

Faculty Development in Program (FDP) for Computer Science

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We can divide our teaching and learning into two broad areas:

- ▶ Knowledge and Understanding
- ▶ Skills and Other Attributes

Within these two areas, this section describes:

- ▶ the learning outcomes for our degree programmes
- ▶ the methods of teaching delivery
- ▶ the methods of assessment

Learning outcomes:

- ▶ Fundamental concepts and physical principles
- ▶ Mathematical principles and techniques
- ▶ The application of the principles to engineering
- ▶ Software engineering and programming skills
- ▶ Role of business processes in engineering
- ▶ Moral and ethical issues

Teaching/learning methods and strategies:

- ▶ The main method of providing information for knowledge is through lectures
- ▶ Lectures are supported by associated problem solving
- ▶ Feedback on progress
- ▶ The programme covers areas from physical devices, circuits and ...

Assessment methods and strategies:

- ▶ The majority of lecture modules are assessed by written exams
- ▶ Project work focuses on the application of engineering principles.

Learning outcomes:

Intellectual Skills:

- ▶ Performance of the analysis of engineering systems
- ▶ Synthesise solutions
- ▶ Adapt and apply methodologies to the solution of unfamiliar problems
- ▶ Practical application of theory

Practical Skills:

- ▶ Acquisition and interpretation of data
- ▶ Construction and testing of circuits
- ▶ Implementation of algorithms
- ▶ Use of commercial software tools to analyse, design
- ▶ Recognize risks

Learning outcomes:

Professional Skills:

- ▶ Communication of scientific material
- ▶ Recognise professional and ethical issues
- ▶ Recognize issues of leadership
- ▶ Adoption of appropriate roles in group activities
- ▶ Ability to interact with professionals
- ▶ Ability to make decisions
- ▶ Ability to plan work
- ▶ Independent learning ability

Teaching/learning methods and strategies:

- ▶ The set problems that compliment each of the lectures of each module are designed for students to exercise
- ▶ The experiments laboratory are designed to build skills in experimental technique

Assessment methods and strategies:

- ▶ A student's skill in numerical problem solving is assessed as part of the examination
- ▶ The experimental skills learned in the laboratory are assessed through a combination of oral examinations
- ▶ Projects also test a range of practical skills
- ▶ Student presentations and reports are also used to assess communication skills,
- ▶ Provision of feedback, marking schemes,