

Curriculum Development in Digital Technology and Green Transition (Computer Science)

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Adapting curricula to keep pace with digital technologies

- Technology moves way too rapidly for a typical curriculum revision cycle (4 years or so)
- Not only the topics, but methodologies and tools to aid learning objectives/outcomes can advance significantly
- To realistically keep pace, a curriculum might be designed with some “moving parts” that can be quickly adjusted with minimal bureaucratic process.
- A greater emphasis on inter-curricular (i.e., sitting in or taking courses or modules from other departments/institutions) and extracurricular activities (projects, internships, competitions, etc).

Implementing digital transformation initiatives within the university

- To stay relevant amidst “educational disruption”, it is important for academic institutions to become less “institutionalized” and more agile in their way.
- It’s crucial to understand shortcomings of existing business processes within & across functions, both back-office and front-office. Identify needs of stakeholders. What are strategies and execution roadmap for “process transformation” along with necessary “people transformation” (and perhaps “regulation transformation” too).
- Digital solutions and how to customize & deploy them are only considered after having a good grasp of the above.

Candidates for curriculum codesign with digital transformation as a theme

- Information technology or Computer science/engineering, with:
 - Business administration, Entrepreneurship
 - Education
 - Agriculture
 - Medicine & healthcare
 - Architecture & designs

Finding market insight on the latest job demands from the industry

- Digital transformation is an important factor for changing job skill demands
- Sources of insights may include
 - Industrial reports
 - Academics working closely or with ties to the industry of expertise
 - Working experts in the industry
 - Close collaborations with industry (research, projects, training services, curriculum co-developement, practice schools)

How universities collaborate to improve their curricula in response to digital transformations in the job market?

- One approach for this is similar to the interdisciplinary curriculum codesign between departments in the same university.
- Same can be achieved in a partnership among institutions involved in curriculum offerings
- Curriculum review and consultation from experts in other universities