

# Multimedia System

## Course Description

### Why this course?

Multimedia is a fast growing and exciting area within the software industry. Multimedia is the technology which produces computer games, computer-generated movies and internet applications. In addition to these the programme will cover Multimedia Systems such as e-Learning Systems, Medical Informatics Systems, Insurance Underwriting Systems, and systems which model of complex phenomena such as traffic flow within an urban area.

### Goal

The programme aims to give you the skills and knowledge to participate in the IT industry, which is in constant need of skilled people. You will study the subjects such programming, how computers and the internet work, as well as specific multimedia subjects, including multimedia design.

You will also study the concepts required to represent phenomena such as planetary motion or traffic patterns at road junctions using multimedia systems. This means you should be comfortable with studying the mathematical subjects needed to achieve this.

The programme will provide you with the personal and professional skills to enable you to work as a mature, self-confident professional in the computing/IT industry, with particular reference to the multimedia/digital media sector.

On successful completion of the programme, you will:

- have the core skills, knowledge and capabilities to gain good employment in the computing industry, plus the additional skills required specifically by the multimedia sector
- have attained the personal and professional knowledge required to participate in a rapidly changing and competitive business environment
- have developed a thorough understanding of a range of subjects (networks, systems etc) appropriate to a degree in computing
- have acquired a thorough understanding of the technical design and implementation issues involved in building complex multimedia systems, covering both the hardware and software components of such systems
- have a thorough understanding of the theoretical technical principles required for the display of complex information
- have a thorough understanding of development methodologies appropriate to multimedia systems
- appreciate the theory of design, and the impact of media and technology on society

- have acquired the transferable skills in research, analytical and critical reasoning, written and oral presentation skills, team work, project management and independent study appropriate to a Honours degree graduate in computing

### **Textbook**

1. Ralf Steinmetz and Klara Nahrstedt , Multimedia: Computing, Communications & Applications , Pearson Ed.
2. Nalin K. Sharda , Multimedia Information System , PHI.
3. Fred Halsall , Multimedia Communications , Pearson Ed.
4. Koegel Buford , Multimedia Systems , Pearson Ed.
5. Fred Hoffstetter , Multimedia Literacy , McGraw Hill.
6. Ralf Steinmetz and Klara Nahrstedt , Multimedia Fundamentals: Vol. 1- Media Coding and Content Processing , PHI.
7. J. Jeffcoate , Multimedia in Practice: Technology and Application , PHI.
8. Prabhat K. Andleigh & Kiran Thakrar , Multimedia Systems Design , PHI.
9. V.S. Subrahmanian, Multimedia Database Systems, Morgan Kaufmann, Harcourt India

### **Language**

The course is taught in English.

### **Programming language**

The course will contain a number of assignments, which you can choose to solve. In principle any multimedia tool can be used to solve the assignments. Help can primarily be given in Flash, Photoshop, Dreamweaver.

### **Examination**

Surprise Test

Class Test

Midterm Examination

Final Examination