Full-Time / Part-Time

INFORMATION TECHNOLOGY
(BUSINESS)
MSc / PG Diploma

Distinctly Ambitious
www.hw.ac.uk
Heriot-Watt University offers a first-rate environment for postgraduate study and research. We are one of the UK’s leading universities, recognized internationally for excellent teaching and innovative technology in our specialist areas of science, engineering, business management, languages and textile design.

Heriot-Watt became a university in 1966 and our origins go back to the foundation of the School of Arts in Edinburgh in 1821. We are Scotland’s most international university. Over 30% of our students come from outside the UK.

We introduced the first Computer Science degree in Scotland in 1966, have taught MSc degrees in this subject from 1970 and are part of the world class SICSA research cluster that aims to sustain and expand Scotland’s research excellence in Informatics and Computer Science.

Programme Structure

The first two semesters (September-May) are spent studying taught courses in IT and business. At the same time research skills are developed as a preliminary for work on an MSc project. Exams take place at the end of each semester.

In the third semester (May-August) students undertake a specialist project which is written up as a dissertation. It enables further development and consolidation of skills introduced in the taught courses, applying them to a challenging practical problem in the subject area.

The project is carried out under the supervision of an academic with expertise in the field. In some cases the project can be carried out in collaboration with an outside industrial or academic organisation.

The table shows the essential and optional courses in the first 2 semesters. Full time students study 4 courses each semester.

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Aim of Programme

The aim of this MSc and Postgraduate Diploma programme is to impart skills and understanding in key IT and business management subjects at Masters level.

The programme covers the design and development of IT systems, the management of IT, business organisation, and e-commerce.

Duration of Programme

The full-time MSc programme starts in mid September and lasts 1 year. The Postgraduate Diploma starts at the same time but only lasts 8 months. Students completing the PG Diploma at MSc level may transfer to the MSc.

Part-time study for the MSc over 2 years is also possible by special arrangement with the programme director.
**SEMESTER 1 COURSES**

**F21DF Database and Information Systems**
- To develop understanding of the processes and methodologies required for analysing, specifying and designing databases and information systems.
- To develop understanding of the relationships among organisations, human activity systems and information systems, and between the information systems and software development life cycles, and to use it in systems design.
- To give practical experience in designing, building and using DBs and ISs, simple DB programming, and developing and deploying DBs and ISs in organisations.

**F21IF Information Systems Methodologies**
- To explore a range of issues concerning advanced methodological approaches to information systems development.
- To develop critical faculties and techniques in selecting and applying these methodological approaches.

**C11OH Organisational Behaviour/ Human Resource Management**
- To explore and study contemporary issues in organisational studies.
- To examine the relationships between organisations and their environment and how they adapt to changes in it.
- To explore power, politics, leadership, cultural management, ethics and social responsibility.
- To examine HRM techniques, performance and reward management, work/job design and team-working.

**F21SF Software Engineering Foundations**
- To impart understanding of object oriented paradigm and object-oriented design.
- To carry out object oriented design from specification, document the design using apt techniques, implement the design in Java and evaluate the results.
- To impart understanding of window-based systems and their development.

**F21SA Statistical Modelling and Analysis**
- To impart a range of statistical modelling and analysis techniques for data analysis and demonstrate their practical application.
- To develop the ability to deal with complex issues and make informed professional judgements about them using statistical models and analysis.

**C11SP Strategic Project Management**
- To relate business strategy, its implementation and project management.
- To relate the pipeline of requirements for business expansion and the portfolio of strategic projects.
- To explore leadership and management of projects in business management terms.
- To involve business leaders so that the techniques and methodologies can be practically validated.
- To apply strategic planning tools.

**SEMESTER 2 COURSES**

**F21BD Big Data Management**
- To review principle abstractions, methods and techniques for the management of large and complex data sets (“Big Data”).
- To develop an understanding of the foundations and tools of the Semantic Web.
- To impart ability to appreciate critically a range of data integration solutions.

**F21DE Digital and Knowledge Economy**
- To consider the impact of deploying new technologies and emerging knowledge in developed economies.
- To discuss e-Business, as a modern business model that leverages technical advancements to create economic growth.
- To introduce relevant models, analytical techniques, technologies and methodologies including business, organisational, knowledge and technology based issues.
- To facilitate the dialogue between business and computing personnel, and translate business requirements to computing ones and vice versa.

**F21EC e-Commerce Technology**
- To impart understanding of e-Commerce technology and of how Information Systems shapes it.
- To put e-Commerce technologies in a structural framework, show how they support e-Commerce operations, provide technical know-how for implementing e-Commerce platforms and analytical skills to examine the technical aspects of e-Commerce.
- To show how marketing strategies in e-Commerce enable effective B2C relationships.

**C11PA Project Management**
- To develop an appreciation of the knowledge and skills of a professional project manager.
- To develop competence in using a generic set of quantitative and qualitative project planning and control tools and techniques.
- To enable recognition of the limitations and appropriateness of approaches to project management.
- To study project progression from strategy formulation to execution.
- To define the role and current issues faced by project managers in the context of project control.

**F21RP Research Methods and Project Planning**
- To enable students to develop skills in critical thinking, research planning, academic writing and experimental design appropriate for a post-graduate programme.
- To enable students to gain skills in project planning and an awareness of legal, social and professional issues relevant for IT professionals.
- To enhance students’ employability by development of job seeking and career planning skills.

**F29SS Sociotechnical and Soft Systems**
- To introduce Soft Systems Methodology and develop critical skills in its application.
- To impart understanding and skills in systems thinking as an means of analysing and developing information systems frameworks.
- To develop skills in the use of rich pictures and other diagramming notations in systems analysis and evaluation.

We may alter the courses offered at any time. Some courses may not run every year. Not every course combination may be possible to take. Students must satisfy each course’s prerequisites and their course choice must be agreed with the programme’s director.
Entry Requirements

Applicants require a first or second class honours degree or its overseas equivalent showing evidence of numeracy. Graduates with a little less than this may sometimes be admitted to the Postgraduate Diploma programme. If their exam and coursework performance is MSc level by May, they may then be recommended for transfer to the MSc.

Non-native English speakers must also satisfy the university’s requirements for competency in English. This can be done with an IELTS score of 6.5, EDEXCEL London Tests of English level 5, UCLES Certificate in Advanced English (CPE) grade C, level B in academic English from our own English language teachers or by proving they have studied wholly in English at university level. A full range of English language training courses can be taken at Heriot-Watt University before starting a programme.

How to apply

Applicants requiring sponsorship for a tier 4 visa to study in the UK via a CAS letter must also satisfy the UK Borders Agency’s English language requirements.

Contact information

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