

Advance Research Topics in Software Engineering: Keeping A Curricula Evolvable!

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- **Modes of study:**
 - Taught: UG and PG
 - Research: MSc (by research/Independent Studies), MPhil and PhD
- **Programmes and Modules in taught modes**
 - A programme of study has a number of modules and runs over a number of semesters (6-8 for UG and 3 for PG).
 - Also known as a *Course*.
 - A module runs over one semester and carries a credit value (5, 10 or 15)
 - In some places modules are also known as a courses (!) - but that is disappearing
 - We used to have 3 terms/academic year then we moved to two semesters and now we going back to modules running over the whole academic year!
 - A programme has a total value of credits equates to the sum total of its constituent modules' credits

- To run an UG/PG programme, you need to go through a complicated, lengthy and expensive Validation process
 - Come up with idea and do your market research to show the need
 - Prepare documents articulating academic rationale, value for money, academic structure, etc.
 - Defended it at **many** committees at Faculty and University levels
 - Once approved, a committee is formed by the University's Academic Board.
 - The size of this committee is 6-8 senior local academics with one external (outside the University).
 - This committee has the sole job of **validating** the proposed programme: scrutinies the proposal, resources (staff, laboratory equipment, library provisions, etc.). They even tour facilities and interview staff, whose CVs must be included in the documentation.
 - Their recommendation is either Yes or No!

- If No, you have to start again!!!
- If approved then the programme can then run.
- Once the programme is approved, the recruitment process starts, with the hope that at least the minimum number is achieved.
- If the programme **did not** recruit the minimum number, then it can be canceled as it is now running at a lose!

- To keep recruitment alive and healthy, you have to maintain evolving the programme. In Software Engineering this is a **must** as technologies evolve.
- Adding/removing, changing titles or contents of a single module must be **approved** and **validated again**.
- There are two design principles to resolve this problem:
 - Introduce **options/electives**
Very expensive
 - Introducing the **Advance Research Topic in Software Engineering**
 - No need to validation
 - cost-effective
 - flexible
 - The programme is ever-evolving as long as it is running

- We ran this module twice now with success.
- The flexibility with this design lies in the fact that we are able to run up to **three** different topics, each carries 5 credits. We call this *thin* or *bite-size* modules.
- 2007/08: *Service-Oriented Computing and Semantic Web*
- 2008/09: *Service-Oriented Computing and Semantic Web & Computer Security*
- 2009/10: *Semantic Web, Computer Security & Open Source Systems*