

Handbook for B.Tech Degree Students
2017-18
(Version 3)



APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

CET Campus, Thiruvananthapuram, Kerala -695016, India

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Message from Pro Chancellor & Honourable Minister of Education

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Welcome to KTU

APJ Abdul Kalam Technological University (KTU) welcomes you for your study of B.Tech degree in the branch of specialization to which you have been admitted. As a recently established University, KTU has initiated major changes in the academic regulations and curriculum for the B.Tech degree. The details are available at the KTU Website (www.ktu.edu.in). In order to appreciate these changes and to make them simple enough to understand, the important issues related to your study at KTU are listed in this handbook.

Wish you all the best in your career at KTU.



What's new?

- Knowledge based, Project based and Experiential learning
- New courses on Design Engineering, Sustainable Engineering, Life Skills, Business Economics and Design Project for all branches.
- Open book examination in certain courses
- Comprehensive examination
- Publication of results of examinations within one month of completion of the examinations
- Supplementary examinations before the commencement of the odd semester
- Summer courses and contact courses for failed students to earn minimum credits without losing an academic year
- Academic calendar for curricular, co-curricular and extra-curricular activities and vacation for doing internship
- Provision for remedial/bridge courses/ Language Lab, micro projects etc. in the curriculum
- Facility for Break of study to initiate start-up venture or product development
- Co-curricular and extracurricular activities to develop soft skills, nurture team work and leadership qualities, build entrepreneurial and trail blazing outlook are made mandatory
- Provision to drop and change elective courses
- Option for meritorious students to acquire B.Tech (Honours) and B.Tech with Minor
- Academic Auditing to monitor teaching-learning process
- Committees for ensuring academic discipline & students' welfare and for addressing students' grievances
- Credit transfer facility from other University/Academic Institution
- Inter college transfer facility after completing the first two semesters or the first four semesters
- Branch change facility after passing the first two semesters
- Provision for course delivery through MOOC (Massive Open Online Course) in certain subjects

1. Salient features of the B.Tech Programme.

B.Tech degree programme is a credit based one, having a normal duration of four academic years, spanning eight semesters. The maximum duration for a student to complete the programme is **six** academic years spanning twelve semesters. On meeting specific conditions, a student can get a B.Tech (Honours) Degree.

2. B. Tech Programme Structure

- i) B. Tech. programme in all branches of study is structured on a credit based system following the semester pattern with continuous evaluation allowing flexibility for students to decide on the duration of programme completion.
- ii) Each semester shall have 72 instructional days, followed by end semester examinations.
- iii) There is the provision for a student to opt for B.Tech (Honours) at the end of the fourth semester, under specific conditions that are given later.
- iv) The curriculum of any branch of the B.Tech programme is designed to have **180** academic credits and **2** additional pass/fail credits, for the award of the degree.

Credits are assigned to the courses based on the following general pattern.

- One credit for each lecture hour per week for one semester
- One credit for each tutorial hour per week for one semester
- One credit for each laboratory/ practical session of 2 or 3 hrs, per week for one semester

Lectures, Tutorials and Practical are indicated in the curriculum as L - T - P followed by the Credits for them. If L - T - P is 3 - 1- 0 the credit is 4; Likewise for 2 - 0 -2 the credit is 3 and for 0 -0- 3 the credit is 1.

- v) In a semester normally up to six lecture based courses and two laboratory/practical courses, carrying a maximum credit of 26, could be offered.
- vi) The University may allow students to transfer credits they have earned at other Universities and Academic Institutions with its approval.
- vii) Student Activities Points:

In addition to academics, students have to actively engage in co-curricular and extra-curricular activities. Points are allotted for such activities. On getting a minimum of 100 activity points the student passes the course and earns 2 credits. The 2 credits earned as mentioned above are not counted for the CGPA, but is mandatory for the award of the degree. Listing of these activities and the maximum points that could be earned by doing them are given in Section 31.

3. Curriculum, List of Courses and Syllabi

- i) Every branch of study in the B.Tech programme will have a curriculum, list of courses, syllabi and course plans approved by the Academic Committee of the University.
- ii) Courses are categorized as Core Theory (CT), Core Practice (CP) and Electives (EL).
- iii) Each course has a course number. Course number includes the offering department or knowledge segment code and a three digit number. Knowledge segment code is used when a course is offered by any one or more departments with the same course content and syllabus.
- iv) Curriculum and Syllabi are available in the website.
- v) Please note that each course is given an Examination Slot (A, B, C.....) in the curriculum. This is for simplifying the End-Semester examination schedule. The semester examination schedule will give only the date and the corresponding slot, not the subjects. All subjects that are listed under Slot A will have the examination on that day. Please note the courses you are attending and their slots.
- vi) Core courses, Prerequisites and Electives

All courses listed in the curriculum, other than the electives, are core courses.

Earning credits in the core courses is mandatory for the B. Tech. degree.

If a student fails in an elective course, he/she can change the elective course with the permission of the faculty advisor concerned.

For some courses there could be a prerequisite course completion/registration requirement. The prerequisite course will be mentioned in the syllabus.

4. Faculty Advisor/Counsellor

All students will have faculty advisors whose role will be:-

- To guide and help students on academic matters

- To monitor their progress in academics and advise them
- To counsel them and hand-hold them in any difficulty

5. Course Registration and Enrolment

It is mandatory for students to register for the courses they want to attend in a semester.

Students admitted freshly to the first semester, are advised to register for all courses listed for the first semester. However they do not have to enrol for the semester.

In each semester, all students have to register for the courses they desire to study in that semester. They have to enrol for these courses for appearing in the examinations.

Students can drop courses already registered for, at the time of enrolment.

Students should clear all dues including any fees to be paid before enrolment and should not have any disciplinary issues pending. They have to remit examination fee as mentioned in Section 6 (b) at the time of registration/enrolment.

The dates for registration and enrolment will be given in the academic calendar. Any late registration or enrolment, allowed up to 7 working days from the stipulated date, will attract a late fee (see Section 6(c)).

A student can withdraw from a course or substitute one already registered by another on valid reasons with the approval of the faculty advisor. However this has to be done within seven working days from the commencement of the semester.

The maximum number of credits a student can register in a semester is limited to **28**.

6. Fee charged by the University

The approved Fee Structure for B.Tech is as follows:

- a) Student Administration Fee : Rs. 1,000/- per student (One-time fee collected at the time of admission)
- b) Examination Fee : Rs.500/- per Semester + Rs. 200/- per theory paper (At the time of registration of the courses)
- c) Late Fee : Rs.500/-
- d) Revaluation fee : Rs. 600/- per paper

The fee will be collected by the college.

7. Course Completion and Earning of Credits

Students registered and later enrolled for a course have to attend the course regularly and meet the attendance rules of the University and appear for all the internal evaluation procedures and end semester examination for the completion of the course. Credits for the course are earned only on getting a pass grade in the composite evaluation (i.e., internal evaluation + end semester exam).

8. Summer Courses

Students who could not earn the required minimum credits (see Section 15) at the end of the second or fourth semester have two options to continue with the studies.

- (i) They can register again for the courses, when they are offered in the next academic year.
- (ii) There is also a provision to attend summer courses in failed courses for these students.
- (iii) The students who have failed in any course due to lack of eligibility can register for summer courses provided the attendance in regular course was above 50% and Internal Assessment marks were more than or equal to 35%. Make up test will be conducted for such students and IA marks will be revised on the basis of marks obtained in the makeup test. Students should have 75% attendance in the summer course and IA marks should be 45% or more to become eligible to write the examination

Summer courses will be conducted for a minimum of 20 contact hours for each course. Summer courses will be offered only at the end of the second and fourth semesters for the courses covered till that semester.

Details of summer courses planned will be announced by the colleges after the declaration of the even semester results. Final examination for summer courses will be conducted by the University.

Options for the fifth and higher semesters

For higher semesters, i.e., fifth semester onwards, summer courses are not offered. Failed students who have less than 45% marks in internal assessments and/or less than 75% attendance have to register again for the course in the regular semester in which it

is offered and complete the course as per the regulations and appear for the end semester examination.

9. Contact Courses

If a student has to earn credits only just for one course to qualify for the degree after completing eight semesters of study, the college concerned may offer a contact course on a written request by the student.

The contact course is considered as fresh registration and will be offered by the teacher concerned who shall conduct the internal evaluation procedures and allot the marks as per the regulations.

Minimum contact hours for the course will be 20. The final examination will be conducted by the college and will be monitored by the external academic auditor. Question paper for the examination will be given by the Controller of Examination. No grade above **C** will be given for a contact course.

10. Academic Assessment/Evaluation

Academic Evaluation of Courses

University follows a continuous academic evaluation procedure. Academic evaluation composes of internal evaluation and end semester examination.

Academic evaluation procedure and corresponding weights are as follows:-

a) For theory courses: -

The maximum marks for internal evaluation : 50

The maximum marks for end semester examination : 100

Internal evaluation marks are awarded as follows.

- i) Two internal tests of 1 hour duration conducted by the college : 40
(20 marks for each test)
- ii) Tutorials/Assignments/Mini Projects carrying 10 marks.
(Internally by the College) : 10

All the above evaluations are mandatory requirements to earn credits.

Students who have missed **either the first or the second test** can register with the consent of the faculty and the Head of the Department (HoD) concerned for a re-test which will be conducted soon after the completion of the second test, but before the

end semester examination. The re-test will cover topics of both the internal tests. Those who have missed both the tests are not eligible to appear for the end semester examination.

However, if one misses both tests due to medical reasons or other personal exigencies, based on genuine evidence, a single test of 2 hour duration for 40 marks will be conducted covering the whole syllabus, before the end semester examinations. Decision on this will be taken by the Principal and verified by the external academic auditor.

b) For Laboratory /Practical /Workshop courses

- | | | | |
|------|----------------------------|----------|-----------------------------|
| i. | Practical records /Outputs | 60 marks | (Internally by the College) |
| ii. | Regular class Viva | 10 marks | (Internally by the College) |
| iii. | Final practical exam | 30 marks | (Internally by the College) |

All the above assessments are mandatory to earn credits. If not, the student has to complete the course/assessments during his free time in consultation with the faculty members. On completion of these, grades will be assigned. In case the Practical / Laboratory/ Workshop courses are not completed in the semester, grade I (incomplete) will be awarded against the course and the final grade will be given only after the completion of the course/ assessments.

c) Comprehensive Examination

As students appear for placements from seventh semester onwards, comprehensive examination is to be completed in the sixth semester. This examination consists of two parts. Part one a written test and the other an oral one. The written examination will be objective type of 1 hour duration and will have 50 marks and will be conducted by the concerned department.

Chairman of the oral examination board will be a senior faculty in the department and the members include two other faculty members of the department and an external expert from another academic institute or an industry. Oral examination will carry 50 marks.

Comprehensive examination may be conducted any time during the 6th semester.

d) Seminar

Each student has to give a seminar on a professional topic of current interest in consultation with the faculty member in charge of the seminar in the Department. Students have to prepare a detailed report on the topic of the seminar and submit it to

the teacher concerned. The seminar is to be of 20 minutes duration with another 5 minutes given for questions and answers. All students in the class have to attend the seminar without fail. Evaluation will be based on the report, seminar presentation as well as on the ability of the student to answer the questions put forward.

Faculty member in charge of the seminar and another faculty member in the department nominated by the Head of the Department are the evaluators for the seminar. Distribution of marks for the seminar is as follows.

Marks for the report	: 30%
Presentation	: 40%
Ability to answer questions on the topic	: 30%

e) Design Project

Each student or a group of students has to take up a design project. The project topic could be arrived at in consultation with any faculty member in the department.

The Evaluation of the project will be done in two stages. Two project progress evaluations each carrying 20 marks and a final report evaluation and presentation of the project for 60 marks.

The project supervisor and two other faculty members from the same or any other department, nominated by the Head of the Department form the evaluation board.

f) Final Semester Project

Students, either individually or in a small batch not exceeding four, have to do a project approved by their faculty supervisor. The preliminary work of the project is to be started in the seventh semester.

Evaluation scheme is given below:-

- I. Two progress assessments : 20% by the faculty supervisor/s
- II. Final Project Report : 30% by the Assessment Board
- III. Project presentation and Viva : 50% by the Assessment Board

If the project work is not completed satisfactorily, the student has to put in more work and appear again for assessment on a specified date, not earlier than one month after the first evaluation. If the student fails in the project, a fresh registration for the project for one semester is mandatory.

11. Eligibility for writing the end semester examination and for grading

Important: The main eligibility criteria for appearing the end semester examination are

- i. minimum 75% attendance in each course,
- ii. minimum 45% internal marks for each course and
- iii. no pending disciplinary action.

Students who do not meet the above eligibility criteria are awarded an **FE** grade and have to register for summer courses, if eligible or for the regular course again at the next opportunity.

A student should have a minimum of 45% marks in the end semester examination to be eligible for grading in a course. Otherwise he/she will be considered to have failed in the course and an **F** grade will be awarded.

Internal marks given to the students who got 45% marks or more in the end semester examination shall be regulated in line with the end semester examination performance.

Internal mark percentage shall not exceed 25% over the end semester mark %.

(For example if the end semester mark % is 45, then the maximum internal mark % is to be $45+25 = 70$ %.)

In case the student writes the supplementary examination, the mark got in that will be taken into consideration for regulating the internal marks.

Those who have more than 45% marks in the end semester examination are awarded the grade based on both internal assessment and end semester examination marks.

A student earns credits for a course if the grade is **P** or above.

12. Examination

End semester examination will be conducted by the University in all lecture based courses offered in the semester. The end semester examination will normally be of three hours duration, unless otherwise specified.

Supplementary examinations will be conducted by the University during summer vacation only.

Students, who have completed a course but could not write the end semester examination for valid reasons like illness or personal exigencies, are allowed to write the supplementary examination or the end semester examination at the next opportunity provided they meet other eligibility criteria.

Grades awarded in the supplementary examination will be taken as the end semester grades in these courses.

13. Award of Grades

Grading is based on the % marks obtained by the student in a course. The grade card will only give the grades against the courses the student has registered. Semester grade card will give the grade for each registered course, Semester Grade Point Average (SGPA) for the semester as well as Cumulative Grade Point Average (CGPA) up to that semester

14. Grades and Grade Points

Grades and Grade Points as per UGC guidelines will be followed by the University

Grades	Grade Point (GP)	% of Total Marks obtained in the course
O (Outstanding)	10	90% and above
A ⁺ (Excellent)	9	85% and above but less than 90%
A (Very Good)	8.5	80% and above but less than 85%
B+ (Good)	8	70% and above but less than 80%
B (Above Average)	7	60% and above but less than 70%
C (Average)	6	50% and above but less than 60%
P (Pass)	5	45% and above but less than 50%
F (Fail)	0	Less than 45%
FE	0	Failed due to eligibility criteria
I		Course Incomplete

SGPA and CGPA are calculated based on the above grading norms and are explained at the end of this document.

15. Eligibility for promotion to higher semesters

A student has to earn a minimum number of credits in a semester to be eligible to register for the new courses offered in the next semester.

Students who do not meet this requirement are not permitted to register for new courses in the higher semesters. They have to register for the failed courses in normal semesters in which they are offered subject to the limitations imposed by the ordinances and course timetable.

Eligibility Criteria for Registering for Higher Semester Courses

Semester	Allotted Credits	Cumulative Credit	Minimum cumulative credits required to register for courses in higher semesters
First	24	24	Not applicable
Second	23	47	Not insisted
Third	24	71	Not insisted
Fourth	23	94	26 credits from S1 & S2
Fifth	23	117	Not insisted
Sixth	23	140	71 credits from S1 to S4
Seventh	22	162	Not insisted
Eighth	18	180	117 credits from S1 to S6

16. Break of Study

A student is permitted to have a break of study.

- i. In case of accident or serious illness needing prolonged hospitalization and rest.
- ii. In case the student has a bright idea and would like to initiate a start-up venture or develop a new product.
- iii. In case of any personal reasons that need a break in study.

For break of study due to illness, student should submit all necessary medical reports together with the recommendation of the doctor treating him giving definite reasons for break of study and its duration. Before joining back the student should submit the fitness certificate from the doctor who treated him.

Students who want to initiate a start-up venture or a product development, have to submit a project report, clearly indicating the purpose, action plan, technical details, funding details and future plans to the college Principal. The Principal will evaluate the proposal by constituting an expert team consisting of a technocrat and a bank executive and take an appropriate decision based on the team's recommendation. In the semester system followed by the University, break of study for an academic year is preferred over a semester break.

Students who want a break in study due to personal reasons shall convince the Principal on the genuine need for it by giving authentic evidence for the same.

In all cases of break of study the maximum duration for completing the B.Tech programme will be twelve semesters.

17. Revaluation and Grade Improvement

There is no provision for improving the grade.

The students can apply for revaluation of answer scripts by remitting the requisite fee. The final mark awarded will be the best of the two marks. If the difference in marks obtained in revaluation and the original valuation is more than 15% of the maximum marks, it will be sent for third valuation. The final mark will then be the average of the closer of the two marks obtained in the three valuations to the advantage of the student. If this average mark is less than the original mark, the original mark will be retained. If 15% or more improvement is there in the revaluation, the fee collected will be refunded.

18. Grade Cards

Students who have written the end semester examination will be given the grade cards for the registered courses, in every semester by the respective colleges. On earning the required credits for the degree, a consolidated grade sheet for the B. Tech programme will be given by the University.

19. Classification of B.Tech Degree

B.Tech degree will not have any classifications like distinction or first class. There will be no ranks awarded.

20. B. Tech. (Honours)

Accredited departments in institutions, having at least two post graduate programmes, may offer B. Tech (Honours).

Students with a CGPA above 8 at the end of the fourth semester and having no credit arrears only are eligible for this option. As only selected institutions may have this

provision, students cannot demand this or move later to an institute where this is available.

Students have to earn 12 additional credits to get B. Tech (Honours). Furthermore their CGPA at the end of the programme should be 8 or higher.

Those who opted for B. Tech (Honours) but unable to earn the required additional credits in 8 semesters or whose final CGPA is less than 8 shall automatically fall back to the B. Tech. programme. However, additional course credits and the grades thus far earned by them will be shown in the grade card but not included for the CGPA.

21. B.Tech with Minor

The areas for Minor specialization have to be outside the core engineering field of specialization and should allow the interested B.Tech student to focus on his specific interest outside the core curriculum. Such minors are not currently available for the students. Hence the way out is only through external assistance from well recognized establishments and organizations and by meeting the academic standards. For a Minor to be approved, the student should earn 12 credits by registering for courses, projects, and other well defined procedures giving specialized knowledge or experience enabling the student to be capable of integrating or supplementing the knowledge gained in the B.Tech program.

One such Minor could be in Technology Entrepreneurship. For this the courses offered by government recognized TBI and certified by them as per the KTU approved procedures could be identified. These courses are to be offered outside the normal academic timings and during vacations.

Likewise minors in any other field like music, journalism, IPR etc could also be included if they are offered by other universities or institutions and there are takers for them.

The University will consider the inclusion of the minor in the B.Tech Degree Certificate with the approval of the UGC/AICTE. CGPA for the minor will be separately given for the minor specialization.

22. Academic Calendar.

The academic calendar for every academic semester will be published by the University in its website.

It indicates the commencement of the semester, date of beginning of instruction, the course registration and enrolment dates, the schedule for mandatory internal tests for theory courses, dates of completion of laboratory/practical evaluations, date for finalization of internal marks, last instruction day in the semester, planned schedule of end semester examinations and result declaration as well as approved holidays falling within the semester.

Schedule for the supplementary examinations and result declaration dates will be included in the calendar.

The schedule of summer courses will also be indicated in the calendar.

23. Discipline

Every college will have a Student's Welfare Committee and a Disciplinary Action Committee (DAC), constituted by the Principal of the college. Each college will have a Grievance Redress and Appeals Committee constituted by the Principal to address the grievances of the students and to consider their appeals on any decisions made by the college.

Breach of guidelines and unfair practices in Examinations will be viewed seriously and appropriate actions will be taken by the colleges.

24. Academic Malpractices

Every student is required to observe discipline and decorous behaviour. Any act of indiscipline, misbehaviour and unfair practice in examinations will be referred to the **Disciplinary Action Committee (DAC)**. Malpractices in examinations will be viewed seriously and any such incident observed or reported by a faculty member or an invigilator associated with the examinations will be reported to the Principal who in turn will refer it to DAC. On the basis of the report and evidence available or gathered, DAC shall immediately initiate an enquiry giving the concerned student a chance to explain his/her case. Based on this the committee will recommend the course of action in line

with the guidelines formulated for this by the Controller of Examination of the University and forward it to the Principal for action.

The student can appeal to the Grievances and Appeals Committee for a relook on the matter. Based on the committee's report, the Principal will take a final decision on the matter.

DAC will be headed by a department head and will have three other faculty members drawn from different departments as members. In case of malpractices in end semester examinations, the report given by the college DAC and the action taken by the Principal will be intimated to the Controller of Examination of the University

25. Rules on Attendance

Attendance is marked for each course. 75% attendance is mandatory for writing the end semester examination in that course.

Under unavoidable circumstances students are permitted to take leave. Leave is normally sanctioned for any approved activity taken up by students outside the college covering sports and other extracurricular activities. Leave is also permitted on medical grounds or on personal exigencies. Leave of absence for all these is limited to 25% of the academic contact hours for the course.

In case of long illness or major personal tragedies/contingencies the college; Principal can relax the minimum attendance requirement to 60%, to write the end semester examination. This is permitted for one or more courses registered in the semester. Principal will keep all records which led to his decision on attendance, for verification by the Academic Auditor. However, this concession is applicable only to any two semesters during the entire programme. In case of prolonged illness, break of study is permitted.

26. Leave of Absence

Students who want to take leave have to submit a leave letter to the teacher conducting the course.

For medical leave over three days, medical certificate indicating the need for leave is required. After any medical leave exceeding five instruction days, on re-joining, the student has to produce the fitness certificate given by the doctor.

27. Ragging

Ragging of any nature is a criminal and non bail able offence. Involvement in ragging shall lead to stringent punishment, including imprisonment as per the law of the land. A student, whose involvement in ragging is established, shall be summarily dismissed from the college. Each student of the Institute, along with his/her parent, is required to give an undertaking in this regard and the same is to be submitted at the time of registration.

28. Eligibility for Award of Degree

The award of B.Tech/B.Tech (Honours) degree will be based on the recommendation of the Academic Committee and the approval of the Board of Governors and in accordance with the academic regulations.

A student will be eligible for the award of B.Tech Degree on satisfying the following requirements

- i. Earned credits for all core courses and the Project.
- ii. Earned the required minimum credits as specified in the curriculum for the branch of study.
- iii. No pending disciplinary action.

29. Norms for Inter College Transfer

1. The following Category of students are not eligible for intercollege transfer
 - a. Govt.of India Nominee
 - b. Management Quota in Aided Colleges
 - c. Any other category which are ineligible as per the conditions for admission prescribed by Govt.of Kerala/ Govt.of India.
2. Inter college transfer shall be applicable only for regular B.Tech students.
3. Inter college transfer shall be permitted before the commencement of the Third semester and Fifth semester.
4. Inter college transfer shall be effected within the sanctioned strength of the college.
5. The Transfer shall be permitted
 - (i) Between Govt. / Govt. Aided Colleges.
 - (ii) Govt. and Govt. Aided colleges to self-financing colleges.
 - (iii) Between Self- financing Colleges. (Including Govt. controlled)

6. Notification inviting application for Inter College Transfer will be issued by the University during the Second semester/Fourth semester.
7. The candidate should fulfil the academic eligibility requirement for the promotion to the Third Semester/Fifth semester.
8. If the numbers of applicants are more than the seats available, the admission may be based on the GPA obtained in the First semester (for ICT to S3)/CGPA up to Third semester (for ICT to S5). Ties will be broken by the marks obtained in for Mathematics, Physics/Chemistry taken in that order.
9. The students will have only one option of the college for transfer.
10. The request for the transfer shall be submitted to the college in which the transfer is sought with the recommendation of the Principal of the college in which the student is currently studying.
11. The selected candidates shall remit a fee of Rs 3000/- (No fee for SC/ST students) within the stipulated date to KTU while joining in the new college.
12. The college transfer once approved by the receiving college will be final and binding on the applicant. No student will be permitted, under any circumstances, to refuse the change of college once offered.
13. A student who has already availed inter college transfer in S3 will not be permitted college transfer in S5

Procedure for the College Transfer (Student seeks a transfer from College A to College B)

Step 1 : Submit a request for transfer to the Principal where he/she is presently studying (College A)

Step 2 : The principal of college A may or may not recommend the transfer. Once recommended, the recommendation cannot be reversed and hence the Principal of college A has to relieve the student, if the student gets the transfer to college B.

Step3: The Principal of college B shall publish the number of students that can be admitted based on the availability of vacant seats and based on the norms published by the University.

Step4: Principal A relieves the student if he/she is selected by college B with necessary entries in the KTU portal.

Step5: Principal B admits the student in College B with necessary entries in the KTU portal.

Step6: Student remits the fee to the University.

30. Norms for Branch change

1. A student admitted to a particular branch of the B.Tech programme will normally continue studying in that branch till completion.
2. However, in special cases the University may permit a student, who has requested for a change from one branch of study to another after the first two semesters, strictly in accordance with the provisions laid down hereinafter.
3. Only those students who have (a) completed all the credits prescribed in the first two semesters of their studies, and (b) obtained a CGPA not lower than 7.5 (6.5 for SC/ST students) at the end of the second semester will be eligible for consideration for a change of branch after the second semester.
4. Change of branch shall be made strictly on the basis of CGPA of S1 & S2 at the end of second semester of the applicant. Ties will be broken by the marks obtained in S1 & S2 for Mathematics, Physics, and Chemistry taken in that order.
5. Change of branch will be considered only in the college in which the applicant is presently studying to the vacant seats within the sanctioned strength of the branch in the college.
6. The notification regarding the transfer of branch will be published in the website of the college after the semester examination. The colleges have to collect the applications from the students, list them in the website and inform the KTU.
7. Students can give only one choice of branch, to which they wish to change over.
8. All changes of branch made in accordance with the above rules will be effective from the third semester of the applicants concerned. No changes of branch shall be permitted thereafter.
9. All changes of branch will be final and binding on the applicant. No student will be permitted, under any circumstances, to refuse the change of branch once offered.
10. The appropriate credits applicable to the new branch of study earned by the student in the first two semesters will be transferred to him in the new branch. The college will have to make sure the academic requirements as given in the table (see Norms for Branch change in KTU website) are met to undergo the study in the new branch.

31. Addendum

1. Calculation of SGPA/CGPA

Semester Grade Point Average (SGPA) and Cumulative Grade Point Average (CGPA) are calculated as follows.

$SGPA = \frac{\sum(C_i \times GP_i)}{\sum C_i}$ where C_i is the credit assigned for a course and GP_i is the grade point for that course. Summation is done for all courses registered by the student in the semester. Here the failed courses are also accounted.

$CGPA = \frac{\sum(C_i \times GP_i)}{\sum C_i}$ where C_i is the credit assigned for a course and GP_i is the grade point for that course. Summation is done for all courses registered by the student during all the semesters for which the CGPA is needed. Here the failed courses are also accounted. CGPA of all courses passed may also be given.

CGPA for the B. Tech programme is arrived at by considering all course credits that are needed for the degree and their respective grade points.

2. Student Activity Points

Apart from technical knowledge and skills, to be successful as professionals, students should have excellent soft skills, leadership qualities and team spirit. They should have entrepreneurial capabilities and societal commitment. In order to nurture these qualities, KTU has introduced activity points to be earned by the students during their academic stay at the University covering extra-curricular and co-curricular activities. All students have to earn a minimum of 100 activity points from various activity segments listed to qualify for the B.Tech degree. Two credits are given for this on a pass/ fail basis and is mandatory for getting the B.Tech Degree. As no grade is given for these two credits, they are not included in the CGPA calculation. For lateral entry students joining from the third semester, the activity point requirement is 75. Points earned by the student will be indicated in the consolidated academic statement. Colleges shall consolidate the activity points earned by students on a semester basis and enter the consolidated points on an academic year basis in the KTU portal. In case of NSS and NCC, points can be entered after the completion of two-year Programme. The portal for this will only be open for a specific time period. All documental proof for awarding the activity points should be obtained and kept with the college authorities to be verified by the Academic Auditor.

THE MAIN ACTIVITY SEGMENTS ARE AS GIVEN BELOW:-

1. National Initiatives
2. Sports & Games
3. Cultural Activities
4. Professional Self Initiatives
5. Entrepreneurship and Innovation
6. Leadership & Management

The following table gives the list of activities under each of these segments, the level of achievement expected, activity points, evidence needed to assign the points and the minimum duration needed for certain activities. Additional activities falling under these segments can be considered, if requested by the college with full details. However this has to be approved by the Academic Committee of the KTU.

Activity Head	Sl. No	Activity	Achievement Levels and Assigned Activity Points					** Approval Document	Max. Points	Min. Duration of activity
			I	II	III	IV	V			
National Initiatives Participation	1	N C C	-	-	-	-	-	a/b	60	2 Years
	2	N S S	-	-	-	-	-	a/b	60	2 Years
	For C certificate / outstanding performance supported by certification, additional marks upto 20 can be provided subjected to maximum limit of 80 points Best NSS Volunteer Awardee (University level) / Participation in National Integration Camp/ Pre Republic Day Parade Camp (South India), supported by certification, additional marks upto 10 can be provided subjected to maximum limit of 70 points Best NSS Volunteer Awardee (State / National level) / Participation in Republic Day Parade Camp / International Youth Exchange Programme, supported by certification, additional marks upto 20 can be provided subjected to maximum limit of 80 points									
Sports & Games Participation	3	Sports:	8	15	25	40	60	a	60	1 Year
	4	Games	8	15	25	40	60	a	60	1 Year
		First Prize	10	10	10	20	20	Additional points can be provided for winning. The maximum limit for activity points is 60. But for Level IV and V winning, the maximum point limit is enhanced to 80.		
		Second Prize	8	8	8	16	16			
		Third Prize	5	5	5	12	12			

Cultural Activities Participation	5	Music	8	12	20	40	60	a	60	1 Year	
	6	Performing arts	8	12	20	40	60	a	60	1 Year	
	7	Literary arts	8	12	20	40	60	a	60	1 Year	
		First Prize	10	10	10	20	20	Additional points can be provided for winning. The maximum limit for activity points is 60. But for Level IV and V winning, the maximum point limit is enhanced to 80.			
		Second Prize	8	8	8	16	16				
		Third Prize	5	5	5	12	12				
Professional Self Initiatives	8	Tech Fest, Tech Quiz	10	20	30	40	50	a	50		
	9	MOOC with final assessment certificate	50					a	50		
	10	Competitions conducted by Professional Societies - (IEEE, IET, ASME, SAE, NASA etc.)	10	15	20	30	40	a	40		
	11	Attending Full time Conference/ Seminars / Exhibitions/ Workshop/ STTP conducted at IITs /NITs	20					a	40		
	12	Paper presentation/ publication at IITs /NITs	30					a	40		
	Additional 10 points for certificate of recognition.										
	13	Poster Presentation at IITs /NITs	20					a	30		
	Additional 10 points for certificate of recognition.										
	14	Industrial Training/ Internship (atleast for 5 full days)	20					a/b	20		

	15	Industrial/ Exhibition visits	5			a/b/d	10	
	16	Foreign Language Skill (TOFEL/ IELTS/BEC exams etc.)	50			a	50	
Entrepreneurship and Innovation	17	Start-up Company – Registered legally	60			d	60	
	18	Patent-Filed	30			d	60	
	19	Patent - Published	35			d	60	
	20	Patent- Approved	50			d	60	
	21	Patent- Licensed	80			d	80	
	22	Prototype developed and tested	60			d	60	
	23	Awards for Products developed	60			d	60	
	24	Innovative technologies developed and used by industries/users	60			d	60	
	25	Got venture capital funding for innovative ideas/products.	80			d	80	
	26	Startup Employment (Offering jobs to two persons not less than Rs. 15000/- per month)	80			d	80	
27	Societal innovations	50			d	50		
Leadership & Manag			Core coordinator	Sub coordinator	Volunteer			

28	Student Professional Societies (IEEE, IET, ASME, SAE, NASA etc.)	15	10	5	d	40	
29	College Association Chapters (Mechanical, Civil, Electrical etc.)	15	10	5	d	40	
30	Festival & Technical Events (College approved)	15	10	5	d	40	
31	Hobby Clubs	15	10	5	d	40	
32	Special Initiatives (Approval from College and University is mandatory)	15	10	5	d	40	
33	Elected student representatives	30 (Chairman)	25 (Secretary)	15 (Other Council Members)	d		

*Level I College Events

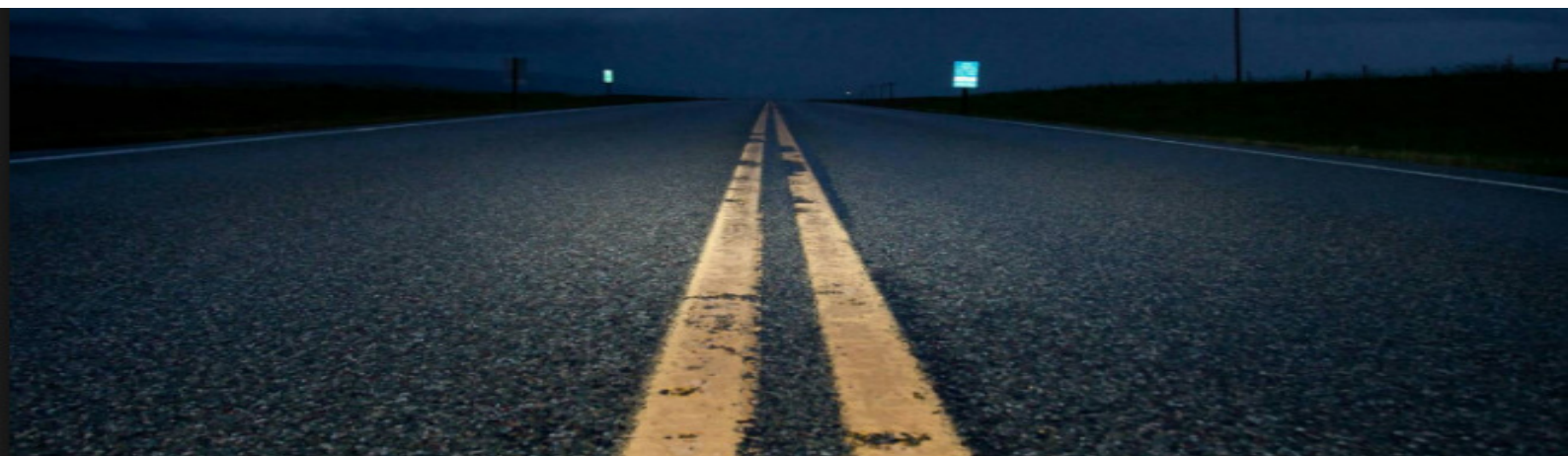
*Level II Zonal Events

*Level III State/ University Events

*Level IV National Events

*Level V International Events

**Approval Documents: (a) Certificate (b) Letter from Authorities (c) Appreciation recognition letter (d) Documentary evidence (e) Legal Proof (f) Others (specify)



33. Frequently Asked Questions

(i) What is the eligibility condition for admission to B.Tech course?

See Clause 1 of 'Ordinance for Bachelor of Technology B.Tech/B.Tech (Honours)' given in the website. The eligibility condition is also available in KEAM prospectus.

(ii) How can one remit exam fee?

Exam fee have to be remitted at the college

(iii) How can registration and enrolment of courses be done?

Registration and enrolment can be done by paying the requisite fee at the college.

(iv) Who will award Student Activities Points?

The faculty advisor.

(v) If a student fails in end exam, will his/her internal evaluation marks be regulated in line with the end semester exam marks?

No. It will be done when the student gets pass marks in supplementary examination.
(See section 11)

(vi) How many chances will a student get to pass a course?

A student will get maximum of six years to complete the B.Tech programme.

(vii) Will the University issue marks details on request?

No. The University will issue grade cards only.

(viii) Can a student skip some courses during regular semester and register in subsequent semester?

Yes, except in semesters 1 & 2. In any case, the maximum duration for completion of the programme is 6 years.

(ix) Will the University publish model question paper or question paper pattern?

Question paper pattern will be published.

(x) How much choice will be available in questions for end semester exam?

It will vary for different subjects. Will be available in the question paper pattern.

(xi) If a student breaks study and continues after one academic year and meanwhile the curriculum is changed, shall he/she register for courses in the previous curriculum or changed curriculum?

The curriculum committee of the University will suggest the equivalent courses to be studied.

(xii) Does the University award ranks for each branch?

No

(xiii) Is there provision for inter college transfer in higher semesters, if vacancy arises?

If both the colleges agree (relieving and admitting colleges) college transfer is permitted according to norms. (see Section 29)

(xiv) Is there provision for branch change?

If the first two semesters are successfully completed, branch change option is there according to certain norms. (see Section 30)

(xv) How can a student continue studies if he/she is not eligible for promotion to higher semesters?

(i) There is no minimum credit requirement for moving from an even semester to the next odd semester.

(ii) If a student has no 'FE' grade in any course but 'F' grade in some course(s), he/she can continue his/her studies if the minimum credits required at the end of even semester is earned by him/her and pass the failed courses in supplementary examinations or the next regular examination. If he has not earned the minimum credits required, he/she has to break study for one academic year, earn credits without registering for the course and qualify for promotion to the next semester.

(iii) If a student has 'FE' grade in any course(s) , he/she can register for summer course, write the supplementary/make up examination and continue his/her studies if he/she earns the minimum credits required at the end of even semester for promotion. He/she can pass the failed courses in the next regular or supplementary examinations. If he/she has not earned the minimum credits

required, he/she has to break study for one academic year, earn credits without registering for the 'F' grade course(s). But he/she has to register for 'FE' grade course(s), if any, and attend the regular classes along with the junior batch of students.

(xvi) What is open book examination?

Students are permitted to bring in class notes, own notes, text books and other books (Maximum 3/4 books) for the test. Access to internet and mobile phones is NOT permitted.

(xvii) Is matriculation/eligibility certificate required for admission?

There is no need to obtain Eligibility/ Equivalency/ Matriculation Certificates from KTU for admission.

(xviii) What is the formula for conversion of GPA to percentage of marks ?

A general formula for conversion of SGPA/CGPA into percentage of marks cannot be defined. However an approximate formula for conversion of SGPA/CGPA to % marks is as follows.

The Percentage Marks (% Marks) = $(10 \times G - 3.75)$, where G is SGPA or CGPA

(xix) What is prerequisite course ?

For certain courses in the curriculum, students should study/have studied another course(s) in the curriculum in the same semester/previous semesters in order to understand the course contents.

(xx) Should a student pass the prerequisite course for registering the course for which prerequisite course requirement is specified ?

Student should **not** earn FE grade in the prerequisite course if it is offered in previous semesters. If it is offered in the same semester, he/she should have registered for the prerequisite course.

