER	43
7	GUIDELINES & TEMPLATE FOR THE PREPARATION OF MINI PROJECT/PROJECT REPORT	43

Definitions of Keywords

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

- (1) **Programme:** This is an educational programme in a particular stream/ branch of engineering/branch of specialization that leads to the award of a degree. It involves events/activities comprising lectures/ tutorials/ laboratory work/ field work, outreach activities/ project work/ vocational training/ viva/ seminars/Internships/ assignments/ presentations/self-study, etc., or a combination of some of these.
- (2) **Branch:** Means specialization or discipline of MCA.
- (3) **Semester:** Refers to one of the two sessions of an academic year (vide: serial number 4), each session being of sixteen weeks duration (with working days greater than or equal to ninety). The odd semester may be scheduled from August and even semester from February of the year.
- (4) **Academic Year:** Refers to the sessions of two consecutive semesters (odd followed by even), including vacation periods.
- (5) **Course:** The text refers to elements commonly referred to as "papers," which are components of a program. Not all courses need to carry the same weight. Each course should define its learning objectives and learning outcomes. A course may be designed to include lectures, tutorials, laboratory work, fieldwork, outreach activities, project work, vocational training, viva, seminars, term papers, assignments, presentations, self-study, or a combination of some of these components.
- (6) **Credit:** This refers to a unit by which the coursework is measured. It determines the number of hours of instruction required per week. One credit is equivalent to one hour of lecture or two hours of laboratory/practical courses/ tutorials/ fieldwork per week, etc.
- (7) **Audit Courses:** This means knowledge/skill-enhancing courses without the benefit of a grade or credit for a course.
- (8) **Choice-Based Credit System (CBCS):** This refers to customizing the coursework through **Core, Elective, and Soft Skill courses to provide necessary support for** students to achieve their goals.
- (9) **Course Registration:** Refers to formal registration for the courses of a semester (credits) by every student under the supervision of a Faculty Advisor (also called a Mentor,

Counselor, etc.) in each Semester for the Institution to maintain a proper record.

(10) Course Evaluation: Means Continuous Internal Evaluation (CIE) and Semester End Examinations (SEE) to constitute the major evaluations prescribed for each course. CIE and SEE are to carry 50 % and 50 %, respectively, enabling each course to be evaluated for 100 marks, irrespective of its credits.

(11) Continuous Internal Evaluation (CIE): This refers to evaluating students' achievement in the learning process. The Course Instructor shall conduct CIE, which will include tests, homework, problem-solving, group discussion, quizzes, mini-projects, and seminars throughout the semester, with weightage for the different components fixed at the university level.

(12) Semester End Examinations (SEE): Refers to examinations conducted at the institution level covering the entire course syllabus. For this purpose, syllabi are to be modularized, and SEE questions are to be set from each module, with a choice confined to the module concerned only. SEE is also termed as Semester End Examination.

(13) First Attempt: This refers to a student who has completed all formalities, become eligible to attend the SEE, and attended at least one head of passing. Such an attempt shall be considered the first attempt.

(14) Credit-Based System (CBS): This refers to quantifying coursework after a student completes the teaching-learning process and passes 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.

(15) Credit Representation: This refers to Credit Values for different academic activities considered, as per Table 1. Credits for seminars, project phases, project viva voce, and internships shall be as specified in the Scheme of Teaching and Examination.

(16) Letter Grade: It is an index of students' performance in a Course. Grades are denoted by the letters O, A+, A, B+, B, C, and F.

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

(17) Grading: Grade refers to a 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: 24OMC7.0]. 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.

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

Letter Grade and corresponding Grade Points on a typical 10 - Point scale							
Letter Grade	O	A+	A	B+	B	C	F
Grade Point	10	09	08	07	06	05	00
% of Marks secured	90-100	80-89	70-79	60-69	55-59	50-54	0-49

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

(20) Credit Point: Is the product of grade point (GP) and number of credits for a course, i.e.,
Credit Points (CrP) = GP x 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: 24OMC7.0]

(22) Cumulative Grade Point Average (CGPA): This measures a student's overall cumulative performance over all semesters. The CGPA is the ratio of total credit points earned by a

student in various courses in all semesters and the sum of the total credits of all Courses in all semesters. It is expressed up to two decimal places. [Refer: 24OMC7.0]

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

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

1. PROFILE OF THE INSTITUTION

1.1 ABOUT NHCE

New Horizon College of Engineering (NHCE) has an unparalleled history of nurturing young minds into engineers prepared to enter the global workforce with strong theoretical knowledge and significant hands-on experience. Located in Bangalore's IT corridor, NHCE features state-of-the-art laboratories, instructional spaces, and a conducive learning environment, making it one of the premier engineering colleges in Bangalore. Due to its successful track record, NHCE has become a highly sought-after institution in a short span.

New Horizon College of Engineering is an autonomous college affiliated with Visvesvaraya Technological University (VTU) and approved by the All India Council for Technical Education (AICTE) and the University Grants Commission (UGC). NAAC accredits NHCE with an 'A' grade, and all undergraduate programs are accredited by the National Board of Accreditation (NBA).

We are proud to be part of the elite group of top-ranked institutions, having received Tier 1 accreditation for our four main BE programs.

As per the National Institutional Ranking Framework (NIRF 2022), announced by the MHRD, Government of India, New Horizon College of Engineering has been ranked 121 among the top engineering colleges across India. Additionally, NHCE secured the "Excellent" band in the ARIIA - Atal Ranking of Institutions on Innovation Achievements (MHRD) under the Private Institutions category for the year 2021.

1.2 MANAGEMENT COMMITTEE

The institution is managed by a team of visionaries, industrialists, and highly qualified and experienced educationists, who are ably supported by the Governing Council Members.

1.3 INFRASTRUCTURE

Every department has a congenial academic environment to promote quality education in engineering and technology. It is fully equipped with modern laboratories and equipment.

The central facilities are as follows:

- Good-ventilated classrooms
- Separate departmental library
- Departmental offices
- Contemporary sports facilities
- Main Library
- Air-conditioned auditorium
- Air-conditioned seminar halls
- Clinic
- Indian Bank
- Hostels (Boys & Girls)
- Cafeteria & Canteen
- Indoor & outdoor gymnasium
- Reprographic facility

1.3.1 LIBRARY & INFORMATION CENTRE

In the spacious and airy library, students have access to the latest books, journals, computers, CDROMs, and multimedia. Separate study/discussion rooms are available for students to study without any disturbance. The college also has a digital library, video conference room, and e-Shikshana.

The Library and Information Centre of New Horizon College of Engineering has a comprehensive collection of documents and electronic resources that are useful for faculty members, students, and research scholars in their educational activities at the institute. Our major objective is to provide the right information to the right user at the right time.

LIBRARY TIMINGS

Library will be kept open 24 hours throughout the year.

Particulars	Ground Floor	Lower Level
Working Days	24 Hrs 365 Days	8.00 a.m. –6.30 p.m.
Holidays		9.00 a.m. –5.00 p.m.
During Examination		8.00 a.m. –6.30 p.m.
During Vacation		8.00 a.m. –6.00 p.m.

COLLECTIONS

Books, journals and periodicals, bound volumes, technical and general magazines, non-book materials, newspapers, question papers, syllabi, project reports, e-journals, e-books, and many other electronic resources.

SERVICES

- + Circulation Service
- + Reference Service & NPTEL Service
- + Online Reservation Services
- + Digital Library Service
- + Document scanning
- + Document Printing
- + OPAC (Online Public Access Catalogue)
- + Reprographic Service
- + Overnight Circulation Service
- + E-Mail & SMS Service
- + Organizing Book Exhibition
- + Newspaper clippings
- + Online Lectures
- + Plagiarism Checking

FACILITIES

- + Library spread over two floors
- + Stack Area
- + Reference Section
- + 600 seating capacity Reading Hall
- + State of the art Digital Library
- + E-Learning Center
- + Video conference room
- + Online classroom with recording facility
- + e-Shikshana Programme
- + Students' discussion rooms

- ✚ Faculty discussion room
- ✚ Books and stationery outlet
- ✚ Coffee/Tea Point

DIGITAL LIBRARY & E-LEARNING CENTER

New Horizon College of Engineering library has state-of-the-art technology to maximize user benefits. The digital library section is a step towards achieving excellent information dissemination in the best possible manner. Library users can easily access the latest developments in different areas of the world. The digital services provided at our library cater to the collection and development of library materials in digital form. Online search for library books is available through the Online Public Access Catalogue (OPAC).

In addition, we have subscribed to electronic databases related to Engineering and technology, namely IEEE, ASCE, IET Digital Library, Springer, Knimbus, ProQuest, ASME, and Taylor & Francis.

LIBRARY INSTRUCTIONS

- ✚ Identity cards should be shown at the checkpoint.
- ✚ Leave your bags, handbags and personal belongings at the depository/property counter.
- ✚ Students are prohibited from carrying any notebook inside the reference section except loose sheets.
- ✚ No person shall write on, damage, or make any mark on any book, journal or other material belonging to the library.
- ✚ Books should be handled with great care, and damage to books in any manner will result in a heavy fine.
- ✚ Students can retain the books for two weeks only, after which a fine of Rs.1/-per book per day (Rs.2/- after 15 days) will be charged.
- ✚ Students can borrow three books, 2CDs, 2 periodicals at a time.

- ✚ Renewals are allowed only when there is no claim by others. No phone renewal will be entertained.
- ✚ A borrowed book, if re-called by the Librarian, must be returned immediately.
- ✚ Online reservations can be made for books that have already been lent out. Reserved books are kept separately in the circulation counter for two days for each member.
- ✚ Maintain a queue at the circulation counter.
- ✚ Wearing an ID-Card is compulsory.
- ✚ Usage of mobile phones is prohibited.

CENTRAL BROWSING FACILITY

- ✚ Internal lab for browsing and downloading information
- ✚ Broadband connectivity
- ✚ One-to-one system availability
- ✚ Hands-on time for the student during leisure time
- ✚ Linux Users' Group to facilitate the student project works.

1.3.2 LABORATORIES

The labs feature the latest technologies. A separate laboratory facility is available for Physics, Chemistry, Computer Science, Basic Electrical Engineering, Electrical Machines, Measurement & Circuits, Power Electronics, High Voltage & Relay, Power System Simulation, Control Systems, Multimedia, Advanced Microprocessor & Interfacing, Internet, Project, Analog Electronics, Digital Electronics, Communication, Micro Processor, Digital Communications, Energy Conversion, Material Testing, Fluid Mechanics, Measurement and Metrology, Design, Heat & Mass Transfer, Foundry & Forging, Workshop Practice, Computer Aided Modeling & Analysis lab, Computer Integrated Manufacturing, Automobile Engineering lab1 & lab2, Engine Lab, Chassis Lab, Material Testing Lab, Geotechnical Lab, Concrete & Highway Material Lab, Environment Engineering Lab etc.

1.3.3 HUMAN RESOURCE DEVELOPMENT

The Department of HRD is headed by Sr. Executive Director.

The main objective of this department is:

To train the students in interview skills, personal grooming, personality development, arranging industrial visits and other related activities, in-plant training, campus interviews for graduating students by the industries, organizing/arranging for summer internships, final Placements for the students, and conducting Entrepreneur Development Programmes.

1.3.4 TRANSPORTATION FACILITIES

The college provides transport facilities for students to commute from selected points in Bangalore on an annual payment basis. The charges depend on the pick-up and drop-off points and the distance involved. This facility is optional. Students who wish to use the college transport facility may meet the transport coordinator on campus and register themselves. After paying the requisite bus fees, a bus pass can be obtained from the front office. If there is a change in the student's residential address during the year, they should inform the Transport Manager and request a new bus pass for the updated route. After evaluating the feasibility and availability, a new pass may be issued. The student will be placed on a waiting list if no seats are available. Any tampering with the bus pass or willful damage to the bus will attract a severe penalty.

1.3.5 CULTURAL, SPORTS AND RECREATION FACILITIES

The college provides excellent facilities for sports and other recreational activities like playing outdoor games and indoor games. As part of co-curricular activities, fests are organized by the students of New Horizon College of Engineering, and these provide an opportunity to bring out their latent talents. Students are also allowed to participate in intercollegiate cultural and technical fests, and the necessary guidance is given to the participants. These activities help in the holistic development of the student's personality. NHCE also organizes a State Level Intercollegiate Mega Cultural Fest, 'SARGAM' every year, along with various technical fests like Tech Horizon, Hackathons, etc.

1.3.6 INDUSTRY INSTITUTE INTERACTION CELL

At NHCE, the importance of Industry Institute Interaction is emphasized by establishing an exclusive cell. The purpose of the Industry Institute Collaboration Cell, which shall be referred to as IIC hereon, is to ensure a paradigm shift in the thought process of a New Horizon student from J2C (Job to Career). This should lead a student towards the identification of a SMART CAREER GOAL. At NHCE, the following are the Centers of Excellence:

- Cisco Networking Academy

- Capgemini Industry 4.0 Lab
- Capgemini DEMS Lab
- Capgemini VLSI Lab
- Capgemini 5 G lab
- Schneider Electric Lab
- SAP Next-Gen Lab
- FANUC Robotics
- Brillio
- IBM Open Power Lab
- Automation Anywhere
- Juniper Networks

1.4 FACULTY

The faculty at NHCE is wholly dedicated to their task and committed to developing each student's full potential. The Heads of the Departments have the requisite experience and strong academic backgrounds. As the student-teacher ratio is ideal, NHCE promises that each student will get adequate attention from the faculty.

1.5 ACADEMIC PROGRAMMES OFFERED

NHCE offers undergraduate and postgraduate programmes, research programmes, and many proficiency courses. It plans to start a series of certificate and diploma courses soon.

1.5.1 UNDERGRADUATE PROGRAMMES

Sl. No.	Programme
1	B.E– Artificial Intelligence & Machine Learning
2	B.E – Computer Science & Engineering
3	B.E – Electronics & Communication Engineering
4	B.E – Electrical & Electronics Engineering

5	B.E – Mechanical Engineering

1.5.2 POSTGRADUATE PROGRAMMES

Sl. No.	Programme
1	Master of Business Administration
2	Master of Computer Applications
3	M.Tech in Computer Science & Engineering

1.5.3 STUDY ABROAD PROGRAMME

During the past two years, NHCE has actively partnered with the Ministry of National Education, France, in various educational activities and collaborations. On 12/03/2018, an agreement was signed between NHCE and the Ministry of National Education, France, to facilitate student exchange Programmes between NHCE and various universities in France.

As a result of this agreement and several visits to France by the NHCE delegation, 45 seventh-semester students from all the B.E branches embarked on an 11-week student exchange Programme in reputed universities in France starting in September 2018. The universities in France have provided this rare opportunity for our students to experience their educational system, technology, and culture.

Every year, 45 students are selected based on merit for a study abroad Programme. The following are the Universities in France that have selected our students for the exchange Programme.

1. University of Rouen
2. University of Le Havre
3. ESIGELEC Rouen (Grand Ecole (French Ivy))
4. CESI Rouen
5. INSA Rouen

6. ISPA Alencon
7. University of Grenoble

1.6 PROFESSIONAL SOCIETIES

Professional societies active on the campus include ISTE, IIPe, IEEE, SAE, CSI, NGKC, RAI, IEI, ICI, AIMS, AIMA, NHRD, CDAC, MTC—Global & NEN, etc.

1.7 SCHOLARSHIP FACILITY

The Institute extends full freeship to the Institute's toppers every year. In addition, the toppers of each branch are given 50% freeship for PG courses on the campus. Apart from the Institute scholarship, Management also supports the students in encashing the Central and State Government scholarships as per norms.

1.8 THE INDUSTRY–INSTITUTE COLLABORATION

Our Institution has a continuous industry-institute interface. Students undertake live industrial projects in reputed industries and research laboratories as part of the curricular requirements.

1.9 ACHIEVEMENTS & ACCOLADES

- **Academic:** Every year, the Institution secures very good results. Many outstanding students have secured enviable positions in software and other industries, in campus selections.
- **Cultural:** Our students have participated in various university and college cultural activities.
- **Sports:** Our students have participated in various sports and events at the national and district levels, home tournaments, and VTU-sponsored sports activities.
- **R&D Facilities:** R&D facilities have been established in Computer Science and Engineering, Electronics and Communication Engineering, Information Science and Engineering, Electrical and Electronics Engineering, Mechanical Engineering, Chemistry, Mathematics, MBA, MCA, Physics, Civil Engineering, and Automobile Engineering.
- **Centers of Excellence:** The institution establishes world-class centres of excellence in partnership with industry. MOUs with industry are signed to Promote Industry–Institute collaboration.

2. SEMESTER SCHEME

As is well known, the Semester Scheme provides several benefits to technical education Programmes in contrast to the Annual Scheme. Therefore, the college adopts the Semester Scheme for its MCA Programme.

Academic Calendar: There shall be uniformity in the functioning of the Semester Scheme for all academic programmes across all Autonomous Colleges under the university, as this can provide good academic flexibility to their stakeholders, particularly the students and the faculty members. For this purpose, each academic year shall be divided into semesters, with the calendar, durations, and academic activities fixed in advance by the Autonomous Colleges while maintaining a standard opening/ reopening date for the odd semester. A copy of the calendar so fixed by the college shall be forwarded to the university at least two weeks before the commencement of the academic year.

The breakdown of an academic year for implementing the Semester Scheme at autonomous colleges is given below:

Typical Breakdown of Academic Year into Semesters	
Number of Semesters/ Year	<p>Two semesters are main semesters (odd, even), and one is a supplementary semester.</p> <p>Note: The supplementary semester primarily assists slow learners and/or repeater students in repeating the courses. However, the college may use this semester to arrange Add-On Courses for other students and/or to depute them for fieldwork and/ or internships.</p>
Semester Durations (Weeks)	<p>Main Semesters (Odd, Even):19 weeks each.</p> <p>Supplementary Semester: 8 weeks</p>
Academic Activities (Weeks)	<p>Main Semester:</p> <p>Registration of courses – 0.5 week;</p> <p>Course work – 15.5 weeks;</p> <p>Examination Preparation –1.0 week;</p> <p>Examinations –1.0 weeks;</p> <p>Declaration of Results -1.0 week; Total: 19 weeks.</p> <p>Supplementary Semester (For Non-Eligible Students):</p> <p>Registration of courses – 0.1 week;</p> <p>Course work – 7.0 weeks ;</p> <p>Examination preparation –0.2weeks;</p> <p>Examination –0.2weeks</p> <p>Declaration of Results-0.5 week;</p> <p>Total: 08 weeks</p> <p>Inter-Semester Recess:</p> <p>After each Main Semester – 2 to 3 weeks, flexible</p> <p>After Supplementary Semester – 1 to 2, flexible.</p> <p>Total: 14 (for good students) and 6 (for slow learner students).</p> <p>Note: Each semester has various provisions for students, such as Registration at the beginning, dropping courses in the middle, and withdrawal from courses towards the end, all of which are under the faculty members' advice.</p>

Examinations	<p>Continuous Internal Evaluation (CIE) and Semester End Examination (SEE) have equal weightage in assessing the student's performance in coursework, Laboratory work, and other activities.</p> <p>NOTE: The Course Instructor shall conduct the CIE throughout a semester on dates to be announced in advance, and the results will be made known to the students occasionally. This will help the students decide on dropping courses or withdrawing from classes based on their performance and in consultation with their faculty advisors. The dates for SEE shall be jointly fixed by the college in consultation with the university to facilitate the students in the transfer of credits.</p>
Other Items	<ul style="list-style-type: none"> • The college ensures that the total number of days for academic work is ≥ 180/ year. • The academic schedule prescribed by the college is strictly adhered to for the success of the semester Scheme. • The college mainly uses Supplementary Semester to conduct repeat courses to benefit non-eligible students. • Minimum, maximum and average course loads per semester are fixed by prior consultation with the university.

3. CREDIT SYSTEMS

GENERAL

As the Credit System has many advantages over the conventional system, it is necessary to introduce an appropriate Choice-Based Credit System (CBCS) for the various Programmes. This will greatly benefit the student's preparations for the challenging opportunities ahead.

In the Credit System, students' coursework is unitized, and each unit is assigned one credit after a student completes the teaching-learning process as prescribed for that unit and is successful in its assessment.

CREDIT DEFINITION

As it is desirable to have uniformity in the definition of credit across all autonomous colleges under the university, the following widely accepted definition for credit is followed at NHCE. This is mainly to provide good flexibility to the students.

Here, one unit of coursework and its corresponding one credit (while referring to a Main Semester) is equal to:

- a. Theory course, conducted for 1 hour/week
- b. Laboratory course or tutorial, conducted for 2 hours/week.

The following additional factors may also be noted in this connection:

- ✚ The above numbers are multiplied by a factor of 2 in the case of the supplementary semester, and
- ✚ Other student activities that are not intellectually demanding or do not lend to effective assessment, like practical training, study tours, and attending guest lecturers, will not carry any credit.

COURSE REGISTRATION

A student registers for courses (core or elective) to earn credits for meeting the requirements of a degree Programme. Such courses, together with their grades and the credits earned, are included in the Grade Card issued by the college at the end of each semester, like odd, even, and supplementary, and it forms the basis for determining the student's academic performance in that semester.

SUPPLEMENTARY SEMESTER

1. The supplementary semester is provided to help students who have failed their examinations. The supplementary semester is provided to help the student avoid losing an academic year. The department/college may offer some courses based on the availability of resources in hand. It is the discretion of the department /college whether to offer the supplementary semester or not. Supplementary semester is a special semester, and the student cannot demand it as a matter of right. During the supplementary semester, a student is permitted to re-register for the course(s) where he/she has secured an F-Grade/W-Grade (new courses/courses dropped during the regular semester are NOT allowed for registration during the supplementary semester). A student is permitted to re-register for a **maximum of 4 courses/14 credits**. All courses are not offered. A student has to opt for those offered by the department in a given supplementary semester. The student has to

pay a special fee prescribed by the college to register for a course in the supplementary semester. The Institutes shall notify the table for supplementary semester well in advance.

Clause	Particulars
24OMC1.0	Title, Duration and Credits of the Programme of Study
24OMC1.1	Title: The Programme shall be called Master of Computer Applications, abbreviated as MCA.
24OMC1.2	Minimum Duration: The programme shall be a full-time programme extended over two academic years, divided into four semesters, and each semester shall be 15-16 weeks in duration (90 working days).
24OMC1.3	A faculty/employee working on a full-time basis in an institution/organization and pursuing/pursuing any full-time course for the same duration as regular shift shall be considered ineligible for employment/higher studies.
24OMC1.4	Maximum Duration for Programme Completion: A full-time candidate shall be allowed a maximum duration of 4 years from the first semester of admission to become eligible for the award of a Master's Degree, failing which he/she may discontinue the Programme or register once again as a fresh candidate for the I semester of the Programme.
24OMC1.5	Prescribed Number of Credits for the Programme: The number of credits to be completed for the award of an MCA degree shall be 80.
24OMC1.6	Definition of Credits: 01 hour Lecture (L) per week per semester =1 credit 02 hours Tutorial (T) per week per semester =1 credit 02 hours Practical/Laboratory/Drawing (P) per week per semester=1 credit. Note: <ul style="list-style-type: none"> Four-credit courses are designed for a 45-50 hours Teaching-Learning process. Three credit courses are designed for a 40-45-hour Teaching-Learning

	process.
24OMC1.7	The university shall notify the calendar of events regarding the programme in advance.
24OMC2.0	Eligibility for Admission (As per the Government orders issued from time to time)
24OMC2.1	<p>Eligibility for Admission to MCA Programme (As per the Government orders issued from time to time):</p> <p>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). Obtained at least 50% marks (45% marks in the case of candidates belonging to the reserved category, which applies only to Karnataka States students) in the qualifying Examination.</p>
24OMC2.2	<p>For admissions under PGCET qualification and Roaster System of the Government of Karnataka:</p> <p>There shall be an Entrance Examination (PGCET) for admission to the MCA Programme. A candidate seeking admission to the MCA Programme offered in any of the engineering colleges affiliated with VTU shall appear for this examination. For admission under the Government quota, ranks obtained in the PGCET entrance exam, conducted by the Karnataka Examination Authority (KEA), shall be considered. For admissions under</p> <p>Management Quota: 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 others 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 interview and selects the candidates for admission.</p>

24OMC2.3	<p>(i) The candidates from universities other than the universities of Karnataka shall have to obtain an Eligibility Certificate from the VTU to seek admission to the MCA Programme in any of the colleges affiliated with VTU.</p> <p>(ii) Candidates from foreign countries shall have to obtain an eligibility certificate from the VTU to seek admission to the MCA Programme in any of the colleges affiliated with VTU. Further, they must produce an equivalence certificate from the Association of Indian Universities (AIU).</p>
24OMC2.4	The AICTE, State Government, and VTU will sanction the intake under various categories from time to time.
24OMC2.5	<p>Admission to vacant seats:</p> <p>Seats remaining vacant (unfilled) after the completion of the PG admission process by the Karnataka Examination Authority shall be filled by the Institution by inviting applications through press notification. Candidates, preferably those with valid PG CET scores, shall fill the seats. 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 college's principal, the Head of the concerned Department and the subject experts shall be in charge of admissions.</p>
24OMC3.0	Courses
24OMC3.1	<p>The curriculum of the Programme shall be any combination of the following types of courses:</p> <p>(i) 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.</p> <p>(ii) Professional Electives Courses (PEC)—relevant to the chosen specialization/branch; these courses can be chosen from the pool of papers. They shall support the discipline, provide extended scope, enable exposure to another discipline/domain, and nurture student skills.</p> <p>(iii) Open Electives Courses (OEC), from other technical and/or emerging specialization areas.</p>

	<p>(iv) Project Work, Seminar, Societal Project, Mini Project.</p> <p>(v) Audit Courses (AC):</p> <p>(a) The Audit course can be any credit course offered by the Programme to which the Candidate is admitted (other than the courses considered for completing the prescribed Programme credits). Audit courses are non-credit courses opted by students for self-enrichment. Though the CIE and SEE are not required, attendance must be compulsorily satisfied for the audit course/s to find a place in the grade card without mentioning the letter grade and credit.</p> <p>(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 the Scheme of Teaching and Examination.</p> <p>(vii) Online Courses: These mandatory online courses are ability enhancement courses, skill development courses, emerging technology courses, bridge courses, or advanced learning courses. The concerned board of studies/VTU suggests these courses. 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 two courses.</p> <p>(viii) Integrated Professional Core Course (IPCC): Professional Theory Core Course Integrated with practical of the same course. The theory part of the IPCC shall be evaluated both by CIE and SEE. The practical part shall be assessed by only CIE (no SEE). However, questions from the practical part of IPCC shall be included in the SEE question paper</p> <p>(ix) Bridge Course (BC): This non-credit course is introduced to students admitted into the MCA Programme who have not taken mathematics at the 10+2 or degree level. Students must pass the course to qualify for the degree award.</p>
24OMC3.2	A candidate shall exercise his /her option regarding the electives and register before the beginning of the concerned semester. The candidate may be

	permitted to opt for a change of elective subject within 10 days from the commencement date of the semester as per the institution's calendar.
24OMC3.3	Students shall be allowed to choose the elective/s according to their career plans, and the minimum number of students to be registered for an elective course shall not be restricted.
24OMC4.0	Internship
24OMC4.1	<p>Internship: The student shall undertake an internship for the specified period as per the Scheme of Teaching and Examination.</p> <ol style="list-style-type: none"> (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, or recognized national and international Professional Bodies, Societies, or Organizations. (2) The department/college shall nominate a faculty member to facilitate, guide, and supervise students during internships. (3) The students shall regularly report the progress of the internship to the internal guide and seek his/her advice. (4) The Internship shall be completed during the period specified in the Scheme of Teaching and Examination. (5) After completion of the Internship, students shall submit a report to the Head of the Department with the approval of internal and external guides. (6) There shall be 50 marks for CIE (Presentation: 25 marks, Report: 25 marks) and shall be evaluated by the internal panel. (7) Students are permitted to carry out internships anywhere in India or abroad. The Institution will not provide any financial assistance to any student for internships.
24OMC4.2	<p>Failing to undergo Internship: Internship is one of the heads of passing. Completion of an internship is mandatory. If any student fails to undergo/complete the internship, he/she shall be considered failed in that course, and the prescribed credits shall not be awarded for 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</p>

	conditions prescribed for the same during the subsequent academic year. The reappearance shall be considered an attempt.
24OMC5.0	Seminar
24OMC5.1	<p>Seminar: Seminar is one of the criteria for passing.</p> <p>(i) 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>(ii) The Head of the Department shall arrange to conduct 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 members from the department, with the senior most acting as the chairman/chairperson. [To be read along with 24OMC10.3]</p>
24OMC6.0	Project
24OMC6.1	<p>Project Work and Dissertation:</p> <p>Each candidate shall carry out the project work independently as per the 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 interdisciplinary, 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, during the third semester. The subject and topic of the dissertation shall be the candidate's major field of study. Modifying only the title but not the field of work may be permitted at the time of the final submission of the dissertation report during the fourth semester. If the dissertation has to be carried out in any industry/ R&D labs outside the campus, permission shall be obtained from the principal.</p>
24OMC6.2	<p>Project is one of the heads of passing:</p> <p>The candidate shall submit a soft/hard copy of the dissertation work to the Guide and, upon checking, will forward it to the office of the controller of examination. The chairman of the respective BoS shall submit a panel of examiners to the office of CoE. The examiners shall be selected from the panel, and they will</p>

	evaluate the project work.
24OMC6.3	<p>Plagiarism Check:</p> <p>Once the dissertation is ready, the guide shall send it for plagiarism check. The acceptable plagiarism index is less than or equal to 10%. If the check indicates a plagiarism index greater than 10%, the candidate must resubmit the dissertation after making the necessary corrections. After the plagiarism check, the dissertation shall be forwarded to the office of the examination controller along with the plagiarism report.</p>
24OMC6.4	The dissertation shall be emailed for evaluation to two examiners—one internal examiner (guide/co-guide) and one external examiner (first)—appointed by the COE from the list sent by BOS. Each examiner shall evaluate the dissertation independently.
24OMC6.5	Examiners shall evaluate the dissertation generally within two weeks of receiving it via email.
24OMC6.6	The examiners shall independently submit the marks in the specified format by email to the Office of CoE.
24OMC6.7	The average of the marks awarded by the two Examiners shall be the final evaluation marks for the Dissertation.
24OMC6.8	<p>(a) Viva-voce examination of the candidate shall be conducted as per 24OMC6.10 if the dissertation work and the reports are accepted by the external examiner (first).</p> <p>(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.</p> <p>(c) The external examiner (first) can recommend modifications/suggestions of the dissertation or altogether reject the dissertation. The examiner shall offer suggestions for improvement of the dissertation for resubmission or list the reasons for rejection of the dissertation.</p> <p>(d) The resubmitted dissertation incorporating the modifications/suggestions [as per 24OMC6.8 (b)] of the external examiner (first) and satisfying the provision 24OMC6.3 shall be sent again to the external examiner (first) for evaluation.</p>

	<p>If the dissertation and the report are accepted by the external examiner (first), a viva voce examination of the candidate shall be conducted as per 24OMC6.10.</p> <p>(e) In case of rejection of the dissertation by the external examiner (first), the same will be sent to a second examiner (external) and approved by the office of CoE. The decision of the Second Examiner (external) is final. If the Second Examiner (external) accepts the dissertation and the report, a viva voce examination of the candidate shall be conducted as per 24OMC6.10. Suppose the Second Examiner (external) rejects the dissertation and the report; in that case, the candidate shall have to complete the dissertation work and submit the dissertation subject to provisions of 24OMC1.4. In such cases of rejection, the candidate shall redo the entire procedure, starting with submitting the dissertation in soft copy.</p> <p>(f) In case of rejection of the Dissertation, with reasons, by the external examiner (first) [as per 24OMC6.8 (b)], the same will be sent to a Second Examiner (external) [not necessarily the same examiner considered under 24OMC6.8 (d)] approved by the office of CoE. The decision of the Second Examiner (external) is final. If the Second Examiner (external) accepts the dissertation and the report, a viva voce examination of the candidate shall be conducted as per 24OMC6.10.</p> <p>Suppose the Second Examiner (external) rejects the dissertation and the report. In that case, the candidate shall have to carry out the dissertation work once again and submit the dissertation subject to provisions of 24OMC1.4. In such cases of rejection, the candidate shall redo the entire procedure, starting with submitting the dissertation in soft copy.</p>
24OMC6.9	<p>The candidate whose Dissertation is rejected can rework on the same topic or choose another dissertation topic under the same Guide or a new Guide if necessary. In such an event, the report shall be submitted subject to provisions of 24OMC1.4.</p>

24OMC6.10	<p>The external examiner and internal examiner/ guide shall conduct the viva voce examination of the candidate.</p> <p>As per the direction of the office of CoE, the internal examiner shall have to arrive at a mutually convenient date for the conduct of a viva-voce examination of the concerned candidate with an intimation to the office of CoE. In case one of the examiners expresses his/her inability to attend the viva voce, the office of CoE shall appoint a substitute examiner in his/her place.</p>																																							
24OMC6.11	<p>The relative weights for the evaluation of the dissertation and the performance at the viva voce shall be as per the scheme of teaching and examination.</p>																																							
24OMC6.12	<p>The marks awarded by both the Examiners at the viva voce Examination shall be sent jointly to the office of CoE immediately after the examination.</p>																																							
24OMC6.13	<p>Examination fees, as fixed from time to time by the Institution for evaluation of dissertation report and conduct of viva voce, shall be remitted through the Head of the Institution as per the instructions of the Registrar (Evaluation) from time to time.</p>																																							
24OMC6.14	<p>The candidates who fail to submit the dissertation work within the stipulated time must submit it at the time of the subsequent examination.</p>																																							
24OMC7.0	Computation of SGPA and CGPA																																							
24OMC7.1	<p>(i) The Institution adopts an absolute grading system wherein marks are converted to grades. Every semester, results will be declared with a semester grade point average (SGPA) and a Cumulative Grade Point Average (CGPA). The CGPA will be calculated for every semester except the first semester.</p> <p>(ii) The grading system with the letter grades and the assigned range of marks under the absolute grading system are as given below:</p> <p>Letter Grade and Corresponding Grade Points on a typical 10-point scale</p> <table><tr><th>Level</th><th>Outstanding</th><th>Excellent</th><th>Very Good</th><th>Good</th><th>Average</th><th>Pass</th><th>Fail</th></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>Grade Points</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 rowspan="2">Percentage of Marks Scored in a Course</td><td>≥90</td><td><90 ≥80</td><td><80 ≥70</td><td><70 ≥60</td><td><60 ≥55</td><td><55 ≥50</td><td><50</td></tr><tr><td>(90-100)</td><td>(80-89)</td><td>(70-79)</td><td>(60-69)</td><td>(55-59)</td><td>(50-54)</td><td>(0-49)</td></tr></table>	Level	Outstanding	Excellent	Very Good	Good	Average	Pass	Fail	Letter Grade	O	A+	A	B+	B	C	F	Grade Points	10	9	8	7	6	5	0	Percentage of Marks Scored in a Course	≥90	<90 ≥80	<80 ≥70	<70 ≥60	<60 ≥55	<55 ≥50	<50	(90-100)	(80-89)	(70-79)	(60-69)	(55-59)	(50-54)	(0-49)
Level	Outstanding	Excellent	Very Good	Good	Average	Pass	Fail																																	
Letter Grade	O	A+	A	B+	B	C	F																																	
Grade Points	10	9	8	7	6	5	0																																	
Percentage of Marks Scored in a Course	≥90	<90 ≥80	<80 ≥70	<70 ≥60	<60 ≥55	<55 ≥50	<50																																	
	(90-100)	(80-89)	(70-79)	(60-69)	(55-59)	(50-54)	(0-49)																																	

	<p>(iii) A student obtaining a Grade F in a course shall be considered failed and must register in the supplementary semester. Any letter grades the student secured during his /her reappearance shall be retained. However, the number of attempts to clear a course shall be indicated in the grade cards/ transcripts.</p> <p>If a student is not eligible to appear SEE due to noncompliance with any course letter grades assigned, that course shall be NE.</p> <p>(iv) Transitional grades: In the following cases, transitional grades, such as 'I', 'W', and 'X', shall be awarded to a student. After the student completes his/her course requirements, including the examinations, these grades need to be converted into one or the other of the letter grades (O-F).</p> <p>a. Grade 'I': Awarded to a student having satisfactory attendance at classes and meeting the passing standards at CIE in a course but remained absent from SEE for valid and convincing reasons acceptable to the college, like:</p> <ul style="list-style-type: none"> • Illness or accident which disabled him/her from attending SEE • A calamity in the family at the time of SEE, which to be away from the college • Any other verifiable exigency <p>b. Grade 'W':</p> <p>Awarded to a student with satisfactory class attendance but withdrew from that course before the prescribed date in a semester under faculty advice.</p> <p>c. Grade 'X':</p> <p>Awarded to a student with a high CIE rating ($\geq 90\%$) in a course, but SEE performance was observed to be poor, which could result in an overall F grade in the course.</p> <p>(v) Make-up Examination: The make-up examination facility shall be available to the students who may have missed the SEE of one or more courses in a semester for valid reasons and given the 'I' grade. Students having the 'X' grade (as per VTU standard, approved in ACM) shall also be eligible to take</p>
--	--

	<p>advantage of the facility. The makeup examination shall be held as per the dates specified in the academic calendar. However, it will be possible for the autonomous college to have this examination at any other time in the semester with the permission of its academic council. In all these cases, the standard of the make-up examination shall be the same as that of regular SEE for the courses.</p> <p>All the 'I' and 'X' grades awarded to the students must be converted to the appropriate letter grades and communicated to the college authorities within two days of the respective Make-Up Examinations. Any 'I' and 'X' grades still not converted within two days after the last scheduled makeup Examinations shall be automatically converted to an 'F' Grade.</p> <p>(vi) All the 'W' grades awarded to the students shall be eligible for conversion to the appropriate letter grades only after the concerned students re-register for these courses in a main (odd/even) or Supplementary semester and fulfil the passing standards for their CIE and (CIE+SEE) as prescribed at the Autonomous College.</p> <p>(vii) Supplementary exam facility shall be available to students with F grades.</p>
24OMC7.2	<p>Grade Point Averages:</p> <p>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 equations together facilitate the declaration of a student's academic performance at the end of a semester and at the end of successive semesters, respectively. Thus,</p> $SGPA = \frac{\Sigma[CourseCredits \times GradePoints]for all the Courses in that Semester}{\Sigma[CourseCredits]for all the Courses in that Semester}$

$$CGPA = \frac{\Sigma[CourseCredits \times GradePoints] \text{ for all Courses excluding those with F and transitional grades until that Semester}}{\Sigma[CourseCredits] \text{ for all Courses excluding those with F grades until that Semester}}$$

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

Semester (Odd :I, Even: 11)	Course Number	Credits	Grade	Grade Points	Credit Points	SGPA, CGPA
I	XX101	5:0:0 = 5	A	8	5×8=40	$SGPA = \frac{122}{25}$ = 4.88
I	XX102	3:2:0 = 5	Absent(F)	0	5×0 =00	
I	XX103	3:0:0 = 3	A+	9	3×9=27	
I	XX104	0:1:1 = 2	F	0	2×0=00	
I	XX105	4:1:0 = 5	B	6	5×6=30	
1	XX106	5:0:0 = 5	C	5	5×5=25	
Total		25 (18*)	Total		122	

(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	$SGPA = \frac{158}{25}$ = 6.32
II	XX108	4:0:0 = 4	A	8	4×8	
II	XX109	3:0:0 = 3	B	6	3×6	
II	XXI10	4:1:0 = 5	C	5	5×5	
II	XXI11	2:1:1 = 4	A	8	4×8	$CGPA = \frac{(122 + 158)}{18 + 23}$ = $\frac{274}{41} = 6.83$
II	XXI12	2:0:0 = 2	F	0	2×0	
II	XXI13	0:2:0 = 2	A	8	2×8	
Total		25 (23*)	Total		158	

(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	$SGPA (ISemester) = \frac{122 + 30 + 14}{25}$ $= \frac{166}{25} = 6.64$																								
	I	XX104	0:1:1=2	B+	7	2×7=14																									
	II	XX112	2:0:0=2	B	6	2×6=12	$SGPA(IISemester) = \frac{158 + 12}{25}$ $= \frac{170}{25} = 6.8$																								
	CGPA at the end of the academic year after passing all the courses of the two consecutive semesters under consideration = $\frac{(6.64 \times 25 + 6.8 \times 25)}{50} = 6.72$																														
	<table><tr><th colspan="5">(b) CGPA Calculation of the Programme: An Illustrative Example</th></tr><tr><th>Semester</th><th>I</th><th>II</th><th>III</th><th>IV</th></tr><tr><td>Credits of the</td><td>24</td><td>26</td><td>24</td><td>26</td></tr><tr><td>SGPA</td><td>7.00</td><td>8.50</td><td>9.20</td><td>6.86</td></tr><tr><td colspan="5">$CGPA = \frac{(24 \times 7.00 + 26 \times 8.50 + 24 \times 9.20 + 26 \times 6.86)}{100}$ $= 7.88$</td></tr></table>							(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	$CGPA = \frac{(24 \times 7.00 + 26 \times 8.50 + 24 \times 9.20 + 26 \times 6.86)}{100}$ $= 7.88$			
(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																											
$CGPA = \frac{(24 \times 7.00 + 26 \times 8.50 + 24 \times 9.20 + 26 \times 6.86)}{100}$ $= 7.88$																															

24OMC7.3	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.
24OMC8.0	Conversions of Grades into Percentage and Class Equivalence
24OMC8.1	Conversions of Grades into Percentage The 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 %
24OMC8.2	Class Equivalence: After the conversion of the final CGPA into the percentage of marks (P), a graduating student is reckoned to have passed in <ul style="list-style-type: none">• First Class with Distinction [FCD] if P≥70%• First Class (FC) if P≥60% but <70% and• Second Class (SC) if P<60%, and P>50%.
24OMC9.0	Continuous Internal Evaluation and Semester End Evaluation At the beginning of the semester, the course instructor or the faculty who is teaching the course shall have to announce the methods used for CIE.
24OMC9.1	Continuous Internal Evaluation There shall be a maximum of 50% CIE Marks in each theory and practical paper. A candidate shall obtain not less than 50% of the maximum marks prescribed for the CIE of each Theory course/ Laboratory/Internship/Project. [To be read along with 24OMC9.8]

24OMC9.2	<p>(1) CIE Marks for theory shall be based on</p> <ul style="list-style-type: none"> (a) Tests for theory component(50% of Marks) (b) Alternate Assessment: Assignments/Quizzes/participation in Seminars/workshops/ Group discussion/Presentation/Self-study Projects / other Co-curricular activities suitably planned to attain the COs and POs (50% of Marks). The total CIE marks (maximum 50 marks) shall be the sum of the marks secured in IA Tests (average of all three tests) and Alternate Assessment. <p>(2) CIE Marks for Integrated Professional Core Courses(IPCC) shall be based on</p> <ul style="list-style-type: none"> (a) Tests for theory component (for 50% Marks) (b) Alternate assessment (for 10% Marks) (c) Practical Component(for 40% Marks) <p>The total CIE marks (maximum 50 marks) shall be the sum of the marks secured in IA Tests (average of all three tests) and marks secured in CIE for Practical Component.</p> <p>(3) CIE Marks for Professional Core Course Lab(PCCL) shall be based on</p> <ul style="list-style-type: none"> (a) Tests for lab component (For 100% Marks) <p>The total CIE marks (maximum 50 marks) shall be the average of the marks secured in two IA Tests.</p>
24OMC9.3	<p>The CIE marks in a theory course, for 25 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 two tests.</p>
24OMC9.4	<p>The candidates shall write the Tests in the Blue Book/s. The Blue Book/s and other documents relating to the award of CIE marks under 24OMC9.2 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 office of CoE.</p>
24OMC9.5	<p>Every page of the CIE marks list shall bear the signatures of the concerned Teacher, Head of the Department, and Principal.</p>
24OMC9.6	<p>The CIE marks list shall be displayed on the Notice Board, and corrections, if any, shall be incorporated before submission to the office of CoE.</p>
24OMC9.7	<p>The CIE marks shall be sent to the CoE office by the department head well in advance before the commencement of Semester End Examinations. No corrections of the CIE marks shall be entertained after the submission of marks.</p>
24OMC9.8	<p>Candidates obtaining less than 50% of the CIE marks in any course (Theory/Seminar Laboratory/ Internship/ Project) shall not be eligible to appear for the Semester End examination in that course/s. In such cases, the Head of the Department shall announce the student as NSSR. The student can register</p>

	for the course in a supplementary semester when offered.
24OMC9.9	<p>Semester-End Evaluation: There shall be a semester-end examination at the end of each semester.</p> <p>Setting Theory Question Papers and Evaluation: The question papers in theory courses shall be set by the Examiners appointed by the Chairman of the board of Examination and approved by CoE.</p>
24OMC9.10	The theory papers shall be double-valued. The theory Answer booklets shall be valued independently by two examiners appointed by the Chairman of the Board of Examination and approved by CoE.
24OMC9.11	Suppose the difference between the marks awarded by the two Examiners is not more than 15 per cent of the maximum marks. In that case, the marks awarded to the candidate shall be the average of two evaluations.
24OMC9.12	Suppose the difference between the marks awarded by the two Examiners is more than 15 per cent of the maximum marks. In that case, the answer booklet shall be evaluated by a third Examiner appointed by the office of CoE. The average of the marks of the nearest two valuations shall be considered the marks the candidate secured. If one of the three marks falls exactly midway between the other two, then the highest two marks shall be taken for averaging.
24OMC10.0	Eligibility for Passing and Award of Degree
24OMC10.1	<p>(1) A Student who obtains any grade O to C shall be considered as passed, and if a student secures an F grade in any of the heads of passing, he/she has to reappear in that head for the Semester End Examination (SEE).</p> <p>(2) A student shall be declared successful at the end of the Program for the award of a Degree only on obtaining a CGPA ≥ 5.00, with none of the courses remaining with an F Grade.</p>

24OMC10.2	<p>(1) For a pass in a theory and laboratory (practical) course, the student shall secure a minimum of 40% of the maximum marks prescribed in the SEE, 50% of marks in CIE and 50 % in the aggregate of CIE and SEE marks. The Minimum Passing Grade in a course is C.</p> <p>(2) To pass an Integrated Professional Core Course (IPCC), which refers to a Professional Theory Core Course integrated with the practical of the same course, the student has to secure a minimum of 50% marks in theory and 50% marks in practical components of CIE. However, the student shall secure a minimum of 40% of the maximum marks prescribed in the SEE, 50% of marks in CIE and 50 % in the aggregate of CIE and SEE marks. The Minimum Passing Grade in such a course is C.</p> <p>(3) For the Bridge Course (BC), a non-credit course introduced to students who are admitted into the MCA Program from a non-computer Science background, have to secure a minimum of 40% of the maximum marks prescribed in the SEE and 50% of marks in CIE and 50 % in the aggregate of CIE and SEE marks.</p> <p>(4) For Audit Courses/ Ability Enhancement Courses suggested by BOS(Online Courses), there is no credit and are not counted for Vertical Progression. However, a pass in two such courses is mandatory for the Award of the Degree.</p>
24OMC10.3	<p>(1) For a pass in the Internship (INT)/Seminar/Mini Project/Project Work examination, a student shall secure a minimum of 50% of the maximum marks prescribed in the 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.</p> <p>(2) For the Societal Project (SP) / Project Work examination, a student shall secure a minimum of 50% of marks in CIE. The Minimum Passing Grade in a course is C.</p>
24OMC10.4	<p>IV semester candidates with backlog courses are permitted to upload the dissertation report and appear for SEE. The IV semester grade card shall be released only when the candidate completes all the backlog courses and becomes eligible for the degree award.</p>
24OMC10.5	<p>Rejection of Result</p> <p>(1) A candidate may, at his/her desire, reject his/her latest semester, except the IV semester results of the university examination with 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.</p> <p>(2) Rejection of university examination results, including CIE marks, is not permitted.</p>
24OMC10.6	<p>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 an even semester, the candidate cannot be admitted to the next odd semester.</p>

24OMC10.7	Applications for rejection shall be submitted to the Registrar (Evaluation) through the college principal within thirty days from the date of announcement of results.
24OMC10.8	A candidate who opts for rejection of the results of a semester shall be eligible for the award of class and distinction but shall not be eligible for the award of rank.
24OMC10.9	Eligibility for Award of Degree: A student shall be declared to have completed the Master of Computer Applications degree, provided the student has undergone the stipulated coursework as per the regulations and has earned the prescribed credits as per the Scheme of Teaching and Examination of the Programme.
24OMC11.0	Attendance Requirement
24OMC11.1	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 include the Candidate's details, course name and code, number of credits, and category (core/elective/audit) for each course 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.
24OMC11.2	Each semester's courses shall be treated as a separate unit for calculation of the attendance.
24OMC11.3	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 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 supporting documents and recommendations to condone the shortage are to be submitted.
24OMC11.4	In case of late admission, approved by a competent authority (Karnataka Examination Authority/VTU), to the first semester of the Programme, attendance shall be reckoned from the date of admission to the Programme.
24OMC11.5	NSSR & NSAR: Students failing to secure the minimum percentage of attendance or CIE mark of any Course/shall not be eligible for the SEE conducted, and they shall be considered as a fail because of Not Satisfying Attendance Requirement

	(NSAR)/Not Satisfying Sessional Requirement (NSSR) in that course/those courses. However, they can appear for SEE conducted in other classes of the same semester. Improvement in CIE marks shall not be allowed during the current semester. The course/s, when repeated, is considered an attempt. The courses with F grades should be registered and taken only during the supplementary semester.
24OMC11.6	Principals of the concerned colleges shall regularly notify the list of candidates who fall short of attendance.
24OMC11.7	The list of candidates falling short of attendance shall be sent to the office of CoE at least one week before the commencement of the examination.
24OMC12.0	Promotion and Eligibility (Vertical Progression)
24OMC12.1	Promotion: There shall be no restriction for promotion from an odd semester to the next even semester, provided the student has fulfilled the attendance requirement.
24OMC12.2	(a) Candidates with a maximum of four backlogged courses in the first year shall be eligible for admission to the second year (III semester). (b) Each credit course shall be treated as a head of passing.
24OMC12.3	The mandatory non-credit courses, if any, shall not be considered for the eligibility criteria prescribed for promotion, class award, SGPA calculation, and CGPA. However, passing the above courses is mandatory before completing the Degree.
24OMC12.4	Passing ONLINE courses is mandatory for the award of a degree. ONLINE courses are not considered under vertical progression; however, the student has to pass these courses before the completion of the maximum duration of the Programme. Suppose a student fails a selected ONLINE course in a semester. In that case, he/she can pass the course the following semester by taking the same course (if offered online) or other university-approved courses during that session. The title of the course/s in which he/she qualifies shall be mentioned in the grade card with the letter PP.

24OMC13.0	Temporary Discontinuation/Break in the Programme
	<p>(a) If a candidate, for any reason, temporarily discontinues the Programme or takes a break from the Programme during any semester, he/she may be permitted to continue in the Programme by registering for the same semester of the prevailing scheme. The candidate shall complete all the remaining coursework subject to provision 24OMC1.4. Also, the Candidates may have to complete additional course/s, if any, as per the decision of the concerned Board of Studies and approval of the Dean on establishing an equivalence between the 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, the SGPA and CGPA should decide whether to admit the student for the award of a degree. Such a candidate shall not be eligible for the award of rank.</p> <p>(b) Candidates who are admitted 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 the concerned Board of Studies and approval of the Dean, Faculty of Engineering, on establishing an 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, the SGPA and CGPA should decide whether to admit the student for the award of a degree. Such a candidate shall not be eligible for the rank award.</p>
24OMC14.0	Award of Prizes, Medals and Ranks
24OMC14.1	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 Institution/University for such awards.
24OMC14.2	<p>(1) For the award of rank in a Specialization of Master of Computer Applications, the CGPA secured by the student on completion of the Programme is considered.</p> <p>(2) A student shall be eligible for a rank at the time of award of the degree of Master of Computer Applications, provided the student</p> <ul style="list-style-type: none"> • Is not a repeater in any semester • Has not rejected the results of any semester. • Has passed I to IV semester in all the courses on the first attempt only <p>(3) The total number of ranks awarded shall be 10% of the total number of students appearing in the IV semester, subject to a maximum of 10 ranks.</p> <p>Illustration:</p> <p>(a) If 150 students appeared for the IV semester, the number of ranks to be declared will be 10.</p>

	<p>(b) If 84 students appeared for the IV semester, the number of ranks to be declared for will be 08.</p> <p>The fractional number of ranks is rounded to a higher integer only when the first decimal place value is greater than or equal to 5.</p> <p>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 a higher SGPA. If it is not resolved even at this stage, the number of times a student has obtained higher grades, like O, A+, A, B+, etc., shall be considered to decide the rank order.</p>
24OMC15.0	Applicability and Power to Modify
24OMC15.1	The regulations governing the Degree of Master of Computer Applications shall be binding on all concerned.
24OMC15.2	<p>1) Notwithstanding anything contained in the foregoing, the Institution shall have the power to issue directions/ orders to address any difficulty.</p> <p>2) Nothing in the foregoing may be construed as limiting the power of the Institution to amend, modify or repeal any or all of the above.</p>

5 DISCIPLINARY MEASURES

5. 1 GENERAL MEASURES

- (a)** The student will not assist or even associate himself/herself with any activities that are likely to disturb the peace and smooth functioning of the institution.
- (b)** The tuition fees shall be paid by the student before or during admission/ registration in every academic year.
- (c)** The student shall follow all the rules and regulations laid down by the college authorities/Management from time to time.
- (d)** Students will have to maintain regular attendance. If attendance is less than 75%, the student will not be allowed to take the ensuing CIE tests. Cumulatively, he should have over 85% attendance, as mentioned earlier, to be eligible for the semester-end exams. In case of any absence, they should provide appropriate proof (medical Certificate/letter from parents, etc.) and information within three days of the absence from the department to the Dean-Students affairs.
- (e)** In case of planning to participate in any curricular (including paper presentation/ competition), co-curricular and extracurricular activities, prior permission has to be sought through the proper channels. Further, immediately within three days of return from the event, they should also provide the necessary proof to the counsellor, the department, and the teacher concerned. Otherwise, they

will not be considered for any attendance benefit, and the certificate will not be considered for credits for the Innovation and Social Skills paper.

5.2 ANTI-RAGGING RULES

Ragging in any form is totally prohibited on campus. Ragging menace is a criminal offence, and students who are involved in such obnoxious practices are liable to be rusticated from the college. Severe action will be initiated against the students who are indulging in ragging. Preventive measures have been taken to tackle ragging. An Anti-Ragging Committee and anti-ragging squads have been formed to prevent ragging.

A student seeking admission to the college and hostel forming a part of the institution shall have to submit affidavits duly signed by him/her and also from his/her parents/ guardians in the prescribed format as per the regulations.

5.3 DRESS CODE

- Dress code is defined based on the need for safety, decency, functionality and comfort.
- Displaying offensive and obscene slogans and icons on clothing is prohibited.

The following dress code must be adhered to by the students at all times within the campus premises:

For boys:

- No shorts
- No headgear (Except Pagdi for Sikhs)
- No overly torn jeans
- No chappals

For girls:

- No shorts
- No short skirts/dresses
- No short tops
- No overly torn jeans
- No strapless tops
- No burkhas

- No headgears/headscarves

Both Boys and Girls must dress in smart casuals. The dress code must be strictly adhered to. The college reserves the right to restrict the entry of students who do not follow the dress code.

5.4 MOBILE PHONE

- Students are banned from using mobile phones in instructional areas. However, they can use them in open areas (lawns and open seating areas).
- If a student is found conversing on a mobile phone in academic areas/ buildings, the mobile will be confiscated, and a fine will be levied for violating the rule.

5.6 SECURITY ISSUES

- Wearing an identity card in a clearly visible way is compulsory inside the campus for security reasons. Entry into the campus without a valid identity card is strictly prohibited. The staff and the security personnel have the authority to check the ID cards
- Motorcyclists must remove their helmets before entering the College Campus
- College security staff has the right to ask individuals to identify themselves. The action shall be initiated against those persons who refuse to identify themselves.
- The students are advised to park their vehicles in the designated parking areas.

Note:

In case of violation of college/hostel norms, rules and regulations, a student may be prevented from continuing in that semester and/or appearing for the semester examination depending on the outcome of the Disciplinary Action Committee report. Ignorance of any rules does not condone any misbehavior.

6. COUNSELING CENTER

New Horizon College of Engineering is happy to extend the services of professional counsellors at their Counseling Center for the student community. Today's youth are challenged by many stresses from within their own home and external sources. There may be issues related to personality, being unable to communicate with peers and others effectively, low self-esteem, poor self-confidence, inability to concentrate, fear of exams, anxiety about one's ability to be a successful student of engineering,

confusion about the future and career, stress related to performance in the college, time management, maybe health related issues and many more.

“Where can you get some relief from these stresses and make sense of what is happening to you and how you cope? Is there somebody to listen to you, especially when you are far away from home and loved ones? These are the questions that may leave you so very disturbed and under tension that it may impact your scores in academics, your concentration and your enjoyment of the best years of your life, that is, college life”. The place to go is the Counseling Center, and seek the help of the Counselors who are there to enable you to understand, build capacities to overcome and develop skills to cope with the situations that you may find stressful. The counselling keywords are compassion, building trust, confidentiality and being non-judgmental. The counselling process is usually one-on-one, and these are experienced counsellors who can empower you to fulfil your true potential during your tenure at New Horizon College of Engineering.

New Horizon College of Engineering will be a platform for learning, exploring, developing and growing into positive and happy professionals who can look forward to a fruitful career. Counsellors can lend a helpful hand to you in this journey.

7 GUIDELINES AND TEMPLATE FOR THE PREPARATION OF MINI PROJECT /PROJECT REPORT

1. INTRODUCTION

This document intends to provide guidelines to both UG and PG students for preparing their mini-project reports. In general, the mini-project report should document in an organized and scholarly fashion an account of the candidate's original work, allowing the application of knowledge acquired during the current and past semesters.

2. NUMBER OF COPIES TO BE SUBMITTED

Students should submit three copies to the concerned Departments on or before the stipulated date. Upon verification and evaluation, the Head of the Department shall send:

- A Soft copy to the library
- A hard copy to the supervisor and
- A hard copy to the student concerned.

3. SIZE OF PROJECT REPORT

The project report should be at least 50 pages.

4. ORDER OF CONTENTS

The sequence in which the mini-project report material should be arranged and bound is as follows:

- Cover Page & Title Page
- Bonafide Certificate
- Plagiarism Certificate
- Abstract
- Acknowledgement
- Table of Contents
- List of Tables
- List of Figures
- List of Symbols, Abbreviations and Nomenclature
- Chapters
- Appendices
- References

The table and figures shall be introduced in the appropriate places.

5. PAGE DIMENSION AND BINDING SPECIFICATIONS:

Standard A4 size paper must be used to prepare the copies. The Report should have the following page margins:

Top edge: 25 to 30 mm

Bottom edge: 25 to 30 mm

Left side: 25 to 30 mm

Right side: 20 to 25 mm

The dimensions of the project report should be in A4 size. The project report should be tape-bounded. The cover should be printed in black letters.

6. FONT TYPE AND SIZE

Calibri Body (font size 12) will be used for the regular text. Calibri Heading of suitable font size is to be used for the heading.

FRONT PAGE FORMAT for MINI PROJECT /PROJECT REPORT



**NEW HORIZON
COLLEGE OF ENGINEERING**

Autonomous College Permanently Affiliated to VTU, Approved by AICTE & UGC
Accredited by NAAC with 'A' Grade, Accredited by NBA

(Template of Cover Page & Title Page)

TITLE

<1.5line spacing>

**A MINI PROJECT / PROJECT
REPORT**

Submitted by

<Italic>

NAME OF THE STUDENT(S)

In partial fulfilment for the award of the degree of

<1.5line spacing><Italic>

NAME OF THE DEGREE

IN

MASTER OF COMPUTER APPLICATIONS

GUIDELINES FOR EVALUATION OF PROJECT PHASE-1

Project Phase 1: Students, in consultation with the guide, shall carry out a literature survey or visit industries to finalize the project topic. Subsequently, the students shall collect the material required for the selected project, prepare a synopsis, and narrate the methodology for carrying out the project work.

Seminar: Each student, under the guidance of a faculty, is required to

- Present the seminar on the selected project orally and/or through PowerPoint slides.
- Answer the queries and be involved in debate/discussion.
- Submit two copies of the typed report with a list of references.

The participants shall participate in discussions to foster a friendly and stimulating environment in which the students are motivated to reach high standards and become self-confident.

Continuous Internal Evaluation: 100 Marks

CIE marks for the project report (50 marks), seminar (30 marks) and question and answer (20 marks) shall be awarded (based on the quality of the report and presentation skill, participation in the question and answer session by the student) by the committee constituted for the purpose by the Head of the Department. The committee shall consist of three faculty members from the department, with the senior most acting as the chairperson.

GUIDELINES FOR EVALUATION OF SOCIETAL PROJECT

- Students are expected to build creative solutions for development problems of the current scenario in Society.
- Utilize the skills developed in the curriculum to solve real-life problems.
- Improve understanding and develop methodology for solving complex issues.

Continuous Internal Evaluation (CIE): 100 Marks

- **Identifying real-life problems and producing a literature report: 20 marks**
- **Data sampling and Cleaning: 10 Marks**
- **Establishing the right Objective: 10 Marks**
- **Developing the solution: 20 Marks**
Propagating the solution to the stakeholders 1) Lectures 2) Social Meetings 3) Social media 4) Street plays 5) Advertisement Either of the 3 (evidence of the work through Jio tag photo)
- **Project Report: 20 marks.** The basis for awarding the marks shall be the student's involvement in the project and report preparation. To be awarded by the internal guide in consultation with an external guide, if any.
- **Project Presentation: 10 marks.**
The Project Presentation marks of the Project Work **phase-II shall be awarded by the committee constituted for the purpose by the Head of the Department. The committee shall consist of three faculty members from the department**, with the senior most acting as the Chairperson.
- **Evaluation: 10 marks.**
The student shall be evaluated based on the ability in the Question and Answer session for 10 marks.

GUIDELINES FOR EVALUATION OF PROJECT PHASE-2

Each student of the project batch shall carry out the project work jointly in constant consultation with the internal guide, co-guide, and external guide and prepare the project report as per the norms, avoiding plagiarism.

- Follow the software development life cycle
- Data collection and planning
- Design the test cases
- Validation and verification of attained results
- Significance of parameters w.r.t scientific quantified data.
- Paper publication in Scopus-indexed conference/reputed journal.

Continuous Internal Evaluation:

Project Report: 20 marks. The basis for awarding the marks shall be the student's involvement in the project and the preparation of the project report. To be awarded by the internal guide in consultation with an external guide, if any.

Project Presentation: 20 marks.

The Project Presentation marks of the Project Work Phase II shall be awarded by the committee constituted for the purpose by the Head of the Department. The committee shall consist of three faculty members from the department, with the senior most acting as the Chairperson.

Project Execution: 50 Marks

The Project Execution marks of the Project Work Phase II shall be awarded by the committee constituted for the purpose by the Head of the Department. The committee shall consist of three faculty members from the department, with the senior most acting as the Chairperson.

Question and Answer: 10 marks.

The student shall be evaluated based on the ability in the question and answer session for 10 marks.

Semester End Examination

SEE marks for the project report (60 marks), seminar (30 marks), and question and answer session (10 marks) shall be awarded (based on the quality of the report and presentation skill, participation in the question and answer session) by the examiners appointed by the university.

PROJECT REPORT GUIDELINES

Project reports should be typed neatly on only one side of the paper, with 1.5 or double line spacing on an A4-size bond paper (210 x 297 mm). The margins should be: Left – 1.25", Right – 1", Top and Bottom – 0.75".

The total number of reports to be prepared is as follows:

- One copy to the department
- One copy to the candidate.

1. Soft Copy of the Report

The student should submit a soft copy of the entire project report in .pdf format to the respective department. Before taking the final printout, the approval of the concerned guide(s) is mandatory, and suggested corrections, if any, must be incorporated.

2. Every copy of the report must contain:

- Inner title page (White)
- Outer title page with a plastic cover
- Certificate in the format enclosed both from the college and the organization where the project is carried out.

3. Plagiarism-check certificate from NHCE library

The project report should be submitted to the NHCE library for plagiarism check, and the Permitted Similarity index should be 20%.

4. The organization of the report should be as follows

- Inner title page, Abstract or Synopsis, Acknowledgments, Table of Contents, List of tables & figures (Usually numbered in roman)
- Chapters (to be numbered in Arabic) containing an Introduction, which usually specifies the scope of work and its importance and relation to previous work and the present developments; the main body of the report should be appropriately divided into chapters, sections and subsections.
- The chapters, sections and subsections may be numbered in decimal form, for e.g. Chapter 2, sections as 2.1, 2.2, etc., and subsections as 2.2.3, 2.5.1, etc.
- The chapter must be left or right justified (font size 16). Followed by the title of the chapter centred (font size 18), section/subsection numbers along with their headings must be left justified with the section number and its heading in font size 16 and the subsection and its heading in font size 14. The body of the text of the report should have a font size of 12.

5. Font Style to be followed: Calibri

- The figures and tables must be numbered chapter-wise, for e.g., Fig. 2.1 Block diagram of a serial binary adder, Table 3.1 Primitive flow table, etc.
- The last chapter should contain the summary of the work carried, contributions, if any, their

utility, along with the scope for further work. Reference or Bibliography: The references should be numbered serially in the order of their occurrence in the text, and their numbers should be indicated within square brackets, for e.g. [3]. The section on references should list them in serial order in the following format.

- For textbooks – A.V. Oppenheim and R.W. Schaffer, Digital Signal Processing, Englewood, N.J., Prentice Hall, 3 Edition, 1975.
 - For papers – Devid, Insulation design to combat pollution problem, Proceedings of IEEE, PAS, Vol 71, Aug 1981, pp 1901-1907.
- Important equations must be numbered in decimal form, e.g. $V = IZ$ (3.2)
 - All equation numbers should be justified towards the right.
 - The project report should be brief and include descriptions of work carried out by others only to the minimum extent necessary. Verbatim reproduction of material available elsewhere should be strictly avoided. Where short excerpts from published work are desired to be included, they should be within quotation marks appropriately referenced.
 - Proper attention is to be paid not only to the technical contents but also to the organization of the report and clarity of the expression. Due care should be taken to avoid spelling and typing errors. The student should note that report-write-up forms the critical component in the overall evaluation of the project.
 - Hardware projects must include the component layout, complete circuit with the component list containing the name of the component, numbers used, etc., and the main component data sheets as an Appendix. At the time of report submission, the students must hand over a copy of these details to the project coordinator and see that they are entered in the proper registers maintained in the department.
 - The reports submitted to the department/guide(s) must be hard bound with a plastic covering. Separator sheets used, if any, between chapters should be made of thin paper.

6. Format of the College-Certificate



**NEW HORIZON
COLLEGE OF ENGINEERING**

Autonomous College Permanently Affiliated to VTU, Approved by AICTE & UGC
Accredited by NAAC with 'A' Grade, Accredited by NBA

Ring Road, Near Marathahalli,
Bengaluru – 560 103

DEPARTMENT OF MASTER OF COMPUTER APPLICATIONS

CERTIFICATE

This is to certify that **<STUDENT NAME>**, bearing USN **<USN NO>** has successfully completed his/her final year IV semester Industry Internship / Project work entitled **<PROJECT TITLE>** as a partial fulfillment of the requirements for the award of **MASTER OF COMPUTER APPLICATIONS** degree, during the Academic Year **<>** under my supervision. This report has not been submitted to any other Organization/University for any award of degree.

Signature of the Internal Guide

Head of the Department

sd/-Principal

External Viva

Internal Examiner

External Examiner

Date:

7. Format of the certificate issued at the organization where the project was carried out. (On a separate sheet)

NAME OF THE INDUSTRY / ORGANIZATION

Address with pin code

CERTIFICATE

Certified that the project work entitled
carried out by Mr./Ms. USN..... a bonafide student
of.....in partial fulfilment for the award of the degree Master
of Computer Applications by New Horizon College of Engineering, an Autonomous Institution
Affiliated to Visvesvaraya Technological University, Belgaum, during the academic year..... It
is certified that he/she has completed the project satisfactorily.

Name & Signature of the Guide:

Organization Name with Address:

8. COLOUR OF THE OUTER COVER/FRONT PAGE OF PROJECT REPORT

The project report's outer cover/front page should be in green color.

9. Team Size - Mini Project, Societal Project, Project Phase 1/ Phase 2, Internship/Main Project

Must be INDIVIDUAL projects and NOT group projects.