

Office of the Dean Academics

Minutes of the Eighth meeting of Undergraduate Curriculum Implementation Committee

March 17, 2013

The sixth meeting of the Undergraduate Curriculum Implementation Committee (UCIC) was held in the Senate room at 1030 hrs on March 16, 2013. The following members were present:

(Italics indicate inability to attend).

Prof. Anurag Sharma, *Prof. Santanu Chaudhury*, *Prof. S. R. Kale*, *Prof. Sanjeev Sanghi*, Dr. Atul Narang, Dr. Shantanu Roy, Dr. N. D. Kurur, *Prof. B. Bhattacharjee*, Prof. Anshul Kumar, *Prof. S. D. Joshi*, *Prof. Ambuj Sagar*, *Dr. Seema Sharma*, *Dr. S. Dharamraja*, Prof. T.R. Sreekrishnan, Prof. R. Chattopadhyay, Prof. D. Ravi Kumar, Prof. Joby Joseph, *Dr. D. Sundar*, *Prof. A. S. Rathore*, Dr. B.R. Chahar, Dr. Subodh Kumar, Prof. G. S. Visweswaran, *Dr. N. Chatterjee*, Prof. Sangeeta Kohli, *Prof. P. Srivastava*, Prof. Manjeet Jassal, *Prof. James Gomes*, Prof. M.R. Ravi. Prof. B.S. Panda and Dr. Sreenadh from Mathematics, Dr. Vivekanandan Perumal from School of Biological Sciences and Dr. B.P. Patel from Applied Mechanics also attended.

The meeting started with a welcome to all members.

1. Minutes of the previous meeting dated February 15, 2013 were confirmed.
2. A note had been sent from the office of the Dean Academics to all Departments inviting comments about various recommendations of the UCIC and about the course templates for Institute Core courses received from various Departments. The note sent to Departments is in Annexure-I. Comments received pertaining to the following matters were discussed:
 - a) **Tutorials:** Most Departments agreed on the proposed formats of tutorials in the new curricular framework, while some Departments strongly felt that the strong ban on tutorials in courses other than 100-200 levels is not academically desirable. Also, some Departments recommended the continuation of the current way of conducting tutorials as an option. The following were decided in view of the discussions on this item:
 - i. In exceptional cases where the Departments feel that the nature of a course demands the use of tutorials, they may include tutorials in 300 level courses with due justification.
 - ii. The current way of conducting tutorials for different groups of students at different times in cycles (and not parallelly in one time slot) could be continued by designing cycle-wise non-overlapping practical slots. Since even in the new framework practicals have to be held on different days for different cycles, non-overlapping slots of 2, 3 or 4 hours need to be designed for practicals. Courses need to choose separate slottings for lectures and practicals in non-overlapping timings. Courses which need tutorials on different days could choose such a slot: a 1-hour slot could be made available for this purpose, while deciding on the timetable for the new curricular framework.
 - iii. Provision should be made for training Teaching Assistants for tutorial and laboratory classes. It was strongly recommended that the UG TA scheme should be strengthened, since it was found quite successful by most members.
 - iv. Mathematics Department requested that not all Mathematics courses in first year should be at 8 am slot, as was decided in I year teaching council sometime ago. In view of this request, it was decided to recommend that a given slot should not have the same hours on all days, as was the case some years ago.
 - b) **Scheduling of Institute Core Courses:** Departments had mostly agreed with the recommended scheduling by UCIC. Since Applied Mechanics had expressed inability to handle the Engineering Mechanics course for the entire batch in II semester, and since Mechanical Engineering had proposed that the Engineering Graphics course should precede the Product Oriented Manufacturing course for all students, the schedule was slightly modified as given in Table – 1.
 - c) **Programme-linked BS / EA-ES Courses:** Comments from many Departments were not yet received, and this item was hence decided to be taken up in a subsequent meeting.
 - d) **Non-graded credit Courses:** Comments from many Departments were not yet received, and this item was hence decided to be taken up in a subsequent meeting.

Table-1: Recommended Scheduling of Institute Core Courses

Semester	Lecture Course-1	Lecture Course-2	Lecture Course-3	Lecture Course-4	Other	Other	Other
I semester	Maths-1/2 (3-1-0)	EE / CS (3-0-2)	PH / CY (3-0-4)	Mechanics (3-1-0) / Graphics (0-0-4)	Intro. to Engg/ Prog (0-0-2)		None/ Language (0-0-4)
II semester	Maths-2/1 (3-1-0)	CS / EE (3-0-2)	CY / PH (3-0-4)	Graphics (0-0-4) / Mechanics (3-1-0)	Intro to Engg/ Prog (0-0-2)	Prod Real. (0-0-4) / None	Language / None (0-0-4)
III semester	PL BS	PL EA/ES	PL BS EA_ES	Biology (3-0-2)/ Env (2-0-0)	Dept / open course	Prod Real. (0-0-4) / None	
IV semester	Dept open course	Dept open course	Dept open course	Env (2-0-0)/ Biology (3-0-2)	Dept / open course		

3. Feedback received from various Departments on the course templates for Institute Core Courses was discussed in detail. It was decided to pass on comments on specific courses to the respective Departments and the Chairman was authorized to forward the revised templates for tabling in the Senate for approval. For some courses, where there were some deviations from the senate-approved format / credits, the committee recommended the following:

a) **Product Oriented Manufacturing (ME Dept):** The ME Department had recommended a credit structure of 1-0-3 for this course. Prof. Sangeeta Kohli and Prof. Ravi Kumar of ME Department explained the rationale of this recommendation. After detailed deliberations, the committee recommended the following. Since it would not be possible to allocate additional 0.5 credits to this course, the following two options could be explored by the Department:

- The course could be conducted as a practical oriented course with a 0-0-4 format recommended in the template, with one-hour briefing session per week. If so desired, these briefing sessions could be conducted for all the groups together, and at a different time slot as proposed by the Department at present, accelerating the briefing sessions to be completed in the first few weeks of the semester. In such a case, evaluations would be only in the form of laboratory evaluations such as a quiz, product submission, etc., and no Minor and Major Tests may be conducted.
- The course could be conducted as a 0.5-0-3 course with minor and major tests as well as laboratory evaluations. The lecture sessions could be accelerated and completed in the earlier part of the semester if desired.

The committee appreciated the coverage and contents of the course and felt that it would be a good introductory course.

b) **Engineering Graphics (ME Dept):** The ME Department had recommended a credit structure of 2-0-3 for this course. The members from the Department explained the rationale of the recommendation. The committee deliberated on the recommendation in detail, and recorded the following observations:

- The objective of the course should be to provide an exposure of engineering graphics to the student and can focus on enabling the student to read and understand engineering drawings. It was suggested that the course be revised with this in mind.
- Some topics under the lecture content of the course appear more like briefing for practical classes while others contain concepts: briefings could be taken out of the lecture content and brought to practical sessions.
- One three-hours session is too short to even introduce students to animation.

In view of the above observations and the limit of credits available from the senate approved concept document, the committee recommended that the Department should re-look at the course and cast it either in a 0-0-4 format with focus on practicals and their evaluation (without minor-major tests) or in a 0.5-0-3 format as recommended for the Product Oriented Manufacturing course above.

- c) **Introduction to Computer Science and Introduction to Computing (Lab):** The CS Department had recommended the Lab course for those students who had no prior exposure to computer programming at school level, so as to bring all students to the same level before starting the Introduction to Computer Science course. The practicability of this suggestion and the additional two credits of the lab course were discussed by the committee in detail. While the committee appreciated the need to bring all students to a common preparedness level before the core course on Computer Science, it also observed that not all students who have computer science marks on their class XII transcript were necessarily of a better level of accomplishment. After detailed discussions, the following recommendations were made:
- i. It is not possible to give two extra credits for the Introduction to Computing Lab. It was suggested that 0.5 credits in non-graded Design component could be allocated to computer proficiency. Those who need the lab course as preparation for CS course should be allowed to earn these from this lab course, and others could earn these credits as part of some project or such other design component involving computer programming.
 - ii. Those students who have Computer Science marks on their class XII transcript should be enrolled into the Introduction to Computer Science course in I semester, and if they feel the need, they may also register for the lab course concurrently.
 - iii. The other students should register for the lab course in the I semester, and the CS course in the II semester.
 - iv. In order to handle the problem of infrastructure and bandwidth of faculty, the lab course could be conducted as an online tutorial based course with contact / office hours with TAs. At the end of the course, the students should clear a test which would make them eligible for the CS course in case their Class XII transcript does not include computer science, and also for the non-graded credits on computer proficiency.
4. **Matters for Information:** The chairman informed the committee that Mechanical Engineering Department had left the decision on whether one or two UG programmes would be offered by the Department to the Senate. In order to guide the decision of the Senate, the Director had appointed a 5-member committee to look into the issues pertaining to one or more undergraduate programmes in a Department, with Prof. B.P. Pal, Prof. H.M. Chawla, Prof. T.C. Kandpal, Prof. B.Bhattacharjee and Prof. T.R. Sreekrishnan as members. The committee was asked to meet faculty of ME and EE Departments that have more than one UG programme, and submit its recommendations. This committee would submit its report which will be tabled in the senate regarding this matter.
5. All members were requested to follow-up with their respective Departments to finalize the Institute core templates within this week and send them to the Dean Academics latest by 22.3.13 so as to enable the preparation of senate agenda papers. Subsequently, they were also requested to follow up on
- a) sending the pending comments if any, on the Programme-linked course contents and non-graded credit components from their Departments
 - b) working on preparing the programme schedule and detailed course templates of their respective programmes so as to get them ready for discussion by end of April.

All the relevant documents are kept in the links on the webpage:

<http://web.iitd.ac.in/~ravimr/curriculum/ucic/index.html>

Templates: <http://web.iitd.ac.in/~ravimr/curriculum/ucic/templates/index.html>

Feedback on templates: <http://web.iitd.ac.in/~ravimr/curriculum/ucic/departments/feedback-mar16/index.html>

The meeting ended with thanks to all the members.

Comments on the above minutes should be sent to the undersigned by 22.3.2013.

M.R. Ravi
Associate Dean Academic (Curriculum)
and Convener, UCIC.

Annexure - I

OFFICE OF DEAN ACADEMICS

No.IITD/ADAC - 97

Date: 08/02/2013

Subject: Undergraduate Curriculum Implementation □ matters for discussions in Departments.

The Undergraduate Curriculum Implementation Committee has had six meetings and several issues have been discussed and recommendations have been arrived at. These issues are listed below. The Faculty Boards are requested to debate on these recommendations and send their views to the Office of Dean Academics latest by 22nd February, 2013 so that the matter can be placed before the Senate in its meeting in early March 2013.

1. Matter regarding tutorials in the new curricular frame-work:

- i Tutorials would be conducted only in 100 and 200 level courses.
- ii. Departments could choose the 3-0-0 format (typically 36 lectures+ 6 problem solving sessions, with some flexibility to the course coordinator) or 3-1-0 format (exactly 42 lectures + 14 problem solving sessions) depending on the number of credits and problem solving sessions desirable for a course. This should be specified in the course template, which should be available in a public document, and should also be announced by the course coordinator at the beginning of the course.
- iii. Tutorials as part of 3-1-0 course, would however be held in parallel sessions with different groups in different rooms simultaneously, or with all groups in the same room, as decided by the Department while offering the course. These sessions could be conducted by one faculty member with the help of Teaching Assistants and/or other faculty members.

2. Schedule of Institute core courses:

Keeping in view the spirit of the concept paper approved by the Senate the number of contact hours in the 1st semester has been kept to a minimum while scheduling Institute core courses. This results in some of the Institute core courses spilling over to the 3rd semester and 4th semester. The schedule can be summarized as given in the table below:

Semester	Lecture Course-1	Lecture Course-2	Lecture Course-3	Lecture Course-4	Other	Other	Other
I semester	Maths-1/2 (3-1-0)	EE / CS (3-0-2)	PH / CY (3-0-4)	Mechanics / None (3-1-0)	Intro. to Engg/ Prog (0-0-2)	Graphics / Prod. Real. (0-0-4)	None/ Language (0-0-4)
II semester	Maths-2/1 (3-1-0)	CS / EE (3-0-2)	CY / PH (3-0-4)	None / Mechanics (3-1-0)	Intro to Engg/ Prog (0-0-2)	Prod Real./ Graphics (0-0-4)	Language / None (0-0-4)
III semester	PL BS	PL EA/ES	PL EA_ES	BS Biology (3-0-2)/ Env (2-0-0)	Dept / open course		
IV semester	Dept / open course	Dept open course	/ Dept / open course	Env (2-0-0)/ Biology (3-0-2)	Dept / open course		

Glossary: PL BS EA/ES: Programme-linked Basic Science / Engg. Arts/Science; Prod. Real: Product Realization; EE, CS, PH, CY: 1st year core EE, CS, PH and CY courses; DC: Department Core

3. Templates of Institute core courses

Templates have been received for the Institute core courses from the various Departments offering these courses and have been discussed in the Curriculum Implementation Committee. These have been placed on the website

<http://web.iitd.ac.in/~ravimr/curriculum/ucic/templates/index.html>

Feedback from Departments on these courses is requested.

4. Course Contents of Programme Linked Basic Science and EA/ES Courses

The tentative Course Contents/Templates of Programme Linked Basic Science and EA/ES Courses have been received from Departments and are also placed in the above mentioned link. Departments are requested to give feedback on these contents. Departments offering Undergraduate Programmes are also requested to specify which of these courses will be required as Programme Linked Core for their Programmes.

5. Non-graded credits

Two sub-committees were formed to discuss the non-graded components of the new curriculum. One committee looked at Professional Ethics, Social Responsibility and NSS/NCC/NSO, while another looked at Introduction to Engineering and Department and Design. The recommendations of the former Committee have been discussed in UCIC while the latter will be discussed in the next meeting. The recommendations of the former Committee are placed in the link:

<http://web.iitd.ac.in/~ravimr/curriculum/ucic/subcommittees/index.html>

The recommendations of the latter Committee are also expected to be posted on this link in about a week.

The above websites are updated as and when relevant information is being received from Departments. While most Departments have already given the necessary inputs, inputs from some Departments are still due and will be updated subsequently. In order to facilitate timely completion of the Curriculum Review and Approval process, it is important that we received feedback intime. It would be of great help if a softcopy of the feedback is also sent to deanacad@admin.iitd.ac.in .

(Anurag Sharma)

All Heads of Departments/Centres