

BEng (Hons) Software Engineering

The BEng (Hons) Software Engineering embodies the best ways to design, implement, evaluate and maintain software systems. It makes use of many of the technical aspects of computer science, especially programming and aims to develop the professional attitudes, interpersonal and technical skills you will need in the software engineering industry.

Course Overview

The course provides a solid foundation in software engineering theories and practices to develop Enterprise level software systems. It provides career pathways in software engineering , Web application development, Mobile application development, Analysis and design of Software systems etc.

Entry Requirements

Students should obtain a minimum of 3 passes at the GCE Advanced Level OR Foundation Certificate in Higher Education AND obtain a minimum of 6 passes in the GCE Ordinary Level with Credit passes in English & Mathematics.

Course Content Outline

The course covers software development process models, programming languages, technologies and tools including Object Oriented Programming languages, OO analysis and design techniques, database designing and practice, Mobile application development, Web application development, Security and Forensics etc. BEng Software Engineering Students will have the option of transferring to Level 5 of the BSc (Hons) Computer Science Degree upon completion of the first year.

Course Modules

Year 1 - Level 4 (core modules)

- Computer Science Practice
- Computer Systems Fundamentals
- Programming Principles I
- Web Design and Development
- Mathematics for Computing
- Programming Principles II

Year 2- Level 5

Core Modules

- Object Oriented Programming
- Client-Server Architecture
- Software Development Group Project
- Database Systems
- Algorithms: Theory, Design and Implementation

Optional Modules

- Applied Maths and Physics
- 3D Graphics Programming
- Mobile Application Development
- Server-side web Development

Year 3 - Industrial Placement

A 12-month placement period is compulsory between year 2 and 4. This experience will give you additional practical skills, and a competitive edge in the job market. This mandatory placement will not only empower a student with a degree but also with the necessary work experience. With this added advantage, IIT students have a 100% employment assurance and is most often selected for high income employment at renowned organizations.

Year 4- Level 6

Core Modules

- Computer Science Project
- Reasoning About Programs
- Security and Forensics

Optional Modules

- Advanced Server-side Web Programming
- Concurrent Programming
- Advanced Maths and Game AI
- Mobile Native Application Development

Associated Careers

You will possess knowledge of a range of technical subjects, and the ability to synthesise this knowledge to produce practical solutions to engineering requirements in a large number of application areas. You will typically be part of a team, building software applications for business and industry.

Typical career opportunities include: software engineer, web application programmer, software designer/ analyst, website designer/ programmer, or senior team leader. The degree will also give you adequate knowledge and study skills to continue with further study and/or research.

Duration - 4 Years (Full Time)



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