B.TECH (ENGINEERING) PROGRAMME REGULATIONS

THE REGULATION FOR BACHELOR OF TECHNOLOGY 4 YEAR DEGREE PROGRAMME*
(CHOICE BASED CREDIT SYSTEM)

INDEX

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1. INTRODUCTION

Jagan Nath University has a strong commitment to high quality teaching and research for comprehensive engineering and technology education to enhance the professional competence of the students having in depth knowledge and innovative approach. The University presently offers 4-Year B.Tech courses in (i) Civil Engineering (ii) Computer Science Engineering (iii) Electrical Engineering (iv) Electronics and Communication Engineering (v) Mechanical Engineering. The main objective of this programme is to groom the students to develop ability for critical thinking and analysis through mathematical skills, problem solving approach   and hands –on practice through case studies, project work and working in industry/ organizations. The first year of the program is foundation courses in core branches of engineering subjects with a blend of applied sciences and humanities. Third semester onwards the students undergo advanced studies and enhance their skills in the relevant branch.

Recently, the University Grants Commission (UGC) has stressed on speedy and substantive academic and administrative reforms in higher education for promotion of quality and excellence. The Action Plan proposed by UGC through its guidelines delimits the need to consider and adopt Semester System, Choice Based Credit System (CBCS) and Flexibility in Curriculum Development and Examination Reforms in terms of adopting Continuous Evaluation Pattern by reducing the weightage on the semester-end examination so that students enjoy a de-stressed learning environment.

2. TITLE AND COMMENCEMENT

2.1. This Regulation shall be called *THE REGULATION FOR BACHELOR OF TECHNOLOGY 4 Year DEGREE PROGRAMME* (CHOICE BASED CREDIT SYSTEM)*

2.2. This Regulation shall come into force with effect from the academic year 2015- 2016.

3. DEFINITIONS

a) **Programme:** means an educational programme leading to award of B.Tech 4 years Degree.

b) **Academic Year:** means Two consecutive (one odd + one even) semesters constitute one academic year.

c) **Choice Based Credit System (CBCS):** The CBCS provides choice for students to select from the prescribed courses [Core, Elective, Ability Enhancement Compulsory (AECC) & Skill Enhancement (SEC)]

d) **Course:** Usually referred to, as 'papers' is a component of a programme. All courses need not carry the same weight. The courses should define learning objectives and learning outcomes. A course may be designed to

comprise lectures/ tutorials/laboratory work/ field work/ outreach activities/ project work/ viva/ seminars/ term papers/assignments/ presentations/self-study etc. or a combination of some of these.

e) **Credit Based Semester System (CBSS):** Under the CBSS, the requirement for awarding a degree is prescribed in terms of number of credits to be completed by the students.

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

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

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

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

j) **Letter Grade:** It is an index of the performance of students in a said course. Grades are denoted by letters O, A+, A, B+, B, C, P and F.

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

l) **Semester:** Each semester will consist of 18 weeks of academic work equivalent to 90 actual teaching days and 3-4 weeks approximately of examination etc. The odd semester may be scheduled from July to December and even semester from January to June.

m) **Transcript or Grade Card or Certificate:** Based on the grades earned, a grade certificate shall be issued to all the registered students after every semester. The grade certificate will display the course details (code, title, number of credits, grade secured) along with SGPA of that semester and CGPA earned till that semester.

n) **External Examiner**: shall mean an examiner who is not is the employment of the University.

o) **Student:** shall mean a person admitted to the Faculty/ Schools of the University for any of the academic programmes to which this policy is applicable.

p) **University:** shall mean Jagan Nath University, Bahadurgarh.

q) **Internal Evaluation:** Continuous Assessment Test conducted during the semester.

r) **External Evaluation:** End-Term examination held at the end of each semester.

s) **Rounding off Marks:** shall mean, that if part is one-half or more, its value shall be increased to one and if part is less than half then its value shall be ignored for getting letter grade and grade point.

t) **Enrollment:** shall mean the student taking admission and registered for pursuing a course at Jagan Nath University.

u) **Migration:** shall mean the student of Jagan Nath University migrating to another University/Institute or the student of other University/Institute taking admission to Jagan Nath University.

4. TYPES of COURSES

Courses in a programme may be of four kinds: Core, Elective, Ability Enhancement & Skill Enhancement.

a) Core Course:-

There may be a Core Course in every semester. This is the course which is to be compulsorily studied by a student as a requirement to complete the programme in a said discipline of study.

b) Elective Course:-

Elective course is a course which can be chosen from a pool of papers. It may be

- Supportive to the discipline of study
- Providing an expanded scope
- Enabling an exposure to some other discipline/domain
- Nurturing student's proficiency/skill.

An Elective Course may be 'Discipline Centric/Specific' & Generic Elective

(i) Discipline Centric/Specific Elective(DSE): Elective courses offered under the main discipline/subject of study is referred to as Discipline Centric/Specific.

(ii) Generic/Open Elective(GE): An elective course chosen from an unrelated discipline/subject is called Generic/Open Elective. These electives will be focusing on those courses which add generic proficiency of students.

c) Ability Enhancement Compulsory Courses (AECC):-

AECC courses are based upon the content that leads to knowledge enhancement, for example: English Communication, Environment Science/ Studies, etc.

a) Skill Enhancement Courses (SEC):-

SEC Courses provide value based and/or skill based knowledge and may content both Theory and Lab/Training/Field Work. The main purpose of these courses is to provide students life- skills in hands- on mode so as to increase their employability.

5. THE COURSE AND THE DURATION

(a) There shall be a 4-Year – 8 Semester Course leading to the degree of Bachelor of Technology.

(b) Each Academic Year shall be divided into two Semesters, i.e. July to November / December and January to May / June.

(c) Each Semester shall consist of minimum 18 weeks with 30 class-hours per week including tutorials, special lectures, study visits and seminars.

(d) The Courses and the syllabi shall be proposed by the Faculty of Engineering and Technology approved by the Academic Council of the University time to time.

6. ELIGIBILITY FOR ADMISSION

B.Tech Programme: An applicant who has successfully completed Senior Secondary School course ('+2') with Physics, Chemistry , Maths or equivalent from a Senior Secondary Board or equivalent, constituted or recognized by the Union or by the State Government., may apply for admission into the course.

Provided that applicants who have obtained +2 Higher Secondary Pass Certificate with Physics, Chemistry , Maths or equivalent certificate after prosecuting studies in distance or correspondence method shall also be considered as eligible for admission in B.Tech Programme .

Explanation: The applicants who have obtained 10 + 2 through open University system directly without having any basic qualification for prosecuting such studies are not eligible for admission in the B.Tech Programme.

7. MINIMUM MARKS IN QUALIFYING EXAMINATION FOR ADMISSION

10+2 or equivalent examination with 45% aggregate marks (40% aggregate marks for SC, ST and OBC candidates)

Provided that such a minimum qualifying marks shall not automatically entitle a person to get admission in the university, but shall only entitle the person concerned to fulfill other criteria notified by the university from time to time, for admission.

8. ADMISSION PROCEDURE

8.1 Admission shall be made strictly on merit by the university admission committee either by holding written admission test or the merit list prepared according to the marks obtained in the qualifying examination followed by interview of the candidates.

8.2 The names of the selected candidates, in order of merit, shall be notified in the office Notice Board and/or website. A selected student who fails to pay his/her admission fee and other charges by the date fixed for such payment shall forfeit his/her claim for admission.

8.3 There shall be no relaxation of marks in minimum eligibility for admission.

9. ATTENDANCE PROVISION FOR END TERM SEMESTER EXAMINATION

9.1 No student shall be allowed to appear in the end term semester examination in a paper if he/ she has not attended minimum of **75%** of the classes held in the paper concerned including tutorials, special lectures, study visits, practical trainings etc. conducted in respect of that paper.

9.2 If a student for any exceptional reason fails to attend **75%** of the classes held in any paper, the Dean / HoD of the department may allow him/ her to take the examination if he/she attended at least 65% of the classes held in the paper concerned and attended 75% of classes in all the papers taken together.

Provided that if the percentage of attendance is deficient on account of:-

(i) Participation in Inter-University, University or Inter-Collegiate Sports tournaments/Youth Festivals /University Level Debates/ Cultural Activities, National and International Tournaments, with the previous sanction of the Dean/HoD of Faculty Engineering & Technology

(ii) Voluntary donation of blood certified by a Government Doctor of Gazetted rank or University medical officer.

(iii) Attendance and/or participation in International/National / State level competitions;

(iv) Attendance at the extension lecture (s) organized by the Faculty of Engineering & Technology.
Credit may be given for the number of days on which lectures were delivered or sessional or sessional/practical work done during the period of attendance or participation aforesaid, provided that the total period of absence shall not exceed 15 days in a semester.

10. LATERAL ENTRY AND MIGRATION

10.1 A student who has passed Three Year Diploma in Engineering or its equivalent with minimum 45% marks (40% for SC/ST/OBC) from a recognized Board of Technical Education, may be permitted to take admission in the III Semester of the relevant or allied branch provided there are seats vacant in that branch.

10.2 A Student who has passed B.Sc. with Mathematics as a subject with minimum 45% marks (40% for SC/ST/OBC) from a recognized University/Institute, may also be permitted to take admission in the III Semester in any branch of Engineering provided there are seats vacant in that branch.

10.3 Migration may be allowed as per University Rules

11. FORMAL DRESS CODE DURING CLASS HOURS AND INTERNSHIP

Formal Dress is to be worn during the normal class hours and during Project work, placement related activities

12. **PROHIBITION TO REGISTER IN OTHER COURSES**

The candidates admitted to the Course, shall not be allowed to pursue any other course except certificate course in any Indian or Foreign language or computer application being conducted by this University on part-time basis in the evening or through Distance Learning with prior permission of the Dean / HoD, Faculty of Engineering & Technology otherwise his candidature for B.Tech Programme will be cancelled forthwith.

13. **EXAMINATION AND EVALUATION**

13.1 The medium of instructions and examination shall be English

13.2 Candidates shall be examined according to the scheme of examination and syllabus as approved by the Academic Council from time to time.

13.3 To pass each semester examination, a candidate must obtain at least 40% marks in each written paper/sessional, practical work /Viva-Voce.

13.4 Each written paper for the respective semester examination shall be set and evaluation of the answer books shall be done as per the University rules.

13.5 The assessment of End Term Semester Examination will be made out of 70 (Seventy) marks in theory Papers and Internal Evaluation of 30 (Thirty) marks shall be made by the subject teacher, teaching the paper in accordance with the following rules:

Mid-Term Test	Normalised Mid-Term Marks (A)	Assignments (B)	Semester Attendance (C)	Total (A+B+C)
50 Marks	To be normalized to15 marks	5 Marks	10 Marks	30 Marks

Criteria for Awarding Semester Attendance Marks will be as prescribed by the University as follows:

    a.   Attendance above   95%   : 10 Marks

    b.   Attendance between 91% to 95%   : 9 Marks

    c.   Attendance between 86% to 90%   : 8 Marks

    d.   Attendance between 81% to 85%   : 7 Marks

    e.   Attendance between 75% to 80%   : 6 Marks

    f.   Attendance between 65% to 74%   : 5 Marks

13.6   The Dean/HOD will preserve the records of the sessional/practical work up to six months from the date of the declaration of the concerned semester examination.

14.   INTERNAL EVALUATION: MID-TERM EXAMINATION

a)   The schedule of Mid-Term tests shall be notified to the students by the University.

b)   Questions papers for mid-term tests shall be set by the internal examiner from the 50% of the syllabus of the course. The answer books will be assessed by the teacher concerned. The assessed answer books will be shown to the students and grievances, if any will be handled by the teacher. The marks of the mid-term tests will be forwarded to the Controller of Examinations by the Head of the Department through the Dean of the Faculty.

c)   No remedial Mid-Term Tests would be conducted.

15.   EXTERNAL EVALUATION: END-TERM EXAMINATION

a)   The End Term examinations shall ordinarily be held at the end of every semester i.e. November-December or May-June, as the case may be, as per the schedule to be notified by the Controller of Examination. The dates for the practical examinations would be decided by the HODs of respective departments in consultation with the Dean of the Faculty.

b)   The examiners for the end-term examination will be appointed by the Vice-Chancellor from the panel of the examiners to be supplied by HOD / DEAN.

c)   At least 50% of the paper setters for the end-term examination will be External Examiners.

d)   The manuscript of the question paper set by the examiner will be moderated by the Moderation Committee consisting of (i) Dean of Faculty (ii) HoD of the Department .After modifications, if needed; it will be handed over to the COE for printing and conduct of examinations.

e)   The answer books will be evaluated by the persons who set the question paper. In case of his inability to assess the answer books, for whatever reasons, the Vice-Chancellor may get them assessed by any other examiner from the Panel or Internal Examiner.

16.   STANDARD OF PASSING THE SEMESTER EXAMINATIONS

A candidate, who fails in a semester examination, shall be exempted from re-appearing in the paper(s) in which he may have obtained at least 40% marks. Such a candidate shall be allowed to appear, for passing in the remaining paper(s), only at the next respective semester examinations.

Provided that a candidate for the B. Tech 4-Year Course must pass all the examinations, i.e., I/II/III/IV/V/VI/VII/VIII within six years of his admission to the first year class of the course failing which he

will be deemed to be unfit for the course and shall not be allowed to appear as a regular student or as an ex-student unless has been otherwise allowed by the Academic Council of the University.

17. RE-APPEAR/IMPROVEMENT IN END TERM EXAM

a) The re-appear/improvement in End Term Examinations for Odd semester will be held along with the Odd Semester regular End Term examinations and for Even Semester with End Term examinations along with Even Semester regular End Term examinations.

b) A student who has to re-appear/improve in a End-Term examination shall be examined as per the syllabus, which was in force at the time when he/she took the examination.

c) A candidate who fails in a semester examination shall be exempted from re-appearing in the paper(s) in which he may have obtained min. pass marks. Such a candidate shall be allowed to appear, for passing in the remaining paper(s), only at the next respective semester examinations.

d) A candidate who has passed in a paper(s), may be allowed to improve the paper(s), only in the next respective semester examinations.

e) The previous internal marks already obtained by the student shall be taken into account without any modification.

18. SEMESTER PROMOTION

(a) A candidate who has appeared and failed or having been eligible but did not appear in the end term semester examination shall be promoted to the next higher semester.

(b) Students are required to successfully complete the entire course within six years from admission to the course.

19. CRITERION FOR AWARDING GRADING SYSTEM

19.1 CRITERION for Awarding SGPA and CGPA: The criterion for awarding the Semester Grade Point Average (SGPA) and Cumulative Grade Point Average (CGPA) for the entire professional programme shall be as follows:

a) The criterion for passing in a subject is that a student should secure minimum 40% marks in individual paper.

b) A student obtaining less than pass marks as specified above, in each subject (sum of internal and End-Term examinations) he will be declared fail in that subject and will have to re-appear in a End-Term examination of the course in subsequent odd / even semester end term examination, subject to maximum permissible period of n+2 years / n+4 semesters to complete the course.

c) The University has adopted Absolute Grading System for converting marks into grades.

The formula of 10- point grading system for conversion of marks obtained into Letter Grades and converting Letter Grades to Grade Point is given below:

Table 1: Marks, Letter Grades and Grade Points

Marks	Letter Grade	Grade Points
91-100	O (Outstanding)	10
81-90	A+(Excellent)	9
71-80	A(Very Good)	8
61-70	B+(Good)	7
51-60	B(Above Average)	6
46-50	C(Average)	5
40-45	P (Pass)*	4
0-39	F(Fail)	0
-	AB (Absent)	0

*Passing Marks: B.Tech- 40% in individual paper

d) *While converting the marks into Letter Grade, the rounding off marks must be considered.*

e) A student obtaining Grade F shall be considered failed and will be required to reappear in the examination.

f) For non credit courses "Satisfactory" or Unsatisfactory" shall be indicated instead of the letter grade and this will not be counted for the computation of SGPA/CGPA.

19.2   Computation of SGPA and CGPA : The university has adopted UGC recommended procedure for computation of Semester Grade Point Average (SGPA) and Cumulative Grade Point Average (CGPA)

a) The SGPA is the ratio of sum of the product of the number of credits with the grade points scored by a student in all the papers/ courses taken by a student and the sum of the number of credits of all the courses undergone by a student, i.e.

SGPA $(S_i) = \Sigma (C_i \times G_i) / \Sigma C_i$

Where C_i is the number of credits of the ith course and G_i is the grade point scored by the student in the ith course. The university shall issue Semester Grade Card to the student.

b) The CGPA is also calculated in the same manner taking into account all the courses undergone by a student over all the semesters of a programme, i.e.

CGPA $= \Sigma (C_i \times S_i) / \Sigma C_i$

Where S_i is the SGPA of the ith semester and C_i is the total number of credits in that semester.

c) *The SGPA and CGPA shall be rounded off to 2 decimal points and reported in the transcripts.*

Illustration of Computation of SGPA and CGPA and Format for Transcripts

a) **Computation of SGPA and CGPA**

Illustration for SGPA

Course	Credit	Grade Letter	Grade Point	Credit Point (Credit x Grade)
Course/Paper 1	3	A	8	3x8=24
Course/Paper 2	4	B+	7	4x7=28
Course/Paper 3	3	B	6	3x6=18
Course/Paper 4	3	O	10	3x10=30
Course/Paper 5	3	C	5	3x5=15
Course/Paper 6	4	B	6	4x6=24
	20			**139**

Thus, SGPA= 139/20= 6.95

b) **Illustration for CGPA**

Semester-1	Semester-2	Semester-3	Semester-4	Semester-5	Semester-6
Credit: 20	Credit: 22	Credit: 25	Credit: 26	Credit: 26	Credit: 25
SGPA:6.9	SGPA:7.8	SGPA:5.6	SGPA:6.0	SGPA:6.3	SGPA:8.0

Thus, CGPA= 20x6.9+22x7.8+25x5.6+26x6.0+26x6.3+25x8.0

--- = **6.73**

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20. CRITERION FOR CREDIT

(a) In case a student secures minimum passing marks (40% and above) in a Theory / Practical paper, he / she will earn the assigned credit of that particular paper.

(b) A student is eligible for the award of degree, if he / she earns minimum credits   required for that particular programme. However if the student has not acquired minimum credits required for   obtaining the degree, he will have to appear in some of the papers in which he has not got credit to fulfill the minimum requirement of Credits.

(c)   **MAXIMUM & MINIMUM CREDITS**

The total number of the credits of the B. TECH 4-Year Programme is 210 and for lateral entry (3 years programme), it is 160.

Each student shall be required to appear for examination in all courses. However, for the award of the degree a student should secure at least 200 credits and for lateral entry it is 150.

Relaxation of credits will be given only in Electives Papers.

21.   AWARD OF THE DEGREE

A student shall be eligible for the award of the B. TECH (Bachelor of Technology) Degree after he/she has successfully completed all the prescribed courses in all the semesters and secured minimum Credits required for award of Degree.

22.   WITHDRAWAL OF DEGREE

A degree awarded by the University may be withdrawn if it is found at the later stage that the candidate has submitted any forged document or ineligible at the time of admission to the course.

23.   SCHOLARSHIPS, AWARDS AND MEDALS

Students excelling in academics, co-curricular and extracurricular activities are felicitated through various awards and scholarships instituted by the University.

A candidate with highest CGPA would be declared Topper. In case of tie of CGPA, the student senior in age will be the topper. Gold, Silver and Bronze medal will be awarded on the basis of securing first three highest CGPA in the course concerned.

24.   JURISDICTION

All disputes are subject to the jurisdiction at Jhajjar.

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