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

SALEM, TAMILNADU, INDIA

BACHELOR OF ENGINEERING/TECHNOLOGY (B.E / B.TECH.)

DEGREE PROGRAMME - PART 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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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 regulations pertaining to the undergraduate Programme and the award of the Degree of Bachelor of Engineering/Technology (B.E. / B.TECH.) at this University.

1.   TITLE AND COMMENCEMENT

These regulations shall be called "**REGULATIONS FOR BACHELOR OF ENGINEERING/TECHNOLOGY (B.E / B.TECH.) - PART TIME DEGREE PROGRAMME – 2017 (R2017)"**.

These regulations **come into force with effect from 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 Engineering/Technology (B.E / 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.

3.   DEFINITIONS AND NOMENCLATURE

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

    i.   "MHRD" means Ministry of Human Resources Development.

    ii.   "UGC" means University Grants Commission.

    iii.   "AICTE" means All India Council for Technical Education.

    iv.   "University" means Vinayaka Mission's Research Foundation (Deemed to be University),

Salem.

v. "Vice Chancellor or VC" means Vice Chancellor of the University.
vi. "Board of Management or BoM" means Board of the Management- the highest governing body of the University.
vii. "Academic Council or AC" means Academic - Council the highest academic body of the University, chaired by the Vice Chancellor.
viii. "Board of Studies or BoS" means Board of Studies of the University under the Faculty of Engineering and Technology.
ix. "CoE" means Controller of Examinations of the University.
x. "Dean" means Dean for the Faculty of Engineering and Technology of the University.
xi. "Institution or College" means Engineering College constituted under University.
xii. "Programme" means Under Graduate Programme leading to the award of Degree B.E./B.TECH. approved by the UGC, AICTE and University.
xiii. "Branch" means specialization or discipline of B.E./B.TECH. Degree Programme, such as Mechanical Engineering, Electronics and Communication Engineering etc.
xiv. "Course" means every paper/subject of study offered by various departments.
xv. "Credit" is the Course work which is measured in units, based on hours conducted/week and content of course.
xvi. "Head of Institution or HoI" means Principal of the Constituent Engineering College of the University.
xvii. "HoD" means Head of the Department of the College.
xviii. "Curriculum and Syllabus" means 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 concerned Academic Council (AC) based on the UGC/AICTE regulations.
xix. "Teaching Staff or Teacher" means The Dean of Faculty, The Principal of the college, Professors, Associate Professors, Assistant Professors, Pro-term Lecturers and other persons engaged in teaching of the students and assisting the students in the conduct of studies and Research in the College/University.

4. QUALIFICATION AND ELIGIBILITY CRITERIA FOR ADMISSION

Candidates seeking admission to the first semester of the B.E / B.Tech. (Part-Time – 7 Semesters) degree programme shall be required to have passed the Diploma in Engineering / Technology in the relevant branch of specialization as mentioned below and awarded by the State Board of Technical Education or any other authority accepted by the Academic Council of the Vinayaka Mission's Research Foundation, Deemed to be University, Salem.

4.1 DEGREE AND BRANCH / QUALIFICATION FOR ADMISSION.

A candidate may be offered, at the time of admission, one of the following disciplines of study, subject to his / her eligibility and availability of the course.

Sl. No.	Degree and Branch of Study	Qualification for Admission
1.	B.E./B.Tech. in Civil Engineering	Diploma in Civil Engineering/ Civil Engineering in Sanitary Engineering / Civil and Rural Engineering

2.	B.E./B.Tech. in Mechanical Engineering	Diploma in Mechanical Engineering / Metallurgy /Automobile Engineering / Mechanical and Rural Engineering / Machine Tool Maintenance and Repairs / Machine Design and Drafting /Refrigeration and Air- conditioning / Production Engineering / Tool and Die Design
3.	B.E./B.Tech. in Electrical and Electronics Engineering	Diploma in Electrical Engineering / Electrical and Electronics Engineering / Electronics Engineering / Electronics and Communication Engineering
4.	B.E./B.Tech. in Electronics and Communications Engineering	Diploma in Electronics Engineering / Electronics and Communication Engineering / Electrical Engineering / Instrument Technology / Electronics with specialization in Instrumentation / Electrical and Electronics Engineering
5.	B.E./B.Tech. in Computer Science and Engineering	Diploma in Computer Science / Electronics and Communication Engineering / Electrical and Electronics Engineering / Instrumentation Engineering.

Note:

(i) The Courses of study shall include theory and practical courses as specified in the respective curriculum.

(ii) The medium of instruction is **English** for all courses, examinations, seminar presentations and project/thesis/dissertation reports.

(iii) The Curricula and Syllabi of all the Under Graduate Part-Time Degree Programmes shall be approved by the Academic Council of University.

(iv) The number of credits to be earned for the successful completion of the Programme shall be as specified in this regulations.

4.2 ELIGIBILITY

Candidates seeking admission shall satisfy the following conditions:

(i) Candidate should have completed the age of 17 years at the time of admission or would complete the age on or before 31st December of the year of admission to the first year B.Tech Part Time course.

(ii) Eligibility conditions such as class obtained, marks and number of attempts shall be as prescribed by the Academic Council of the Vinayaka Mission's Research Foundation Deemed to be University, Salem from time to time.

(iii) For the candidates who have studied abroad, equivalency of qualifications determined by the Association of Indian Universities, shall form the guidelines to determine the eligibility and should have passed in the subjects of Mathematics, Physics, Chemistry and English up to the 12th Standard level.

(iv) Shall have been employed for at least two years **after qualifying for the** award of degree **Diploma in respective discipline of engineering**. The period being counted as on 1st January of the academic year in which admission is sought.

(v) Notwithstanding the qualifying examination the candidate might have passed a minimum level of proficiency in Mathematics, Physics, Chemistry and the relevant

branch of study as may be prescribed by the University from time to time.

    (vi)   Shall have employment or work place within a radial zone of 90 Km from the University / College Campus.

    (vii)   Shall have to satisfy the conditions of physical fitness as prescribed by the Academic Council of the University.

    (viii)   The ruling of the Eligibility Committee shall be adapted for any criteria which are not covered in above provisions.

    (ix)   Candidates who have passed any qualifying examination shall obtain an eligibility certificate from the University by remitting the prescribed fees along with the application form before seeking admission to the Institution.

4.3 MIGRATION

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. The eligibility criteria decided by Academic Council time to time will be applicable for these students.

5. ADMISSION

Guidelines issued time to time for admission of students in educational institutions by State Govt. of Tamil Nadu and All India Council for Technical Education (AICTE) is adhered and followed strictly for admission of eligible students to various Under Graduate programmes.

6. REGISTRATION OF CANDIDATE IN UNIVERSITY

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

    i.   The duration of the programme shall be seven consecutive semesters, spread over 3.5 academic years, (one academic year consisting of 2 semesters).

    ii.   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.

8. EXTENSION OF MAXIMUM DURATION

A student is ordinarily expected to complete the B.E / B.Tech. (Part – time - 7 semesters) degree programmes in seven semesters (three and half academic years) but in case of some emergent situations (medical reasons, natural calamities etc.), if the candidate could not complete the course requirements successfully, he / she has to pass the examinations in all the courses prescribed in the respective curriculum within a maximum period of 14 Semesters (7 academic years) reckoned from the commencement of the first semester to which the candidate was admitted. This maximum period shall be 16 semesters in the case of women candidates.

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 classes shall commence in the month of August.

10.   WORKING DAYS IN AN ACADEMIC YEAR

Each semester normally consists of **75 working days** including Tests, Model exams and Practicals. The academic year is divided into **two Semesters**, **odd semester normally spanning from June to November and the even semester from January to May.**

11.   BREAK OF STUDY – MAXIMUM ONE YEAR

i.   Maximum **two semesters or One Year break of study** will be allowed in the entire duration of the course for genuine reasons like serious health problems and calamitous family situations.

ii.   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).

iii.   **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.   CHANGE OF PROGRAMME OF STUDY / BRANCH

A student may opt for change of his/ her programme of study / branch i.e. one programme to another programme. In general, most of the common courses are prescribed in first semester only; this option is admissible maximum up to commencement of 2nd semester only. Even in the midst of 2nd semester, exercising of this option is not feasible.

13.   DISCIPLINE

i.   Every student is required to be disciplined and maintain decorum both inside and outside the college campus.

ii.   Students should not indulge in any activity which can bring down the reputation of the University or College.

iii.   The Principal shall constitute a disciplinary committee consisting of Principal, two Heads of Departments, and faculty advisor of the student and others as per the discretion of Principal to enquire into acts of indiscipline and notify the Academic Council about the disciplinary action taken.

14.   PROGRAMMES OF STUDY – B.E./B.TECH DEGREE AND STRUCTURE OF COURSES – SCBCS AND OBE

i)   Programmes

Every student shall undergo a period of certified study extending over three and half academic years allocated into 7 semesters with the duration of six months period from the date of commencement of his/her study for the courses comprising the Engineering/Technical curriculum to the date of completion of the examination.

Sl.No.	Degree	Programme
1.	B.E / B.Tech.	Computer Science and Engineering
2.	B.E / B.Tech.	Civil Engineering
3.	B.E / B.Tech.	Electronics and Communication Engineering
4.	B.E / B.Tech.	Electrical and Electronics Engineering
5.	B.E / B.Tech.	Mechanical Engineering

ii)   Structured Choice Based Credit System (SCBCS)

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.

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. 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.

iii)   Outcome Based Education (OBE)

Outcome Based Education (OBE) is an educational theory that bases each part of an educational system around goals (outcomes). By the end of the educational experience, each student should have achieved the goal. There is no single specified style of teaching or assessment in OBE; instead, classes, opportunities, and periodic assessments should all help students achieve the specified outcomes. The role of the faculty adapts into instructor, trainer, facilitator, and/or mentor based on the outcomes targeted.

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.

Outcomes of OBE

(a)   Clarity

The focus on outcomes creates a clear expectation of what needs to be accomplished by the end of the course. Students will understand what is expected of them and teachers will know what they need to teach during the course. Clarity is important over years of student's academic tenure and when team teaching is involved. Each team member will have a clear understanding of what needs to be accomplished in each class, or at each level, allowing students to progress. Those designing and planning the curriculum are expected to work backwards once an outcome has been decided upon; they must determine what knowledge and skills will be required to reach the outcome.

(b)   Flexibility

With a clear sense of what needs to be accomplished, teachers will be able to structure their lessons around the student's needs. OBE does not specify a specific method of instruction and it provides freedom to the teachers to teach the   student using any method.

Teachers will also be able to recognize diversity among students by using various teaching and assessment techniques during their class. OBE is meant to be a student centered learning model. Teachers are meant to guide and help the students understand the material in any necessary way, study guides, and group work are some of the methods teachers can use to facilitate students learning.

(c)   Involvement

Student involvement in the classroom is a key part of OBE. Students are expected to do their own learning, so that they gain a full understanding of the material. Increased student involvement allows students to feel responsible for their own learning, and they should learn more through this individual learning. Other aspects of involvement are parental and community, through developing curriculum, or making changes to it. OBE outcomes are meant to be decided upon within the college system, or at a local level. Parents and community members are asked to give input in order to uphold the standards of education within a community and to ensure that students will be prepared for life after college.

15.   Curriculum Design and Components

The curriculum shall be submitted to the Academic Council for approval 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) framework. The content of each course and Course Outcomes (CO) are well mapped with Program Outcomes (PO) and Program Specific Outcomes (PSO)**

The details of structure of courses and range of credits (Minimum and Maximum Credits to be earned by students) for each category are as described below.

CREDIT STRUCTURE OF COURSE CATEGORY

Sl. No.	Category of Courses	Credits to be earned Min – Max.
01	**A. Foundation Courses (FC)**	**12 - 18**
	i. Humanities and Sciences (English and Management Courses)	3 – 6
	ii. Basic Sciences (Maths, Physics and Chemistry Courses)	9– 12
02	**B. Core courses (CC) relevant to the chosen programme of study.**	**77**
03	**C. Elective Courses (EC)**	**12 - 18**
	i. Programme Specific (Class Room or Online)	9 – 12
	ii. Open Elective (Class Room or Online)	3 - 6

04	D. Project	6
	Minimum Credits to be earned for awarding of Degree	**107**

Credits earned in categories A to D would be mentioned in Mark sheets and will be used for overall CGPA Calculations.

i) **Components of Curriculum**

(a) **Category A - Foundation Courses (FC) (Min – 12 & Max 18 Credits)**

The student has to choose the course belongs to Humanities and Sciences (English and Management Courses- Min – 03 & Max 06 Credits) and Basic Sciences (Maths, Physics and Chemistry Courses - Min – 09 & Max 12 Credits) fulfilling the criteria of minimum and maximum credit to be earned. The credits earned in this category will be used for overall CGPA calculation.

(b) **Category B - Core Courses relevant to the Programme (77 Credits)**

The courses related to the Programme have been specified during board of studies. The students have to choose the course as per their convenience and with consultation of faculty advisor. **It is mandatory for a student to earn 77 Credits in core courses.** The credits earned in this category will be used for overall CGPA calculation.

(c) **Category C - Elective Courses (EC) (Min 12 & Max 18 Credits)**

The courses under this category are grouped under two categories:

(i) **Programme Specific Elective (Min 09 & Max 12 Credits)**

Programme Specific electives are courses offered by the same department relevant to the **core or specialization**. These courses may or may not have any prerequisites and can be chosen as and when required by students. **The students have to select electives from the list specified in respective board of studies**. The credits earned in this category will be used for overall CGPA calculation. The students may earn credits through successful completion of MOOCs, NPTEL, SWAYAM and other online courses. The credits earned as mentioned in the certificate issued will be transferred for overall CGPA calculation and will be reflected in the marks statement.

(ii) **Open Elective (Min 03 & Max 06 Credits)**

A student should earn minimum 03 Credits and maximum 06 Credits by undergoing Open Elective interdisciplinary courses offered by other departments. Course offered under this category should not have pre-requisite conditions. The course will be offered with the approval of both Head of the Departments. The credits earned in this category will be used for overall CGPA calculation. The students may earn credits through successful completion of MOOCs, NPTEL, SWAYAM and other online courses. The credits earned as mentioned in the certificate issued will be transferred for overall CGPA calculation and will be reflected in the marks statement.

(d) **Category D - Project (06 Credits)**

The student has to earn 6 credits compulsorily by doing a quality project depicting his knowledge in his/her domain in 7th Semester. Project work cannot be undertaken before and has to be completed in 7th semester only. The credits earned in this category will be used for overall CGPA calculation.

16. Course Design - Bloom's Taxonomy

Bloom's taxonomy is a set of **three (cognitive, affective and psychomotor domain) hierarchical models** used to classify **educational learning objectives** into **levels of complexity and specificity**. The three models cover the learning objectives in cognitive, affective and sensory domains. The cognitive domain list has been the primary focus of most traditional education and is frequently used to structure curriculum learning objectives, assessments and activities.

Each course contents are structured to fulfil the requirement of learning objectives and course outcomes with respect to "**Remember, Understand, Apply, Analyze, Evaluate, and Create" which covers all the three models of Bloom's taxonomy for achieving the targets specified in Program Outcomes.**

17. COURSE CODE

Courses are assigned with a Course Code which is based on year of regulation (first two digits), two letters alphabetical code of offering department like ME for Mechanical Engineering, AR for Aeronautical Engineering etc., category (HS for Humanities & Sciences, BS for Basic Sciences, ES for Engineering Sciences, EC for Elective Courses, SE for Specialisation Elective Courses etc.) which it belongs followed by two numerical digits which is based on the order of the course in the category of courses (starts from 01 for theory courses and 81 for Practical Courses).

For Example:

Course Name	Year of Regulation	Offering Department	CATEGORY	Order of the Course	CODE
Engineering Mathematics	2017	Mathematics (MA)	Basic Science (BS)	01	17MABS01
Technical English	2017	English (EG)	Humanities & Sciences (HS)	01	17EGHS01
English Language Lab	2017	English (EG)	Humanities & Sciences (HS)	81	17EGHS81
Essentials of Computing	2017	Computer Science (CS)	Engineering Sciences (ES)	01	17CSES01
Engineering Mechanics	2017	Mechanical (ME)	Core Courses (CC)	01	17MECC03
Engine Testing Lab	2017	Aeronautical (AR)	Core Courses (CC)	85	17MECC85

18. REGISTRATION OF COURSES – EVEN / ODD SEMESTER

a.   The students will register courses to be studied in semester (Even / Odd) with their department in first week of commencement of semester or whenever it is asked for. The selection of courses should satisfy the credit structure of courses as per the components of curriculum. A prior confirmation of offering of the course is to be obtained from respective HoD for open electives. Faculty advisor will assist and provide necessary guidance to the students for planning and selection of courses.

b.   In a semester (Even / Odd), a student can register fresh courses to be studied in the semester for minimum 14 Credits and maximum 30 credits. The criteria for registration of courses for minimum 14 will not be applicable for those students who are having less than 14 credits to be earned for awarding of degree. In such cases, the students will be allowed to register for the remaining courses for less than 14 credits. The limit of Maximum 30 credits do

not include courses of reappearance i.e. 'RA' grade in courses awarded in previous attempt. The students are having liberty in registration of any number of courses in which 'RA' grade is obtained. Courses of reappearance with 'RA' grade will be considered as arrears. Students have to register afresh for exams of courses they have not passed in previous semesters.

c. The students are at liberty to drop the course (except pre-requisite courses) in which reappear "RA" grade is obtained and can choose a new course. The student may attend the class when the course is offered in the department but it is not mandatory.

d. The students must fulfil the requirement of attendance percentage in Pre-requisite courses in a semester before choosing other courses for which Pre-requisite condition is specified in subsequent semesters.

e. Internal Assessment (IA) Marks already awarded for the courses studied including pre-requisite courses will be taken into consideration and valid for three attempts only. The students, if they wish, can apply for the improvement of IA Marks of the courses to CoE Office through HoI by paying required fee. The student will be awarded with improved IA after submission of fresh assignments and appearing in internal exams conducted by faculty in-charge for that particular course. Improved IA marks with required fee should be forwarded to CoE office through HoI.

19. Medium of Instruction

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

20. Course Evaluation in a Semester

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 2 seminar/week is equivalent to 1 credit. The number of periods or hours of a course per week is the number of credits for that course. Accordingly, the course is designed and assigned with 1, 2, 3 and 4 Credits.

The total number of credits a student earns during the course of study period will be called the **total credits earned**. For successful completion of B.E / B.Tech. Part Time Degree Programme, a student must earn minimum 107 credits. **Overall CGPA will be calculated out of 107 Credits in 7 semesters.**

21. Academic Structure

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 inform parents periodically about the progress of the students. The faculty advisor maintains a diary regarding his/her student profile.

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. Members of the class committee will be consisting of one Chair- person (a teacher who is not normally teaching any course for the class), all teachers handling courses for the class, and Students (minimum of 4 students consisting of 2 boys and 2 girls on pro-rata basis). Duties and responsibilities 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 assessment examinations and the syllabus coverage for each assessment.

iii. Inform the student representatives 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 etc. 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 help/guidance/coaching to such students.

vi. Discuss and sort out other 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 class committee meeting. The Principal may participate in class committee meetings in the department.

viii. 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.

ix. 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 guidelines 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**

Generally, in 1st and 2nd semester, common courses are offered to maximum students. Each common course offered to more than one class / branch by more than one teacher shall have a course committee comprising of 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.

22. UNIVERSITY EXAMINATIONS

a)   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. There shall be two main examinations in a year to be held not later than 6 months after the publication of results.

b)   The duration of the Examination should be 3 hours. The maximum marks for each and every question paper is 100 marks. The Evaluation will be for 100 marks for each course, followed by conversion of marks for out of 50 as external assessment which will be added with IA Mark (out of 50) and result will be declared by CoE as per the grades specified.

c)   A student who has appeared and passed in any course is not permitted to reappear in the examination of that course for improvement of the Grades. However, he / she may apply for revaluation of answer script by paying prescribed fee.

d)   Admission to Examinations

No candidate shall be permitted to appear for the Examination unless he/she secures 75% of overall attendance in that semester. If a candidate fails to satisfy the requirement of 75% attendance, he/she is required to repeat that incomplete course(s) whenever offered.

Note: All students are expected to attend all classes and secure 100% attendance. The above provision of minimum 75% attendance is made to compensate 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.

Examination applications completed in all respect will be forwarded by HoI of constituent colleges to office of Controller of Examinations, Vinayaka Mission's Research Foundation, Deemed to be University for further necessary action.

e)   Submission of Students Attendance to CoE

The Head of the Institutions of the Constituent Colleges has to furnish attendance particulars of students specifying the number of working days attended by them to the Controller of Examinations of the University.

The final attendance particulars of students for registration of students for semester ending university examinations 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 in the Examination.

f)   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 examination in that course.

g) **Condonation**

Due to unavoidable situations and beyond control of the student, if a student could not fulfill minimum attendance requirement, a student who has an attendance between 65% and 74% will be allowed to write the semester ending university examinations provided the student pays the condonation fees as prescribed by the University from time-to-time.

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 and no condonation fee has to be paid by students attending extra - curricular and co-curricular activities.

iv. Any other reason, Head of Institution deems reasonable for Condonation.

23. **Assessment and Evaluation – Internal and External**

a) The Institution / University shall ensure that the required number of hours for lecture / practical / seminar etc., in the courses of B.E / B.Tech. are completed and examinations are to be conducted as specified in the regulations.

b) The Institution / University shall ensure that the students of the colleges, who do not fulfil the minimum requirements of Regulations for Engineering / Technology, should not be permitted to appear in the semester ending university examinations.

c) Examination for Theory and practical courses shall be of three hours duration each.

d) **Methods of Assessment / Evaluation**

Evaluation of students will be done by conducting written tests, practical's, mini projects, seminars, viva voce etc. It is achieved by following two independent processes of assessment.

i) Formative or Internal Assessment (IA) is done through Continuous Assessment Tests (CATs) and Model examination conducted by the institution. Minimum Passing Marks – 35% i.e. 18 out of 50 Marks.

ii) Summative or External Assessment (EA) is done by evaluation of performance in semester ending university examinations conducted by CoE. Minimum Passing Marks – 45% i.e. 23 out of 50 Marks.

e) **Internal Assessment**

i. Weightage for the internal assessment shall be 50% of the total marks in each course.

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.

iv. The IA Marks shall be based on day to day assessment, evaluation of student assignment, preparation for seminar, Internal/Model/ Online test etc.

v. Internal assessment shall relate to different ways of student's participation in learning process during semesters. For example, Preparation of courses for seminar, tutorials, problem solving exercises, participation in Project Contests in the Engineering / Technology, skill and proficiency in carrying out small research project, Multiple Choice Questions (MCQ) test etc.

vi. Each Assessment mentioned above is examined and recorded. Some of the assessment can be assigned as Home work/ Vacation work.

vii. The continuous 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.

viii. 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.

ix. It is mandatory for a student to secure minimum 18 marks i.e. 35% out of 50 marks i.e. 35% in Internal Assessment in all courses registered in that semester.

x. The students have to register courses including arrears afresh in every semester including pre-requisites. Internal Assessment (IA) Marks already awarded for the courses studied including pre-requisite courses will be taken into consideration and valid for three attempts only. The students, if they wish, can apply for the improvement of IA Marks of the courses to CoE Office through HoI by paying required fee. The student will be awarded with improved IA after submission of fresh assignments and appearing in internal exams conducted by faculty in-charge for that particular course. Improved IA marks with required fee should be forwarded to CoE office through HoI.

g) **Parameters for Awarding Internal Assessment (IA) Marks**
i. **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 s e m e s t e r, the Record should be verified by the Principal.

The marks allocated for attendance in Internal Assessment (IA) marks is as follows.

% of Attendance	Marks
Less than and Equal to 75	0
76 - 80	1
81 - 85	2
86 - 90	3
91 - 95	4
96 - 100	5

ii.   IA MARKS CALCULATION

   a)   Theory Course

   Internal Assessment for Theory Course

S. No	Components for Internal Assessment Marks	Duration (in minutes)	Maximum Marks
1.	Two Continuous Assessment Tests (CAT) I, II	90	20
2.	Model Exam	180	15
3.	Assignment / Seminar/ Online test/ Mini Project	-	10
4.	Attendance	-	05
	Total Marks		**50**

   b)   Practical Courses

   Practicals will be conducted in the laboratories. The objective will be to assess proficiency in skills to conduct experiment, interpretation of data and logical conclusion. 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.

   University Practical examination will be evaluated jointly by one internal examiner and one external examiner appointed by the Controller of Examinations. The Evaluation will be for 50 marks.

Internal Assessment for Practical Course

S. No	Items	Duration (in minutes)	Maximum Marks
1.	Observation & Record		20
2.	Model Practical	180 Minutes	25
3.	Attendance		05
		Total Marks	**50**

iii. **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.

iv. **Project Work**

The evaluation of the project work completed in 8th Semester 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.

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.

24. **Question Paper Pattern for Theory Courses**

a) **Theory Courses**

i. The examinations and question papers are to be designed to cover Bloom's taxonomy with a view to ascertain whether the candidate has acquired the necessary knowledge, minimum skills along with clear concepts of the fundamentals in different levels (Remember, Understand, Apply, Analyse, Evaluate and Create) prescribed 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.

ii. The **question paper pattern** must consist of questions in proportion as an assessment of performance of student in different levels. Questions with choice in **EITHER–OR** form should be of same level.

iii. The Question paper setter must apply the concepts mentioned below while setting the question paper for a course.

Sl. No.	Cognition Level (Bloom's Taxonomy)	Description	Percentage distribution recommended
a)	LOCQ – Lower order cognitive questions	Covering questions for testing the remembering and understanding of the concepts by the students.	20-30%
b)	IOCQ – Intermediate order cognitive questions	Covering questions that test the applying and analyzing skills of students.	40-50%
c)	Psychomotor Level	Covering questions that test the evaluating and creating abilities of the students with respect to their knowledge.	30-40%

iv. HoI may provide set of questions on each level for a course prepared by respective course handler to CoE if requested for. A common pattern will be followed for each theory courses except some industrial electives for which multiple choice questions (MCQ) are prescribed by respective industry.

25. 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.

26.　　Examiners

Panel of examiners for theory, practical and Project work evaluation will be approved by academic council of the university based on recommendations of the concerned Board of Studies (BOS).

27.　　Passing Requirements

A candidate securing not less than 50% of total marks (IA + EA) prescribed for the course in both theory and practical courses including project work in the semester ending university examinations will be declared to have passed the Examination.

28.　　RESULTS & READMISSION TO EXAMINATION
i. The University may ensure that the results of the examinations are published in time so that the student who successfully completes B.E / B.TECH. Examination can complete the course within stipulated time prescribed by the regulation.
ii. A student who fails in the examination shall be allowed to appear in next higher Semester examination.
iii. 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.
v. 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.

29.　　Redressal of Grievances in Evaluation of Answer Scripts

Students who are not satisfied with the grades awarded can seek redressal of grievances within specified time.

Redressal Sought	Methodology
Request for Revaluation of Answer Script.	Any student passed or failed, can apply through HoI to CoE VMRFDU with prescribed fee, for revaluation of answer script within 10 days from the publication of result.

30.   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.

i.   Semester Grade Point Average (SGPA)

Each student is assigned a Semester Grade Point Average (SGPA) on completion and declaration of result of a semester.

$$(SGPA) = \sum(C_i \times G_i) / \sum C_i$$

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.

ii.   Cumulative Grade Point Average (CGPA)

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

$$CGPA = \sum_j \left\{ \frac{\sum_i (C_{ij} * G_{ij})}{\sum_i C_{ij}} \right\}$$

RANGE OF MARKS, GRADES AND GRADE POINTS

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 has obtained any one of the following grades: **'O + +', 'O +', 'O', 'A + +',   'A +**

', 'A', 'B +', 'B' and 'C' as mentioned above with a minimum **aggregate percentage 50 for MINIMUM PASS**.

If the student is detained and not allowed for appearing in university examinations due to insufficient attendance, grade **'RA'** will be awarded in that particular course.

Also, if the student has not cleared the course after appearing in university examinations, grade **'RA'** will be awarded in that particular course.

If the student is absent in any of the university examinations, grade **'AB'** will be awarded in that particular course.

31.   AWARD OF DEGREE

A student shall be declared to be eligible for the award of the B.E / B.Tech. Degree provided the student has successfully completed the course requirements by earning minimum 107 credits and has passed all the prescribed examinations in all the seven semesters within a maximum period of 7 years reckoned from the commencement of the first semester to which the candidate was admitted.

32.   CLASSIFICATION OF THE DEGREE AWARDED

i.   First class with Distinction

A student who qualifies for the award of degree having passed the examination in all registered courses in his / her first appearance within FOUR AND HALF years 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.

ii.   First Class

A student who qualifies for the award of degree having passed the examination in all the courses within FOUR AND HALF years 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.

iii.   Second Class

All other students not covered above and who qualifies for the award of B.E./B.Tech. Degree having passed the examination in all the courses shall be declared to have passed in Second Class.

33.   RANKING

Students obtaining top 3 positions in CGPA ranking in a programme 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.

34.   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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