ADITYA INSTITUTE OF TECHNOLOGY AND MANAGEMENT
(AUTONOMOUS)
Approved by AICTE, Accredited by NBA & NAAC, Recognized under 2(f) and 12(b) of UGC
Permanently Affiliated to JNTUK, Kakinada
K. Kotturu, Tekkali, Srikakulam-532201, Andhra Pradesh, India

Academic Regulations 2020 (AR20) for B. Tech
(Effective for the students admitted into I year from the Academic Year 2020-21 onwards)

1. Award of B.Tech Degree:

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

Registered for **160** credits and he/she must secure total **160** credits.

Students, who fail to complete their four-year course of study within **8** years or fail to acquire the **160** Credits for the award of the degree within **8** academic years from the year of their admission, shall forfeit their seat in B. Tech course and their admission shall stand cancelled.

2. Courses of study:

The following courses of study are offered at present with specialization in the B.Tech Course.

S. No.	Branch Code-Abbreviation	Branch
01	01-CE	Civil Engineering
02	02-EEE	Electrical and Electronics Engineering
03	03-ME	Mechanical Engineering
04	04-ECE	Electronics and Communication Engineering
05	05-CSE	Computer Science and Engineering
06	12-IT	Information Technology
07	42-CSM	CSE (Artificial Intelligence and Machine Learning)
08	44-CSD	CSE (Data Science)

And any other course as approved by the authorities of the University from time to time.

3. Credits (Semester system from I year onwards):

S. No	Course	Credits
1	Mandatory Course	0
2	Theory Course	3
3	Laboratory Course	1.5
4	Integrated Course	4.5
5	Interdisciplinary/Open Elective Course	3
6	Skill-Oriented/Skill-Advanced/Soft Skills Course	2
7	Internship	1.5/03
8	Project work	12

4.   Interdisciplinary/Open Electives:

There are two interdisciplinary electives in II year II semester and III year I semester and one open elective in IV year I semester. The student can choose any one interdisciplinary elective/open elective courses offered in the respective semester. The pattern of Midterm examinations and End examinations of these courses is similar to regular theory courses and the valuation is purely internal.

5.   MOOCs:

Explore all possibilities to run at least one subject in every semester from II year I semester onwards as a MOOCs.

6.   NCC/NSS activities:

All undergraduate students shall register for NCC/NSS activities. A student will be required to participate in an activity for two hours in a week during II year I semester or II year II semester and evaluated during the II year II Semester. Grade shall be awarded as Satisfactory or Unsatisfactory in the mark sheet on the basis of participation, attendance, performance and behavior. If a student gets an unsatisfactory Grade, he/she shall repeat the above activity in the subsequent years, in order to complete the degree requirements.

7.   Evaluation Methodology:

The performance of a student in each semester shall be evaluated with a maximum of **100** marks for theory course, laboratory and other courses. The project work shall be evaluated for **200** marks.

7.1   Mandatory Courses:

Mandatory course is one among the compulsory courses and does not carry any Credits. The list of mandatory courses is shown below:

➢   Induction Program
➢   Constitution of India
➢   Environmental Science
➢   Human Values

No marks or letter grade shall be allotted for all mandatory non-credit courses.

7.2   Theory course (100 marks):

For theory course, the distribution shall be **40** marks for internal midterm evaluation and **60** marks for the External End Examinations. Out of **40** internal midterm marks, **25** marks are allotted for descriptive exam, **10** marks for two assignments (**5** marks for each assignment) or one case study (group-wise), and **5** marks for objective test.

7.2.1 Pattern for Internal Midterm Examinations (25 marks):

For theory courses of each semester, there shall be **2** Midterm exams. Each descriptive exam is to be held for **30** marks and will be scaled down to **25** marks, with the duration of **90** minutes.

For final calculation of internal marks, weightage of **70%** will be given to the student who performed well either in first Midterm or second Midterm and **30%** weightage will be given to other Midterm examination.

Midterm paper contains three descriptive type questions with internal choice. Each question carries **10** marks (3×10=30M). The first Midterm examination will be conducted usually after 8 weeks of instruction or after completion of 50% syllabus (i.e. first 3 Units), and the second Midterm examination will be conducted usually at the end of instruction after completion of remaining 50% syllabus (i.e. remaining 3 Units).

7.2.2 Objective test (5 marks):

For theory courses of each semester, there shall be **2** Objective tests to be conducted along with Midterm exam. Each Objective test is to be held for **10** marks with the duration of **10** minutes and will be scaled down to **5** marks.

For final calculation of objective test marks, weightage of **70%** will be given to the student who performed well either in first objective test or second objective test and **30%** weightage will be given to other objective test.

7.2.3 Pattern for External End Examinations (60 marks):

The question paper shall have descriptive type questions for **60** marks. There shall be one question from each unit with internal choice. Each question carries **10** marks. Each course shall consist of six units of syllabus. The student should answer total **6** questions. (6X10M=60M)

7.3   Laboratory Course (100 marks):

For laboratory course, there shall be continuous evaluation during the semester for **40** internal marks and **60** semester end examination marks. Out of the **40** marks for internal, **25** marks for day–to–day evaluation, **5** marks for record and **10** marks to be awarded for internal laboratory written test. The end examination shall be conducted by the teacher concerned and external examiner from outside the college.

For the course Engineering Graphics and Design, the distribution shall be **40** marks for internal evaluation (**20** marks for day–to–day evaluation, and **20** marks for internal tests) and **60** marks for end examination.

For the award of marks for internal tests, weightage of **70%** will be given to the student who performed well either in first test or second test and **30%** weightage will be given to other test.

7.4   Integrated Course (100 marks):

Integrated courses are exclusively designed to provide a unique learning experience of layered learning where students have a chance to practice while learning. These courses are designed by blending both theory and laboratory components one over the other.

Assessment for **100** marks as given below:

Category	Marks	Assessment
Internal	20	Internal assessment of Laboratory carried out for 40 marks will be scaled down to 20 marks.
	20	Internal assessment of Theory carried out for 40 marks will be scaled down to 20 marks.
End examination	40	End examination of Laboratory carried out for 60 marks will be scaled down to 40 marks.
	20	End examination of Theory carried out for 60 marks will be scaled down to 20 marks.

For Integrated courses, the evaluation of Theory and Laboratory are carried out separately as per evaluation method given in 7.2 and 7.3.

A candidate shall be declared to have passed in integrated course if he/she secures a minimum of **40%** aggregate marks i.e. **40** out of **100** (Internal & Semester-end examination marks put together), subject to a minimum of **35%** marks i.e. **21** marks out of **60** in semester-end examination; in addition to that he/she has to secure minimum of **14** marks (out of **40**) in Laboratory end examination and minimum of **7** marks (out of **20**) in Theory end examination.

7.5   Skill Oriented/Skill Advanced Course (100 marks):

Out of a total of **100** marks for the Skill-Oriented/Skill-Advanced Course, **40** marks shall be for the internal evaluation and **60** marks for semester-end examination.

The internal evaluation shall be made on the basis of seminar given by each student on the topic of his/her Skill-Oriented/Skill-Advanced Course, which was evaluated by internal committee constituted by HOD.

The semester-end examination (Viva-Voce) shall be conducted by the committee, consists of an External examiner, Head of the department and Internal supervisor of the Skill-Oriented/Skill-Advanced Course.

7.6   Soft Skills (100 marks):

One Soft Skills course is there in III year II semester and Soft skills shall be evaluated for **100** marks. Evaluation pattern of Soft Skills course is similar to the Theory course and evaluation is purely internal.

7.7 Internship (100 marks):

All the students shall undergo Community Internship as well as Industrial Internship. Community Internship is for a minimum period of **2** weeks after II year II Semester and Industrial Internship is for a minimum period of **4** weeks after III year II Semester.

Self study report for the Community Internship after the II year II Semester shall be submitted and evaluated during the III year I Semester and Self study report for the Industrial Internship after the III year II Semester shall be submitted and evaluated during the IV year I Semester.

The Self study report will be evaluated for a total of **100** marks consisting of **40** marks for internal assessment and **60** marks for semester-end examination.

Internal assessment for **40** marks shall be done by: internal supervisor in case of community internship and internship supervisor in industry in case of internship in an industry based on day to day observation.

The semester-end examination (Viva-Voce) shall be conducted by the committee, consisting of an External examiner, Head of the department and Internal supervisor of the Internship.

7.8 Project (200 marks):

Out of a total of 200 marks for the Project, **80** marks shall be for Project Internal Evaluation and **120** marks for the semester-end Examination.

The Internal Evaluation shall be made on the basis of two seminars given by each student on the topic of his project which was evaluated by an internal committee. Out of **80** internal marks: **20** marks allotted for literature survey, **30** marks for results and analysis, **15** marks for first seminar (usually after 8 weeks) and **15** marks for second seminar (at the end of the semester).

The semester-end examination (Viva – Voce) shall be conducted by the committee, consisting of an External examiner, Head of the Department and Supervisor of the Project. The evaluation of project shall be made at the end of IV year.

7.9 Honors/Minor Programme:

The curriculum provides flexibility to enable the competent students to register for B. Tech. degree with Honors/Minor by earning additional 20 credits which are over and above 160 credits for the award of B. Tech. (Regular) degree. The students registered for B. Tech (Honors) shall not be permitted to register for Minor or vice versa.

He/She shall register Honors/Minor during II B.Tech II semester provided he/she secures ≥ 8 CGPA and clearing all the courses in single attempt till II B.Tech I semester. In case of students admitted through lateral entry, the CGPA compliance will be considered from II B.Tech I semester onwards.

If a student is detained due to lack of attendance, he/she shall not be permitted to register the courses of Honors/Minor.

All the students who maintain ≥ 8 CGPA are eligible to enroll for B. Tech with Honors/Minor; however, registration for Honors/Minor degree will be limited to maximum of 35% of the total intake in a particular batch of students.

The students shall have the scope to earn these additional 20 credits from II year II semester to IV year I semester and at any point of time if he/she wishes to withdraw from B. Tech (Honors/Minor) program, the additional credits acquired till that time will get lapsed and cannot be used to compensate with those 160 credits needed for the award of B.Tech degree.

To acquire 20 additional credits, the students shall register for four 4-credit courses under the list of the courses offered by the respective departments and acquire the balance 4 credits by taking two MOOCs NPTEL courses with not less than 8 weeks duration. The student can complete these two MOOCs NPTEL courses during II year II semester to IV year II semester course completion and these courses will be included in the IV year II Semester grade memo.

For the award of B. Tech. degree with Honors the additional 20 credits shall be earned by taking the courses offered by the respective department of study in one domain. A set of four courses are offered under each of the domains preferably from the new emerging areas as recommended by the BoS.

For the award of B. Tech degree with Minor the additional 20 credits shall be earned by taking the inter-disciplinary courses offered preferably from the new emerging areas by other departments.

These additional courses offered by the program may change from time to time based on the demand and resources availability. The courses may be offered in different modes i.e. guided learning/taught courses/Blended mode or combination.

Evaluation methodology of Honors/Minor courses will be similar to the regular B.Tech theory course/laboratory course/integrated course. No Supplementary examination for the courses offered in B.Tech Honors/Minor Program. If a student fails in a course (offered under B.Tech Honors/Minor Program), that course will not be reflected in Grade Memo. The courses passed under Honors/Minor program will not be counted for CGPA/SGPA calculation.

The student who acquires 20 additional credits and maintained ≥ 8 CGPA and acquiring 160 credits in regular B.Tech course and clearing all the courses in single attempt will be awarded the B.Tech degree with Honors/Minor. Any student who fails to fulfill these conditions will automatically get deregistered for B. Tech (Honors)/B.Tech (Minor) without any notification.

Honors/Minor shall not be awarded under any circumstances without completing the regular B. Tech programme in which a student got admitted.

The student is not permitted to repeat any course offered by any department to fulfil credit requirement for Honors/Minor program.

8. Attendance Requirements:

A student shall be eligible to appear for the semester-end examinations, if he/she acquires a minimum of **75%** of attendance in aggregate of all the subjects.

Condonation of shortage of attendance in aggregate up to **10%** (**65%** and above and below **75%**) in each semester with genuine reasons shall be approved by a committee duly appointed by the college. The condonation approved otherwise can be reviewed by the College Academic Committee. A fee stipulated by the college shall be payable towards condonation of shortage of attendance.

Shortage of Attendance below **65%** in aggregate shall in NO case be condoned.

A Student will not be promoted to the next semester unless he satisfies the attendance requirement of the present semester. He/she may seek re-admission for that semester when offered next.

The overall attendance in each semester of regular B. Tech course and Honors/Minor course shall be computed separately.

A student shall maintain an attendance of 75% in each course of Honors/Minor to appear for semester end examination of Honors/Minor. Condonation of shortage of attendance up to **10%** (**65%** and above and below **75%**) in each course with genuine reasons shall be approved by a committee duly appointed by the college. A separate fee stipulated by the college shall be payable towards condonation of shortage of attendance in Honors/Minor.

A student detained due to lack of attendance in Honors/Minor course shall not be permitted to continue Honors/Minor programme, but he/she can continue regular B. Tech programme.

9. Minimum Academic Requirements:

9.1 Conditions for pass and award of credits for a course:

A candidate shall be declared to have passed in individual course if he/she secures a minimum of **40%** aggregate marks i.e. **40** out of **100** (internal & semester-end examination marks put together), subject to a minimum of **35%** marks i.e. **21** marks out of **60** in semester-end examination.

On passing a course of a programme, the student shall earn assigned credits in that Course.

9.2 Method of Awarding Letter Grades and Grade Points for a Course:

A letter grade and grade points will be awarded to a student in each course based on his/her performance as per the grading system given below.

Table: Grading System for B.Tech Programme

Marks Range	Level	Letter Grade	Grade Points
>= 90%	Outstanding	A+	10
80 – 89%	Excellent	A	9
70 – 79%	Very Good	B	8
60 – 69%	Good	C	7
50 – 59%	Fair	D	6
40 – 49%	Satisfactory	E	5
< 40%	Fail	F	0
-	Absent	AB	0

9.3 Calculation of Semester Grade Points Average (SGPA) for semester:

The performance of each student at the end of the each semester is indicated in terms of SGPA.

The SGPA is calculated as below:

$$\text{SGPA} = \frac{\Sigma(\text{CR} \times \text{GP})}{\Sigma \text{CR}} \quad \text{(for all courses passed in a semester)}$$

Where CR = Credits of a Course
GP = Grade points awarded for a course

9.4 Calculation of Cumulative Grade Points Average (CGPA) and Award of Division for entire programme:

The CGPA is calculated as below:

$$\text{CGPA} = \frac{\Sigma(\text{CR} \times \text{GP})}{\Sigma \text{CR}} \quad \text{(for the entire programme)}$$

Where CR = Credits of a course
GP = Grade points awarded for a course

➢ Both SGPA and CGPA shall be rounded off to 2 decimal points and reported in the transcripts.
➢ As per the AICTE regulations, conversion of CGPA into equivalent percentage as follows:
Equivalent Percentage = (CGPA – 0.5) x 10

9.5 Award of Class:

Class Awarded	CGPA to be secured	Remarks
First Class with Distinction	≥ 7.75 (Without any supplementary appearance)	From the CGPA secured from 160 Credits
First Class	≥ 6.75	
Second Class	≥ 5.75 and < 6.75	
Pass Class	≥ 5.0 and < 5.75	

9.6 Supplementary Examinations:

Supplementary examinations will be conducted in every semester.

9.7 Conditions for Promotion:

(i)   A student will be promoted to second year if he/she satisfies the minimum attendance requirement.

(ii)   A student shall be promoted from II to III year only if he fulfills the academic requirement of total **50%** credits (if the number of credits is in fraction, it will be rounded off to a lower digit) from regular and supplementary examinations of I year and II year examinations, irrespective of whether the candidate takes the examination or not.

(iii) A student shall be promoted from III year to IV year only if he fulfills the academic requirements of total **50%** credits (if number of credits is in fraction, it will be rounded off to lower digit) from regular and supplementary examinations of I Year, II Year and III Year examinations, irrespective of whether the candidate takes the examinations or not.

10. Course pattern:

(i)   The entire course of study is of four academic years and each year will have TWO Semesters (Total EIGHT Semesters).

(ii)   A student is eligible to appear for the end examination in a subject, but when absent for it or failed in the end examinations he/she may appear for that subject's supplementary examinations, when offered.

(iii) When a student is detained due to lack of credits / shortage of attendance, he may be re-admitted when the semester is offered after fulfillment of academic regulations. Whereas the academic regulations hold well with the regulations he/she first admitted.

11. Minimum Instruction Days:

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

12. There shall be no branch transfer after the completion of admission process.

13. **General:**

(i) Wherever the words "he," "him," "his," occur in the regulations, they include "she," "her," "hers" as well.
(ii) The academic regulation should be read as a whole for the purpose of any interpretation.
(iii) In the case of any doubt or ambiguity in the interpretation of the above rules, the decision of the principal is final.
(iv) 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 2020 (AR20) for B. Tech (Lateral Entry Scheme)
(Effective for the students admitted into II year from the Academic Year 2021-22 onwards)

1. Award of B. Tech. Degree:

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

Registered for **121** credits and he/she must secure total **121** credits.

Students, who fail to complete their three-year course of study within **6** years or fail to acquire **121** Credits for the award of the degree within **6** academic years from the year of their admission shall forfeit their seat in B. Tech course and their admission shall stand cancelled.

2. Promotion Rule:

A lateral entry student will be promoted from II year to III year if he satisfies the minimum required attendance in II year.

A student shall be promoted from III year to IV year only if he fulfills the academic requirements of total **50%** of credits (if the number of credits is in fraction, it will be rounded off to lower digit) from the **II Year** and III Year examinations, irrespective of whether the candidate takes the examinations or not.

3. All other regulations as applicable for B. Tech. four- year degree course (Regular) will hold good for B. Tech. (Lateral Entry Scheme)

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DISCIPLINARY ACTION FOR MALPRACTICES / IMPROPER CONDUCT IN EXAMINATIONS

	Nature of Malpractices/Improper conduct	Punishment
1	If the student 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 he 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.
	If the student gives assistance or guidance or receives it from any other student orally or by any other body language methods or communicates through cell phone with any student or students in or outside the exam hall with respect to any matter	Expulsion from the examination hall and cancellation of the performance in that subject only. In case of an outsider, he will be handed over to the police and a case is registered against him.
2	If the student 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 appearing	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 subjects of that semester/year.
3	If the student 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 practical's 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 semester-end examinations. The continuation of the course by the student is subject to the academic regulations in connection with forfeiture of the seat. If the imposter is an outsider, he will be handed over to the police and a case is registered against him.
4	If the student smuggles the answer book or additional sheet or takes out or arranges to send out the question paper 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 semester-end examinations. The continuation of the course by the student is subject to the academic regulations in connection with forfeiture of the seat.
5	If the student uses objectionable, abusive or offensive language in the answer script 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	If the student refuses to obey the orders of the Chief Superintendent/Assistant -Superintendent / any officer on duty or misbehaves or creates disturbance of any kind in and around the examination hall or organizes a walkout or instigates others to walk out or threatens the officer-in charge or any person on duty in or outside the examination hall or causes any injury to any of his relatives either by words 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 relatives, or indulges in any other act of misconduct or mischief which results in damage or destruction of property in the examination hall or any part of the	In case of students of the college, they shall be expelled from examination hall and cancellation of their performance in that subject and all other subjects the candidate(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.

	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	
7	If the student leaves the exam hall taking away answer script or intentionally tears off 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 candidate is subject to the academic regulations in connection with forfeiture of the seat.
8	If the student possesses 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 candidate for the particular examination or any person not connected with the college indulges in any malpractice or improper conduct mentioned in clauses 6, 7, 8	In case of student of the college, 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 candidate 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	If the student 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 already appeared including practical examinations and project work of that semester/year examinations.