

ACADEMIC RULES & REGULATIONS

Applicable to all Undergraduate Autonomous Programmes

Under Outcome Based Education (OBE)

AND

Choice Based Credit System (CBCS) Scheme

2018 scheme - 175 Credits

(with effect from 2018)



NEW HORIZON COLLEGE OF ENGINEERING

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

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.**

QUALITY 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**
- **Innovation**
- **Integrity**
- **Professionalism**
- **Inclusiveness**
- **Social Responsibility**

INDEX

Section	Particulars	Page
1.	PROFILE OF THE INSTITUTION	1
	1.1. ABOUT NHCE	1
	1.2. MANAGEMENT COMMITTEE	1
	1.3. INFRASTRUCTURE	1
	1.3.1. LIBRARY AND INFORMATION CENTRE	2
	1.3.2. LABORATORIES	5
	1.3.3. HUMAN RESOURCE DEVELOPMENT	5
	1.3.4. TRANSPORTATION FACILITIES	5
	1.3.5. CULTURAL, SPORTS AND RECREATION FACILITIES	6
	1.3.6. INDUSTRY INSTITUTE INTERACTION CELL	6
	1.4. ENTREPRENEURSHIP DEVELOPMENT CENTRE	6
	1.5. FACULTY	7
	1.6. ACADEMIC PROGRAMMES OFFERED	7
	1.6.1. UNDER GRADUATE PROGRAMMES	7
	1.6.2. POST GRADUATE PROGRAMMES	8
	1.6.3. STUDY ABROAD PROGRAMME	8
	1.7. PROFESSIONAL SOCIETIES	8
	1.8. SCHOLARSHIP FACILITY	9
	1.9. INDUSTRY INSTITUTE INTERACTION CELL	9
	1.10. ACHIEVEMENTS AND ACCOLADES	9
2.	NOMENCLATURE OF PROGRAMMES	9
	2.1 GENERAL	9
	2.2 PROGRAMME DURATION	10
	2.3 ADMISSION OF STUDENTS	11
	2.4 SEMESTER SCHEME	12
3.	CREDIT SYSTEM	14
	3.1 GENERAL	14
	3.2 CREDIT DEFINITIONS	14
	3.3 COURSE REGISTRATION	14
	3.4 SUPPLEMENTARY SEMESTER	15
	3.5 AUDIT COURSES	15
4.	CREDIT STRUCTURE	15
5.	COURSE LOAD	17

6.	CURRICULUM FRAMEWORKS	20
	6.1 GENERAL ISSUES	20
	6.2 B.E/B.TECH DEGREE PROGRAMMES	20
	6.2.1 RECOMMENDED COURSES	20
	6.2.2 MANDATORY COURSES AND OTHER REQUIREMENTS	20
	6.2.3 INDUCTION PROGRAMME & INTERNSHIP	21
	6.2.4 ALLOCATION OF CREDITS FOR B.E DEGREE PROGRAMME	21
	6.2.5 SEQUENCING OF COURSES FOR B.E/ B.TECH. DEGREE	21
7.	ASSESSMENT	22
	7.1 ACHIEVEMENT TESTING	22
	7.2 QUESTION PAPERS	23
	7.3 EXAMINATIONS: MAINTANENCE OF STANDARDS	24
8.	GRADING	28
	8.1 GENERAL	28
	8.2 GRADE POINTS	29
	8.3 GRADE CARD	31
	8.4 GRADE POINT AVERAGES	31
	8.5 VERTICAL PROGRESSION	33
	8.6 AWARD OF CLASS	34
9.	B. E HONOURS	35
	9.1 ELIGIBILITY CRITERIA FOR REGISTRATION	35
	9.2 REGISTRATION PROCEDURE	35
	9.3 AWARD OF HONOURS QUALIFICATION	35
	9.4 COURSE WORK	36
10.	ACTIVITY POINTS	37
11.	OTHER ACADEMIC MATTERS	40
	11.1 CHOICE BASED CREDIT SYSTEM	40
	11.2 TIME SCHEDULES	40
	11.3 TEMPORARY WITHDRAWAL	41
	11.4 TERMINATION FROM THE PROGRAMME	42
12.	STUDENTS' FEEDBACK	42
13.	RECOMMENDATIONS FOR DEGREE AWARD	43
14.	DISCIPLINARY MEASURES	44
15.	COUNSELING CENTRE	46
16.	GUIDELINES AND TEMPLATE FOR THE PREPARATION OF MINI PROJECT /PROJECT REPORT	47

1 PROFILE OF THE INSTITUTION

1.1 ABOUT NHCE

New Horizon College of Engineering (NHCE) has un-paralleled 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 programmes 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.m. –6.30 p.m.
Holidays		9.00a.m. –5.00 p.m.
During Examination		8.00a.m. –6.30 p.m.
During Vacation		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
- ✚ Digital 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
- ✚ 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 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.
- ✚ 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 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, 2 CDs, 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 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
- ✚ 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 lab 1 & 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, 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 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. Schneider 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 – Automobile Engineering
2	B.E – Civil Engineering
3	B.E – Computer Science & Engineering
4	B.E – Electronics & Communication Engineering
5	B.E – Electrical & Electronics Engineering
6	B.E – Information Science & Engineering
7	B.E – Mechanical Engineering
8	B.E – Computer Engineering
9	B.E– Artificial Intelligence & Machine Learning

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
4	M.Tech in Machine Design
5	M.Tech in Cyber Forensics & Information Security

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 programs between NHCE and various universities 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, IPE, 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, MCA, 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 NOMENCLATURE OF PROGRAMMES

2.1 GENERAL

The nomenclatures and their abbreviations given below, are followed as per the suggestion given by the University:

UG Level: Bachelor of Engineering (B.E.), B.E(Hon's) in all branches of Engineering

Besides, the branch subject of specialization, if any, shall be indicated in brackets after the abbreviation; e.g., B.E.(Mechanical Engineering)

2.2 PROGRAMME DURATION

- ✚ Ordinarily, the duration of fulltime academic programme shall be the same as that followed by the University, i.e., four years for B.E
- ✚ As a flexible credit system is to be followed for coursework at each Autonomous College, it is to be noted that the programme duration in the case of UG shall also be dictated by the period in which a student earns the prescribed credits for the Degree award. Hence, it is possible for an outstanding student to earn the required credits in a shorter time than that ordinarily prescribed for the relevant programme mentioned above.
- ✚ In such cases, as per the university norms, it shall be open to the Autonomous College to prescribe additional credits to be earned by a UG student in prior consultation with the University so as to qualify for the concerned Degree award with Honors or any other term associated with it.
- ✚ The maximum period which a student can take to complete a fulltime academic programme shall be the same as that prescribed by the University from time to time; e.g., double the nominal duration of the programme, i.e., eight years for B.E and 6 years for students admitted to II year B.E under lateral entry scheme.
- ✚ A student who has not obtained the eligibility to III semester even after three academic years from the date of admission to I semester shall discontinue the Programme or get readmitted to I semester of first year BE/B.Tech with a new University Seat Number but retaining the same year of admission.
- ✚ A student (under lateral entry scheme) who has not obtained the eligibility for V semester even after two academic years from the date of admission to III semester shall discontinue the Programme or get readmitted to III semester of II year BE/B.Tech with a new University Seat Number but retaining the same year of admission.
- ✚ Besides, the maximum period for a programme at Autonomous Colleges shall also be dictated by the fact that a student has to demonstrate the specified minimum academic performance by registering for the

prescribed minimum number of credits in every semester for continuing with programme. And, this period can be equal to or smaller than the maximum period indicated as above.

2.3 ADMISSION OF STUDENTS

Admissions: The admission of students to various UG programmes is made by following the State Government and/ or the University Policies / Practices. In all the cases, we follow the necessary statutory provisions of reservation of seats to different categories of candidates from time to time.

There is provision for candidates with a polytechnic Diploma or any other qualification approved by the Council and the Commission to join UG Degree programmes at the beginning of the second year of the 4-year programme as per the prevailing practice in the University.

The students can opt to migrate from one branch or specialization to another branch or specialization at the same College or at another Autonomous / Affiliated / Constituent College under the University at the beginning of the second year. In these cases, we follow the Rules and Regulations of the University /Council.

Eligibility Criteria: The eligibility criteria for admission of students to program at the College are same as those prescribed by the University.

The eligibility criteria for admission of students from a non-Autonomous College to an Autonomous College, from one Autonomous college to another Autonomous college and from University scheme at an Autonomous College to its Autonomous Colleges, shall be fixed by the Academic Councils of the College, who shall frame suitable Rules for this purpose consistent with the objectives of academic autonomy. A copy of the Rules so adopted shall be sent to the University within a fortnight of such adoption.

The eligibility criteria for the admission of students from other Universities to the College shall be fixed by the Academic Council of the College by getting the individual cases examined by the concerned Board(s) of Studies and also by following the same criteria as above and recommending the names of such candidates qualifying for admission to the University for its approval.

2.4 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 UG 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 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 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	
Number of Semester/ Year	<p>Three Semesters; Two being Main Semesters (Odd, Even) and one being a Supplementary Semester.</p> <p>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.</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; Course work – 15.5 weeks; Examination Preparation – 1.0 week; Examinations – 1.0 weeks; Declaration of Results -1.0 week; Total: 19 weeks.</p> <p>Supplementary Semester (For Repeat):</p> <p>Registration of courses – 0.1 week;</p>

	<p>Course work – 7.0 weeks ; Examination Preparation –0.2weeks; 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.</p>
Examinations	<p>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.</p> <p>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.</p>
Other Items	<ul style="list-style-type: none"> ✚ Care is taken by the College to ensure that the total number of days for academic work is ≥ 180/ year. ✚ Academic schedule prescribed by College is strictly adhered to, for success of the Semester Scheme. ✚ Supplementary Semester is mainly used by the College for conducting Repeat Course for the benefit of slow learners/ repeaters ✚ 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.

	<ul style="list-style-type: none"> ✚ Minimum, Maximum and Average Course loads per Semester are fixed by prior consultation with the University.
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3 CREDIT SYSTEMS

3.1 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.

3.2 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.

3.3 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.

3.4 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.

3.5 AUDIT COURSES

In Addition, a student can register for courses for audit only with a view to supplement his/her knowledge and / or skills. Here also, the student's grades will have to be reflected in the Grade Card. But, these shall not be taken into account in determining the student's academic performance in the semester. In view of this, it may not be necessary for the Colleges to issue any separate transcript covering the audit courses to the registrants at these courses.

4 CREDIT STRUCTURE

A typical Credit Structure for coursework based on the above definition is given in Table below. This shall be applicable for the coursework of students registered for UG, PG and Research Programmes at the College

Typical Credit Structure for coursework				
Lectures (L) (hours/week/ semester)	Tutorials (T) (hours/week/ semester)	Laboratory work (P) (hours/ week/semester)	Credits (L:T:P)	Credits (Total)
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

Major Benefits: Major benefits accruing to the College by adopting the credit system are listed below:

- ✚ Quantification and uniformity in the listing of courses for all programmes at the College, like core (hard/ soft), electives and project work.
- ✚ Ease of allocation of courses under different heads by using their credits to meet national/ international practices in technical education.
- ✚ Convenience to specify the minimum / maximum limits of course load and its average per semester in the form of credits to be earned by a student.
- ✚ Flexibility in programme duration for students by enabling them to pace their course load within minimum /maximum limits based on their preparation and capabilities.
- ✚ Wider choice of courses available forms any department of the same college or even from other similar Colleges, either for credit or for audit.
- ✚ Improved facility for students to optimize their learning by availing of transfer of credits earned by them from one College to another.

Thus, it is more appropriate to specify the eligibility requirements for a Degree award based on course work, by prescribing the total number of credits to be earned, as an alternative to specifying the Programme Duration. This will be of great help in providing the well needed flexibility to the students in planning their academic programmes and their careers.

5 COURSE LOAD

In the planning of Coursework for an academic programme at the College, it is therefore necessary to specify the average Course load for a student per semester as well as its minimum and maximum limits.

Looking at the prevailing practices at leading institutions in India and abroad in this respect, taking into account the AICTE Model Curricula for UG Programmes (February 2018) and considering the academic strength and capability of an average student, University has fixed the course load at all Autonomous Colleges at 22 credits/ semester (average level) with its minimum and maximum limits being set at 16 to 28 credits respectively. This pattern is followed uniformly at NHCE by making a provision in its time table for the students to register for 22 credits on an average in each semester.

Course Flexibility: Further, as directed by the University to all the Autonomous Colleges, we shall follow the following practices for providing flexibility to the students in their academic programmes and to meet their varied needs:

a. Faculty Advice: There is a faculty advisory system (comprising its regular faculty members) established the College with each faculty advisor being assigned a group of students. The functions of Faculty Advisor shall be to:

✚ Advise the students in the group on all academic matters (like registration of courses, dropping of courses and / or withdrawing from courses),

✚ Monitor the students' in the group for their individual academic performance,

✚ Identify students in the group who are slow, average or fast learners to help them pace their studies/ learning at the college based on their individual abilities, and

✚ Serve as friend, philosopher and guide to all of them in the group during their studentship at the College

b. With the faculty advisory system in place, a student to be normally permitted to register for the average course load in the first semester. And, based on the performance in the semester and faculty advice, he/she to continue with this load (for average and fast learners) or to reduce it to the minimum permissible (for slow learners) by dropping of/ withdrawing from

some course(s) credits before the dates prescribed for these. This facility to assist the student to pace the course work, minimize the chances of failure in the course(s) and optimize the learning process.

c. The student's performance in the first semester to form the basis for faculty advice on the number of credits to be registered in the second (or subsequent) semester, (to be within the minimum / maximum limits of 16/28 credits). Further faculty advice and close monitoring to help a slow learner to pace the course work properly by reducing the course load, if required and to minimize the chances of failure in the semester.

d. The above experience to enable any student to properly plan his/her course load in each succeeding semester, by fixing it to be between ≥ 16 and ≤ 28 credit limits based on faculty advice and his/ her academic performance in the previous semester. Faculty advice to be useful to the student in identifying appropriate elective courses.

e. This experience also helps fast learners (or outstanding students) to accelerate their programmes by registering and maintaining up to the maximum (equal to 28 credits) course load in each succeeding semester based on their performance in the preceding and the current semesters. Such students to be able to complete the credit requirements of the programme in a shorter time, like 7 semesters in the case of B.E as example.

Similarly, slow learners to register only for the minimum (equal to 16) number of credits in each succeeding semester and strive to maintain good performance in all the courses registered and complete the total requirements for the programme at a slower pace, say 9 to 10 semesters, in the case of B. E/ B. Tech as example.

f. The College as per the direction of University has set uniform standards for enabling the vertical progression of students from one academic year to the next. The number of credits earned by a student during the semester / year and Semester Grade Point Average (SGPA) as well as the Cumulative Grade Point Averages (CGPA) shall serve as performance indices to determine the standards as given in the Guidelines. The College has a well-organized Faculty Advisory system, effective examinations/assessment system and a

comprehensive academic calendar prescribing specific dates for each activity, for good success in realizing the flexibilities.

The total number of credits to be earned by a student to qualify for the Degree award from the College shall be as given below.

Total Number of credits to Qualify for Degree/ Diploma /Certificate Award			
Programme		Normal Duration Years(Semesters)	Total number of Credits to be Earned
UG Degree	B. E./ B.Tech	4.0 (8)	175
	B. E./ B.Tech. (Lateral entry)	3.0 (6)	135
	B.E (Honours)*	4.0(8)	175*
* Refer 9 - B.E (Honours) guidelines for details			

Contact Hours: Considering the expectations from engineering professionals with UG Degree in the 21st Century, it is desirable to limit the number of contact hours for students to 30-35/week. This will be of help to students in getting enough time and opportunity to do better preparation for the courses prescribed for credit, to take up self-study, to develop their creative talents and abilities and benefitting from the Add-On courses and those taken for audit. This can also enable them to get ready for challenging and exciting careers ahead. A typical example showing the calculation of contact hours based on course credits is given in the table below

Calculation of Contact Hours / Week – An Example			
No. of courses	Credits of the course	Total credits	Contact hours per week
Three lecture courses	3:0:0	9	9
Two Lecture cum tutorial courses	3:1:0	8	10
Two Lecture cum Laboratory courses	3:0:1	8	10
one Lecture, Laboratory cum tutorial courses	1:1:1	3	5

Total	28	34
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6 CURRICULUM FRAMEWORKS

6.1 General Issues

(a) Curriculum Framework is important in setting the right direction for a Degree/ Diploma / Certificate programme at a College, as it takes into account the type and quantum of knowledge necessary to be acquired by a student to qualify for a particular award in his/her chosen branch or specialization area.

(b) Besides, this also helps in assigning the credits for each course, sequencing the courses semester-wise and finally arriving at the total number of courses to be studied and the total number of credits to be earned by a student to fulfill the requirements for the conferment. The college also takes into account the AICTE Model Curricula notified from time to time and follow them so as to be abreast of the national trends in this connection.

6.2 B. E/ B. TECH. DEGREE PROGRAMME

The Curriculum Framework for a B. E/B. Tech. Degree programme is given below as an example. The programme includes the following courses.

6.2.1 RECOMMENDED COURSES

These include coursework under the following categories:

- ✚ Humanities and Social Sciences including Management (HSMC);
- ✚ Basic Sciences (BSC) (Mathematics, physics, Chemistry, Biology);
- ✚ Engineering Sciences (ESC) Materials, Workshop, Drawing, Computers);
- ✚ Professional Core (PCC), relevant to the chosen specialization / branch;
- ✚ Professional Electives (PEC), relevant to the chosen specialization /branch;
- ✚ Open Electives (OEC), from other technical and/ or emerging subject areas;
- ✚ Project Work (PROJ), Seminar and /or Internship in Industry or elsewhere

6.2.2 MANDATORY COURSES (MC) AND OTHER REQUIREMENTS: The UG Degree programmes also require the inclusion of certain courses necessary for familiarity of subjects, like environmental studies, Constitution of India, Communication Skills, Aptitude Skills, Chosen Language Knowledge/ Proficiency such as Aadalitha kannada/Vyavaharika kannada as Mandatory Courses. Such courses shall not carry any credit for the award of the Degree. But, a pass in each such course during the

Programme shall be a necessary requirement for the student to qualify for the Degree.

6.2.3 INDUCTION PROGRAMME AND INTERNSHIP: There is also a requirement now a days to include a 3- week Induction Programme for the first year B. E/ B.Tech students at the beginning of their 1st semester, as per the requirements of AICTE in its Model UG Curriculum (Feb. 2018.) Besides, there is also a mandatory requirement of Internship to be undertaken by all the UG students. The College has ensured that both these are fulfilled to the best possible extent.

6.2.4 ALLOCATION OF CREDITS FOR B.E / B.TECH. DEGREE PROGRAMME: Looking at the UG Engineering Degree programmes practiced at leading institutions in India and abroad and the need for Indian engineering professionals to be able to meet the 21st century challenges, we at our college follow the coursework breakdown as given in Table below. It is expected that this breakdown will lead to a highly useful and respectable B.E/ B.Tech. Degree programme under the University

Typical Breakdown for the B.E./B.Tech. Degree Curriculum			
Course Category	Percentage (%) of total credits		Average number of credits
	Minimum	Maximum	
Humanities, Social Sciences and Management (HSMC)	5	10	10
Basic Sciences (BSC)	10	20	28
Engineering Sciences (ESC)	10	20	20
Professional Core (PCC)	30	40	64
Professional Electives (PEC)	10	15	20
Open Electives (OEC)	5	10	09
Project Work (PROJ)/Internship	10	15	24
Total			175

6.2.5 SEQUENCING OF COURSES FOR B.E/ B.TECH. DEGREE:

The above breakdown of the B.E/ B.Tech. Degree curriculum forms the basis for the sequencing of the coursework for the programmes at the College. Based on

this, a typical sequencing plan for coursework for B.E/ B.Tech. Degree programme is given in the below Table. Sequencing of Courses for B.E/ B.Tech. Degree: The above breakdown of the B.E/ B.Tech Degree curriculum forms the basis for the sequencing of the coursework for the programmes at the College. Based on this, a typical sequencing plan for coursework for B.E/ B.Tech. Degree programme is given below.

Typical sequencing plan for B.E /B.Tech Degree Curriculum	
Semesters	Course Categories
I-II	<ul style="list-style-type: none"> • HSMC, BSC and ESC, Common for all Programmes as per AICTE Model Curriculum. • MC and Mandatory Induction Programme (3 weeks).
III-IV	<ul style="list-style-type: none"> • HSMC, BSC and ESC, Common for all Programmes (to be continued). • Also, MC (to be continued, if required). • PCC: In two/three groups (like Circuit, Non-Circuit). • Area-wise Orientation, Add-On Courses.
V-VII	<ul style="list-style-type: none"> • PCC/PEC/OEC, Core and Electives. • Branch-wise Orientation, Add-On Courses, Seminar, Internship.
VIII	<ul style="list-style-type: none"> • PEC/OEC, Electives, Project work (PROJ), Dissertation. • Add-On Courses, Seminar, Final wrap-up of Programme.

7 ASSESSMENT

7.1 ACHIEVEMENT TESTING

a) The assessments of students' performance in course work during and / or at the conclusion of a programme are done using examinations.

b) At NHCE, the assessment is preferably of the achievement testing type so that a student's knowledge, understanding and competence in the courses studied are properly assessed and certified. Therefore, we have introduced proper reforms in the examination system to achieve this goal. The Guidelines

given below enable us to achieve this goal and gain the confidence and respect of our stakeholders, particularly students. Typically achievement testing is done in two parts, as follows: both of them being important in assessing the students' achievement:

- ✚ **Sessional:** Involving Continuous Internal Evaluation (CIE), to be conducted by the course instructor all through the semester. This may include mid-term tests, weekly/fortnightly class tests, homework assignments, problem solving, group discussions, quiz, seminar, mini-project and other means.

- ✚ **Terminal:** Covering Semester End Examination (SEE) to be conducted at the end of the semester, by the course instructor jointly with an internal and external examiner, on dates fixed at the College level. This includes a written examination for theory courses and practical/design examination with built-in oral part for laboratory/ design courses.

- ✚ Both CIE and SEE being equally important in judging the course work performance of students; they are conducted with equal rigor and seriousness.

7.2 QUESTION PAPERS

Question Paper pattern

For an effective achievement testing of students in a course, a good Question Paper needs to be used as the main tool. This makes it necessary for us to make sure that the question papers used at CIE and SEE to:

- ✚ Cover all sections of the course syllabus uniformly.
- ✚ Be unambiguous and free from any defects/ errors.
- ✚ Emphasize knowledge testing, problem solving and quantitative methods.
- ✚ Contain adequate data / other information on the problems assigned and
- ✚ Have clear and complete instructions to the candidates.

Question Paper Planning

The above requirements make it necessary for a Question Paper to cover the entire syllabus, with a provision for the students to answer questions from the whole syllabus. As students need to be given some choice in the questions

included in the paper, it is necessary for the question papers at SEE, in particular, must have built in choice under each module of the syllabus. This factor has been taken note of and strictly followed by our College, while planning of the Question papers.

Besides, it is also necessary for the course syllabi to be drafted properly, be defect-free and also properly given in modular form to enable the setting of good question papers covering the whole syllabus. These aspects have been taken into account, in particular, by the Boards of Studies at the College.

Typical Question Paper

The questions to be included in the Question Papers at CIE and SEE can be of two types as follows.

✚ Multiple Choice Question, having each question to be answered by tick marking the correct answer from the choices (commonly four) given against it. Such a question paper is useful in the testing of knowledge, skills, comprehension, application, analysis, synthesis, evaluation and understanding of the students. However, Question Papers for CIE and SEE to include no more than 15-20% of questions of this type.

✚ Comprehensive Questions, having all questions of the regular type to be answered in detail. Such a Question Paper to be useful in the testing of overall achievement and maturity of the students in a course through long questions relating to theoretical/ practical knowledge, derivations, problem solving, modeling simulation, design, application and quantitative evaluation.

7.3 EXAMINATIONS: MAINTENANCE OF STANDARDS

For ensuring a high standard in both CIE and SEE fully meeting the provisions of the University Statutes and being able to declare the results of students' performance at both these in a time bound manner as per our Academic Calendar, the college follow the points given below for conducting the examinations.

CIE: The CIE is conducted exclusively by the course instructor. The instructor spell out the components of CIE to the students in advance, maintain

transparency in its operation, declare the evaluation results in time and then return the answer scripts and assignment sheets to them as soon as possible. The instructor also solves the questions from these test papers during tutorial sessions for the benefit of all the students concerned, especially slow learners.

✚ The candidates shall write the tests, assignments/unit-tests /written quizzes in Blue Books which shall be preserved by the Principal/ Head of the Department for at least six months after the announcement of University results and shall be made available for verification at the direction of the Registrar (Evaluation).

✚ **NSAR/NSSR:** 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.

SEE: The SEE is conducted jointly by the course instructor and an external examiner appointed for this purpose. Here, the external examiner to mainly associate with the work of Question paper setting, because of the difficulties in having him/her for conducting the evaluation of students answer scripts due to the tight time schedule for the various tasks connected with SEE.

✚ **SEE – Answer Scripts:** The answer scripts of SEE may be normally evaluated by the course instructor only. But as a healthy step, a Department Committee is set preferably to oversee this task and ensure the quality and standard of evaluation and also of the grades awarded in all the cases. Also, before declaring the results an external review is conducted.

Passing Standards Using Absolute Grading	
Evaluation Method	Passing Standard
Sessional (Continuous Internal Evaluation)	Score: $\geq 40\%$
Terminal (Semester End Examination)	Score : $\geq 40\%$

✚ **External Review of SEE:** An external review is conducted under the aegis of the Board of Studies / Board of Examiners of the College by appointing a panel of experts from outside the College for this purpose aiming at a complete review of SEE operation in the College. This includes such step as, question paper review, checking random samples of answer scripts, analysis of results/ grades awarded and other related aspects. This step is also necessary for gaining the confidence of the University and of the society at large, of the fairness, transparency and acceptability of the examination practice among the stakeholders.

✚ **Attendance standards:** All students of the College Shall maintain a minimum attendance of 85% in each course registered. In case of any shortfall in this, the Academic Council of the College shall consider the same and may condone the deficiency in special cases up to 10% any student failing to meet the above standard of attendance in any course(s) registered may not be allowed to appear for SEE of such course(s) because of NSAR.

✚ **Attendance at CIE and SEE:** Attendance at all examinations, both CIE and SEE of each course registered is compulsory for the students and there is no provision for re-examinations. Any student against whom any disciplinary action by the College/University is pending shall not be permitted to attend any SEE in that Semester.

✚ **Passing Standards:** High standard is maintained in all aspects of the examination at the College. The standards of passing at CIE and SEE for each Course, registered are given below.

✚ **Project Work Evaluation:** The evaluation of CIE of the Project work shall be based on the progress of the student in the work assigned by the project supervisor periodically evaluated by him / her together with a Departmental Committee constituted for this purpose at the College. Seminar Presentation,

project report (dissertation) and final oral examination conducted by a common Project Evaluation Committee at the College level shall form the SEE of the Project work.

✚ In the case of other requirements, such as seminar, industrial internship, field work, comprehensive viva voce, if any, the assessment shall be made as laid down by the Academic Council of the College.

✚ There shall be no re-examination for any Course in the credit system to take care of such students:

- ✓ Who have absented themselves from attending CIE or SEE without any valid reason
- ✓ Who have failed (Grade F,) to meet the minimum passing Standard Prescribed for CIE and /or SEE
- ✓ Who have been detained for shortage of attendance in any Course work
- ✓ Who have withdrawn (Grade W) from a Course.

✚ Such students shall be required to re-register for the Course(s) and go through CIE and SEE again and obtain a Grade E or better in each case. While such students shall have to re-register for the same Courses(s) if hard core, they can re- register for alternative course(s) from among the soft core or elective Courses, as the case may be. The re- registration shall be possible only when the particular Course is offered again either in a main (Odd/Even) or a supplementary semester.

1. 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.
- 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.
- 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.

- Students who opt for rejection of results shall be eligible for the award of degree and not for the award of ranks.

2. A student shall be declared to have completed the programme of BE degree and is eligible for the award of degree, provided the student has undergone the stipulated Course work of all the semesters under the same Scheme of Teaching and Examination and has earned the prescribed number of credits.

3. Over and above the academic credits, every Day College regular student admitted to the 4 years Degree programme and every student entering 4 years Degree programme through lateral entry, shall earn 100 and 75 Activity Points** respectively for the award of degree through AICTE Activity Point Programme. Students transferred from other Universities to fifth semester are required to earn 50 Activity Points from the year of entry to VTU. The Activity Points earned shall be reflected on the student's eighth semester Grade Card.

4. Activity Points (non-credit) have no effect on SGPA/CGPA and shall not be considered for vertical progression. In case a student fails to earn the prescribed activity Points, Eighth semester Grade Card shall be issued only after earning the required activity Points. The student shall be admitted for the award of degree only after the release of the Eighth semester Grade Card.

8 GRADING

8.1 GENERAL

(a) In recent years, the grading system has replaced the evaluation of students performance in a Course based on absolute marks, because of its many advantages. Here again, it is necessary to maintain uniformity in the grading practices at different Colleges to ensure that the migration of students to transfer of credits among Autonomous Colleges under the University is made easy.

(b) **Letter Grades:** A letter grade is basically a qualitative measure (an alphabet/ letter) giving the performance of a student, such as , Outstanding (S)Excellent (A), Very Good (B), Good(C), Above Average(D), Poor (E) and Fail (F),based on the

raw score (marks, as in conventional practice) obtained by the student .This is usually arrived at after the student’s performance in a course, which includes both CIE and SEE, is assessed and raw score (marks) for the total are awarded to begin with, followed by grouping of all the students at a Course under different grading levels, as above.

(c) Absolute Grading: The College follows absolute grading system for evaluating the students’ performance.

8.2 GRADE POINTS

(a) Depending on the letter grades assigned, a student earns certain grade points.

As the grading system can have different scales for grade points (like 5, 8, and 10) with more number of points in the scale being desirable for providing higher resolution in the assessment. Moreover, all Autonomous Colleges under the University need to follow the same scale for uniformity in their operations . Hence, the Autonomous Colleges under the University shall follow the 10-Point grading system, as given in Table below for absolute grading system.

Grade Points Scales for Absolute Grading							
Level	Outstanding	Excellent	Very Good	Good	Above Average	Poor	Fail
Grade	S	A	B	C	D	E	F
Grade Points	10	9	8	7	6	4	0
Score (Marks)		<90 -	<80 -	<70 -	<60 -	<50 -	
Range %	≥90	≥ 80	≥ 70	≥ 60	≥ 50	≥ 40	<40

(b) The grade Points given in the above table will help in the evaluation of credit points earned by the students in a course. As the credit points are equal to the number of credits assigned to the course multiplied by the grade points awarded to the students in that course. This shall be used in arriving at the credit index of the student for that semester, as it is the sum of total of all the credit points earned by the student for all the Courses registered in that semester.

(c) Earning of credits: A student shall be considered to have completed a

course successfully and earned credits if he/ she secures an acceptable letter grade in the range S to E. Letter grade F in any course implies failure of the student in that course and no credit shall be earned.

(d) Transitional grades: The transitional grades, such as, 'I', 'W' and 'X' shall be awarded 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 in an overall F grade in the course.

(e) 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.

(f) 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.

(g) 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.

8.3 GRADE CARD:

Each student shall be issued a Grade Card (or transcript) at the end of each semester. While this will have a list of all the Courses registered by a student in the semester. Together with their credits, the letter grades with grade points awarded in each case and those with grades 'I', 'W' and 'X', only those Courses registered for credit and having grade points shall be included in the computation of the students performance, like SGPA and CGPA. And, the Courses, taken for audit will not form part of this computation. The results of mandatory courses, which are of the non- credit type, shall also be reflected in the Grade Card as PP (for Passed) or NP (for Not Passed). It may be noted that each UG student shall have to obtain the grade PP in each mandatory course to qualify for the Degree award by the University.

8.4 GRADE POINT AVERAGES

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

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

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

Illustrative Example: An Illustrative example given in Table below indicates the use of the two equations in calculating SGPA and CGPA. Both of them shall be normally calculated up to the second decimal position, so that the CGPA, in particular, can be made use of in rank ordering the students' performance in a class at a Autonomous College. If two students get the same CGPA, the tie may be resolved by considering the number of times a student has obtained higher SGPA. But, if it is not resolved even at this stage, the number of times a student has obtained higher grades like S,A,B, may be taken in to account in rank ordering of the students in the class.

SGPA/CGPA Calculations: An Illustrative Example						
Semester (Odd:I, Even:II)	Course No.	Credits	Grade	Grade Points	Credit Points	SGPA, CGPA
I	XX101	5:0:0	B	8	40	SGPA =117/20 =5.85
I	XX102	3:2:0	W	-	-	
I	XX103	3:0:0	A	9	27	
I	XX104	0:1:1	F	0	00	
I	XX105	4:1:0	D	6	30	
I	XX106	5:0:0	E	4	20	
Total		20(18*)	Total		117	
II	XX107	3:1:1	C	7	35	SGPA =157/25 =6.28
II	XX108	4:0:0	B	8	32	
II	XX109	3:0:0	D	6	18	
II	XX110	4:1:0	E	4	20	
II	XX111	2:1:1	A	9	36	CGPA =274/41 =6.68
II	XX112	2:0:0	F	0	00	
II	XX113	0:2:0	B	8	16	
Total		25(23*)	Total		157	

Supple- mentary	XX102	3:2:0	D	6	30	SGPA =56/9 =6.22
Supple- mentary	XX104	0:1:1	C	7	14	
Supple- mentary	XX112	2:0:0	D	6	12	CGPA =330/50 =6.60
TOTAL		9	TOTAL		56	
<ul style="list-style-type: none"> • Total No. of Credits excluding those with 'F' and 'W' grades particularly important to keep track of the number of Credits earned by a student up to any semester. 						

8.5 VERTICAL PROGRESSION:

It shall also be necessary to lay down uniform minimum standards for CGPA together with the minimum number of credits to be earned in an academic year for the vertical progression of students at all Autonomous Colleges under the university

This shall be used to facilitate the mobility of students from one College to another and also to avoid any confusion among the students. The Prescribed standards for vertical progression shall be as follows:

1. The range of minimum and the maximum credits to be earned in an academic year (Inclusive of Supplementary semester, if any) :

(i) First Year: ≥ 28 to ≤ 40 credits

(ii) Second Year and third year: ≥ 32 to ≤ 56 credits

2. Further, at the end of each academic year (Inclusive of supplementary semester), the number of heads with "F" of all the previous semesters shall not exceed four.

A. In the case of students of students admitted to first year

✚ Students having not more than four F Grade in the 1st and 2nd semester of the Programme shall be eligible to move to second year.

✚ Students having not more than four F grades in the Four semester of I and II year shall be eligible to move to third year.

- ✦ Student who has earned all the prescribed credits of I year (Nil F grade in first year), and having not more than four F grades in the four semesters of II and III year shall be eligible to move to IV year.
- ✦ A student shall not be allowed to carry any of the 1st year courses to 4th year. Any student having backlog from 1st year courses shall not be permitted to register for 7th semester courses.

B. In the case of Lateral Entry students admitted to second year (Diploma students)

- ✦ Students having not more than four F grades in the 3rd and 4th semester of II year shall be eligible to move to third year. (Excluding the fail or Pass status of Additional mathematics – I and II if any)
- ✦ Students having not more than four F grades in the four semester of 2nd and 3rd year shall be eligible to move to fourth year.
- ✦ However, completion of Additional mathematics – I and II is mandatory for the award of degree.

Note: From II Year onwards, the number of maximum credits that a student can register in a semester shall be 28. In any case, the number of credits shall not be less than 16 after dropping/ withdrawal of a course/(s) in that semester.

8.6 Award of Class:

Sometimes, it is necessary to provide equivalence of these averages, viz., SGPA and CGPA with the percentages and /or Class awarded as in the conventional system of declaring the results of University Examinations. This shall be done by Autonomous College under the University only at one stage by prescribing certain specific thresholds in these averages for First class with Distinction, First Class and Second Class, at the time of Degree Award. This provision given below in Table follows the approach of the Council for this purpose as reproduced from the AICTE Approval Process Handbook.

Percentage Equivalence of Grade Points (For a 10- Point Scale)	
Grade Point	Percentage of Marks /Class
5.75	50
6.25	55
6.75	60

7.25	65
7.75	70
8.25	75

Note:

(1) The Following Formula for Conversion of CGPA to Percentage of Marks to be used only after a student has successfully completed the programme:

$$\text{Percentage of Marks} = (\text{CGPA} - 0.75) \times 10$$

(2) Class Designation:

- $\geq 70\%$ (First Class with Distinction) ,
- $\geq 60\%$ and $< 70\%$ (First Class) ,
- $< 60\%$ (Second Class)

9 B.E (Honors)

Student shall choose, Online Courses (18 credits or more) from the bouquet of approved online courses by the institution/university.

To subsume the intentions of AICTE, VTU has instituted the award of BE degree with Honours from 2018-19 Batch onwards

The regulation shall be applicable to the Students

- ✓ Admitted to I semester/I year as a Regular student
- ✓ Admitted to III semester/II year as a Lateral Entry Student

9.1 Eligibility Criteria for Registration

Every student intending to register for the 'Honours' qualification shall fulfill the following academic requirements:

- a. Registration to 'Honours' qualification shall start from **fifth semester** onwards.
- b. The Registrants shall have obtained a **grade $\geq D$** in all the courses in the first attempt only, in the semesters until this stage.
- c. The Registrants shall have obtained a **CGPA ≥ 8.50** at the end of the fourth semester.
- d. The lateral entry Diploma students shall have completed Additional Mathematics I and II during 3rd and 4th semesters in first attempt only.

9.2 Registration Procedure

- A student meeting the eligibility criteria specified above and intending to

register for the 'Honours Qualification shall apply in the prescribed form along with a **non refundable registration fee as decided by the institution to confirm** the registration.

9.3

Award of HONOURS Qualification

- ❖ Students shall maintain a **grade \geq D** in all the courses of fifth to eight semesters in first attempt only.
- ❖ Students shall choose, online courses **totaling to 18 or more credits** from the bouquet of **approved online courses, by institution/University**.
- ❖ Students failing to maintain a **grade \geq D** in all the courses of fifth to eight semesters in first attempt only shall discontinue the attempt to earn additional credits, for Honours degree.
- ❖ Students not having a **GGPA \geq 8.50** at the end of programme shall not be eligible for the award of Honours even if they have satisfied the additional credits consideration prescribed for Honours degree.
- ❖ Additional credits earned through NPTEL shall not be considered for the calculation of CGPA as well as rank declaration.
- ❖ The Award of the HONOURS degree shall be recommended by the Academic council and approved by the Governing Council of the Institution.

9.4

Course Work

- Successfully in the remaining semesters, that is, **fifth to eight** for the relevant Degree award, each student registered for the Honours qualification shall have to take up the **coursework as notified by the university from NPTEL**
- Final score (**Online assignments: 25% + Proctored exam: 75%**) leading to NPTEL **Elite** (60 to 75 %) / **Elite + Silver** (76 to 89 %) / **Elite + Gold** (> 90 %) certificate, within the minimum prescribed duration for the award of Degree.
- The **University/Institution** shall announce the **BOS approved list of MOOCs** (chosen from **NPTEL/SWAYAM**/other platforms) corresponding to each engineering programme.

THE CREDIT EQUIVALENCE FOR ONLINE NPTEL COURSES SHALL BE DETERMINED BASED ON THE FOLLOWING TABLE.

Assigned Credits	
Online course Duration	Assigned Credits
04 Weeks	1
08 Weeks	2
12 Weeks	3

The Head of the Departments shall submit the list of students who are eligible for the award of Honours degree along with the total credit earned by each student and the corresponding MOOC certificates to the office of Controller of Examination, programme wise, together with the CIE marks of 8th semester.

The list shall be validated by the Faculty Advisor of the students under consideration and endorsed by the Head/Chairperson of the Department.

- a) Those students who cannot/do not submit the certificates on or before the last date prescribed by the institution shall not be considered for the award of 'Honours' qualification, irrespective of the number of credits earned by them. However, they shall be awarded only B.E. Degree.
- b) The 'Honours' qualification shall be suffixed to the respective degrees and shown in the Degree certificates as a recognition of higher achievement by the student concerned.
- c) The CGPA earned by the students shall be only on the basis of students' performance in the various semester level examinations conducted by the University/ Autonomous colleges, as the case may be.

10 Activity Points

Apart from technical knowledge and skills, to be successful as professionals, students should have excellent soft skills, leadership qualities and team spirit. They should have entrepreneurial capabilities and societal commitment.

In addition to the regular academic activities, there is a need for the student to develop the personality trait as required by industry and society. In order to meet

such requirements AICTE has introduced a mechanism of awarding activity points over and above the academic grades.

This is applicable to all B.E students

- Admitted to I semester/I year from the **academic year 2018-19 onwards**
- Admitted to III semester/II year from the **academic year 2019-20 onwards (LATERAL BATCH)**
- Re-admitted / rejoined to III semester/II year from the **academic year 2019-20 onwards**
- Rejoining to V semester from the **academic year 2020-21 onwards**

Sl. No.	Student Category	Activity points prescribed by AICTE
1	Day College regular student admitted to the 4 years Degree programme	100
2	Student entering 4 years Degree programme through lateral entry	75
3	Students transferred from other Universities to fifth semester	50

1. The Activity Points earned shall be reflected on the student's eighth semester Grade Card.
2. The activities can be can be spread over the years (duration of the programme), anytime during the semester weekends and holidays, as per the interest and convenience of the student from the year of entry to the programme. However, minimum hours specified must be satisfied.
3. Activity Points (non-credit) have no effect on SGPA/ CGPA and shall not be considered for vertical progression.
4. In case students fail to earn the prescribed Activity Points, Eighth semester Grade Card shall be issued only after earning the required Activity Points. Students shall be admitted for the award of degree only after the release of the Eighth semester Grade Card.
5. The AICTE Activity Programme, a non-credit programme, can be taken up

any time during the semester weekends and holidays. These activities can be spread over the years, as per Convenience of the student. However, minimum hours specified must be satisfied.

AICTE Activity Point Programme (Activity Summary sheet)					
Following suggestive activities may be carried out by students in teams as per their choice					
Sl. No.	Activity Head	Minimum Duration		Performance appraisal/ Maximum points/ activity	Evaluated by
		Weeks	Hours		
1	Helping local schools to achieve good result and enhance their enrolment in Higher/ technical/ Vocational Education.	2	80-90	20	NSS/youth Red Cross Co-ordinators /Chairperson-CICC (College Internal Complaints Committee) / SAGY (sansad Adarsh Gram Yojana, Govt. of India) of the institute / Mentor
2	Preparing an actionable business proposal for enhancing the village Income.	2	80-90	20	
3	Developing Sustainable Water Management system	2	80-90	20	
4	Tourism Promotion Innovative Approaches.	2	80-90	20	
5	Promotion of Appropriate Technologies.	2	80-90	20	
6	Reduction in Energy Consumption.	2	80-90	20	
7	To Skill rural population.	2	80-90	20	
8	Facilitating 100% Digitized money transactions.	2	80-90	20	
9	Setting of the information imparting club for women leading to contribution in social and economic issues.	2	80-90	20	
10	Developing and managing efficient garbage disposable system.	2	80-90	20	
11	To assist the marketing of rural produce.	2	80-90	20	

12	Food preservation/packaging	2	80-90	20	
13	Automation of local activities.	2	80-90	20	
14	Spreading public awareness under rural outreach programmes.	2	80-90	20	
15	Contribution to any national level initiative of Government of India. For e.g. Digital India/ Skill India/ Swachh Bharat Internship etc.,	2	80-90	20	

6. Submission of Activity Points: The consolidated report of activity points earned by the students shall be sent to the University.

11 OTHER ACADEMIC MATTERS

11.1 CHOICE BASED CREDIT SYSTEM

(a) Choice Based Credit system for academic Programmes is of considerable benefit to the students for customizing their programmes of direct interest of them, developing their individual capabilities and talents and preparing them for exciting careers ahead in the 21st century.

(b) The students are provided with Easy access to the scheme of instruction, syllabi, credit structure of programmes and the courses being conducted (either in print or in electronic form) so as to assist them in course work planning.

(c) Institutionalizing the conduct of course work by adopting a centralised time table for all the programmes in the college, with a view to assist the students in customizing their programmes and also optimizing the use of physical facilities.

(d) Establishing a dynamic faculty advisory system where 10-20 students are assigned to an Advisor for guiding them in planning/ implementing their course work in a flexible and effective manner and also monitoring them.

11.2 TIME SCHEDULES

(a) **Academic Schedules:** To specify various time schedules, Academic Calendar is prepared to assist the students and also the faculty members.

These include, dates assigned for registration of courses, dropping of courses and withdrawal from courses. This enables the students to be well prepared, minimize their chances of failure in CIE and/or SEE and take full advantage of the flexibility provided by the credit system.

(b) Registration of Courses: Each student shall have to register for courses at the beginning of a semester. The permissible Course load to be either average number of credits in the 1st Semester of a programme or to be within the limits of minimum and maximum credits prescribed in each later semester. A period of 2-3 days is specifically assigned for this event in the Academic Calendar for the students to seek faculty advice, discuss with the course instructors and complete the formalities.

c) Dropping of Courses: Based on the review conducted, of students' performance in CIE by the Faculty Advisors concerned, a specific time period is fixed, e.g in the middle of a semester, to mainly assist the students having poor performance to be facilitated to drop the identified course(s) (up to the minimum credits specified for the semester) without being mentioned in the Grade Card. Such Courses to be re- registered by these students and taken up for study at a later semester in the programme.

d) Withdrawal from Courses: With the help of review by the faculty advisor, regarding student performance in CIE, course(s) that need to be withdrawn can be identified (up to the minimum credits specified for the semester) with mention in the Grade Card (grade 'W'). Such Courses to be re-registered by these students and taken up for study at a later semester in the programme

11.3 TEMPORARY WITHDRAWAL: A student shall be permitted to withdraw temporarily from College on grounds like, prolonged illness, grave calamity in the family or any other serious happening. The withdrawal shall be for periods which are integral multiples of a semester, provided that:

(i) The student applies to the College within at least 6 weeks of the commencement of the semester or from the date he/she last attended the classes, whichever is later, stating fully the reasons for such a withdrawal, together supporting documents and endorsements of his/her parents/guardians.

(ii) The College is satisfied of the genuineness of the case and that, even by taking into account the expected period of withdrawal, the student has the possibility to complete the prescribed programme requirements within the time limits specified by the University.

(iii) The student does not have any dues or demands at the College/University including tuition and other fees as well as library material.

(a) A student availing of temporary withdrawal from the College under the above provision shall be required to pay such fees and /or charges as may be fixed by the college until such time as his/her name appears on the students' Roll List. However, it may be noted that the fees/charges once paid shall not be refunded.

(b) Normally, a student will be entitled to avail of the temporary withdrawal facility only once during his/her studentship of the programme at the College. However, any other concession for the student shall have to be approved by the Academic Council of the College.

11.4 TERMINATION FROM THE PROGRAMME:

A student shall be required to withdraw from the programme and leave the College on the following grounds:

- Absence from classes for more than six weeks at a time in a semester without leave of absence being granted by the competent Authority.
- Failure to meet the standards of discipline as prescribed by the College from time to time.

12 STUDENTS' FEEDBACK

(a) Regular feedback is obtained from the students on their course work and various academic activities conducted under the credit system. For this purpose, a suitable feedback form is devised by the College and the feedback is obtained from the students in confidence regularly. A Report on the Feedback is received and proper action is taken on the Report.

(b) The feedback received from the students is discussed at various levels of decision making at the College and the changes/improvements, if any, suggested is given due consideration for implementation at the College.

13 **RECOMMENDATIONS FOR DEGREE AWARD**

(a) College forwards its recommendations to the University in respect of students qualifying for UG/UG (Hon's)/Research Degree Awards based on their success in the examinations/adjudication of theses as the case may be after receiving approval from the Authorities/Bodies of the College concerned.

(b) College also ensures that each such student in (a) has fulfilled all the requirements for the Degree Award.

(c) Only those students recommended for the Degree Award shall be entitled to receive the relevant Provisional Certificates /Transcripts from the College at this stage.

GRADUATION CEREMONY

(a) College has its own annual Graduation ceremony for the award of degrees (Provisional Certificates) to the students completing the prescribed academic and other requirements in each case as per the lists recommended to the University, in prior consultation with the University and by following the provisions in the University Statutes.

(b) College has instituted Prizes and Awards to meritorious students, which are being given away annually at the Graduation ceremony, to encourage the students to strive for excellence in their academic activities. Ranks are awarded to the students based on the merit as determined by CGPA. If two or more students get the same CGPA, the tie is 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 is taken into account to decide the order of the rank.

For award of rank in a specialization, a minimum of 10 students should have appeared in the VIII semester examination.

The total number of ranks awarded shall be 10% of the total number of students appeared in VIII semester, subjected to a maximum of 10 ranks in a specialization.

FOR AWARD OF RANK

- 1.** In a specialization of B.E, the CGPA secured by the students from III to VIII semester is considered
- 2.** A student is eligible for a rank at the time of award of degree, provided he/she has Passed all the courses starting from I semester, in first attempt only (starting from III semester for lateral entry)
- 3.** completed all prescribed mandatory non credit courses
- 4.** Not repeated any course in any semester due to rejection of result or shortage of attendance etc.
- 5.** Completed all the semesters without any break/discontinuity.
- 6.** CGPA ≥ 6.75 (equivalent to first class or above)

14 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), co-curricular 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 usage of mobile phones by the students in the instructional areas is banned. However, these can be used in open areas (lawn and open seating areas).
- If a student is found conversing on mobile phone in any of the academic areas/ buildings, the mobile will be confiscated and fine will be levied for violating the rule.

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.

15 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.

16 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 in the preparation of their mini project reports. In general, the mini project report should document in an organized and scholarly fashion an account of original work of the candidate/s leading to the application of knowledge acquired during the course of their 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 size of project report should not exceed 50 pages of typed matter.

4. ORDER OF CONTENTS

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

1. Cover Page & Title Page
2. Bonafide Certificate
3. Plagiarism Certificate
4. Abstract
5. Acknowledgement
6. Table of Contents
7. List of Tables
8. List of Figures
9. List of Symbols, Abbreviations and Nomenclature
10. Chapters
11. Appendices
12. 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 for preparing 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 dimension 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) is to 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

BRANCH OF STUDY

GUIDELINES FOR EVALUATION OF PROJECT PHASE-1

All the projects and mini-projects in CSE/ISE/MCA departments are to be carried out as SOLO projects (Only one student per project)

Projects and mini-projects in departments other than CSE/ISE/MCA can have a minimum of one student and a maximum of four students, left to the discretion of the departments

Project Phase-1 may broadly consist of the following activities:

- Problem Statement/Project Title
- Background work/Literature survey as required
- Detailed descriptions of the various modules or components of the project
- Proposed timeline for completion of the project
- Project Design

Project Phase-1 Report:

- Phase-1 report of at least 25 pages must be submitted
- A detailed report on the activities carried out in phase-1 along with the plan of action for the completion of the project should be included
- Departments can decide on the template for the phase-1 report

CIE:

- All the activities carried out during project phase-1 over the course of the semester must be evaluated as a part of CIE
- CIE must have a presentation and a phase-1 report evaluation

SEE

- The SEE will consist of a write-up and a detailed viva-voce on the status of the project and the proposed plan for its completion.

PROJECT REPORT GUIDELINES

Project reports should be typed neatly only on 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 are:

- One copy to the department
- One copy to the concerned guide(s)
- Two copies to the sponsoring agency
- One copy to the candidate.

1. Soft Copy of the Report

Student should submit the 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

An abstract (synopsis) not exceeding 100 words, indicating salient features of the work. (NB: four copies of the abstract are to be submitted to the Department on the date of submission separately)

4. The organization of the report should be as follows

Inner title page Abstract or Synopsis Acknowledgments Table of Contents

List of table & figures (optional) Usually numbered in roman

Chapters (to be numbered in Arabic) containing Introduction-, which usually specifies the scope of work and its importance and relation to previous work and the present developments, Main body of the report divided appropriately into chapters, sections and subsections.

The chapters, sections and subsections may be numbered in the 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 chapter centered (font size 18), section/subsection numbers along with their headings must be left justified with section number and its heading in font size 16 and subsection and its heading in font size 14. The body or the text of the report should have font size 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. Schafer, Digital Signal Processing, Englewood, N.J., Prentice Hall, 3 Edition, 1975.

For papers – Devid, Insulation design to combat pollution problem, Proc of IEEE, PAS, Vol 71, Aug 1981, pp 1901-1907. Only SI units are to be used in the report. Important equations must be numbered in decimal form for e.g. $V = IZ$ (3.2)

All equation numbers should be right justified.

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 important 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 Appendix. At the time of report submissions, the students must hand over a copy of these details to the project coordinator and see that they are entered in proper registers maintained in the department.

Software projects must include a virus free disc, containing the software developed by them along with the read me file. Read me file should contain the details of the variables used, salient features of the software and procedure of using them: compiling procedure, details of the computer hardware/software requirements to run the same, etc. If the developed software uses any public domain software downloaded from some site, then the address of the site along with the module name etc. must be included on a separate sheet. It must be properly acknowledged in the acknowledgments. Sponsored Projects must also satisfy the above requirements along with statement of accounts; bills for the same dully attested by the concerned guides to process further, They must also produce NOC from the concerned guide before taking the internal viva examination.

The reports submitted to the department/guide(s) must be hard bounded, with a plastic covering. Separator sheets, used if any, between chapters, should be of thin paper.

6. Format of the College-Certificate

NAME OF THE INSTITUTION Address with pin code Department of		
CERTIFICATE Certified that the project work entitledcarried out by Mr./Ms.....USN....., a bonafide student ofin partial fulfillment for the award of Bachelor of Engineering / Bachelor of Technology in of the Visveswaraiah Technological University, Belgaum during the year It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the Report deposited in the departmental library.		
Name & Signature of the Guide of the Principal	Name Signature of the HOD	Signature
External Viva		
Name of the examiners Signature with date		
1.		
2.		

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

NAME OF THE INDUSTRY / ORGANIZATION Address with pin code	
CERTIFICATE Certified that the project work entitled carried out by Mr./Ms USN..... a bonafied student of.....in partial fulfillment for the award of Bachelor of Engineering / Bachelor of Technology in..... of the Visveswaraiah Technological University, Belgaum during the year..... It is certified that, he/she has completed the project satisfactorily.	
Name & Signature of the Guide	Name & Signature of the HOD
Organization:	

8. COLOUR OF THE OUTER COVER/FRONT PAGE OF UG DISSERTATION / PROJECT

Sl.No	UG course	Color of the outer cover/front page of the report
1	<ul style="list-style-type: none">• Electronics & Communication Engineering• Electrical & Electronics Engineering	PURPLE
2	<ul style="list-style-type: none">• Computer Science & Engineering• Information Science & Engineering	CREAM
3	<ul style="list-style-type: none">• Mechanical Engineering• Automobile Engineering	SKY BLUE
4	<ul style="list-style-type: none">• Civil Engineering	GREY
5	<ul style="list-style-type: none">• Artificial Intelligence & Machine Learning• Computer Engineering	COFFEE BROWN
6	<ul style="list-style-type: none">• Master of business administration	ROYAL BLUE
7	<ul style="list-style-type: none">• Master of Computer application	GREEN
8	<ul style="list-style-type: none">• Master of Technology(all branches)	SILVER

Team Size

Main Project

B.E Main Projects can have a minimum of ONE student, and a maximum of FOUR students working on a project.

Mini Project

Must be INDIVIDUAL projects and NOT group projects.