BANGALORE UNIVERSITY

Choice Based Credit System (CBCS)

Academic Rules and Regulations 2018

(Undergraduate Programmes in Engineering and Architecture)

UNIVERSITY VISVESVARAYA COLLEGE OF ENGINEERING
K R Circle, Bengaluru-560 001.

BANGALORE UNIVERSITY

VISION

"To strive for excellence in education for the realization of a vibrant and inclusive society through knowledge creation and dissemination"

MISSION

- Impart quality education to meet national and global challenges
- Blend theoretical knowledge with practical skills
- Pursue academic excellence through high quality research and publications
- Provide access to all sections of society to pursue higher education
- Inculcate right values among students while encouraging competitiveness to promote leadership qualities
- Produce socially sensitive citizens
- Hasten the process of creating a knowledge society
- To contribute to nation building

BANGALORE UNIVERSITY

UNIVERSITY VISVESVARAYA COLLEGE OF ENGINEERING

K R CIRCLE, BENGALURU – 560 001.

University Visvesvaraya College of Engineering (UVCE) was started as a School of Mechanical Engineering by Bharat Ratna Sir. M. Visvesvaraya, in the year 1913, to meet the needs of the State for skilled workers with S V Setty as its Superintendent. Later, it was converted to a full-fledged Engineering College in the year 1917 under the name Government Engineering College (GEC) and was affiliated to the University of Mysore. It is the fifth Engineering College established in the country.

After the formation of Bangalore University in 1964, GEC became University College of Engineering (UCE) and later renamed as University Visvesvaraya College of Engineering (UVCE), and established as one of the Constituent Colleges of Bangalore University. This is one of the oldest Institutions in the country imparting technical education leading to B.E., M.E., B.Arch., M.Sc. (Engineering, Research), M.Arch. and Ph.D. degrees in various disciplines of Engineering and Architecture.

The Institution currently offers 7 Undergraduate Full-time, 3 Undergraduate Part-time and 24 Postgraduate Programmes.

VISION

The vision of UVCE is to strive for excellence in advancing engineering education through path breaking innovations across the frontiers of human knowledge to realize a vibrant, inclusive and humane society.

MISSION

The mission of UVCE is to prepare human resource and global leaders to achieve the above vision through discovery, invention and develop friendly technologies to promote scientific temper for a healthy society. UVCE shapes engineers to respond competently and confidently to the economic, social and organizational challenges arising from globally advancing technical needs.

BANGALORE UNIVERSITY

UNIVERSITY VISVESVARAYA COLLEGE OF ENGINEERING

K R CIRCLE, BENGALURU – 560 001.

Departments of UVCE, Bangalore University Bangalore:

1. Department of Civil Engineering.
2. Department of Mechanical Engineering.
3. Department of Electrical and Electronics Engineering.
4. Department of Electronics and Communication Engineering.
5. Department of Computer Science and Engineering.
6. Department of Architecture.

BANGALORE UNIVERSITY
DEPARTMENT OF CIVIL ENGINEERING, UVCE
Name of programme: B.Tech. in Civil Engineering
Outcome Based Education Curricula (Academic Year 2018-19)

Vision of the Department

To be front runner in academic activities in the field of Civil Engineering to bring out Civil Engineers with high technical competencies.

Mission of the Department

CVM1: By providing quality education to the students with the fundamental background necessary for an active successful professional career in Civil Engineering, in general.

CVM2: Imparting knowledge and enlighten students to make them competent, self-motivated and expanding their knowledge skills through continuous education, and to inculcate human values and concern for environment and the society.

CVM3: Promote Entrepreneurship to strengthen the economy and society.

PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

The graduates will be able to:

CVPEO1: Excel in their professional career by practicing factual, analytical, procedural, application in the field of computing and Civil Engineering.

CVPEO2: Perceive higher education in the field of Civil Engineering / Management.

CVPEO3: Apply the principles of sustainable development and global interconnectedness to solve societal and environmental issues.

CVPEO4: Use the techniques, skills, and modern engineering tools necessary for Civil Engineering and work as a team members.

PROGRAM OUTCOMES (POs)

Civil Engineering Graduates will be able to:

CVPO1: Engineering Knowledge: Apply the knowledge of Mathematics, Science, Engineering fundamentals, and an Engineering specialization to the solution of complex Engineering problems.

CVPO2: Problem Analysis: Identify, formulate, review research literature, and analyze complex Engineering problems reaching substantiated conclusions using first principles of Mathematics, natural Science, and Engineering Sciences**.**

CVPO3: Design/development of solution: Design solutions for complex Engineering problems and design system components or processes that need the specified needs with appropriate consideration for the public health and safety, cultural, societal, and Environmental considerations**.**

CVPO4: Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, synthesis of the information to provide valid conclusions.

CVPO5: Modern tool usage: Create, select and apply appropriate techniques, resources and modern Engineering and information technology tools including prediction and modelling to complex Engineering activities with an understanding of the limitations**.**

CVPO6: The Engineer and Society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional Engineering practice.

CVPO7: Environment and Sustainability: Understand the impact of the professional Engineering solutions in societal and Environmental context, and demonstrate the knowledge of, and need for sustainable development

CVPO8: Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the Engineering practice**.**

CVPO9: Individual and Team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings**.**

CVPO10: Communication: Communicate effectively on complex Engineering activities with the Engineering community and with Society at large, such as, being able to comprehend and write effective report and design documentation, make effective presentation, and give and receive clear instruction**.**

CVPO11: Project management and finance: Demonstrate knowledge and understanding of the Engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments**.**

CVPO12: Life-long Learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change**.**

PROGRAM SPECIFIC OUTCOMES (PSOs)

The graduate will be able to:

CVPS01: Analyze soil-structure interaction and design of buildings/structures.

CVPS02: Plan, analyze and design of transportation and water supply/wastewater systems.

CVPS03: Analyze and design of irrigation and water resource projects.

BANGALORE UNIVERSITY
DEPARTMENT OF MECHANICAL ENGINEERING, UVCE
Name of programme: B.Tech. in Mechanical Engineering
Outcome based Education curricula (Academic Year 2018-19)

Vision of the Department

Strive for Centre of Excellence in advancing Mechanical Engineering education to produce highly qualified human resources to meet local and global requirement.

Mission of the Department

MEM1: Implementing effectively, the outcome based education by imparting knowledge of basics and advances in Mechanical Engineering and other allied disciplines.

MEM2: Preparing and equipping human resources to become global leaders through innovation, discovery, sustainable and environment friendly technology.

MEM3: Creating conducive environment for effective teaching and learning process through interdisciplinary research, online courses, interaction with institutions of higher learning and industries, R and D laboratories of national importance, alumni, employers and other internal & external stake holders.

MEM4: Imbibing awareness of entrepreneurship, ethics, honesty, credibility, social and environmental consciousness and providing opportunity to the faculty and technical staff for continuous academic improvement and to equip them with then latest trends in Mechanical Engineering and thereby inculcate the habit of continuous learning in faculty, staff and students.

PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

MEPEO1: Graduates shall have successful career in the field of mechanical and other allied fields of engineering with a thorough knowledge of the fundamentals and applications in Mechanical Engineering, including pursuing of higher studies in Mechanical Engineering and Management.

MEPEO2: Graduates shall be able to solve problems by adopting analytical, numerical, experimental and managerial skills keeping in view of the societal and environmental impact with a focus on research, development and innovation in Design, Manufacturing, Materials and Thermal engineering.

MEPEO3: Graduates shall have effective communication skills and ability to work individually and in team, zeal for entrepreneurship and involve in lifelong learning.

Program Outcomes (POs):

Mechanical Engineering graduates will be able to:

MEPO1: Engineering Knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

MEPO2: Problem Analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural science, and engineering sciences**.**

MEPO3: Design/development of solution: Design solutions for complex Engineering problems and design system components or processes that need the specified needs with appropriate consideration for the public health and safety, cultural, societal, and environmental considerations**.**

MEPO4: Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, synthesis of the information to provide valid conclusions.

MEPO5: Modern tool usage: Create, select and apply appropriate techniques, resources and modern engineering and information technology tools including prediction and modelling to complex engineering activities with an understanding of the limitations**.**

MEPO6: The Engineer and Society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

MEPO7: Environment and Sustainability: Understand the impact of the professional engineering solutions in societal and environmental context, and demonstrate the knowledge of, and need for sustainable development

MEPO8: Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice**.**

MEPO9: Individual and Team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings**.**

MEPO10: Communication: Communicate effectively on complex engineering activities with the engineering community and with Society at large, such as, being able to comprehend and write effective report and design documentation, make effective presentation, and give and receive clear instruction**.**

MEPO11: Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments**.**

MEPO12: Life-long Learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change**.**

Program Specific Outcomes (PSOs): The graduates will be able to

MEPSO1: Design mechanical systems and conduct performance tests by applying the basics and advances in the field of Design and Thermal Engineering.

MEPSO2: Compare the capabilities of different manufacturing processes including latest advancements in applications of computers in Automation and Manufacturing.

MEPSO3: Characterise and compare the different materials for Engineering applications.

BANGALORE UNIVERSITY
DEPARTMENT OF ELECTRICAL ENGINEERING, UVCE,
Name of programme: B.Tech. in Electrical and Electronics Engineering
Outcome based Education curricula (Academic Year 2018-19)

Vision of the Department:

To impart quality education to produce world class Electrical and Electronics Engineers who can meet the challenges of the ever growing technological needs.

Mission of the Department:

Establish the state of the art facilities for research & innovation to serve the industry and community through inclusive growth and development.

PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

The PEOs have been evolved in alignment with the vision and mission of the Department. The broad objective of the program is to facilitate the development of competent and successful professionals in line with modern day technological and societal requirements. Therefore, after concerted interactions (both formal and informal) with all major stakeholders including Alumni, Employers, experts from industry and research laboratories, faculty and students, parents and others, the Program Educational Objectives of the UG course offered by Department of Electrical and Electronics Engineering have been arrived at as follows:

The PEOs of the program are as under:

EEPEO1: Possess successful careers in Electrical and Electronics Engineering and allied areas and pursue higher education with a broad knowledge base in Mathematics and Engineering principles.

EEPEO2: Utilize their technical, analytical, communicative and managerial skills and knowledge for societal progress and enrich them to keep in pace with relevant advancement by engaging themselves in lifelong learning.

EEPEO3: Exhibit professionalism by displaying competence, leadership, dedication and commitment.

PROGRAM OUTCOMES (POs)

EEPO1: Engineering Knowledge: Apply the knowledge of Mathematics, Science, Engineering fundamentals, and an Engineering specialization to the solution of complex Engineering problems.

EEPO2: Problem Analysis: Identify, formulate, review research literature, and analyze complex Engineering problems reaching substantiated conclusions using first principles of Mathematics, natural Science, and Engineering Sciences**.**

EEPO3: Design/development of solution: Design solutions for complex Engineering problems and design system components or processes that need the specified needs with appropriate consideration for the public health and safety, cultural, societal, and Environmental considerations**.**

EEPO4: Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, synthesis of the information to provide valid conclusions.

EEPO5: Modern tool usage: Create, select and apply appropriate techniques, resources and modern Engineering and information technology tools including prediction and modelling to complex Engineering activities with an understanding of the limitations**.**

EEPO6: The Engineer and Society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional Engineering practice.

EEPO7: Environment and Sustainability: Understand the impact of the professional Engineering solutions in societal and Environmental context, and demonstrate the knowledge of, and need for sustainable development

EEPO8: Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the Engineering practice**.**

EEPO9: Individual and Team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings**.**

EEPO10: Communication: Communicate effectively on complex Engineering activities with the Engineering community and with Society at large, such as, being able to comprehend and write effective report and design documentation, make effective presentation, and give and receive clear instruction**.**

EEPO11: Project management and finance: Demonstrate knowledge and understanding of the Engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments**.**

EEPO12: Life-long Learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change**.**

PROGRAM SPECIFIC OUTCOMES (PSOs)

The students will have the ability to:

EEPSO1: Develop models, analyze and assess the performance of different types of generation, transmission, distribution and protection mechanisms in power systems.

EEPSO2: Design, develop, analyze and test electrical and integrated electronics systems; deploy control strategies for power electronics related and other applications.

EEPSO3: Measure, analyze, model and control the behaviour of electrical quantities associated with constituents of energy or allied systems.

BANGALORE UNIVERSITY
DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING, UVCE
Name of programme: B.Tech. in Electronics and Communication Engineering
Outcome Based Education curricula (Academic Year 2018-19)

Vision of the Department

To strive for academic excellence in the field of Electronic and communication Engineering through knowledge assimilation, creation and dissemination to augment human resource capital**.**

Mission of the Department

(1) To impart quality education and skills through state of the art curriculum and facilities to produce intellectual minds for advancing frontiers of Electronics and Communication Engineering.
(2) To pursue academic excellence through quality teaching, research and innovation.
(3) To inculcate the values of academic integrity and accountability.

PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

Graduates will be able to

PEO1: Pursue career in the field of Electronics and Communication and allied areas.

PEO2: Analyse, design, model and test electronic devices, digital and analog circuits in communication, Signal processing and VLSI.

PEO3: Pursue higher education and will exhibit Professionalism by displaying competence, leadership and effective communication skill.

PROGRAM OUTCOMES (POs)

ECPO1: Engineering Knowledge: Apply the knowledge of Mathematics, Science, Engineering fundamentals, and an Engineering specialization to the solution of complex Engineering problems.

ECPO2: Problem Analysis: Identify, formulate, review research literature, and analyze complex Engineering problems reaching substantiated conclusions using first principles of Mathematics, natural Science, and Engineering Sciences**.**

ECPO3: Design/development of solution: Design solutions for complex Engineering problems and design system components or processes that need the specified needs with appropriate consideration for the public health and safety, cultural, societal, and Environmental considerations**.**

ECPO4: Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, synthesis of the information to provide valid conclusions.

ECPO5: Modern tool usage: Create, select and apply appropriate techniques, resources and modern Engineering and information technology tools including prediction and modelling to complex Engineering activities with an understanding of the limitations**.**

ECPO6: The Engineer and Society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional Engineering practice.

ECPO7: Environment and Sustainability: Understand the impact of the professional Engineering solutions in societal and Environmental context, and demonstrate the knowledge of, and need for sustainable development

ECPO8: Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the Engineering practice**.**

ECPO9: Individual and Team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings**.**

ECPO10: Communication: Communicate effectively on complex Engineering activities with the Engineering community and with Society at large, such as, being able to comprehend and write effective report and design documentation, make effective presentation, and give and receive clear instruction**.**

ECPO11: Project management and finance: Demonstrate knowledge and understanding of the Engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments**.**

ECPO12: Life-long Learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change**.**

PROGRAM SPECIFIC OUTCOMES (PSOs)

PSO1: Identify and apply the knowledge of basic science subjects and engineering to solve problems of Electronics and Communication Engineering.

PSO2: Design, develop, analyze, test and model electronic and communication systems by applying basics and advances in them and in allied fields.

PSO3: Ability to work in multi disciplinary teams by possessing effective communication skills.

PSO4: Exhibit professional ethics with a habit of self and lifelong learning including the possibility to venture into entrepreneurship.

BANGALORE UNIVERSITY
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING, UVCE
Outcome Based Education curricula (Academic Year 2018-19)

Vision of the Department

Strive for excellence in Computer Engineering Education and Research to develop knowledge, talent, and leadership for ever growing IT requirements.

Mission of the Department

CSEM1: Impart quality education and promote scientific temper, leadership qualities.

CSEM2: Pursue academic excellence through quality teaching and research.

CSEM3: Blend theoretical knowledge with practical skills.

The department offers 2 UG Programmes:

1. Computer Science and Engineering
2. Information Science and Engineering

(1) B.Tech. Program in Computer Science and Engineering

PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

Students will be able to

CSEPEO1: Have successful career as Computer Science engineers with a sound knowledge of fundamentals.

CSEPEO2: Solve problems by adopting analytical, numerical, experimental and managerial skills keeping in view of societal impact.

CSEPEO3: Communicate effectively and work individually and in team.

CSEPEO4: Inculcate awareness and commitment to professional ethics, lifelong learning and promoting entrepreneurships.

PROGRAM OUTCOMES (POs)

Computer Science and Engineering Graduates will be able to:

CSPO1: Engineering Knowledge: Apply the knowledge of Mathematics, Science, Engineering fundamentals, and an Engineering specialization to the solution of complex Engineering problems.

CSPO2: Problem Analysis: Identify, formulate, review research literature, and analyze complex Engineering problems reaching substantiated conclusions using first principles of Mathematics, natural Science, and Engineering Sciences**.**

CSPO3: Design/development of solution: Design solutions for complex Engineering problems and design system components or processes that need the specified needs with appropriate consideration for the public health and safety, cultural, societal, and Environmental considerations**.**

CSPO4: Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, synthesis of the information to provide valid conclusions.

CSPO5: Modern tool usage: Create, select and apply appropriate techniques, resources and modern Engineering and information technology tools including prediction and modelling to complex Engineering activities with an understanding of the limitations**.**

CSPO6: The Engineer and Society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional Engineering practice.

CSPO7: Environment and Sustainability: Understand the impact of the professional Engineering solutions in societal and Environmental context, and demonstrate the knowledge of, and need for sustainable development

CSPO8: Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the Engineering practice**.**

CSPO9: Individual and Team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings**.**

CSPO10: Communication: Communicate effectively on complex Engineering activities with the Engineering community and with Society at large, such as, being able to comprehend and write effective report and design documentation, make effective presentation, and give and receive clear instruction**.**

CSPO11: Project management and finance: Demonstrate knowledge and understanding of the Engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments**.**

CSPO12: Life-long Learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change**.**

PROGRAM SPECIFIC OUTCOMES (PSOs)

CSEPSO1: Identify and apply the knowledge of computer engineering concepts to solve the current IT problems.

CSEPSO2: Design, analyze and implement network, mobile, web-based and security applications using the state-of-art technologies, standards and tools.

(2) B.Tech. Program in Information Science and Engineering

PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

Students will be able to

ISEPEO1: Excel as Information Science Engineers with adaptive and agile skills in information processing.

ISEPEO2: Have successful careers in industry, research organisations and institutions of higher learning.

ISEPEO3: Solve problems by adopting analytical, numerical and experimental skills in IT industries.

ISEPEO4: Cultivate professional ethics, lifelong learning and effective communication.

PROGRAM OUTCOMES (POs)

Information Science and Engineering Graduates will be able to:

ISPO1: Engineering Knowledge: Apply the knowledge of Mathematics, Science, Engineering fundamentals, and an Engineering specialization to the solution of complex Engineering problems.

ISPO2: Problem Analysis: Identify, formulate, review research literature, and analyze complex Engineering problems reaching substantiated conclusions using first principles of Mathematics, natural Science, and Engineering Sciences**.**

ISPO3: Design/development of solution: Design solutions for complex Engineering problems and design system components or processes that need the specified needs with appropriate consideration for the public health and safety, cultural, societal, and Environmental considerations**.**

ISPO4: Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, synthesis of the information to provide valid conclusions.

ISPO5: Modern tool usage: Create, select and apply appropriate techniques, resources and modern Engineering and information technology tools including prediction and modelling to complex Engineering activities with an understanding of the limitations**.**

ISPO6: The Engineer and Society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional Engineering practice.

ISPO7: Environment and Sustainability: Understand the impact of the professional Engineering solutions in societal and Environmental context, and demonstrate the knowledge of, and need for sustainable development

ISPO8: Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the Engineering practice**.**

ISPO9: Individual and Team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings**.**

ISPO10: Communication: Communicate effectively on complex Engineering activities with the Engineering community and with Society at large, such as, being able to comprehend and write effective report and design documentation, make effective presentation, and give and receive clear instruction**.**

ISPO11: Project management and finance: Demonstrate knowledge and understanding of the Engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments**.**

ISPO12: Life-long Learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change**.**

PROGRAM SPECIFIC OUTCOMES (PSOs)

ISEPSO1: Identify and apply the knowledge of basic information science engineering concepts to solve the current IT problems.

ISEPSO2: Develop IT based applications using the state -of -art technologies, standards and tools.

BANGALORE UNIVERSITY

UNIVERSITY VISVESVARAYA COLLEGE OF ENGINEERING

K R CIRCLE, BENGALURU – 560 001.

Choice Based Credit System (CBCS)
Academic Rules and Regulations 2018

(Undergraduate Programmes in Engineering and Architecture)

PART-I: B.Tech.

(**Undergraduate Programmes in Engineering**)

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PART-II: B.Arch.

(**Undergraduate Programmes in Architecture**)

Choice Based Credit System (CBCS)

PART-I

(Undergraduate Programmes in Engineering - B.Tech.)

CHOICE BASED CREDIT SYSTEM (CBCS)

Preamble:

The University Grants Commission, New Delhi, in its 12th Plan Guidelines, directed the Universities in the country to implement the Choice Based Credit System (CBCS) to set a benchmark in the University education and fulfil expectations of all the stakeholders.

1. OBJECTIVES

1. Shift in focus from Teacher-Centric to Learner-Centric education.
2. Allow students to choose according to their learning needs, interests and aptitude.
3. Provide flexibility to the students allowing them to choose inter-disciplinary courses, change majors, programs, etc.
4. Make education broad-based. Students can earn credits by choosing unique combinations.
5. Help self-paced learning with flexibility. Students can opt for as many as 26 credits per semester.
6. Student can exercise the option to decide his/her own pace of learning- slow, normal or accelerated plan and sequence the choice of courses, learn to face challenges through term/project work and may venture out to acquire extra knowledge/proficiency through add-on courses.
7. Offer opportunity to study at different times and in different places. Credits earned at one Institution can be transferred to another.

2. SHORT TITLE AND COMMENCEMENT

2.1 The academic rules and regulations listed under this head are common to all undergraduate B.Tech. Programmes.

2.2 The academic rules and regulations are subject to amendments as may be made by the Academic Council of the College / University from time to time, keeping in view the recommendations of the Board of Studies. Any or all such amendments from such date and to such batches of candidates including those already undergoing the Programme, will be effective as may be decided by the Academic Council.

3. DEFINITIONS

(a) University: Bangalore University, Bengaluru (BUB).

(b) College: University Visvesvaraya College of Engineering (UVCE).

(c) Commission: University Grants Commission (UGC).

(d) Council: All India Council for Technical Education (AICTE) or Council of Architecture (COA)

(e) Statutes: Bangalore University Statutes.

(f) Academic Autonomy: Freedom granted by the University to the College in all aspects of conducting its academic Programmes for promoting academic excellence.

(g) Autonomous College: A College notified as an autonomous College as per the Bangalore University Statutes / UGC.

(h) Programme: An educational Programme leading to award of a Degree, Diploma or Certificate.

(i) Regular Students: Students admitted to B.Tech. or B.Arch. Programmes after PUC (10+2) or equivalent.

(j) Lateral Entry Students: Students admitted to the III semester of engineering (second year) Programme after completing Diploma in the respective discipline, both for Day and Evening Programmes.

(k) Degree: B.Tech. / B.Arch. undergraduate Degree.

(l) Branch: Specialization in a Programme, for example, B.Tech. Degree Programme in Civil Engineering or B.Tech. Degree Programme in Computer Science and Engineering or B.Arch. Degree Programme in Architecture etc.

(m) Course: A subject either theory or practical, identified by its title and the code number. For example, Engineering Mathematics-I is a course offered in the First Semester and its code is 18BSEM101. All courses need not carry the same credit. The courses should define learning objectives and learning outcomes. A course may be designed to comprise of Lectures/ Tutorials/Laboratory Work/ Field Work/ Outreach Activities/ Project Work/ Vocational Training/Viva/ Seminars/ Term Papers/Assignments/ Presentations/ Self-Study etc. or a combination of these.

(n) Semester: A semester shall consist of 15-19 weeks of academic work.

(o) Choice Based Credit System (CBCS): The CBCS provides choice for students to select from the prescribed courses (Elective or Minor or Soft Skill Courses).

(p) Credit: A unit by which the course work is measured. It determines the number of hours of instructions required per week. One credit is equivalent to one hour of teaching lecture or two hours of tutorial or two hours of practical work/field work per week. One credit is also equivalent to four hours of self study by students.

(q) Letter Grade: It is an index of the performance of students in a said course. Grades are denoted by letters S, A, B, C, D, E and F.

(r) Grade Point: It is a numerical weight allotted to each letter grade on a 10-point scale.

(s) Credit Point: It is the product of grade point and number of credits for a course.

(t) Semester Grade Point Average (SGPA): It is a measure of performance of work done in a semester. It is the ratio of total credit points secured by a student in various courses registered in a semester and the total course credits taken during that semester. It shall be expressed up to two decimal places.

(u) Cumulative Grade Point Average (CGPA): It is a measure of overall cumulative performance of a student over all semesters. The CGPA is the ratio of total credit points secured by a student in various courses in all semesters and the sum of the total credits of all courses in all the semesters. It is expressed up to two decimal places.

(w) Grade Card: A grade card shall be issued to all the registered students after every semester based on the grades earned. The grade card shall display the course details (Code, Title, Number of Credits, Grade secured) along with SGPA of that semester and CGPA and the number of credits earned till that semester.

(x) BoS: Board of Studies, the duties and responsibilities are as per prevailing BU statutes.

(y) BoE: Board of Examiners, the duties and responsibilities are as per prevailing BU statutes.

4. NOMENCLATURE OF ACADEMIC PROGRAMMES

4.1. The nomenclature and the corresponding abbreviations shown in Table 1, shall be used for the Degree Programmes under the University, as required by the Commission, AICTE and COA:

(i) Bachelor of Technology (B.Tech.)

(ii) Bachelor of Architecture (B. Arch.)

Besides, the Branch / Programme of specialization, if any, shall be indicated in the brackets after the abbreviation. For example, Degree in Mechanical Engineering Programme is abbreviated as B.Tech. (Mechanical Engineering).

4.2. The Undergraduate (UG) Degree Programmes offered by the College are listed in Table 1.

Table 1: UG Programmes and their Abbreviation

Sl. No.	Title of the UG Programme	Abbreviation
1	Civil Engineering	CV
2	Mechanical Engineering	ME
3	Electrical and Electronics Engineering	EE

4	Electronics and Communication Engineering	EC
5	Computer Science and Engineering	CS
6	Information Science and Engineering	IS
7	Architecture	AR

NOTE: For the B.Arch. programme, the detailed regulations for the admission process, curriculum framework, credit allocation, scheme of studies and examinations, Continuous Internal Evaluation (CIE), Semester End Examination (SEE), vertical progression and other norms are placed in Part II of CBCS Academic Rules and Regulations 2018 (Undergraduate Programmes in Architecture).

5. DURATION OF THE ACADEMIC PROGRAMMES

As Choice Based Credit System is followed, the Programme duration shall be dictated by the period in which a student earns the prescribed number of credits for the award of Degree.

5.1. Normal Duration

5.1.1. The duration of B.Tech. programme for regular students shall be four years.

5.1.2 The duration of B.Tech. programme for lateral entry students shall be three years.

5.2. Maximum Duration

5.2.1. The maximum duration that a student can take to complete a full time academic Programme shall be twice the normal duration of the Programme, i.e., eight years for regular students, six years for Lateral Entry (Regular) and Lateral Entry (Evening programme) course students to obtain B.Tech. Degree.

5.2.2. The maximum duration for a Programme shall be dictated by the fact that a student has to demonstrate the prescribed minimum academic performance by registering for the prescribed minimum number of credits in every semester, for continuing with the Programme. This duration can be less than or equal to the maximum period as indicated in 5.2.1.

5.3. Admission of Students

5.3.1. The admission of students to various UG Degree Programmes listed in Table 1 shall be made by following the State / Central Government and/or University Policies/Practices.

5.3.2. The candidates with a Diploma or any other equivalent qualification approved by the Council and the Commission are eligible to join the Degree Programmes at the beginning of the second year (third semester), as per the prevailing practice in the College / University (Lateral Entry).

5.3.3. The students can migrate from one branch or specialization to another branch or specialization in the same College at the beginning of the second year (third semester) as per the prevailing AICTE/State Government norms and as amended from time to

time. Further, this clause is applicable to migration of students from other colleges and vice versa.

5.3.4. The eligibility criteria for admission of students to UG Degree Programmes shall be the same as those prescribed by the State Government / University / College from time to time.

5.4. Semester Scheme

The semester scheme is adopted for all the B.Tech. programmes.

5.5. Academic Calendar

An academic year consists of two regular semesters and a fast track semester, the details of which are shown in Table 2.

Table 2: Typical Schedule of the Academic Year

Sl. No.	Activity	Description	
1	Number of semesters in an academic year	Two regular semesters (Odd and Even) and one Fast Track Semester	
2	Duration of Regular Semester	19 weeks	
3	Duration of Fast Track Semester	08 weeks	
4	Academic activities (duration in weeks)	Regular Semester(s)	Fast Track Semester
	Course Registration	01 Day	01 Day
	Course Work including CIE	15 Weeks	06 Weeks
	Examination preparation, SEE, Valuation, Re-valuation and Declaration of Results.	04 Weeks	02 Weeks
5	Evaluation	Continuous Internal Evaluation (CIE) and Semester End Examination (SEE) shall have equal weightage in the student's performance in Course/Laboratory Work and other activities.	
6	Re-registration	a) Student awarded with 'F' grade in core course(s) shall Re-Register for the same core course(s) and shall appear for CIE and SEE afresh in each such course(s). This shall continue until a pass grade is obtained in the said course(s). b) Students awarded with 'F' grade in any elective course(s) shall Re-Register for the same or any Elective Course(s) of the same group and shall appear for CIE and SEE afresh.	
7	Fast Track Semester at the end of Even Semester	Fast Track Semester may be conducted for failed students before the commencement of the next semester.	

6. PROCTOR SYSTEM

6.1. Introduction

The Proctor system makes the students punctual and helps them to complete their studies successfully. The faculty is the Proctor and the student is the Proctee.

6.2. Objective(s)

6.2.1. To guide and fulfil the academic requirements of the students.

6.2.2. To advise the students appropriately from time to time.

6.2.3. In addition, the Proctee shall respond positively to fulfil 6.2.1 and 6.2.2.

6.3. Roles and Responsibilities

6.3.1. The proctor shall monitor the student who fails to satisfy minimum attendance (75 %) and internal marks (40 %) requirements in all Courses, as per Regulations.

6.3.2. The Proctor and Proctee shall maintain updated diary, complete in all respects from time to time.

6.3.3. The proctor shall arrange for a meeting with the students at least once in a month and submit the proceedings to the respective Chairpersons of the Department.

6.3.4. The proctor shall invite the parents for discussion at least once in every semester to update the academic progress of their ward, in case of non-performing and/ or irregular students.

6.3.5. The Proctor shall arrange to send the progress reports to the Parents/Guardian regarding the details of Attendance, Test Marks, Examination results etc.

6.3.6. Proctor shall ensure that the students do not indulge in any sort of ragging activity inside the campus/hostel.

6.4. Expected Outcome

Results in enhanced performance and holistic development of the students.

7. CREDIT SYSTEM

7.1. General

7.1.1. The Choice Based Credit System (CBCS) comes into effect from the academic year 2018-2019. The students have the option of choosing from a wide range of electives offered in the Department, cluster of Departments and the Institution. In addition, Value-added Credit Courses are offered as part of extended learning in interdisciplinary and multi-disciplinary domains.

7.1.2. Credit Definition: One credit is assigned in the regular semester (odd/even) for:

a) Theory Course conducted for one Hour/Week.

b) Tutorials and Practical classes (Laboratory Courses) conducted for Two Hours/Week respectively.

c) Self-Study in a Course by students, for four Hours/Week.

However, in case of fast track semester, the Course load is multiplied by Two. These guidelines form the basis to fix semester Course load and weekly contact hours in the Regular/Fast track semesters.

7.1.3. One hour of contact means 50 minutes to 60 minutes.

7.1.4. The workload of teachers shall be calculated as shown in Table 3.

Table 3: Workload computation for teachers

Teaching Component	No. of Hours	Workload in Hours / Units
Direct teaching - Theory	1	1
Tutorial	1	1
Practical class	3	2

NOTE: Other student activities like practical training, study tours, project tours, industrial visits are mandatory and shall not carry any credits.

7.1.5. Course Registration: A student shall register for the Courses to earn credits to meet the requirements of the Degree Programme. Such Courses together with their grades and the credits earned shall be included in the Grade Card issued by the University / College at the end of each semester and it forms the basis for determining student's academic performance in that semester.

7.1.6. Value Added Audit Courses: In addition, a student can register for Courses such as value added Courses for audit only in order to supplement his/her knowledge and/or skills. But, these shall not be taken into account in assessing the students' academic performance in the semester.

7.2. Credit Structure

7.2.1. A typical Credit Structure for Course work (Hour/Week in a Semester) in B.Tech. Programme is shown in Table 4.

Table 4: Credit Structure

Course	No. of hours/week				Credits
	L	T	P	S	
EFG	2	2	0	0	3.0
ABC	0	0	3	0	1.5
XYZ	3	0	2	0	4.0
PQR	3	0	2	4	5.0
LMN	3	2	0	4	5.0
HIJ	0	0	4	0	2.0

L – Lecture, T – Tutorial, P – Practical, S – Self-Study

8. REGULAR SEMESTER(S)

8.1. The Course load opted by a student can be a maximum of 26 credits per semester in an academic year.

8.2. In the first two semesters, the prescribed Course load per semester is fixed and as specified in the Scheme of Teaching for I/II Semester B.Tech. Withdrawal/dropping of Courses in I Semester and II Semester shall not be allowed.

8.3. From III semester onwards, the applicable course load per semester may vary from a minimum of 18 credits to a maximum of 33 credits, including the credits of courses re-registered. The variation in credits depends on CGPA. This flexibility enables students to cope-up with the course work and helps in improving their academic performance and optimizing the learning outcome.

8.4. A student may be permitted to register for additional Courses (subject to a maximum of 26 Credits), from III semester onwards. This is subject to the following conditions:

a) The student shall have secured a CGPA $\geq$ 8.5

b) The student shall not have any backlogs from the previous semesters.

c) The student shall ensure that there is no overlapping of class in time table.

d) The student shall submit a copy of documentary evidence in respect to the above (a, b, c) while seeking the approval from the concerned Chairperson of the Department.

e) It is the responsibility of the student to ensure that all the above conditions (a, b, c, d and e) are satisfied for registering additional Courses over and above the prescribed credits in a semester. Otherwise, the registrations for the additional Courses shall deemed to be cancelled.

8.5 Degree Requirements

The Degree requirement of a student for the B.Tech. programme are as follows:

1. College requirements:

   i) Minimum Earned Credit Requirement for Degree (Table 5)

   ii) Satisfactory completion of all Mandatory Learning courses

2. Programme Requirements:

   Minimum Earned Credit Requirements on all core courses, professional elective courses, open electives and major/minor project as specified. No extra credits earned on core/elective courses can be allowed in lieu of credits earmarked for major/minor project.

8.6 Graduation Requirements and convocation

1. A student shall be declared to be eligible for the award of the degree if he/she has

   i) Fulfilled Degree Requirements.

ii) No Dues to the College, Departments, Hostels, Library, Central Computer Centre and any other centres of the institution.

iii) No disciplinary action pending against him/her.

2. The award of the degree must be recommended by the University.

8.7. The total number of credits required to be earned by a student to qualify for the award of the Degree in Engineering (both regular and lateral entry) is as shown in Table 5.

Table 5: Credits required for the award of degree

Programme	Normal Duration		Total number of credits to be earned
	Years	Semester	
B.Tech.	4	8	175
B.Tech. Lateral Entry: Regular & Evening College	3	6	142

8.8. A student will be awarded B.Tech. (Honours) if he / she completes an additional 20 credits. These shall be acquired through Massive Open Online Courses (MOOCs), not already credited, and with the approval of the Department.

8.9. B.Tech. Degree once awarded, shall not be upgraded to B.Tech. (Honours), under any circumstances.

9. FAST TRACK SEMESTER

The Fast Track Semester is conducted for students who have failed in their Examinations of theory courses and theory component of Integrated/Comprehensive courses. The significance of Fast Track Semester is to avoid loss of an academic year to the student.

9.1. The Department/College may offer Theory Courses based on the availability of resources. The student has to opt from the Courses offered by the Department in a given Fast Track Semester.

9.2. During the Fast Track Semester, a student is permitted to Re-Register for Course(s) where the student has obtained 'F', 'I', 'X', 'W' Grade and 'U' (Unsatisfactory) (Refer Clause 14.2 and 13.6).

9.3. No new Courses are allowed for Registration in Fast Track Semester.

9.4. A student is permitted to register for a maximum of 9 Credits in a Fast Track Semester. While the CIE marks secured in Regular Semester shall be carried forward to the Fast Track Semester for 'F', 'I' and 'X' grade, other students ('W' and 'U') have to fulfil CIE requirements afresh.

9.5. All students of registered for Fast Track Semester have to fulfil attendance requirement of 75% minimum.

9.6. It is the discretion of the Department to offer Course/s the Fast Track Semester. However, the decision of the Principal/Chairperson in the matter is final and binding. The Fast Track Semester is a Special Semester and the student shall not demand it as a matter of right.

9.7. Students have to re-register for courses in the regular semester when offered, if such course/s are not offered in the Fast Track Semester.

9.8. The student has to pay a special fee prescribed by the College to register for a Course in the Fast Track Semester.

10. CURRICULUM FRAMEWORK

10.1. Contact Hours: The maximum number of contact hours for the students is set at 35 Hrs/Week. This helps the students in getting enough time and opportunity to develop their creative talents and abilities, benefitting from add-on Courses and also those opted for audit Courses, in addition to the ones prescribed for credit under a Programme and preparing them for challenging and exciting careers.

10.2. Curriculum framework is important in setting the right direction for a Degree Programme, as it takes into account the type and quantum of knowledge necessary to be acquired by a student to qualify for award of a Degree in his/her chosen branch.

10.3. Besides, the curriculum framework 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 fulfil the requirements for conferring the B.Tech. Degree.

10.4. Table 6 shows a typical Curriculum framework for B.Tech. Degree Programme. The average number of credits are only indicative.

Table 6: Curriculum Framework for B.Tech.

Sl. No.	Subject Area And code	Average No. of Credits
1	Humanities and Social Science including Management Courses -(HS)	09
2	Basic Science Courses (Physics, Chemistry and Mathematics) -(BS)	21
3	Engineering Science Courses including Workshop, Engineering Graphics and Design, Basics of Electrical/Electronics /Mechanical /Computer/Civil, Problem Solving etc. -(ES)	22
4	Professional Core Courses -(PC)	80
5	Professional Elective Courses relevant to chosen Specialization/ Branch -(PE)	18
6	Open Elective Courses on interdisciplinary and / or emerging subjects across Departments -(OE)	06
7	Project work, seminar and internship in industry or elsewhere -(PW)	15

8	Mandatory Courses [Environmental Sciences, Induction Program, Indian Constitution, Kannada] -(MC)	04
Total		175

10.4.1 Professional Core Courses (PC): They constitute the core of the programme of study and are mandatory for a given programme.

10.4.2 Elective Courses (EC): They offer a choice of advanced or specialized courses related to the programme of study. They enable students to specialize in a domain of their interest or tune their learning to suit their career needs and current trends. An Elective Course can be any of the following:

Professional Elective Courses (PE), and
Open Elective Courses (OE)

10.4.3 Professional Elective Courses (PE): They are programme-specific courses offered by the parent department listed under PEC category to students of the given Programme.

10.4.4 Open Elective Courses (OE): They are offered by any department and are courses listed in the Curriculum Framework under the Open Elective category and are offered to students of any department including the parent department. There shall not be any prerequisite for open elective courses. The students of a particular programme have to complete the total credits required under the elective category by earning the minimum credits prescribed under the Professional Elective Courses (PE) and Open Elective Courses (OE) as given in Table 6.

10.5 Electives

10.5.1 A candidate shall register for electives in each semester from 2 or 3 groups of electives, commencing from V semester. A minimum of 3 electives will be listed in each group and one elective shall be chosen from each group.

10.5.2 The minimum number of students to be registered for any Elective offered shall not be less than ten.

10.5.3 A candidate shall opt for his/her choice of electives and register for the same at the beginning of each of V, VI, VII and VIII semesters. The candidate is permitted to opt for change of elective within 15 days from the date of commencement of the semester as per the academic calendar.

11. MANDATORY COURSES FOR B.Tech. PROGRAMME

The UG Degree Programmes require the inclusion of certain Courses like Induction Program, Kannada, Constitution of India, Environmental Science, Bridge Courses and additional courses suggested by respective BOS for the completion of the Programme as Mandatory Courses. Mandatory Courses shall carry credits.

11.1 Mandatory Courses for the Students admitted under lateral entry

i. The student shall compulsorily pass two Bridge Courses in Mathematics (one in III Semester and one in IV Semester) and Professional English, of 3 credits each.

ii. The student shall pass the Bridge Courses in Mathematics and Professional English before the completion of the Degree Programme.

12. ASSESSMENT

The CBCS consists of the following Assessment Rules:

12.1 Performance evaluation

12.1.1 The assessment of student's performance during and /or at the conclusion of an academic semester has to be done using Examinations. In general, Examination may have different goals like understanding a concept, problem solving, creativity testing and endurance testing.

12.1.2 Typically, these goals can be tested by two methods:

a) Continuous Internal Evaluation (CIE): CIE shall be conducted by the Faculty in-charge of the course throughout the semester. The CIE includes, but not limited to, Home-Works/Assignments, Group Discussions, Quizzes, Class Room Problem Solving, Seminars, Mini-Projects, Tests and Alternative Assessment Tool (AAT). These activities are designed in such a way that the Faculty and the concerned proctor will understand the shortcomings of the student that can be corrected during the interaction between the student and proctor.

b) Semester End Examinations (SEE): SEE shall be conducted at the end of each semester to evaluate the performance of the student covering the entire syllabus of the Course. The dates are fixed by the College/University and includes a written Examination for Theory Courses and Practical/Design Examination for the Laboratory/Design Course and Project work examination.

c) CIE and SEE shall have equal (50:50) weightage. Students performance in a Course shall be decided by taking into account the performance in CIE and SEE individually and taken together.

12.2 Question Papers

12.2.1 It is necessary for the Course Syllabus to be well drafted, be defect-free and be modularized to enable the setting of good question papers covering the whole syllabus, and in compliance with Outcome Based Education (OBE) including action verbs of Blooms Taxonomy. These aspects have to be addressed by the Board of Studies (BoS).

12.2.2 Question Paper Planning: Question paper should cover the entire syllabus, with a provision for the students to compulsorily answer questions from the full syllabus. As the students need to be given choice in the questions, it is preferred for the question

paper at SEE, in particular, to have built-in choice. The Board of Examiners (BoE) shall take note of choice in paper setting, while planning for the question papers.

12.2.3 Question Paper Pattern: For an effective evaluation of a student in a Course, balanced question paper needs to be used as the major tool. This makes it necessary for the question papers, used at CIE and SEE, to be in conformity with Outcome Based Education to:

(i) cover all Units of the course syllabus uniformly.

(ii) be unambiguous and free from any defects/errors.

(iii) contain adequate data/other information on the problems assigned.

(iv) have clear and complete instructions to the candidates.

(v) emphasize knowledge testing, qualitative analysis, design and problem solving.

12.2.4 Typical Question Paper: The questions to be included in the question papers at

CIE and SEE can be of two types:

(i) Multiple Choice Questions, to be answered by marking the correct answer/s from the choices (commonly four) given against it; such questions should be useful in testing the knowledge, analysis, evaluation, skills, application, and the depth of understanding of the students. However, the marks for MCQ's/ short answer questions in question papers for SEE shall not exceed 15 % of the maximum marks.

(ii) Comprehensive questions, to be answered in detail, are useful in testing the depth of understanding of the subject. These questions shall be related to Theoretical / Practical Knowledge, Problem Solving, Derivations, Applications and Quantitative Evaluation at all levels.

The faculty and the External Examiners may have to be well trained to set the question papers in accordance with Clause 12.2.1.

12.3 Examinations / Assessment - CIE

12.3.1 Continuous Internal Evaluation (CIE): The CIE shall be conducted by the Course Faculty. It is the responsibility of the faculty handling a Course to state the Teaching/Assessment pattern of the CIE such as Test, Quiz, Assignment, Seminar, Term Paper, Open Ended Experiments, Mini Projects, Two Minute Videos, Massive Open Online Courses (MOOCs) etc. The necessary *Rubrics* for CIE be provided to students in advance. The Faculty shall maintain transparency and announce the CIE results on time.

12.3.2 Components in a Course: Each Course consists of three components namely, Theory (Lecture and Tutorial), Practical and Self-Study. A given Course shall be classified based on the combination of one or more of these components.

12.3.3 Types of Courses: Regular/Normal, Integrated and Comprehensive.

(i) Regular/Normal Course: Course that has only one component, i.e., Theory or Practical.

(ii) Integrated Course: Course that has both Theory and Practical components.

(iii) Comprehensive Course: Course that has three components, i.e., Theory, Practical and Self-Study. Self-Study component refers to studying of advanced topics relevant to the course, proposed by the concerned faculty, by the students.

12.3.4 Alternative Assessment: In order to encourage innovative methods while delivering a Course, the faculty members are encouraged to use Alternative Assessment Tool (AAT). The AAT enables faculty to employ innovative methods and design his/her own assessment patterns during CIE. However, the usage of AAT is optional. The AAT enhances the autonomy (freedom and flexibility) of individual faculty and enables them to create innovative pedagogical practices. If properly applied, the AAT converts the classroom into an effective learning space. The AAT includes Seminar, Assignments, Term Paper, Open Ended Experiments, Mini-Projects, Two Minute Videos, MOOCs etc. However, it is mandated for a faculty to obtain prior permission from the concerned Chairperson for implementing AAT and announce the same in the respective class before the commencement of a Course.

12.3.5 Assessment pattern with 20% weightage for Quiz/AAT.

12.3.5.1. Assessment pattern for Regular/Normal Courses: The weightage of various components of CIE for Regular/Normal Courses considering weightage of 20% to Quiz/AAT i.e., 10 out of 50 marks is as shown in the Table 7. SEE shall be conducted for 100 marks and the marks obtained shall be reduced for 50 marks.

Table 7: Assessment Pattern for Regular/Normal Courses

(i) Theory

Component	**Theory**		**Total Marks**	**Total marks for awarding Letter Grade**
Type of Assessment	Test*	Quiz# or AAT	**50**	**100**
Max. CIE Marks	40	10		
Max. SEE Marks	----	---	**50****	

(ii) Practical

Component	**Practical**			**Total Marks**	**Total marks for awarding Letter Grade**
Type of Assessment	Records and Performance	Lab Test	Viva Voce /AAT	**50**	**100**
Max. CIE Marks	20	20	10		
Max. SEE Marks	**----**	**----**	**----**	**50****	

NOTE:

*There shall be two tests for theory courses and the sum of two tests shall be considered for the final assessment. The third test may be conducted for the students who are absent in any one of the tests for valid reasons. The third test may also be conducted for other students in consultation with concerned Faculty and the Chairperson of the respective Department. There shall be only one test for Practical courses to award CIE marks.

#Two Quizzes shall be conducted and sum of two Quizzes shall be considered for final assessment. If AAT is employed, the concerned teacher shall prescribe the pattern of assessment prior to the commencement of the classes.

**SEE shall be conducted for 100 marks each for theory and practical courses and the marks obtained in each case shall be reduced for 50 Marks.

12.3.5.2 Assessment pattern for Integrated Courses: The weightage of various components of CIE for Integrated Courses considering weightage of 20% to Quiz/AAT i.e., 10 out of 50 Marks is as shown in the Table 8.

Table 8: Assessment pattern for Integrated Courses

Component	**Theory**		**Practical**			**Total Marks**	**Total marks for awarding Letter Grade**
Types of Assessment	Test*	Quiz# /AAT	Records and Performance	Lab Test	Viva Voce /AAT	100	200
Max. CIE Marks	40	10	20	20	10		
Max. SEE Marks	100**		100**			100	

NOTE:

*There shall be two tests for theory component of Integrated Courses and the sum of two tests shall be considered for final assessment. The third test may be conducted for the students who are absent in any one of the tests for valid reason. The third test may also be conducted for other students in consultation with concerned Faculty and the Chairperson of the respective Department. There shall be only one test for Practical component of Integrated Courses to award CIE marks.

**SEE shall be conducted for 100 marks each for theory and practical components and the marks obtained in each case shall be reduced for 50 Marks.

#Two Quizzes shall be conducted and the sum of two Quizzes will be considered for final assessment. If AAT is employed, the concerned teacher shall prescribe the pattern of assessment prior to the commencement of the classes.

12.3.5.3 Assessment pattern for Comprehensive Courses: The weightage of various components of CIE for Comprehensive Courses considering weightage of 20% to Quiz/AAT i.e., 10 out of 50 Marks is as shown in the Table 9.

SEE shall be conducted for 100 marks each for theory and practical courses and the marks obtained in each case shall be reduced for 50 Marks.

Table 9: Assessment pattern for Comprehensive Courses

Component	**Theory**		**Practical**			**Self Study**	**Total Marks**	**Total marks for awarding Letter Grade**
Types of Assessment	Test*	Quiz# /AAT	Records and Performance	Lab Test	Viva Voce/AAT	AAT	100	200
Max. CIE Marks	40	10	20	10	10	10		
Max. SEE Marks	100**		100**				100	

NOTE:

* There shall be two tests for theory component of Comprehensive Courses and the sum of two tests shall be considered for final assessment. The third test may be conducted for the students who are absent in any one of the tests for valid reasons. The third test may also be conducted for other students in consultation with Faculty and the Chairperson of the respective Department. There shall be only one test for Practical component of Comprehensive Courses to award CIE marks.

#Two Quizzes shall be conducted and the sum of two Quizzes shall be considered for final assessment. As AAT is employed, the concerned teacher shall prescribe the pattern of assessment prior to the commencement of the classes.

**SEE shall be conducted for 100 marks each for theory and practical components and the marks obtained in each case shall be reduced for 50 Marks.

12.3.6. CIE Assessment pattern with weightage between 20% and 40% for Quiz/AAT.

A Faculty, who wishes to design AAT with more than 20% weightage, shall create a new pattern for assessment indicating weightages for all the three components. The assessment pattern shown above (12.3.5.1, 12.3.5.2 and 12.3.5.3) need not be used. It is mandated that a faculty shall submit a detailed assessment pattern and obtained prior approval (preferably one week before the commencement of classes), from the concerned Departmental Academic Committee (DAC) constituted for the purpose.

12.4 Semester End Examination (SEE)

The SEE shall be conducted by the Institution. The Internal / External Examiners, appointed by the respective Board of Examinations, are associated with the work of Question Paper Setting/Evaluation/Moderation/Lab Examination /Project Evaluation and others.

12.4.1 SEE Answer scripts: The answer scripts of SEE are evaluated/ moderated by the Course Faculty / External Examiner. A committee of the College may oversee and ensure the quality and standard of evaluation and of the grades awarded in all cases.

12.4.2 External Review of SEE: The Board of Examiners (BoE) shall meet and scrutinize the question papers for SEE. An external review of question papers set shall be done by the Board of Examiners (BoE) of the College by having a panel of subject experts from outside the College. To achieve totality in the review of SEE operation, 30% of answer scripts shall be reviewed and then Results / Grades shall be declared. This facilitates in enhancing the confidence level on transparency and fairness of the evaluation system.

12.4.3 Gracing rules shall be adopted for SEE component in accordance with the prevailing Bangalore University Regulations.

12.4.4. There shall be a provision for providing photocopy of the answer books to students for a prescribed fee.

12.4.5. There shall be provision for revaluation of answer scripts of SEE, Make-up Examination and fast track examination, for a prescribed fee, in accordance with the prevailing regulations of Bangalore University with respect to revaluation.

12.5 Passing Standards

The absolute linear grading method is employed for the determination of passing standards. The minimum marks for passing in respect of CIE and SEE for each Course is as shown in Table 10.

Table 10: Passing Marks using Absolute Linear Grading

Evaluation Method	Passing Marks for Registered course
CIE	≥ 40%
SEE	≥ 40%

In case of integrated and comprehensive courses, a student must secure a minimum of 40 % marks and 75 % attendance in both theory and practical components. In addition, the overall CIE marks including theory, practical and self study components shall not be less than 40 %.

12.6 Make-up Examination:

Students who have obtained 'I' and 'X' grades in the SEE are eligible to take up Make-up examination. The standard of the Make-up Examination shall be the same as that of regular SEE for the courses. The Make-up Examination shall be held as per dates notified in the Academic Calendar. The grades obtained in the Make-up Examination (D, C, B, A, S) shall be reduced to the next lower grade. However, there shall be no Make-up examination for Practical courses and Practical component of Integrated and Comprehensive courses.

12.7 There shall be NO Make-up Examination for any Course(s) in the credit system for students who have:

a) obtained 'F' grade in SEE or,

b) absented themselves from attending CIE or SEE, without valid reasons; or,

c) failed to satisfy minimum attendance; or,

d) obtained Grade 'W' in a course and shall be required to Re-Register for the course(s) and go through CIE and SEE again and obtain a Grade equal to or better than 'E' in each case.

12.8 Project Work Evaluation

The CIE of the project work shall be based on the progress of the student in the work assigned by the Project Supervisor, periodically evaluated by the Project Supervisor together with a Project Evaluation Committee (PEC) at the Department, constituted for this purpose. PEC ensures a minimum of three evaluations for CIE: one initial, one mid – semester and one towards the end of semester (before the last working day). Project Demonstration/Presentation, Seminar, Submission of Project Report and Final Oral Examination shall be conducted by a panel of an Internal and External Examiner appointed by the respective BoE.

12.9 Course Re-Registration

12.9.1 In the case of core course(s), if 'F' grade is obtained, after Make-up Examination / Fast track semester (if offered), students shall have to Re-Register for the same course(s).

12.9.2 In the case of professional elective course(s) and open elective course(s), if 'F' grade is obtained after Make-up Examination / Fast track semester (if offered), students shall Re-Register for same courses or alternative course(s) from among the program elective courses / open electives of the same group. The Re-Registration shall be possible when a particular course(s) is offered in regular semesters.

12.10 Successive Failures

A student who has not been able to obtain eligibility for third semester even after three academic years can re-join B.Tech. Programme in the College as a fresh student to the First Year.

13. ATTENDANCE REQUIREMENT

13.1. All students shall maintain a minimum attendance of 75% in each Course registered. Any student failing to meet the above standard of attendance in any Course(s) registered shall not be allowed to appear for SEE of such Course(s).

13.2. Attendance at all examinations, both CIE and SEE, of each Course registered shall be compulsory for the students and hence there shall not be any provision for Make-up examination.

13.3. Student against whom disciplinary action by the College is pending may not be permitted to attend SEE in that Semester.

13.4. The basis for the computation of the attendance shall be the period prescribed by the College by its calendar of events. For the first semester students, the same is reckoned from the Date of Admission to the Course.

13.5. The students shall take note of his/her attendance status periodically from the respective faculty and strive to make up for the shortage. The Departments shall periodically announce the attendance status of the students. Non-receipt of such information from the College shall not be considered as valid reason for exemption from the attendance requirements.

13.6. If a student does not satisfy the attendance requirements in any Course, then he / she shall not be permitted to attend the SEE in that Course and is deemed to have been declared "U" (Unsatisfactory) in that Course. In such a case, student has to Re-Register for the course in the Fast Track / Regular semester.

13.7. In respect of Integrated Courses 75% of attendance shall be maintained in theory as well as in practical component of the Course. If he / she fails to maintain the 75 % attendance in any one component, the student shall not be permitted to take up SEE in that Course.

13.8. Exemption in attendance shall be given only to a student if he/she represents, with prior permission, the University/Institution at the State level / National level / International level Technical/Cultural/Sports events.

14. GRADING

14.1 General

14.1.1 The grading system has replaced the evaluation of student's performance in a Course based on absolute marks. This is to ensure uniformity in the grading practice at different autonomous Colleges to facilitate the migration of students or transfer of credits among Autonomous Colleges under the Universities.

14.1.2 Letter Grades: The letter grade is basically a qualitative measure (an alphabet/letter) to assess the performance of a student by awarding the following Grades:

(i) Outstanding (S)

(ii) Excellent (A)

(iii) Very Good (B)

(iv) Good (C)

(v) Average (D)

(vi) Pass (E)

(vii) Fail (F)

The Grades are based on the absolute marks (as in conventional practice) obtained by the student. This is usually arrived at after the student's performance is assessed in a Course that includes both CIE and SEE. To begin with, absolute marks for the total

are awarded, followed by grouping of all the students in a Course under different grading levels, as in Table 11.

14.1.3 Absolute Grading: The College / University have adopted the absolute grading system.

14.2 Grade Points and Transitional Grades

14.2.1 The College follows the 10-point grading system, as shown in Table 11.

Table 11: Grade Points Scale (Absolute Grading)

Level	Outstanding	Excellent	Very Good	Good	Average	Pass	Fail
Grade	S	A	B	C	D	E	F
Grade Points	10	09	08	07	05	04	00
Marks Range (%)	≥ 90	≥ 75 - < 90	≥ 60 - < 75	≥ 50 - < 60	≥ 45 - < 50	≥ 40 - < 45	< 40

14.2.2 The grade points given in Table 11 help in the computation of credit points earned by the student in a Course. The credit points are equal to the number of credits assigned to the Course multiplied by the grade points awarded to the student in that Course. This shall be used in arriving at the credit index of the student for that semester. The credit index is the sum total of all the credit points earned by the student for all the Courses registered in that semester.

14.2.3 Earning of the Credits: A student shall be considered to have completed a Course successfully and earned the credits if he/she secures an acceptable letter grade (S, A, B, C, D, E). Letter grade F in any Course implies failure of the student in that Course and with no credits earned.

14.2.4 Transitional Grades: The transitional grades, such as 'I', 'W', 'X' shall be awarded to a student in the following cases. These transitional grades shall be converted into any one of the letter grades (S to F) after the student completes his/her Course requirements, including the Examination.

14.2.4.1 Grade 'I': Grade 'I' is awarded to a student having satisfactory attendance at classes and meeting the passing standard at CIE in a Course, but has had remained absent from SEE for valid and convincing reasons acceptable to the College, under the following circumstances:

a) Accident or severe illness leading to hospitalization that disables the student from attending Semester End Examination (SEE).

b) A calamity in the family at the time of SEE that requires the student to be away from the College.

c) Student represents, with prior permission, the University/Institution at the State level / National level / International level Technical / Cultural / Sports Events.

d) In the event of (a) or (b) or (c) above, it is the responsibility of the Student/Parent/Guardian to inform the College authorities (Proctor/Chairperson/Principal) immediately. The information shall be in the form of either written communication, personal communication by Parent/ Guardian/ Peer or any Electronic Messages. The candidate needs to submit all the relevant documents (hospital reports, police reports, certificates from competent authorities).

e) The student who has earned 'I' grade shall be provided with an opportunity to appear for the Make-up Examination.

14.2.4.2 Grade 'X': Grade 'X' is awarded to a student having attendance ≥75% and CIE marks ≥ 80% in a Course, but SEE performance is observed to be poor, that could result in an overall 'F' Grade in the Course. In this case 'F' grade is not awarded but student's performance record is maintained separately. The student shall be provided with an opportunity in the Make-up Examination.

14.2.5 Grade 'W': Grade 'W' is awarded to a student having satisfactory attendance and has withdrawn from that Course before the prescribed date in a semester on the request of the student and the recommendation of the faculty. The student shall re-register for the said Course in the Fast Track / Regular semester. 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 Fast Track / Regular semesters when offered and fulfil the passing standards.

14.2.6 Grade 'Au': A student is awarded grade 'Au' in a course if the student has registered for that course for audit only, provided that the student satisfies the attendance requirements as stipulated in Section 13. This grade would carry no grade points and is not used in the computation of SGPA or CGPA.

14.2.7 Grade Card: Each student shall be issued a Grade Card at the end of each semester. This shall have a list of all Courses registered by a student in the semester along with the credits. In addition to the letter grades with grade points, the grade card shall contain transitional grades 'I', 'W' and 'X' that does not carry any grade points. Hence, only the Courses registered for credit and having grade points shall be included in the computation of SGPA and CGPA. The grade card of a semester shall contain the total credits earned till that semester.

14.2.7.1 However, the Courses taken for audit shall not form part of this computation. The results of Mandatory Courses that 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 every student shall have to obtain the grade 'PP' in each Mandatory non Credit Course to qualify for award of the Degree by the University.

14.2.8 In the event, a student fails in a Laboratory Course/Project and/or CIE of a course in the final year, the student shall be given grade 'I' for the Course(s). In such a case, the Institution may grant the student extra time not exceeding 12 weeks for completing

the Course with due concurrence of the faculty and Chairperson of the Department. If no such extra time is sought/granted, the concerned student shall have to re-register for the Course(s) in the succeeding regular semester and fulfil the academic requirements for award of the Degree.

14.2.9 All the transitional grades ('I' and 'X') awarded to a student shall have to be converted to an appropriate letter grade after the Make-up Examinations. Any outstanding 'I' and 'X' grades two days after the last scheduled Make-up Examinations shall be converted to 'F' grade automatically.

14.3 Grade Point Average

14.3.1 SGPA and CGPA: The credit index is used for computing the Semester Grade Point Average (SGPA) and the Cumulative Grade Point Average (CGPA). 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 is the sum total of credit indices of all the previous semesters, including the current semester, divided by the total number of credits registered in all these semesters.

The SGPA and CGPA shall be computed as shown below:

Semester Grade Point Average (SGPA)

The SGPA is the ratio of sum of the product of the number of credits with the corresponding grade points scored by a student in all the courses taken by a student **to** the sum of the number of credits of all the courses undergone by the student in that semester, i.e.,

$$\frac{\sum [(\text{Course credits}) \times (\text{Grade points})] \text{ (for all Courses in that semester under consideration excluding transitional grades)}}{\sum [(\text{Course credits})] \text{ (for all Courses in that semester under consideration excluding transitional grades)}}$$

Cumulative Grade Point Average (CGPA)

The CGPA is also calculated in the same manner as that of SGPA taking into account all the courses undergone by a student over all the completed semesters of a Programme including the current semester, i.e.,

$$\frac{\sum [(\text{Course credits}) \times (\text{Grade points})] \text{ (for all Courses excluding those with F and transitional grades of semesters under consideration)}}{\sum [(\text{Course credits})] \text{ (for all Courses excluding those with F and transitional grades of semesters under consideration)}}$$

SGPA and CGPA facilitate the declaration of academic performance of a student, at the end of a semester and at the end of successive semesters respectively. SGPA and CGPA shall be normally calculated up to the second decimal position, so that the CGPA, in particular, can be made use of in ranking the students in a class. If two students get the same CGPA, the tie

should be resolved by considering the number of times a student has obtained higher SGPA. If it is not resolved even at this stage, the number of times a student has obtained higher grades like S, A, B etc., shall be taken into account in ranking the students in a class.

14.3.2 An illustrative example given in Table 12 indicates the computation of SGPA and CGPA as in Section 14.3:

Table 12: Calculation of SGPA/CGPA – An example

Semester (Odd: I) (Even: II)	Course No.	Credits	Grade	Grade Points	Credit Points	SGPA	CGPA
I	101	1	S	10	10		
I	102	1.5	F	0	00		
I	103	3	A	9	27		
I	104	4	B	8	32		
I	105	3	W	-	-		
Total		9.5 (8*)			69	7.26 (69/9.5)	7.26 (69/9.5)
II	107	3	C	7	21		
II	108	4	B	8	32		
II	109	3	D	5	15		
II	110	1.5	E	4	06		
II	111	1	F	0	00		
Total		12.5 (11.5*)			74	5.92 (74/12.5)	6.50 (143/22)
Fast Track	102	1.5	B	8	12		
Fast Track	105	3	C	7	21		
Fast Track	111	1	D	5	5		
Total		5.5			38	6.91 (38/5.5)	6.58 (181/27.5)

*Total No. of credits excluding those with 'F' and transitional grades. This is particularly important to keep track of the number of credits earned by a student up to a semester under consideration.

14.4. Vertical Progression

Minimum score for SGPA and CGPA along with the minimum number of credits are prescribed for the vertical progression of students to higher odd semesters. This also facilitates the mobility of students from one College to another. The vertical progression of students is applied between two academic years only and all students progress to next even semesters automatically.

The following are the prescribed scores and other rules for vertical progression:

a) Minimum Score for SGPA = 5.0

b) Minimum Score for CGPA = 5.0 (at the end of each academic year)

c) Maximum number of 'F' Grades that can be carried forward at the end of any academic year is four.

d) To move to V Semester, a student shall achieve passing standards of all courses up to and including II Semester and to move to VII Semester, a student shall achieve passing standards of all courses up to and including IV Semester.

e) The maximum number of withdrawals at any given time shall not exceed two courses subject to maintaining the minimum registration requirements.

However, failure to secure a minimum CGPA = 5.0 at the end of any semester for the first time, shall attract a warning before allowing the student to continue in the next semester.

14.5 Award of Class:

The class shall be awarded after the student earns a total of 175 credits. Table 13 shows the mapping of the range of percentage marks, the range of Grade Point Average and the award of class.

Table 13: Award of Class

Percentage of Marks	Range of Grade Point Average (SGPA or CGPA)	Class
≥ 40 and < 50	5 ≤ CGPA < 5.75	Pass Class (PC)
≥ 50 and < 60	≥ 5.75 and < 6.75	Second Class (SC)
≥ 60 and < 70	≥ 6.75 and < 7.75	First Class (FC)
≥ 70	≥ 7.75	First Class with Distinction (FCD)

NOTE: The percentage of marks for a given SGPA/CGPA can be computed using the formula: % Marks Scored = [CGPA – 0.75] X 10

14.5.1 The First Class with Distinction is awarded only if passing standard is achieved in all the courses in FIRST attempt only. The appearance in Make-up Examination, under any circumstance, shall be counted as an attempt for the declaration for First Class with Distinction. For students appearing for Make-up Examination with an I grade, it shall not be counted as First attempt.

14.6 Graduation Ceremony

14.6.1 The college will organize annual Graduation Day ceremony for the award of Degrees to students completing the prescribed academic requirements.

14.6.2 The College may award Ranks and Medals to the meritorious students during the Graduation Day Ceremony to encourage the students to strive for excellence.

15. OTHER ACADEMIC MATTERS

15.1 Academic Schedules

The Academic Calendar is published before the commencement of every academic year to assist the students and faculty. The Calendar of events includes, dates for registration of

Courses, dropping of Courses, withdrawal from Courses, etc. This enables the students to minimize their chances of failure in CIE and/or SEE and take full advantage of the flexibility provided by the CBCS.

15.2 Registration of Courses

Each student shall have to register for Course work at the beginning of a semester as prescribed in the academic calendar. The student has to compulsorily register for all the stipulated credits in the first year of the Programme. From third semester onwards the registrations shall be within the limits of minimum ($\geq$ 18) and maximum ($\leq$ 26) credits. The students may seek faculty advice and discuss with the proctor/faculty prior to registration of Courses.

15.3 Dropping of Courses

A specific period in the middle of a semester is fixed for this purpose and to help review the student's performance in CIE by the faculty advisors (proctors). The students having poor performance have the option to drop the identified Course(s) up to the minimum credits specified for the semester. The dropped courses shall not be mentioned in the Grade Card. Such Courses have to be re-registered by these students in the regular semesters at a later time. However, the students are not allowed to drop any courses in first and second semester.

15.4 Withdrawal from Courses

A specific period is identified towards the end of a semester to help review the student's performance in CIE by the Proctor. The Proctor shall advise the students having poor performance to withdraw from identified Course(s) (up to the minimum credits specified for the semester) with a mention in the Grade Card 'W'. Such Courses have to be re-registered by these students in the main/regular semesters at a later time, as and when offered.

(i) When to withdraw?

A student is allowed to withdraw from a Course(s) before one week counted from the last date of the second internal test (CIE) or as mentioned in the Academic Calendar.

(ii) Separate circular/notification is not issued in this regard. It is the responsibility of the student to withdraw from the Courses within the stipulated time failing which the student shall continue with the Course and fulfil the academic requirements.

15.5 Temporary withdrawal from Programme

(i) A student may withdraw temporarily from the Programme on grounds like, prolonged illness, grave calamity in the family or any other serious circumstances. The withdrawal shall be for periods which are integral multiples of a semester, provided that:

15.5.1 The student shall apply to the College within six weeks from the commencement of the semester or the date he/she last attended the classes, (whichever is later) stating fully the reasons for such a withdrawal, together with supporting documents and endorsement of his/her parent/guardian.

15.5.2 The College is satisfied about the genuineness of the case and by taking into account the expected period of withdrawal, the student has the option to complete the Programme requirements within the time limits specified by the College/University.

15.5.3 The student does not have any dues or demands at the College/University including tuition fee, hostel, library, laboratory and other dues.

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

(iii) Normally, a student shall be entitled to avail the temporary withdrawal facility only once during his/her studentship of the Programme. However, any other concession, including multiple withdrawals, for the concerned student, shall have to be approved by the Academic Council of the College on the recommendation of the Principal.

15.6 Termination from the Programme

A student shall be terminated from the Programme and leave the College on the following grounds:

(i) Failure (getting F Grade) in any Course in spite of five attempts.

(ii) Failure to secure a CGPA $\geq$ 5.00 on three consecutive occasions (However, failure to secure a CGPA $\geq$ 5.00 at the end of any semester for the first time attracts warning before approval of the student to continue in the following semester).

(iii) Absence from classes for Two consecutive semesters (Odd and Even) at a time without leave of absence being granted by competent authorities.

(iv) Failure to meet the standards of discipline as prescribed by the College / University from time to time.

(v) Successive Failures: A student who has not been able to obtain eligibility for third semester even after three academic years shall be terminated from the program. However, such a student can re-join the B.Tech. Programme in the College as a fresh student to the First year.

15.7 Student's feedback

(i) The College shall obtain feedback from the students on their Course Work and various academic activities. The feedback is obtained from the students at regular intervals, as decided by the College/University, maintaining confidentiality.

(ii) The feedback received from the students shall be reviewed by a committee constituted for the said purpose and necessary corrective measures shall be initiated.

15.8 Suitable assessment tools and processes shall be incorporated for evaluation of course outcomes, program outcomes and program specific outcomes through direct and indirect methods required for accreditation of programmes by NBA.

15.9 To facilitate industry interaction, guest lectures from industry, R & D organizations may be arranged in every semester.

16. AWARD OF PRIZES, MEDALS & RANKS

For the award of Prizes, Medals and Ranks, the conditions stipulated by the Donor shall be considered as per the statutes framed by the College/University for such awards.

17. CONDUCT AND DISCIPLINE

17.1 Students shall conduct themselves within and outside the College campus in a manner befitting the students of an Institution of National Importance.

17.2 As per the order of Honourable Supreme Court of India, ragging in any form is considered as a criminal offence and is banned. Any form of ragging will be severely dealt with.

17.3 The following acts of omission/ or commission shall constitute gross violation of the Code of Conduct and are liable to invoke disciplinary measures:

a) Ragging
b) Lack of courtesy and decorum; indecent behaviour anywhere within or outside the campus
c) Wilful damage or stealthy removal of any property/belongings of the College/Hostel or of fellow students/citizens.
d) Possession, consumption or distribution of alcoholic drinks or any kind of hallucinogenic drugs.
e) Mutilation or unauthorized possession of Library books.
f) Noisy unseemly behaviour and disturbing studies of fellow students.
g) Hacking in computer systems (such as entering into other person's area without prior permission, manipulation and / or any other Cyber crime etc.)
h) Plagiarism of any nature.
i) Any other act of gross indiscipline as decided by the College/University from time to time.
j) Use of mobile in the college academic area.
k) Smoking in college Campus and tobacco chewing.
l) Unauthorized fund raising and promoting sales.

Commensurate with the gravity of the offence the punishment may be: reprimand, expulsion from the hostel, debarring from an examination, disallowing the use of certain facilities of the college, rustication for a specified period or even outright expulsion from the college, or even handing over the case to appropriate law enforcement authorities or the judiciary, as may required by the circumstances.

17.4 For an offence committed in

(i) Hostel
(ii) Department or in a class room and

(iii) Elsewhere, the Chief Warden, the Chairperson of the Department and the Dean (Faculty of Engineering) respectively, shall have the authority to reprimand or impose fine.

17.5 All cases involving punishment other than reprimand shall be reported to the Principal.

17.6 Cases of adoption of unfair means and/ or any malpractice in an examination shall be reported to the Registrar (Evaluation) for taking appropriate action.

18. TRANSITION FROM NON-CBCS SCHEME TO CBCS SCHEME

18.1 Students who are not eligible to register for higher semesters under Non-CBCS scheme shall be given the benefit of full carryover for higher semesters, as and when CBCS scheme becomes operational for lower semester/s.

18.2 Students who have Not Satisfied with Sessional Requirements (NSSR) under Non-CBCS scheme shall

(i) join B.Tech. CBCS scheme, if the student has NSSR in First Semester B.E.

(ii) continue in B.E. parallel Non-CBCS scheme, if the student has NSSR in Second or higher semesters,

as and when the CBCS scheme becomes operational for lower semester/s.

19. INTERPRETATION

19.1. Any question that arises as to the interpretation of these rules and regulations shall be decided by the College / University, whose decision shall be final and binding on the student in the matter. The College / University shall also have the power to issue clarifications to remove any doubt, difficulty or anomaly, which may arise with regard to the implementation of these regulations.

19.2 In the absence of any provision in CBCS Academic Rules and Regulations 2018, the prevailing Regulations of Bangalore University shall be followed.

19.3. CBCS Academic Rules and Regulations 2018 may be altered/changed from time to time by the Academic Council of the College / University.

19.4. Failure to read and understand CBCS Academic Rules and Regulations 2018 is not an excuse (Ignorantia juris non excusat).

20. REPEAL AND SAVINGS

20.1 The Provisions of Regulations, the Provisions of Guidelines, Order, Rule or Regulations in force shall be inapplicable to the extent of their inconsistency with these Regulations.

20.2 The University shall issue such orders, instructions, etc., and prescribe such format, procedure, etc., as it may deem fit to implement the Provisions of these Regulations.

20.3. In case of any difficulty in the implementation, or giving effect to the provisions of these Regulations, the decision of the Vice Chancellor is final.

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