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**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD**  
(Established by Andhra Pradesh Act No. 30 of 2008)

Kukatpally, Hyderabad – 500 085, Telangana (India)

**Dr. N.V. RAMANA RAO**

*B.E., M.Tech., PGDCS., Ph.D (UK) Post Doc. (UK).*

Professor of Civil Engg., &  
REGISTRAR

Lr. No. A1/2293/2015

Date: 23.06.2015

To

The Principal & Director of the Constituent Autonomous College and Institutions of JNTUH.  
The Principals of Autonomous Affiliated Colleges of JNTUH.

Sir,

Sub: JNT University Hyderabad – Academic & Planning Office – Implementation of **Choice Based Credit System** proposed by the UGC in the Constituent Autonomous College and Academic Institutions of JNTUH, and Autonomous Affiliated Colleges of JNTUH from the academic year **2015-16.**

- Ref: 1. DO Lr. No. F1-1/2014 (Secy) dated 12.11.2014 of Prof. Jaspal S. Sandhu, Secretary, UGC, New Delhi.  
2. Minutes of the Committee meeting dated 22.05.2015 and 08.06.2015.  
3. Note orders of the Vice-Chancellor dated 23.06.2015.

\*\*\*\*\*

The University Grants Commission (UGC) proposed Choice Based Credit System (CBCS) to be adopted by all the Universities in the country. This ensures mobility of students across all the higher educational institutions of the country as well as abroad since credits earned by the students seeking migration from one institution to another can be transferred.

Based on the UGC proposal, the University has constituted Committees to examine the UGC proposed Choice Based Credit System (CBCS) to be adopted by the University. Based on the resolutions of the Committees, I am by direction, you are requested to implement the Choice Based Credit System in Under-Graduate and Post-Graduate Programs in your College/Institution from the academic year 2015-16. Guidelines and instructions will be intimated shortly.

Necessary steps may be initiated to implement the Choice Based Credit System as per the UGC Guidelines.

Yours faithfully,

Encl: UGC Guidelines.

  
REGISTRAR

Copy to:

The Director of Evaluation  
The Controller of Examinations.  
P.A. to Vice-Chancellor  
PA to Rector  
PA to Registrar

  
**Principal**  
**Megha Inst. of Engg. & Tech for Women:**  
**Edulabad, Ghatkesar (Md),**  
**Medchal Dist-501 301**

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**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD**  
(Established by Andhra Pradesh Legislative Act No. 30 of 2008)  
Kukatpally, Hyderabad – 500 085 – Telangana- INDIA.

**Dr. Avula Damodaram**  
B.Tech.(C.S.E.), M.Tech.(C.S.), Ph.D.(C.S.)  
**Professor of CSE &**  
**Director, Academic and Planning**

Lr. No. A1/2293/2015

Date : 29.07.2015

To  
The Principals/Directors of all the Constituent Colleges/Units of JNTUH.  
The Principals/Directors of all the Affiliated Colleges of JNTUH.

Sir,

Sub: JNTUH, Hyderabad – Academic & Planning – Implementation of Choice Based Credit System (CBCS) and National Skills Qualification Framework (NSQF) in the Universities from the Academic year 2015-16.

Ref: Letter No. 2207/UE/2015-2 dated 06.07.2015 of the Principal Secretary to Government, Higher Education Department, Government of Telangana.

\* \* \* \* \*

With reference to the letter cited, the Higher Education Department, Government of Telangana State requested the University to implement the Choice Based Credit System (CBCS) and National Skills Qualification Framework (NSQF) (UGC XII Plan Guidelines) at the earliest from the Academic year 2015-16.


I am by direction, communicated the same for your information and necessary action.

Yours faithfully

Encl: As above

Copy to P.A. to Vice-Chancellor, PA to Rector, PA to Registrar.  
Copy to the Director of Evaluation and Controller of Examinations.

  
DIRECTOR

  
Principal  
Megha Inst. of Engg. & Tech for Women  
Edulabad, Ghatkesar (Mdi),  
Medchal Dist-501 301

GOVERNMENT OF TELANGANA  
HIGHER EDUCATION (UE) DEPARTMENT

>>>

Dated:06-07-2015.

Letter No.2207/UE/2015-2.

From:  
The Principal Secretary to Government,  
Higher Education Department,  
Telangana State Secretariat,  
Hyderabad.

To  
The Vice-Chancellor,  
Osmania University, Hyderabad / Kakatiya University, Warangal/ Palamuru  
University, Mahabubnagar/ Mahatma Gandhi University, Nalgonda/ Satavahana  
University, Karimnagar/ Telangana University, Nizamabad/ Potti Sreeramulu  
University, Hyderabad/ Dr.B.R. Ambedkar Open University, Hyderabad, Jawaharlal  
Nehru Technological University, Hyderabad, Jawaharlal Nehru Architecture and Fine  
Arts University, Hyderabad and Rajiv Gandhi University of Knowledge Technologies,  
Hyderabad. (w.e)

Sir/Madam,

Sub:- Higher Education Department - Universities – Implementation of Choice  
Based Credit System (CBCS) and National Skills Qualification  
Framework(NSQF) in the Universities from Academic Year 2015-16– Reg.

- Ref:
1. From the Secretary, Ministry of Human Resource Development,  
Department of Higher Education, Government of India, D.O.Lr.No.  
SECY(HE)/ 2014/ 139980, dt.28.11.2014.
  2. University Grants Commission Guidelines on adaptation of Choice  
Based Credit System (CBCS).
  3. Ministry of Human Resource Development, Document for Credit  
Framework, skills and Education under the National Skills qualification  
Framework, dt.11.11.2014.
  4. Govt. Memo.No. 3667/OP/A2/2014-01, Higher Education (OP)  
Department, dt.10.12.2014.
  5. From the Additional Secretary, Ministry of Human Resource  
Development, Department of Higher Education, Government of India,  
D.O.No.F. 36-13/2014-TS-II(NV), dt.17.12.2014.
  6. G.O.Rt.No.1 Higher Education (OP) Department dt.02.01.2015.
  7. Preliminary report of the Committee dt. nil Constituted vide G.O.Rt.No. 1  
Higher Education (OP) Department dt.02.01.2015.
  8. Report and recommendations of Committee(2015) for introduction of  
Credit Framework and Skill Development (CFSD) and Choice Based  
Credit System (CBCS) in Higher Education Institutions of Telangana  
State, dt. 30.01.2015.
  9. From the Commissioner of Collegiate Education, Telangana State, Hyd.,  
Lr.No.01/Academic Cell/AC/2014, dt.03-04-2015.
  10. Govt. Letter No.2207/UE/2015-1, Higher Education (UE) Department,  
dt.17.04.2015.
  11. From the Secretary, Telangana State Council of Higher Education,  
Lr..dt. Nil received on 25-06-2015.

\*\*\*\*\*

  
Principal  
Megha Inst. of Engg. & Tech for Women  
EduLabad, Ghatkesar (Mdj),  
Medchal Dist-501 301

regarding Choice Based Credit System (CBCS) issued by the University Grants Commission has informed that both are path breaking initiatives which can transform the quality of Higher Education in our country. The first document provides a framework for Certification of Skills and for provision of credits for such Skill and Theory to acquire formal University and Board Certification. The second document provides for Semesterization of Curricula in the Universities, Choices of Courses for Students and Standardisation of the Examination and Credit System to allow for mobility.

2. The Ministry of Human Resource Development gives very high priority to adaption of the Credit System for Skills and Education and of the Choice Based Credit System by State Universities and other Institutions. The credit framework, using the NSQF and National Occupational standards, is an exercise in recognising Skills and Education as part of an Integrated Learning System. It is an effort to bridge the gap between Certificate and Diploma level and between Diploma and Degree levels by allowing for mobility from one to the other. It also provides an opportunity to the Graduates of Vocational Education to further pursue Post Graduate learning. The best of the Universities across the world follow the Choice Based Credit System which facilitates diversity of opportunities for the students and also encourages their employability. The Skills and Education Credit System is path breaking in permitting a formal Certification through the University System of Vocational Skills. The adoption of the Choice Based Credit System will permit students doing General Graduate Programmes to take credits in Semesters for Skill Based Programmes as well, if they so desire. This will greatly facilitate their employability. The success of Make in India, Digital India, Skill India all depend on our ability to improve outcomes for the Higher Education System.

3. Both the Systems need to be adopted soon. This will require lot of work on semesterization of Curriculum, Standardization of Examinations and Restructuring of Syllabi and in the form of modules, identification of Core Courses, Elective Courses and Foundation Courses.

4. In the reference fourth cited, the references 2<sup>nd</sup> and 3<sup>rd</sup> cited i.e University Grants Commission Guidelines on adaptation of Choice Based Credit System (CBCS) and Document for Credit Framework, Skills and Education under National Skills Qualification Frame work was communicated to you.

5. It is to inform further that Government vide G.O.Rt.No. 1, Higher Education (OP) Department dt.02.01.2015, had constituted a Committee under the Chairmanship of Prof. A. Ravinderanath, Dean, Development and UGC affairs, Osmania University and Six (6) other Members to give pre-requisite, recommendations on the Credit Framework for Skills and Education under NSQF and Choice Based Credit System. The said Committee has submitted its Preliminary and Final Report (2015) and made certain recommendations, requesting the Government to initiate necessary steps for implementation of Choice Based Credit System (CBCS) and Credit Framework for Skill Development (CFSD) in Higher Education Institutions in the State as per the directions of Ministry of Human Resource Development and UGC. Copy of the Preliminary Report is enclosed herewith as Annexure - I. The Final Report will be uploaded by the Chairman of the Committee (which was formed as per reference 6<sup>th</sup> cited) in the website [www.osmania.ac.in](http://www.osmania.ac.in). All the Vice-Chancellors may download the Final Report from this website.

6. It is to inform further that, in Government letter No.2207/UE/2015-1, dt.17.04.2015 the Secretary, Telangana State Council of Higher Education was requested to conduct a Meeting with all the Universities and Commissioner of Collegiate

Education and Commissioner of Technical Education, Telangana State, Hyderabad on the subject matter based on these Reports of the Committee and finalise further action in the matter.

7. The Secretary, Telangana State Council of Higher Education in the reference 11<sup>th</sup> cited, has informed that, with reference to the Public Notice issued by the UGC dt. 10.04.2015 seeking views and feedback from stakeholders on CBCS Model Curriculum and letter dt. 17.04.2015 from the State Government, a Meeting of the Deans of Faculties of all the State Universities and representative from Commissioner Collegiate Education and Members of the State Level Committee on CBCS was conducted on 24.04.2015 at Telangana State Council of Higher Education. The Meeting was chaired by the Prof. T. Papi Reddy, Chairman, Telangana State Council of Higher Education (TSCHE) and Co-chaired by Prof. S. Mallesh, Vice-Chairman, TSCHE. The Chairman after briefing the objectives of the meeting, requested the members to actively participate in the deliberations and express their views and opinions on CBCS for its implementation.

8. The Members after carefully examining the letters and guidelines issued by the UGC from time to time (12<sup>th</sup> November 2014, 8<sup>th</sup> January 2014 and 10<sup>th</sup> April 2015) expressed their opinions as follows:-

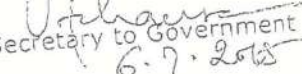
1. The UGC in its first letter dt. 12.11.2014 issued Guidelines for the adoption of CBCS uniformly throughout the country with a Draft Template classifying the courses as **Core**, **Elective** and **Foundation** with a minimum 50% of Core Component while providing a Scheme for the Grading System of Evaluation in a Semester Pattern.
2. The UGC in its subsequent letter dt. 08.01.2015 based on the consensus emerged from State Education Ministers meet convened by MHRD on 06.01.2015 requested to initiate action on CBCS by addressing the following pertinent issues in order to expedite the implementation process:-
  - a. Semesterization of Curricula.
  - b. Restructuring of Syllabi in the form of Modules
  - c. Standardisation of Examination and
  - d. Switching over from Numerical Marking System to Grade System
3. The UGC in its latest letter dt. 10.04.2015 directed the academic fraternity and students to send comments/feedback within 15 days for the Draft Model Syllabi proposed for Under Graduate Courses under CBCS.
4. Further, the Members on the directions of the State Government deliberated on the feasibility and implementation of CBCS and also discussed whether to commence it in a phased manner or to implement in toto in one go.
5. Finally, the Members opined that the TSCHE and State Government provide directions to the Universities over the feasibility and implementation of CBCS using the Broad Based Template provided in the Draft Report of the State Level Committee for redesigning, both Under Graduate and Post Graduate Programme of the respective Disciplines after deliberating in respective Academic Bodies of the Universities and also to decide on its commencement either from 2015-16 and or 2016-17.

9. The Secretary, Telangana State Council of Higher Education also enclosed the summary of the opinions expressed by all the Members during this Meeting which are enclosed as Annexure-II.

10. Therefore, based on the above, you are requested to implement the CBCS (Choice Based Credit System) and NSQF (National Skills Qualification Framework) at the earliest in the academic year 2015-16 in your University.

11. You are also requested to inform the Government about the progress in this regard from time to time.

Yours faithfully,

  
Principal Secretary to Government  
6.7.2015

Copy to:

- The Registrar,  
Osmania University, Hyderabad / Kakatiya University, Warangal/ Palamuru  
University, Mahabubnagar/ Mahatma Gandhi University, Nalgonda/ Satavahana  
University, Karimnagar/ Telangana University, Nizamabad/ Potti Sreeramulu  
University, Hyderabad/ Dr.B.R. Ambedkar Open University, Hyderabad, Jawaharlal  
Nehru Technological University, Hyderabad, Jawaharlal Nehru Architecture and Fine  
Arts University, Hyderabad and Rajiv Gandhi University of Knowledge Technologies,  
Hyderabad.
- The Secretary, Ministry of Human Resource Development, Department of Higher  
Education, Government of India, 128 'C' wing, Sastri Bhavan, New Delhi -110115.
- The Chairman, University Grants Commission, Bahadursha Zafar Marg,  
New Delhi -110 002
- The Secretary, Telangana State Council of Higher Education, Hyderabad.
- The Commissioner of Collegiate Education, Telangana State, Hyderabad.
- The Higher Education (OP & MC) Department.
- The P.S to Dy. CM& M(Edn)

  
Principal  
Megha Inst. of Engg. & Tech for Women  
Edulabad, Ghatkesar (Mdi),  
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**UGC GUIDELINES ON ADOPTION OF CHOICE BASED  
CREDIT SYSTEM**

**UNIVERSITY GRANTS COMMISSION  
BAHADURSHAH ZAFAR MARG NEW  
DELHI — 110 002**



**Principal  
Megha Inst. of Engg. & Tech for Women  
Edulabad, Ghatkesar (MdI),  
Medchal Dist-501 301**

# UGC Guidelines on Adoption of Choice Based Credit System

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## 1. Preamble

The University Grants Commission (UGC) has initiated several measures to bring equity, efficiency and excellence in the Higher Education System of country. The important measures taken to enhance academic standards and quality in higher education include innovation and improvements in curriculum, teaching-learning process, examination and evaluation systems, besides governance and other matters.

The UGC has formulated various regulations and guidelines from time to time to improve the higher education system and maintain minimum standards and quality across the Higher Educational Institutions (HEIs) in India. The academic reforms recommended by the UGC in the recent past have led to overall improvement in the higher education system. However, due to lot of diversity in the system of higher education, there are multiple approaches followed by universities towards examination, evaluation and grading system. While the HEIs must have the flexibility and freedom in designing the examination and evaluation methods that best fits the the curriculum, syllabi and teaching-learning methods, there is a need to devise a sensible system for awarding the grades based on the performance of students. Presently the performance of the students is reported using the conventional system of marks secured in the examinations or grades or both. The conversion from marks to letter grades and the letter grades used vary widely across the HEIs in the country. This creates difficulty for the academia and the employers to understand and infer the performance of the students graduating from different universities and colleges based on grades.

The grading system is considered to be better than the conventional marks system and hence it has been followed in the top institutions in India and abroad. So it is desirable to introduce uniform grading system. This will facilitate student mobility across institutions within and across countries and also enable potential employers to assess the performance of students. To bring in the desired uniformity, in grading system and method for computing the cumulative grade point average (CGPA) based on the performance of students in the examinations, the UGC has formulated these guidelines.

## 2. Applicability of the Grading System

These guidelines

shall apply to all undergraduate and postgraduate level degree, diploma and certificate programmes under the credit system awarded by the Central, State and Deemed to be universities in India.

## 3. Definitions of Key Words:

1. **Academic Year:** Two consecutive (one odd + one even) semesters constitute one academic year.
2. **Choice Based Credit System (CBCS):** The CBCS provides choice for students to select from the prescribed courses (core, elective or minor or soft skill courses).
3. **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/ vocational training/viva/ seminars/ term papers/assignments/ presentations/ self-study etc. or a combination of some of these.

4. **Credit Based Semester System (CBSS):** Under the CBSS, the requirement for awarding a degree or diploma or certificate is prescribed in terms of number of credits to be completed by the students.
5. **Credit Point:** It is the product of grade point and number of credits for a course.
6. **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.
7. **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.
8. **Grade Point:** It is a numerical weight allotted to each letter grade on a 10-point scale.
9. **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.
10. **Programme:** An educational programme leading to award of a Degree, diploma or certificate.
11. **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.
12. **Semester:** Each semester will consist of 15-18 weeks of academic work equivalent to 90 actual teaching days. The odd semester may be scheduled from July to December and even semester from January to June.
13. **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.

#### **4. Semester System and Choice Based Credit System**

The Indian Higher Education Institutions have been moving from the conventional annual system to semester system. Currently many of the institutions have already introduced the choice based credit system. The semester system accelerates the teaching-learning process and enables vertical and horizontal mobility in learning. The credit based semester system provides flexibility in designing curriculum and assigning credits based on the course content and hours of teaching. The choice based credit system provides a 'cafeteria' type approach in which the students can take courses of their choice, learn at their own pace, undergo additional courses and acquire more than the required credits, and adopt an interdisciplinary approach to learning. It is desirable that the HEIs move to CBCS and implement the grading system.

#### **5. Types of Courses:**

Courses in a programme may be of three kinds: Core, Elective and Foundation.

##### **1. 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 core requirement to complete the requirement of a programme in a said discipline of study.

## 2. 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 may be "Generic Elective" focusing on those courses which add generic proficiency to the students. An elective may be "Discipline centric" or may be chosen from an unrelated discipline. It may be called an "Open Elective."

## 3. Foundation Course:-

The Foundation Courses may be of two kinds: Compulsory Foundation and Elective foundation. "Compulsory Foundation" courses are the courses based upon the content that leads to Knowledge enhancement. They are mandatory for all disciplines. Elective Foundation courses are value-based and are aimed at man-making education.

## 6. Examination and Assessment

The HEIs are currently following various methods for examination and assessment suitable for the courses and programmes as approved by their respective statutory bodies. In assessing the performance of the students in examinations, the usual approach is to award marks based on the examinations conducted at various stages (sessional, mid-term, end-semester etc.,) in a semester. Some of the HEIs convert these marks to letter grades based on absolute or relative grading system and award the grades. There is a marked variation across the colleges and universities in the number of grades, grade points, letter grades used, which creates difficulties in comparing students across the institutions. The UGC recommends the following system to be implemented in awarding the grades and CGPA under the credit based semester system.

### 6.1. Letter Grades and Grade Points:

- i. Two methods -relative grading or absolute grading- have been in vogue for awarding grades in a course. The relative grading is based on the distribution (usually normal distribution) of marks obtained by all the students of the course and the grades are awarded based on a cut-off marks or percentile. Under the absolute grading, the marks are converted to grades based on pre-determined class intervals. To implement the following grading system, the colleges and universities can use any one of the above methods.
- ii. The UGC recommends a 10-point grading system with the following letter grades as given below:

**Table 1: Grades and Grade Points**

Letter Grade	Grade Point
--------------	-------------

O (Outstanding)	10
A+(Excellent)	9
A(Very Good)	8
B+(Good)	7
B(Above Average)	6
C(Average)	5
P (Pass)	4
F(Fail)	0
Ab (Absent)	0

- iii. A student obtaining Grade F shall be considered failed and will be required to reappear in the examination.
- iv. 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.
- v. The Universities can decide on the grade or percentage of marks required to pass in a course and also the CGPA required to qualify for a degree taking into consideration the recommendations of the statutory professional councils such as AICTE, MCI, BCI, NCTE etc.,
- vi. The statutory requirement for eligibility to enter as assistant professor in colleges and universities in the disciplines of arts, science, commerce etc., is a minimum average mark of 50% and 55% in relevant postgraduate degree respectively for reserved and general category. Hence, it is recommended that the cut-off marks for grade B shall not be less than 50% and for grade B+, it should not be less than 55% under the absolute grading system. Similarly cut-off marks shall be fixed for grade B and B+ based on the recommendation of the statutory bodies (AICTE, NCTE etc.,) of the relevant disciplines.

### **6.2. Fairness in Assessment:**

Assessment is an integral part of system of education as it is instrumental in identifying and certifying the academic standards accomplished by a student and projecting them far and wide as an objective and impartial indicator of a student's performance. Thus, it becomes bounden duty of a University to ensure that it is carried out in fair manner. In this regard, UGC recommends the following system of checks and balances which would enable Universities effectively and fairly carry out the process of assessment and examination.

- i. In case of at least 50% of core courses offered in different programmes across the disciplines, the assessment of the theoretical component towards the end of the semester should be undertaken by external examiners from outside the university conducting examination, who may be appointed by the competent authority. In such courses, the question papers will be set as well as assessed by external examiners.
- ii. In case of the assessment of practical component of such core courses, the team of examiners should be constituted on 50 - 50 % basis. i.e. half of the examiners in the team should be invited from outside the university conducting examination.
- iii. In case of the assessment of project reports / thesis / dissertation etc. the work should be undertaken by internal as well as external examiners.

## **7. Computation of SGPA and CGPA**

The UGC recommends the following procedure to compute the Semester Grade Point Average (SGPA) and Cumulative Grade Point Average (CGPA):

- i. 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 courses taken by a student and the sum of the number of credits of all the courses undergone by a student, i.e

$$\text{SGPA (Si)} = \frac{\sum(C_i \times G_i)}{\sum C_i}$$

where  $C_i$  is the number of credits of the  $i$ th course and  $G_i$  is the grade point scored by the student in the  $i$ th course.

- ii. 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.

$$\text{CGPA} = \frac{\sum(C_i \times S_i)}{\sum C_i}$$

where  $S_i$  is the SGPA of the  $i$ th semester and  $C_i$  is the total number of credits in that semester.

- iii. The SGPA and CGPA shall be rounded off to 2 decimal points and reported in the transcripts.

## **8. Illustration of Computation of SGPA and CGPA and Format for Transcripts**

- i. Computation of SGPA and CGPA

### ***Illustration for SGPA***

<b>Course</b>	<b>Credit</b>	<b>Grade letter</b>	<b>Grade point</b>	<b>Credit Point</b> (Credit x Grade)
Course 1	3	A	8	3 X 8 = 24
Course 2	4	B+	7	4 X 7 = 28
Course 3	3	B	6	3 X 6 = 18
Course 4	3	O	10	3 X 10 = 30
Course 5	3	C	5	3 X 5 = 15
Course 6	4	B	6	4 X 6 = 24
	20			139

Thus, **SGPA = 139/20 = 6.95**

### ***Illustration for CGPA***

<b>Semester 1</b>	<b>Semester 2</b>	<b>Semester 3</b>	<b>Semester 4</b>
Credit : 20 SGPA:6.9	Credit : 22 SGPA:7.8	Credit : 25 SGPA: 5.6	Credit : 26 SGPA:6.0

<b>Semester 5</b>	<b>Semester 6</b>		
Credit : 26 SGPA:6.3	Credit : 25 SGPA: 8.0		

Thus,  $CGPA = \frac{20 \times 6.9 + 22 \times 7.8 + 25 \times 5.6 + 26 \times 6.0 + 26 \times 6.3 + 25 \times 8.0}{144} = 6.73$

- ii. Transcript (Format): Based on the above recommendations on Letter grades, grade points and SGPA and CCPA, the HEIs may issue the transcript for each semester and a consolidated transcript indicating the performance in all semesters.

  
Principal  
Megha Inst. of Engg. & Tech for Women  
Edulabad, Ghatkesar (MdI),  
Medchal Dist-501 301



# JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

(Established by State Act No. 30 of 2008)

Kukatpally, Hyderabad, Telangana (India).

## ACADEMIC REGULATIONS FOR B.TECH. REGULAR STUDENTS

### WITH EFFECT FROM

### ACADEMIC YEAR 2016-17 (R-16)

- 1.0 **Under-Graduate Degree Programme in Engineering & Technology (UGP in E&T)**
- 1.1 JNTUH offers a 4-year (8 semesters) **Bachelor of Technology (B.Tech.)** degree programme, under **Choice Based Credit System (CBCS)** at its non-autonomous constituent and affiliated colleges with effect from the academic year 2016-17 in the following branches of Engineering:

<b>Branch</b>
Civil Engineering
Electrical and Electronics Engineering
Mechanical Engineering
Electronics and Communication Engineering
Computer Science and Engineering
Chemical Engineering
Electronics and Instrumentation Engineering
Bio-Medical Engineering
Information Technology
Mechanical Engineering (Mechatronics)
Electronics and Telematics Engineering
Metallurgy and Material Technology
Electronics and Computer Engineering
Mechanical Engineering (Production)
Aeronautical Engineering
Instrumentation and Control Engineering
Biotechnology
Automobile Engineering
Mining Engineering
Petroleum Engineering
Civil and Environmental Engineering
Mechanical Engineering (Nano Technology)
Computer Science & Technology
Pharmaceutical Engineering

## 2.0 Eligibility for admission

- 2.1 Admission to the under graduate programme shall be made either on the basis of the merit rank obtained by the qualified student in entrance test conducted by the Telangana State Government (EAMCET) or the University or on the basis of any other order of merit approved by the University, subject to reservations as prescribed by the government from time to time.
- 2.2 The medium of instructions for the entire under graduate programme in E&T will be **English** only.

## 3.0 B.Tech. Programme structure

- 3.1 A student after securing admission shall pursue the under graduate programme in B.Tech. in a minimum period of **four** academic years (8 semesters), and a maximum period of **eight** academic years (16 semesters) starting from the date of commencement of first year first semester, failing which student shall forfeit seat in B.Tech course.

Each semester is structured to provide 24 credits, totaling to 192 credits for the entire B.Tech. programme.

Each student shall secure 192 credits (with CGPA  $\geq 5$ ) required for the completion of the under graduate programme and award of the B.Tech. degree.

- 3.2 **UGC/ AICTE** specified definitions/ descriptions are adopted appropriately for various terms and abbreviations used in these academic regulations/ norms, which are listed below.

### 3.2.1 Semester scheme

Each under graduate programme is of 4 academic years (8 semesters) with the academic year being divided into two semesters of 22 weeks ( $\geq 90$  instructional days) each, each semester having - 'Continuous Internal Evaluation (CIE)' and 'Semester End Examination (SEE)'. Choice Based Credit System (CBCS) and Credit Based Semester System (CBSS) as indicated by UGC and curriculum / course structure as suggested by AICTE are followed.

### 3.2.2 Credit courses

All subjects/ courses are to be registered by the student in a semester to earn credits which shall be assigned to each subject/ course in an L: T: P: C (lecture periods: tutorial periods: practical periods: credits) structure based on the following general pattern.

- One credit for one hour/ week/ semester for theory/ lecture (L) courses.
- One credit for two hours/ week/ semester for laboratory/ practical (P) courses or Tutorials (T).

Courses like Environmental Science, Professional Ethics, Gender Sensitization lab and other student activities like NCC/NSO and NSS are identified as mandatory courses. These courses will not carry any credits.

### 3.2.3 Subject Course Classification

All subjects/ courses offered for the under graduate programme in E&T (B.Tech. degree programmes) are broadly classified as follows. The university has followed almost all the guidelines issued by AICTE/UGC.

S. No.	Broad Course Classification	Course Group/ Category	Course Description
1	Foundation Courses (FnC)	BS – Basic Sciences	Includes mathematics, physics and chemistry subjects
2		ES - Engineering Sciences	Includes fundamental engineering subjects
3		HS – Humanities and Social sciences	Includes subjects related to humanities, social sciences and management
4	Core Courses (CoC)	PC – Professional Core	Includes core subjects related to the parent discipline/ department/ branch of Engineering.
5	Elective Courses (ElC)	PE – Professional Electives	Includes elective subjects related to the parent discipline/ department/ branch of Engineering.
6		OE – Open Electives	Elective subjects which include inter-disciplinary subjects or subjects in an area outside the parent discipline/ department/ branch of Engineering.
7	Core Courses	Project Work	B.Tech. project or UG project or UG major project
8		Industrial training/ Mini- project	Industrial training/ Internship/ UG Mini-project/ Mini-project
9		Seminar	Seminar/ Colloquium based on core contents related to parent discipline/ department/ branch of Engineering.
10	Minor courses	-	1 or 2 Credit courses (subset of HS)
11	Mandatory Courses (MC)	-	Mandatory courses (non-credit)

### 4.0 Course registration

- 4.1 A 'faculty advisor or counselor' shall be assigned to a group of 15 students, who will advise student about the under graduate programme, its course structure and curriculum, choice/option for subjects/ courses, based on their competence, progress, pre-requisites and interest.



- 4.2 The academic section of the college invites 'registration forms' from students before the beginning of the semester through 'on-line registration', ensuring 'date and time stamping'. The on-line registration requests for any 'current semester' shall be **completed before the commencement of SEEs (Semester End Examinations) of the 'preceding semester'**.
- 4.3 A student can apply for **on-line** registration, **only after** obtaining the '**written approval**' from faculty advisor/counselor, which should be submitted to the college academic section through the Head of the Department. A copy of it shall be retained with Head of the Department, faculty advisor/ counselor and the student.
- 4.4 A student may be permitted to register for the subjects/ courses of **choice** with a total of 24 credits per semester (minimum of 20 credits and maximum of 28 credits per semester and permitted deviation of  $\pm 17\%$ ), based on **progress** and SGPA/ CGPA, and completion of the '**pre-requisites**' as indicated for various subjects/ courses, in the department course structure and syllabus contents. However, a **minimum** of 20 credits per semester must be registered to ensure the '**studentship**' in any semester.
- 4.5 Choice for '**additional subjects/ courses**' to reach the maximum permissible limit of 28 credits (above the typical 24 credit norm) must be clearly indicated, which needs the specific approval and signature of the faculty advisor/ counselor.
- 4.6 If the student submits ambiguous choices or multiple options or erroneous entries during **on-line** registration for the subject(s) / course(s) under a given/ specified course group/ category as listed in the course structure, only the first mentioned subject/ course in that category will be taken into consideration.
- 4.7 Subject/ course options exercised through **on-line** registration are final and **cannot** be changed or inter-changed; further, alternate choices also will not be considered. However, if the subject/ course that has already been listed for registration by the Head of the Department in a semester could not be offered due to any unforeseen or unexpected reasons, then the student shall be allowed to have alternate choice either for a new subject (subject to offering of such a subject), or for another existing subject (subject to availability of seats). Such alternate arrangements will be made by the head of the department, with due notification and time-framed schedule, within the **first week** after the commencement of class-work for that semester.
- 4.8 Dropping of subjects/ courses may be permitted, only after obtaining prior approval from the faculty advisor/ counselor (subject to retaining a minimum of 20 credits), '**within a period of 15 days**' from the beginning of the current semester.
- 4.9 **Open electives:** The students have to choose one open elective (OE-I) during III year I semester, one (OE-II) during III year II semester, and one (OE-III) in IV year II semester, from the list of open electives given. However, the student cannot opt for an open elective subject offered by their own (parent) department, if it is already listed under any category of the subjects offered by parent department in any semester.
- 4.10 **Professional electives:** students have to choose professional elective (PE-I) in III year II semester, Professional electives II, III, and IV (PE-II, III and IV) in IV year I

semester, Professional electives V, and VI (PE-V and VI) in IV year II semester, from the list of professional electives given. However, the students may opt for professional elective subjects offered in the related area.

#### 5.0 **Subjects/ courses to be offered**

- 5.1 A typical section (or class) strength for each semester shall be 60.
- 5.2 A subject/ course may be offered to the students, **only if** a minimum of 20 students (1/3 of the section strength) opt for it. The maximum strength of a section is limited to 80 (60 + 1/3 of the section strength).
- 5.3 More than **one faculty member** may offer the **same subject** (lab/ practical may be included with the corresponding theory subject in the same semester) in any semester. However, selection of choice for students will be based on - '**first come first serve** basis and CGPA criterion' (i.e. the first focus shall be on early **on-line entry** from the student for registration in that semester, and the second focus, if needed, will be on CGPA of the student).
- 5.4 If more entries for registration of a subject come into picture, then the Head of Department concerned shall decide, whether or not to offer such a subject/ course for **two (or multiple) sections**.
- 5.5 In case of options coming from students of other departments/ branches/ disciplines (not considering **open electives**), first **priority** shall be given to the student of the '**parent department**'.

#### 6.0 **Attendance requirements:**

- 6.1 A student shall be eligible to appear for the semester end examinations, if student acquires a minimum of 75% of attendance in aggregate of all the subjects/ courses (excluding attendance in mandatory courses Environmental Science, Professional Ethics, Gender Sensitization Lab, NCC/NSO and NSS) for that semester.
- 6.2 Shortage of attendance in aggregate up to 10% (65% and above, and below 75%) in each semester may be condoned by the college academic committee on genuine and valid grounds, based on the student's representation with supporting evidence.
- 6.3 A stipulated fee shall be payable towards condoning of shortage of attendance.
- 6.4 Shortage of attendance below 65% in aggregate shall in **no** case be condoned.
- 6.5 **Students whose shortage of attendance is not condoned in any semester are not eligible to take their end examinations of that semester. They get detained and their registration for that semester shall stand cancelled. They will not be promoted to the next semester.** They may seek re-registration for all those subjects registered in that semester in which student was detained, by seeking re-admission into that semester as and when offered; in case if there are any professional electives and/ or open electives, the same may also be re-registered if offered. However, if those electives are not offered in later semesters, then alternate electives may be chosen from the **same** set of elective subjects offered under that category.

6.6 A student fulfilling the attendance requirement in the present semester shall not be eligible for readmission into the same class.

**7.0 Academic requirements**

The following academic requirements have to be satisfied, in addition to the attendance requirements mentioned in item no.6.

7.1 A student shall be deemed to have satisfied the academic requirements and earned the credits allotted to each subject/ course, if student secures not less than 35% marks (26 out of 75 marks) in the semester end examination, and a minimum of 40% of marks in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together; in terms of letter grades, this implies securing ‘C’ grade or above in that subject/ course.

7.2 A student shall be deemed to have satisfied the academic requirements and earned the credits allotted to UG Mini Project and seminar, if student secures not less than 40% marks (i.e. 40 out of 100 allotted marks) in each of them. The student would be treated as failed, if student (i) does not submit a report on UG Mini Project, or does not make a presentation of the same before the evaluation committee as per schedule, or (ii) does not present the seminar as required in the IV year I Semester, or (iii) secures less than 40% marks in industry UG Mini Project / seminar evaluations.

Student may reappear once for each of the above evaluations, when they are scheduled again; if student fails in such ‘one reappearance’ evaluation also, student has to reappear for the same in the next subsequent semester, as and when it is scheduled.

**7.3 Promotion Rules**

S. No.	Promotion	Conditions to be fulfilled
1	First year first semester to first year second semester	Regular course of study of first year first semester.
2	First year second semester to second year first semester	(i) Regular course of study of first year second semester.  (ii) Must have secured at least 24 credits out of 48 credits i.e., 50% credits up to first year second semester from all the relevant regular and supplementary examinations, whether the student takes those examinations or not.
3.	Second year first semester to second year second semester	Regular course of study of second year first semester.
4	Second year second semester	(i) Regular course of study of second

	to third year first semester	year second semester.  (ii) Must have secured at least 58 credits out of 96 credits i.e., 60% credits up to second year second semester from all the relevant regular and supplementary examinations, whether the student takes those examinations or not.
5	Third year first semester to third year second semester	Regular course of study of third year first semester.
6	Third year second semester to fourth year first semester	(i) Regular course of study of third year second semester.  (ii) Must have secured at least 86 credits out of 144 credits i.e., 60% credits up to third year second semester from all the relevant regular and supplementary examinations, whether the student takes those examinations or not.
7	Fourth year first semester to fourth year second semester	Regular course of study of fourth year first semester.

- 7.4 A student shall register for all subjects covering 192 credits as specified and listed in the course structure, fulfills all the attendance and academic requirements for 192 credits, 'earn all 192 credits by securing SGPA  $\geq$  5.0 (in each semester), and CGPA (at the end of each successive semester)  $\geq$  5.0, to successfully complete the under graduate programme.
- 7.5 After securing the necessary 192 credits as specified for the successful completion of the entire under graduate programme, the student can avail exemption of two subjects up to 6 credits, that is, one open elective and one professional elective subject or two professional elective subjects for optional drop out from these 192 credits earned; resulting in 186 credits for under graduate programme performance evaluation, i.e., the performance of the student in these 186 credits shall alone be taken into account for the calculation of 'the final CGPA (at the end of under graduate programme, which takes the SGPA of the IV year II semester into account)', and shall be indicated in the grade card of IV year II semester. However, the performance of student in the earlier individual semesters, with the corresponding SGPA and CGPA for which grade cards have already been given will not be altered.
- 7.6 If a student registers for some more 'extra subjects' (in the parent department or other departments/branches of engg.) other than those listed subjects totaling to 192

credits as specified in the course structure of his department, the performances in those 'extra subjects' (although evaluated and graded using the same procedure as that of the required 192 credits) will not be taken into account while calculating the SGPA and CGPA. For such 'extra subjects' registered, % of marks and letter grade alone will be indicated in the grade card as a performance measure, subject to completion of the attendance and academic requirements as stated in regulations 6 and 7.1 – 7.5 above.

- 7.7 A student eligible to appear in the end semester examination for any subject/ course, but absent from it or failed (thereby failing to secure 'C' grade or above) may reappear for that subject/ course in the supplementary examination as and when conducted. In such cases, internal marks (CIE) assessed earlier for that subject/ course will be carried over, and added to the marks to be obtained in the SEE supplementary examination for evaluating performance in that subject.
- 7.8 A student **detained in a semester due to shortage of attendance may be re-admitted when the same semester is offered in the next academic year for fulfillment of academic requirements.** The academic regulations under which student has been readmitted shall be applicable. However, no grade allotments or SGPA/ CGPA calculations will be done for the entire semester in which student has been detained.
- 7.9 A student detained **due to lack of credits, shall be promoted to the next academic year only after acquiring the required academic credits.** The academic regulations under which student has been readmitted shall be applicable to him.
- 8.0 **Evaluation - Distribution and Weightage of marks**
- 8.1 The performance of a student in every subject/course (including practicals and UG major project) will be evaluated for 100 marks each, with 25 marks allotted for CIE (Continuous Internal Evaluation) and 75 marks for SEE (Semester End-Examination).
- 8.2 For theory subjects, during a semester, there shall be two mid-term examinations. Each mid-term examination consists of one objective paper, one descriptive paper and one assignment. The objective paper and the descriptive paper shall be for 10 marks each with a total duration of 1 hour 20 minutes (20 minutes for objective and 60 minutes for descriptive paper). The objective paper is set with 20 bits of multiple choice, fill-in the blanks and matching type of questions for a total of 10 marks. The descriptive paper shall contain 4 full questions out of which, the student has to answer 2 questions, each carrying 5 marks. While the first mid-term examination shall be conducted on 50% of the syllabus, the second mid-term examination shall be conducted on the remaining 50% of the syllabus. Five marks are allocated for assignments (as specified by the subject teacher concerned). The first assignment should be submitted before the conduct of the first mid-examination, and the second assignment should be submitted before the conduct of the second mid-examination. The total marks secured by the student in each mid-term examination are evaluated for 25 marks, and the average of the two mid-term examinations shall be taken as the

final marks secured by each student in internals/sessionals. If any student is absent from any subject of a mid-term examination, an on-line test will be conducted for him by the university. The details of the question paper pattern are as follows,

- The end semester examinations will be conducted for 75 marks consisting of two parts viz. i) **Part- A** for 25 marks, ii) **Part - B** for 50 marks.
- Part-A is compulsory question which consists of ten sub-questions. The first five sub-questions are from each unit and carry 2 marks each. The next five sub-questions are one from each unit and carry 3 marks each.
- Part-B consists of five questions (numbered from 2 to 6) carrying 10 marks each. Each of these questions is from one unit and may contain sub-questions. For each question there will be an “either” “or” choice, which means that there will be two questions from each unit and the student should answer either of the two questions.

- 8.3** For practical subjects there shall be a continuous internal evaluation during the semester for 25 sessional marks and 75 semester end examination marks. Out of the 25 marks for internal evaluation, day-to-day work in the laboratory shall be evaluated for 15 marks and internal practical examination shall be evaluated for 10 marks conducted by the laboratory teacher concerned. The semester end examination shall be conducted with an external examiner and the laboratory teacher. The external examiner shall be appointed from the clusters of colleges which are decided by the examination branch of the university.
- 8.4** For the subject having design and/or drawing, (such as engineering graphics, engineering drawing, machine drawing) and estimation, the distribution shall be 25 marks for continuous internal evaluation (15 marks for day-to-day work and 10 marks for internal tests) and 75 marks for semester end examination. There shall be two internal tests in a semester and the average of the two shall be considered for the award of marks for internal tests.
- 8.5** There shall be an UG mini-project, in collaboration with an industry of their specialization. Students will register for this immediately after III year II semester examinations and pursue it during summer vacation. The UG mini-project shall be submitted in a report form and presented before the committee in IV year I semester. It shall be evaluated for 100 marks. The committee consists of an external examiner, Head of the Department, supervisor of the UG mini-project and a senior faculty member of the department. There shall be no internal marks for UG mini-project.
- 8.6** There shall be a seminar presentation in IV year I semester. For the seminar, the student shall collect the information on a specialized topic, prepare a technical report, and submit it to the department. It shall be evaluated by the departmental committee consisting of Head of the Department, seminar supervisor and a senior faculty member. The seminar report shall be evaluated for 100 marks. There shall be no semester end examination for the seminar.

- 8.7 Out of a total of 100 marks for the UG major Project, 25 marks shall be allotted for internal evaluation and 75 marks for the end semester examination (viva voce). The end semester examination of the UG major Project shall be conducted by the same committee as appointed for the UG mini-project. In addition, the UG major Project supervisor shall also be included in the committee. The topics for UG mini project, seminar and UG major Project shall be different from one another. The evaluation of UG major Project shall be made at the end of IV year II semester. The internal evaluation shall be on the basis of two seminars given by each student on the topic of UG major Project.
- 8.8 The laboratory marks and the sessional marks awarded by the college are subject to scrutiny and scaling by the university wherever necessary. In such cases, the sessional and laboratory marks awarded by the college will be referred to a committee. The committee will arrive at a scaling factor and the marks will be scaled accordingly. The recommendations of the committee are final and binding. The laboratory records and internal test papers shall be preserved in the respective institutions as per the university rules and produced before the committees of the university as and when asked for.
- 8.9 For mandatory courses Environmental Science, Professional Ethics and gender sensitization lab, a student has to secure 40 marks out of 100 marks (i.e. 40% of the marks allotted) in the continuous internal evaluation for passing the subject/course.
- 8.10 For mandatory courses NCC/ NSO and NSS, a 'satisfactory participation certificate' shall be issued to the student from the authorities concerned, only after securing  $\geq$  65% attendance in such a course.
- 8.11 No marks or letter grade shall be allotted for all mandatory/non-credit courses.
- 9.0 Grading procedure**
- 9.1 Marks will be awarded to indicate the performance of student in each theory subject, laboratory / practicals, seminar, UG mini project, UG major project. Based on the percentage of marks obtained (Continuous Internal Evaluation plus Semester End Examination, both taken together) as specified in item 8 above, a corresponding letter grade shall be given.
- 9.2 As a measure of the performance of student, a 10-point absolute grading system using the following letter grades (as per UGC/AICTE guidelines) and corresponding percentage of marks shall be followed:

<b>% of Marks Secured in a Subject/Course (Class Intervals)</b>	<b>Letter Grade (UGC Guidelines)</b>	<b>Grade Points</b>
<b>Greater than or equal to 90%</b>	<b>O (Outstanding)</b>	<b>10</b>
<b>80 and less than 90%</b>	<b>A<sup>+</sup> (Excellent)</b>	<b>9</b>

70 and less than 80%	A (Very Good)	8
60 and less than 70%	B <sup>+</sup> (Good)	7
50 and less than 60%	B (Average)	6
40 and less than 50%	C (Pass)	5
Below 40%	F (FAIL)	0
Absent	Ab	0

- 9.3 A student obtaining 'F' grade in any subject shall be deemed to have 'failed' and is required to reappear as a 'supplementary student' in the semester end examination, as and when offered. In such cases, internal marks in those subjects will remain the same as those obtained earlier.
- 9.4 A student who has not appeared for examination in any subject, 'Ab' grade will be allocated in that subject, and student shall be considered 'failed'. Student will be required to reappear as a 'supplementary student' in the semester end examination, as and when offered.
- 9.5 A letter grade does not indicate any specific percentage of marks secured by the student, but it indicates only the range of percentage of marks.
- 9.6 A student earns grade point (GP) in each subject/ course, on the basis of the letter grade secured in that subject/ course. The corresponding 'credit points' (CP) are computed by multiplying the grade point with credits for that particular subject/ course.

**Credit points (CP) = grade point (GP) x credits .... For a course**

- 9.7 The student passes the subject/ course only when  $GP \geq 5$  ('C' grade or above)
- 9.8 The semester grade point average (SGPA) is calculated by dividing the sum of credit points ( $\Sigma CP$ ) secured from all subjects/ courses registered in a semester, by the total number of credits registered during that semester. SGPA is rounded off to **two** decimal places. SGPA is thus computed as

$$SGPA = \{ \sum_{i=1}^N C_i G_i \} / \{ \sum_{i=1}^N C_i \} \dots \text{For each semester,}$$

where 'i' is the subject indicator index (takes into account all subjects in a semester), 'N' is the no. of subjects 'registered' for the semester (as specifically required and listed under the course structure of the parent department),  $C_i$  is the no. of credits allotted to the  $i^{\text{th}}$  subject, and  $G_i$  represents the grade points (GP) corresponding to the letter grade awarded for that  $i^{\text{th}}$  subject.



9.9 The cumulative grade point average (CGPA) is a measure of the overall cumulative performance of a student in all semesters considered for registration. The CGPA is the ratio of the total credit points secured by a student in **all** registered courses in **all** semesters, and the total number of credits registered in **all** the semesters. CGPA is rounded off to **two** decimal places. CGPA is thus computed from the I year II semester onwards at the end of each semester as per the formula

$$\text{CGPA} = \{ \sum_{j=1}^M C_j G_j \} / \{ \sum_{j=1}^M C_j \} \dots \text{for all } S \text{ semesters registered}$$

(i.e., up to and inclusive of S semesters,  $S \geq 2$ ),

where 'M' is the **total** no. of subjects (as specifically required and listed under the course structure of the parent department) the student has '**registered**' i.e., from the 1<sup>st</sup> semester onwards up to and inclusive of the 8<sup>th</sup> semester, 'j' is the subject indicator index (takes into account all subjects from 1 to 8 semesters),  $C_j$  is the no. of credits allotted to the j<sup>th</sup> subject, and  $G_j$  represents the grade points (GP) corresponding to the letter grade awarded for that j<sup>th</sup> subject. After registration and completion of I year I semester, the SGPA of that semester itself may be taken as the CGPA, as there are no cumulative effects.

#### Illustration of calculation of SGPA

Illustration of calculation Course/Subject	on of CGPA: Letter Credits Grade	Grade Points	Credit Points
Course 1	4 A	8	$4 \times 8 = 32$
Course 2	4 O	10	$4 \times 10 = 40$
Course 3	4 C	5	$4 \times 5 = 20$
Course 4	3 B	6	$3 \times 6 = 18$
Course 5	3 A+	9	$3 \times 9 = 27$
Course 6	3 C	5	$3 \times 5 = 15$
	21		152

$$\text{SGPA} = 152/21 = 7.23$$

Semester	Credits	SGPA	Credits x SGPA
Semester I	24	7	$24 \times 7 = 168$
Semester II	24	6	$24 \times 6 = 144$
Semester III	24	6.5	$24 \times 6.5 = 156$
Semester IV	24	6	$24 \times 6 = 144$
Semester V	24	7.5	$24 \times 7.5 = 180$

Semester VI	24	8	24 x 8 = 192
Semester VII	24	8.5	24 x 8.5 = 204
Semester VIII	24	8	24 x 8 = 192
	192		1380

$$\text{CGPA} = 1380/192 = 7.18$$

- 9.10** For merit ranking or comparison purposes or any other listing, **only** the ‘**rounded off**’ values of the CGPAs will be used.
- 9.11** For calculations listed in regulations 9.6 to 9.9, performance in failed subjects/ courses (securing **F** grade) will also be taken into account, and the credits of such subjects/ courses will also be included in the multiplications and summations. After passing the failed subject(s) newly secured letter grades will be taken into account for calculation of SGPA and CGPA. However, mandatory courses will not be taken into consideration.

#### **10.0 Passing standards**

- 10.1** A student shall be declared successful or ‘passed’ in a semester, if student secures a  $\text{GP} \geq 5$  (‘C’ grade or above) in every subject/course in that semester (i.e. when student gets an  $\text{SGPA} \geq 5.00$  at the end of that particular semester); and a student shall be declared successful or ‘passed’ in the entire under graduate programme, only when gets a  $\text{CGPA} \geq 5.00$  for the award of the degree as required.
- 10.2** After the completion of each semester, a grade card or grade sheet (or transcript) shall be issued to all the registered students of that semester, indicating the letter grades and credits earned. It will show the details of the courses registered (course code, title, no. of credits, and grade earned etc.), credits earned, SGPA, and CGPA.

#### **11.0 Declaration of results**

- 11.1** Computation of SGPA and CGPA are done using the procedure listed in 9.6 to 9.9.
- 11.2** For final percentage of marks equivalent to the computed final CGPA, the following formula may be used.

$$\% \text{ of Marks} = (\text{final CGPA} - 0.5) \times 10$$

#### **12.0 Award of degree**

- 12.1** A student who registers for all the specified subjects/ courses as listed in the course structure and secures the required number of 192 credits (with  $\text{CGPA} \geq 5.0$ ), within 8 academic years from the date of commencement of the first academic year, shall be declared to have ‘**qualified**’ for the award of the B.Tech. degree in the chosen branch of Engineering as selected at the time of admission.

- 12.2 A student who qualifies for the award of the degree as listed in item 12.1 shall be placed in the following classes.
- 12.3 Students with final CGPA (at the end of the under graduate programme)  $\geq 8.00$ , and fulfilling the following conditions -
- (i) Should have passed all the subjects/courses in '**first appearance**' within the first 4 academic years (or 8 sequential semesters) from the date of commencement of first year first semester.
  - (ii) Should have secured a CGPA  $\geq 8.00$ , at the end of each of the 8 sequential semesters, starting from I year I semester onwards.
  - (iii) Should not have been detained or prevented from writing the end semester examinations in any semester due to shortage of attendance or any other reason, shall be placed in '**first class with distinction**'.
- 12.4 Students with final CGPA (at the end of the under graduate programme)  $\geq 6.50$  but  $< 8.00$ , shall be placed in '**first class**'.
- 12.5 Students with final CGPA (at the end of the under graduate programme)  $\geq 5.50$  but  $< 6.50$ , shall be placed in '**second class**'.
- 12.6 All other students who qualify for the award of the degree (as per item 12.1), with final CGPA (at the end of the under graduate programme)  $\geq 5.00$  but  $< 5.50$ , shall be placed in '**pass class**'.
- 12.7 A student with final CGPA (at the end of the under graduate programme)  $< 5.00$  will not be eligible for the award of the degree.
- 12.8 Students fulfilling the conditions listed under item 12.3 alone will be eligible for award of '**university rank**' and '**gold medal**'.
- 13.0 **Withholding of results**
- 13.1 If the student has not paid the fees to the university/ college at any stage, or has dues pending due to any reason whatsoever, or if any case of indiscipline is pending, the result of the student may be withheld, and student will not be allowed to go into the next higher semester. The award or issue of the degree may also be withheld in such cases.
- 14.0 **Transitory regulations**
- A. **For students detained due to shortage of attendance:**
1. A Student who has been detained in I year of R09/R13/R15 Regulations due to lack of attendance, shall be permitted to join I year I Semester of R16 Regulations and he is required to complete the study of B.Tech./B. Pharmacy programme within the stipulated period of eight academic years from the date of first admission in I Year.
  2. A student who has been detained in any semester of II, III and IV years of R09/R13/R15 regulations for want of attendance, shall be permitted to join the corresponding semester of R16 regulations and is required to complete the study of

B.Tech./B. Pharmacy within the stipulated period of eight academic years from the date of first admission in I Year. The R16 Academic Regulations under which a student has been readmitted shall be applicable to that student from that semester.

See rule (C) for further Transitory Regulations.

**B. For students detained due to shortage of credits:**

3. A student of R09/R13/R15 Regulations who has been detained due to lack of credits, shall be promoted to the next semester of R16 Regulations only after acquiring the required credits as per the corresponding regulations of his/her first admission. The student is required to complete the study of B.Tech./B. Pharmacy within the stipulated period of eight academic years from the year of first admission. The R16 Academic Regulations are applicable to a student from the year of readmission onwards.

See rule (C) for further Transitory Regulations.

**C. For readmitted students in R16 Regulations:**

4. A student who has failed in any subject under any regulation has to pass those subjects in the same regulations.
5. The maximum credits that a student acquires for the award of degree, shall be the sum of the total number of credits secured in all the regulations of his/her study including R16 Regulations. The performance evaluation of the student will be done after the exemption of two subjects if total credits acquired are  $\leq 206$ , three subjects if total credits acquired are  $> 206$  (see R16 Regulations for exemption details).
6. If a student readmitted to R16 Regulations, has any subject with 80% of syllabus common with his/her previous regulations, that particular subject in R16 Regulations will be substituted by another subject to be suggested by the University.

**Note:** If a student readmitted to R16 Regulations, has not studied any subjects/topics in his/her earlier regulations of study which is prerequisite for further subjects in R16 Regulations, the College Principals concerned shall conduct remedial classes to cover those subjects/topics for the benefit of the students.

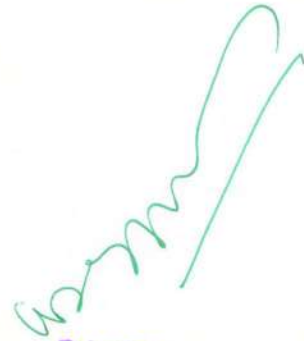
**15.0 Student transfers**

**15.1** There shall be no branch transfers after the completion of admission process.

**15.2** There shall be no transfers from one college/stream to another within the constituent colleges and units of Jawaharlal Nehru Technological University Hyderabad.

**15.3** The students seeking transfer to colleges affiliated to JNTUH from various other Universities/institutions have to pass the failed subjects which are equivalent to the subjects of JNTUH, and also pass the subjects of JNTUH which the students have not studied at the earlier institution. Further, though the students have passed some of the subjects at the earlier institutions, if the same subjects are prescribed in different semesters of JNTUH, the students have to study those subjects in JNTUH in spite of the fact that those subjects are repeated.

- 15.4 The transferred students from other Universities/institutions to JNTUH affiliated colleges who are on rolls to be provide one chance to write the CBT (internal marks) in the **failed subjects and/or subjects not studied** as per the clearance letter issued by the university.
- 15.5 The autonomous affiliated colleges have to provide one chance to write the internal examinations in the **failed subjects and/or subjects not studied**, to the students transferred from other universities/institutions to JNTUH autonomous affiliated colleges who are on rolls, as per the clearance (equivalence) letter issued by the University.
- 16.0 **Scope**
- 16.1 The academic regulations should be read as a whole, for the purpose of any interpretation.
- 16.2 In case of any doubt or ambiguity in the interpretation of the above rules, the decision of the vice-chancellor is final.
- 16.3 The university may change or amend the academic regulations, course structure or syllabi at any time, and the changes or amendments made shall be applicable to all students with effect from the dates notified by the university authorities.



Principer  
Megha Inst. of Engg. & Tech for Women  
Edulabad, Ghatkesar (Mdl).  
Medchal Dist-501 301



# JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

(Established by State Act No. 30 of 2008)

Kukatpally, Hyderabad, Telangana (India).

## Academic Regulations for B.Tech. (Lateral Entry Scheme) from the AY 2017-18

### 1. Eligibility for award of B. Tech. Degree (LES)

The LES students after securing admission shall pursue a course of study for not less than three academic years and not more than six academic years.

2. The student shall register for 144 credits and secure 144 credits with CGPA  $\geq 5$  from II year to IV year B.Tech. programme (LES) for the award of B.Tech. degree. **Out of the 144 credits secured, the student can avail exemption up to 6 credits**, that is, one open elective subject and one professional elective subject or two professional elective subjects resulting in 138 credits for B.Tech programme performance evaluation.
3. The students, who fail to fulfil the requirement for the award of the degree in six academic years from the year of admission, shall forfeit their seat in B.Tech.
4. The attendance requirements of B. Tech. (Regular) shall be applicable to B.Tech. (LES).

### 5. Promotion rule

S. No	Promotion	Conditions to be fulfilled
1	Second year first semester to second year second semester	Regular course of study of second year first semester.
2	Second year second semester to third year first semester	(i) Regular course of study of second year second semester. (ii) Must have secured at least 29 credits out of 48 credits i.e., 60% credits up to second year second semester from all the relevant regular and supplementary examinations, whether the student takes those examinations or not.
3	Third year first semester to third year second semester	Regular course of study of third year first semester.
4	Third year second semester to fourth year first semester	(i) Regular course of study of third year second semester. (ii) Must have secured at least 58 credits out of 96 credits i.e., 60% credits up to

		<b>third year second semester from all the relevant regular and supplementary examinations, whether the student takes those examinations or not.</b>
<b>5</b>	<b>Fourth year first semester to fourth year second semester</b>	<b>Regular course of study of fourth year first semester.</b>

6. All the other regulations as applicable to B. Tech. 4-year degree course (Regular) will hold good for B. Tech. (Lateral Entry Scheme).

### **MALPRACTICES RULES**

#### **DISCIPLINARY ACTION FOR / IMPROPER CONDUCT IN EXAMINATIONS**

	<b>Nature of Malpractices/Improper conduct</b>	<b>Punishment</b>
	If the student:	
1. (a)	Possesses or keeps accessible in examination hall, any paper, note book, programmable calculators, cell phones, pager, palm computers or any other form of material concerned with or related to the subject of the examination (theory or practical) in which student is appearing but has not made use of (material shall include any marks on the body of the student which can be used as an aid in the subject of the examination)	Expulsion from the examination hall and cancellation of the performance in that subject only.
(b)	Gives assistance or guidance or receives it from any other student orally or by any other body language methods or communicates through cell phones with any student or persons in or outside the exam hall in respect of any matter.	Expulsion from the examination hall and cancellation of the performance in that subject only of all the students involved. In case of an outsider, he will be handed over to the police and a case is registered against him.
2.	Has copied in the examination hall from any paper, book, programmable calculators, palm computers or any other form of material relevant to the subject of the examination (theory or practical) in which the student is	Expulsion from the examination hall and cancellation of the performance in that subject and all other subjects the student has already appeared including practical examinations and project work and shall not be permitted to appear for the remaining examinations of the

	appearing.	subjects of that semester/year. The hall ticket of the student is to be cancelled and sent to the university.
3.	Impersonates any other student in connection with the examination.	The student who has impersonated shall be expelled from examination hall. The student is also debarred and forfeits the seat. The performance of the original student who has been impersonated, shall be cancelled in all the subjects of the examination (including practicals and project work) already appeared and shall not be allowed to appear for examinations of the remaining subjects of that semester/year. The student is also debarred for two consecutive semesters from class work and all university examinations. The continuation of the course by the student is subject to the academic regulations in connection with forfeiture of seat. If the imposter is an outsider, he will be handed over to the police and a case is registered against him.
4.	Smuggles in the answer book or additional sheet or takes out or arranges to send out the question paper during the examination or answer book or additional sheet, during or after the examination.	Expulsion from the examination hall and cancellation of performance in that subject and all the other subjects the student has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the subjects of that semester/year. The student is also debarred for two consecutive semesters from class work and all university examinations. The continuation of the course by the student is subject to the academic regulations in connection with forfeiture of seat.
5.	Uses objectionable, abusive or offensive language in the answer paper or in letters to the examiners or writes to the examiner requesting him to award pass marks.	Cancellation of the performance in that subject.
6.	Refuses to obey the orders of the chief superintendent/assistant – superintendent / any officer on duty or misbehaves or creates disturbance of	In case of students of the college, they shall be expelled from examination halls and cancellation of their performance in that subject and all other subjects the student(s) has



	any kind in and around the examination hall or organizes a walk out or instigates others to walk out, or threatens the officer-in charge or any person on duty in or outside the examination hall of any injury to his person or to any of his relations whether by words, either spoken or written or by signs or by visible representation, assaults the officer-in-charge, or any person on duty in or outside the examination hall or any of his relations, or indulges in any other act of misconduct or mischief which result in damage to or destruction of property in the examination hall or any part of the college campus or engages in any other act which in the opinion of the officer on duty amounts to use of unfair means or misconduct or has the tendency to disrupt the orderly conduct of the examination.	(have) already appeared and shall not be permitted to appear for the remaining examinations of the subjects of that semester/year. The students also are debarred and forfeit their seats. In case of outsiders, they will be handed over to the police and a police case is registered against them.
7.	Leaves the exam hall taking away answer script or intentionally tears of the script or any part thereof inside or outside the examination hall.	Expulsion from the examination hall and cancellation of performance in that subject and all the other subjects the student has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the subjects of that semester/year. The student is also debarred for two consecutive semesters from class work and all university examinations. The continuation of the course by the student is subject to the academic regulations in connection with forfeiture of seat.
8.	Possess any lethal weapon or firearm in the examination hall.	Expulsion from the examination hall and cancellation of the performance in that subject and all other subjects the student has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the subjects of that semester/year. The student is also debarred and forfeits the seat.
9.	If student of the college, who is not a	Student of the colleges expulsion from the

	student for the particular examination or any person not connected with the college indulges in any malpractice or improper conduct mentioned in clause 6 to 8.	examination hall and cancellation of the performance in that subject and all other subjects the student has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the subjects of that semester/year. The student is also debarred and forfeits the seat. Person(s) who do not belong to the college will be handed over to police and, a police case will be registered against them.
10.	Comes in a drunken condition to the examination hall.	Expulsion from the examination hall and cancellation of the performance in that subject and all other subjects the student has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the subjects of that semester/year.
11.	Copying detected on the basis of internal evidence, such as, during valuation or during special scrutiny.	Cancellation of the performance in that subject and all other subjects the student has appeared including practical examinations and project work of that semester/year examinations.
12.	If any malpractice is detected which is not covered in the above clauses 1 to 11 shall be reported to the university for further action to award suitable punishment.	

#### **Malpractices identified by squad or special invigilators**

1. Punishments to the students as per the above guidelines.
2. Punishment for institutions : (if the squad reports that the college is also involved in encouraging malpractices)
  - a. A show cause notice shall be issued to the college.
  - b. Impose a suitable fine on the college.
  - c. Shifting the examination centre from the college to another college for a specific period of not less than one year.

\* \* \* \* \*



## JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

(Established by State Act No. 30 of 2008)

Kukatpally, Hyderabad, Telangana (India).

### ACADEMIC REGULATIONS FOR B.TECH. REGULAR STUDENTS

#### WITH EFFECT FROM ACADEMIC YEAR 2018-19 (R-18)

#### 1.0 Under-Graduate Degree Programme in Engineering & Technology (UGP in E&T)

Jawaharlal Nehru Technological University Hyderabad (JNTUH) offers a 4-year (8 semesters) **Bachelor of Technology (B.Tech.)** degree programme, under **Choice Based Credit System (CBCS)** at its non-autonomous constituent and affiliated colleges with effect from the academic year 2018-19.

#### 2.0 **Eligibility for admission**

2.1 Admission to the under graduate (UG) programme shall be made either on the basis of the merit rank obtained by the qualified student in entrance test conducted by the Telangana State Government (EAMCET) or the University or on the basis of any other order of merit approved by the University, subject to reservations as prescribed by the government from time to time.

2.2 The medium of instructions for the entire under graduate programme in Engineering & Technology will be **English** only.

#### 3.0 **B.Tech. Programme structure**

3.1 A student after securing admission shall complete the B.Tech. programme in a minimum period of **four** academic years (8 semesters), and a maximum period of **eight** academic years (16 semesters) starting from the date of commencement of first year first semester, failing which student shall forfeit seat in B.Tech course. Each student shall secure 160 credits (with CGPA  $\geq 5$ ) required for the completion of the under graduate programme and award of the B.Tech. degree.

3.2 **UGC/ AICTE** specified definitions/ descriptions are adopted appropriately for various terms and abbreviations used in these academic regulations/ norms, which are listed below.

#### 3.2.1 **Semester scheme**

Each under graduate programme is of 4 academic years (8 semesters) with the academic year divided into two semesters of 22 weeks ( $\geq 90$  instructional days) each, each semester having - 'Continuous Internal Evaluation (CIE)' and 'Semester End Examination (SEE)'

under Choice Based Credit System (CBCS) and Credit Based Semester System (CBSS) indicated by UGC, and curriculum/course structure as suggested by AICTE are followed.

### 3.2.2 Credit courses

All subjects/ courses are to be registered by the student in a semester to earn credits which shall be assigned to each subject/ course in an L: T: P: C (lecture periods: tutorial periods: practical periods: credits) structure based on the following general pattern.

- One credit for one hour/ week/ semester for theory/ lecture (L) courses or Tutorials.
- One credit for two hours/ week/ semester for laboratory/ practical (P) courses.

Courses like Environmental Science, Constitution of India, Intellectual Property Rights, and Gender Sensitization lab are mandatory courses. These courses will not carry any credits.

### 3.2.3 Subject Course Classification

All subjects/ courses offered for the under graduate programme in E&T (B.Tech. degree programmes) are broadly classified as follows. The University has followed almost all the guidelines issued by AICTE/UGC.

S. No.	Broad Course Classification	Course Group/ Category	Course Description
1	Foundation Courses (FnC)	BS – Basic Sciences	Includes mathematics, physics and chemistry subjects
2		ES - Engineering Sciences	Includes fundamental engineering subjects
3		HS – Humanities and Social sciences	Includes subjects related to humanities, social sciences and management
4	Core Courses (CoC)	PC – Professional Core	Includes core subjects related to the parent discipline/ department/ branch of Engineering.
5	Elective Courses (ElC)	PE – Professional Electives	Includes elective subjects related to the parent discipline/ department/ branch of Engineering.
6		OE – Open Electives	Elective subjects which include inter-disciplinary subjects or subjects in an area outside the parent discipline/ department/ branch of Engineering.
7	Core Courses	Project Work	B.Tech. project or UG project or UG major project or Project Stage I & II
8		Industrial training/ Mini- project	Industrial training/ Summer Internship/ Industrial Oriented Mini-project/ Mini-project

9		Seminar	Seminar/ Colloquium based on core contents related to parent discipline/ department/ branch of Engineering.
10	Minor courses	-	1 or 2 Credit courses (subset of HS)
11	Mandatory Courses (MC)	-	Mandatory courses (non-credit)

#### 4.0 Course registration

- 4.1 A 'faculty advisor or counselor' shall be assigned to a group of 20 students, who will advise the students about the under graduate programme, its course structure and curriculum, choice/option for subjects/ courses, based on their competence, progress, pre-requisites and interest.
- 4.2 The academic section of the college invites 'registration forms' from students before the beginning of the semester through 'on-line registration', ensuring 'date and time stamping'. The on-line registration requests for any 'current semester' shall be **completed before the commencement of SEEs (Semester End Examinations) of the 'preceding semester'**.
- 4.3 A student can apply for **on-line** registration, **only after** obtaining the '**written approval**' from faculty advisor/counselor, which should be submitted to the college academic section through the Head of the Department. A copy of it shall be retained with Head of the Department, faculty advisor/ counselor and the student.
- 4.4 A student may be permitted to register for all the subjects/ courses in a semester as specified in the course structure with maximum additional subject(s)/course(s) limited to 4 credits, based on **progress** and SGPA/ CGPA, and completion of the '**pre-requisites**' as indicated for various subjects/ courses, in the department course structure and syllabus contents.
- 4.5 Choice for '**additional subjects/ courses**' must be clearly indicated, which needs the specific approval and signature of the faculty advisor/ counselor.
- 4.6 If the student submits ambiguous choices or multiple options or erroneous entries during **on-line** registration for the subject(s) / course(s) under a given/ specified course group/ category as listed in the course structure, only the first mentioned subject/ course in that category will be taken into consideration.
- 4.7 Subject/ course options exercised through **on-line** registration are final and **cannot** be changed or inter-changed; further, alternate choices also will not be considered. However, if the subject/ course that has already been listed for registration by the Head of the Department in a semester could not be offered due to any unforeseen or unexpected reasons, then the student shall be allowed to have alternate choice either for a new subject (subject to offering of such a subject), or for another existing subject (subject to availability of seats). Such alternate arrangements will be made by the head of the

department, with due notification and time-framed schedule, within the **first week** after the commencement of class-work for that semester.

- 4.8 Dropping of subjects/ courses may be permitted, only after obtaining prior approval from the faculty advisor/ counselor 'within a period of 15 days' from the beginning of the current semester.
- 4.9 **Open electives:** The students have to choose three open electives (OE-I, II & III) from the list of open electives given. However, the student cannot opt for an open elective subject offered by his own (parent) department, if it is already listed under any category of the subjects offered by parent department in any semester.
- 4.10 **Professional electives:** The students have to choose six professional electives (PE-I to VI) from the list of professional electives given.

#### 5.0 **Subjects/ courses to be offered**

- 5.1 A typical section (or class) strength for each semester shall be 60.
- 5.2 A subject/ course may be offered to the students, **only if** a minimum of 20 students (1/3 of the section strength) opt for it. The maximum strength of a section is limited to 80 (60 + 1/3 of the section strength).
- 5.3 More than **one faculty member** may offer the **same subject** (lab/ practical may be included with the corresponding theory subject in the same semester) in any semester. However, selection of choice for students will be based on - '**first come first serve** basis and CGPA criterion' (i.e. the first focus shall be on early **on-line entry** from the student for registration in that semester, and the second focus, if needed, will be on CGPA of the student).
- 5.4 If more entries for registration of a subject come into picture, then the Head of the Department concerned shall decide, whether or not to offer such a subject/ course for **two (or multiple) sections**.
- 5.5 In case of options coming from students of other departments/ branches/ disciplines (not considering **open electives**), first **priority** shall be given to the student of the '**parent department**'.

#### 6.0 **Attendance requirements:**

- 6.1 A student shall be eligible to appear for the semester end examinations, if the student acquires a minimum of 75% of attendance in aggregate of all the subjects/ courses (excluding attendance in mandatory courses like Environmental Science, Constitution of India, Intellectual Property Rights, and Gender Sensitization lab) for that semester. Two periods of attendance for each theory subject shall be considered, if the student appears for the mid-term examination of that subject. **This attendance should also be included in the fortnightly upload of attendance to the University.**

**The attendance of Mandatory Non-Credit courses should be uploaded separately to the University.**

- 6.2 Shortage of attendance in aggregate up to 10% (65% and above, and below 75%) in each semester may be condoned by the college academic committee on genuine and valid grounds, based on the student's representation with supporting evidence.
- 6.3 A stipulated fee shall be payable for condoning of shortage of attendance.
- 6.4 Shortage of attendance below 65% in aggregate shall in **no** case be condoned.
- 6.5 **Students whose shortage of attendance is not condoned in any semester are not eligible to take their end examinations of that semester. They get detained and their registration for that semester shall stand cancelled. They will not be promoted to the next semester.** They may seek re-registration for all those subjects registered in that semester in which the student is detained, by seeking re-admission into that semester as and when offered; if there are any professional electives and/ or open electives, the same may also be re-registered if offered. However, if those electives are not offered in later semesters, then alternate electives may be chosen from the **same** set of elective subjects offered under that category.
- 6.6 A student fulfilling the attendance requirement in the present semester shall not be eligible for readmission into the same class.

#### 7.0 Academic requirements

The following academic requirements have to be satisfied, in addition to the attendance requirements mentioned in item no.6.

- 7.1 A student shall be deemed to have satisfied the academic requirements and earned the credits allotted to each subject/ course, if student secures not less than 35% (26 marks out of 75 marks) in the semester end examination, and a minimum of 40% (40 marks out of 100 marks) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together; in terms of letter grades, this implies securing 'C' grade or above in that subject/ course.
- 7.2 A student shall be deemed to have satisfied the academic requirements and earned the credits allotted to Industrial Oriented Mini Project/Summer Internship and seminar, if the student secures not less than 40% marks (i.e. 40 out of 100 allotted marks) in each of them. The student is deemed to have failed, if he (i) does not submit a report on Industrial Oriented Mini Project/Summer Internship, or does not make a presentation of the same before the evaluation committee as per schedule, or (ii) does not present the seminar as required in the IV year I Semester, or (iii) secures less than 40% marks in Industrial Oriented Mini Project/Summer Internship and seminar evaluations.

A student may reappear once for each of the above evaluations, when they are scheduled again; if the student fails in such 'one reappearance' evaluation also, the student has to reappear for the same in the next subsequent semester, as and when it is scheduled.

### 7.3 Promotion Rules

S. No.	Promotion	Conditions to be fulfilled
1	First year first semester to first year second semester	Regular course of study of first year first semester.
2	First year second semester to second year first semester	(i) Regular course of study of first year second semester. (ii) Must have secured at least 18 credits out of 37 credits i.e., 50% credits up to first year second semester from all the relevant regular and supplementary examinations, whether the student takes those examinations or not.
3.	Second year first semester to second year second semester	Regular course of study of second year first semester.
4	Second year second semester to third year first semester	(i) Regular course of study of second year second semester. (ii) Must have secured at least 47 credits out of 79 credits i.e., 60% credits up to second year second semester from all the relevant regular and supplementary examinations, whether the student takes those examinations or not.
5	Third year first semester to third year second semester	Regular course of study of third year first semester.
6	Third year second semester to fourth year first semester	(i) Regular course of study of third year second semester. (ii) Must have secured at least 73 credits out of 123 credits i.e., 60% credits up to third year second semester from all the relevant regular and supplementary examinations, whether the student takes those examinations or not.
7	Fourth year first semester to fourth year second semester	Regular course of study of fourth year first semester.



- 7.4 A student (i) shall register for all courses/subjects covering 160 credits as specified and listed in the course structure, (ii) fulfills all the attendance and academic requirements for 160 credits, (iii) earn all 160 credits by securing SGPA  $\geq 5.0$  (in each semester), and CGPA (at the end of each successive semester)  $\geq 5.0$ , (iv) **passes all the mandatory courses**, to successfully complete the under graduate programme. The performance of the student in these 160 credits shall be taken into account for the calculation of 'the final CGPA (**at the end of under graduate programme**), and shall be indicated in the grade card of IV-year II semester.
- 7.5 If a student registers for '**extra subjects**' (in the parent department or other departments/branches of Engg.) other than those listed subjects totaling to 160 credits as specified in the course structure of his department, the performances in those '**extra subjects**' (although evaluated and graded using the same procedure as that of the required 160 credits) will not be taken into account while calculating the SGPA and CGPA. For such '**extra subjects**' registered, percentage of marks and letter grade alone will be indicated in the grade card as a performance measure, subject to completion of the attendance and academic requirements as stated in regulations 6 and 7.1 – 7.4 above.
- 7.6 A student eligible to appear in the semester end examination for any subject/ course, but absent from it or failed (thereby failing to secure '**C**' grade or above) may reappear for that subject/ course in the supplementary examination as and when conducted. In such cases, internal marks (CIE) assessed earlier for that subject/ course will be carried over, and added to the marks to be obtained in the SEE supplementary examination for evaluating performance in that subject.
- 7.7 A student **detained in a semester due to shortage of attendance may be re-admitted in the same semester in the next academic year for fulfillment of academic requirements**. The academic regulations under which a student has been readmitted shall be applicable. However, no grade allotments or SGPA/ CGPA calculations will be done for the entire semester in which the student has been detained.
- 7.8 A student detained **due to lack of credits, shall be promoted to the next academic year only after acquiring the required academic credits**. The academic regulations under which the student has been readmitted shall be applicable to him.
- 8.0 **Evaluation - Distribution and Weightage of marks**
- 8.1 The performance of a student in every subject/course (including practicals and Project Stage – I & II) will be evaluated for 100 marks each, with 25 marks allotted for CIE (Continuous Internal Evaluation) and 75 marks for SEE (Semester End-Examination).
- 8.2 For theory subjects, during a semester, there shall be two mid-term examinations. Each mid-term examination consists of one objective paper, one descriptive paper and one assignment. The objective paper and the descriptive paper shall be for 10 marks each with a total duration of 1 hour 20 minutes (20 minutes for objective and 60 minutes for descriptive paper). The objective paper is set with 20 multiple choice, fill-in the blanks and matching type of questions for a total of 10 marks. The descriptive paper shall contain 4 full questions out of which, the student has to answer 2 questions, each

carrying 5 marks. While the first mid-term examination shall be conducted on 50% of the syllabus, the second mid-term examination shall be conducted on the remaining 50% of the syllabus. Five marks are allocated for assignments (as specified by the subject teacher concerned). The first assignment should be submitted before the conduct of the first mid-term examination, and the second assignment should be submitted before the conduct of the second mid-term examination. The total marks secured by the student in each mid-term examination are evaluated for 25 marks, and the average of the two mid-term examinations shall be taken as the final marks secured by each student in Continuous Internal Evaluation. If any student is absent from any subject of a mid-term examination, an on-line test will be conducted for him by the University. The details of the end semester question paper pattern are as follows:

**8.2.1** The semester end examinations (SEE) will be conducted for 75 marks consisting of two parts viz. i) **Part- A** for 25 marks, ii) **Part - B** for 50 marks.

- Part-A is a compulsory question consisting of ten sub-questions. The first five sub-questions are from each unit and carry 2 marks each. The next five sub-questions are one from each unit and carry 3 marks each.
- Part-B consists of five questions (numbered from 2 to 6) carrying 10 marks each. Each of these questions is from one unit and may contain sub-questions. For each question there will be an “either” “or” choice, which means that there will be two questions from each unit and the student should answer either of the two questions.

**8.2.2** For subjects like **Engineering Graphics/Engineering Drawing**, the SEE shall consist of five questions. For each question there will be an “either” “or” choice, which means that there will be two questions from each unit and the student should answer either of the two questions. There shall be no Part – A, and Part – B system.

**8.2.3** For subjects like **Machine Drawing Practice/Machine Drawing**, the SEE shall be conducted for 75 marks consisting of two parts viz. (i) Part – A for 30 marks. 3 out of 4 questions must be answered, (ii) Part – B for 45 marks. Part – B is compulsory.

**8.2.4** For the Subject **Estimation, Costing and Project Management**, the SEE paper should consist of Part- A, Part-B and Part C. (i) Part – A – 1 out of 2 questions from Unit – I for 30 Marks, (ii) Part – B – 1 out of 2 questions from Unit – II for 15 Marks, (iii) Part – C – 3 out of 5 questions from Units – III, IV, V for 30 Marks.

**8.2.5** For subjects **Structural Engineering – I & II (RCC & STEEL)**, the SEE will be conducted for 75 marks consisting of 2 parts viz. (i) Part – A for 15 marks and, (i) Part – B for 60 marks. Part – A is a compulsory question consisting of ten sub-questions. The first five sub-questions are from each unit relating to design theory and codal provisions and carry 2 marks each. The next five sub-questions are from each unit and carry 1 mark each. Part – B consists of 5 questions (numbered 2 to 6) carrying 12 marks each. Each of these questions is from one unit and may contain sub-questions. For each question there is either or choice, which means that there will be two questions from each unit and the student should answer either of the two questions.

- 8.3** For practical subjects there shall be a continuous internal evaluation during the semester for 25 marks and 75 marks for semester end examination. Out of the 25 marks for internal evaluation, day-to-day work in the laboratory shall be evaluated for 15 marks and internal practical examination shall be evaluated for 10 marks conducted by the laboratory teacher concerned. The semester end examination shall be conducted with an external examiner and the laboratory teacher. The external examiner shall be appointed from the clusters of colleges which are decided by the examination branch of the University.
- 8.4** For the subject having design and/or drawing, (such as engineering graphics, engineering drawing, machine drawing, machine drawing practice and estimation), the distribution shall be 25 marks for continuous internal evaluation (15 marks for day-to-day work and 10 marks for internal tests) and 75 marks for semester end examination. There shall be two internal tests in a semester and the average of the two shall be considered for the award of marks for internal tests.
- 8.5** There shall be an Industrial Oriented Mini Project/Summer Internship, in collaboration with an industry of their specialization. Students will register for this immediately after III year II semester examinations and pursue it during summer vacation. Industrial Oriented Mini Project/Summer Internship shall be submitted in a report form and presented before the committee in IV year I semester. It shall be evaluated for 100 external marks. The committee consists of an external examiner, Head of the Department, supervisor of the Industrial Oriented mini project/Summer Internship and a senior faculty member of the department. There shall be no internal marks for Industrial Oriented Mini Project/Summer Internship.
- 8.6** There shall be a seminar presentation in IV year I semester. For the seminar, the student shall collect the information on a specialized topic, prepare a technical report, and submit it to the department. It shall be evaluated by the departmental committee consisting of Head of the Department, seminar supervisor and a senior faculty member. The seminar report shall be evaluated for 100 internal marks. There shall be no semester end examination for the seminar.
- 8.7** UG project work shall be carried out in two stages: Project Stage – I during IV Year I Semester, Project Stage – II during IV Year II Semester. Each stage will be evaluated for 100 marks. Student has to submit project work report at the end of each semester. First report includes project work carried out in IV Year I semester and second report includes project work carried out in IV Year I & II Semesters. SEE for both project stages shall be completed before the commencement of SEE Theory examinations.
- 8.8** For Project Stage – I, the departmental committee consisting of Head of the Department, project supervisor and a senior faculty member shall evaluate the project work for 75 marks and project supervisor shall evaluate for 25 marks. The student is deemed to have failed, if he (i) does not submit a report on Project Stage - I or does not make a presentation of the same before the evaluation committee as per schedule, or (ii) secures less than 40% marks in the sum total of the CIE and SEE taken together.

A student who has failed may reappear once for the above evaluation, when it is scheduled again; if he fails in such 'one reappearance' evaluation also, he has to reappear for the same in the next subsequent semester, as and when it is scheduled.

- 8.9** For Project Stage – II, the external examiner shall evaluate the project work for 75 marks and the project supervisor shall evaluate it for 25 marks. The topics for industrial oriented mini project, seminar and Project Stage – I shall be different from one another. The student is deemed to have failed, if he (i) does not submit a report on Project Stage - II, or does not make a presentation of the same before the external examiner as per schedule, or (ii) secures less than 40% marks in the sum total of the CIE and SEE taken together.

For conducting viva-voce of project stage – II, University selects an external examiner from the list of experts in the relevant branch submitted by the Principal of the College.

A student who has failed may reappear once for the above evaluation, when it is scheduled again; if student fails in such 'one reappearance' evaluation also, he has to reappear for the same in the next subsequent semester, as and when it is scheduled.

- 8.10** The laboratory marks and the internal marks awarded by the college are subject to scrutiny and scaling by the University wherever necessary. In such cases, the internal and laboratory marks awarded by the college will be referred to a committee. The committee will arrive at a scaling factor and the marks will be scaled accordingly. The recommendations of the committee are final and binding. The laboratory records and internal test papers shall be preserved in the respective institutions as per the University rules and produced before the committees of the University as and when asked for.
- 8.11** For mandatory courses of Environmental Science, Constitution of India, Intellectual Property Rights, and Gender Sensitization lab, a student has to secure 40 marks out of 100 marks (i.e. 40% of the marks allotted) in the continuous internal evaluation for passing the subject/course. **These marks should also be uploaded along with the internal marks of other subjects.**
- 8.12** No marks or letter grades shall be allotted for mandatory/non-credit courses. Only Pass/Fail shall be indicated in Grade Card.

## **9.0 Grading procedure**

- 9.1** Grades will be awarded to indicate the performance of students in each theory subject, laboratory / practicals, seminar, Industry Oriented Mini Project, and project Stage - I & II. Based on the percentage of marks obtained (Continuous Internal Evaluation plus Semester End Examination, both taken together) as specified in item 8 above, a corresponding letter grade shall be given.
- 9.2** As a measure of the performance of a student, a 10-point absolute grading system using the following letter grades (as per UGC/AICTE guidelines) and corresponding percentage of marks shall be followed:

<b>% of Marks Secured in a Subject/Course (Class Intervals)</b>	<b>Letter Grade (UGC Guidelines)</b>	<b>Grade Points</b>
---	--	---------------------

Greater than or equal to 90%	<b>O</b> <b>(Outstanding)</b>	<b>10</b>
80 and less than 90%	<b>A<sup>+</sup></b> <b>(Excellent)</b>	<b>9</b>
70 and less than 80%	<b>A</b> <b>(Very Good)</b>	<b>8</b>
60 and less than 70%	<b>B<sup>+</sup></b> <b>(Good)</b>	<b>7</b>
50 and less than 60%	<b>B</b> <b>(Average)</b>	<b>6</b>
40 and less than 50%	<b>C</b> <b>(Pass)</b>	<b>5</b>
Below 40%	<b>F</b> <b>(FAIL)</b>	<b>0</b>
Absent	<b>Ab</b>	<b>0</b>

- 9.3 A student who has obtained an ‘F’ grade in any subject shall be deemed to have ‘failed’ and is required to reappear as a ‘supplementary student’ in the semester end examination, as and when offered. In such cases, internal marks in those subjects will remain the same as those obtained earlier.
- 9.4 To a student who has not appeared for an examination in any subject, ‘Ab’ grade will be allocated in that subject, and he is deemed to have ‘failed’. A student will be required to reappear as a ‘supplementary student’ in the semester end examination, as and when offered next. In this case also, the internal marks in those subjects will remain the same as those obtained earlier.
- 9.5 A letter grade does not indicate any specific percentage of marks secured by the student, but it indicates only the range of percentage of marks.
- 9.6 A student earns grade point (GP) in each subject/ course, on the basis of the letter grade secured in that subject/ course. The corresponding ‘credit points’ (CP) are computed by multiplying the grade point with credits for that particular subject/ course.

**Credit points (CP) = grade point (GP) x credits .... For a course**

- 9.7 A student passes the subject/ course only when **GP ≥ 5** (‘C’ grade or above)
- 9.8 The Semester Grade Point Average (SGPA) is calculated by dividing the sum of credit points ( $\Sigma CP$ ) secured from all subjects/ courses registered in a semester, by the total number of credits registered during that semester. SGPA is rounded off to **two** decimal places. SGPA is thus computed as

$$SGPA = \{ \sum_{i=1}^N C_i G_i \} / \{ \sum_{i=1}^N C_i \} \dots \text{For each semester,}$$

where ‘i’ is the subject indicator index (takes into account all subjects in a semester), ‘N’ is the no. of subjects ‘registered’ for the semester (as specifically required and listed under the course structure of the parent department),  $C_i$  is the no. of credits

allotted to the  $i^{\text{th}}$  subject, and  $G_i$  represents the grade points (GP) corresponding to the letter grade awarded for that  $i^{\text{th}}$  subject.

- 9.9** The Cumulative Grade Point Average (CGPA) is a measure of the overall cumulative performance of a student in all semesters considered for registration. The CGPA is the ratio of the total credit points secured by a student in **all** registered courses in **all** semesters, and the total number of credits registered in **all** the semesters. CGPA is rounded off to **two** decimal places. CGPA is thus computed from the I year II semester onwards at the end of each semester as per the formula

$$\text{CGPA} = \{ \sum_{j=1}^M C_j G_j \} / \{ \sum_{j=1}^M C_j \} \dots \text{for all } S \text{ semesters registered}$$

(i.e., up to and inclusive of  $S$  semesters,  $S \geq 2$ ),

where ' $M$ ' is the **total** no. of subjects (as specifically required and listed under the course structure of the parent department) the student has '**registered**' i.e., from the 1<sup>st</sup> semester onwards up to and inclusive of the 8<sup>th</sup> semester, ' $j$ ' is the subject indicator index (takes into account all subjects from 1 to 8 semesters),  $C_j$  is the no. of credits allotted to the  $j^{\text{th}}$  subject, and  $G_j$  represents the grade points (GP) corresponding to the letter grade awarded for that  $j^{\text{th}}$  subject. After registration and completion of I year I semester, the SGPA of that semester itself may be taken as the CGPA, as there are no cumulative effects.

**Illustration of calculation of SGPA:**

Course/Subject	Credits	Letter Grade	Grade Points	Credit Points
Course 1	4	A	8	4 x 8 = 32
Course 2	4	O	10	4 x 10 = 40
Course 3	4	C	5	4 x 5 = 20
Course 4	3	B	6	3 x 6 = 18
Course 5	3	A+	9	3 x 9 = 27
Course 6	3	C	5	3 x 5 = 15
	21			152

$$\text{SGPA} = 152/21 = 7.24$$

**Illustration of calculation of CGPA up to 3<sup>rd</sup> semester:**

Semester	Course/Subject Title	Credits Allotted	Letter Grade Secured	Corresponding Grade Point (GP)	Credit Points (CP)
I	Course 1	3	A	8	24
I	Course 2	3	O	10	30
I	Course 3	3	B	6	18
I	Course 4	4	A	8	32
I	Course 5	3	A+	9	27
I	Course 6	4	C	5	20

II	Course 7	4	B	6	24
II	Course 8	4	A	8	32
II	Course 9	3	C	5	15
II	Course 10	3	O	10	30
II	Course 11	3	B+	7	21
II	Course 12	4	B	6	24
II	Course 13	4	A	8	32
II	Course 14	3	O	10	30
III	Course 15	2	A	8	16
III	Course 16	1	C	5	5
III	Course 17	4	O	10	40
III	Course 18	3	B+	7	21
III	Course 19	4	B	6	24
III	Course 20	4	A	8	32
III	Course 21	3	B+	7	21
	<b>Total Credits</b>	<b>69</b>		<b>Total Credit Points</b>	<b>518</b>

$$\text{CGPA} = 518/69 = 7.51$$

The above illustrated calculation process of CGPA will be followed for each subsequent semester until 8<sup>th</sup> semester. The CGPA obtained at the end of 8th semester will become the final CGPA secured for entire B.Tech. Programme.

- 9.10** For merit ranking or comparison purposes or any other listing, **only** the ‘rounded off’ values of the CGPAs will be used.
- 9.11** SGPA and CGPA of a semester will be mentioned in the semester Memorandum of Grades if all subjects of that semester are passed in first attempt. Otherwise the SGPA and CGPA shall be mentioned only on the Memorandum of Grades in which sitting he passed his last exam in that semester. However, mandatory courses will not be taken into consideration.

  
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## 10.0 Passing standards

- 10.1 A student shall be declared successful or 'passed' in a semester, if he secures a GP  $\geq 5$  ('C' grade or above) in every subject/course in that semester (i.e. when the student gets an SGPA  $\geq 5.00$  at the end of that particular semester); and he shall be declared successful or 'passed' in the entire under graduate programme, only when gets a CGPA  $\geq 5.00$  for the award of the degree as required.
- 10.2 After the completion of each semester, a grade card or grade sheet shall be issued to all the registered students of that semester, indicating the letter grades and credits earned. It will show the details of the courses registered (course code, title, no. of credits, grade earned, etc.), credits earned.

## 11.0 Declaration of results

- 11.1 Computation of SGPA and CGPA are done using the procedure listed in 9.6 to 9.9.
- 11.2 For final percentage of marks equivalent to the computed final CGPA, the following formula may be used.

$$\% \text{ of Marks} = (\text{final CGPA} - 0.5) \times 10$$

## 12.0 Award of degree

- 12.1 A student who registers for all the specified subjects/ courses as listed in the course structure and secures the required number of 160 credits (with CGPA  $\geq 5.0$ ), within 8 academic years from the date of commencement of the first academic year, shall be declared to have '**qualified**' for the award of B.Tech. degree in the chosen branch of Engineering selected at the time of admission.
- 12.2 A student who qualifies for the award of the degree as listed in item 12.1 shall be placed in the following classes.
- 12.3 A student with final CGPA (at the end of the under graduate programme)  $\geq 8.00$ , and fulfilling the following conditions - shall be placed in '**first class with distinction**'. However, he
- (i) Should have passed all the subjects/courses in '**first appearance**' within the first 4 academic years (or 8 sequential semesters) from the date of commencement of first year first semester.
  - (ii) Should have secured a CGPA  $\geq 8.00$ , at the end of each of the 8 sequential semesters, starting from I year I semester onwards.
  - (iii) Should not have been detained or prevented from writing the semester end examinations in any semester due to shortage of attendance or any other reason.
- A student not fulfilling any of the above conditions with final CGPA  $> 8$  shall be placed in '**first class**'.

- 12.4 Students with final CGPA (at the end of the under graduate programme)  $\geq 6.50$  but  $<$



8.00 shall be placed in '**first class**'.

**12.5** Students with final CGPA (at the end of the under graduate programme)  $\geq 5.50$  but  $< 6.50$ , shall be placed in '**second class**'.

**12.6** All other students who qualify for the award of the degree (as per item 12.1), with final CGPA (at the end of the under graduate programme)  $\geq 5.00$  but  $< 5.50$ , shall be placed in '**pass class**'.

**12.7** A student with final CGPA (at the end of the under graduate programme)  $< 5.00$  will not be eligible for the award of the degree.

**12.8** Students fulfilling the conditions listed under item 12.3 alone will be eligible for award of '**Gold Medal**'.

### **13.0 Withholding of results**

**13.1** If the student has not paid the fees to the University at any stage, or has dues pending due to any reason whatsoever, or if any case of indiscipline is pending, the result of the student may be withheld, and the student will not be allowed to go into the next higher semester. The award or issue of the degree may also be withheld in such cases.

### **14.0 Student transfers**

**14.1** There shall be no branch transfers after the completion of admission process.

**14.2** There shall be no transfers from one college/stream to another within the constituent colleges and units of Jawaharlal Nehru Technological University Hyderabad.

**14.3** The students seeking transfer to colleges affiliated to JNTUH from various other Universities/institutions have to pass the failed subjects which are equivalent to the subjects of JNTUH, and also pass the subjects of JNTUH which the students have not studied at the earlier institution. Further, though the students have passed some of the subjects at the earlier institutions, if the same subjects are prescribed in different semesters of JNTUH, the students have to study those subjects in JNTUH in spite of the fact that those subjects are repeated.

**14.4** The transferred students from other Universities/institutions to JNTUH affiliated colleges who are on rolls are to be provided one chance to write the CBT (internal marks) in the **equivalent subject(s)** as per the clearance letter issued by the University.

**14.5** The autonomous affiliated colleges have to provide one chance to write the internal examinations in the **equivalent subject(s)** to the students transferred from other universities/institutions to JNTUH autonomous affiliated colleges who are on rolls, as per the clearance (equivalence) letter issued by the University.

### **15.0 Scope**

**15.1** The academic regulations should be read as a whole, for the purpose of any interpretation.

**15.2** In case of any doubt or ambiguity in the interpretation of the above rules, the decision of the Vice-Chancellor is final.

- 15.3** The University may change or amend the academic regulations, course structure or syllabi at any time, and the changes or amendments made shall be applicable to all students with effect from the dates notified by the University authorities.
- 15.4** Where the words “he”, “him”, “his”, occur in the regulations, they include “she”, “her”, “hers”.



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## JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

(Established by State Act No. 30 of 2008)

Kukatpally, Hyderabad, Telangana (India).

### ACADEMIC REGULATIONS FOR B.TECH. (LATERAL ENTRY SCHEME) FROM THE AY 2019-20

1. **Eligibility for award of B. Tech. Degree (LES)**

The LES students after securing admission shall pursue a course of study for not less than three academic years and not more than six academic years.

2. The student shall register for 123 credits and secure 123 credits with CGPA  $\geq 5$  from II year to IV year B.Tech. programme (LES) for the award of B.Tech. degree.
3. The students, who fail to fulfil the requirement for the award of the degree in six academic years from the year of admission, shall forfeit their seat in B.Tech.
4. The attendance requirements of B. Tech. (Regular) shall be applicable to B.Tech. (LES).

5. **Promotion rule**

S. No	Promotion	Conditions to be fulfilled
1	Second year first semester to second year second semester	Regular course of study of second year first semester.
2	Second year second semester to third year first semester	(i) Regular course of study of second year second semester. (ii) Must have secured at least 25 credits out of 42 credits i.e., 60% credits up to second year second semester from all the relevant regular and supplementary examinations, whether the student takes those examinations or not.
3	Third year first semester to third year second semester	Regular course of study of third year first semester.
4	Third year second semester to fourth year first semester	(i) Regular course of study of third year second semester.

		(ii) Must have secured at least 51 credits out of 86 credits i.e., 60% credits up to third year second semester from all the relevant regular and supplementary examinations, whether the student takes those examinations or not.
5	Fourth year first semester to fourth year second semester	Regular course of study of fourth year first semester.

6. All the other regulations as applicable to B. Tech. 4-year degree course (Regular) will hold good for B. Tech. (Lateral Entry Scheme).

### MALPRACTICES RULES

#### DISCIPLINARY ACTION FOR / IMPROPER CONDUCT IN EXAMINATIONS

	Nature of Malpractices/Improper conduct	Punishment
	If the student:	
1. (a)	Possesses or keeps accessible in examination hall, any paper, note book, programmable calculators, cell phones, pager, palm computers or any other form of material concerned with or related to the subject of the examination (theory or practical) in which student is appearing but has not made use of (material shall include any marks on the body of the student which can be used as an aid in the subject of the examination)	Expulsion from the examination hall and cancellation of the performance in that subject only.
(b)	Gives assistance or guidance or receives it from any other student orally or by any other body language methods or communicates through cell phones with any student or persons in or outside the exam hall in respect of any matter.	Expulsion from the examination hall and cancellation of the performance in that subject only of all the students involved. In case of an outsider, he will be handed over to the police and a case is registered against him.
2.	Has copied in the examination hall from any paper, book, programmable calculators, palm computers or any other form of material relevant to the subject	Expulsion from the examination hall and cancellation of the performance in that subject and all other subjects the student has already appeared including practical examinations and project work and shall not be permitted to

	of the examination (theory or practical) in which the student is appearing.	appear for the remaining examinations of the subjects of that semester/year.  The hall ticket of the student is to be cancelled and sent to the University.
3.	Impersonates any other student in connection with the examination.	The student who has impersonated shall be expelled from examination hall. The student is also debarred and forfeits the seat. The performance of the original student who has been impersonated, shall be cancelled in all the subjects of the examination (including practicals and project work) already appeared and shall not be allowed to appear for examinations of the remaining subjects of that semester/year. The student is also debarred for two consecutive semesters from class work and all University examinations. The continuation of the course by the student is subject to the academic regulations in connection with forfeiture of seat. If the imposter is an outsider, he will be handed over to the police and a case is registered against him.
4.	Smuggles in the answer book or additional sheet or takes out or arranges to send out the question paper during the examination or answer book or additional sheet, during or after the examination.	Expulsion from the examination hall and cancellation of performance in that subject and all the other subjects the student has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the subjects of that semester/year. The student is also debarred for two consecutive semesters from class work and all University examinations. The continuation of the course by the student is subject to the academic regulations in connection with forfeiture of seat.
5.	Uses objectionable, abusive or offensive language in the answer paper or in letters to the examiners or writes to the examiner requesting him to award pass marks.	Cancellation of the performance in that subject.
6.	Refuses to obey the orders of the chief superintendent/assistant – superintendent / any officer on duty or	In case of students of the college, they shall be expelled from examination halls and cancellation of their performance in that subject

	<p>misbehaves or creates disturbance of any kind in and around the examination hall or organizes a walk out or instigates others to walk out, or threatens the officer-in charge or any person on duty in or outside the examination hall of any injury to his person or to any of his relations whether by words, either spoken or written or by signs or by visible representation, assaults the officer-in-charge, or any person on duty in or outside the examination hall or any of his relations, or indulges in any other act of misconduct or mischief which result in damage to or destruction of property in the examination hall or any part of the college campus or engages in any other act which in the opinion of the officer on duty amounts to use of unfair means or misconduct or has the tendency to disrupt the orderly conduct of the examination.</p>	<p>and all other subjects the student(s) has (have) already appeared and shall not be permitted to appear for the remaining examinations of the subjects of that semester/year. The students also are debarred and forfeit their seats. In case of outsiders, they will be handed over to the police and a police case is registered against them.</p>
7.	<p>Leaves the exam hall taking away answer script or intentionally tears off the script or any part thereof inside or outside the examination hall.</p>	<p>Expulsion from the examination hall and cancellation of performance in that subject and all the other subjects the student has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the subjects of that semester/year. The student is also debarred for two consecutive semesters from class work and all University examinations. The continuation of the course by the student is subject to the academic regulations in connection with forfeiture of seat.</p>
8.	<p>Possesses any lethal weapon or firearm in the examination hall.</p>	<p>Expulsion from the examination hall and cancellation of the performance in that subject and all other subjects the student has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the subjects of that semester/year. The student is also debarred and forfeits the seat.</p>

9.	If student of the college, who is not a student for the particular examination or any person not connected with the college indulges in any malpractice or improper conduct mentioned in clause 6 to 8.	Expulsion from the examination hall and cancellation of the performance in that subject and all other subjects the student has already appeared including practical examinations and project work and shall not be permitted for the remaining examinations of the subjects of that semester/year. The student is also debarred and forfeits the seat.  Person(s) who do not belong to the college will be handed over to the police and, a police case will be registered against them.
10.	Comes in a drunken condition to the examination hall.	Expulsion from the examination hall and cancellation of the performance in that subject and all other subjects the student has already appeared for including practical examinations and project work and shall not be permitted for the remaining examinations of the subjects of that semester/year.
11.	Copying detected on the basis of internal evidence, such as, during valuation or during special scrutiny.	Cancellation of the performance in that subject and all other subjects the student has appeared for including practical examinations and project work of that semester/year examinations.
12.	If any malpractice is detected which is not covered in the above clauses 1 to 11 shall be reported to the University for further action to award a suitable punishment.	

#### Malpractices identified by squad or special invigilators

1. Punishments to the students as per the above guidelines.
2. Punishment for institutions: (if the squad reports that the college is also involved in encouraging malpractices)
  - a. A show cause notice shall be issued to the college.
  - b. Impose a suitable fine on the college.
  - c. Shifting the examination centre from one college to another college for a specific period of not less than one year.

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# JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

(Established by State Act No. 30 of 2008)

Kukatpally, Hyderabad, Telangana (India).

## ACADEMIC REGULATIONS FOR B.TECH. REGULAR STUDENTS

### WITH EFFECT FROM

### ACADEMIC YEAR 2016-17 (R-16)

1.0 **Under-Graduate Degree Programme in Engineering & Technology (UGP in E&T)**

1.1 JNTUH offers a 4-year (8 semesters) **Bachelor of Technology (B.Tech.)** degree programme, under Choice Based Credit System (CBCS) at its non-autonomous constituent and affiliated colleges with effect from the academic year 2016-17 in the following branches of Engineering:

Branch
Civil Engineering
Electrical and Electronics Engineering
Mechanical Engineering
Electronics and Communication Engineering
Computer Science and Engineering
Chemical Engineering
Electronics and Instrumentation Engineering
Bio-Medical Engineering
Information Technology
Mechanical Engineering (Mechatronics)
Electronics and Telematics Engineering
Metallurgy and Material Technology
Electronics and Computer Engineering
Mechanical Engineering (Production)
Aeronautical Engineering
Instrumentation and Control Engineering
Biotechnology
Automobile Engineering
Mining Engineering
Petroleum Engineering
Civil and Environmental Engineering
Mechanical Engineering (Nano Technology)
Computer Science & Technology
Pharmaceutical Engineering



## 2.0 Eligibility for admission

2.1 Admission to the under graduate programme shall be made either on the basis of the merit rank obtained by the qualified student in entrance test conducted by the Telangana State Government (EAMCET) or the University or on the basis of any other order of merit approved by the University, subject to reservations as prescribed by the government from time to time.

2.2 The medium of instructions for the entire under graduate programme in E&T will be **English** only.

## 3.0 B.Tech. Programme structure

3.1 A student after securing admission shall pursue the under graduate programme in B.Tech. in a minimum period of **four** academic years (8 semesters), and a maximum period of **eight** academic years (16 semesters) starting from the date of commencement of first year first semester, failing which student shall forfeit seat in B.Tech course.

Each semester is structured to provide 24 credits, totaling to 192 credits for the entire B.Tech. programme.

Each student shall secure 192 credits (with CGPA  $\geq 5$ ) required for the completion of the under graduate programme and award of the B.Tech. degree.

3.2 UGC/ AICTE specified definitions/ descriptions are adopted appropriately for various terms and abbreviations used in these academic regulations/ norms, which are listed below.

### 3.2.1 Semester scheme

Each under graduate programme is of 4 academic years (8 semesters) with the academic year being divided into two semesters of 22 weeks ( $\geq 90$  instructional days) each, each semester having - 'Continuous Internal Evaluation (CIE)' and 'Semester End Examination (SEE)'. Choice Based Credit System (CBCS) and Credit Based Semester System (CBSS) as indicated by UGC and curriculum / course structure as suggested by AICTE are followed.

### 3.2.2 Credit courses

All subjects/ courses are to be registered by the student in a semester to earn credits which shall be assigned to each subject/ course in an L: T: P: C (lecture periods: tutorial periods: practical periods: credits) structure based on the following general pattern.

- One credit for one hour/ week/ semester for theory/ lecture (L) courses.
- One credit for two hours/ week/ semester for laboratory/ practical (P) courses or Tutorials (T).

Courses like Environmental Science, Professional Ethics, Gender Sensitization lab and other student activities like NCC/NSO and NSS are identified as mandatory courses. These courses will not carry any credits.

### 3.2.3 Subject Course Classification

All subjects/ courses offered for the under graduate programme in E&T (B.Tech. degree programmes) are broadly classified as follows. The university has followed almost all the guidelines issued by AICTE/UGC.

S. No.	Broad Course Classification	Course Group/ Category	Course Description
1	Foundation Courses (FnC)	BS – Basic Sciences	Includes mathematics, physics and chemistry subjects
2		ES - Engineering Sciences	Includes fundamental engineering subjects
3		HS – Humanities and Social sciences	Includes subjects related to humanities, social sciences and management
4	Core Courses (CoC)	PC – Professional Core	Includes core subjects related to the parent discipline/ department/ branch of Engineering.
5	Elective Courses (E&C)	PE – Professional Electives	Includes elective subjects related to the parent discipline/ department/ branch of Engineering.
6		OE – Open Electives	Elective subjects which include inter-disciplinary subjects or subjects in an area outside the parent discipline/ department/ branch of Engineering.
7	Core Courses	Project Work	B.Tech. project or UG project or UG major project
8		Industrial training/ Mini- project	Industrial training/ Internship/ UG Mini-project/ Mini-project
9		Seminar	Seminar/ Colloquium based on core contents related to parent discipline/ department/ branch of Engineering.
10	Minor courses	-	1 or 2 Credit courses (subset of HS)
11	Mandatory Courses (MC)	-	Mandatory courses (non-credit)

### 4.0 Course registration

- 4.1 A 'faculty advisor or counselor' shall be assigned to a group of 15 students, who will advise student about the under graduate programme, its course structure and curriculum, choice/option for subjects/ courses, based on their competence, progress, pre-requisites and interest.

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD**

**MASTER OF BUSINESS ADMINISTRATION (MBA) R15**

**COURSE STRUCTURE AND SYLLABUS**

**I Year – I Semester**


Category	Course Title	Int. marks	Ext. marks	L	P	C
Core Course II	MANAGEMENT AND ORGANISATIONAL BEHAVIOUR	25	75	3	-	3
Core Course II	BUSINESS LAWS & BUSINESS ENVIRONMENT	25	75	3	-	3
Core Course III	MANAGERIAL ECONOMICS	25	75	3	-	3
Core Course IV	FINANCIAL ACCOUNTING & ANALYSIS	25	75	3	-	3
Core Course V	STATISTICS FOR MANAGEMENT	25	75	3	-	3
Open Elective I	<ul style="list-style-type: none"> <li>• CROSS CULTURE MANAGEMENT</li> <li>• WTO &amp; IPR</li> <li>• TOTAL QUALITY MANAGEMENT</li> <li>• PROJECT MANAGEMENT</li> </ul>	25	75	3	-	3
Laboratory	STATISTICAL DATA ANALYSIS - LAB	50	-	-	4	2
Seminar	BUSINESS COMMUNICATION- SEMINAR	50	-	-	4	2
<b>Total Credits</b>				<b>18</b>	<b>8</b>	<b>22</b>

**I Year - II Semester**

Category	Course Title	Int. marks	Ext. marks	L	P	C
Core Course I	HUMAN RESOURCE MANAGEMENT	25	75	3	-	3
Core Course II	MARKETING MANAGEMENT	25	75	3	-	3
Core Course III	FINANCIAL MANAGEMENT	25	75	3	-	3
Core Course IV	QUANTITATIVE ANALYSIS FOR BUSINESS DECISIONS	25	75	3	-	3
Core Course V	MIS & ERP	25	75	3	-	3
Open Elective I	<ul style="list-style-type: none"> <li>• FOREIGN TRADE</li> <li>• BANKING,INSURANCE &amp; RISK MANAGEMENT</li> <li>• LOGISTICS &amp; SUPPLY CHAIN MANAGEMENT</li> <li>• MSME MANAGEMENT</li> </ul>	25	75	3	-	3
Laboratory	ANNUAL REPORT ANALYSIS - LAB	50	-	-	4	2
Seminar	SUMMER INTERNSHIP - SEMINAR	50	-	-	4	2
<b>Total Credits</b>				<b>18</b>	<b>8</b>	<b>22</b>

**II Year – I Semester**

Category	Course Title	Int. marks	Ext. marks	L	P	C
Core Course I	PRODUCTION & OPERATIONS MANAGEMENT	25	75	3	-	3
Core Course II	STRATEGIC MANAGEMENT	25	75	3	-	3
Core Course III	RESEARCH METHDOLOGY	25	75	3	-	3
Core Elective I	(MRKG/HRM/FIN/SYS)	25	75	3	-	3
Core Elective II	(MRKG/HRM/FIN/SYS)	25	75	3	-	3
Core Elective III	(MRKG/HRM/FIN/SYS)	25	75	3	-	3
Seminar	PERSONAL EFFECTIVENESS - SEMINAR	50	-	-	4	2
Seminar	BUSINESS BEST PRACTICES AND SUCCESS STORIES OF EMERGING LEADERS - SEMINAR	50	-	-	4	2
<b>Total Credits</b>				<b>18</b>	<b>8</b>	<b>22</b>


  
 Principal  
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## II Year - II Semester

Category	Course Title	Int. marks	Ext. marks	L	P	C	
Core Course I	ENTREPRENEURSHIP	25	75	3	-	3	
Core Course II	MANAGEMENT OF TECHNOLOGY	25	75	3	-	3	
Core Elective IV	(MRKG/HRM/FIN/SYS)	25	75	3	-	3	
Core Elective V	(MRKG/HRM/FIN/SYS)	25	75	3	-	3	
Core Elective VI	(MRKG/HRM/FIN/SYS)	25	75	3	-	3	
Seminar	PRE SUBMISSION OF PROJECT –SEMINAR	50	-	-	4	2	
	COMPREHENSIVE VIVA	-	100	-	4	2	
	PROJECT	25	75	-	-	3	
<b>Total Credits</b>					15	8	22

### CORE ELECTIVE STREAMS (choose any one stream subjects as Core Electives)

<b>MARKETING ELECTIVES</b>
CONSUMER BEHAVIOUR
SALES AND DISTRIBUTION
INTEGRATED MARKETING COMMUNICATIONS
RETAILING MANAGEMENT
SERVICES MARKETING
INTERNATIONAL MARKETING
<b>FINANCE ELECTIVES</b>
STRATEGIC MANAGEMENT ACCOUNTING
SECURITY ANALYSIS AND PORTFOLIO MANAGEMENT
FINANCIAL INSTITUTIONS, MARKETS & SERVICES
STRATEGIC INVESTMENT AND FINANCING DECISIONS
INTERNATIONAL FINANCIAL MANAGEMENT
FINANCIAL DERIVATIVES
<b>HR ELECTIVES</b>
PERFORMANCE MANAGEMENT
TRAINING AND DEVELOPMENT
MANAGEMENT OF INDUSTRIAL RELATIONS
COMPENSATION & REWARD MANAGEMENT
INTERNATIONAL HUMAN RESOURCE MANAGEMENT
LEADERSHIP & CHANGE MANAGEMENT
<b>SYSTEMS ELECTIVES</b>
BUSINESS INTELLIGENCE
DATABASE MANAGEMENT SYSTEMS
DECISION SUPPORT SYSTEMS
E-BUSINESS
KNOWLEDGE MANAGEMENT
INFORMATION SYSTEMS, CONTROL AND AUDIT

  
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