M.Sc. Curriculum Concept Paper

Issues

1. Heterogeneity in preparedness of the student intake
2. Diversity in the aspirations of the students
3. Desirability of tutorials
4. Project component
5. Credit structure

Background of Issues

1. *Heterogeneity in Preparedness of the Student Intake*: With the increase in intake the heterogeneity among admitted students, with respect to analytical and communication abilities, has become more pronounced. This is also showing up in relatively poor performance of students.

2. *Diversity in the Aspirations*: M.Sc. is, in general, not a terminal degree, from a placement point of view, in the core subject. Students would normally be required to do Ph.D. for a research/teaching career in the core subject; however, a number of students do seek placement in other sectors after M.Sc. Thus, the aspirations of the students vary from higher studies in the core subject to careers in beyond the core subject.

3. *Desirability of Tutorials*: In the last curriculum review, tutorials were introduced in the core courses. General feedback from some departments is that these are useful while in some other cases, these have not been very useful.

4. *Project Component*: There is often a complaint from faculty that the students are not regular and are not taking the project work seriously. Further, most projects are not hardware based. There are also many problems with evaluation of project, such as the role of supervisor vis-à-vis the committee.

5. *Credit Structure*: It has been brought out that in comparison to the M.Sc. in other sister institutions and also vis-à-vis B.Tech./M.Tech. programmes, the credits requirement in M.Sc. are too high and there is need for reducing the credits by 10-15. This would be more in line with the credit budgeting of 20 credits per semester as proposed (and approved by the Senate) for the UG curriculum.

Proposals:

1. *Credit Structure*: The total credits for an M.Sc. programme would be 75-81 with following break-up:

Programme Core+Elective:	69-75
(PE minimum 9)	
Open Electives (OE):	6
Total:	75-81

Existing Programme Structures			
	Physics	Maths	Chemistry
PC	69	72	72
PE	15	12	12
OE	6	6	6
Total	90	90	90

The Programme electives are out of specified list of courses. The open electives are chosen by the student, could be from the list of programme electives. Project would be in two parts, first one of which is compulsory and the other conditional elective. The first part of minimum 3 credits would be in the PC while the other of 4-8 credits could be in the PE. Suitable criteria for eligibility to take the second part may be evolved by the respective departments.

2. *Tutorials*: Tutorial can be included in the core courses.

3. *Course Distribution*: Since the intake is heterogeneous and coming from a different academic environment, we may reduce the credit assigned to the first semester to a maximum of 20.

4. *Specialization*: It is proposed that an option for specialization could be introduced by the department. This would require additional courses of 12 credits including the 6 OE credits in addition to the Part-II project in the area of the specialization. Thus the total credits with specialization would be 81-87.