

Suggestions for Curriculum modification*

*this is not the official document

Points discussed in the orientation session conducted by task force for curriculum redesign being undertaken by the institute:

Every discipline's course structure was bench marked against the top 3 universities in its league and areas of improvement were identified.

Note: This was a general session with emphasis on common curriculum. Discipline specific curriculum would be discussed later.

Areas of improvement in structure:

- ✓ Reduce Common Content
 - Reduce/Combine foundation content
 - Reduce/Combine cross-inter disciplinary courses
 - Offer flavours for some of the common courses (*there will be specific flavor of chemistry, thermodynamics, prob/stat, consys, numal, OR and Opti for CS students that will be different from other disciplines - fundamentals would remain the same but applications would be taught differently - will not be implemented immediately but gradually*)
- ✓ Strengthen discipline specific content
 - Increase the number of courses
 - Introduce discipline specific courses as early as possible
 - **Restrict PS/Thesis to specific discipline**
- ✓ **Extend duration of dual degree program** to strengthen both their degrees.
- ✓ Offer more electives
 - Disciplinary
 - Inter disciplinary
- ✓ Humanities courses

Areas of improvement in Pedagogy:

- ✓ Improve hands on experience
- ✓ Increase self learning/design components wherever possible
- ✓ Better labs (Infrastructure)
- ✓ Better teacher : student ratio
- ✓ Content creation (eContent)

REDESIGN "PROPOSAL" FOR SINGLE DEGREE STUDENTS

Kinds of courses	Existing	Proposal	
Common	24(72)	14(42)	
Discipline Mandatory	12(36)	10-14	
Discipline Electives	0	5-9	Total: 60U (~19courses) of core
Open Electives	6(18)	6(18)	
Humanities	0	3(9)	
Total (Units)	42(125)	42(129)	

- ✓ Flavours of some courses would be there as mentioned above.
- ✓ About 6-10 Hum electives would be offered from which one can choose 3.

- ✓ 12-20 core electives will be offered by every department.
- ✓ **Thesis will be letter graded**
- ✓ PSII and thesis in the concerned discipline based on feasibility (PSD companies issues)

COMMON COURSES FOR ALL FIRST DEGREE STUDENTS:

	Units
General Biology (+ Lab)	4
Chemistry I (+ Lab)	4
Maths I	3
Maths II	3
Maths III	3
Probability and Statistics	3
Physics I (+ Lab)	4
Computer Programming (+ Lab)	4
Electrical Sciences I	3
Technical Report Writing	2
Thermo Dynamics	3
Engineering Graphics	2
Workshop (No lectures)	2
Principles of Management/Principles of Economics	3 (1 among the 2-choice left to students)

Green – Flavoured
Blue – Modified

- ✓ MT1 is split up into 3 labs as indicated above (Bio, Chem, Phy)
- ✓ MechSol, SPM, ESII will be studied by only departments in which it is required.
- ✓ **Elective Slots will be available from 2-1** (Elective Slots not overloading electives which we do currently - we now have slots only in 4th year)

REDESIGN PROPOSAL FOR DUAL DEGREE STUDENTS:

Dual degree students will have to do

2*60 (2 disciplines ~38courses) +
42 (14-common) +
6 (3-Humanities) +
18 (6-Open Electives) = 186 units +
PS/Thesis - 1 for each discipline

Roughly 61 courses.

Split up as
6*2 (1st year)
7*7 (2nd, 3rd, 4th year and 5-1)
2 PS/Thesis semesters (5-2, 6-1)

5 1/2 years dual degree

Plans for acceleration to 5 years:

- Some combinations (Physics+EEE, Math+Compsci, Bio+Chem, Chemistry+Chem) will have interdisciplinary courses which will be counted twice (doubly counted).
 - Will have an extra summer semester to accommodate 3 more courses
 - Thesis sem will have 3 more courses (9 Unit Thesis, 3 courses(9 unit))
-
- This proposal will be presented to senate by the end of this month.
 - Suggestions/Clarifications can be posted on this thread. We'll redirect them to concerned people.
 - Some of these changes would be incorporated in Aug 2011 and rest in Aug 2012.
 - This is a proposal and there will be some changes before the final structure is decided.