

### **3BA 2021-2022: Information Technology**

#### **Core Modules:**

#### **CT3535: Object Oriented Programming (5 ECTs): Semester I**

Lecturers: Dr. Seamus Hill & Dr. Matthias Nickles

Introduction: objects, classes, flow control, data structures using Java. OO Design Principles. Exception Handling. Input and Output. Graphical Programming, Event Model. Applets. Introduction to Multithreading & Network Programming. Java Beans. RMI. Java and Security. Discussion on OO design and implementations in the Java and Python environments

Lecture Hours: 24

Lab Hours: 20

#### **CT327: Humanities Applications (5 ECTs): Semesters I & II**

Lecturer: Dr. Attracta Brennan

The objective of this module is to enable students to carry out a piece of independent research and produce a paper for an academic conference. The research topic is one of their own choice, within the area of IT and the Humanities. During the academic year students produce an abstract, and after receiving constructive feedback, write an outline of their paper. They again receive feedback before producing a full version of their paper. Students also review other papers and respond with a critical evaluation of the work they read. They are supported by a series of tailored seminar sessions.

Lecture Hours: 24

#### **CT328: Final Year Project (10 ECTs): Semesters I & II**

Co-Ordinator: Dr. Malika Bendeche

The final year project represents a two semester based body of work in which groups of students (groups consist of 2 students) engage with the specification, design, implementation, evaluation and reporting of an adequate project that (a) reflects their understanding of one of a number of areas with IT (as determined through discussions with a designated staff member or assigned from a list that reflects current interests in the IT community) and (b) provides them with the opportunity to demonstrate their creativity and capabilities in a technical setting.

### **3BA Options 2016-2017: Information Technology**

Students are required to select any two of the following modules. Two optional modules are offered in each semester and students should pick one module each semester. In Semester One, the second lecture hour in each option falls outside the Core lecture hours assigned to IT in the Final BA timetable. Where this second lecture hour clashes with a student's core lectures in their other subject, please let the IT Option Lecturer know and they will make any arrangements necessary to accommodate you.

#### **Semester I:**

##### **CT318: Human Computer Interaction (5 ECTs)**

Lecturer: Karen Young

This course is concerned with the effective design of user interaction to computer systems. It covers topics including: Good Design – success criteria; User Research; Interaction Design: models of interaction, the design process, paradigms, prototyping, visual design; Evaluation: approaches & methods.

##### **CT319: Artificial Intelligence (5 ECTs)**

Lecturer: Dr. Malika Bendeche

The course will walk learners through the broad fundamental concepts and techniques of AI, and their application in solving various problems. Some of topics covered in the module include Problem Solving, Uninformed Search, Heuristics and Metaheuristics (e.g., Simulated Annealing and Genetic Algorithms), Machine Learning (Clustering, Classification, and Regression), and AI ethics concerns.

#### **Semester II:**

##### **CT411: Multimedia Development (5 ECTs)**

Lecturer: Dr. Attracta Brennan

This course concerns the area of media technologies covering design, development and integration of media elements into interactive systems.