

### 1. Graduate Attributes-

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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.

### 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?

S1 can be common syllabus. Having a common syllabus in the first semester can help establish a common foundation and level of knowledge among students from different backgrounds, which can be useful for further learning. In the second semester and beyond, it is often appropriate to have program-specific courses that build on the foundation established in the first semester and provide more in-depth knowledge and skills relevant to the particular field of study.

### 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:

It may be offered as a computer-aided practical course

### 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.

Offering a two-month break to students after their 6th semester to pursue internships and identify a project topic can be a beneficial approach to promoting their learning and professional development. The break can provide students with an opportunity to gain practical experience in their field of study and apply the knowledge and skills they have acquired in the classroom to real-world situations.

#### 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.

#### 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.

It is suggested to include 8 number (6 Theory +2 Lab/Drawing) of courses per semester. One course per semester may be identified for project based learning. No assignment weightage is needed for project based courses. The weightage for Continuous Internal Assessment (CIA) is one third of the total mark. For the CIA, 40% weightage give for project work, 40% weightage for internal examination and 20% weightage for the attendance. Conduct End Semester Examination (ESE) for 100 marks.

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

Details : Should the B.Tech (Hons) be retained in the current form? Please include your comments.8. B.Tech with Minor: Should the B.Tech (Minor) be retained in the current form? Please include your comments.

Conducting separate Hons courses in the college can be resource-intensive and may not be feasible for all institutions. One alternative approach is to allow students to earn additional credits by completing Massive Open Online Courses (MOOCs) approved by the university.

#### 8. B.Tech with Minor\*

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

Conducting separate Minor courses in the college can be resource-intensive and may not be feasible for all institutions. One alternative approach is to allow students to earn additional credits by completing Massive Open Online Courses (MOOCs) approved by the university.

#### 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.

**Need more clarity in the implementation**

#### 10. Start-ups\*

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

**Need more clarity in nature of start-ups ventures to be considered. Is it necessary to be a technology based start-up in their respective domain?**

#### 11. Prerequisite for courses\*

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

**Introducing prerequisite for the elective courses are desirable not mandatory.**

#### 12. Inter-College transfer\*

Details: Should Intercollegiate transfer be retained?

**Inter-college transfer may be limited to first year.**

#### 13. Classification of degree \*

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

**Yes**

#### 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.

**Yes**

#### 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/APIJKTU/Directorate of Technical Education should be strictly adhered to. The slot for the tour will be during June/July.

#### 16. Activity points\*

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

Yes

#### 17. Internal marks\*

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

Yes

#### 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.

The exam duration for the End Semester Examinations should be 3 hrs.

CIA/ESE mark ratio is suggested as:

1:2 for all theory courses,

1:1 for all laboratory courses,

1:2 for project based courses (CIA weightage- 40% for project, 40% for Test, 20% for attendance)

2:1 for project work.

#### 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)

Yes. Needs to continue the current practice.

## 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).

Yes

## 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.

Ensure that enough stress on **C programming, Python programming with OOPs** concepts is given in the curriculum for at least up to the 4th semester for all Engineering branches

## 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

Yes

## 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%.

The existing system can continue.

## 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.

Agree with the proposal.

25. Promotion to higher semesters\*

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

Yes

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? 27. Practical Courses

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

(A) – Yes

- (B) - implementation of revised Bloom's taxonomy in question paper setting, mapping to course outcomes
- (C) - University will conduct exams for Core courses only in all semesters and the Colleges will conduct exams for other subjects
- (D) - University should conduct Lab exams for all Practical courses.

#### 27. Practical Courses\*

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

No.

Separate practical courses are needed.

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

Details :

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

OR

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

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

#### 29. Any other remark

It can be challenging to complete all the laboratory experiments within the allotted time, particularly when the practical courses are conducted simultaneously with the respective theory courses in the same semester. One solution to this problem is to include the practical courses in the semester immediately after the semester in which the respective theory courses are taught.