

Questions for the Departments:

1. **A Minor - an area of sub-specialisation - will consist of 27 -36 credits. What Minors could your department offer? Please specify the ideal structure of the minor (courses and their order). What interdisciplinary minors could you offer in association with other departments? What would be their structure?**

CHE MINOR

ChE minor to consist of four courses with the first three courses being D3, D6 and D7 and the fourth course being a choice between D9 or D10.

D3: Chemical Engineering Thermodynamics

D6: Mass Transfer

D7: Reaction Engineering

And

D9: Process Control or D10: Process Design

INTERDISCIPLINARY MINORS (ChE participates)

Minor in "Meso/Nano scale Engineering"

ChE 688: Colloids and Interface Science

ChE XX: Introduction to Nano-science and Technology

ChE659: Process Engineering Principles in Microelectronic Fabrication

Basket of courses from other departments may include MS617 (Organic Electronics), ME689 (Microscale thermal engineering) (?), MME467 (Materials for Semiconductors industry) and MME688 (Nanomaterials Processing and Properties).

Minor in "Polymers"

ChE672: Polymer Processing

ChE676: Engineering Applications of Rheology

ChE677: Introduction to Polymer Physics and Rheology

Basket of courses from other departments may include courses from ME in polymers related area (?).

2. **What would be the structure of 2nd B- Tech/B.S. degree (Major) in your department for students from other departments? Specifically, what should be the minimum number of credits for award of the 2nd degree? What should be the course / credit mix (choice of electives and core courses) for 2nd degree?**

SECOND B TECH DEGREE IN CHE

Second B Tech in ChE requires completion of all the 103 department specific core credits.

3. **Do you think there should be an option for a B.Tech (Honours) degree? If so, what should be the criteria for giving this special honours degree?**

PROVISION FOR B TECH (HONORS)

A B Tech (Honors) to be awarded to UG students accomplishing significant research (through UGR credits). Honors awarded only to students with min. overall CPI of 7.5 **and** at least 9.0 grade average in the UGR credits. A research minor may be awarded to students not satisfying the Honors criteria but successfully completing all 31 UGR credits. .

B Tech with distinction may be awarded to meritorious students satisfying a min CPI criterion.

4. **Should there be an exit option for students who consistently underperform during the core programme at IIT Kanpur? If so, what form should this exit option take?**

EXIT OPTION FOR STUDENTS UNDERPERFORMING IN THE CORE PROGRAM

An underperforming student may be allowed to exit from the program after completing ~200 credits. The credits should not be restricted to “Core Courses” only. Appropriate Certificate to be given to the student making an exit. Exit option to be exercised only after minimum of three years residence. Both the student and the Institute can exercise the option. Consultation with parents / guardians in the exercise of the option is recommended.

5. **In the proposed curriculum, a student may take a maximum of 35 credits (three full- semester courses) and a minimum of 10 credits (one full-semester course) under the ESO category. Which ESO courses would you make compulsory for your department?**

1. ESO 202 – Thermodynamics
2. ESO 214 – Nature and Properties of Materials

6. **In what ways can your department integrate communication skills as a necessary evaluative criteria in some of your department courses?**

Given the emphasis on the need to improve students’ communication skills, it is desirable to have group projects/term-papers with presentations towards the end of the semester in all courses (including lab courses). Developed course contents may explicitly highlighted the same. Departmental sub-committee may suggest a few sample term-papers/group projects.

7. **Should we switch from the pattern of two midterm and one end-term exam to one midterm and one end-term exam for all courses?**

TWO MID TERM EXAMINATIONS VS ONE MID-TERM EXAMINATION

To ensure continuous evaluation, the one mid-term examination may be supplemented with two quizzes (duration 20-30 mins each).