I've invited you to fill out a form:[B.TECH CURRICULUM REVISION 2023](https://docs.google.com/forms/d/e/1FAIpQLSfHLedKlN8O4XpCAM8c0Ide0L16w_i0JGYZjVuGj2qJ7xOwWw/viewform?vc=0&c=0&w=1&flr=0&usp=mail_form_link" \t "_blank)

**Academic Philosophy of KTU:**

The academic philosophy of the University shall be in line with the **Outcome-Based Education (OBE)** adopted by the AICTE and  the **Choice Based Credit system** envisaged by the UGC. Accredited engineering degrees call upon students to develop a wide range of knowledge and skills. These range from technical, scientific and mathematical knowledge, through to transferable skills such as communications, teamwork, business acumen and critical analysis.

Through various brain storming sessions and discussions, we aim to implement a cross-departmental teaching framework. A range of pedagogies will be employed to develop a new way of teaching, aimed at developing the student's knowledge, skill and attitude that will also meet a diverse range of learning outcomes.

The curriculum will be designed keeping in mind the changing needs of the learning experiences of our students. They should have an option to choose diverse paths after graduation. The curriculum shall not merely be a set of courses to major and minor in, but rather will be aimed at helping students to further thread their specializations and  customize their learning track that will provide for accelerated, normal or slow learning pace. The curriculum shall be focussed on education and not examination. Further, the new vision for the education system that is defined by mobility, credit transfer, nonlinearity, flexibility, agility, modularity, intensity, diversity, churn and experientiality, shall also be addressed. The University B.Tech curriculum shall be a curriculum that is quality motivated, outcome based and socially & industrially relevant.

The teaching learning process and evaluation of students shall be based on Program Objectives and Desired Outcomes. The curriculum, syllabus, teaching learning process and evaluation shall conform to **Graduate Attributes (GA)**. The syllabus shall be such as to include a problem solving approach and to develop analytical skills. We have to ensure that the policy "**one size fits all"** no longer exists. Instead, our students should be provided with different domains of learning. KTU is an affiliating University with close to 150 colleges offering B.Tech programmes and about 50000 students with their calibre ranging from the average to the very brilliant. The curriculum and syllabus that is to be designed should take into consideration the wide gap in the capability of the students. A bright student should not lose any opportunity to acquire advanced knowledge and at the same time an average student should acquire the minimum knowledge required for an Engineering graduate.  
  
Based on this philosophy and after discussions in various committees, conversations with experts from Academia and Industry, APJAKTU has arrived at certain targeted points for discussion.

**You are requested to go through these, discuss with your stakeholders and offer your responses.**

|  |
| --- |
| [**FILL OUT FORM**](https://docs.google.com/forms/d/e/1FAIpQLSfHLedKlN8O4XpCAM8c0Ide0L16w_i0JGYZjVuGj2qJ7xOwWw/viewform?vc=0&c=0&w=1&flr=0&usp=mail_form_link) |

GOOGLE FORM – contents for which we have to give answers

B.TECH CURRICULUM REVISION 2023

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**sct@ktu.edu.in** (not shared) [Switch account](https://accounts.google.com/AccountChooser?continue=https://docs.google.com/forms/d/e/1FAIpQLSfHLedKlN8O4XpCAM8c0Ide0L16w_i0JGYZjVuGj2qJ7xOwWw/viewform?vc%3D0%26c%3D0%26w%3D1%26flr%3D0%26usp%3Dmail_form_link%26urp%3Dgmail_link&service=wise)

\* Required

Name of the College\*



Your answer

Name of the Principal, email id and phone no:\*

Your answer



**1. Graduate Attributes-**

\*

**Details**: While designing the curriculum and the syllabus, the Graduate Attributes shall be the basis. Each course in the curriculum (Course Objectives and Course Outcomes)  shall be mapped to GAs.

The BoS/ Curriculum and syllabus committee shall comply with this in the mapping of the curriculum, course objectives, and outcomes with GAs. A mapping table may be designed and given to the committee of faculty that drafts the syllabus.

The approved syllabus of each course must invariably have a mapping with GAs, Course Objectives, and Course Outcomes. It must be ensured that the curriculum and syllabi properly address the graduate attributes.

**The curriculum gaps in the current syllabus may be listed.**

**Please give your opinion on whether the above is to be followed.**

Your answer



**2. Common curriculum for S1 and S2**

\*

**Details**: Are common courses in S1 and S2 required for all branches? Or should the syllabus be designed for the subjects in S1 and S2 specific to the branch of study?

**Your response**

Your answer



**3. Engineering Graphics**

\*

**Details**:  It may be offered as a computer-aided practical course. (*The textbook by Duff J M and Ross W A titled “Engineering Design and Visualisation” published by Cengage Learning can be a good resource book*)

**Your response on whether Engineering Graphics needs to be offered as a Computer-based practical course:**

Your answer



**4. Internship**\*

**Details**: The eighth semester is to be dedicated exclusively to project work/internship/startup. Faculty will be assigned to assess the performance of the student. Likewise, the number of subjects in the seventh semester be reduced so that the student gets ample time to dedicate to the design phase of the project or to explore internships/startups.

**Your response**

Your answer



**5. Curriculum requirement Mech (Prod), Mech  (Auto) etc**  
\*

**Details** :  It is proposed that the curriculum of such programmes shall be framed from the curricula of the parent branches  such that in Semesters 3 to 8, theory and practical courses with credits 45-55% of total credits  shall be from one parent branch and the remaining from the other parent branch. eg:- For Mech (Auto) branch 45-55% credits ( theory & practical courses)  must be from S3 to S8 of the Mechanical Engg. branch and remaining from S3 to S8 of the Automobile Engg. branch.

**Your response**

Your answer



**6. Number of Courses in each semester**  
\*

**Details** :7 numbers of courses per semester (5 Theory + 2 lab/ Drawing). The course plan may be divided in to 5 modules. One Core course in each semester (from S3 onwards) may be identified for project based learning with one third of aggregate marks allotted for project, one third for internal tests, quizzes and assignments and one third for end semester examination. In the first two semesters, Sustainable Engineering and Design & Engg. can be project based courses.

**Your response**

Your answer



**7. B.Tech (Hons)**

\*

**Details** : Should the B.Tech (Hons) be retained  in the current form? Please include your comments.

**Your response**

Your answer



**8. B.Tech with Minor**

\*

**Details** :   Should the B.Tech (Minor) be retained  in the current form?  Please include your comments.

**Your response**

Your answer



**9. Industry Minor and Industry Electives**\*

**Details**: The option can be included in the curriculum. Please also comment on whether the lectures are to be delivered by personnel from Industry.

**Your response**

Your answer



**10.  Start-ups**\*

**Details** : Should Credits be awarded for start-up ventures?

**Your response**

Your answer



**11. Prerequisite for courses**

\*

**Details** : Should prerequisites be introduced for enrolling to higher level elective courses?

**Your response**

Your answer



**12.  Inter-College transfer**\*

**Details**: Should Intercollegiate transfer be retained?

**Your response**

Your answer



**13. Classification of degree**

\*

**Details** : Is a classification of the degree as distinction, first class, second class required?

**Your response**

Your answer



**14. Maths and Basic science**

\*

**Details**: The respective Engineering stream should decide the broader content that is to be taught, which is appropriate to that particular stream.

**Your response to the above statement**

Your answer



**15. Educational Tour**

\*

**Details**: Immediately after the 4th semester (and before the commencement of the 5th semester), students can go on educational tours for a maximum of **15 days** which should mandatorily include a minimum of 2 industrial visits. Those who are not proceeding on such an educational tour must undergo an industrial visit/training/internship for a minimum period of 15 days. Students should submit a tour report/training report as a mandatory requirement for registration to the 5th semester. These reports are to be made available by the College during the Academic Audit. All guidelines regarding the tour issued by the Government/APJAKTU/Directorate of Technical Education should be strictly adhered to. The slot for the tour will be during June/July.

**Your response**

Your answer



**16. Activity points**

\*

**Details** : Whether the requirement of 2 credits to be gained by the completion of 100 Activity points be retained?

**Your response**

Your answer



**17. Internal marks**

\*

**Details** : Whether it is needed to normalize the internal mark based on the End Semester Mark as practiced currently?

**Your response**

Your answer



**18. Mark details**

\*

**Details** : The philosophy of the proposed revision is to emphasize continuous evaluation and to reduce the over dependence on End Semester Evaluation for grading a course. It is proposed to have 2 hour End Semester Examinations instead of the current practice of 3 hour examinations.

**CIA/ESE mark ratio is proposed as:**

1:1.5 for all theory courses,

1:1 for all laboratory courses,

2:1 for project based courses

 1:0 for project work.

**Your response**

Your answer



**19. Attendance requirements**

\*

**Details** :  Institutions are requested to suggest the norms for attendance. (Whether eligibility to write examinations is to be decided based on the attendance, if so what % is needed, whether marks are to be awarded for attendance etc)

**Your response**

Your answer



**20. Maths Orientation**\*

**Details** : In the Core courses to be offered by the University, it should be ensured that there is enough stress on Engineering Math. Mandatorily include tutorial sessions. Engineering Math should be taught out of textbooks that are written for a particular content (eg: Linear Algebra by Gilbert Strang).

**Your response**

Your answer



**21. Computer Concepts**  
\*

**Details**: A brute majority of the students, close to 90%, who are recruited from campus, are recruited in the service sector where they need IT skills that are not offered in the current curriculum. Ensure that enough stress on **web technology/algorithmic thinking/programming (Python, C++, Java)/data structures**is given in the curriculum for at least up to the 4th semester for all Engineering branches. Such skills cannot be delinked from the Graduate Attributes which are programme specific, in the current scenario.

**Your response**

Your answer



**22. Core Courses**\*

**Details**: Whether the Professional core courses are to be designed from all of the options below:

(a) Industry perspective

(b) Higher studies perspective- GATE

(c) Generic industry perspective

**Your response**

Your answer



**23. Internal assessment**

\*

**Details**: Including innovation and research ideas as part of the internal assessment:  Conventional Assignments shall be replaced with solving non-routine problems/term papers/case studies/micro-projects/seminars. The internal marks split up can be assignments at 40%  and tests at 60%.

**Your response**

Your answer



**24. Pass requirement**\*

**Details** : Pass minimum for the University examination will be 40%. However, for a passing grade, the mandatory requirement is to be 50% (Internal assessment and University examination put together). Whether minimum internal marks are to be considered as an eligibility condition to write the ESE? *Please also comment on whether a passing grade can be awarded if the student acquires a pass in the ESE if an academic eligibility criterion of 45% in the internal component is introduced for the student to be eligible to write the ESE.*

**Your response**

Your answer



**25. Promotion to higher semesters**\*

**Details** : Remove the Credit barrier for  promotion to higher semesters for all students who complete the examinations

**Your response**

Your answer



**26. Conduct of examinations**

\*

**Details**:   No ESE by the University in the first semester, only internal assessments. Thereafter, the examination will be conducted by the University/by the respective Institutions in a ratio of 3:2 till the seventh semester. In the eighth semester, there will be only internship/project work.

(A) Possibility of conducting online objective type exam for select courses (eg.: Basic Engineering courses, Economics, Principles of Management, Environmental science, etc.),

(B) Question paper setting

 (i) implementation of revised Bloom's taxonomy in question paper setting, mapping to course outcomes,            (ii) **Question Bank**,

(iii) The pattern/scheme should be linked to GAs,

(iv)Detailed scheme with solutions shall be insisted on along with the question paper submitted,

(v)Choice of questions in the question paper shall be such that the total marks of all questions should not exceed  150% of the maximum marks.

(C)**Choose between**

(i) University Examinations in Even semesters only and Evaluation by College in Odd semesters

OR

(ii) University will conduct exams for Core courses only in all semesters and the Colleges will conduct exams for other subjects

(D) Likewise should the University conduct exams for Lab exams for all Practical courses? Can the College conduct the Lab exams for at least some of the Practical courses?

**Your response**

Your answer



**27.  Practical Courses**\*

**Details** : Whether the practical courses are to be merged with the respective theory courses?

**Your response**

Your answer



**28.  Mandatory Non-credit Courses (MNC)**

\*

**Details** :

The assessment of MNC can be conducted by the Colleges as Obbjective Type.

OR

Such courses can be offered as MOOC Courses (NPTEL/SWAYAM/NITTR etc) recommended by the BOS (UG)

**Your response**

Your answer



**29. Any other remark**

\*

**Your response**

Your answer



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