Welcome
to the …

Software Systems Courses

Introduction

Overview

- Software Systems (Computing) at Bournemouth
- Current courses, ethos and structure
- What we want and what we offer
- Year One & Year Two
- Placement
- Final year units
- Projects
- The student experience

Software Systems (Computing) at Bournemouth

- Industrially relevant education, underpinned by research and enterprise, on accredited courses with excellent employability prospects

- We have always had a focus on the professions.
- For example, were among the first to have courses focussed on Software Engineering & Business IT (as opposed to Computer Science).
- Our current frameworks and courses still address professional practice, and reflect the breadth of the Computing industry with their specialisations, whilst being informed by our *research and enterprise activity*.
- We continue to review and refresh our provision to ensure its currency and value.

- ***Research relevant to the profession of Computing.***
  - Requirements Engineering
    - Alignment of Business and IT
    - Process modelling and Process Oriented Requirements.
    - Requirements within a Model Driven Development Process
  - Software Modelling
    - Model Driven Development
    - Domain Specific Languages
    - Software Product Lines
    - Automotive Software Engineering, Bosch, Germany
  - Software Process and Quality
  - Global Software Systems
    - Data Mining
    - Web Systems
    - Global Software Development

Some Research Projects

- ***Working in partnership to produce genuine solutions***.
- **VIDE – Visual Model Driven Development:** *Funded by the European Commission to a total of €2,298,436. Tools to support model driven development, and to provide an end-to-end visual modelling notations accessible to a wide range of users.*
- **MDS – Misuse Detection System:** *Funded by the European Commission to a total of €1,334,776. Developed and evaluated a system for the detection and prediction of misuse in telecommunication networks.*
- **Model merging:** *Funded by Bosch (Germany) and conducted in collaboration with Zwickau University of Applied Sciences (Germany). Developing tools and techniques for visual merging of software models to support distributed development processes.*
- **Methods for Rich Internet Applications**
- *This project, in collaboration with Hark Solutions, is developing robust agile methods for the development of rich internet products, utilising technologies such as Adobe Air or Flex.*
- **A naturally inspired guidance system for unmanned autonomous vehicles**
- *The use of natural search strategies for improving the performance of autonomous vehicles operating in a search role. Early work has already received a prestigious best paper award, which was presented to the authors by HRH the Duke of Edinburgh.*

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Bournemouth University

- BSc (Hons) Multimedia Business & Entrepreneurship
- BSc (Hons) Digital Media Development
- BSc (Hons) Business Information Technology
- BSc (Hons) Information Technology Management
- BSc (Hons) Business Computing
- BSc (Hons) Web Systems
- BSc (Hons) Internet Communication Systems
- BSc (Hons) Network Systems Management
- BSc (Hons) Computing
- BSc (Hons) Software Engineering
- BSc (Hons) Software Engineering Management
- BSc (Hons) Software Product Design
- BSc (Hons) Multimedia Communication Systems
- BSc (Hons) Forensic Computing and Security

Course ethos and structure

- A range of titles reflect the breadth of the profession.
- General grounding in year one (core topics)
- These are similar topics across framework (though delivered in sympathy with course ethos)
- Further grounding in second year (though some further degree of specialisation).
- Typically placement in third year.
- This ensures core areas, for example, necessary for accreditation with professional bodies are covered.
- Specialisation in final year, according to final title.
- Allows choice, and changes of direction up to final year.

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What we want from you

- Creativity
  - in technical solutions
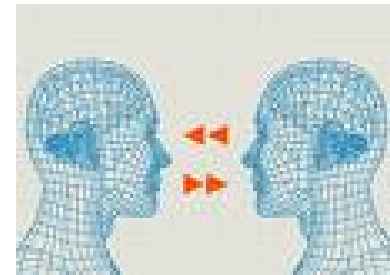 - in design of the software product

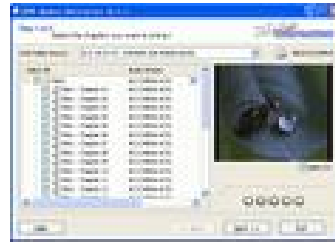- Analysis and Problem solving
  - to explore different solutions to a problem
  - to develop innovative ideas

- Ability to communicate
  - to explore customer requirements
  - to explain your proposed solutions

What we offer you

Technical Skills

- Building systems
- Programming, databases, networks

Analytical Skills

- Understanding the business process (perspective)
- Modelling problems
- Marketing and accounting

- Integration of the skills
- Improving business processes with intelligent application of IT

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Year One – Core grounding

- Databases
- Programming
- Systems Analysis and Design
- Computers and Networks
- Business & Professional Issues
- Web and Media Development

- Topics which underpin further second year core and specialist units.

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Year Two

Core topics

- Programming
- Systems Design
- Integrating Team Projects

Further units

- Data Management
- Business Context
- Games
- Networks and Security
- *Forensic Science in Practice*
- *Digital Security and Forensics*

Pathways and courses – Year Two onwards

Titles of Courses (and paths to each title from units C & I)			
Media	**Business IT**	**Computing**	**Security**
	IT Management	Software Engineering	
DMD	Business Computing	Software Engineering Mgmt	Forensic Comp & Security
MBE	BIT	Software Product Design	
	Web Systems	Computing	
	ICS	MCS	
	NSM		
Second year routes and units			
Business Context	Business Context	Games	Forensic Science in Practice
Games	Networks & Security	Networks & Security	Dig Sec & Forensics
Data Management	Data Management	Data Management	Networks & Security
Programming 2			
Integrating Team Projects			
Systems Design			

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Integrating the learning

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Integrating the learning

Placement Year

- Placements are for minimum of 40 weeks.
- The Placement Service help you to find one at home or abroad
  - Large, Small and Medium Enterprises
  - IBM, Microsoft, HP, NHS, House of Fraser, BT, Debenhams etc. Eli Lilly, Oracle, JP Morgan

- Knowledge and skills mature
  - Informs choice of final year
- Often specifies the final year project application
- Full-time employment after graduation

Final Year

- Split into two semesters, taught units, followed by project.

- Experience is that placement sometimes changes your aspirations and choice of final degree.

- Hence, while final year electives typically lead on from choice of groupings in year two, there is still considerable choice.

- Most titles mandate three set units plus project.

  - For example, Software Engineering: Business processes and requirements, software systems modelling, software quality and testing.

- However, generic titles (Computing & BIT) allow for a more eclectic choice of electives and are popular among final years.

Current Electives

- Business Processes and Requirements
- Software Systems Modelling
- Web Systems
- Advanced Development
- Management in Computing
- Business Development and Enterprise
- Software Quality and Testing
- Digital Entertainment Systems
- Advanced Data Management
- Information Assurance and Forensics
- Advanced Networks
- Network Configuration Management

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Course Titles	Business Processes & Requirements	Software Systems Modelling	Web Systems	Advanced Development	Management in Computing	Business Development &Enterprise	Software Quality and Testing	Digital Media & Games	Advanced Data Management	Information Assurance & Forensics	Advanced Networks	Network Configuration Management
IT Management	X				X	X						
Business Computing				X	X				X			
BIT: 3 electives*												
Web Systems	X		X	X								
Software Engineering	X	X					X					
SEM	X				X		X					
Software Product Design	X			X		X						
Computing: 3 electives:												
MCS			X						X			X
ICS			X	X								X
Network Systems Mgmt					X						X	X
MBE			X		X	X						
DMD			X			X		X				
Forensic Computing (+ 2 electives)										X		

Projects

- Projects follow units, though ideas developed (with support) throughout first semester.

- Triple weighted unit (60 credits)

- Choose relevant area of research and development

- Project Tutor advises students on possible projects and potential supervisors

- Supervision throughout the year
  - With appointed project supervisor

- Deliverables (typical)
  - Dissertation and design documents
  - System demonstration

Student Experience

- Lectures
  - Each unit has a number of lectures
- Seminars and workshops/lab sessions
  - Students in smaller groups
  - Each unit has a number of seminars or labs
  - Supervised by lecturers or demonstrators
- Extra support sessions where required
- Laboratories are modern, well-equipped, open 24 hours per day
- MSDN Academic Alliance now strengthened to unique agreement with Microsoft.
- *Imagination Cup*

On graduation

- Marketing Database Administrator with Origen (e-company)
- Project Co-ordinator with Eli Lilley
- Networking with Unilever Business Team
- IT Teacher
- Business Analyst
- Programmer with Cap Gemini
- PhD student
- Self employed (own company marketing networking)
- IT Consultant at JP Morgan

Student Support

- Pastoral tutor
  - Specially for problems in the first year
- Framework (Courses) Leader
  - Course related issues
- Placement Office
- Peer Assisted Learning (PAL)
  - Second year students supporting first year students
- Student Union
- Careers Office
- On campus medical facilities

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Questions?

Please depart via the Fire Exit

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