

2BA 2021-2022 Information Technology

Semester I:

CT2101: Object Oriented Programming I

Lecturer: Seamus Hill

This module introduces Object-oriented design and covers topics such as: Encapsulation and information-hiding, the separation of behavior and implementation, classes and subclasses, Arrays, Composition, Inheritance and Polymorphism.

Lecture Hours: 24

Lab Hours: 20

CT2105: Web-based Information Systems

Lecturer: Josephine Griffith

This module introduces the concepts and techniques associated with web-based Information systems. In particular, search engines, recommender systems, social networks and document filtering are studied.

Lecture Hours: 24

CT230: Database Systems I

Lecturer: Josephine Griffith

Indexing Techniques: Primary, Secondary, Clustering, B Trees, Hashing (Extendible, Dynamic, Linear). Database Architectures and Data Models: Network, Hierarchical, Relational, Object-Oriented. Relational Model: Relations, Relational operators, Integrity constraints. Relational Algebra and SQL: Relational operators, Query Optimisation, DDL, DML, DCL. Extended Relational Model.

Lecture Hours: 24

Lab Hours: 20

Semester II:

CT2102: Object Oriented Programming II

Lecturer: Seamus Hill

This module builds upon Object Oriented Programming I and covers topics such as Interfaces, Collections, Sorting & Searching, Recursion, GUI and Event-Driven programming.

Lecture Hours: 24

Lab Hours: 22

CT2103: Systems Analysis & Design

Lecturer: Karen Young

This module progresses the students' study of computer systems with a focus on the analysis and design of software systems and the stakeholders involved. Students will develop specific systems analysis design skills (Software Development Lifecycle techniques) and reflect on the social and ethical issues associated with systems design.

Lecture Hours: 24

Lab/Tutorial Hours: 12

CT2104: Web Application Development

Lecturer: TBC

This module teaches the students how to create modern client-server browser-based web applications. The module builds on introductory web technology and programming introduced in Years 1 and 2, as well as integrating with the database design and development concepts learned in Year 2. The core technologies learned will be client programming and server side programming. A group development project will form a major part of the workload.

Lecture Hours: 24

Lab Hours: 22