

## MME Response to IARC 2008 interim report

1. Point on Self Study "SS": Previous implicit formula is fine. How to quantify SS rationally appears to be an important issue. Some of us did not agree to include SS explicitly in the formula.
2. Point on credit based system: General opinion was in favour of a credit based system.
3. Point on AL formula: General opinion is in favour of Earlier formula
4. Point on attendance: The faculty was divided though a majority was in favour of imposing mandatory attendance criterion
5. Point on all four year degree: Vast majority of the members opined in favour of all 4 year UG program at IIT Kanpur
6. Graduating CPI: The house was divided evenly on this issue -6 (Yes) and 4 (N) on lowering of passing CPI to 4.
7. Majority was in favour of B. Tech, in Engineering Sciences, but successful implementation would require
  - Proper program guidance of student possibly through a virtual or real DUGC
  - Having many within departments/ inter-department minor options with fixed timetables
  - Question about placements of graduating students are also to be considered
8. Majority in favour of Minors, but implementation difficulties in terms of timetable, etc. are summarized in DARC report.
9. MME is also in favour of second major in another department.
10. MME suggests that TA should not be split into two courses rather it should continue as only workshop course without lectures. Class room teaching can be substituted by well developed videos to be seen before/after the workshop. We also recommend single project incorporating MME/ME related processes.
11. **HSS**: In favour of expanding HSS elective, but Management should not be a part of HSS. It can be an open elective offered by IME.
12. **Modular courses**: MME in favour of modular courses with one exam.
13. Teaching of communication skills should be part of both UG and **PG** program.
14. Comments on proposed 4-year Bachelor degree program
  - If student's have the option to choose one chemistry course, then Physical Chemistry should be part of both courses.
  - PHY102 and PHY201 should have same credit or PHY102 should have less. We think that most of PHY102 is covered in JEE.
  - 4<sup>th</sup> Semester is overloaded. Our suggestion is to move OE-1/DEPT from this semester.

**Response from the dept. of MME on various specific questions.**

Q.1 IARC: A minor- an area of sub-specialization- 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 with other departments? What would be their structure?

***We are for minor- an area of sub-specialization. It is however noted that if all departments offer more than the required number of compulsory courses ( also detach lab component from courses, introduce fixed time table), then minors will have evolve automatically out of the compulsory departmental UG teaching program. It will be very difficult to sustain the concept of minor unless the above ideas (large number of courses and fixed timetable) are implemented.***

Q2. IARC: What would be the structure of 2<sup>nd</sup> B.Tech/B.S. degree (Major) in your department for students from other departments? Specially, what should be minimum number of credits for award of 2<sup>nd</sup> degree? What should be the course/credit mix (choice of electives and core courses) for 2<sup>nd</sup> degree?

***The department is also in favour of Major. All designated compulsory courses together with two other elective courses will constitute the major in the department of MME.***

Q3. IARC: DO you think there should be an option for a B.Tech.(Honors) degree? If so, what should the criteria for giving this special honors degree?

***Yes, there should be provision for B.Tech. (Honors) degree. The following criteria are proposed;***

- ***The student should not have F grade in any course***
- ***UGR2 and UGR3 must have B grade***
- ***Graduating CPI should be above 8.5***

OR

***The student secures CPI above 9.0, if he/she does not take UGR in his/her academic program.***

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

***We are not in favour of an exit option***

Q5.. IARC: 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?

**3 ESO courses**

- ***Nature and properties of Materials***
- ***Mechanics of solids***
- ***Rate phenomena***

Q6. IARC: In what ways can your department integrate communication skills as a necessary evaluative criterion in some of your department?

***It is a highly subjective issue and would tend to vary from one person to another. The institute may consider to address the communication skills at the entry level of the student at IIT Kanpur***

Q7. IARC: Should we switch from the pattern of two mid -term and one end-term exam to one mid term and one end-term exam for all courses?

***Existing pattern of two midterm examination suffices***

Q8 IARC: Opinion on Credit system

***Credit system as proposed by IARC is OK.***

Q9. IARC: Graduating requirement

***The graduating CPI should be 5, not 4 as proposed by IARC. The grading system should be relooked at. With overall “poor” grade a student should not graduate from IITK***