

Nagarjuna College of Engineering & Technology

Bengaluru-562164

(An Autonomous Institution under VTU, NAAC Accredited with A+ Grade)



NAGARJUNA
COLLEGE OF ENGINEERING
AND TECHNOLOGY

***10th Meeting of Academic Council (AC)
Held On
12.09.2022 at 10.00 AM***

Minutes of the Meeting

ACADEMIC COUNCIL MEETING #10

Date: 12.09.2022, Monday

Time: 10.00 am

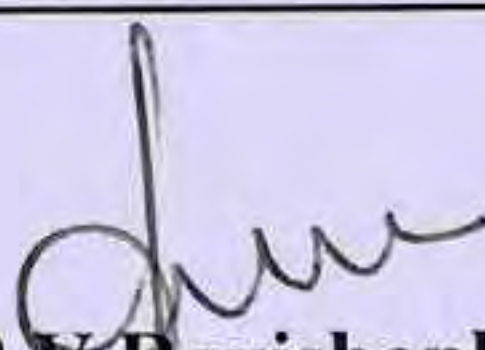
Venue: Chamber of Principal, NCET

Agenda

Agenda #	Agenda Description
10/1	Confirmation of Minutes of the 9th Meeting of AC
10/2	Action taken Report on the suggestions of the 9th Meeting of AC
10/3	To note the information about NAAC Accreditation of the institute with A+ grade
10/4	Approval of Autonomous Academic Rules and Regulations for 2021-22 scheme
10/5	Ratification / Approval of Recommendations of various Boards of Studies
	i. B E in Electronics and Communication Engineering
	ii. B E in Computer Science and Engineering
	iii. B E in Information Science and Engineering
	iv. B E in Computer Science and Engineering(AIML)
	v. B E in Computer Science and Engineering(DS)
	vi. B E in Civil Engineering
	vii. M.Tech in Structural Engineering
	viii. M.Tech in Construction Technology
	ix. MBA
	x. Basic Sciences and Humanities
10/06	Ratification/Approval of additional courses to be studied by the students having shortage credits
10/07	Approval of change in the format of the grade card
10/08	Approval of the list of students graduating during the academic year 2021-22
10/09	To note the achievements of faculty and students
10/10	To note the result analysis for the AY 2021-22.
10/11	Any other matter with the permission of the chair


Dr. Yogeesha H C
Member Secretary

Internal Quality Assurance Cell
Nagarjuna College of Engineering & Technology
Venkatagiri Kote Post, Devanahalli,
Bengaluru - 562 154.


Dr. B V Ravishankar
Principal

PRINCIPAL
Nagarjuna College of Engineering & Technology
Devanahalli (Tq) Bengaluru (Dt.)-Pin: 562164

Members Present:

Sl. No.	Name	Position
1.	Dr. B V Ravishankar, Principal, NCET	Chairman
2.	Dr. Y S Nijagunarya, Professor, Dept of CSE, SIT, Tumkur	VTU Nominee
3.	Dr. B Yogesha, Professor, Dept of ME, MCE, Hassan	VTU Nominee
4.	Dr. A Sudhahar, Chief Consultant, Dimensions@Confluence, Coimbatore	Experts representing industry, alumni, R & D institutions and Technical Education
5.	Dr. S G Gopala Krishna, Prof & Director, Nagarjuna Education Society	Teachers representing the college
6.	Dr. Gopalakrishnan, Prof & Advisor(R&D), NCET	
7.	Dr. Ajeet C, Professor-CSE	
8.	Dr. Sarvesha M V, COE & HOD-Mathematics	HODs of all Departments
9.	Dr. Ramesh P S, HOD-Civil	
10.	Dr. Dinesha H A, HOD-CSE	
11.	Dr. Nagesh K N, HOD-EC	
12.	Dr. Anil Kannur, HOD-IS	
13.	Dr. Geethanjali G, HOD -MBA	
14.	Dr. Syed N H – HOD-DS	
15.	Dr. Vijayanand R, HOD-AIML	
16.	Dr. Manjunath K, HOD-Chemistry	
17.	Mrs. Sharada T, HOD-Physics	
18.	Mr. Ranjan Manish, Dean- I4 & AR	
19.	Mr.B. Ramesh, HOD-SSFL	Member Secretary
20.	Dr. Yogeesh H C, Associate Director(IQAC),NCET	

Members Sought Leave of Absence :

Sl.No	Name	Position
1.	Dr. S Ramesh, Professor, Dept of ECE, Dr. AIT, Bengaluru	VTU Nominee
2.	Dr. Nagesh Poojary, Lead Technical Architect, Continental Technical Centre, Bengaluru	Experts representing industry, alumni, R & D institutions, and Technical Education
3.	Mr. Mohan Kumar, Practice Head, Wipro Limited	
4.	Mr. R Anish Simha, Senior General Manager, Rinac India Limited, Bengaluru	

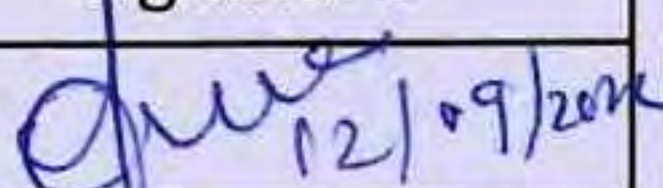
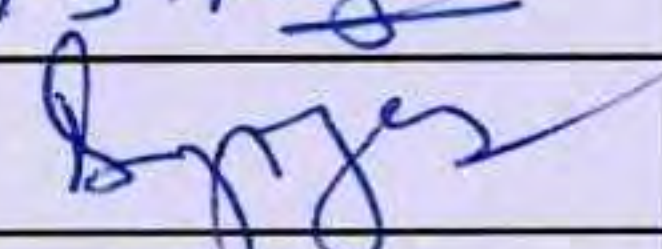
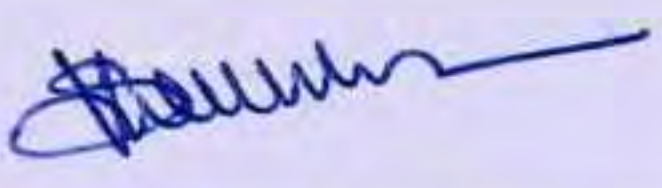
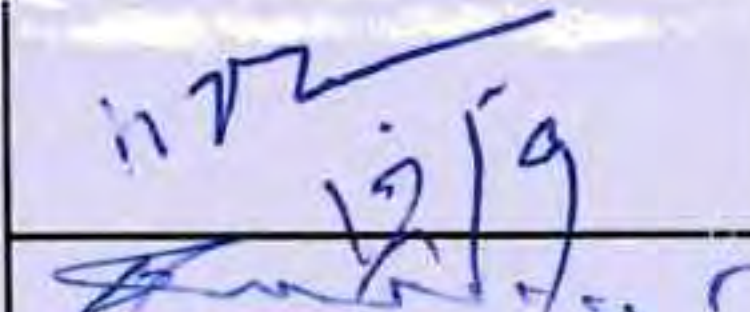
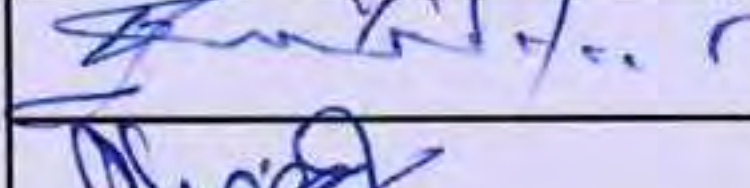
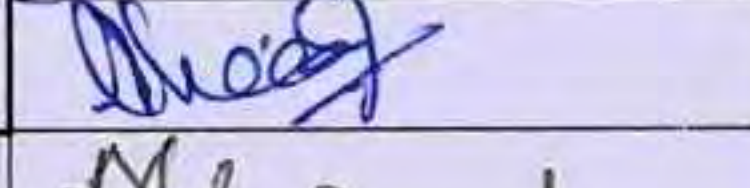
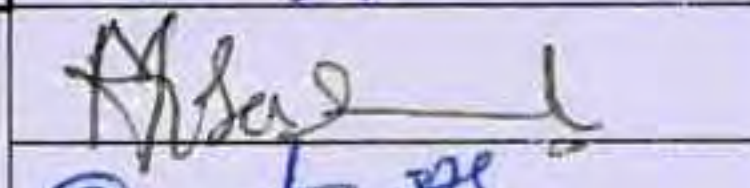
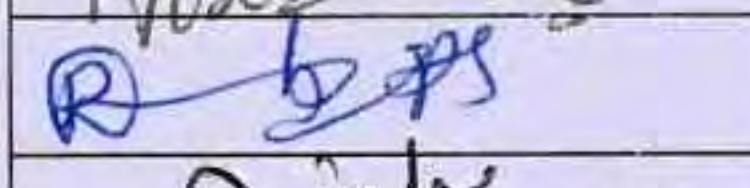
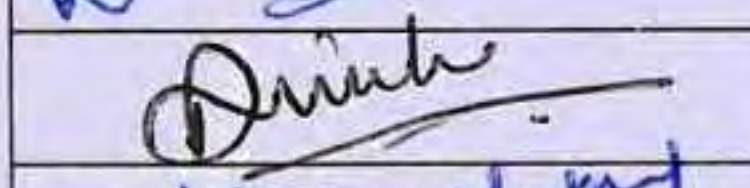
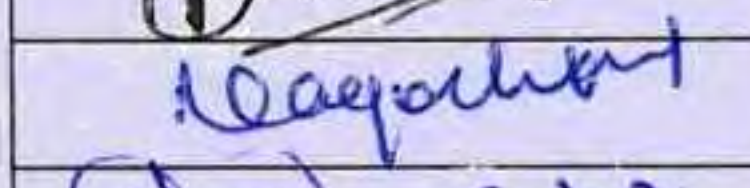
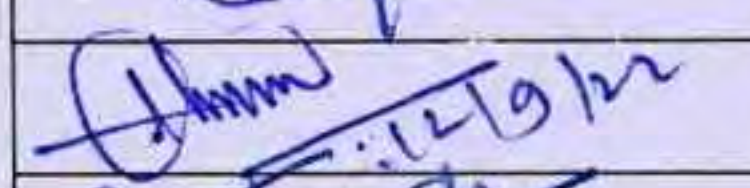
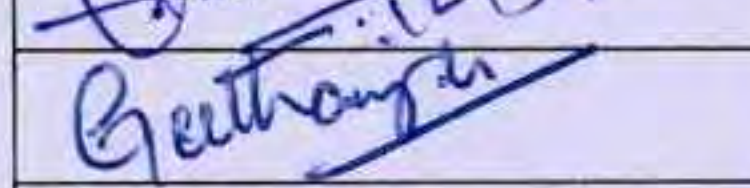
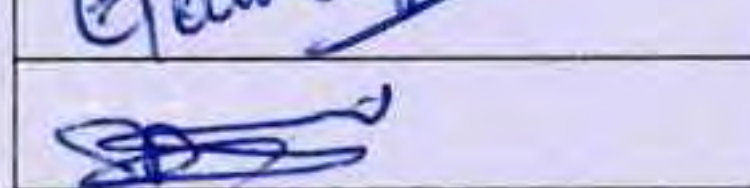
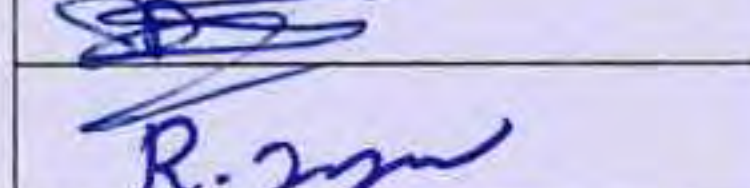
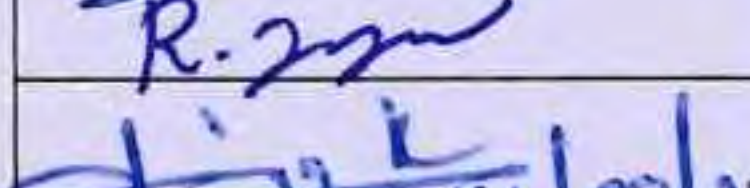
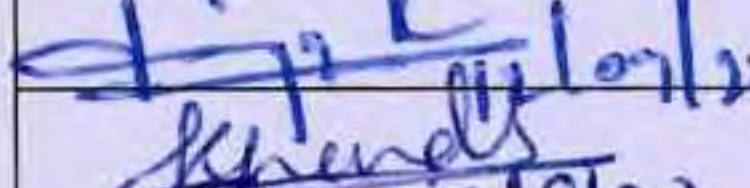
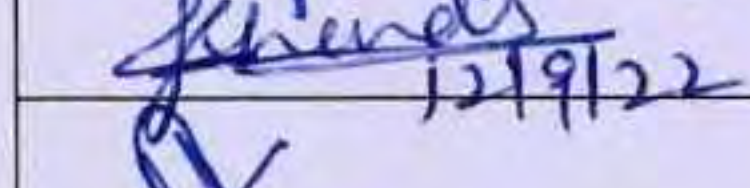
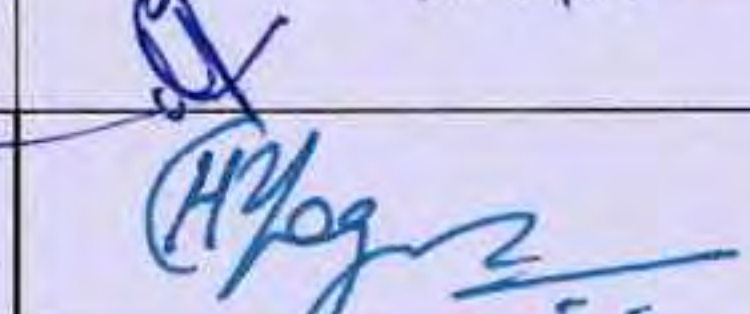
ACADEMIC COUNCIL MEETING #10

Date: 12.09.2022, Monday

Time: 10.00 am

Venue: Chamber of Principal, NCET

Members of the Academic Council

#	Name	Position	Signature
1.	Dr. B V Ravishankar, Principal, NCET	Chairman	
2.	Dr. S Ramesh, Professor, Dept of ECE, Dr. AIT, Bengaluru	VTU Nominee	AB
3.	Dr. Y S Nijagunarya, Professor, Dept of CSE, SIT, Tumkur	VTU Nominee	Y.S. Nijagunarya
4.	Dr. B Yogesha, Professor, Dept of ME, MCE, Hassan	VTU Nominee	
5.	Dr. Nagesh Poojary, Lead Technical Architect, Continental Technical Centre, Bengaluru	Experts representing areas such as industry, alumni, R & D institutions, and Technical Education	AB
6.	Mr. Mohan Kumar, Practice Head, Wipro Limited		AB
7.	Mr. R Anish Simha, Senior General Manager, Rinac India Limited, Bengaluru		AB
8.	Dr. A Sudhahar, Chief Consultant, Dimensions@Confluence, Coimbatore		
9.	Dr. S G Gopala Krishna, Prof & Director, Nagarjuna Education Society	Teachers representing the college	
10.	Dr. Gopalakrishnan, Prof & Advisor(R&D), NCET		
11.	Dr. Ajeet C, Professor-CSE		
12.	Dr. Sarvesha M V, COE & HOD-Mathematics	HODs of all Departments	
13.	Dr. Ramesh P S, HOD-Civil		
14.	Dr. Dinesha H A, HOD-CSE		
15.	Dr. Nagesh K N, HOD-EC		
16.	Dr. Anil Kannur, HOD-IS		
17.	Dr. Geethanjali G, HOD -MBA		
18.	Dr. Syed N H – HOD-DS		
19.	Dr. Vijayanand R, HOD-AIML		
20.	Dr. Manjunath K, HOD-Chemistry		
21.	Mrs. Sharada T, HOD-Physics		
22.	Mr. Ranjan Manish, Dean- I4 & AR		
23.	Dr. Yogeesh H C, Associate Director(IQAC),NCET	Member Secretary	

Minutes of 10th Academic Council Meeting Held on 12.09.2022

Tenth Academic Council meeting was held on 12.09.2022 in the Principal chamber at 10.00 am. Dr Yogeesha H C, Associate Director (IQAC) & Member Secretary welcomed Dr B V Ravishankar, Principal and requested him to chair the session. Dr B V Ravishankar, Principal welcomed all the members to the meeting and directed the member secretary to start proceedings of the meeting. Member Secretary started the proceedings of the meeting with agenda points.

Agenda & Discussions:

Section 1: Items for Confirmation and Action Taken Report

10/1. Confirmation of the proceedings of the 9th Meeting of Academic Council held on 13.05.2022

Dr Yogeesha H C, Member Secretary informed that minutes of the Academic council held on 13.05.2022 were circulated to all the members and requested for the confirmation. As there were no comments from the members, the council permitted to confirm the minutes of the 9th Meeting of Academic Council.

The Academic Council confirmed the minutes of the 9th Meeting.

10/2. To Note the Action Taken Report on the suggestions/recommendations of the 9th Meeting of Academic Council held on 13.05.2022

The Member Secretary placed before the council the action taken report on the suggestion given in the 9th meeting of academic council.

Sl. No	Suggestions	Action Taken
1.	AC suggested to prepare programme wise syllabus for Mathematics.	Syllabus of the Mathematics course is prepared separately for IT & Non-IT branches and the same is recommended for approval by the BOS of Basic Science & Humanities.
2.	AC suggested to offer fundamentals of Business analytics as core course in MBA and making Campus to Connect as a Value Added Course	The suggestions are implemented by MBA and the same is recommended for approval by the BOS of MBA.
3.	AC suggested to include R & D achievements of the faculty in the ACM for information of the members.	R & D achievements of the faculty members are included in the ACM for information to the members.
4.	AC suggested to take suitable measures to improve Industry Institute Collaboration and strengthen consultancy activities.	Steps are taken to improve the Industry collaborations and consultancy activities.
5.	AC suggested to take steps to improve placements in Civil Engineering department in collaboration with NCC.	Steps are taken to improve placements in Civil Engineering and NCC has agreed to conduct the placement drive in the campus. Internship opportunities are provided to our students by NCC.

6. AC suggested implementing external evaluation of the answer scripts if the no. of answer scripts in a course is less than 5

The same is implemented in examination system.

The Academic Council approved the action taken report on the suggestion given in the 9th ACM

Section 2: Items for Information

10/3 NAAC Accreditations with A+ Grade

Member Secretary informed the AC that NAAC Peer Team has visited the institution on 23.06.2022 and 24.06.2022 for accreditation of our institution under cycle-2. Peer Team expressed their happiness over the functioning of the institution and submitted their report. The NAAC Grade Sheet is placed before the AC for kind perusal as Annexure-I. NAAC has accorded accreditation to our institution with A+ Grade having CGPA of 3.38.

The matter is placed before the members of AC and AC Noted the same. Further AC has expressed their appreciation to Principal and members of staff for their achievement.

Section 3: Items for Ratification and Approval

10/4 Approval of Autonomous Academic Rules and Regulations for 2021-22 scheme

NCET has drafted the rules and regulations to be followed by the students admitted under NEP scheme from the Academic year 2021-22. Member Secretary highlighted the important aspects of the regulations to the members of the AC. The regulations are presented as Annexure – II.

The regulations are placed before the members of the AC and AC approved the same after detailed discussions.

10/5 Ratification / Approval of Recommendations of various Boards of Studies

Member secretary, informed the members that, meeting of board of studies of various departments were conducted during the month of September 2022 and requested for the approval of changes and suggestions during their Board of Studies meeting. Member Secretary requested the chairman of several Boards of Studies to present the recommendations of their BOS.

i. Electronics and Communication Engineering

Dr. Nagesh K N, HOD & Chairman, Board of Studies of Electronics & Communication Engineering, presented the recommendations of board of studies and detailed syllabus for second year BE Programme in Electronics and Communication Engineering.

The Academic Council discussed the changes recommended by the BOS of Electronics and Communication Engineering and approved the recommendations of the BOS with respect to 3rd and 4th semester BE for academic year 2022-23.

ii. **Computer Science Engineering**

Dr. Dinesha H A, HOD & Chairman of Board of studies of Computer Science Engineering, presented the recommendations of Board of Studies to the Academic Council.

Dr. Dinesha H A, informed the AC that the course "Object Orientated using JAVA" was now introduced as an integrated course as per the recommendations of Board of Studies. He further informed that Discrete Mathematics course also has been implemented as an integrated course.

Dr .Y.S Nijaguarya suggested to include "Analog Electronics" in 3rd semester. Principal suggested most of the sessions should be Hands-on training.

The Academic Council ratified the changes recommended by the BOS of Computer Science and Engineering and approved the detailed syllabus of 3rd and 4th semester BE in Computer Science and Engineering for academic year 2022-23.

iii. **Information Science Engineering**

Dr. Anil Kannur, HOD & Chairman of Board of Studies of Information Science and Engineering, presented the recommendations of board of studies to the members of the Academic Council.

The Academic Council approved detailed syllabus of 3rd and 4th semester BE in Information Science and Engineering for academic year 2022-23 as per the recommendation of the Board of Studies.

iv. **CSE (Artificial Intelligence and Machine Learning)**

Dr. Vijayanad, HOD & Chairman of Board of studies of CSE(Artificial Intelligence and Machine Learning), presented the recommendations of their Board of Studies to the members of the Academic Council.

Principal suggested to change the name of the course "Operating Systems" as "Distributed Operating Systems". Dr Y.S Nijagunarya, suggested to update the syllabus of Analog and Digital Electronics. Dr Yogeesh H.C, Associate Director-IQAC and other members suggested including "Data Analysis" as an Elective course. Principal suggested to conduct more orientation on Microcontrollers and Embedded systems.

The Academic Council approved the changes recommended by the BOS-CSE (Artificial Intelligence And Machine Learning) with respect to the detailed syllabus of 3rd and 4th Semester BE for the Academic year 2022-23.

v. **CSE (Data Science)**

Dr. Syed N.H, HOD & Chairman of Board of studies of CSE (Data Science), presented the recommendations of Board of Studies to the Academic Council.

Dr. Syed N.H informed the members regarding the introduction of two courses "Foundation of Data Science" and "Data Visualization using R " in 3rd and 4th semester respectively.

Principal suggested to change the course name "Foundation of Data Science" as "Fundamentals of Data Science".

The Academic Council approved the changes recommended by the BOS-CSE (Data Science) and also approved the detailed syllabus for 3rd and 4th semester BE for the academic year 2022-23.

vi. Civil Engineering

Dr. Ramesh P S, HOD & chairman of Board of studies of Civil Engineering, presented the recommendations of the Board of Studies to the Academic Council.

Dr. Ramesh P S informed that BOS has suggested to include Electricity Resistive method course in 4th semester. Dr. A Sudhahar suggested that students should know how to take alternate measurements and write abstracts on their own. Principal suggested adding internship in 7th semester and project in 8th semester. Dr. A. Sudhahar suggested including 2 courses on Structural Analysis and lab components.

The Academic Council approved the changes recommended by the BOS in Civil Engineering and approved the detailed syllabus for 3rd and 4th semester BE for the academic year 2022-23.

vii. M.Tech Structural Engineering

Dr Ramesh P S, HOD & Chairman of Board of Studies of Civil engineering, presented the recommendations of board of studies with respect to the M.Tech Structural Engineering to the Academic Council.

As there were no changes in the scheme as compared to previous scheme, the academic council approved the recommendations of BOS in Civil Engineering with respect to M.Tech in Structural Engineering.

viii. M.Tech Construction Technology

Dr Ramesh P S, HOD & Chairman of Board of Studies of Civil Engineering, presented the recommendations of board of studies with respect to the M.Tech in Construction Technology to the Academic Council.

As there were no changes in the scheme as compared to previous scheme, the academic council approved the recommendations of BOS in Civil Engineering with respect to M.Tech in Construction Technology.

ix. MBA

Dr Geethanjali G, HOD & Chairman of Board of studies of MBA presented the recommendations of the Board of Studies to the Academic Council.

Dr Geethanjali informed the members about the inclusion of courses, Innovation and Entrepreneurship, Total Quality Management, Basics of Computer Applications, Design Thinking, Management of Information System and Business Ethics in the scheme of studies.

Principal suggested that Industrial visits should be related to a particular course and students should involve in group discussions & seminar with the help of case studies.

The Academic Council approved the recommendation of the Board of Studies in MBA.

x. Basic Science and Humanities

Dr. Sarvesha M, HOD of Mathematics presented the changes to be effected in Mathematics to the Academic Council. Principal suggested to solve more number of problems in the class as well as in tutorials for mathematics oriented courses.

Dr. Manjunath K, HOD-Chemistry, Mrs. Sharada T, HOD-Physics and Mr. Ramesh, HOD-SSFL&HE presented the detailed syllabus of courses offered by their department.

Dr S G Gopala Krishna suggested activity based learning in English instead of theory.

The Academic Council ratified the changes recommended by the BOS- Basic Science and Humanities and approved the detailed scheme and syllabus for 1st and 2nd Semester BE for the academic year 2022-23.

10/6 Ratification/Approval of additional courses to be studied by the students having shortage credits

Member Secretary informed the AC that, few students from 2017 and earlier schemes were re-admitted to 2018 scheme. These students have to earn 200 credits for the award of the degree. However, they are facing shortage of credits to reach the 200 credits as per the 2017 and earlier scheme. Hence, a committee has formed to frame the modalities for earning the remaining credits. It is suggested by the committee to establish the equivalence of courses/credits of the courses studied by the students with previous scheme of the students. After establishing the equivalences, if any shortage of credits is observed, then the students shall be permitted to take additional courses in the Supplementary Semester to make up the shortage of credits.

The matter is placed before the members of AC and AC approved the same.

10/7 Approval of change in the format of the grade card

Controller of Examinations has suggested the change in the format of Grade card to be issued to the students and format of the grade card is attached as Annexure-III.

The matter is placed before the members of AC and AC approved the same.

10/8 Approval of the list of students graduating during the academic year 2021-22

Controller of Examinations presented the list of students graduating during the academic year 2021-22 and is provided in Annexure - IV

The matter is placed before the members of AC and AC approved the list of graduating students.

10/9 To note the achievements of faculty and students

Member Secretary presented the achievements of faculty members and students after 9th ACM and is provided in Annexure-V.

The matter is placed before the members of AC and AC noted the same.

10/10 To note the result analysis for the AY 2021-22

The result analysis of even semester for the academic year 2021-22 is provided in Annexure-VI.

The matter is placed before AC and AC noted the same.

Section 5: Any other Items

10/11 Any other subject/s with the permission of the Chair

As there was no other matter raised by the members, Dr B V Ravishankar, Principal, expressed happiness about the active involvement of all the members during the deliberations of the meeting and thanked all the members.

Suggestion/Comments given by the Academic Council Members

Dr. A Sudhahar:

- Suggested to incorporate peer tutoring by advanced learners to slow learners.
- Suggested to give more importance for Learning by doing.
- Suggested that videos on the lab experiments (Video Manual) shall be created and circulated among the students.
- Suggested that instead of the student internships, the students shall involve in apprenticeship program so that they can get stipend during the period of apprenticeship.
- Suggested that faculty members shall involve in consultancy activities.
- Suggested that Emphasis program should be introduced for faculty members wherein the faculty members work closely with the industries to gain the real world experience.
- Suggested for Orientation program for the newly recruited faculty members and Principal informed that the said programme is already in place in the institution. Further, Principal informed that, he is interacting with faculty members at regular intervals to imbibe them with the effective teaching techniques

Dr. S G Gopala Krishna:

- Suggested two lab tests for Integrated Courses and Member Secretary informed that the same is adopted in the new regulations.

Dr. Y.S Nijagunarya:

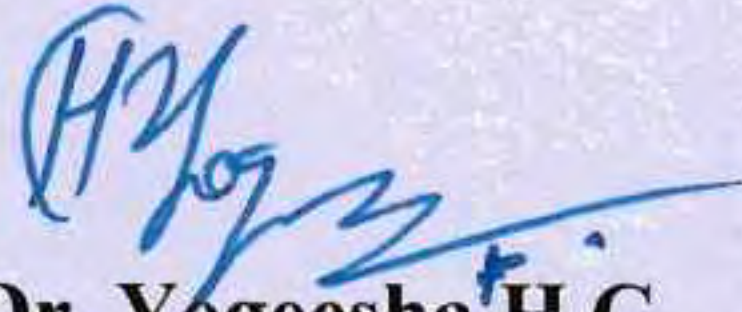
- Suggested to group the lab experiments into two groups so that the lab tests can be conducted after the completion of each group of experiments.

Dr. B V Ravishankar:

- Suggested that Lab CIEs shall be evaluated strictly. For project works, Literature Survey should be conducted in well defined manner. Students should have the capacity to write abstract of the research papers.
- Suggested to use Saturdays for remedial classes, literature surveys and for project works.

Member Secretary:

Thanked the chairman and the members of the Academic Council for their active involvement, support, suggestions, valuable time and contribution towards the academic growth of institution.



Dr. Yogeesha H C
Member Secretary
Internal Quality Assurance Cell
Nagarjuna College of Engineering & Technology
Venkatagiri Kote Post, Devanahalli,
Bengaluru - 562 154.



Dr. B V Ravishankar
Principal

PRINCIPAL
Nagarjuna College of Engineering & Technology
Devanahalli (Tq) Bengaluru (Dt) - Pin: 562164

NAAC Grade Sheet

Name of the Institution: NAGARJUNA COLLEGE OF ENGINEERING AND TECHNOLOGY

Type of the Institution: Autonomous colleges

Dates of Visit: 20 - 06 - 2022 to 21 - 06 - 2022

No	Criteria	Weightage (W _i)	Criterion-wise weighted Grade Point (CrWGP _i)	Criterion-wise Grade Point Averages (CrWGP _i / W _i)
1	Curricular Aspects	150	570	3.8
2	Teaching-learning and Evaluation	300	967	3.22
3	Research, Innovations and Extension	142	470	3.31
4	Infrastructure and Learning Resources	100	362	3.62
5	Student Support and Progression	90	264	2.93
6	Governance, Leadership and Management	90	324	3.6
7	Institutional Values and Best Practices	100	332	3.32
Total		$\sum_{i=1}^7 (W_i) = 972$	$\sum_{i=1}^7 (CrWGP_i) = 3289$	3.38

$$\text{Institutional CGPA} = \frac{\sum_{i=1}^7 (CrWGP_i)}{\sum_{i=1}^7 (W_i)} = \frac{3289}{972} = 3.38$$

Grade: A+

Name of the Institution: NAGARJUNA COLLEGE OF ENGINEERING AND TECHNOLOGY

Type of the Institution: Autonomous colleges

Dates of Visit: 20 - 06 - 2022 to 21 - 06 - 2022

No	Criteria and Key Indicators	Key Indicator Weightage (W _i)	Key Indicator Wise Weighted Grade Points (KIWGP) _i
Criterion 1: Curricular Aspects			
1.1	Curriculum Design and Development	50	200
1.2	Academic Flexibility	40	140
1.3	Curriculum Enrichment	40	150
1.4	Feedback System	20	80
Total		∑ W₁=150	∑ (KIWGP)₁ =570
Calculated CrGPA₁ = ∑ (KIWGP)₁ / ∑ W₁ = 570 /150 = 3.8			
Criterion 2: Teaching-learning and Evaluation			
2.1	Student Enrollment and Profile	20	70
2.2	Catering to Student Diversity	30	105
2.3	Teaching- Learning Process	50	170
2.4	Teacher Profile and Quality	50	60
2.5	Evaluation Process and Reforms	50	200
2.6	Student Performance and Learning Outcomes	50	170
2.7	Student Satisfaction Survey	50	192
Total		∑ W₂=300	∑ (KIWGP)₂ =967
Calculated CrGPA₂ = ∑ (KIWGP)₂ / ∑ W₂ = 967 /300 = 3.22			
Criterion 3: Research, Innovations and Extension			
3.1	Promotion of Research and Facilities	20	44
3.2	Resource Mobilization for Research	7	26
3.3	Innovation Ecosystem	10	30
3.4	Research Publications and Awards	25	65
3.5	Consultancy	10	40
3.6	Extension Activities	50	185
3.7	Collaboration	20	80
Total		∑ W₃=142	∑ (KIWGP)₃ =470
Calculated CrGPA₃ = ∑ (KIWGP)₃ / ∑ W₃ = 470 /142 = 3.31			
Criterion 4: Infrastructure and Learning Resources			
4.1	Physical Facilities	30	120
4.2	Library as a Learning Resource	20	60
4.3	IT Infrastructure	30	112
4.4	Maintenance of Campus	20	70

No	Criteria and Key Indicators	Key Indicator Weightage (W _i)	Key Indicator Wise Weighted Grade Points (KIWGP) _i
	Infrastructure		
Total		∑ W₄=100	∑ (KIWGP)₄ =362
Calculated CrGPA₄ = ∑ (KIWGP)₄ / ∑ W₄ = 362 /100 = 3.62			
Criterion 5: Student Support and Progression			
5.1	Student Support	30	114
5.2	Student Progression	20	40
5.3	Student Participation and Activities	30	80
5.4	Alumni Engagement	10	30
Total		∑ W₅=90	∑ (KIWGP)₅ =264
Calculated CrGPA₅ = ∑ (KIWGP)₅ / ∑ W₅ = 264 /90 = 2.93			
Criterion 6: Governance, Leadership and Management			
6.1	Institutional Vision and Leadership	10	40
6.2	Strategy Development and Deployment	10	34
6.3	Faculty Empowerment Strategies	30	116
6.4	Financial Management and Resource Mobilization	10	34
6.5	Internal Quality Assurance System	30	100
Total		∑ W₆=90	∑ (KIWGP)₆ =324
Calculated CrGPA₆ = ∑ (KIWGP)₆ / ∑ W₆ = 324 /90 = 3.6			
Criterion 7: Institutional Values and Best Practices			
7.1	Institutional Values and Social Responsibilities	50	182
7.2	Best Practices	30	90
7.3	Institutional Distinctiveness	20	60
Total		∑ W₇=100	∑ (KIWGP)₇ =332
Calculated CrGPA₇ = ∑ (KIWGP)₇ / ∑ W₇ = 332 /100 = 3.32			
Grand Total		972	3289

$$\text{Institutional CGPA} = \sum_{i=1}^7 (\text{CrWGP}_i) / \sum_{i=1}^7 (W_i) = 3289 / 972 = 3.38$$

Nagarjuna College of Engineering & Technology

Venkatagiri Kote Post, Devanahalli, Bengaluru-562164

An Autonomous Institution under VTU, NAAC Accredited with A+ Grade.



NAGARJUNA

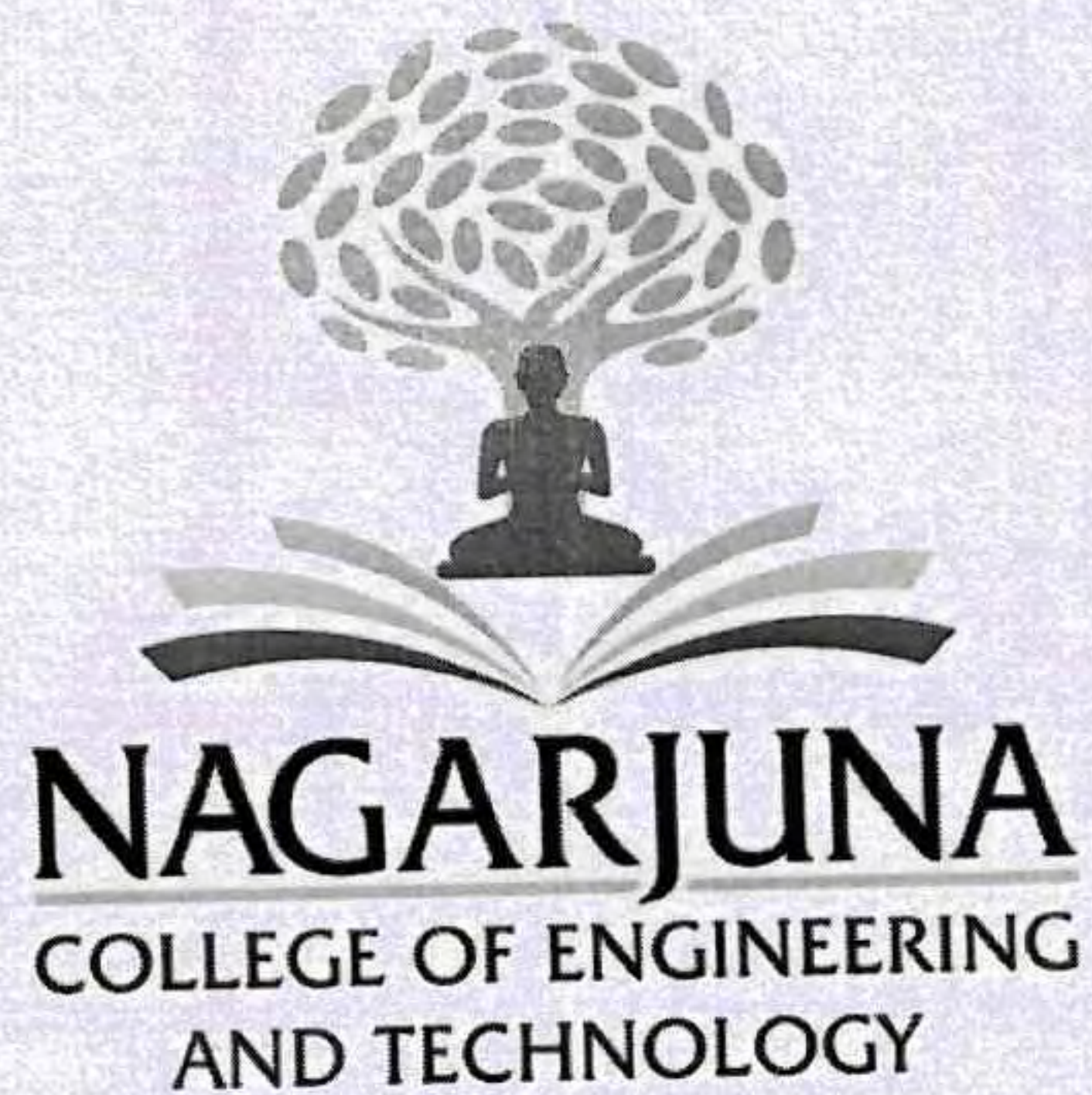
COLLEGE OF ENGINEERING
AND TECHNOLOGY

***Rules and Regulations for
UG Programmes under
Autonomous Scheme***

2021-22 Scheme

Tel: 080-6746 2700 Fax: 080-6746 2799

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VISION

Leadership and Excellence in Education

MISSION

To fulfill the vision by imparting total quality education replete with the philosophy of blending human values and academic professionalism.

QUALITY POLICY

Nagarjuna College of Engineering and Technology (NCET) shall be maintained, as an “Institution of Excellence” in the domains of Engineering, Technology and Management studies through continual improvement of system, processes and academic professionalism.

1. PROFILE OF THE INSTITUTION

1.1 ABOUT NCET

Nagarjuna College of Engineering and Technology (NCET), a self financing engineering college, was started in the year 2001 under the aegis of Nagarjuna Education Society, Bangalore. Nagarjuna Education Society (NES) was established in 1995 under the able guidance of Sri J.V.Rangaraju, leading industrialist and philanthropist. His commitment towards contribution to nation building is being achieved by imparting world-class education at all levels, viz. from primary, graduate, post-graduate to doctoral research degree.

NCET is affiliated to VTU, Belagavi, recognized by Government of Karnataka (GoK) and approved by AICTE. The institution is re-accredited by NAAC with A+ grade with a CGPA of 3.38 during its second cycle. Four UG programmes are accredited by NBA from 2018-19 to 2021-22. The institution has ranked under ARIIA in B-Band (26-50) during 2020-21 and Best performer during 2021-22. The institution has received 4-star rating from Institute's Innovation Council for Ministry of Education during 2020-21.

The institution has lush green campus spread over 100 acres with on-campus residential facility for boys, girls and staff. These hostels have amenities like mess, recreation room, 600mbps Wi-Fi internet facility, state of art gymnasium, automated laundry, etc. Students are encouraged to actively participate in outdoor games as well.

The college has a spacious library with well stacked books and well subscribed e-journals and e-books. The college is also a member of the VTU Consortium for e-resources. The college is recognized as Nodal Center for virtual lab facility, sponsored by MHRD, GOI. The institution is associated with IITB, Mumbai for the project titled eYantra on Robotic Technology for students and staff. ISRO has recognized the college as one of the center to carry out projects under STUDSAT. The institution also has MoUs with different leading industries. The institution has received Autonomous status from UGC, VTU & GoK from the year 2015-16. The college is recognized by Government of Karnataka as a Centre of Innovative Science and Engineering Education. Seven departments have been recognized as research centers from Visvesvaraya Technological University, Belgaum to offer Ph.D. programmes. The institution also focuses on imparting training in soft-skills, logical reasoning, aptitude tests & interviews and provides placement to all eligible candidates.

1.1 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 equipment.

The central facilities are as follows:

- Good ventilated classrooms
- Departmental offices
- Contemporary sports facilities

- Library
- Air-conditioned Auditorium & Seminar Halls
- Health Care Centre
- Hostels (Boys & Girls)
- Cafeteria & Canteen
- Gymnasium
- Reprographic Facilities

1.1.1 LIBRARY & INFORMATION CENTRE

In the spacious and well ventilated library, students have an access to latest books, journals, computers, CD ROMs and multimedia content. 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 Nagarjuna College of Engineering and Technology 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.

1.1.2 SERVICES IN THE LIBRARY

- ✚ Reference Service
- ✚ Circulation Service
- ✚ Print and Web Journals
- ✚ Web Online Public Access Catalog (WEBOPAC)
- ✚ Internet Service
- ✚ Digital Library Service (DELNET)
- ✚ E-learning (NPTEL, VTU-EDUSAT Program)
- ✚ Inter Library Loan Service (Through DELNET)
- ✚ SC/ST & General Book bank service
- ✚ Institutional Membership (VTU-Consortium, DELNET, CMTI, CSI and NDLI)

1.1.3 DIGITAL LIBRARY & E-LEARNING CENTER

Nagarjuna College of Engineering and Technology 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, Taylor and Francis.

1.1.4 LIBRARY INSTRUCTIONS

- ↓ Every reader/user shall present his/her identity card while entering the library or on demand by the library staff.
- ↓ Every reader/user entering the library should deposit their belonging at the property counter.
- ↓ Sign the register kept at the checkpoint, while entering the library.
- ↓ Show the documents, which are being taken out of the library, to the staff at the checkpoint.
- ↓ Book lost by the borrower have to be reported immediately in writing to the librarian, falling which fines will keep on accumulating, PLEASE DO NOT ASK FOR WAIVER OF FINES. Replace the book within the time Permitted.
- ↓ Loss of borrower's card must be reported immediately in writing.
- ↓ Each borrower is responsible for the book issued on that card. Hence, a borrower is advised not to lend his card to others.
- ↓ Collect your library card without fail after returning the book from the circulation counter.
- ↓ No due certificate will be issued at the end of Academic year.
- ↓ Change of Department, Status, Address etc., to be informed and the card needs to be corrected.
- ↓ Book should be handled with great care and mutilation of book in any manner will be heavily fined.
- ↓ Keep the library clean.
- ↓ Loud talking, conversations, etc, are strictly prohibited in the library.
- ↓ Use of **Mobiles within the library premises is strictly prohibited** and penalty of Rs.100/- will be charged if mobile is carried inside the library without switching off.
- ↓ Use the dustbins provided in the reading area.

1.2 TRANSPORTATION FACILITIES

The college provides transport facility for student's coming from various places like Bangalore, Gauribidanur, Chintamani and Chickaballapur 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 contact the transport coordinator in the campus and register themselves. Bus pass can be obtained from the transport coordinator after paying the requisite transport 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 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 Nagarjuna College of Engineering and Technology 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. NCET also organizes every year a Mega Cultural Fest 'Kalarava', various technical fests like Techno fest, Hackthons etc.,

1.4 INDUSTRY INSTITUTE INTERACTION & INNOVATION CELL(I4)

At NCET, the importance of Industry Institute Interaction is emphasized by establishing an exclusive I4 cell. The purpose of the I4 Cell is to ensure a paradigm shift in the thought process of a student from J2C (Job to Career).

1.5 FACULTY

The faculty at NCET are 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 NCET is that each student will get the adequate attention by the faculty.

1.6 ACADEMIC PROGRAMMES OFFERED

NCET 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 – CSE (Artificial Intelligence & Machine Learning)
2.	B.E – CSE (Data Science)
3.	B.E – Civil Engineering
4.	B.E – Computer Science & Engineering
5.	B.E – Electronics & Communication Engineering
6.	B.E – Information Science & Engineering

1.6.2 POST GRADUATE PROGRAMMES

Sl. No.	Programme
1	Master of Business Administration
2	M.Tech in Structural Engineering
3	M.Tech in Construction Technology

2. NOMENCLATURE OF PROGRAMMES

2.1 GENERAL

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

2.1.1 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.(Computer Science and Engineering)

2.1.2 PG Level

Master of Technology (M. Tech) and Master of Business Administration (MBA). Besides, the branch/subject of specialization, if any, shall be indicated in brackets after the abbreviation, eg., M.Tech. (Structural Engineering).

2.1.3 Research Level: MS by Research and Doctor of Philosophy (Ph.D.)

Further, it is necessary that the Diploma and Certificate programmes at Autonomous Colleges shall also be indicated in abbreviated form, like DIP and CERT with the branch/subject of specialization given in brackets after the abbreviation.

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, 2 years for PG.
- 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 11year B.E under lateral entry scheme.

Programme	Years	
	Minimum	Maximum
a) B.E	4	8
b) B.E(Lateralentry)	3	6
c) M.Tech	2	4
d) MBA	2	4
e) PG Diploma	1	2
f) PG Certificate	6 months	1 year

- Besides, the maximum period for a programme, 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 the programme and, this period can be equal to or smaller than the maximum period indicated as above.

2.3 ADMISSION OF STUDENTS

Admissions: Admissions to UG and PG Programmes: The admission of students to various UG and PG programmes listed shall be made by the Autonomous Colleges by following the orders issued from Government of Karnataka and University Regulations and directions issued from time to time in this regard.

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, the Rules and Regulations of the University/Council are followed.

Admission to PG Diploma and Certificate programmes: The admission of students to PG Diploma and Certificate programmes shall be made by the Autonomous College on its own, by following the Regulations as notified by the University from time to time. In all such cases, it shall be necessary to follow the statutory provisions of reservation of seats to different categories of candidates made by the government from time to time. University shall be informed of these programmes

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, PG, Diploma and Certificate programmes.

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

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

Typical Breakdown of Academic Year into Semesters	
Number of Semester/ Year	Three Semesters; Two being Main Semesters (Odd, Even) and one being a Supplementary Semester. Note: Supplementary Semester is primarily to assist the slow learners and/or repeater students for repeating the courses. However, the College may use this Semester to arrange Add-On Courses for other students and/or for deputing them for field work and/ or internship.
Semester Durations (Weeks)	Main Semesters (Odd, Even): 19 weeks each. Supplementary Semester : 8 weeks

<p>Academic Activities (Weeks)</p>	<p><u>Main Semester:</u> 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><u>Supplementary Semester (For Repeaters):</u> Registration of courses – 0.1 week; Course work – 7.0 weeks ; Examination Preparation –0.2weeks; Examination –0.2weeks Declaration of Results-0.5 week; Total: 08 weeks</p> <p><u>Inter- Semester Recess:</u> After each Main Semester – 2 to 3 weeks, flexible After Supplementary Semester – 1 to 2 weeks, flexible. Total: 14 (for normal 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>
<p>Examinations</p>	<p>Continuous Internal Evaluation (CIE) and Semester End Examination (SEE) both having equal weight age 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 fromtime 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.</p> <p>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>
<p>Other Items</p>	<p>Care is taken to 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. Minimum, Maximum and Average Course loads per Semester are to be fixed by prior consultation with the University.</p>

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 NCET. 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.
- iii. Self Study conducted for 4 hours per 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 ELIGIBILITY REQUIREMENTS

- For registration to 3rd semester, the total number of courses failed (F Grade) should not exceed 4, excluding Non-Credit Mandatory Courses.
- Should not have dues of the previous semesters to the Institution, Hostel and Library.
- Should not have any disciplinary proceeding pending against the candidate.

3.4.1 Illustration

- A candidate seeking eligibility to 3rd semester should not have F grade in more than four courses of 1st and 2nd semester taken together excluding mandatory courses.
- A candidate seeking eligibility to 7th semester should have passed all the courses of 1st & 2nd semesters.

3.5 REGISTRATION PROCEDURE

- On the day of registration, the students must meet the concerned faculty advisor/counselor.
- Faculty Advisor will counsel and advice the students regarding the courses to be registered during the current semester, taking into account the performance of the student during the previous semesters.
- Students will pay the prescribed fee and collect fee paid receipt from Account Section.
- Students will produce the fee paid receipt to the Counsellor and the Counsellor will make arrangements for enrolling the students for the courses indicated in the registration form.

3.5.1 REGISTRATION FOR ODD SEMESTER

- For registration to 3rd, 5th and 7th semesters, students should satisfy the conditions of vertical progression.
- A student has to register for all the courses offered in the semester. Partial registration of courses is not permitted.
- Students can register for a maximum of 28 credits.

3.5.2 REGISTRATION FOR EVEN SEMESTER

- All students are eligible to move from odd semester to even semester during the same academic year.
- A student has to register for all the courses offered in the semester. Partial registration of courses is not permitted.
- Students can register for a maximum of 28 credits

3.6 COURSE PREREQUISITES

- Certain courses need the knowledge of courses offered in the previous semesters, called prerequisites.
- Department notifies the prerequisite courses. Students are not permitted to drop or withdraw the prerequisite courses.
- Further, for taking some courses, student has to complete the pre-requisite course as per the curriculum structure.

3.7 REJECTION OF RESULTS

A student may reject his/her results of all the courses registered in an academic year only once in the entire academic period, if he/she is not satisfied with the result of any semester, subject to the condition that the maximum duration for the completion of the course is not exceeded.

3.8 ATTENDANCE REQUIREMENTS

- A candidate has to obtain a minimum attendance of 85% in each course to appear for the Semester End Examination (SEE).
- However, the students who have attendance between 75% and 85% may get condonation of attendance by the Principal, only on valid grounds such as hospitalization, participation in university and intercollegiate sports, cultural activities and participation in seminar, workshop and paper presentation, etc. with prior permission.
- Students must submit the request for condonation of attendance in the prescribed format with supporting documents and duly recommended by the Head of the Department at least one week before the commencement of examination, failing which condonation of attendance will not be considered.
- Students having less than 75% are not eligible for condonation of attendance on any of the grounds.
- If a candidate fails to satisfy the minimum attendance requirements in any course, F grade is awarded in that course.
- The basis for the calculation of attendance shall be the period prescribed by the institute in its calendar of events. For first semester & lateral entry students, the attendance is reckoned from their date of admission. For all other semesters, attendance will be counted from the date of commencement of class as announced in the institute academic calendar.
- It is mandatory on the part of the students to regularly check the status of their attendance with the respective faculty.
- The departments shall announce the status of attendance of students in their notice boards at the beginning of every month and the list of students having shortage of attendance shall be notified 10 days before the commencement of the SEE.

3.9 SUPPLEMENTARY SEMESTER

A student of UG programme will have opportunity to register for supplementary semester which is offered after 4th semester for courses from 1st to 4th semester and after 8th semester for courses from 5th to 8th semesters. For registering to supplementary semester, the student should complete the Internship/s as notified in the University Regulations /directions. The students opting for supplementary semester between 4th and 5th semester must comply the missed internship requirement in the subsequent semester in the gap between 5th and 6th semesters.

3.9.1 REGISTRATION FOR SUPPLEMENTARY SEMESTER:

- The course/s for which the student does not possess satisfactory attendance and CIE score, shall be marked as NE in the Grade sheet. Such students are not permitted for SEE for the Courses marked as NE in Grade sheet. The students have to re-register only for course/s marked as NE in supplementary semester whenever that course is offered and obtain the required CIE and attendance. Subsequently, they are eligible to appear for SEE in such course/s.
- The student who obtains required attendance and CIE in supplementary semester, but obtains 'F' grade in SUPPLEMENTARY SEE, is permitted to appear for SEE

subsequently as backlog course/s. The student need not repeat course for Attendance and CIE.

- All courses may not be offered in the Supplementary semester. It is the discretion of the College to offer the courses based on the availability of resources. The Institutes shall notify time table for Supplementary semester well in advance.
- Supplementary Semester is optional; it is for the student to make best use of the opportunity. Supplementary semester is a special semester, and the student cannot demand it as a matter of right.
- A student is permitted to register for a maximum of 16 credits in Supplementary/fast track semester.
- A student must choose those courses which are offered by the Institution in a given Supplementary Semester.

Note: The students who have satisfied CIE and Attendance requirements for the course/s and obtained F grade in SEE are permitted to appear directly in ensuing examination/s as backlog paper/s. The students need not re-register for such course/s in the supplementary/ fast track semester.

In case the student wishes to improve CIE/ he/she has to re-register for supplementary semester when offered next.

3.10 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 and PG at the College.

Refers to the Credit Values for different academic activities considered, Credits for the seminar, project phases, project viva-voce and internship shall be as specified in the Scheme of Teaching and Examinations.

Typical Credit Structure for course work				
Lectures (L) (hours/week/ semester)	Tutorials (T) (hours/week/ semester)	Laboratory work (P) (hours/ week/semester)	Credits (L:T:P:S)	Credits (Total)
3	0	0	3:0:0:0	3
2	2	0	2:1:0:0	3
2	0	2	2:0:1:0	3
2	2	2	2:1:1:0	4
0	0	6	0:0:3:0	3

NOTE: Activities like practical training, study tour, and participation in Guestlecturers do not carry Credits.

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.
- 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 NCET 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 practices listed below for providing flexibility to the students in their academic programmes and to meet their varied needs:

- a. Faculty Adviser:** 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. Based on the performance in the semester and faculty advice, he/she has 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 as example. **However, the**

student has to complete the programme within the permitted maximum duration.

- 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.
- g. 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/ Diploma/Certificate award from the University shall be as given below.

Programme		Normal Duration Years (Semesters)	Minimum number of Credits to be Earned
UG Degree	B.E	4.0 (8)	160
	B.E (Lateral entry)	3.0 (6)	120
	B.E (Honors)*	4.0(8)	160+18*
PG Degree	M.Tech	2.0 (4)	80
	MBA	2.00(4)	100

***Refer: B.E (Honors) 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.

6. CURRICULUM FRAMEWORK

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 course work 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;
- Integrated Professional Core Courses (IPCC)
- Project Work (PROJ)
- Seminar
- Internship in Industry or elsewhere
- Non-Credit Mandatory Courses (NCMC)
- Ability Enhancement Courses (AEC)
- Universal Human Value Courses (UHV)

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, Chosen Language Knowledge/ Proficiency, NSS, NCC, Sports, Yoga as Mandatory Courses. Such courses shall not carry any credit for the award of the Degree. A pass in each course during the programme shall be a necessary requirement for the student to qualify for the Degree. The student's performance (like, pass or fail) in such Mandatory Courses will be included in his/her Grade Card/ transcript.

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

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			
SL. No	Category	AICTE Breakup of Credits (Total 160)	Proposed Breakup of Credits (Total 160)
1	Humanities and Social Sciences including Management courses	12	10
2	Basic Science courses	25	23
3	Engineering Science courses including workshop, drawing, basics of Electrical / Mechanical/computer etc.	24	20
4	Professional Core Courses	48	43
5	Professional Elective courses relevant to chosen specialization/ branch /Ability Enhancement Courses	18	14
6	Open subjects Electives from other Technical, emerging, Arts, Commerce and NCC/NSS subjects/ Ability Enhancement Courses	18	14
7	Mini and Major Project work /Seminar/ Summer Internship and Research/ Industrial Internship	15	32
8	Mandatory Non- Credit Courses [Environmental Sciences, Induction training, Indian Constitution, Universal Human Values, Kannada]	No credits	04
Total		160	160

6.2.5 SEQUENCING OF COURSES

The above breakdown of 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.

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). • IPCC, INT • 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. • IPCC, AEC, HSMC • 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 NCET, 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 stake holders, 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.

c. Both CIE and SEE being equally important in judging the coursework performance of students, they need to be conducted with equal rigor and equal seriousness in the credit system. This makes it necessary that both of them are assigned equal (50:50) weightage. Student's performance in coursework shall be judged by taking into account the results of both CIE and SEE individually and also together by giving equal weightage for them.

7.2 CONTINUOUS INTERNAL EVALUATION (CIE)

At the beginning of the semester, the course instructor or the faculty who is teaching the course shall have to announce the methods used for CIE.

Continuous Internal Evaluation Procedure:

The minimum CIE marks to be secured in all courses shall be 40% of the maximum marks. The following guidelines shall be followed for the CIE of various courses. **However, the BOS chairman has all the right to decide on the pattern of CIE for their respective courses and the same should be clearly mentioned in the syllabus copy after approval of BOS.**

Students failing to attend a particular component of the CIE shall lose the marks allocated to such a component. No additional CIE shall be provided to the students.

7.2.1 THEORY COURSES WITH 3 CREDITS

- CIE Tests: Three Tests each of 20 Marks (duration 01 hour) and take sum of all three
 - First test at the end of 5th week of the semester
 - Second test at the end of the 10th week of the semester
 - Third test at the end of the 15th week of the semester
- Alternate Assessment: Assignments / Quizzes / participation in Seminar / workshops / Group Discussions / Presentation / Self-study Projects / Other Co-curricular activities suitably planned to attain the COs and POs for 40 Marks
- The total CIE marks shall be the sum of the marks secured in CIE Tests and Alternate Assessments.

Continuous Internal Assessment of Theory Courses with 2 or more credits					
CIE1	CIE2	CIE3	AAT1	AAT2	AAT3
Class test at the end of 5 th week for 1 hour duration	Class test at the end of 10 th week for 1 hour duration	Class test at the end of 15 th week for 1 hour duration	Assignments at the end of 4 th Week or any other AAT	Assignments at the end of 9 th week or any other AAT	Seminar / Quiz / Group Discussions or any other AAT
20 Marks	20 Marks	20 Marks	10 Marks	10 Marks	20 Marks
Total Marks: 100. Reduced to 50					

7.2.2 THEORY COURSE WITH 01 CREDIT

- Three CIE Tests (preferably in MCQ pattern with 20 questions) each of **20 Marks** and take sum of all three.
 - First test at the end of 5th week of the semester
 - Second test at the end of the 10th week of the semester
 - Third test at the end of the 15th week of the semester Two
- **Alternate Assessment Tools (AAT):** Assignments/ Quizzes/ participation in Seminar/workshops/group discussions/Presentation/Self-study Projects/other Co-curricular activities suitably planned to attain the COs and POs for 40 Marks.
- **The total CIE marks (maximum 50 marks) shall be the sum of the marks secured in CIE and alternate Assessments.**

Continuous Internal Assessment of Theory Courses with 1 credit					
CIE1	CIE2	CIE3	AAT1	AAT2	AAT3
Class test at the end of 5 th week for 1 hour duration	Class test at the end of 10 th week for 1 hour duration	Class test at the end of 15 th week for 1 hour duration	Assignments at the end of 4 th Week or any other AAT	Assignments at the end of 9 th week or any other AAT	Seminar / Quiz / Group Discussions or any other AAT
20 Marks	20 Marks	20 Marks	10 Marks	10 Marks	20 Marks
Total Marks: 100. Reduced to 50					

7.2.3 THEORY COURSE WITH 02 CREDITS

- **CIE shall be same as 01 Credit Course for 1st and 2nd Semesters.** However, for higher semesters, depending upon the type of the course, the CIE pattern may be MCQ type (100 marks) or same as the other theory courses.
- CIE methods / question papers is to be designed to attain the different level of Bloom's Taxonomy as per the outcome defined for the course.
- At the beginning of the semester, the course teacher has to announce the methods of CIE for the course with 2 credits, in consultation and approval from the Chairman of the Board of Studies.

7.2.4 PRACTICAL/LABORATORY COURSES

- CIE marks for the practical course is 50 Marks. The split-up of CIE marks for Lab Test and Lab Records are in the ratio 60:40.
- Each experiment to be evaluated for conduction with observation sheet and record write-up. Spit up of marks for the evaluation of the journal/write-up for hardware/software experiments shall be designed by the faculty who is handling the laboratory session and shall be made known to students at the beginning of the practical session.
- Record should contain all the specified experiments in the syllabus and each experiment write-up will be evaluated for 10 marks.
- Total marks scored by the students shall be scaled down to 20 marks (40% of maximum marks).
- Weightage to be given for neatness and submission of record/write- up on time.
- Department shall conduct 02 tests, the first test shall be conducted after the 8th week of the semester and the second test shall be conducted after the 14th week of the semester.
- The lab test shall be conducted by the lab course teacher only. Assistance may be taken from other teachers who have handled or handling the lab course.
- In each test, test write-up, conduction of experiment, acceptable result, and procedural knowledge will carry a weightage of 60% and the rest 40% for viva-voce.
- The minimum marks to be secured in CIE to appear for SEE shall be the 12 (40% of

maximum marks) in the Lab test component and 08 (40% of maximum marks) in the Lab Record component. **Securing minimum 40% marks in both Lab test and Lab Record component is mandatory to appear for SEE.**

- The suitable split up of marks can be designed to evaluate each student's performance and learning ability.

Continuous Internal Assessment of Laboratory /Practical Courses		
Lab Test1	Lab Test2	Lab Records
Class test at the end of 8 th week	Class test at the end of 14 th week	Continuous Assessment of lab records
15 Marks	15 Marks	20 Marks
Total: 50		

7.2.5 INTEGRATED PROFESSIONAL CORE COURSES (IPCC): THEORY INTEGRATED WITH PRACTICAL COURSES (4 CREDITS)

The CIE marks for the theory component of the IPCC shall be 30 marks and for the laboratory component 20 Marks.

7.2.4.1 CIE FOR THE THEORY COMPONENT OF IPCC

- Three Tests each of 20 Marks, average of all 3 to be taken for 20 marks.
- One assignment for 10 Marks

7.2.4.2 CIE FOR THE PRACTICAL COMPONENT OF IPCC (INTEGRATED PROFESSIONAL CORE COURSES)

- On completion of every experiment/program in the laboratory, the students shall be evaluated and marks shall be awarded on the same day. 15 marks are for conducting the experiment and preparation of the laboratory record, the other 05 marks shall be for the test conducted at the end of the semester.
- The CIE marks awarded in the case of the Practical component shall be based on the continuous evaluation of the laboratory report. Each experiment report can be evaluated for 10 marks. Marks of all experiments' write-ups are added and scaled down to 15 marks.
- The laboratory test at the end of the 15th week of the semester /after completion of all the experiments (whichever is early) shall be conducted for 50 marks and scaled down to 10 marks. Lab Test shall be conducted by the Course teacher only. Assistance may be taken from other teachers who have handled or handling the lab course.
- Scaled-down marks of write-up evaluations and tests added will be CIE marks for the laboratory component of IPCC for **20 marks**.
- The minimum marks to be secured in CIE to appear for SEE shall be the 12 (40% of maximum marks) in the theory component and 08 (40% of maximum marks) in

the practical component. **Securing minimum 40% marks in both theory and practical component is mandatory to appear for SEE.**

- The laboratory component of the IPCC shall be for CIE only.
- However, in SEE, the questions from the laboratory component shall be included. The maximum of 05 questions to be set from the practical component of IPCC, total marks of all questions should not be more than the 25 marks. The theory component of the IPCC shall be for both CIE and SEE.

Continuous Internal Assessment of Integrated Courses					
Theory Component				Practical Component	
CIE1	CIE2	CIE3	AAT1	Lab Test	Lab Records
Class test at the end of 5 th week	Class test at the end of 10 th week	Class test at the end of 15 th week	Assignments at the end of 10 th Week	Lab Test at the end of 15 th week	Continuous Assessment of lab records
20 Marks	20 Marks	20 Marks	10 Marks	10 Marks	10 Marks
Average of 3 Tests for 20 Marks					
Total Marks: 50					

7.2.6 ENGINEERING GRAPHICS/DRAWING/ENGINEERING VISUALIZATION COURSE

- The CIE marks awarded in the case of Drawing shall be based on the weekly evaluation of class work (sketching and computer-aided drawing).
- Each drawing will be evaluated for marks as mentioned module-wise in the syllabus. Marks for all the drawing sheets are added and scaled down to 20 marks.
- Two tests will be conducted after 8th week and 14th week for 30 marks and scaled down to 15 marks each.
- CIE marks (out of 50) scored by the student shall be the sum of class work evaluation and test marks.
- **Securing 40% of the marks in Lab Tests and Sketch book is mandatory to appear for SEE.**

Continuous Internal Assessment of Engineering Graphics & Visualization/Drawing		
Lab Test1	Lab Test2	Class Work Evaluation
Class test at the end of 8 th week	Class test at the end of 14 th week	Continuous Assessment of Sketch Books & Computerization of drawings
Conducted for 30 Marks Reduced to 15 Marks	Conducted for 30 Marks Reduced to 15 Marks	Evaluated for 100 Reduced to 20 Marks
Total Marks : 50		

The CIE marks awarded for higher semester Drawings/Design Drawings offered by various branches shall be based on the evaluation of the sheets and one test in the ratio 80:20.

7.2.7 CIE OF FIELD WORK

- Surveying Practice / Socio-Economic survey/ Marketing survey/traffic survey/ environmental survey. CIE marks will be split into two components 80% of maximum marks (40 marks) are given for fieldwork report evaluation and 20% of maximum marks (10 marks) for internal assessment test evaluation.
- Fieldwork evaluation includes attendance, data collection through survey, use of data for design drawing, and report. The split-up of marks for the report shall be decided by the faculty member who is guiding them for the design drawing and report. The criteria for split-up of marks shall be done to achieve the course outcomes. The report evaluation shall be carried out for 100 marks and scored marks shall be scaled down to 40 marks.
- The assessment shall be through a presentation of the report followed by the viva-voce. This test shall be conducted by the fieldwork project guide and fieldwork coordinator. If the fieldwork coordinator happens to be the same faculty then, HOD or senior faculty member will conduct the test with the guide. A test similar to SEE will be conducted for 100 marks and marks scored by the student will be scaled down to 10 marks.
- The sum of the report and test marks will be total CIE marks for fieldwork.

7.2.8 CIE OF INTERNSHIP

- The Internship shall be taken up during the period specified in the Scheme of Teaching and Examinations.
- The Department/ College shall nominate faculty member/s to facilitate, Guide, and supervise students under an internship.
- The students shall report the progress of the internship to the Guide in regular intervals and seek his/her advice. The Guide shall maintain the progress record of the candidates undergoing internship.

7.2.4.1 DURATION OF INTERNSHIPS

- Inter/Intra Institutional Internship **03 weeks**
- Innovation /Societal /Entrepreneurship based Internship: **04 weeks**
- Industry / Research Internship **24 weeks**

Report evaluation for Research / Industry internships shall be conducted for 50% maximum marks. The split-up of marks suggested for report evaluation shall be based on the

- Report formatting (20% of marks of CIE for report)
- Presentation of the outcomes in the report (40% of marks for CIE for report) and
- Technical content of the report (40% of marks for CIE for report) (Weightage may be given for paper publication in reputed journal/refereed journal/ Conferences/Product

developed/ Patent filed: Only for Industry / Research Internship).

- Viva-Voce conducted for 50% of marks of CIE. The split-up of marks suggested are
 - For a demonstration of (soft) skills/Engineering Knowledge gained (50% of marks of CIE for Viva-voce).
 - The question-answer session will be checked for the understanding of the fundamentals and concepts (40% of CIE marks for Viva-voce)
 - Clarity in answering the questions (10% of CIE marks for Viva-voce)
 - **There shall be only CIE for Inter/Intra Institutional Internship and Innovation / Societal / Entrepreneurship based Internship. However, Research/Industry Internship shall have both CIE and SEE Components.**
 - Viva-voce will be conducted by the Mentor /guide and Head of the department and one of the senior faculty assigned by the head of the department.

7.2.9 TECHNICAL SEMINAR:

There shall be only CIE for Technical Seminar. No SEE Shall be conducted for Technical Seminar. The maximum marks prescribed for CIE shall be evaluated for 100 and scaled down to 50. The marks awarded for Technical Seminar shall be based on the evaluation of the Seminar Report, Presentation skill, and Question and Answer session in the ratio of 50:25:25.

The Head of the Department shall make arrangements for the conduct of seminars through a committee of faculty members of the Department. The committee, constituted for the purpose by the Head of the Department, shall award the CIE marks for the seminar. The committee shall consist of three senior faculty members of the Department and the senior-most acting as the Chairperson.

Split up of Marks:

- Formatting of the report (10 marks)
- Literature survey (20 Marks)
- Technical content of the report (20 marks)
- Seminar Presentation marks to be allotted by the committee: (25 marks) Viva-Voce (Question answer session): 25 marks
 - Understanding of fundamentals and concepts (15 marks)
 - Clarity in answering the questions (10 Marks)

7.2.10 MINI PROJECT

There shall be only CIE for Technical Seminar. No SEE Shall be conducted for Mini Project. The CIE marks awarded for Mini-Project, shall be based on the evaluation of the

Mini-Project Report, Project Presentation skill, and Question and Answer session in the ratio of 50:25:25. The marks awarded for the Mini-Project report shall be the same for all the batch mates.

50 marks of CIE for the report shall be evaluated by the faculty guide/mentor who is guiding the mini-project.

The Head of the Department shall make arrangements for the conduct of viva-voce evaluation of the mini-project. The committee shall consist of a guide/mentor and two senior faculty members of the Department. This committee shall evaluate Mini-project Work for 50 marks considering project presentation and question-answer session.

- Project presentation: 25 marks
- Question and answer session :25 marks

7.2.11 PROJECT WORK

The project work shall be evaluated considering both CIE and SEE; the maximum mark for CIE is 100. The maximum marks prescribed for CIE shall be 100. The CIE marks awarded for Project Work shall be based on the evaluation of the Project Report, Project Presentation skill, and Question and Answer session in the ratio of 50:25:25. The marks awarded for the Project report shall be the same for all the batch mates.

50 marks of CIE for the report shall be evaluated by the faculty guide/Mentor who is guiding the project work.

The Head of the Department shall make arrangements for the conduct of viva-voce evaluation of the project work. The committee shall consist of a guide/mentor and two senior faculty members of the Department. This committee shall evaluate Project Work for 50 marks considering project presentation and question-answer session

- Project presentation: 25 marks
- Question and Answer session: 25 marks

7.3 MAINTENANCE OF STUDENT RECORDS

The candidate shall write tests, assignments/unit-tests /written quizzes in Blue Books/ Assignment books which shall be preserved by the Head of the Department for at least 3 years after the announcement of results and shall be made available for verification by any external agency.

7.4 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.

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.

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

- 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.

7.5 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 in a time bound manner as per our Academic Calendar, the college follow the points given below for conducting the examinations.

7.5.1 CONTINUOUS INTERNAL EVALUATION

The CIE shall be conducted exclusively by the course instructor. The instructor to announce 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 to also solve the questions from these test papers during tutorial sessions for the benefit of all the students concerned, especially slow learners.

7.5.2 MODERATION COMMITTEE FOR CIE

A moderation Committee for CIE shall be constituted in every department to monitor the assessment of a course with regard to CIE components. The committee shall be chaired by the head of the department and two senior faculty members nominated by the principal shall be the members of the committee. This committee is responsible for the entire process of CIE in the department, including the grievances, if any.

Guidelines for Moderation Committee

Moderation may be conducted at each CIE or after CIEs where large number of students obtain fail marks or higher marks, or when large number of students are obtaining the same marks, or when there are discrepancies between marks allocated to individual students in different courses. Moderation Committee may look into the following aspects of CIE:

- Split up of marks for each of the different types of assessment in a course is to be checked.
- Checking the question paper for RBT levels and Course Outcomes.
- Whether the assessments modes are used to cover the entire syllabus of a course or not.
- Checking the manner of awarding the marks, i.e. has the correction has been at the extremes, liberal or tough.
- Moderation should not be restricted to just assessment but it may also include assessment design(scheme of evaluation).

7.5.3 SEMESTER END EXAMINATIONS

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.

- It is compulsory to register for SEE if the student/s has satisfied the attendance and CIE requirement of ODD /EVEN semester.
- The examinations for all the Programs of study shall be conducted at the end of each semester.
- Students having no backlog course/s, may not have more than one examination on the same day. However, students having backlog course/s may face a situation where they may have:
 1. Two examinations scheduled at the same time of the day,
 2. two examinations on the same day, one during the morning session and the other in the afternoon session, and
 3. Examinations on consecutive days.
- As changing the examination dates is not an option, the examination timetable shall not be modified/ altered/ adjusted in any of the above three cases. In the first case, the students shall select any one of the overlapping courses and in the second and third cases, the students shall manage the examinations as per their decision.

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.

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 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 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.

NE: 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 (NE) 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.

The Course/s when repeated is considered as attempts.

7.2.4.1 MARKS AND PASSING STANDARDS OF SEE

Passing Standards at Colleges using Absolute Grading		
Evaluation Method	Passing Standards	
	UG Programmes	PG Programmes
Sessional (Continuous Internal Evaluation)	Score: $\geq 40\%$	Score $\geq 50\%$
Terminal (Semester End Examination)	Score: $\geq 35\%$	Score : $\geq 40\%$
	CIE + SEE $\geq 40\%$	SEE + CIE $\geq 50\%$

- a. Examination for all Courses under SEE shall be conducted for a maximum of 100 Marks. The marks secured by the students for 100 marks shall be proportionately scaled down to a maximum of 50 marks to add the same with the CIE marks for the award of the letter grade.
- b. For all theory Courses of the UG Programmes, the maximum SEE marks shall be 50, the minimum SEE marks to be secured shall be 35 % of the maximum marks i.e., 18 marks, for PG programmes it is 40% i.e. 20 marks.
- c. For Practical/Fieldwork the maximum SEE marks shall be 50, the minimum SEE marks to be secured shall be 35 % of the maximum marks i.e., 18 marks, in case of UG

programmes and 40% of the maximum marks i.e. 20 marks in PG programmes.

- d.** For 24 weeks of Research / Industry Internship /Major Project the maximum SEE marks shall be 100, the minimum SEE marks to be secured shall be 35% of the maximum marks i.e., 35 marks.
- e.** The sum total of CIE and SEE marks must be 40% of the maximum marks prescribed for a course as per the scheme of teaching and examination
- f.** Students who satisfy the above conditions, and obtain any grade from O to P in a course shall be considered to have passed that course.
- g.** A student shall be declared fail if he/she
 - a.** Fails to satisfy the conditions of passing standards
 - b.** Absents himself/herself to the examination.
 - c.** Is held guilty of examination malpractice and for any other reasons and declared the performance of any course/s as null and void by the competent authority.
 - d.** The course/s in which student/s fail to satisfy attendance and CIE requirement (NE courses) are also considered as F only.
- h.** If a student secures an F grade in any of the Courses, he/she shall reappear for that Course(s) during the subsequent SEE. The CIE marks awarded to the student at the first attempt in the concerned Course(s) shall be carried forward. Revised CIE marks are considered only in cases NE (not eligible to appear for SEE due to non-comply of attendance and CIE) cases.
- i.** 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.
- j.** Over and above the academic credits, every 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.
- k.** 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

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.

Letter Grades: Letter Grade: Course Letter Grade (or simply letter grade or grade) is an index of performance of a student in a said course and refers to a qualitative measure of achievement of a student in each course, based on the percentage range of marks secured in CIE and SEE put together.

Grades are denoted by letters O, A+, A, B+, B, C, P and F. The rubrics attached to letter grades are as follows:

O - Outstanding, A+ - Excellent, A - Very Good, B+ - Good, B - Above Average, C - Average, P-Pass and F - Fail.

If student remain absent for SEE of any of the course, the letter grade assigned to that course shall be F.

NE: If a student fails to satisfy Attendance and / or CIE requirement for course/s then such course/s shall be marked as Not Eligible (NE)" i.e. Not eligible to appear for SEE in that Courses/s.

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.

Letter Grade and corresponding Grade Points on a typical 10 - Point scale for UG Programmes								
Letter Grade	O	A+	A	B+	B	C	P	F
	Outstanding	Excellent	Very Good	Good	Above Average	Average	Pass	Fail
Grade Points	10	9	8	7	6	5	4	0
% of Marks secured	90-100	80-89	70-79	60-69	55-59	50-54	40-49	0-39

If a student remains absent for SEE of any of the courses, the letter grade assigned in

the grade card to that course shall be **F**. If a student is not eligible to appear for SEE due to non-comply of any of the course/s then letter grade assigned against that course/s shall be **NE**.

- 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 O to P. 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 (O-F) after the student completes his/her course requirements, including the examinations.
 - **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.
 - **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.
 - **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. Students having the 'X' grade 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 students within two days of the respective Make-Up Examinations. Any 'I' and 'X' grades still not converted within two days after the last scheduled Make-Up Examinations shall automatically be

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) or 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 for every examination the student has appeared. This will have a list of all the courses registered by a student in the said examination, together with their credits, the letter grades and grade points awarded in each case. Courses registered for credit and having grade points shall be included in the computation of the students' performance, like SGPA and CGPA. 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.

If a student remains absent for SEE of any of the courses, the letter grade assigned in the grade card to that course shall be **F**. If a student is not eligible to appear for SEE due to non-compliance of any of the course/s requirements then letter grade assigned against that course/s shall be **NE**.

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,

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

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

The SGPA and CGPA shall be rounded off to 2 decimal points and reported in the grade cards.

SGPA and CGPA Calculation

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 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)	CourseNo.	Credits	Grade	GradePoints	CreditPoints	SGPA,CGPA
I	XX11	5:0:0	B	8	40	SGPA =117/20 =5.85
I	XX12	3:2:0	NE	-	-	
I	XX13	3:0:0	A	9	27	
I	XX14	0:1:1	F	0	00	
I	XX15	4:1:0	D	6	30	
I	XX16	5:0:0	E	4	20	
Total		20(18*)	Total		117	
II	XX21	3:1:1	C	7	35	SGPA =157/25 =6.28
II	XX22	4:0:0	B	8	32	
II	XX23	3:0:0	D	6	18	
II	XX24	4:1:0	E	4	20	
II	XX25	2:1:1	A	9	36	CGPA =274/41 =6.68
II	XX26	2:0:0	F	0	00	
I	XX14	0:1:1	B	8	16	
Total		25(23*)	Total		157	
Supplementary						
Supplemen tary	XX102	3:2:0	D	6	30	SGPA =56/9 =6.22
Supplemen tary	XX104	0:1:1	C	7	14	
Supplemen tary	XX112	2:0:0	D	6	12	CGPA =330/50 =6.60
TOTAL		9	TOTAL		56	

*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.

CGPA Calculation of the Program: An Illustrative Example								
Semester	I	II	III	IV	V	VI	VII	VIII
Credits of the semester	20	20	20	20	20	20	24	16
SGPA	5.0	6.73	9.20	6.86	8.18	7.73	9.18	9.40
Σ CGPA	100	175	220	165	204	185	184	169
CGPA = [100+175+220+165+204+185+184+169] / 160 = 1402 / 160 = 8.76								
For Lateral Entry Students CGPA = [220+165+204+185+184+169] / 120 = 1127 / 120 = 9.39								

9. VERTICAL PROGRESSION

All the below clauses are subject to a maximum duration of eight (for Regular Students) / six years (for Lateral Entry Students) as applicable.

1. In case of students admitted to the first year:

- i. Students have to fulfill the attendance and CIE requirement to appear for SEE of course/s of 1st year.
- ii. Students having **not more than four F grades in the 1st and 2nd semesters** of the first year of the program shall be eligible to move to the 3rd semester (2nd year) of the program. These courses include courses marked as NE.
- iii. The students who fail to satisfy CIE and attendance requirement has to repeat the courses whenever offered next and become eligible for the 2nd year.

2. **Obtaining CIE:** From the (3rd semester) second year onwards, the student who obtains the required attendance for the course, but not the required CIE marks is allowed to move forward to the next semester. However, the student has to mandatorily obtain the required CIE in the subsequent semester. Obtaining minimum CIE marks for the course is mandatory. It may also be noted that the student shall not be permitted to appear for SEE in such courses until he/she obtains the required CIE.

3. **Carryover of backlog courses:** From 3rd semester onwards, the student/s who obtains required attendance, CIE, and appears for Semester EndExaminations but fails (F Grade) in course/s is allowed to move forward to the next semester (odd /even) irrespective of a number of F grades. However, for the award of degree, the student has to pass in all courses as per applicable scheme and regulations and earn the prescribed credits. This is subject to a permitted maximum duration. **It may also be noted that the student will be given admission to the IV year (7th semester/8th semester) provided he/she passes all courses of 1st and 2nd semesters.**

4. From the second year onwards, there shall be no restriction for promotion from an even to next odd semester (or odd to next even semester) even if the student has not satisfied the attendance requirement in one or more courses (including bridge courses for lateral entry students).

9.1 SUCCESSIVE FAILURES:

- If a student fails in a course even after four attempts, that course is deemed to be exempted for him/her. Then, the student may choose a course of his / her choice with the same number of credits from the pool of courses suggested by the concerned Board of Studies. The course so selected should not have been studied by the student or to be studied in higher semester/s. The faculty advisor shall guide/advise the student in this regard. The college has to make arrangements for the registration and conduction of CIE for the selected course.
- This provision is given only for two courses (one at a time) during the entire maximum duration of a course. This provision is optional; the student/s can continue appearing for SEE with the same course without opting for a change of course.

9.2 READMISSIONS

- Students who are temporarily discontinuing the program and getting readmitted or rejoin to the eligible semester are subject to a maximum duration of eight (for Regular students) / six (for lateral Entry students) years as applicable.
- The permission for readmission is only on request through the Principal and is not treated as a matter of right. Such students shall not claim any benefits based on the readmission.
- Students who take re-admission to any semester of the existing scheme from another scheme, as a repeater/fresher because of various reasons, shall attend and complete all the remaining semester/s of the program adhering to the regulations of the prevailing scheme and shall complete additional Course/s, if any, as per the decision of equivalence committee in concurrence with concerned Board of Studies on establishing the equivalence between two schemes. Such a candidate shall not be eligible for the award of rank.
- Readmission to odd/even semester shall not be considered as fresh admission and therefore students shall continue to have the same University Seat Number, which was allotted at the time of admission to the program. The maximum duration of the Program shall be counted with reference to the USN (University Seat Number) allotted during admission to the program.

9.2.1 PERMITTED MAXIMUM CREDITS FOR REGISTRATION

The student shall be permitted to register for total courses not exceeding 28 credits. These 28 credits include the courses of the regular semester and backlogs. The registration of these additional credits includes the courses having a shortage of attendance and the courses whose CIE requirements are not fulfilled. A student has to pay the prescribed fee as notified by the college from time to time.

The candidates who have temporarily discontinued the Program of study or changed the scheme of study from one to another because of various reasons or transferred with credits from the autonomous college of VTU /other University to non-autonomous constituent/affiliated college of VTU, shall be eligible for the award of degree provided the credits earned at that stage are equal to or greater than the credits decided by the

University in the individual cases.

In case, the forecasted or estimated credits are going to be less than that of the credits prescribed by the University on the completion of all the semesters of the program under the prevailing scheme, the candidate shall register for a course or courses not studied earlier and make up the credits which are equal to or greater than the university prescribed credits.

10. REJECTION OF RESULTS

- 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. However, the rejection of performance of VIII semester project shall not be permitted.
- 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 Course duration will be counted with reference to old USN.

Students who opt for rejection of results shall be eligible for the award of degree and Minor Degree but not for the award of ranks and Honors degree.

11. MULTIPLE ENTRY AND EXIT OPTION

Entry 1: (at 1st semester) A program of study leading to entry into the first year of the Bachelor's degree is open to those who have met the entrance requirements, including specified levels of attainment at the secondary level of education specified in the program admission regulations.

Exit 1: The exit option is given to the student at the end of year 1 (after the 2nd semester). The student has to complete all academic requirements of 1st year of the undergraduate program and earned requisite credits of 1st and 2nd semester and recommendation of the counseling team of the Institute

Entry 2: (at 3rd semester) A program of study leading to the second year of the Bachelor's degree is open to those who have met the entrance requirements, including specified levels of attainment, in the program

Admission regulations: Admission to a program of study is based on the evaluation of documentary evidence (including the academic record) of the applicant's ability to undertake and complete a Bachelor's degree program.

This option is open to those who have left after completion of the 1st year of the

program and want to join back for the continuation of their study subject to the condition of a maximum duration of 8 years from the date of 1st admission.

Student opting for multiple entries a3rd-semester level has to undergo a mandatory Summer Internship-I of 03 weeks during the intervening period of semester III and IV. CIE shall be conducted in the 3rd semester and prescribed credits earned for the internship shall be entered into the grade card of the IV semester.

Exit 2: The exit option is given to the student at the end of year 2 (after the 4th semester). The student has to complete all academic requirements to complete the two years of the undergraduate program and earned requisite credits of 1st 2nd 3rd and 4th semesters and recommendation of the counselling team of the Institute

Entry 3: This option is open to those who have left after completion of the 2nd year of the program and want to join back for the continuation of their study subject to the condition of a maximum duration of 8/6 years from the date of 1st admission.

A program of study leading to the Bachelor's degree is open to those who have met the entrance requirements, including specified levels of attainment. Admission to a program of study is based on the evaluation of documentary evidence (including the academic record) of the applicant's ability to undertake and complete a Bachelor's degree program.

Students opting for multiple entries at the 5th-semester level have to undergo mandatory Summer Internship-II of 04 weeks during the intervening period of semesters V and VI. CIE shall be conducted in the 5th semester and prescribed credits earned for the internship shall be entered into the grade card of VI semesters.

Exit 3. (after 6th semester) On successful completion of three years, the relevant degree shall be awarded. The student has to complete all academic requirements to complete the three years of the undergraduate program and earned requisite credits of 1st to 6th semester and recommendation of the counselling team of the Institute.

12. 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.

12.1 CONVERSION OF CGPA TO PERCENTAGE

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

Percentage of Marks = CGPA X 10

Illustration for a CGPA of 8.20;

Percentage of marks secured M = $8.20 \times 10 = 82.0\%$

Percentage Equivalence of Grade Points (For a 10- Point Scale)	
Grade Point Average	Percentage of Marks /Class
5.00	50
6.00	60
7.00	70
8.00	80
9.00	90
10.00	100

12.2 Class Designation

- $\geq 70\%$ (First Class with Distinction)
- $\geq 60\%$ and $< 70\%$ (First Class)
- $\geq 50\%$ and $< 60\%$ (Second Class)
- $\geq 40\%$ and $< 50\%$ (Pass Class)

13. Internship

The internship is an extended period of work experience undertaken by university/Institute students looking to supplement their degree with professional development. The students are allowed to prepare themselves for the workplace and develop practical skills.

The Internship shall be completed during the period specified in the Scheme of Teaching and Examinations. There will be three internships:

- 1. Inter/Intra Institutional Internship:** (In the case of the students admitted to 1st year B.E./B.Tech. program) All the students admitted to engineering programs shall have to undergo a mandatory summer internship of 03 weeks during the intervening semester period of the II and III semesters. The internship shall include Inter / Intra Institutional activities (refer to Annexure-IV). CIE shall be carried out during the Internship period/III semester and prescribed marks shall be included in the IV semester grade cards.

Inter/Intra Institutional Internship: (In case of students admitted under Lateral Entry): All the students admitted to engineering programs under the lateral entry category shall have to undergo a mandatory internship of 03 weeks during the

intervening semester period of the III and IV semesters. The internship shall include Inter / Intra Institutional activities (refer to Annexure-IV). CIE shall be carried out during the Internship period/IV semester and prescribed marks shall be included in the IV semester grade cards.

2. Inter /Intra Institutional internship. Innovation/ Societal/Entrepreneurship based Internship:

During the intervening period of IV and V semester the Internship of 04 weeks period shall be carried out in industries /Govt. organization/NGO/MSME. Focus may be given to Rural Internship/Innovative activities and Entrepreneurship (Social/Industrial). CIE shall be carried out during the Internship period/V semester and prescribed marks shall be included in the VI semester grade cards.

3. Research Internship/Industry Internship of 24 weeks duration:

At the beginning of the IV academic year, students can opt for VII semester course work or VII semester Internship depending on the opportunities available for enrolling to either Research Internship or Industry Internship. With reference to this, both VII and VIII semesters shall be in progress simultaneously. Research Internship Industry Internship shall be carried out at Industry / government organizations, non-governmental organizations (NGOs)/ Micro, Small & Medium Enterprises (MSME) /Research and development organizations/Organizations of National or international repute/Institution Research Centers / Innovation and Incubation Centers/Start-ups /entrepreneur cells. The institution shall encourage students to take up (i) interdisciplinary Research Internship or Industry internship and (ii) rural internship, a work- based activity carried out to learn practical experiences in rural areas, for the upliftment of living standards. In case students want to undergo an internship at his/her family business, he/she shall be permitted to provide; a declaration by a parent that is submitted directly to the Principal of the Institution. With the consent of the internal guide and Principal of the Institution, students shall be allowed to carry out the internship at their hometown (within or outside the state or abroad), provided favorable facilities are available for the internship and the student remains regularly in contact with the internal guide

The institution shall not bear any cost involved in carrying out the internship by students. However, students can receive any financial assistance extended by the organization. University Viva-Voce examination shall be conducted at the end of the internship period. Research Internship /Industry Internship shall be considered as head of passing and shall be considered for the award of the degree. Those who do not complete the internship shall be declared fail and shall have to complete it during subsequent University examinations after stratifying the internship requirements during subsequent semesters.

13.1 Responsibilities of Department and Guides:

- The Department/college shall nominate department coordinator /staff member/s to facilitate, guide, and supervise students under internship.
- The students shall report the progress of the internship to the Guide at regular intervals and seek his/her advice. The Guide shall maintain the progress record/diary of the candidates undergoing internship.

- After the completion of the Internship, students shall submit a report with a completion certificate to the Head of the Department with the approval of internal Guides.
- There shall be 100 marks for CIE for Inter/Intra Institutional Internship and Innovation/Societal /Entrepreneurship based Internship. For Research/industry internship 100 marks for CIE and 100 marks for SEE. The minimum requirement of CIE and SEE marks shall be 40% and 35% of the maximum marks respectively. In total, the student has to secure 40% of the course maximum marks i.e., the sum of the CIE and SEE marks prescribed for the course.
- The internal Guide and one senior faculty shall be the internal examiners for CIE Inter/Intra Institutional Internship and Innovation/Societal/Entrepreneurship based Internship.
- For Research /Industry Internship, External Guide for the Internship shall be the external examiner for SEE. Examination for internship shall be conducted at the college and the date shall be fixed in consultation with the external Guide. The Examiners shall jointly award the SEE marks.
- In case, the external Guide expresses his/her inability to conduct the Examination, the Principal /examination Chief Superintendent of the Institute appointed by the University shall appoint a senior faculty of the Department to conduct the Examination along with the internal Guide.

14. TECHNICAL SEMINAR

- Technical Seminar is one of the heads of passing.
- Each student has to present the seminar on a specific topic chosen from the relevant field /list provided by the department under the supervision of a faculty coordinator.
- The Head of the Department/designated coordinator for technical seminar shall make arrangements for the conduct of seminars through a committee of faculty members of the Department. The committee constituted for the purpose of the Head of the Department, shall award the CIE marks for the seminar. The committee shall consist of three senior faculty members of the Department and the senior-most among them is to act as the Chairperson.

15. MINI-PROJECT

A Mini Project is a laboratory-oriented course that will provide a platform to students to enhance their practical knowledge and skills by the development of small systems/applications

Based on the ability/abilities of the student/s and recommendations of the mentor, a single disciplinary or a multidisciplinary Mini-project can be assigned to an individual student or a group having not more than 4 students.

16. PROJECT WORK

Based on the ability/abilities of the student/s and recommendations of the mentor, a single disciplinary or a multidisciplinary Major-project can be assigned to a group having not more than 4 students. The main project work needs to be taken up within the institute/ research laboratory/industry. It is desirable, that the outcome of the project work may be published /patented.

17. MASSIVE OPEN ONLINE COURSES (MOOC)

Massive Open Online Courses (MOOC) are the part of the curriculum and students can register for courses instead of the elective courses on the NPTEL/ SWAYAM platform. Students can choose and register from the list of courses identified and approved by Board of Studies.

Course registered shall be of 12 – 16 week duration (approximately 40 hour; 1 credit = 13 hours) is considered equivalent to 3 credits. However, BOS in consultation with Principal can establish credit equivalents as per the credit plan of the program.

On receipt of MOOCs completion certificate from Host Institution, a copy of MOOC completion certificate attested by the Course Coordinator/facilitator and College Coordinator for MOOC shall be submitted to the deperatment. An equivalent Grade corresponding to grade/ marks awarded by MOOC agency shall be determined (if required) by a committee consisting of Principal and BOS. The grade awarded by Host Institution or equivalent Grade (as the case may be) shall be shown in the grade card, transcript and accounted in the SGPA and CGPA calculations.

Students' failing to appear for the final examinations conducted by the Host Institution and not being awarded MOOC course complete certificate shall re-register for MOOC in the next subsequent session (s) and earn the credits to fulfill the requirements for the completion of the degree. The student can opt for change of MOOC elective in case of the same MOOC being not offered in consultation with the cousellor and HoD. The same is applicable to the student obtaining 'F' grade in the final examination conducted by the Host Institution.

18. MINIMUM CGPA OF 5 FOR AWARD OF DEGREE

18.1 Noncompliance of CGPA \geq 5.00 at the end of the Program

Students, who have completed all the courses of the Program but do not have a CGPA \geq 5.00 at the end of the Program, shall not be eligible for the award of the degree.

In such cases,

- Students shall be permitted to appear again for SEE in course/s other than [Internship, Technical seminar, Project (Mini and Main), and Laboratories] of any Semester/s without the rejection of CIE marks for any number of times, subject to the

provision of the maximum duration of the Program to make up the CGPA equal to or greater than 5.00 for the award of the Degree.

- In case the student earns improved grade/s in all the reappeared course/s, the CGPA shall be calculated considering the improved grade/s. If it is >5.00 , the students shall become eligible for the award of the degree. If $CGPA < 5.00$, the students shall repeat the procedure.
- In case the students earn improved grade/s in some course/s and the same or lesser than the previously earned pass grade/s in the other reappeared course/s, the CGPA shall be calculated considering the improved grade/s and the pass grades earned before the reappearance. If it is > 5.00 , the student shall become eligible for the award of the degree. If $CGPA < 5.00$, the students shall repeat the procedure.
- In case the student earns improved grade/s in some courses and fails in the other reappeared course/s, the CGPA shall be calculated by considering the improved grade/s and the previously earned pass grade/s of the reappeared course/s in which the student has failed. If it is > 5.00 , the student shall become eligible for the award of the degree. If $CGPA < 5.00$, the students shall repeat the procedure.
- In case the student fails (i.e., earns F grade) in all the reappeared course/s, pass grade/s of the course/s earned by the students before reappearance shall be retained. In such cases, the students shall repeat the procedure.

The student shall obtain written permission from the Principal to reappear in SEE to make up the CGPA equal to or greater than 5.00.

18.2 Noncompliance of Mini-project

The mini-project shall be considered as a head of passing and shall be considered for the award of degree. Those, who do not take up/complete the mini-project shall be declared fail in that course and shall have to complete the same during subsequent University examinations after satisfying the Mini- project requirements.

18.3 Noncompliance of Major-project

The Project Work shall be considered as a head of passing and shall be considered for the award of degree. Those, who do not take up/complete the Major-project shall be declared fail in that course and shall have to complete the same during subsequent University examinations after satisfying the Major-project requirements.

18.4 Noncompliance of Internship

All the students of B.E./B.Tech. shall have to undergo mandatory internship. The internship shall be considered as a head of passing and shall be considered for the award of degree. Those, who do not take up/complete the internship shall be

declared fail in that Course and shall have to complete the same during subsequent University examinations after satisfying the internship requirements.

19. 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 Batches.

19.1 The regulation shall be applicable to the Students

- Admitted to I semester/I year from the **academic year 2019-20** (i.e.USN-XXX18XXXXX- **REGULAR BATCH**)
- Admitted to III semester/II year from the **academic year 2020-21** (i.e.USN-XXX19XX4XX- **LATERAL BATCH**)

19.2 Eligibility Criteria for Registration

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

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

19.3 Registration Procedure

A student meeting the eligibility criteria specified above and intending to register for the 'Honors Qualification shall apply in the prescribed form along with a **non refundable registration fee Rs.2,000/-** to confirm the registration.

19.4 AWARD OF HONOURS DEGREE

- ❖ Students shall maintain a **grade \geq D** in all the courses of 5th to 8th 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 Honors degree.

- ❖ Students not having a **GGPA ≥ 8.50** at the end of programme shall not be eligible for the award of Honors even if they have satisfied the additional credits consideration prescribed for Honors 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.

19.5 Course Work

- Successfully in the remaining semesters, that is, **5th to 8th** for the relevant Degree award, each student registered for the Honors 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.

Credit Assignment for Online Courses	
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 Honors 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 "Honors" qualification, irrespective of the number of credits earned by them. However, they

shall be awarded only B.E. Degree.

- b. The 'Honors' 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.

20. 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

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

- The Activity Points earned shall be reflected on the student's eighth semester Grade Card.
- The activities 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.
- Activity Points (non-credit) have no effect on SGPA/ CGPA and shall not be considered for vertical progression.
- 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.
- 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/youthRed CrossCo-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/ SkillIndia/ Swachh Bharat Internship etc.,	2	80-90	20	

Submission of Activity Points: The consolidated report of activity points earned by the students shall be submitted to the office of the Controller of Examinations & sent to the University.

21. B.E./B.TECH. WITH MINOR DEGREE

A student shall be declared to have completed the Program of B.E./ B.Tech. Degree and shall be eligible to get undergraduate B.E./B.Tech., degree with minors, provided.

- The student has undergone the stipulated Course work of all the semesters under the same Scheme of Teaching and Examinations and has earned the prescribed number of credits, i.e. 160 credits for I semester admitted student and 120 for III semester admitted student
- Has earned additional 18 or more credits through a University approved courses list submitted by the Board of Studies.

22. AWARD OF DEGREE FOR AN EXTRAORDINARY STUDENT

The University through college can offer a fast-track degree for an extraordinary student. The same is done by offering courses of his / her choice to fulfill the requirement of the program in three and half years. However, the degree shall be awarded on completion of 04 years. However, the course completion letter may be issued jointly by University and Institute immediately after completion of the program, notwithstanding the minimum duration. Aspirant students have to register with University through the Principal of the college **at the 5th-semester** level, with the prescribed registration fee as fixed by the University from time to time. A special provision to registering for more credits other than regular semester credits shall be made only after registration.

The extraordinary student is one with a CGPA ≥ 9 in 1st, 2nd, 3rd, and 4th semesters and maintains the same in all the semesters. Otherwise, his/her registration will stand canceled automatically.

23. OTHER ACADEMIC MATTERS

23.1 CHOICE BASED CREDIT SYSTEM

1. 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.
2. 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.
3. 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.
4. 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.

23.2 TIME SCHEDULES

- i. 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.
- ii. 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.
- iii. 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.
- iv. 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.
- v. Declaration of the Results and appeal on grades**
 - The results of the Semester End Examination shall be announced within ten days from the completion of the last examination by the Office of the Controller of Examinations (COE).
 - Before the announcement of the results, COE shall place the results before the Result Moderation Committee for approval. The approved results sheets shall be sent to the departments for announcement and the results of the individual students shall be made available in the college website.
 - The facility of re-totaling, revaluation and photocopy of the answer scripts is available only for theory examination where answer scripts are valued only once (valued by single examiner). The candidate can apply for any number of courses of theory examination for grievance redressal.
 - The candidate shall submit an application to the Examination section in the prescribed format for re-totaling, revaluation and photocopy of the answer scripts by paying the prescribed fee within the stipulated date from the date of announcement of the results.

23.3 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:

- 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, along with supporting documents and endorsements of his/her parents/guardians.
- 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.
- The student does not have any dues or demands at the College/University including tuition and other fees as well as library material.
- A student availing of temporary withdrawal from the College under the above provision shall be required to pay such fees and /or charges as maybe 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.
- 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.

23.4 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

23.5 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.

23.6 RECOMMENDATIONS FOR DEGREE AWARD

- 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.
- College also ensures that each such student in (a) has fulfilled all the requirements for the Degree Award.
- Only those students recommend for the Degree Award shall be entitled to receive the relevant Provisional Certificates /Transcripts from the College at this stage.

24. GRADUATION CEREMONY

24.1 AWARD OF PRIZES, MEDALS, AND RANKS

- 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 by following the provisions in the University Statutes.
- b) College has instituted Prizes and Awards to meritorious students, which are being awarded annually at the Graduation ceremony, to encourage the students to strive for excellence in their academic activities.
- c) 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.
- d) For award of rank in a specialization, a minimum of 10 students should have appeared in the Final semester examinations.
- e) The total number of ranks awarded shall be 10% of the total number of students appeared in Final semester, subjected to a maximum of 10 ranks in a specialization.

Illustration:

- If 128 students appeared for the final semester in Electronics and Communication Engineering Program, the number of ranks to be awarded for Electronics and Communication Engineering shall be 10.
- If 90 students appeared for the final semester in Civil Engineering, the number of ranks to be awarded for Biomedical Engineering will be 09.
- In case of a fractional number of ranks, it is rounded to a higher integer only when the first decimal place is greater than or equal to 5.

24.2 FOR AWARD OF RANK

1. In a specialization of B.E, the CGPA secured by the students is considered.
2. The additional credits earned for the award of Honors / Minors degree shall not

have any bearing for the Rank declaration.

3. A student shall be eligible for a rank at the time of award of the degree of Bachelor of Engineering/ Technology, provided that the student,
 - a. (i) Has passed all the Courses of 1st to 8th semesters in the first attempt only in case of Candidates admitted to 1st year.
 - (ii) Has passed all the Courses **(including bridge courses)** of 1st to 8th semesters in the first attempt only in case of Candidates admitted under lateral entry scheme.
 - b. Is not a repeater in any semester because of rejection of result of a semester/ shortage of attendance /**temporarily discontinued and rejoined/readmitted etc.**
 - c. Has completed all the Courses/semesters of the same Scheme of Teaching and Examinations without any break/discontinuity.
4. 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 3rd semester for lateral entry)
5. Completed all prescribed mandatory non-credit courses
6. Not repeated any course in any semester due to rejection of result or shortage of attendance etc.
7. Completed all the semesters without any break/discontinuity.
8. CGPA \geq 6.75 (equivalent to first class or above)

25. DISCIPLINARY MEASURES

25.1 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.

25.2 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.

25.3 DRESS CODE

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

For boys:

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

For girls:

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

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

25.4 MOBILE PHONE

- The usage of mobile phones by the students in the instructional areas is prohibited. However, they 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, the mobile will be confiscated and fine will be levied for violating the rule.

25.5 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 Committee report. Ignorance of any rules does not condone any misbehavior.

26. COUNSELING CENTER

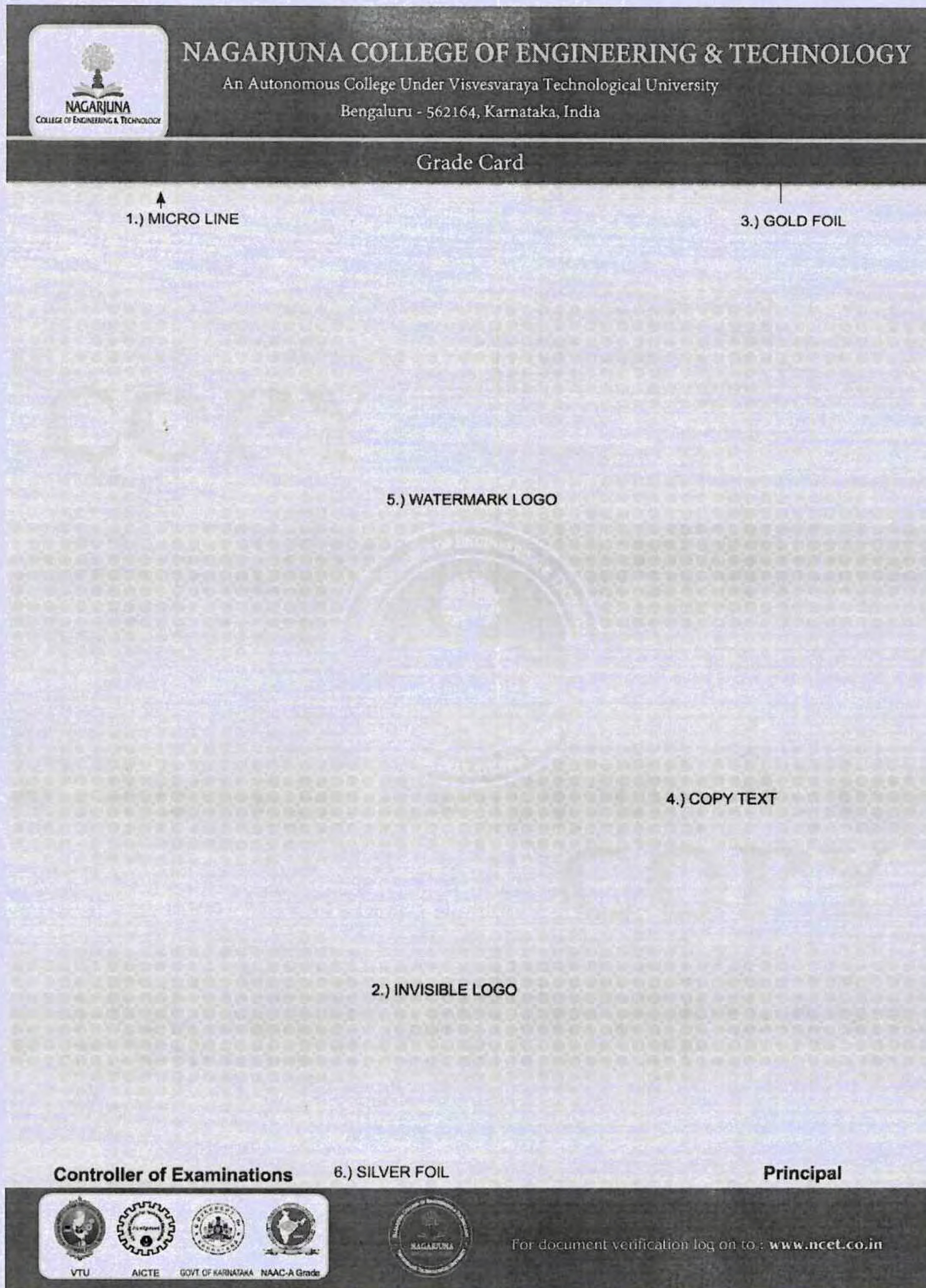
Nagarjuna College of Engineering and Technology is very pleased to extend the services of professional counselors at their Counseling Center for the student community. The youth of today are challenged by many stresses from within their own home and from external sources. There may be issues related to personality, being unable to communicate with peers and others effectively, low self esteem, poor self confidence, inability to concentrate, fear of exams, anxiety about one's ability to be a successful student of engineering, confusion about the future and career, stress related to performance in the college, time management, may be health related issues and many more.

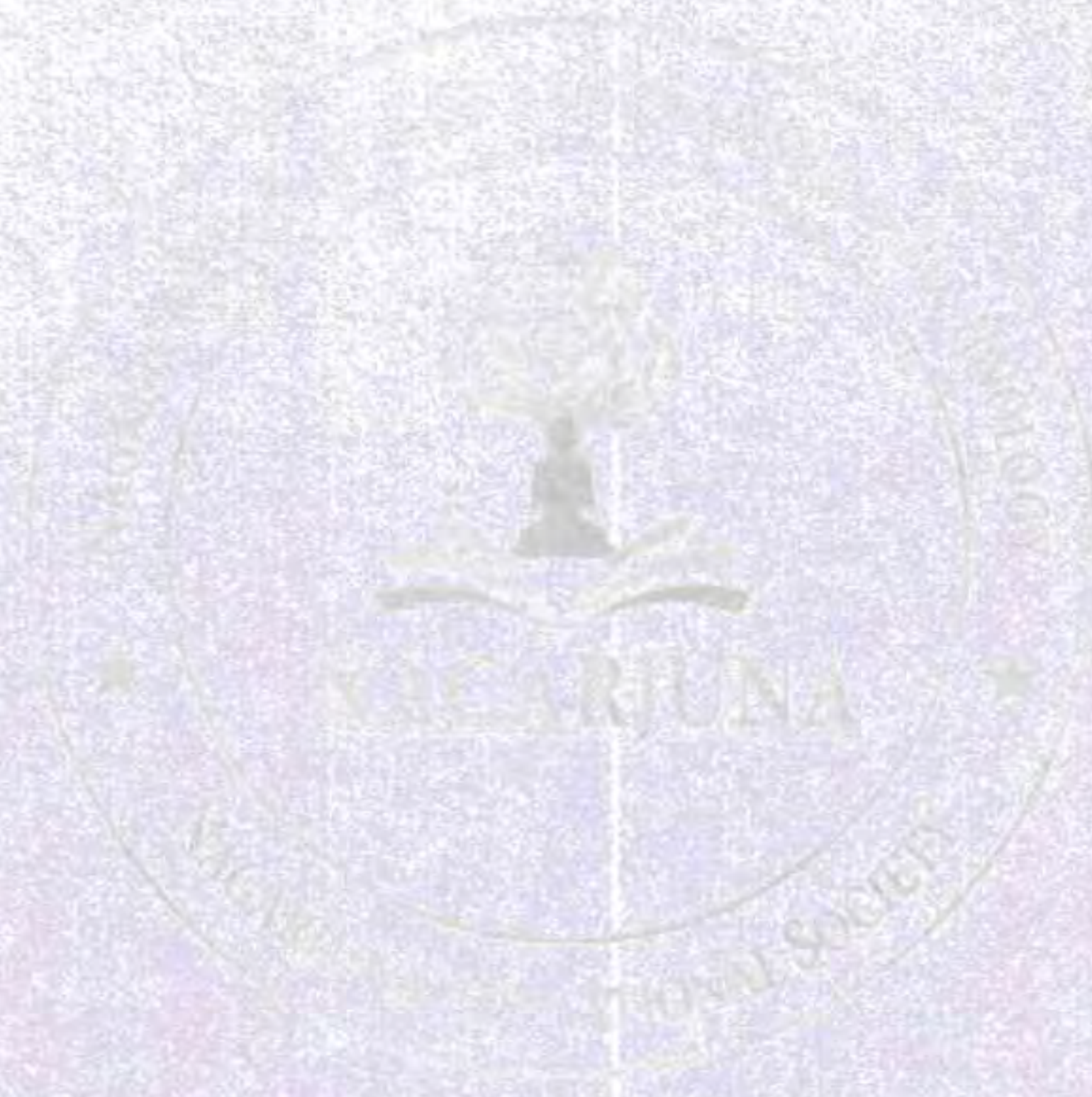
The Counselors enable students to understand, to build capacities, to overcome and to develop skills to cope with the situations that they may find stressful. The keywords of counseling are compassion, building trust, confidentiality and being non-judgmental. The counseling process is usually one-on-one and these are experienced counselors who can empower students to fulfill their true potential during your tenure in Nagarjuna College of Engineering and Technology.

Nagarjuna College of Engineering and Technology 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 students in this journey. Students of Nagarjuna College of Engineering and Technology can communicate to the counselors through the email.

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.*

New Format of the Grade Card to be issued to the students after every examination





7.) Nano Text



9.) Magic Text

Provisional List of Students Graduating during the Academic Year 2021-2022

SL.No	Programme	Eligible Students
1.	MBA - Master of Business Administration	57
2.	M.Tech – CCT (M.Tech Construction Technology)	14
3.	M.Tech – CSE (M.Tech Structural Engineering)	14
4.	BE – Electronics and Communication Engineering	103
5.	BE – Computer Science Engineering	107
6.	BE – Information Science and Engineering	51
7.	BE – Mechanical Engineering	49
8.	BE – Civil Engineering	97
	TOTAL	492

Achievements of Staff and Students

Patents filed by the faculty members after 9th ACM:

Sl. NO	Title of the Patent	Jurisdiction Publication	Inventors Name/ Faculty Members/ Students/Emeritus Professors	Date of Application Grant	Dept
1.	Novel system method and determination of economic base width of transmission tower for different wind zones	Indian	Dr. Kanapathy Gopalakrishnan Chaitra D M Milind Nataraj Shyamenahalli	13.05.2022	CIVIL
2.	Novel system , Analysis and design of elevated water tank for different seismic zones	Indian	Dr. Kanapathy Gopalakrishnan Gayathri Devi R Pooja Chaitra D M Dr Pinky Devi	13.05.2022	
3.	Novel system method for seismic analysis and retrofitting of an existing structure	Indian	Dr. Kanapathy Gopalakrishnan Chaitra D M Geetha M	13.05.2022	
4.	Novel System, Method, Design And Development Of Speech Emotion Recognition Using Mlp Classifier	Indian	1)Dr. Kanapathy Gopalakrishnan 1)Gopinath 2)Swathi S 3)Dr. Prasanna Lakshmi 4)G S Deekshitha S 5)Arati Chabukswar	08.07.2022	CSE
5.	Novel System, Method, Design And Development Of An Optimized Model For Detecting The Performance Of Credit Card Fraud	Indian	1)Dr. Kanapathy Gopalakrishnan 1)Deekshitha S 2)Jeevitha S R 3)Bhagyashree P Pujeri 4)Swathi S	15.07.2022	
6.	Novel System, ,Method, Design And Development Of Customized CNN Model For Detection And Classification Of Objects In Satellite Image	Indian	1)Dr. Kanapathy Gopalakrishnan 1)Swathi S 2)Gopinath A R 3)Sudhakar Reddy 4)Raghavendra B 5)Abraham Rajan	08.07.2022	
7.	Novel System, Method, Design And Development Of Camouflage Techniques Based Multifunctional Army Rob	Indian	1)Dr. Kanapathy Gopalakrishnan 2)Archana V 3)Naghma Anjum 4)Gagana K V	15.07.2022	ECE

			5)Sahana R 6)Harish Kumar C 7)Rani B A 8)Nagesh K N 9)Rohith S		
8.	Novel System, Method, Design And Development Of Industrial Environment Monitoring System Using Lora	Indian	1)Dr. Kanapathy Gopalakrishnan 2)M. Vijay Kumar Reddy 3)Shwetha S 4)Y. Mallikarjuna 5)Shilpa J 6)Dr. Basavaraj G M 7)Dr. Rohith S	22.07.2022	
9.	Novel System, Method, Design And Development Of A Weapon Auto Aiming And Trigger System For Rapidly Deployable Armed Support Robots	Indian	1)Dr. Kanapathy Gopalakrishnan 2)Sunitha M 3)Anusha S N 4)Bhavya Shree P 5)Komala M 6)Lavanya K R	22.07.2022	
10.	Novel System, Method, Design And Development Of Iot Enabled Next Gen Smart Helmet Using Arduino	Indian	1)Dr. Kanapathy Gopalakrishnan 2)Sreenivasulu K N 3)Manoj A 4)Chandrakanth N 5)Manjunatha 6)Rakesh M 7)Dr. Rohith S	22.07.2022	
11.	Novel System, Method, Design And Development Of Iot Based Footstep Power Generation Using Piezo Electrics	Indian	1)Dr. Kanapathy Gopalakrishnan 2)Mahesh M R 3)Adarsh Reddy K R 4)Chetan N Vaidya 5)Karthik R 6)Madan N 7)Nagesh K N	15.07.2022	ECE
12.	Novel System, Method, Design And Development Of Development Of Smart Traffic Light Control System	Indian	1)Dr. Kanapathy Gopalakrishnan 2)Vathsala P 3)Rani B A 4)Rushendra Chowdary G 5)Shalini R 6)Raksha M 7)Naghma Anjum 8)Dr. Nagesh K N 9)Dr. Rohith S	08.07.2022	
13.	Method And System To Develop Data Encryption And Decryption Using Crypto-Stego-Ai Based	Indian	1)Sunil T	02.06.2022	
14.	Novel System, Method,	Indian	1)Dr. Kanapathy	08.07.2022	

	Design And Development Of Smart Care Unit For Covid 19 Patients Using Raspberry		Gopalakrishnan 2)Harshitha L N 3)Harish V 4)Aishwarya S 5)Kasepogu Madhavi 6)Jayalakshmi 7)Dr. Nagesh K N 8)Dr. Rohith S 9)Shashikiran R		
15.	Novel System, Method, Design And Development Of Braille System For Visually Challenged People	Indian	1)Dr. Kanapathy Gopalakrishnan 2)Prof. Sunitha M 3)Dr. Rohith S 4)Dr. Basavaraj G M 5)Dr. Nagesh K N 6)Prof. Rashmi G P 7)Prof. Kasetty Rambabu	13.05.2022	
16.	Novel System, Method And Design Of Two-Way Video Monitoring System Using Android And Java Media Framework	Indian	1)Dr. Kanapathy Gopalakrishnan 2)Prof. Rani B.A 3)Dr.Rohith S 4)Dr.Nagesh K.N 5)Prof. Nagma Anjum 6)Prof. Sreenivasulu K.N	13.05.2022	
17.	Novel System, Method And Development Of Iot Based Automatic Waterbodies Garbage Treatment Machine	Indian	1)Dr. Kanapathy Gopalakrishnan 2)Dr. Rohith S 3)Prof. Mahesh M R 4)Dr. Basavaraj G M 5)Prof.Sunil Kumar. B. S	13.05.2022	
18.	Attribute Based Discovery Architecture For Devices In Internet Of Things (IOT)	Indian	1)Dr. H. Venkatesh Kumar 2)Dr. Nagesh K. N	26.06.2020	ECE
19.	A Hybrid Neural Network Approach For The Recognition of Emotions in Dailect	Indian	1)Sunil T 2)Dr. Vinay N A 3)Dr Ravi Kumar M G 4)Dr Nagesh K N	26.08.2022	
20.	Novel System And Method Of Age Detection Based On Facial Image Using Fusion Extreme Learning Machine Classifier	Indian	1)Dr. Kanapathy Gopalakrishnan 2)Dr Sundeep Kumar 3)Mr Subhakar 4)Dr Sindhu D V 5)Mr Likith S R	13.05.2022	DS

Faculty Publications after 9th ACM

Sl. No	Title of publication	Name of the Publisher	Name of the Author	DOI
1	“Viscoelastic Response Polyvinly Alcohol Composites” Book Chapter	Lambert Publication	Dr. Amaresh Gunge	10.48175/568
2	Circularly polarized tunable graphene-patch over SiO ₂ substrate for THz applications”.	SCIE article	Dr. Nagesh K.N and Dr. Ajay Kumar Dwivedi,	https://link.springer.com/article/10.1007/s11082-022-04000-3
3	Algorithm for recognition of movement of objects in a video surveillance system using a Neural Network	Hindawi	S. Harish, C .Anil Kannur, Lakshmi Srinivas, S. Rohith	10.1155/2022/8216221
4	Enhanced photo catalytic hydrogen evolution from reduced grapheme oxide-defect rich Tio ₂ -x nanocomposites	Elevisher	Mahesh shastri	https://doi.org/10.1016/j.ijhyden.2022.07.115
5	Aperture coupled dielectric resonator antenna optimization using machine learning techniques	Elevisher	Ajay Kumar Dwivedi	https://doi.org/10.1016/j.aeue.2022.154302
6	A compact MIMO Antenna for 5G NR Frequency Bands n527/n258/n261 Under Millimetre Wave Communication	Taylor & Francis	Ajay Kumar Dwivedi Vivek Singh	https://doi.org/10.1080/03772063.2022.2091044
7.	Effect of fines on strength and durability of concrete with manufactured sand	Materials Today	Ramesh P S	https://doi.org/10.1016/j.matpr.2022.06.334
8.	“Efficient Graphene Based Circularly Polarized MIMO Antenna for THz Applications”.	SCIE article	Dr. Ajay Kumar Dwivedi	https://doi.org/10.1364/AO.462531

Student Achievements

Sl. No	Name of the student	Details	Department	Sem	Achievement
1	Students of ISE branch	Project Expo 2022 “SRISHTI” State Level Project Exhibition Competition conducted At BMSCE College	ISE	6 th	2 nd Prize
2	Mr. Calvin Das	Advance Web Designing competition held at SJCIT	CSE		1 st place
3	Mr Vishnu	National Amateur Body Building & Fitness Championship 2022	MBA	1 st	2 nd Place
4	Mr Vishnu	State Level Mr. Karnataka Body building Competition	MBA	1 st	2 nd Place With Silver Medal
5	Mr Vengopal	Webathon	DS	4 th	2 nd place

6	Mr. Tanish Mahajan & Mr. Poorvak Suri	National Fencing Championship	CS		National level participation
7.	Vidya C M	Javellein throw, Intercollegiate Athletic Meet, 27-30 June, 2022, SJCIT		1	

Result Analysis for the Even Semester 2021-22

SEMESTER WISE- RESULT ANALYSIS B.E									
Examination : JUL./AUG. 2022									
Program : B.E, Semester 8									
SL.NO	Programme	No. of Students Appeared	FCD	FC	SC	PS	No. of Students Passed	PASS %	No. of Students Scored 75% & above
1	BE-CSE	124	124	0	0		124	100 %	124
2	BE-CV	126	120	2	0		122	96.83 %	80
3	BE-Mech	66	63	0	0		63	95.45 %	47
4	BE-EC	113	112	0	0		112	99.12 %	112
5	BE-IS	55	54	0	0		54	98.18 %	51
	Total	484	473	2	0	0	475	98.14 %	414