ADITYA ENGINEERING COLLEGE
An Autonomous Institution

ACADEMIC REGULATIONS (AR17) FOR B. TECH PROGRAMME
Applicable for the students admitted from the academic year 2017-18 onwards

1. AWARD OF B. TECH. DEGREE

A student will be declared eligible for the award of B. Tech. Degree if he fulfills the following academic regulations.

1.1   If he pursued a Programme of study in not less than four and not more than eight academic years.

1.2   The student shall register for 180 credits and secure all the 180 credits.

2. PROGRAMMES OF STUDY

The following programmes of study are offered at present as specializations for the B. Tech. programme with English as medium of Instruction.

S. No	Branch	Programme code
01	Civil Engineering	01
02	Electrical and Electronics Engineering	02
03	Mechanical Engineering	03
04	Electronics and Communication Engineering	04
05	Computer Science and Engineering	05
06	Information Technology	12
07	Mining Engineering	26
08	Petroleum Technology	27
09	Agricultural Engineering	35

3. DISTRIBUTION AND WEIGHTAGE OF MARKS

3.1   The performance of a student in each semester shall be evaluated course - wise with a maximum of 100 marks for both Theory and Practical courses. The Industry-Oriented (Internship) Minor Project shall be evaluated for 50 marks, Major Project work for 200 marks, Audit courses for 50 marks and Employability Skills course for 50 marks.

3.2   For theory courses, the distribution shall be 40 marks for Sessional evaluation and 60 marks for the End - Examinations. There shall be 2

Sessional examinations during the semester. The Sessional marks shall be awarded by giving a weightage of 80% for best of the two Sessional examinations and 20% for the other Sessional examination. The I Sessional examination (Descriptive, Objective and Assignment) is conducted for first 2 ½ units of syllabus and II Sessional examination for the remaining 2 ½ units for each course in a semester. The weightage of Sessional marks for 40 consists of Descriptive - 24, Objective -10 (Conducted at College level with 20 Multiple choice questions with a weightage of ½ mark each) and Assignment - 06 (Theory, Design, Analysis, Simulation, Algorithms, Drawing, Quiz, Term paper, Tutorial, Surprise test, Seminar, Case study, Lab activity, Minor Project, etc. as the case may be and for Physics-Virtual lab, for Mathematics - MATLAB). For Assignment, the nature of test will be intimated by the concerned faculty member at the beginning of the semester. The descriptive examination is conducted for 90 minutes and the objective examination is for 20 minutes. Each descriptive examination question paper shall contain 3 questions of equal marks and all questions need to be answered. The Objective examination is conducted for 10 marks and descriptive examination is conducted for 24 marks are to be added to the assignment of 06 marks for finalizing Sessional marks of 40. The End examination is conducted for 60 marks in duration of 180 minutes, which contains ten questions, two questions are from each unit and each question may have sub questions. The student has to write one question from each unit, each question carries 12 marks.

3.3   For practical courses, there shall be continuous evaluation during the semester for 40 Sessional marks and 60 End examination marks. The Sessional 40 marks shall be awarded as, day-to-day work-15 marks, observation and Record-10 marks and laboratory Exam -15 marks. The End examination shall be conducted by the concerned teacher and external examiner appointed by the Principal.

3.4   For design and / or drawing, (such as Engineering Drawing, Machine Drawing) and estimation courses, the distribution shall be 40 marks for Sessional evaluation (20 marks for day - to - day work, and 20 marks for Sessional examination) and 60 marks for End examination. There shall be

two Sessional examinations in a Semester. The Sessional marks shall be awarded by giving a weightage of 80% for the best of two Sessional examinations and 20% for the other Sessional examination.

3.5   For audit courses, during a semester there shall be one examination for 50 marks for a duration of 180 minutes in which a student should get minimum 40% of the marks for satisfactory, otherwise the student is considered as not satisfactory. The examination is conducted by covering the topics of all units, which contains five 10 marks questions with internal choice from each unit and each question may have sub questions. If a student failed to get satisfactory marks or is absent for examination, he has to write the exam in that course when conducted next.

3.6   For Employability Skills as audit course, during a semester there shall be one examination for 50 marks. The duration of examination is 100 minutes. The examination shall be conducted in objective type (Multiple choice questions with weightage of ½ mark each), in which a student should get minimum 40% of the marks for satisfactory; otherwise the student is considered as not satisfactory. If a student failed to get satisfactory marks or is absent for examination, he has to write the exam in that course when conducted next.

3.7   For Employability Skills as credit course, the exam is conducted for 50 marks in which 20 marks are conducted for Sessional examination and 30 marks for End examination. For Sessional marks, during the semester there shall be two Sessional examinations. The duration of Sessional examination is 40 minutes and for End examination is 60 minutes. Both the Sessional and End examinations are conducted in objective type (Multiple choice questions with weightage of ½ mark each). The Sessional marks shall be awarded by giving 80% weightage for the best of two Sessional examinations and 20% weightage for other Sessional examination.

3.8   For Industry-Oriented (Internship) Minor Project, the students have to do a project in collaboration with an industry of their specialization, during the vacation after VI Semester End examination. However, the minor project and its report shall be evaluated in VII Semester. The Minor Project shall be submitted in report form and should be presented before

the committee, which shall be evaluated for Sessional marks of 50. The committee consists of Head of the Department, Supervisor of the minor project and a senior faculty member of the department. There shall be no external evaluation.

3.9   For Major Project, 200 marks are awarded out of which 80 marks shall be for Sessional Evaluation and 120 marks for the End Examination. The Sessional Evaluation shall be on the basis of two seminars given by each student on the topic of his major project and evaluated by an internal committee that consists of Head of the Department, Supervisor of the major project and one senior faculty of the department. The End Examination (Viva-Voce) shall be conducted by the committee that consists of an External Examiner (appointed by Principal from the panel of three members given by HOD), Head of the Department and Supervisor of the major project.

3.10   For Massive Open Online Courses MOOCs – I & MOOCs- II, Students should register for a course with prior permission from MOOCS-Coordinator of the department. User ID should be submitted to the MOOCS – Coordinator after the registration. It is through this User ID only; the student has to write the proctored examination. Students should register only for Technical Subjects. However, they can register for Interdisciplinary subjects also. Students have to register for a technical course which is not yet studied or will not be studied in the upcoming semesters. Students should register for a course with duration of ≥ 4 weeks or ≥ 20hrs. Students MOOCS Certificate is considered only if the students write the examination under a proctored system. If the student registers a course where he/she has to write an unproctored online examination, he/she should bring it to the notice of the HOD for conducting the exam in the college. These exams will be usually planned on Saturdays. For MOOCS-I, the course completion certificate should be submitted to the MOOCS-Coordinator before the completion of V Semester end examinations. For MOOCS-II, the course completion certificate should be submitted to the MOOCS-Coordinator before the completion of VI Semester end examinations. In case a student does not pass the courses registered through MOOCs, the same or alternative

equivalent course may be registered again through MOOCs in the next semester with the recommendation of HOD.

4. ATTENDANCE REQUIREMENTS

4.1   A student shall be eligible to write the End examinations if he acquires a minimum of 75% of attendance in aggregate of all the courses.

4.2   Condonation of shortage of attendance in aggregate up to 10% (65% and above and below 75%) on a medical grounds in a semester may be granted by the College Academic Committee and a student can be condoned for a maximum of three times only.

4.3   Shortage of Attendance below 65% in aggregate shall not be condoned.

4.4   Students whose shortage of attendance is not condoned in any semester   are not eligible to write their End examinations of that semester.

4.5   A fee of Rs. 500/- shall be payable towards condonation for shortage of attendance.

4.6   A student will be promoted to the next semester if he satisfies the attendance requirement of the present semester.

4.7   If any student fulfills the attendance requirement in the present semester, he shall not be eligible for re-admission into the same semester.

4.8   A student who is shortage of attendance in a semester may seek re- admission into that semester when offered within 2 weeks from   the   date   of the commencement of class work.

5. MINIMUM ACADEMIC REQUIREMENTS

The following academic requirements have to be satisfied in addition to the attendance requirements mentioned in item no.4.

5.1   A student is deemed to have passed a course and earns the credits allotted to that course by securing not less than 35% of marks in the End examination, and minimum 40% of marks of the total marks (sum of Sessional marks and End examination marks).

5.2   A student will be promoted from IV semester to V semester, if he fulfills the academic requirement of 50% of the credits up to IV semester from all the examinations, whether or not the student takes the examinations.

5.3   A student shall be promoted from VI semester to VII semester if he fulfills the academic requirements of 50% of the credits up to VI semester from all the examinations, whether or not the students takes the examinations.

5.4   All the credit courses shall be considered for calculation of SGPA and CGPA.

6. PROGRAMME PATTERN

6.1   The entire programme of study is for four academic years and all the years are in semester pattern.

6.2   A student is eligible to appear for the End examination in a course, but absent from it or has failed in the End examination, may write the exam in that course when conducted next.

6.3   When a student is detained for lack of credits / shortage of attendance, he may be re-admitted into the same semester in which he has been detained. However, the academic regulations under which he was first admitted shall continue to be applicable to him.

7. AWARD OF DEGREE AND CLASS

After a student has satisfied the requirements prescribed for the completion of the program and is eligible for the award of B. Tech. degree, he shall be placed in one of the following four classes:

Class Awarded	CGPA to be secured	
First Class with Distinction	≥7.75 with no course failures	**From the CGPA Secured from 180 Credits**
First Class	≥6.75 with course failures	
Second Class	≥5.75 to <6.75	
Pass Class	≥4.75 to <5.75	

7.1 Cumulative Grade Point Average (CGPA)

The following procedure is to be adopted to compute the Semester Grade Point Average (SGPA) and Cumulative Grade Point Average (CGPA):

Range of Marks(%)	Letter Grade	Level	Grade Point
≥ 90	O	Outstanding	10
≥ 80 to <90	A+	Excellent	9
≥ 70 to <80	A	Very Good	8
≥ 60 to <70	B+	Good	7
≥ 50 to <60	B	Fair	6
≥ 40 to <50	P	Satisfactory	5
<40	F	Fail	0
	-	Absent	0

1. **COMPUTATION OF SGPA**

   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

   $$SGPA(S_i) = \frac{\sum (C_i.G_i)}{\sum (C_i)}$$

   Where C_i is the number of credits of the ith course and G_i is the grade point scored by the student in the ith course.

2. **COMPUTATION OF CGPA**

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

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

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

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

iii. Equivalent Percentage = (CGPA - 0.75) x 10

8. MINIMUM INSTRUCTION DAYS

The minimum instruction days for each semester shall be 90 working days.

9. TRANSFER

9.1 Aditya Engineering College (AEC) proposes to practice JNTUK / State government guidelines for transfer**.**

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

10. WITHHOLDING OF RESULTS

If the student not paid any dues to the college or involved in indiscipline activities, his result will be withheld.

11. TRANSITORY REGULATIONS

11.1 Discontinued or detained students are eligible for readmission as and when next offered.

11.2 The readmitted students will be governed by the regulations under which the student has been admitted.

11.3 a) In case of transferred students from other Universities / colleges, the credits shall be transferred to AEC as per the academic regulations and course structure of the AEC.

 b) The students seeking transfer to AEC from various other universities/institutions have to obtain the credits of any equivalent courses as prescribed by college. In addition the transferred students have to pass the failed courses at the earlier institute.

12. GENERAL

12.1 Wherever the words "he", "him", "his", occur in the regulations, they include "she", "her", "hers".

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

12.3   In case of any doubt or ambiguity in the interpretation of the above rules,   the decision of the Academic Council is final.

12.4   The college may change or amend the academic regulations or syllabi at   any time and the changes or amendments made shall be applicable to all the students with effect from the dates notified by the college.

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ACADEMIC REGULATIONS (AR17) FOR B.TECH. PROGRAMME (LATERAL ENTRY)

Applicable for the students admitted into III semester from the Academic Year 2018-19 onwards

1. **AWARD OF B. TECH. DEGREE**

   A student will be declared eligible for the award of B. Tech. Degree if he fulfills the following academic regulations:

   1.1 If he pursues a course of study in not less than three academic years and not more than six academic years.

   1.2 The student shall register for 133 credits and secure all the 133 credits. All the credit courses shall be considered for calculation of SGPA and CGPA.

2. **PROMOTION RULE**

   2.1 A student shall be promoted from VI semester to VII semester if he fulfills the academic requirements of 50% of the credits up to VI semester from all the examinations, whether or not the student takes the examinations.

3. **AWARD OF CLASS**

   After a student has satisfied the requirement prescribed for the completion of the program and is eligible for the award of B. Tech. degree, he shall be placed in one of the following four classes:

Class Awarded	CGPA to be secured	
First Class with Distinction	≥7.75 with no course failures	**From the CGPA Secured from 133 Credits**
First Class	≥6.75 with course failures	
Second Class	≥5.75 to <6.75	
Pass Class	≥4.75 to <5.75	

4. **All the other regulations applicable to B.Tech Programme remain the same for B.Tech Lateral Entry also.**

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