THE UNIVERSITY of EDINBURGH
informatics

Introduction to taught MSc

Paul Jackson – Year Organiser

www.ed.ac.uk/informatics

Welcome

You can look forward to:

- An exciting year in a great city!
- Lots of intellectual challenges!
- **A LOT OF WORK!**

The next hour:

- Organisation of MSc Programmes
- Selecting Courses
- …

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MSc Community

- >150 Students on course this year
- In previous years ~40 Nationalities on the MSc programmes
- Benefit from this opportunity!

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English Language support

University's **English Language Teaching Centre** provides free support**:**

courses, workshops, independent study materials

Cannot hurt your record
English vital for courses and project

TEAM: Test for English at Matriculation
10:00-11:00 Thursday
Essential if IELTS 6.5/TOEFL-iBT 92

Programme structure

Semester 1	Semester 2	Summer
Informatics Research Review (20 points)	Informatics Research Proposal (20 points)	Individual Project supervised over the summer (60 points)
Taught Courses (40 points)	Taught Courses (40 points)	

Dissertation

- Dissertation work starts in May, submission in August
- Project topic allocation in January
- Most staff- and some student-proposed
- Work with supervisor on an individual project
- IRR and IRP prepare dissertation stage

Some Sample Dissertations

Video Tracking of Drosophila Melanogaster Gravitaxic Behaviour

Controlling robot in virtual world applying AI planning

A generic metadata management tool for large-scale data-intensive applications

Automated Stock Trading and Portfolio Optimization Using XCS Trader and Technical Analysis

Accuracy measures for neural population codes with correlated variability

Probabilistic Time Lapse Video

Query Evaluation over Distributed File Structures

Paying Attention to Attention: towards a unified computational model of visual perceptual learning

Implementing a Workflow Engine for Executing Business Process and Business Analysis

Exploring Neural Models of Path Integration

Using Sub-optimal HTN-Generated Plans as a Basis for Searching for Near-optimal Plans

Creating a Natural Logic Inference System with Combinatory Categorial Grammar

Evaluating the Quality of Data on the Web

...

Assessment and awards

Common mark scheme (across UK):

50% pass-level performance
60% merit-level performance
70% distinction-level performance

Need to meet hurdles in both courses and project

Assessment mix for courses

- Marks based on
  - coursework (programming, experiments, essays), and/or
  - final exam
- Most exams in April/May, some in December
- Only one attempt per subject, no resits
- Must pass at least 80 of 120 points of at 50%

Assessment: important rules (1)

Strict deadlines for coursework and project

Late submissions score zero!

Extensions prior to deadline are possible in exceptional circumstances only

See handbook for full details

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Assessment: important rules (2)

Kyriakos Kalorkoti (KK)

School Academic Misconduct Officer

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Course choices

- More than 50 taught courses at MSc level
- Many additional undergraduate/external options
- Talk to Personal Tutors for advice about course choice
- Must choose courses for both semesters by week 2, semester 1 (ideally sooner)

MSc-level courses

Adaptive Learning Environments
Advanced Databases
Advanced Natural Language Processing
Advanced Vision
Applied Databases
Automated Reasoning
Automatic Speech Recognition
Bioinformatics 1
Bioinformatics 2
Cognitive Modelling
Cognitive Neuroscience of Language
Compiler Optimisation
Computational Cognitive Neuroscience
Computational Neuroscience of Vision
Computational Systems Biology
Computer Animation and Visualisation
Computer Graphics
Computer Networking
Data Integration and Exchange
Data Mining and Exploration
Informatics Entrepreneurship
Informatics Research Methodologies
Information Theory
Intelligent Autonomous Robotics
Knowledge Modelling and Management
....

Undergraduate courses

Agent Based Systems
Algorithms and Data Structures
Compiling Techniques
Computability and Intractability
Computer Architecture
Computer Design
Database Systems
Enterprise Computing
Introduction to Cognitive Science
Introduction to Java Programming
Introduction to Vision and Robotics
Semantics and Implementation
Logic Programming
Operating Systems
Software Testing
...

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Programmes & Specialisms

MSc Programmes

Informatics

Artificial Intelligence

Cognitive Science

Computer Science

Data Science

Specialist Areas

Intelligent Robotics
Agents, Knowledge and Data
Machine Learning
Natural Language Processing
Neural Computation and Neuroinformatics
Cognitive Science
Analytical and Scientific Databases
Computer Systems, Software Engineering & HPC
Cyber Security and Privacy
Theoretical Computer Science

Bioinformatics, Systems and Synthetic Biology
Music Informatics

Courses

- Most MSc (level 11) courses worth 10 points (roughly 100 hours of work)
- At least 50 credits of specialism courses
- Up to 30 credits of level 9/10 undergraduate courses are allowed

Flexibility in requirements

- Some limits, e.g. on external courses, are unhelpful for some areas of informatics
- Personal Tutor might be able to obtain a *concession* to help
- **Not flexible:** absolute max 30 credits level 9/10 (undergraduate) courses

Programming requirement

Requirement can be met by taking one of

- IJP: Java Programming
- LP: Prolog Programming
- CPSLP: Python for Speech and Language
- Bioinformatics Programming: Python & Java

Talk to your Personal Tutor to have requirement waived if your programming skills are already strong

Innovation-driven Entrepreneurship

Administration

Semester 2?
10 or 20 credits
No pre-requisites
Primarily Informatics and ECA/DDM students

Content

Very similar to prior years: projects and industry speakers
Opportunity assessment and business plan writing
Practical support for new venture creation

UNIVERSITY OF EDINBURGH
Business School

Instructor: Adam J. Bock

PhD **Innovation and Entrepreneurship, Imperial College**
MBA **Entrepreneurship, UW-Madison (USA)**
BS **Engineering & BA Economics, Stanford University (USA)**

Manager, ESR angel network

- 75 angels, US$10 million invested
- Medical imaging, online music distribution, financial software

Co-founder, CFO/COO Stratatech Corporation

- Immortalized human keratinocytes for wound healing

Co-founder, VP Finance Nerites Corporation

- Surgical bioadhesive, sold for US$20 million in Q1, 2011

Founding CEO, Virtual Incision Corporation

- In vivo robots for laparoscopic surgery, VC “A” round Q1, 2011

A few tips and tricks...

- Time management is (almost) **everything:** organised students get the highest marks

- Do not overestimate coursework and underestimate **exams** (consider mark weightings!)

- Do not despair: almost everyone makes it in the end, though many people worry **a lot**!

A few tips and tricks...

- Wellbeing: without good sleep, proper food, a social life and some sunlight nobody can survive an MSc!

- Talk to us: we want feedback, are sympathetic to problems and can **help** with many many things!

A few tips and tricks...

- Course choice is extremely important – get information, try out courses, make good choices!

- We offer non-hierarchical, informal style of teaching and learning, but expect **responsibility** in return!

- All our documentation is online, **read it!** In particular, the ***Taught MSc Handbook***!

Thank you!

Want to be a class rep?

Leave me your name+email now