

### **ACADEMIC RULES & REGULATIONS**

# REGULATIONS GOVERNING THE DEGREE OF

**MASTER OF TECHNOLOGY (M.Tech)** 

**Under Outcome Based Education (OBE)** 

**AND** 

Choice Based Credit System (CBCS) Scheme Effective from academic year 2022 -23

#### **VISION**

To emerge as an institute of eminence in the fields of engineering, technology and management in serving 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 the academia and industry through the 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.

### **OUALITY POLICY**

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

#### **VALUES**

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

Regulation Clause	Title	Page Numbe
	DEFINITIONS OF KEYWORDS	04
1	PROFILE OF THE INSTITUTION	07
	ABOUT NHCE	
	MANAGEMENT COMMITTEE	
	INFRASTRUCTURE	
	LIBRARY AND INFORMATION CENTRE	
	LABORATORIES	
	HUMAN RESOURCE DEVELOPMENT	
	TRANSPORTATION FACILITIES	
	CULTURAL, SPORTS AND RECREATION FACILITIES INDUSTRY INSTITUTE INTERACTION CELL	
	ENTREPRENEURSHIP DEVELOPMENT CENTRE	
	FACULTY	
	ACADEMIC PROGRAMMES OFFERED	
	UNDER GRADUATE PROGRAMMES	
	POST GRADUATE PROGRAMMES	
	STUDY ABROAD PROGRAMME	
	PROFESSIONAL SOCIETIES SCHOLARSHIP FACILITY	
	INDUSTRY INSTITUTE INTERACTION CELL	
	ACHIEVEMENTS AND ACCOLADES	
2	SEMESTER SCHEME	14
3	CREDIT SYSTEMS	15
22OMT1.0	TITLE, DURATION AND CREDITS OF THE PROGRAMME OF STUDY	16
22OMT2.0	ELIGIBILITY FOR ADMISSION	17
22OMT3.0	COURSES	18
22OMT4.0	INTERNSHIP	19
22OMT5.0	MINI PROJECT AND SEMINAR	20
22OMT6.0	COMPUTATION OF SGPA AND CGPA	22
20OMT7.0	CONVERSIONS OF GRADES INTO PERCENTAGE AND CLASS EQUIVALENCE	26
20OMT8.0	CONTINUOUS INTERNAL EVALUATION AND SEMESTER END EVALUATION	26
20OMT9.0	ELIGIBILITY FOR PASSING AND AWARD OF DEGREE	27
20OMT10.0	ATTENDANCE REQUIREMENT	28
20OMT11.0	PROMOTION AND ELIGIBILITY (VERTICAL PROGRESSION)	29
20OMT12.0	PROVISION TO MOVE TO INTEGRATED Ph.D. PROGRAM	
20OMT13.0	TEMPORARY DISCONTINUATION/BREAK IN THE PROGRAM	29
200MT14.0	AWARD OF PRIZES, MEDALS AND RANKS	29
20OMT15.0	APPLICABILITY AND POWER TO MODIFY	30
5	DISCIPLINARY MEASURES	30
6	COUNSELING CENTER	32
7	GUIDELINES & TEMPLATE FOR THE PREPARATION OF MINI PROJECT/PROJECT	33
-	REPORT	

#### **Definitions of Keywords**

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

- (1) Program: Is an educational program in a particular stream/ branch of Engineering/branch of specialization leading to award of Degree. It involves events/activities, comprising of lectures/ tutorials/ laboratory work/ field work, outreach activities/ project work/ vocational training/ viva/ seminars/ Internship/ assignments/ presentations/ self- study etc., or a combination of some of these.
- (2) Branch: Means Specialization or discipline of M.Tech., Degree Program, like Power Electronics, Structures, Machine Design, etc.
- (3) Semester: Refers to one of the two sessions of an academic year (vide: serial number 4), each session being of sixteen weeks duration (with working days greater than or equal to 90 days). The odd semester may be scheduled from August and even semester from February of the year.
- (4) Academic Year: Refers to the sessions of two consecutive semesters (odd followed by an even) including periods of vacation.
- (5) Course: Refers to usually referred to as 'papers' and is a component of a program. All Courses need not carry the same weight. The Courses should define learning objectives and learning outcomes. A Course may be designed to comprise lectures/ tutorials/ laboratory work/ field work/ outreach activities/project work/ vocational training/ viva/ seminars/ term papers/assignments/ presentations/ self-study etc., or a combination of some of these.
- (6) Credit: Refers to a unit by which the Course work is measured. It determines the number of hours of instructions required per week. One credit is equivalent to one hour of lecture or two hours of laboratory/practical Courses/ tutorials/ fieldwork per week etc.
- (7) Audit Courses: Means Knowledge/ Skill enhancing Courses without the benefit of a grade or credit for a Course.
- (8) Choice Based Credit System (CBCS): Refers to customizing the Course work, through Core, Elective and soft skill Courses, to provide necessary support for the students to achieve their goals.
- (9) Course Registration: Refers to formal registration for the Courses of a semester (Credits) by every student under the supervision of a Faculty Advisor (also called Mentor, Counselor etc.,) in each Semester for the Institution to maintain proper record.
- (10) Course Evaluation: Means Continuous Internal Evaluation (CIE) and Semester End Examinations (SEE) to constitute the major evaluations prescribed for each Course. CIE and SEE to carry 50 % and 50 % respectively, to enable each Course to be evaluated for 100 marks, irrespective of its Credits.

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

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

- (11) First Attempt: Refers to a student who has completed all formalities and has become eligible to attend the SEE and has attended at least one head of passing, such attempt shall be considered as first attempt.
- (12) Credit Based System (CBS): Refers to quantification of Course work, after a student completes teaching learning process, followed by passing in both CIE and SEE. Under CBS, the requirement for awarding degree is prescribed in terms of total number of credits to be earned by the students.
- (13) Credit Representation: Refers to Credit Values for different academic activities considered, as per the Table.1. Credits for seminar, project phases, project viva-voce and internship shall be as specified in the Scheme of Teaching and Examination.
- (14)Letter Grade: It is an index of the performance of students in a said Course. Grades are denoted by letters O, A+, A, B+, B, C and F

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

**NOTE:** Activities like, practical training, study tour and participation in Guest lecturers not to carry Credits.

(15) Grading: Grade refers to qualitative measure of achievement of a student in each Course, based on the percentage of marks secured in (CIE plus SEE). Grading is done by Absolute Grading [Refer: 22OMT6.0]. The rubric attached to letter grades are as follows:

O – Outstanding, A+ – Excellent, A – Very Good, B+ – Good, B – Above Average, C – Pass and F – Fail. If a student remains absent for SEE for any of the course/s, the letter grade assigned to that course shall be F. If a student is not eligible for appearing SEE, due to non-comply of any of these course/s then the letter grade assigned that course shall be NE.

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

Letter Grade and	Letter Grade and corresponding Grade Points on a typical 10 - Point scale						
Letter Grade	0	A+	A	B+	В	С	F
	Outstanding	Excellent	Very Good	Good	Above Average	Pass	Fail
Grade Point	10	09	80	07	06	05	00
% of Marks secured	90-100	80-89	70-79	60-69	55-59	50- 54	0- 49

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

(17) Credit Point: Is the product of grade point (GP) and number of credits for a Course i.e.,

- Credit points (CrP) =  $GP \times Credits$  for the Course.
- (18)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: 22OMT6.0]
- (19) Cumulative Grade Point Average (CGPA): Is a measure of overall cumulative performance of a student over all semesters. The CGPA is the ratio of total credit points earned by a student in various Courses in all semesters and the sum of the total credits of all Courses in all the semesters. It is expressed up to two decimal places. [Refer: 22OMT6.0]
- (20) Grade Card: Refers to a certificate showing the grades earned by a student. A grade card shall be issued to all the registered students after every semester. The grade card will display the programme details (Course code, title, number of credits, grades secured) along with SGPA of that semester and CGPA earned till that semester.
- (21) Multiple Entry Multiple Exit: The multiple entries and exit points in the academic programs offered at Higher Education Institutions (HEIs) would remove rigid boundaries and create new possibilities for students. There are occasions when learners have to give up their education mid-way for various reasons. To facilitate flexible learning within the stipulated period (four years for regular students), multiple exits and entry options are given to the needy students. The student can exit from the program only at the end of the even semester/s (2<sup>nd</sup> semester) and the entry option is provided to the students at the beginning of the odd semester/s (3<sup>rd</sup> semester)
- (22) University: Visvesvaraya Technological University (VTU), Belagavi.

#### PROFILE OF THE INSTITUTION

#### 1.1 ABOUT NHCE

New Horizon College Engineering (NHCE) un-paralleled of has history of nurturing young brains into engineers who are groomed to enter the global workforce with strong theoretical knowledge synergized with significant hands-on-experience. NHCE is located in Bangalore IT corridor with its state-of-the-art laboratories, instructional space and learning environment in an appropriate setting for one of the premier engineering colleges in Bangalore. In a short span, NHCE has become a much sought-after institute because of its successful track record. New Horizon College of Engineering is an Autonomous college affiliated to Visvesvaraya Technological University (VTU), approved by the All India Council for Technical Education(AICTE) & University Grants Commission(UGC). NHCE is accredited by NAAC with 'A' grade & all undergraduate programmers are accredited by National Board of Accreditation (NBA). We are proud to be in the Elite club of top ranked institutions and accorded Tier 1 accreditation for the 4 main BE programmes. New Horizon College of Engineering has been Ranked 114 amongst the Top Engineering Colleges across India, as per the National Institutional Ranking Framework (NIRF 2020) Rankings, announced by MHRD, Govt. of India. NHCE has secured All India Rank: 6th-25th (Band"A") in ARIIA-Atal Ranking of Institutions on Innovation Achievements (MHRD) under the Private Institutions Category for the year 2020.

#### 1.2 MANAGEMENT COMMITTEE

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

#### 1.3 INFRASTRUCTURE

Every department has a congenial academic environment to promote quality education in the field of engineering and technology. Each department is fully equipped with modern laboratories and equipments.

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 Gym
- Reprographic Facility

#### 1.3.1 LIBRARY & INFORMATION CENTRE

In the spacious and airy library, students have an access to the latest books, journals, computers, CD ROMs and multimedia. Separate study/discussion rooms are available for the students to study without any disturbance. The college also has the facility of 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 which are useful for Faculty members, Students and Research Scholars in their educational activities in the institute. The major objective of our Library and Information Centre is to provide 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	8.00a.m6.30 p.m.
Holidays		9.00a.m. –5.00 p.m.
During Examination	1	8.00a.m. –6.30 p.m.
During Vacation	1	8.00a.m. –6.00 p.m.

#### COLLECTIONS

Books, Journals/Periodicals, Bound Volumes, Technical/general magazines, Non-Book materials, News Papers, Question Papers, Syllabus, Project Reports, E–Journals, E–Books and many more electronic resources.

#### **SERVICES**

- Circulation Service
- Reference Service & NPTEL Service
- Online Reservation Services
- Library Service
- Document scanning
- Document Printing
- OPAC (Online Public Access Catalogue)
- Reprographic Service
- Overnight Circulation Service
- E-Mail & SMS Service
- Organising Book Exhibition
- News paper clippings
- Online Lectures

4 Plagiarism Checking

#### **FACILITIES**

- Library spread over two floors
- Stack Area
- Reference Section
- 4 600 seating capacity Reading Hall
- State of the art Digital Library
- E-Learning Center
- Video conference room
- Online class room 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 is having state of the art technology to provide maximum benefit to users. The digital library section is a step towards achieving excellence dissemination of information in the best possible manner. The library users can easily access the latest developments in different areas taking place in any part 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 Online Public Access Catalogue (OPAC).

Apart from this, we have subscribed electronic databases related to Engineering &Technology, namely IEEE, ASCE, IET Digital Library, Springer, Taylor& Francis, Knimbus, ProQuest, ASME and Taylor& Francis

#### LIBRARY INSTRUCTIONS

- Identity card should be shown at the checkpoint.
- $\downarrow$  Leave your bags, handbags and personal belongings at the depository/property counter.
- \$\blacktriangleright\tau\_\text{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 of books in any manner will be heavily fined.
- ♣ 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 atime.

- Renewals are allowed only when there is no claim by others. No phone renewal will be entertained.
- lacktriangle A borrowed book if recalled by the Librarian must be returned immediately.
- Online reservation can be done for a book, which is already lent out. Reserved books are kept separately in circulation counter for two days for each member.
- Maintain a Queue at the circulation counter.
- Wearing ID-Card is compulsory.
- Usage of mobile phone is prohibited.

#### **CENTRAL BROWSING FACILITY**

- Internal lab for browsing and downloading information
- ♣ Broadband connectivity
- One to one system availability
- igsplace 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 Micro processor & 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 an Executive Director. The main objective of this department is: Training 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 Internship, Final Placement for the students and also conducting Entrepreneur development programmes.

#### 1.3.4 TRANSPORTATION FACILITIES

The college provides transport facility for student's commutation from selected points in Bangalore, on an annual payment basis. The charges levied depend on the pick-up and drop-in points and the distance involved. This facility is optional. Students who wish to use the college transport facility may meet the transport coordinator in the campus and

register themselves. Bus pass can be obtained from the front office after paying the requisite bus fees. If, in the course of the year, there is a change in the residential address of the student, it can be brought to the notice of the Transport Manager with a request for a fresh bus pass for the new route; after examining the feasibility and availability, he may issue a fresh pass. If the seat is not available, the student may be kept in waiting list. Any tampering with bus pass or willful damage to 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 Inter-collegiate 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 every year a State Level Intercollegiate Mega Cultural Fest 'SARGAM', various technical fests like Tech Horizon, Hackathonsetc.,

#### 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 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 identification of a SMART CAREER GOAL . At NHCE, we have 9 Centers of Excellence.

They are,

- 1. Cisco Networking Academy
- 2. Quest Global IIOT
- 3. Schinder Electric Indo French CoE in Electricity automation and Energy
- 4. SAP Next Gen Lab
- 5. HPE Vertica
- 6. VMware IT Academy
- 7. AI lab IBM Open Power
- 8. Automation Anywhere
- 9. Capgemini

#### 1.4 ENTREPRENEURSHIP DEVELOPMENT CELL

The Vision of NH-EDC is to educate, mentor and provide enterprising resources to budding entrepreneurs and to build an exhaustive resource pool to aid potential student entrepreneurs at NHCE. NHCE is one of the selected colleges under PM-YUVA Yojana(Pradhan Mantri Yuva Udyamita Vikas Abhiyan), which aims to create an enabling ecosystem for Entrepreneurship Development through entrepreneurship education. Focus will also be on entrepreneurship promotion and social entrepreneurship. Working in collaboration with National Entrepreneurship Network (NEN), since its inception, NH-EDC has conducted various activities for the college

students creating and promoting entrepreneurship awareness at the campus. E-WEEK is one of such initiatives where array of activities are conducted raising the spirit of innovation and creativity which are considered as sparkplugs of entrepreneurship. Students and Alumni Startups are incubated with the New Horizon Center for Innovation, Incubation and Entrepreneurship which provides all the pre-incubation and incubation facilities, mentoring and seed funding to the budding entrepreneurs.

#### 1.5 FACULTY

The faculties at NHCE are wholly dedicated to their task and are committed towards developing the full potential of each student. The Heads of the departments have the requisite experience and strong academic background. As the student teacher ratio is ideal, the promise at NHCE is that each student will get the adequate attention by the faculty.

#### 1.6 ACADEMIC PROGRAMMES OFFERED

NHCE offers the following Under – Graduate and Post- Graduate programmes; it also offers a wide range of proficiency courses and plans to start a series of certificate and diploma courses soon.

#### 1.6.1 UNDER GRADUATE PROGRAMMES

Sl. No.	Programme
1	B.E- Artificial Intelligence & Machine Learning
2	B.E – Computer Engineering
3	B.E – Computer Science & Engineering (Data Science)
<mark>4</mark>	B.E - Computer Science & Engineering
<mark>5</mark>	B.E - Electronics & Communication Engineering
<mark>6</mark>	B.E – Electrical & Electronics Engineering
7	B.E – Information Science & Engineering
8	B.E – Mechanical Engineering

#### 1.6.2 POST GRADUATE PROGRAMMES

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

#### 1.6.3 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 programsbetween NHCEandvariousuniversities in France.

As a result of this agreement and a number of visits to France by the NHCE delegation, 45 seventh semester students from all the B.E branches will embark on a 11 week student exchange program in reputed universities in France starting Sept 2018. The Universities in France have provided this rare opportunity to our students to experience their educational system, technology and culture.

Every year 45 students are selected based on merit for study abroad program. The following are the Universities in France which have selected our students for the exchange program.

- 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

#### 1.7 PROFESSIONAL SOCIETIES

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

#### 1.8 SCHOLARSHIP FACILITY

The Institute extends full freeship to the topper of the Institute every year. In addition to this the topper of each branch is given 50% freeship for PG courses in the campus. Apart from the Institute scholarship, Management also support the students to encash the Central and State Government scholarship as per norms.

#### 1.9 THE INDUSTRY-INSTITUTE COLLABORATION

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

#### 1.10 ACHIEVEMENTS & ACCOLADES

- **a. Academic:** Every year the Institution secures very good results. Many outstanding students have secured enviable positions in software and other industries, in campus selections.
- **b. Cultural:** Our students have been participating in various cultural activities at university and college levels.
- **C. Sports:** Our students have participated in various sports and events at the National and District levels, Home Tournaments and also in VTU sponsored sports activities.
- d. R & D Facilities: R & D Facilities have been set up in Computer Science & Engineering, Electronics & Communication Engineering, Information Science & Engineering, Electrical& Electronics Engineering, Mechanical Engineering, Chemistry, Mathematics, MBA, Physics, Civil Engineering and Automobile Engineering.
- **e. Centers of Excellence:** 9 World class centers of excellence in partnership with industry are set up in the institution. 21 MOUs with industry are signed for Industry–Institute collaboration

#### 2. SEMESTER SCHEME

As it 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 their MCA program.

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 stake holders, 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 being fixed in advance by the Autonomous Colleges while maintaining a common opening/reopening date for the odd semester. A copy of the calendar so fixed by the College and 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
	T=
Number of Semester/	Three Semesters; Two being Main Semesters (Odd, Even) and one being a Supplementary Semester.
Year	Note: Supplementary Semester is primarily to assist the slow learners and/or repeater students for repeating the courses. However, the College may use this Semester to arrange Add-On Courses for other students and/or for deputing them for field work and/ or internship.
Semester	Main Semesters (Odd, Even):19 weeks each.
Durations (Weeks)	Supplementary Semester: 8 weeks
Academic	Main Semester:
Activities	Registration of courses – 0.5 week;
(Weeks)	Course work – 15.5 weeks;
	Examination Preparation and Examination – 2.0 weeks;
	Declaration of Results -1.0 week;
	Total: 19 weeks.
	Supplementary Semester (For Repeat):
	Registration of courses – 0.1 week;
	Course work – 7.0 weeks;
	Examination Preparation –0.2 weeks;
	Examination -0.2weeks
	Declaration of Results-0.5 week; Total: 08 weeks
	Inter- Semester Recess:
	After each Main Semester – 2 to 3 weeks, flexible
	After Supplementary Semester – 1 to 2, flexible.

	Total: 14 (for good students) and 6 (for slow learner students).  Note: In each semester, there are various provisions for students like, Registration of courses at the beginning, Dropping of courses in the middle and withdrawal from courses towards the end, all being under the faculty members' advice.
Examinations	Continuous Internal Evaluation (CIE) and Semester End Examination (SEE) both having equal weightage in the students' performance in course work/ Laboratory work and other activities.  NOTE: The CIE shall be conducted by the Course Instructor throughout a Semester on dates to be announced in advance and the results made known to the students from time to time. This will help the students to decide on Dropping of Courses or Withdrawal from Courses 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 so as to facilitate the students in the transfer of credits.
Other Items	<ul> <li>Care is taken by the College to ensure that the total number of days for academic work is ≥ 180/ year.</li> <li>Academic schedule prescribed by College is strictly adhered to, for success of the Semester Scheme.</li> <li>Supplementary Semester is mainly used by the College for conducting Repeat Course for the benefit of slow learners/ repeaters</li> <li>Students failing in any Course(s) at the College shall re-register for the same, when offered again and go through CIE and SEE in each case.</li> <li>Minimum, Maximum and Average Course loads per Semester are fixed by prior consultation with the University.</li> </ul>

#### 4. CREDIT SYSTEMS

#### GENERAL

As the Credit System has many advantages over the conventional system of organizing academic programmes, it is necessary to introduce an appropriate Choice Based Credit System (CBCS) for the various programmes. This will be of great benefit to the students in their preparations to meet the challenging opportunities ahead.

In the Credit system, the course work of students 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 course work and its corresponding one credit (while referring to a Main Semester) is equal to:

- (i) Theory course, conducted for 1 hour/week
- (ii) 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 which are not demanding intellectually or which do not lend to effective assessment, like practical training, study tours, attending guest lecturers will not carry any credit.

#### **COURSE REGISTRATION**

A student shall register for courses (core or elective) to earn credits for meeting the requirements of a Degree programme. Such course together with their grades and the credits earned shall be included in the Grade card issued by the College at the end of each semester, like odd, even, supplementary and it forms the basis for determining the student's academic performance in that semester.

#### SUPPLEMENTARY SEMESTER

The Supplementary semester is provided for helping students who have failed in their examinations. The Supplementary semester is provided to help the student to 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 course(s) where he/she has secured 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 the **maximum of 4 Credited courses/14 credits**. All courses are not offered. A student has to opt from 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.

Clause	Particulars
22OMT1.0	Title, Duration and Credits of the Programme of Study
22OMT1.1	The Programme shall be called Master of Technology (Subject of Specialization), abbreviated as M.Tech. (Subject of Specialization).
22OMT1.2	There shall be one category of Program: Full -time Program (FT)
22OMT1.3	Full-time Program: The Programme shall extend over a period of four semesters and each semester shall have 16 weeks (not less than 90 days) duration.
220MT1.4	A Faculty/ Employee working on Full Time basis in an Institution/ Organization and pursuing/ pursued

any Course conducted in the timing of Regular/First Shift for the same duration as that of Regular Shift shall be considered as ineligible for the purpose of employment/ higher studies.

<b>220MT1.</b> 5	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 Master's Degree, failing which he/she may discontinue the programme or register once again as a fresh candidate to I semester of the programme.
22OMT1.6	Prescribed Number of Credits for the Programme:
	The number of credits to be completed for the award of degree shall be 80.
22OMT1.7	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> <li>Four credit Courses are designed for 50-60 hours Teaching - Learning process.</li> </ul>
	<ul> <li>Four credits integrated course are designed for 40 hours of theory and 10-12 sessions of</li> </ul>
	practical components.
	Three credit Courses are designed for 45-50 hours Teaching - Learning process.
	Two credit Courses are designed for 25-30 hours Teaching - Learning process.
220MT1.8	One credit Courses are designed for 15-20 hours Teaching - Learning process.      The Color day of experts in years at of the Dreamstrand chall be a stiffed by the University in a dreamstrand.
	The Calendar of events in respect of the Programme shall be notified by the University in advance.
22OMT2.0	Eligibility for Admission (As per the Government orders issued from time to time)
22OMT2.1	Admission to I year/I semester Master of Technology Programme shall be open to all the candidates
	who have passed B.E./ B. Tech. Examinations of VTU or any other recognized University/ Institution.  The decision of the Equivalence committee shall be the final in establishing the eligibility of candidates for a particular Programme.
	For the foreign degrees, Equivalence certificate from the Association of Indian Universities shall be a must.
	The candidates who have completed their degree through the distance mode education from any University (National or International) are <b>not eligible</b> for admission to M.Tech. Programs under any quota.
220MT2.2	AMIE in respective branches shall be equivalent to B.E./ B. Tech. Programs of VTU for admission to M.
	Tech.
	(Certificate/ qualification awarded by professional bodies/ institution in the field of Technical
	Education will be treated as equivalent to B.E. / B.Tech. programmes of VTU for admission to M.Tech.
	programmes subjects to the notification / approval from Government of Karnataka and AICTE New Delhi)
<b>220MT2.3</b>	Admission to M.Tech. Programme shall be open to the candidates (as per 22OMT 2.1 and 2.2) who
	have passed the prescribed qualifying examination with not less than 50% of the marks in the
	aggregate of all the years of the degree examination. However, in the case of candidates belonging to
	SC/ST and Category I, the aggregate percentage of marks in the qualifying examinations shall not be
	less than 45%. Rounding off of percentage secured in qualifying examination is not permissible. (Reservation is applicable only for Karnataka Candidates).
22OMT2.4	For admissions under GATE/ PGCET qualification and Roaster system of Government of Karnataka:

T	
	The candidates should be GATE qualified or should have appeared for the Entrance Examination conducted by an authority recognized by Government of Karnataka (PGCET)/VTU.  For admissions under Management Quota:
	The candidates should be GATE qualified or should have appeared for the Entrance Examination conducted by an authority recognized by Government of Karnataka PGCET/VTU.
	Further, there shall be an Admissions Committee for PG Programme in each college for each branch of PG studies consisting of the Principal of the College as the Chairman, Head of the concerned Department, one senior faculty of the concerned Department as members. The Admissions Committee shall conduct the interview and select the candidates for admissions.  For admissions under Sponsored Quota:
	The candidates should be GATE qualified or should have appeared for the Entrance Examination conducted by an authority recognized by Government of Karnataka PGCET/VTU/any other University on approval by Government of Karnataka.
22OMT2.5	The candidates, who are qualified in the GATE Examination for the appropriate branch of engineering, shall be given priority. They are exempted from taking Entrance Examination.
	In case a GATE qualified Candidate appears for entrance examination and become qualified to claim a seat under entrance examination quota, he/she will be considered in the order of merit along with other candidates appeared for the entrance examination.
22OMT2.6	If sufficient number of GATE qualified candidates are not available, the remaining vacant seats shall
	be filled from amongst the candidates appeared for Entrance Examination in the order of merit.
220MT2.7	The intake under various categories (regular, sponsored candidates and SC/ST) shall be as sanctioned by the AICTE, State Government and VTU, from time to time.
22OMT2.8	Subject to the provisions of 22OMT2.1 and 22OMT2.2, members of the Teaching/Research staff working in any Engineering College recognized by AICTE either in the State of Karnataka or outside
	and who have put in a minimum of 03 years of teaching experience on a full-time basis in Engineering
	Colleges, Polytechnic Institutions / any other institutions imparting Engineering education shall be eligible for admission to PG Programs under sponsored quota, if they are sponsored by the respective
0007/100	institutions / DTE.
22OMT2.9	Subject to the provisions of 22OMT2.1 and 22OMT2.2, members working in the State Government / Central Government / Quasi Government Organizations/ Public Sector Industries / Reputed Private
	Industries, who have put in a minimum 0f 03 years of working experience and sponsored by the concerned Organizations, shall also be eligible to seek admissions to PG Programs against sponsored
	quota.
	Preference for admission under 22OMT2.8 and 2.9 shall be given to candidates sponsored by
22OMT2.10	organizations of State and Central Governments.  Engineering graduates other than the Karnataka candidates shall obtain Eligibility Certificate from
	VTU to seek admission to P.G. Programme in any of the colleges (Autonomous or Non - Autonomous) affiliated to VTU.

#### 22OMT2.11

#### Admission to vacant seats:

Seats remaining vacant (unfilled), after the completion of PG admission process by Karnataka Examination Authority, shall be filled by the Institution by inviting applications through Press notification. The seats shall be filled by Candidates preferably who have valid GATE/ PGCET score. In the absence of such Candidates, admission shall be based on merit in the entrance test conducted at the Institution level. An Admissions Committee, consisting of the Principal of the College, Head of the concerned Department and the subject experts, shall be in charge of admissions.

#### 22OMT3.0

#### Courses

#### 22OMT3.1

The curriculum of the Programme shall be any combination of following type of courses:

- 1. One Course on Mathematics supportive to the concerned programme in the first semester.
- 2. 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.
- 3. Professional Electives Courses (PEC) relevant to the chosen specialization/ branch: these are the courses, which can be chosen from the pool of papers. It shall be supportive to the discipline/ providing extended scope/enabling an exposure to some other discipline / domain / nurturing student skills.
- 4. Open Electives Courses (OEC) from other technical and/ or emerging specialization areas.
- 5. Integrated Professional Core Course (IPCC) Theory course is merged with the practical component of the same course.
- 6. Project Work Project work is an application-oriented academic activity and aims to sharpen your theoretical and quantitative skills through their application in the light os theoretical knowledge gained while pursuing the various courses.
- 7. Mini-project with Seminar A mini project in engineering to strengthen the understanding of fundamentals through effective application of theoretical concepts. There are separate credits for each mini project that needs to complete. Projects will help to boost the skills and widen the horizon of thinking of the student. Mini-project work shall be presented as a seminar in front of examiners who evaluates.
- 8. Audit Courses (AC) -
  - Audit course/s are non-credit courses opted by students for self-enrichment. The audit course/s are mentioned in the grade card without the mention of a letter grade and credit. The student has to select the courses from the suggested list of ONLINE courses. If an Audit course is not necessary for a particular program, then in place of an audit course an Ability Enhancement Course (AEC) can be selected from the suggested list of online courses.
- 9. Internship: Preferably at an industry/R and D organization/IT company/ Government organization of significant repute for a specified period mentioned in Scheme of Teaching and Examination.
- 10. On-Line Courses: These mandatory online courses are ability enhancement courses or skill development courses or emerging technology courses or bridge courses or advanced learning courses. These courses are suggested by the concerned board of studies. These courses are notified on the university portal. The students have to opt for these courses with the help of a mentor / staff coordinator.

<b>220MT3.2</b>	A candidate shall exercise his /her option in respect of the electives and register for the same before
	the beginning of the concerned semester. The candidate may be permitted to opt for change of elective
	subject within 10 days from the date of commencement of the semester as per the calendar of the
	Institution.
<b>22OMT3.3</b>	Students shall be allowed to choose the elective/s, depending on their career plans, and there shall
	not be any restriction to the minimum number of students to be registered for an elective course.
22OMT4.0	Internship
22OMT4.1	Internship: The student shall undergo Internship as per the Scheme of Teaching and Examination.
	(1) The internship shall be carried out in any industry/R&D Organization/Research Institute/Institute
	of national and international repute/recognized national and international Professional Bodies,
	Societies or Organizations.
	(2) The Department shall nominate a faculty to facilitate, guide and supervise students under
	internship.
	(3) The students shall report the progress of the internship to the internal guide in regular intervals
	and seek his/her advise.
	(4) The Internship shall be completed during the period specified in Scheme of Teaching and
	Examination.
	(5) After completion of Internship, students shall submit a report to the Head of the Department with
	the approval of both internal and external guides.
	(6) There will be 50 marks for CIE (Seminar:20, Internship report:30) and 50 marks for Viva - Voce
	conducted during SEE. [To be read along with 220MT8.8]
	(7) The internal guide shall award the CIE marks for seminar and internship report after evaluation.
	He/she will also be the internal examiner for Viva - Voce conducted during SEE.

	(8) The external guide from the industry shall be an examiner for the Internship viva-voce
	examination. Viva-Voce on internship shall be conducted at the college and the date of Viva-Voce shall be fixed in consultation with the external Guide. The Examiners shall jointly award the Viva - Voce marks.
	(9) (i) In case the external Guide is not available or expresses his inability to conduct viva voce, the
	Chief Superintendent shall be permitted to make alternate arrangement. The examiner, in the
	order of preference, shall be an industry person or a faculty of another institution chosen from the
	list of examiners. The same shall be intimated to the concerned BOE Chairperson and Registrar (Evaluation).
	(ii) In case the external Guide accepts to conduct viva-voce examination from his/her workplace, it
	shall be arranged via Video/web conferencing/Webinar. The external Examiner shall send the mutually agreed signed marks (evaluated for SEE marks) list, soon after the examination, via email/any electronic media.
	(10) The students shall be permitted to carry out the internship anywhere in India or abroad. The
	institution shall not provide any kind of Financial Assistance to any student for internship.
22OMT4.2	Failing to undergo Internship: Internship is one of the head of passing. Completion of internship is
	mandatory. If any student fails to undergo/complete the internship, he/she shall be considered as fail
	in that Course and shall not be permitted to appear for SEE in that Course. However, such students shall
	appear for SEE after satisfying the conditions prescribed for Internship. The reappearance shall be
	considered as an attempt.
22OMT5.0	Mini Project and Seminar

22OMT5.1	Mini project and Seminar is one of the heads of passing.
	Each candidate shall complete one mini project work as per the scheme of teaching and examination
	under the guidance of the supervisor/guide. This course will have only CIE and no SEE. CIE shall be
	conducted by the guide and one senior faculty of the department. Marks allotment shall be in the ration
	of 50:25:25 for project work completion, report and seminar followed by question answer session.
<b>220MT5.2</b>	Project Work: Project is one of the heads of passing.
	Project work shall preferably be on individual basis.
	The candidate shall submit a soft / hard copy of the dissertation work to the Guide, upon checking will
	forward it to the office of controller of examination. Chairman of respective BoE shall submit a panel of
	examiners to the office of CoE. The examiners shall be selected from the panel and the project work
	will be evaluated by them.
<b>220MT5.3</b>	Plagiarism Check
	Once the dissertation is ready, the guide shall send it for plagiarism check. The allowable plagiarism
	index is less than or equal to 25%.
	If the check indicates a plagiarism index greater than 25%, the candidate has to resubmit the
	dissertation, after making necessary correction. After the plagiarism check the dissertation shall be

	forwarded to the office of controller of examination along with the plagiarism report.
22OMT5.4	The dissertation shall be sent through email for evaluation to two examiners - one internal examiner (guide/co-guide) and one external examiner (first) appointed by the office of CoE. The evaluation of the dissertation shall be made independently by each examiner.
22OMT5.5	Examiners shall evaluate the dissertation normally within a period of not more than two weeks from the date of receipt of dissertation through email.
22OMT5.6	The examiners shall independently submit the marks in the specified format through EMAIL to the office of CoE
22OMT5.7	Average of the marks awarded by the two Examiners shall be the final evaluation marks for the Dissertation.

#### **220MT5.8**

- (a) Viva-voce examination of the candidate shall be conducted as per 22OMT5.10, if the dissertation work and the reports are accepted by the external examiner (first).
- (b) If the external examiner (first) finds that the dissertation work and the report are not up to the expected standard and the minimum passing marks cannot be awarded, the dissertation shall not be accepted for SEE.
- (c) The external examiner (first) can recommend for modifications/suggestions of dissertation or totally reject the dissertation. The examiner shall offer suggestions for improvement of the dissertation for resubmission or list the reasons for rejection of the dissertation.
- (d) The resubmitted Dissertation incorporating the modifications/suggestions [as per 22OMT5.8(b)] of the external examiner (first) and satisfying the provision 22OMT5.3 shall be sent again to the external examiner (first) for evaluation. If the dissertation and the report are accepted by the external examiner (first), Viva- voce examination of the candidate shall be conducted as per 22OMT5.10.
- (e) In case of rejection of Dissertation by the external examiner (first), the same will be sent to a Second Examiner (external) approved by the office of CoE. The decision of the Second Examiner (external) is final. If the dissertation and the report are accepted by the Second Examiner (external), Vivavoce examination of the candidate shall be conducted as per 22OMT5.10. If the Second Examiner (external) rejects the dissertation and the report, the candidate shall have to carry out the dissertation work once again and submit the dissertation subject to provisions of 22OMT1.6. In such cases of rejection, the candidate shall redo the entire procedure starting from the submission of Dissertation in soft copy.
- (f) In case of rejection of Dissertation, with reasons, by the external examiner (first) [as per 22OMT5.8 (b)], the same will be sent to a Second Examiner (external) [not necessarily the same examiner considered under 22OMT5.8 (d)] approved by the office of CoE. The decision of the Second Examiner (external) is final. If the dissertation and the report are accepted by the Second Examiner (external), Viva-voce examination of the candidate shall be conducted as per 22OMT5.10. If the Second Examiner (external) rejects the dissertation and the report, the candidate shall have to carry out the dissertation work once again and submit the dissertation subject to provisions of 22OMT1.6. In such cases of rejection, the candidate shall redo the entire

	procedure starting from the submission of Dissertation in soft copy
<b>22OMT5.9</b>	The candidate, whose Dissertation is rejected, can rework on the same topic or choose another topic
	of dissertation under the same Guide or new Guide if necessary. In such an event, the report shall be
	submitted within four years in case of full-time student from the date of admission to the Programme.
22OMT5.10	Viva-voce examination of the candidate shall be conducted by the external examiner and internal examiner/guide.
	Internal examiner as per the direction of the office of CoE, shall have to arrive at a mutually convenient
	date for the conduct of viva-voce examination of the concerned candidate with an intimation to the
	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.
22OMT5.11	The relative weights for the evaluation of dissertation and the performance at the viva voce shall be as
	per the scheme of teaching and examination.
22OMT5.12	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.
22OMT5.13	Examination fee 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
	office of CoE from time to time.

220MT5.14	TT	The candidates who fail to submit the dissertation work within the stipulated time have to submit the								
		ame at the time of next ensuing examination.								
	50	and at the time of nont officing onatification.								
22OMT6.0		Computation	of SGPA and (	CGPA						
22OMT6.1	(i)	The Instituti	on adopts abs	olute gradin	g system	wherein t	he marks a	re converte	ed to gra	des, and
		every seme	ster result will	be declared	l with sem	ester grad	de point ave	rage (SGP	A) and C	umulative
		Grade Point	Average (CGI	PA). The CG	PA will be	e calculate	d for every	semester,	except fo	or the first
		semester.					-		_	
	(ii	i) The grading	system with th	ne letter grad	des and th	e assigne	d range of n	narks unde	r absolut	e grading
	,	system are a	as given below	<i>r</i> :			•			
		Lette	r Grade and co	orrespondin	g Grade I	Points on a	a typical 10	point scale	9	]
				_	_			_		
		<b>Level</b>	<mark>Outstandin</mark>	<b>Excellent</b>	<b>Very</b>	Good	Above	<b>Average</b>	<b>Fail</b>	
			g		Good		<b>Average</b>			
		Letter	0	A+	A	B+	B	C	F	
		<mark>Grade</mark>	Outstanding	Excellent	<mark>Very</mark> Good	Good	<u>Average</u>	Pass	Fail	
		Grade Point	10	9	8	7	<mark>6</mark>	<mark>5</mark>	0	
		% of Marks     (90-100)     (80-89)     (70-79)     (60-69)     (55-59)     (50-54)     (0-49)								
	(i)	Minimum m	arks to score fo	or CIE is 50%	6 of the m	aximum m	arks of CIE	and minim	um passi	i <mark>ng marks</mark>
		for SEE is 40% of the maximum marks of SEE. In aggregate the students have to secure 50% total								
		marks of the	course (CIE+	SEE marks).						
	(ii	i) A student ob	otaining grade	F in a cours	se shall be	e consider	ed a failure	and is req	uired to	reappear
		in subsequent SEE. Whatever the letter grade secured by the student during his /her reappperance								
		shall be retained. However, the number of attempts taken								
	(1	0) Transitiona	l grades: The	e transitiona	ıl grades,	such as,	'I', 'W' and	d 'X' shall	be awar	ded to a

student in the following cases. These grades need to be converted into one or the other of the letter grades (S-F). After the student completes his/her course requirements, including the examinations.

- i) 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:
  - Illness or accident, which disabled him/her from attending SEE
  - A calamity in the family at the time of SEE, which required the student to be away from the college
  - Any other verifiable exigency
- ii) Grade 'W':

Awarded to a student having satisfactory attendance at classes, but withdrawing from that course before the prescribed date in a semester under faculty advice.

iii) Grade 'X':

Awarded to a student having high **CIE rating** (>=90%) in a course, but SEE performance observed to be poor, which could result inan overall F gradeinthecourse.

Make-up Examination: The make-up examination facility shall be available to the students who may have missed to attend the SEE of one or more courses in a semester for valid reasons and given the 'I' grade. Student having the 'X' grade (as per VTU standard, approved in ACM) shall also be eligible to take advantage of the facility. The Make-up examination shall be held as per dates notified in the academic calendar. However, it will be possible for autonomous college to hold 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.

All the 'I' and 'X' grades awarded to the students shall have to 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 schedule Make-Up Examinations shall be automatically converted to 'F' grade.

(v) 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) Supplementary semester and fulfill the passing standards for their CIE and (CIE+SEE) as prescribed at the Autonomous College.

#### **220MT6.2**

**Grade Point Averages:** 

**SGPA** and **CGPA**: The credit index can be used further for calculating the Semester Grade Point Average (SGPA) and the Cumulative Grade Point Average (CGPA), both being important academic performance indices of the student. While SGPA is equal to the credit index for a semester divided by the total number of credits registered by the student in that semester, CGPA gives the sum total of credit indices of all the previous semesters divided by the total number of credits registered in all these semesters. Both the equations together facilitate the declaration of academic performance of a student, at the end of a semester and at the end of successive semesters respectively. Thus,

 $SGPA = \frac{\Sigma[\textit{Course Credits} \times \textit{Grade Points}] \textit{for all the Courses in that Semester}}{\Sigma[\textit{Course Credits}] \textit{for all the Courses in that Semester}}$   $\frac{\Sigma[\textit{Course Credits} \times \textit{Grade Points}] \textit{for all Courses excluding}}{\Sigma[\textit{Course With F and transitional grades until that Semester}}$   $\frac{\Sigma[\textit{Course Credits}] \textit{for all Courses excluding}}{\Sigma[\textit{Course Credits}] \textit{for all Courses excluding}}$   $\frac{\text{those with F grades until that Semester}}{\Sigma[\textit{Course Credits}]}$ 

Semester (Odd :I, Even: 11)	Course Number	Credits	Grade	Grade Points	Credit Points	SGPA, CGPA
I	XX101	5:0:0= 5	В	8	5×8=40	$SGPA = \frac{117}{25}$
I	XX102	3:2:0= 5	Absent(F)	0	5×0	25 = <b>4</b> . <b>68</b>
I	XX103	3:0:0= 3	A	9	3×9	
I	XX104	0:1:1 = 2	F	0	2×0	
I	XX105	4:1:0= 5	D	6	5×6	
1	XX106	5:0:0= 5	Е	4	5×4	
Total	<u> </u>	25 (18*)	Total	I	117	

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

П	XX107	3:1:1 = 5	С	7	5×7	157 SGPA = 25
II	XX108	4:0:0 = 4	В	8	4×8	= 6.28
II	XX109	3:0:0= 3	D	6	3×6	
II	XXI10	4:1:0= 5	Е	4	5×4	
П	XXI11	2:1:1 =	A	9	4×9	(117 + 157) $CGPA = 18 + 23$
II	XXI12	2:0:0= 2	F	0	2×0	$ \begin{array}{r} 16 + 23 \\ 274 \\ = 6.28 \end{array} $
II	XXI13	0:2:0 = 2	В	8	2×8	41
Total	•	25 (23*)	Total	•	157	

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

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

I	XX102	3:2:0=5	D	6	5×6=30	117 + 30 + 14
I	XX104	0:1:1=2	С	7	2×7=14	SGPA (I Semester) =
						25
						161
						= = 6.44
						25
II	XX112	2:0:0=2	D	6	2×6=12	157 + 12
						SGPA (II Semester) =
						25
						169
						= = 6.76
						25

CGPA at the end of the academic year after passing all the Courses of the two

consecutive semesters under consideration =  $(6.44 \times 25 + 6.76 \times 25)$ 

(b) CGPA Calculation of the Programme: An Illustrative Example							
Semester I II III IV							
Credits of the	24	24	20	20			
SGPA	7.00	8.50	9.20	6.86			

	$CGPA = (24 \times 7.00 + 24 \times 8.50 + 20 \times 9.20 + 20 \times 6.86)$ $= 7.88$
	88
<b>220MT6.3</b>	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.
22OMT7.0	Conversions of Grades into Percentage and Class Equivalence
	Conversion formula for the conversion of CGPA into percentage is given below:
	Percentage of marks secured, P=[CGPA Earned -0.75]×10
	Illustration For A CGPA Of 8.20: P=[CGPA Earned 8.2-0.75]×10=74.5 %
22OMT7.1	Class Equivalence: ———
	After the conversion of final CGPA into percentage of marks (P), a graduating student is reckoned to
	have passed in
	(i) First Class with Distinction [FCD] if P≥70%
	(ii) First Class (FC) if P≥60% but <70% and
	(iii) Second Class (SC) if P<60% but >=50%
22OMT8.0	Continuous Internal Evaluation and Semester End Evaluation
22 <b>OMT</b> 8.1	Continuous Internal Evaluation
	For each theory and practical paper, the CIE marks shall be 50.
	For Mini project with seminar and Project Phase -I, and Societal Project the CIE marks shall be 100.
	Project Phase-II both CIE and SEE are 100 marks each.
	[To be read along with 22OMT8.8]
22 <b>OMT</b> 8.2	CIE Marks shall be based on
	Three Unit Tests for each of 20 Marks (duration 01 hour)
	Two assignments each of 10 Marks / one Skill Development Activities of 20 marks.  Group discussion/ Seminar/ quiz/ Course project/ field work (Survey) any one of three suitably
	planned to attain the Cos and Pos for 20 Marks (duration 01 hours)
	The sum of three tests, two assignments/skill development activities and quiz/seminar/group
	discussion will be out of 100 marks ad will be scaled down to 50 marks
	CIE methods/ question paper is designed to attain the different levels of Bloom's taxonomy as per the
	outcome defined for the course.
<b>220MT8.3</b>	An additional test may be conducted for the needy students to provide an opportunity to improve their
	CIE Marks before the end of the semester. The CIE marks shall be the average of the marks scored in
	three tests, Assignments/skill development activities, Quiz/Seminar/course projects etc. Marks scored
	by the student/s proportionally scaled down to 50 marks. [To be read along with 22OMT8.8]
22OMT8.4	The candidates shall write the Tests in Blue Book/s. The Blue book/s and other documents relating to
	award of CIE marks under 220MT8.2 (b) shall be preserved by the Principal / Head of the Department
	for at least six months from the date of announcement of results and made available for verification at
	the directions of the office of CoE
22OMT8.5	Every page of the CIE marks list shall bear the signatures of the concerned Teacher, Head of the
	Department and the Principal.
22 <b>0MT</b> 8.6	The CIE marks list shall be displayed on the Notice Board and corrections, if any, shall be
	incorporated before submitting to the office of CoE.

22 <b>0MT8.7</b>	The CIE marks shall be sent to the office of CoE by the Head of the department well in advance before
	the commencement of Semester End Examinations. No corrections of the CIE marks shall be entertained after the submission of marks.
<b>220MT8.8</b>	Candidates obtaining less than 50% of the CIE marks in any course (Theory/ Laboratory/ Internship/
	Project) shall not be eligible to appear for the 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 for the course
	in supplementary semester when offered.

22 <b>OMT</b> 8.9	Semester End Evaluation: There shall be an examination at the end of each semester.
220W110.9	
22OMT8.10	There shall be double valuation of theory papers. The theory Answer booklets shall be valued independently by two examiners appointed by the office of COE as given by BOE chairman.
22OMT8.11	If the difference between the marks awarded by the two Examiners is not more than 15 per cent of the maximum marks, the marks awarded to the candidate shall be the average of two evaluations.
22OMT8.12	If the difference between the marks awarded by the two Examiners is more than 15 per cent of the
	maximum marks, the answer booklet shall be evaluated by a third Examiner appointed by the office of
	CoE. The average of the marks of nearest two valuations shall be considered as the marks secured by
	the candidate. In case, if one of the three marks falls exactly midway between the other two, then the
	highest two marks shall be taken for averaging.
22OMT9.0	Eligibility for Passing and Award of Degree
22OMT9.1	(1) A student who obtains any grade O to C shall be considered as passed and if a student secures F
	grade in any of the head of passing he/she has to register for the course in supplementary semester.
	(2) A student shall be declared successful at the end of the Programme for the award of Degree only
	on obtaining CGPA > 5.00, with none of the Courses remaining with F Grade.
	(3) In case, the CGPA fall below 5.00, the student shall be permitted to appear again for SEE for
	required number of courses (other than seminar and Practical) and times, subject to the provision
	of 22OMT1.6, to make up CGPA >5.0. The student should reject the SEE results of the previous
	attempt and obtain written permission from the office of CoE to reappear in the subsequent SEE.
22OMT9.2	For a pass in a theory course, the student shall secure minimum of 40% of the maximum marks
	prescribed in the Semester End Examination and $50\%$ of marks in CIE and $50\%$ in the aggregate of
	CIE and SEE marks. The Minimum Passing Grade in a course is C.
22OMT9.3	For a pass in Internship/Practical/Project/Dissertation/Viva-voce examination, a student shall secure
	a minimum of 50% of the maximum marks prescribed for the SEE in Internship / Practical / Project /
	Dissertation/Viva-voce. The Minimum Passing Grade in a course is C.
220MT9.4	IV semester Full-time candidates having backlog courses are permitted to upload the dissertation
	report and to appear for SEE. The IV semester grade card shall be released only when the candidate
	completes all the backlog courses and become eligible for the award of degree. [To be read along
	with 22OMT11.2]
·	

<b>220MT9.5</b>	A student may, at his/her desire can reject the total performance of a year (including CIE marks). The
	rejection is permitted only once during the entire Programme of study. The student who desires to reject the results of a year shall reject performance in all the Courses of the year, irrespective of whether the student has passed or failed in any Course, except the IV semester project results. Rejection shall be permitted only once during the entire Programme.
22OMT9.6	Readmission to any year in such cases shall not be considered as fresh admission and therefore the student will continue to have the same University Seat Number, which was allotted earlier. The programme duration will be counted with reference to USN.
22OMT9.7	Application for rejection shall be submitted to the office of COE through the Principal of the college,

within thirty days from the date of announcement of results.
A candidate, who opts for rejection of results of a semester shall be eligible for the award of class and
distinction, but shall not be eligible for the award of rank.
Eligibility for Award of Degree:
A student shall be declared to have completed the degree of Master of Technology, provided the student has undergone the stipulated course work as per the regulations and has earned the prescribed Credits, as per the Scheme of Teaching and Examination, of the programme.
Attendance Requirement
Registration and Enrolment:
(i) Except for the first semester, registration for a semester will be done during a specified week before the semester end examination of the previous semester.
(ii) The registration sheet should have the Candidate details, course name and code, number of credits and category (core/elective/audit) for each course of that semester.
(iii) The Faculty Adviser, assigned by the Head of the Department, will counsel the students in planning their courses of study and provide guidance, motivation, emotional support, and enable the mentees to reach the desired professional and career goals.
Courses of each semester shall be treated as a separate unit for calculation of the attendance.
The candidate has to put in a minimum attendance of 85 $\%$ in each course with a provision to condone
10 % of the attendance by the recommendation of the Principal of the college where the candidate is studying, based on medical grounds, participation in NSS/NCC/Red Cross /Republic Day and Independence Day parades/University/ State/ National/ International level sports and cultural activities, seminars, workshops, paper presentation etc., of significant value. The necessary documents in support are to be submitted along with recommendations to condone the shortage.
In case of late admission, approved by competent authority (DTE/VTU), to I semester of the
programme the attendance shall be reckoned from the date of admission to the programme.

22OMT10.5	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 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 Courses of the same semester.
	Improvement in CIE marks shall not be allowed during the current semester. The Course/s when
	repeated is considered as attempts. The courses with F grade should be registered and taken only
	during supplementary semester.
22OMT10.6	Principals of the concerned colleges shall notify regularly, the list of candidates who fall short of
	attendance.
220MT10.7	The list of the candidates falling short of attendance shall be sent to the office of COE at least one week
	prior to the commencement of the examination.

22OMT11.0	Promotion and Eligibility (Vertical Progression)
22OMT11.1	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.
22OMT11.2	(a) Candidates, under full-time programme, with a maximum of two backlog courses of first year shall
	be eligible for taking admission to second year (III semester).
	(b) Each credit course shall be treated as a head of passing.
	(c) (i)Candidates, under part-time Programme, with one backlog subject of an academic year shall
	be eligible for taking admission to next odd semester from even semester.
	(ii)For admission to V semester, Candidates under part-time Programme must have completed all
	the courses of I and II semesters.
22OMT11.3	The Mandatory non - credit courses, if any, shall not be considered for the Eligibility criterion
	prescribed for promotion, award of Class, calculation of SGPA and CGPA. However, a pass in the
	above courses is mandatory before the completion of Degree.
	The state of the s
22 <b>0MT</b> 11.4	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 program. If a student fails in a selected ONLINE course in a semester then
	he/she can pass the course in the next semester by taking the same course (if offered online) or other
	university-approved available courses during that session. The title of the course/s in which he/she
	qualify shall be mentioned in the grade card with letter PP.
22OMT12.0	Provision to move to integrated PhD program
000767710.1	
22OMT12.1	(a) The candidates pursuing M.Tech Degree at the institution and who have successfully completed
	the prescribed common coursework of the first three semesters of study with a minimum CGPA of
	7.75 out of 10 or 70% aggregate marks and published research papers in 'SCOPUS/SCI/WoS
	indexed Journals/UGC-CARE Approved Journals or obtained /filed patents shall be eligible for up-
	gradation to the PhD Program, subject to approval by the Admissions Committee.
	(b) Integrated PhD program is a full time program.

### 22OMT13.0 22OMT13.1

#### Temporary Discontinuation/Break in the Program

- (a) If a candidate, for any reason, temporarily discontinues the Programme or take a break from programme during any semester, he/she may be permitted to continue in the programme by registering to the same semester of the prevailing scheme. The candidate shall complete all the remaining course work subject to the provision 200MT1.6. Also the Candidates may have to complete additional course/s, if any, as per the decision of concerned Board of Studies and approval of Dean, Faculty of Engineering, on establishing equivalence between two schemes. A Grade card shall be issued to that effect. Additional course/s shall not be considered for the eliqibility criterion prescribed for promotion. However, based on the individual cases, it is considered to decide the SGPA and CGPA to admit the student for the award of degree. Such candidate shall not be eligible for the award of rank.
- (b) Candidates who takes admission to any semester of the existing scheme from another scheme, as a repeater/fresher because of various reasons have to complete additional course/s, if any, as per the decision of concerned Board of Studies and approval of Dean, Faculty of Engineering, on establishing equivalence between two schemes. A Grade card shall be issued to that effect. Additional course/s shall not be considered for the eligibility criterion prescribed for promotion. However, based on the individual cases, it is considered to decide the SGPA and CGPA to admit the student for the award of degree. Such candidate shall not be eligible for the award of rank.

#### 220MT13.2 Multiple Entry and Multiple Exit:

The multiple entries and exit points in the academic programs offered at Higher Education Institutions (HEIs) would remove rigid boundaries and create new possibilities for students. There are occasions when learners have to give up their education mid-way for various reasons. To facilitate flexible learning within the stipulated period (four years for regular students), multiple exits and entry options are given to the needy students. The student can exit from the program only at the end of the even semester/s (2nd semester) and the entry option is provided to the students at the beginning of the odd semester/s (3rd semester).

However, the students who passes all his registered courses of the 1st and 2nd semesters as per scheme of teaching and examinations and obtains required credits, shall be awarded with Post Graduate Diploma Certificate if he/she shall opt for exit. However he/she shall be permitted to take admission (3<sup>rd</sup> semester) subjected to the maximum duration of the course. He/she has to complete 06 weeks of internship before admitting to 3rd semester.

#### 22OMT14.0

#### Award of Prizes, Medals and Ranks

#### 22OMT14.1

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.

#### 22OMT14.2

- (1) For award of rank in a Specialization of Master of Technology, the CGPA secured by the student on completion of the programme is considered.
- (2) A student shall be eliqible for a rank at the time of award of degree of Master of Technology, provided the student
- (a) Is not a repeater in any semester

	(b) Has not rejected the results of any semester.
	(c) Has passed I to IV semester in all the courses in first attempt only
	(3) The total number of ranks awarded shall be 10% of total number of students appeared in IV
	semester subject to a maximum of 10 ranks in a Specialization.
	(4) For award of ranks in a Specialization, a minimum of 10 students should have appeared in the IV semester examination.
	Illustration:
	(a) If 150 students appeared for the IV semester in VLSI Design and Embedded Systems Branch, the number of ranks to be declared in VLSI Design and Embedded Systems will be 10.
	(b) If 84 students appeared for the IV semester in Computer Science & Engineering, the number of ranks to be declared for Computer Science & Engineering will be 08.
	(c) In case of fractional number of ranks, it is rounded to higher integer only when the first decimal place value is greater than or equal to 5.
	(5) Students under Part-time Programme are not considered for Rank declaration.
22OMT14.3	Ranks are awarded based on the merit of the students as determined CGPA. If two or more students
	get the same CGPA, the tie shall be resolved by considering the number of times a student has
	obtained higher SGPA. If it is not resolved even at this stage, the number of times a student has obtained
	higher grades like S, A, B etc., shall be taken into account to decide the order of the rank.
22OMT15.0	Applicability and Power to Modify
22OMT15.1	The regulations governing the Degree of Master of Technology shall be binding on all concerned.
22OMT15.2	(i) Notwithstanding anything contained in the foregoing, the Institution shall have the power to issue
	directions/ orders to address any difficulty.
	(ii) Nothing in the foregoing may be construed as limiting the power of the Institution to amend,
	modify or repeal any or all of the above.

#### 5. DISCIPLINARY MEASURES

#### **GENERAL MEASURES**

- a) The students will not assist or even associate himself / herself in any activities that is likely to disturb the peace and smooth functioning of the institution.
- **b)** The tuition fees shall be paid by the student before or at the time of 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) Student will have to maintain regular attendance. In case of attendance less than 75% the student will not be allowed for 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 have to 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), cocurricular and extra-curricular activities, prior permission has to be sought through proper channel. Further immediately within three days, on return from the event, should also provide the necessary proof to the counselor, 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 paper on Innovation and Social Skills.

#### ANTI-RAGGING RULES

Ragging in any form is totally prohibited in the campus. Ragging menace is a criminal offence & such of the students who are involved in such obnoxious practice are liable to be rusticated from the college. Severe action will be initiated against the students who are indulging in the ragging. The 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.

#### **DRESS CODE**

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

- Boys should not wear shorts, headgears, overly torn jeans and chappals.
- Girls should not wear shorts, short skirts, overly torn jeans, strapless tops, burkhas, headgears/headscarves.
- Displaying offensive and obscene slogans and icons on clothing is prohibited.
- Students who do not adhere to the dress code are liable to be rusticated from the institution.

#### **MOBILE PHONE:**

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

- · Boys should not wear shorts, headgears, overly torn jeans and chappals.
- Girls should not wear shorts, short skirts, overly torn jeans, strapless tops, burkhas, headgears/headscarves.
- Displaying offensive and obscene slogans and icons on clothing is prohibited.

Students who do not adhere to the dress code are liable to be rusticated from the institution.

#### SECURITY ISSUES:

- Wearing identity card in a way that it is clearly visible is compulsory inside the campus for security reasons. Entry into the campus without 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. 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 very pleased to extend the services of professional counselors at their Counseling Center for the student community. The youth of today are challenged by many stresses from within their own home and from external sources. There may be issues related to personality, being unable to communicate with peers and others effectively, low self esteem, poor self confidence, in-ability 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, may be health related issues and many more.

"Where can you go to get some relief from these stresses and make sense of what is happening to you and how do 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 seeks the help of the Counselors who are there to enable you to understand, to build capacities to overcome and to develop skills to cope with the situations that you may find stressful. The keywords of counseling are compassion, building trust, confidentiality and being non-judgmental. The counseling process is usually one-on-one and these are experienced counselors who can empower you to fulfill your true potential during your tenure in 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 for a fruitful career. Counselors can extend a helpful hand to you in this journey. Students of New Horizon College of Engineering can communicate to the counselors through the email ID nhce\_counselor@newhorizonindia.edu

#### :: **NOTE** ::

These rules and regulations may be altered/changed from time to time by the academic council. Failure to read and understand the rules is not an excuse.