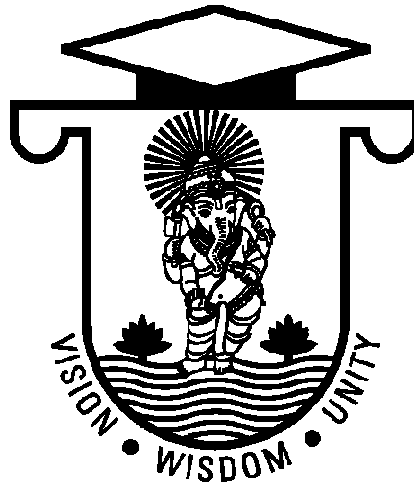


**VINAYAKA MISSION'S RESEARCH FOUNDATION  
(DEEMED TO BE UNIVERSITY)**

**SALEM, INDIA**



**BACHELOR OF TECHNOLOGY (B.TECH.)**

**DEGREE PROGRAMME - FULL TIME**

**UNDER FACULTY OF ENGINEERING AND TECHNOLOGY**

**REGULATIONS 2017**

**STRUCTURED CHOICE BASED CREDIT SYSTEM**

**(SCBCS)**

**(FOR THE STUDENTS ADMITTED FROM 2017-18 ONWARDS)**

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(DEEMED TO BE UNIVERSITY)**

**SALEM, INDIA  
BACHELOR OF TECHNOLOGY (B.TECH.)  
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**(FOR THE STUDENTS ADMITTED FROM 2017-18 ONWARDS)**

In exercise of the powers conferred by the Revised Memorandum of Association (RM2010) and Revised Bye-Laws (RB2010) of the Vinayaka Mission's Research Foundation (Deemed to be University), Salem, Board of Management of the University hereby issue the following revised regulations pertaining to the undergraduate Programme and the award of the degree of Bachelor of Technology (B.TECH.) at this University.

**1. TITLE AND COMMENCEMENT**

These revised regulations shall be called "REGULATIONS FOR BACHELOR OF TECHNOLOGY (B.TECH.)-FULL TIME DEGREE PROGRAMME – (R2017).

These revised regulations come into force with effect from the Academic year 2017-18 and are subject to such modifications as may be approved by the apex bodies of the University from time to time.

**2. PREAMBLE**

The Degree of Bachelor of Technology (B.TECH.) in Faculty of Engineering and Technology shall be awarded to a candidate who, as per these regulations, has successfully undergone the programme, passed the prescribed examinations and thereby qualified to receive the degree.

**2.1. General Considerations and Teaching Approach**

The tremendous growth of Science and Technology has made inroads in every sphere of human activity. It has created opportunities, challenges and opened new horizon in the pursuit of knowledge, career and accomplishments. Aspirants are crossing oceans in the pursuit of knowledge and for successful career. The globalization and subsequent opening of our economy have provided ample opportunities in the quest of knowledge to the students of our Nation. Hence a need has arisen to provide flexible, need based, versatile and learner oriented Education / Knowledge to our students and make them competitive. If the present rigid

academic system and the Institution methodologies are continued to be imposed, the learners may not have the choice of courses of their liking and hence will not meet the requirements to strengthen their knowledge in specific areas needed for their career. In view of the above a move has to be initiated from Institution centric to learner oriented education system.

## 2.2 Objectives of Structured Choice Based Credit System (SCBCS)

The **Structured Choice Based Credit System (SCBCS)** provides ample opportunity for multiple entries, large number of electives, flexible pace for earning credits, carryover of such credits, and choice of courses from other branches.

Further it has the ability to accommodate diverse choices that the students may like to have. SCBCS is a way in which a student has complete freedom in tailoring his course the way he wishes.

It accommodates the wants and needs of the entire student community as a whole. With this system, a student can prepare his/her own timetable with the specific courses he/she intends to do in that semester along with the timings of classes and choice of teachers.

Students have the flexibility to pursue their other interests in sports or club activities and scheduling classes accordingly.

It is a beautiful system that is tailor made to suit all the kinds of students with all learning needs, whether someone wishes to complete subjects early or pursue subjects at his own pace satisfying the criteria of minimum and maximum duration of completion of degree.

In addition, this system ensures offerings of subjects from all disciplines encouraging students to pursue multiple interests and develop themselves wholly.

In view of the above advantages the SCBCS has been implemented from the academic year 2017-2018 onwards.

## 3. DEFINITIONS AND NOMENCLATURE

In the Regulations, unless the context otherwise requires, certain terms used and their meanings are as under.

- 3.1. "MHRD" means Ministry of Human Resources Development.
- 3.2. "UGC" means University Grants Commission.
- 3.3. "AICTE" means All India Council for Technical Education
- 3.4. "University" means Vinayaka Mission's Research Foundation (Deemed to be University), Salem.
- 3.5. "Vice Chancellor or VC" means Vice Chancellor of the University
- 3.6. "Board of Management or BoM" means Board of the Management, the highest governing body of the University
- 3.7. "Academic Council or AC" means Academic Council the highest academic body of the University, chaired by the Vice Chancellor
- 3.8. "Board of Studies or BoS" means Board of Studies of the University under the Faculty of Engineering and Technology
- 3.9. "CoE" means Controller of Examinations of the University
- 3.10. "AICEE" means All India Common Entrance Examination conducted by the University
- 3.11. "Dean" means Dean for the Faculty of Engineering and Technology of the University
- 3.12. "Institution or College" means Engineering College constituted under University.
- 3.13. "Programme" means Under Graduate Programme leading to the award of Degree B.TECH. approved by the UGC and University.

- 3.14. "Branch" means specialization or discipline of B.Tech. Degree Programme, such as Mechanical Engineering, Electronics and Communication Engineering etc.
- 3.15. "Course" means every paper/subject of study offered by various departments.
- 3.16. "Credit" is the Course work which is measured in units, based on hours Conducted/week and content of course.
- 3.17. "Head of Institution or HoI" means Principal of the Constituent Engineering college of the University
- 3.18. "HoD" means Head of the Department of the College.
- 3.19. "Curriculum and Syllabus" mean the various components/courses studied in each programme that provides appropriate knowledge in the chosen branch. The curriculum and syllabus for study is as prescribed by the Board of Studies (BoS) with the approval of the concern Academic Council (AC) based on the UGC/AICTE regulations.
- 3.20. "Teaching Staff or Teacher" means The Dean of Faculty, The Principal of the college, Professors, Associate Professors, Assistant Professors, Pro-term Lecturers and other like persons engaged in teaching the students and assisting the students in the conduct of studies and Research in the College/University.

#### **4. ELIGIBILITY FOR ADMISSION**

##### **4.1. First year Admission**

The candidate seeking admission to the first semester B.TECH degree programme should have passed the Higher secondary examination or the Indian School Certificate Examination which is equivalent to 10+2 Higher Secondary Examination with Physics, Chemistry, Mathematics/Biology/ Botany and Zoology put together with English OR should have passed the Higher Secondary Examination of Vocational stream (Vocational groups in Engineering/ Technology with Mathematics/Physics/Chemistry as one of the subjects of study) as prescribed by the concerned State Government.

##### **4.2. Lateral Entry Admission**

The candidate seeking admission to the third semester B.TECH of the programme should have passed a 10 + 3 Diploma (any stream) in Engineering / Technology awarded by State Board of Technical Education or its equivalent in relevant fields or B.Sc. Degree with Mathematics as a subject are eligible to apply for Lateral entry admission to the third semester.

**4.3.** The Academic council of the university from time to time may include any other examination which in scope and standard is found to be equivalent to the intermediate technical examination of an Indian University/Board, taking Physics, Chemistry and Biology/ Mathematics including practical test in each of these subjects and English. The candidates also shall satisfy the conditions regarding the minimum marks, age and physical fitness as may be prescribed by the Academic council of the university from time to time.

The candidates with disability should produce the Disability Certificate issued by the duly constituted District Medical Board.

## 5. ADMISSION

The students applying for admission to this programme of this University shall be selected on the basis of merit through the "ALL INDIA COMMON ENTRANCE EXAMINATION (AICEE)" conducted by the University. The Admission Procedure for the AICEE conducted by the University for this Programme is given by the academic council of University.

**Non Resident / Foreign Nationals can be admitted up to 15% of total seats** as per norms and guidelines of the University. They are exempted from the AICEE stated above, but their merit will be ascertained based on their performance in qualifying examination approved by the University.

## 6. REGISTRATION

A candidate admitted in the Under Graduate Programme in the constituent Engineering Colleges of the University shall register with the University by remitting the prescribed fees along with the application form for registration dully filled in and forwarded to the Controller of Examinations of this University through the Head of the Institutions within the stipulated date.

## 7. DURATION OF THE PROGRAMME

### 7.1 B.TECH –REGULAR (Ist Semester Onwards)

The duration for the B.TECH. REGULAR DEGREE programmes shall extend **over a period of 4 years (8 semesters) for the students admitted in first semester but in any case not more than 8 years (16 semesters).**

### 7.2 B.TECH –REGULAR – LATERAL ENTRY (IIIrd Semester Onwards)

The duration for the B.TECH. REGULAR DEGREE- Lateral Entry programmes shall extend **over a period of 3 years (6 semesters) for the students admitted in third semester and not more than 7 years (14 semesters).**

7.3 The total duration for completion of the programme reckoned from the commencement of the first semester to which the student was admitted shall not exceed the maximum duration specified in Clause 7.1 and 7.2 irrespective of the period of Break of Study or prevention in order that the student may be eligible for the award of the degree.

7.4 For the purpose of regulations, the academic year is divided into two Semesters, the odd semester normally spanning from June to November and the even semester from December to May.

## 8. EXTENSION OF MAXIMUM DURATION

The candidates who fail to complete the year-wise programme as mentioned in clause 7 would be permitted to complete the programme within a period of 8 years (7 years for Lateral Entry candidates) from the date of admission to the course. Those who fail to complete within the extended period may apply for extension to the Vice-Chancellor. The decision of Vice-Chancellor will be final.

## 9. COMMENCEMENT OF THE COURSE

The academic year for the programme shall commence in the month of July every year except first year. The first year will commence in the month of August.

## **10. WORKING DAYS IN AN ACADEMIC YEAR**

Each semester normally consists of **90 working days or 450 Periods** including Tests and University Practical Examinations. The Principal is given the discretionary powers to decide the number of working days.

## **11. MIGRATION**

**11.1.** Migration/Transfer of students from one Engineering college/University to another Engineering college/University may be granted on any genuine ground subject to the availability of vacancy in the college where migration is sought and fulfilling the other requirements.

**11.2.** The provision of combination of attendance shall be granted to a transfer for admission to the Examinations of this University on satisfactory fulfilment of the regulations of the University.

**11.3.** The Rules/Guidelines for Migration/Transfer of the students for this Programme is decided by the committee consisting of three members from the constituent colleges and two from the office of the Controller of examinations.

**11.4.** All Migrations/Transfer are subject to the approval of the Academic Council based on the recommendation of the Vice-Chancellor.

## **12. BREAK OF STUDY – MAXIMUM ONE YEAR**

**12.1.** Maximum **two semesters or One Year break of study** will be allowed for the entire duration of the course for genuine reasons like serious health problems and calamitous family situations. The Vice chancellor is vested with the power to permit the break and rejoining the course for which the candidate must apply in the prescribed form enclosing necessary supporting documents and fees through his/her Head of the Institution (HoI).

**12.2.** If a student is detained for want of requisite attendance, progress and good conduct, the period spent in that semester shall not be considered as permitted Break of Study.

**12.3.** To encourage students to do better and study at their own pace, they would be allowed to **drop a course to a maximum of 06 Credits from the 3<sup>rd</sup> to the 8<sup>th</sup> semester.**

## **13. SYSTEM OF ARREARS**

### **13.1. Going Away with the System of Arrears**

**The university has incorporated a change in system of arrears and decided to go away with arrear system. Instead, students have to re-register and reappear for exams of subjects they have not passed in a semester.**

The students must however, appear for all the internal tests held for the subject through the semester and may sit in a class when the subject is being taught if they wish, but it is not compulsory.

## **14. PROGRAMMES OF STUDY – B.TECH DEGREE**

### **14.1. Programmes**

Every student shall undergo a period of certified study extending over 4 academic years allocated into 8 semesters (3 academic years allocated into 6 semester for lateral entry students)

with the duration of six months period from the date of commencement of his/her study for the subjects comprising the Engineering/Technical curriculum to the date of completion of the examination.

1. Programme – I : Aeronautical Engineering
2. Programme – II : Automobile Engineering
3. Programme – III : Biotechnology
4. Programme – IV : Biomedical Engineering
5. Programme – V : Computer Science and Engineering
6. Programme – VI : Civil Engineering
7. Programme – VII : Electronics and Communication Engineering
8. Programme – VIII : Electrical and Electronics Engineering
9. Programme – IX : Mechatronics
10. Programme – X : Mechanical Engineering
11. Programme – XI : Computer Science and Engineering with specialisation in Cloud Computing
12. Programme – XII : Solar and Alternate Energy
13. Programme - XIII : Information Technology

#### 14.2. Curriculum and its Components

The curriculum and syllabus for the course shall be prescribed by the Academic Council based on the recommendation of concerned Board of faculty and Board of Studies. Each programme shall have a curriculum comprising of Theory, Theory cum Practical and Practical courses with well defined Program Outcomes and Programme Educational Objectives (PEO) as per Outcome Based Education (OBE). The content of each course is designed based on the Course Outcomes (CO). The details of courses and distribution of credits for each category are given below in tabulated form.

| Sl. No.                             | Category   | Credits        |
|-------------------------------------|--|----------------|
| 01                                  | <b>A. Foundation Courses (FC)</b>  | <b>54 - 63</b> |
|                                     | i. Humanities and Sciences (English and Management Subjects)   | 12 – 21        |
|                                     | ii. Basic Sciences (Maths, Physics and Chemistry Subjects)   | 24 – 33        |
|                                     | iii. Engineering Sciences (Basic Engineering Courses)  | 18 - 27        |
| 02                                  | <b>B. Core courses (CC) relevant to the chosen programme of study.</b>                                   | <b>81</b>      |
| 03                                  | <b>C. Elective Courses (EC)</b>  | <b>18 - 27</b> |
|                                     | i. Programme Specific (Class Room or Online)   | 12 – 15        |
|                                     | ii. Interdisciplinary (Class Room or Online)   | 6 - 9          |
| 04                                  | <b>D. Project + Internship + Industry Electives (P + I + I)</b>  | <b>18</b>      |
|                                     | i. Project   | 9              |
|                                     | ii. Internship / Industry Supported Courses  | 9              |
| 05                                  | <b>E. Employability Enhancement Courses + Co - Curricular Courses + Extra Curricular Courses (EEC)**</b> | <b>9 - 18</b>  |
| <b>Minimum Credits to be earned</b> |  | <b>180</b>     |

\*\* - Mandatory, Credits would be mentioned in Mark sheets but not included for CGPA Calculations.

### 14.3 Semester Curriculum

The curriculum and courses specified for 1<sup>st</sup> and 2<sup>nd</sup> semester are blend of theory and practical courses belongs to Foundation Courses, Core Courses (CC) and Elective Courses (EC) as mentioned in components of Curriculum.

From 3<sup>rd</sup> to 8<sup>th</sup> semester, a student will have freedom to choose a blend of theory and practical courses as per his desire subjected to the fulfilment of pre-requisite conditions for the course.

Project work cannot be undertaken before the 8<sup>th</sup> Semester and has to be completed in 8<sup>th</sup> semester or final semester of the studies (if it is after 8<sup>th</sup> semester) only.

The courses per semester to be selected by students should satisfy requirement of minimum credit of 14 and maximum credit of 30 per semester (from 3<sup>rd</sup> semester onwards).

#### 14.3.1 Personality and Character Development

All students shall register, on admission, in any one of the personality and character development programmes (NCC/NSS) and undergo training and attend camps as prescribed by the respective officers / coordinators. The training shall include classes on hygiene and health awareness and also training in first aid.

**National Cadet Corps (NCC)** will have a number of parades/camps specified by the NCC officer.

**National Service Scheme (NSS)** will have social service activities in and around the college specified by the NSS coordinator.

**Sports, games, drills and physical exercises** specified by the Physical Director

While the training activities will normally be during weekends, the camp will normally be during vacation period. Every student shall put in a minimum attendance in the training and attend the camp. The training and camps shall be completed during the first year of the programme. However, for valid reasons, the Principal may permit a student to complete this requirement in the second year.

#### 14.3.2 Employability Enhancement Courses / Industrial Training/ Internship

Students will be offered a set of employability enhancement courses such as internship, participation in seminars, professional practices, summer project, case study and industrial/practical training as part of the curriculum. Every student is expected to undergo In-plant training in any industry/ organization during the programme of studies. **Every 2 weeks of internship/training at industry is equivalent to 1 credit.** The credit will be awarded to the student after the submission of internship/training report to the Head of the Department. The report will be evaluated by a team of faculty members nominated by the Head of the Department. Based on the recommendation by the team, the student will be awarded credits in Skill/ Proficiency based Courses category and the results will be sent to The Controller of Examinations after the approval by the Head of the Institution. The final semester project period at industry/research



organization will not be considered as industrial training/internship for earning credits in Skill/ Proficiency based Electives category.

#### **14.3.3 Industrial Visit**

Every student is expected to undergo one industrial visit every year starting from second semester of the programme, subject to the approval of the Head of the Department and Principal.

#### **14.3.4 Industry supported Courses**

Students can opt for one-credit, two credit and three credit courses, offered by experts from industry/ research organizations and approved by academic council. Students can register such courses from his/her third year of study as and when these courses are conducted by different departments. A student is also permitted to register for these courses of other departments, provided the student has fulfilled the necessary pre-requisites of the course being offered and subject to the approval of both the heads of departments. There is no limit to the number of one-credit, two credit and three credit courses a student can register during the programme of studies. However, a student can register for only one course in a semester. These courses are evaluated by the respective course coordinator of the programme. **The maximum number of credits earned from industry supported courses is limited to 6.**

**If a student who registers for industry supported one-credit, two credit and three credit courses does not successfully complete the course, the registration of that course will be considered as cancelled. Further, it will not be treated as arrear and no supplementary examination will be conducted; alternatively, if he/she wishes, he/she can re-register for the same course in the ensuing semesters and successfully complete it as and when it is offered subsequently.**

#### **14.3.5 Guided Study Course**

**A student who maintains SGPA greater than and equal to 8.0 and cleared his/her subjects in one attempt can study ONE extra programme specific elective as a guided study course during the programme of study from 3<sup>rd</sup> year / 5<sup>th</sup> Semester onwards. The credits earned in this category will be used for overall semester SGPA calculation.**

One faculty member approved by the Head of the Department shall be responsible for the periodic monitoring and evaluation of the course. **The student does not need to attend the classes. However, the student has to appear for continuous assessment tests and submit assignments to the respective faculty-in-charge assigned by the Head of the Department.**

#### **14.3.6 Programme Specific Elective**

**Programme Specific** electives are courses offered by the same department relevant to the core or specialization. These courses may not have any prerequisites and could be chosen as and when required by students. **The students have to select electives from the list specified in respective board of studies.**

#### **14.3.7 Inter Disciplinary Elective**

A student may opt for minimum **ONE** course, as **Inter Disciplinary Elective course offered in other departments**. Such course would be offered if the student has studied **the pre-requisite of it** and subject to the approval of both Head of the Departments.

#### **14.3.8 Online Courses**

**Students may be permitted to register for online courses like SWAYAM, NPTEL, IIT BOMBAY SPOKEN TUTORIAL etc. which are provided with certificate after evaluation of the performance.** On successful completion of the course, he/she has to submit the copy of the certificate to the Head of the Department. Based on the recommendation by the team of faculty members nominated by the Head of the Department, the student will be awarded credits in Skill/ Proficiency based Courses category and the results will be sent to The Controller of Examinations after the approval by the Head of the Department.

#### **14.3.9 Extra – Curricular Value Added Courses**

A set of **extra – curricular value added courses** has been incorporated as a part of the curriculum. **The courses will be listed in the mark sheet with credit and the credit earned in this category will not be used for overall CGPA calculation. The courses should not include areas already covered as core or elective.**

#### **14.4 Medium of Instruction**

The medium of instruction for lectures, examinations and project work is English, except for language courses other than English.

#### **14.5 Course Evaluation in a Semester**

##### **14.5.1 Credits**

Course work is measured in units called credit hours or simply credits. In assigning the credits for the courses, 1 Period lecture/week, 2 Period tutorial/week, 2 Period practical/week, 2 Period project work or seminar/week is equivalent to 1 credit.

##### **Total Credits**

The total number of credits a student earns during the course of study period called the total credits. **For successful completion of B.TECH. programme, a student must earn minimum 180 credits if it is a Regular (8 semesters) programme and 130 credits if it is a Lateral Entry (6 semesters) programme. The number of periods or hours of a course per week is the number of credits for that course.**

##### **Role of Persons involved in Academic Activities/ Committee.**

##### **a) Faculty Advisor**

To help the students in planning their courses and for general guidance on the academic programme, the Head of the Department will allot a certain number of students to a teacher of the department who shall function as faculty advisor throughout their period of study. The faculty advisor shall advise the students and monitor the courses undergone by the students, check attendance and progress of the students and counsel them periodically. The faculty advisor may also discuss with the HOD and parents about the progress of the students

**b) Class Committee**

The class committee shall be constituted within the first week of commencement of every semester.

Every class will have a class committee constituted by the HOD. The members of the Class committee consisting of Chair- person (a teacher who is not normally teaching any course for the class), all teachers handling courses for the class, Students (a minimum of 4 consisting of 2 boys and 2 girls on pro-rata basis)

**Functions of the Class Committee**

The functions of the class committee shall include the following:

- i. Clarify the regulations of the programme and the details of rules therein.
- ii. Inform the student representatives, the academic schedule including the dates of assessments and the syllabus coverage for each assessment.
- iii. Inform the student representatives the details of Regulations regarding weightage used for each assessment. In the case of practical courses (laboratory / drawing / project work / seminar etc.,) the breakup of marks for each experiment / exercise / module of work, should be clearly discussed in the class committee meeting and informed to the students.
- iv. Analyse the performance of the students of the class after each test and initiate steps for improvement.
- v. Identify slow learners, if any, and request the teachers concerned to provide additional help / guidance / coaching to such students.
- vi. Discuss and sort out problems experienced by students in the class room and in the laboratories.
- vii. The chairperson of the class committee may invite the faculty advisor and the Head of the Department to the meeting of the class committee.
- viii. The principal may participate in any class committee meeting of the Institution.
- ix. The chairperson is required to prepare the minutes of every meeting, submit the same through the Head of the Department to the Principal within two days of the meeting and arrange to circulate the same among the students and teachers concerned. Points requiring action by the University shall be brought to the notice of the University by the Principal.
- x. The first meeting of the class committee shall be held within one week from the date of commencement of the semester, in order to inform the students about the nature and weightage of assessments as per the framework of the Regulations. Two or three subsequent meetings may be held in a semester at suitable intervals. During these meetings the student representatives shall meaningfully interact and express opinions and suggestions of the students of the class to improve the effectiveness of the teaching learning process.

**c) Course Committee for Common Courses**

Each common theory course offered to more than one class / branch by more than one teacher shall have a Course Committee comprising all the teachers teaching the common course with one of them nominated as Course Coordinator.

The HoD will nominate the course committee for common course / courses handled in their department. The Principal will nominate the course committee for common courses handled in more than one department. This course committee will ensure that a common question paper is prepared for the tests / exams and uniform

evaluation is carried out. The Course committee will meet a minimum of 3 times in each semester.

## **15. EXAMINATION**

### **15.1 Commencement of Examinations**

The University Examinations will be conducted twice in an academic year. The Controller of Examinations would notify the dates of examinations to the candidates.

### **15.2 Requirements for Admission to Examinations**

**15.2.1** No candidate shall be permitted to appear for the Examination unless he/she secures 75% of overall attendance in that semester.

**15.2.1.1** If a candidate fails to satisfy the clause 15.2.1, he/she is required to repeat that incomplete course(s) in the next academic year whenever offered or complete the course(s) in the vacation term if offered.

*Note: All students are expected to attend all classes and secure 100% attendance. The above provision is made to allow for unavoidable reasons such as medical leave/ permitted participation in sports and Co-curricular activities. The days of suspension of a student on disciplinary grounds will be considered as days of absence for calculating the percentage of attendance.*

**15.2.2** The Head of the Institutions of the Constituent Colleges has to furnish to the Controller of Examinations of this University, the attendance particulars specifying the number of working days attended by the candidate after 45 days of commencement of semester and before commencement of examination by E-mail and in hard copy form.

**15.2.3** The attendance particulars for the Examination session for the respective study period are to be submitted two weeks prior to the commencement of the Examination. As the candidate would have paid the fees for the particular Examination, it could be presumed that he/she would attend the rest of the classes in the remaining two weeks after submission of attendance particulars to the University and appear for the Examination.

#### **15.2.4 Lack of Attendance**

A student who has an attendance less than 75% in a course during odd / even semester, will not be allowed to appear for the immediate odd/even semester examination in that course. In such a case, the candidate should repeat that course during the next odd / even semester thereby losing one year.

#### **15.2.5 Condonation**

A student who has an attendance between 65% and 74% will be allowed to write the end semester examination provided he pays the condonation fees as prescribed by the University from time-to-time. A student shall be allowed to pay condonation fees only twice during the entire duration of his / her study in the University.

**15.2.5.1** Condonation of lack of attendance shall be taken up for consideration under the following circumstances:

- i.** Any illness affecting the candidate (The candidate should submit Medical Certificate from a registered Medical Practitioner to the Dean/Principal of the faculty/college immediately after returning to college after treatment)
- ii.** Any unforeseen tragedy in the family. (The parent / guardian should give in writing the reason for the ward's absence to the Principal).

- iii. Participation in NCC / NSS / YRC and other co-curricular activities representing the college or University. The Head of the Institution should permit the candidate to participate and instruct the concerned officers in charge of the student's activities in their college to endorse the leave. Such cases may be granted 10% attendance for their participation.
- iv. Any other leave the Head of Institution deems reasonable for Condonation.

#### **15.2.6 Other Requirements for Admission to the Examinations**

Registration for all Eligible courses in the current semester and arrear examination where ever applicable. If a student is prevented to register for any number of courses in the end semester examinations for want of minimum attendance; he/ she may be allowed to go to subsequent semester.

### **15.3 Scheme of Examination**

- 15.3.1 The Institution / University shall ensure that the required number of hours for lecture / practical /seminar etc., in the subjects of B.TECH. are completed and examination to be conducted as specified in the curriculum of the regulations.
- 15.3.2 The Institution / University shall ensure that the students of the colleges, who do not fulfil the requirements of Regulations for Engineering/Technology (Minimum Requirement of Education), will not be permitted to appear for the University Examination.
- 15.3.3 Each theory paper examination shall be of three hours duration.

### **15.4 Methods of Evaluation**

Evaluation may be achieved by the written test, practicals, mini project, seminars and viva voce. It is achieved by two processes

- 15.4.1 Formative or Internal Assessment (IA) is done through a series of tests and examinations conducted by the institution.
- 15.4.2 Summative or University examinations are done by the university through examinations conducted at the end of the specified course.

### **15.5 Internal Assessment**

- i. **Weightage for the internal assessment shall be 50% of the total marks in each subject.**
- ii. Day to day records should be given importance during internal assessment.
- iii. The internal assessment marks for all courses should be submitted to the University endorsed by the Principal of the College within a week after the last working day.
  - 15.5.1 The IA shall be based on day to day assessment, evaluation of student assignment, preparation for seminar, Internal/Model/ Online test etc.
  - 15.5.2 Internal assessment shall relate to different ways in which student's participation in learning process during semesters. For example, Preparation of subject for student's seminar, tutorial, problem solving exercise, Participation in Project in the Engineering/Technology, Proficiency in carrying out a practical or a skill in small research project, Multiple Choice Questions (MCQ) test after completion of a system/ teaching etc.
  - 15.5.3 Each Assessment mentioned in clause 15.5.1 is examined and recorded. Some of the assessment can be assigned as Home work/ Vacation work.
  - 15.5.4 The continuing assessment tests / examinations for theory may be held

frequently, at least three times, two Internal tests and one Model Examination, in a given semester and the marks of that examination shall be taken into consideration for the award of Internal Assessment (IA) marks.

**15.5.5** A minimum of one model practical examination shall be conducted during the semester and marks for that examination shall be taken into consideration for awarding of Internal Assessment (IA) marks for Practical Course.

**15.5.6** No candidate shall be permitted to appear for the Examination unless he/she secures 18 marks out of 50 marks in Internal Assessment in all courses registered in that semester.

**15.5.6.1** If a candidate fails to satisfy the clause 15.5.6 for a course(s), he/she is allowed to improve the IA Marks or maintain the same IA awarded to him in earlier semester. Again if he fails to secure the minimum requirement i.e. from third attempt onwards, the case for improvement of IA Marks will be judged on case to case basis and forwarded to Vice – Chancellor for appropriate decision. The decision of Vice-Chancellor will be final in this regard.

## **15.6 Internal Marks Distribution**

### **15.6.1 Attendance, Record and Marks for attendance**

Every teacher is required to maintain an 'ATTENDANCE AND ASSESSMENT RECORD' for each course handled, which consists of students attendance in each lecture / practical / project work classes, the test marks and the record of class work (topics covered).

This should be submitted to the Head of the Department periodically (at least 3 times in a semester) for checking the syllabus coverage and the records of test marks and attendance. The HOD after due verification will sign the above record. At the end of semester, the Record should be verified by the Principal. These records will be kept in safe custody by respective HOD for five years.

The marks allocated for attendance in Internal Assessment (IA) marks is as mentioned in the table.

| <b>% of Attendance</b> | <b>Marks</b> |
|------------------------|--------------|
| <= 75                  | 0            |
| 76 - 80                | 1            |
| 81 - 85                | 2            |
| 86 - 90                | 3            |
| 91 - 95                | 4            |
| 96 - 100               | 5            |

## 15.6.2 IA MARKS CALCULATION

### 15.6.2.1 Theory Course

The distributions of marks for calculation of IA Marks for theory are as follows

| S. No              | Components for Internal Assessment Marks    | Duration (in minutes) | Maximum Marks |
|--------------------|---|-----------------------|---------------|
| 1.                 | Two Continuous Assessment Tests (CAT) I, II | 90                    | 30            |
| 2.                 | Model Exam                                  | 180                   |               |
| 3.                 | Assignment / Seminar/ Online test           | -                     | 15            |
| 4.                 | Attendance (as per Clause 14.7.1.)          | -                     | 05            |
| <b>Total Marks</b> |   |                       | <b>50</b>     |

### 15.6.2.2 Practical Course

Every practical exercise / experiment in all practical courses will be evaluated based on the conduct of exercise / experiment and records maintained by the students. There will be at least one model practical examination.

The criteria for awarding marks for internal assessment is as follows

| S. No              | Items                             | Duration (in minutes) | Maximum Marks |
|--------------------|-----------------------------------|-----------------------|---------------|
| 1.                 | Observation & Record              | AS                    | 20            |
| 2.                 | Model Practical                   | REQUIRED              | 25            |
| 3.                 | Attendance (as per clause 14.7.1) |                       | 05            |
| <b>Total Marks</b> |                                   |                       | <b>50</b>     |

### 15.6.3 Online Test

Each online test contains Ten Objective / Multiple Choice type questions from each subject of the current semester with one minute time for each question. Students will login with his log-in details and start answering by clicking any one of the answer from the choices and at the end students can view the score then & there.

### 15.6.4 Project Work

The evaluation of the project work completed by the student will be placed in front of a committee constituted by the Principal on the recommendation of HoD. For each programme one such review committee will be constituted. The Review committee consists of three senior faculty members including one supervisor/Guide of the student, having expertise in the areas of project

The student shall make a presentation at least three times, on the progress made by him/her before the review committee. There will be equal weightage for all three assessments (each for 100 marks maximum) and the total marks obtained will be reduced for 90 and the remaining 10 marks will be given for attendance vide clause 14.7.1.

The report of the committee will be submitted to the Head of the Department for review. The HoD based on the recommendation of the review committee will take the appropriate action to improve the skill / performance of the student on his/her project with the help of his/her project supervisor.

#### **15.6.5 Technical Seminar & Mini Project / Industrial Training / Value added course**

These courses will be evaluated internally.

##### **Seminar**

A staff can be allocated for the seminar. The maximum marks for a seminar course shall be 100. Three seminars each carrying 100 marks shall be organised by staff concerned. It is recommended that the 3 seminar topics are chosen to ensure sufficient depth of understanding in the selected area. Total marks obtained in the three assessments shall be reduced to 90 and with addition of 10 marks for attendance, calculated for 100 Marks. Weightage of marks for each seminar is decided based on literature review, expression / Delivery and interaction.

##### **Mini Project / Industrial Training / Value added course**

These courses shall be evaluated by the examiner(s) appointed by the HoI. The examiner(s) shall normally be the supervisor/guide/ course handler. A three member committee shall be constituted by the Head of the Department having expertise in the areas of mini projects.

### **15.7 University Examinations**

#### **15.7.1 Theory Courses**

Theory papers will be prepared by the examiners as prescribed. A common pattern of question paper will be followed for each theory courses except some industrial electives for which multiple choice questions (MCQ) given as per the recommendation of Industry. Question Paper will have Ten questions each carrying two marks in Part A and five questions “Either – OR” type each carrying 16 marks in Part B. The Evaluation will be for 100 marks and the duration of the Examination is 3 hours.

#### **15.7.2 Practical Courses**

Practical will be conducted in the laboratories. The objective will be to assess proficiency in skills to conduct experiment, interpretation of data and logical conclusion. This will be evaluated jointly by one internal examiner and one external examiner appointed by the Controller of Examinations. The Evaluation will be for 100 marks.

Note : The approval of the panel of examiners for theory, practical and Project work evaluation will be by the academic council of the university based on recommendations of the concerned Board of Studies (BOS).

### **15.8 Malpractice**

If a student indulges in malpractice in any internal test / model examination / end semester examination, he / she shall be liable for punitive action as prescribed by the University in general.

### **15.9 Examination**

The examinations are to be designed with a view to ascertain whether the candidate has acquired the necessary knowledge, minimum skills along with clear concepts of the fundamentals which are necessary for him/her to carry out his/her professional day to day work competently. Evaluation will be carried out on an objective basis.

There shall be **two main examinations** in a year to be held not later than 6 months after the publication of its results except at the end of the eighth semester where **supplementary examination enabling the final year students to appear for the arrear subjects.**



A student who has appeared and passed any course is not permitted to reappear in the course / exam for the purpose of improvement of the Grades.

### **15.10 Supplementary Examination**

After the publication of Eighth semester results, a supplementary exam will be offered to students who have failed or absent in any courses in eighth semester but eligible to write the semester examinations. Interested students should register for the supplementary exams required by them. Controller of Examinations (CoE) will publish a schedule of supplementary examinations after the last date of registering for the supplementary examinations. The pattern of evaluation will be the same as that of end semester examinations.

A student who has appeared and passed any course is not permitted to re-enroll / reappear in the course / exam for the purpose of improvement of the Grades.

### **15.11 Passing Requirements**

A candidate who secures not less than 50% of total marks prescribed for the courses with a minimum of 45% prescribed for the end examination in both theory and practical courses including project work and 36 % prescribed for the IA shall be declared to have passed the Examination.

For students scoring less than the passing minimum marks in the end semester examinations, the term "**RA**" against the concerned course will be indicated in the grade sheet. The student has to reappear in the subsequent end semester examinations for the concerned course as arrears.

The letter grade "**RA**" will be indicated in the grade sheet for courses for which the student has insufficient attendance. In case of a student having **shortage of attendance the student shall re-do** the course as a vacation term course (Clause 15.12) or in the regular semester as the case may be.

For a student who is absent for theory/practical/ project viva- voce, the term "**AB**" will be indicated against the corresponding course. The student should reappear for the end semester examination of that course as arrear in the subsequent semester.

The letter grade "**RA**" will be indicated for the courses for which the student has been granted authorized withdrawal / break of study as per clause 12.

If a candidate fails to secure a pass in a particular course, it is mandatory that he/she shall register and reappear for the examination in that course during the subsequent semester when examination is conducted in that course. He/She should continue to register and re- appear for the examinations in the failed subjects till he / she secures a pass.

### **15.12 Vacation Term Course**

**15.12.1** A Vacation term course may be offered by a department on the recommendation of the Head of the Department and the approval of the Principal.

**15.12.2** Vacation term courses are offered only to those students who had taken the courses earlier and had obtained '**RA**' Grades including students who could not appear in university examinations due to shortage of attendance in the semester.

**15.12.3** No student should register for more than three courses during a Vacation term.

**15.12.4** Vacation term courses will be announced by the Principal at the end of the even semester before the commencement of the end semester examinations. A student will have to register within the time stipulated in the announcement by paying the prescribed fees.

**15.12.5** The number of contact hours and the assessment procedure for the vacation term course will be the same as the regular semester course.

15.12.6 Withdrawal from a vacation term course and examination is not permitted.

## 15.13 Examiners

### 15.13.1 Theory Courses

No person shall be appointed as an examiner in any of the subjects of the Professional examination leading to and including the projects for the award of the B.TECH. degree unless he/she has **at least five year experience in teaching, a doctorate degree of a recognized university or an equivalent qualification in the particular subject as per recommendation of the council on teachers.**

15.13.1.1 External examiners shall not be from the same institution.

15.13.1.2 External examiners shall rotate at an interval of 3 years.

15.13.1.3 There should be a separate set of examiners for each constituent engineering college of the University with internal examiners from the concerned college.

### 15.13.2 Practical Courses

#### 15.13.2.1 Submission of Laboratory Record Note Books

At the time of practical each candidate shall submit his/her laboratory record note books duly certified by the Head of the Department /Institution as the bonafide record of the work done by the candidate to the Examiners. **The practical record shall be evaluated by the concerned Internal and External Examiner.**

15.13.2.2 At the time of practical each candidate shall submit his/her laboratory record note books duly certified by the Head of the Department /Institution as the bonafide record of the work done by the candidate to the Examiners. **The practical record shall be evaluated by the concerned Internal and External Examiner.**

15.13.2.3 In respect of candidates failed in Practical Courses due to poor performance or absent, Internal Assessment Marks awarded in the semester will be carried over for the subsequent examination.

15.13.2.4 Candidates coming under the **Clause 15.13.2.3** and candidates scored less or mere passing marks in Practical Courses in the semester will be having the **option to improve his / her IA Marks by fulfilling the criteria mentioned in 15.6.2.2 for award of IA Marks and submission of required fee.**

## 16. RESULTS & READMISSION TO EXAMINATION

16.1 The University may ensure that the results of the examinations are published in time so that the student who successfully completes B.TECH. Examination can complete the course within stipulated time prescribed by the regulation.

16.2 A student who fails in the Examination shall be allowed to appear in next higher Semester examination

16.3 The student may carry over his/her subject(s) as arrear(s) till his/her end of the course.

16.4 The University may under exceptional circumstances, partially or wholly cancel any examination conducted by it, shall intimate to the Academic Council of the University and arrange to conduct the re-examination in those subjects within the period of 30 days from the date of such cancellation.

### 16.5 Grace Marks

Grace marks will be awarded after the approval of the Vice - Chancellor based on the recommendation of the Result Passing Board constituted by the Vice - Chancellor.

### 16.6 Methods for Redressal of Grievances in Evaluation of Answer Scripts

Students who are not satisfied with the grades awarded can seek redressal by the methods given below.

| Redressal Sought                           | Methodology  |
|--|--|
| Request for Photocopy of answer script.    | A student can apply to CoE within 5 days of declaration of result along with the payment of the prescribed fee.                |
| Request for reevaluation of answer script. | A student can apply to CoE within 5 days of obtaining photocopy of answer script along with the payment of the prescribed fee. |

## 17. CLASSIFICATION OF PERFORMANCE

Classification of performance of students in the examinations pertaining to the courses in a programme is done on the basis of numerical value of Cumulative Grade Point Average (CGPA). The concept of CGPA is based on Marks, Credits, Grade and Grade points assigned for different mark ranges. The following Table shows the relation between the range of marks, Grades and Grade points assigned.

| Grade | Grade Points(GP) | Range of percentage of Marks | Class                        |
|-------|------------------|------------------------------|------------------------------|
| O + + | 10               | 95 – 100                     | FIRST CLASS WITH DISTINCTION |
| O +   | 9.5              | 90 – 94                      |                              |
| O     | 9                | 85 -89                       |                              |
| A + + | 8.5              | 80 – 84                      |                              |
| A +   | 8                | 70 – 79                      |                              |
| A     | 7                | 60 - 69                      | FIRST CLASS                  |
| B +   | 6                | 55 - 59                      | SECOND CLASS                 |
| B     | 5.5              | 51 - 54                      |                              |
| C     | 5                | 40 - 50                      | MINIMUM PASS                 |
| AB    |                  |                              | REAPPEAR                     |
| RA    |                  |                              |                              |

A student is deemed to have passed and acquired the corresponding credits in a particular course if he/she obtained any one of the following grades: ‘O + +’, ‘O +’, ‘O’, ‘A + +’, ‘A +’, ‘A’, ‘B +’, ‘B’ and ‘C’ as mentioned above with an **aggregate percentage merely of 50 for MINIMUM PASS.**

The grade 'RA' denotes Failed in the particular subject(s) which requires Reappearance (RA) for that particular course in the subsequent examinations. The grade 'RA' will figure in Result sheets and Grade Sheets.

The grade 'RA' denotes Failed in the particular subject(s) because of insufficient attendance which requires Reappearance (RA) for that particular course in the subsequent examinations. The grade 'RA' will figure in Result sheets and Grade Sheets as mentioned in clause 15.11.

The letter grade 'AB' denotes Eligible to write the particular subject(s) but absent for that subject(s) which requires Reappearance (RA) for that particular course in the subsequent examinations.

#### **17.1 Semester Grade Point Average (SGPA)**

On completion of a semester, each student is assigned a Semester Grade Point Average which is computed as below for all courses registered by the student during that semester.

$$\text{Semester Grade Point Average (SGPA)} = \frac{\sum(C_i \times G_i)}{\sum C_i}$$

Where  $C_i$  is the credit for a course in that semester and  $G_i$  is the Grade Point earned by the student for that course. The SGPA is rounded off to two decimals.

#### **17.2 Cumulative Grade Point Average (CGPA)**

The overall performance of a student at any stage of the Degree programme is evaluated by the Cumulative Grade Degree programme is evaluated by the Cumulative Grade Point Average (CGPA) up to that point of time.

$$\text{Cumulative Grade Point Average (CGPA)} = \sum_j \left\{ \frac{\sum_i (C_{ij} * G_{ij})}{\sum_i C_{ij}} \right\}$$

### **18. CRITERIA FOR AWARD OF DEGREE**

A student shall be declared to be eligible for the award of the B.TECH. Degree provided the student has successfully completed the course requirements and has passed all the prescribed examinations in all the Eight semesters (Six semester for lateral entry) within a maximum period of 8 years (6 years for lateral entry) reckoned from the commencement of the first semester to which the candidate was admitted.

### **19. CLASSIFICATION OF SUCCESSFUL CANDIDATES FOR AWARD OF DEGREE**

A student shall be declared to be eligible for the award of the degree if he/she has satisfied the following:

**19.1** A student seeking B.Tech. degree shall be required to undergo the prescribed courses of study and evaluation in the college for the specified duration and to pass all the examinations prescribed therefore.

**19.2** He / she should register for all the courses prescribed in the curriculum of the respective degree programme and earn the minimum number of credits (180 credits for regular admission students and 130 credits for lateral entry admission students).

**19.3** The maximum time limit for the completion of the B.Tech Degree programmes will be 8 (Eight) years from the date of admission to the first semester of the programme and 7 (Seven) years for the lateral entry students from the date of admission to the third semester of the programme.

**19.4** The student completes the NCC / NSS /Sports requirements.

19.5 No disciplinary action pending against the student.

## 20. CLASSIFICATION OF THE DEGREE AWARDED

### 20.1 First class with Distinction

A student who qualifies for the award of degree (vide clause 18) having passed the examination in all registered courses in his / her first appearance (including industry supported courses), **within FIVE years (FOUR Years for Lateral Entry students) including the authorized Break of Study of One Year, and securing a CGPA of not less than 8.00 shall be declared to have passed in First class with distinction and should not have been prevented from writing end semester examination due to lack of attendance in any of the courses. The authorized break of study (vide clause 12) will not be counted as an attempt.**

### 20.2 First Class

A student who qualifies for the award of degree (vide clause 18) having passed the examination in all the courses within **FIVE years (FOUR Years for Lateral Entry students) including the authorized Break of Study of One Year and securing a CGPA of not less than 7.0 shall be declared to have passed in First class and should not have been prevented from writing end semester examination due to lack of attendance in any of the courses. The authorized break of study (vide clause 12) will not be counted as an attempt.**

### 20.3 Second Class

**All other students (not covered in 20.1 and 20.2) who qualify for the award of degree having passed the examination in all the courses and fulfilling the requirements given in clause 18 above shall be declared to have passed in Second Class.**

## 21. CHANGE OF PROGRAMME OF STUDY / BRANCH

A provision is incorporated to allow students to change his / her programme of study / branch. A student may be allowed to change his / her programme of study / branch upto commencement of 3rd semester.

## 22. DISCIPLINE

**Every student is required to be disciplined and maintain decorum both inside and outside the college campus.** They should not indulge in any activity which can bring down the reputation of the University or College. **The Principal shall constitute a disciplinary committee consisting of Principal, Two Heads of Departments (of which one should be from the faculty advisor of the student) to enquire into acts of indiscipline and notify the Academic Council about the disciplinary action taken.**

## 23. RANKING

**Students obtaining top 3 positions or top 10% in CGPA ranking (whichever is higher) in a branch will be considered as a rank holder. They should have passed all the prescribed courses in the first appearance and should have obtained a CGPA of 8.0 and above. The student should also have a clean record of discipline during the period of study. Special certificates will be given to rank holders. There should be at least five candidates for ranking in particular discipline.**

**24. AWARD OF DEGREE**

The award of Degree will be approved by the Academic Council of the University. The degree and consolidated Grade Sheet will be issued by Vinayaka Missions University.

**25. MODIFICATIONS OF REGULATIONS**

These regulations are subject to modifications from time to time as per the decisions of the apex body of the University.

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