computer science
Undergraduate and Postgraduate courses 2009
“Our 94% employability rating – and being voted the ‘Best new University’ by computing employers is a result of years of working closely with industry.”

Robin Oldham, Principal Lecturer

Our awards include:

- Computer Science
- Software Engineering
- Computer Games Programming
- Network and Mobile Computing
- Forensic Computing
- Systems Security
- Information Systems
- Data Management
- Web Design and Programming
- Multimedia Computing

computing awards purpose-designed to give you an edge

Year-on-year, the number of opportunities available for IT professionals has continued to grow across the computing sector.

Indeed, referring to the final quarter of 2007, Computer Weekly* reported that Permanent IT jobs advertised on the web shot upwards by 33% relative to the same quarter last year, maintaining the healthy growth trend that has lasted for eight consecutive quarters.

With the same article also reporting that. Taking 2007 as a whole, 17% more permanent IT jobs were advertised compared with 2006, career opportunities in computing clearly appear to remain vibrant.

Right across the IT sector, Staffordshire University’s Faculty of Computing, Engineering and Technology has a reputation for creating graduates with the technical skills, creative abilities and vision to succeed in what has to be one of the most fascinating and varied of career sectors.

Our Computer Science undergraduate and postgraduate programmes embrace a whole range of high quality awards that will equip you to progress in a wide variety of IT-based careers.

In fact, whether it’s the skills you’ll demonstrate as one of our placement students, or the work we do in research and enterprise, you’ll find our reputation for excellence is both national and international.

With IET-accredited courses, an enviable track record of BCS accreditations across our awards, numerous industry partnerships - and a reputation for well-proven computing expertise - Staffordshire University is widely acknowledged as the place to study for your degree or masters award.

*Computer Weekly, 11th March 2008
“Throughout my time at Staffordshire University I feel that the Computing Degree Scheme has helped me to become a determined and focused individual with the skills necessary to enter the IT industry.

The combination of excellent laboratory facilities, a broad range of subject modules, and varied interests and experiences within the University staff, all provide a solid platform for the academic learning environment.

The opportunity to take a placement during the course provides an invaluable experience leading to the development of working skills necessary to be successful within the industry. These skills can provide a competitive advantage over other graduates, leading to excellent career prospects upon graduation.”

Greg Holdcroft Computing Science: Web Development

“Computer graduates leave Staffordshire University with the necessary skills, tools and techniques to hit the ground running.”

Alastair Dawes, Senior Lecturer

Staffordshire University has a long, proud history of excellence in the provision of quality computing education and research.

As the very first university to offer a computing degree back in the 1960s, we are renowned for our experienced staff, in-depth knowledge, cutting-edge facilities, global industrial partnerships and flexible awards structure.

Put simply, we take pride in creating real computing professionals. Indeed, graduating with one of our sandwich degrees means that you will not only have an honours degree with a broad understanding and knowledge of computing, but will also have 12 months’ relevant industrial computing experience.

We recognise that you are best equipped to succeed when you have a detailed knowledge and understanding of your chosen area of application, as well as a broad understanding of all areas of computing. That’s why all our courses are designed to make sure you hit the ground running - ready to succeed.

You can be confident that by choosing to study at Staffordshire University you will gain:

• a thorough understanding of the IT sector
• a clearer idea of the area you wish to work in
• the skills you need to succeed.
“Staffordshire University is a great place to learn and have fun. It has the most amazing computer facilities available and even better staff who are always there to give a helping hand. My time there was both challenging and thought-provoking and I enjoyed every second of it. I also made more life-long friends than I could ever have imagined, with people from all over the world. Everyone at the University strongly believes in the ‘work hard – play hard’ ethos and we all made the most of it.”

Landon Wainwright

Regardless of the computing course you choose, your studies will be supported by over 130 highly qualified, enthusiastic and friendly academic staff, many of whom enjoy international reputations for research and consultancy within their specialist fields.

In addition to this, the Faculty has dedicated student advisors, as well as support from the University’s extensive student welfare network. Whether it’s a particularly tricky programming problem or advice on student finances, there’s always someone available to help.

Valuable industrial experience

Our dedicated placements team is there to help you gain the industrial experience that is so highly valued by employers. We place over 300 students a year all over the world, with many leading names across the field of IT, as well as numerous small-to-medium companies.

We also attract students from all over the world - and, as a consequence, can even arrange for you to study part of your course in one of our overseas partner institutions in countries including Malaysia, Singapore and China.

When you study one of the computing courses outlined in this brochure you will also be eligible for British Computer Society accreditation.
The home of computing at Staffordshire University is the Octagon, a purpose-built computing facility to rival the best in Europe. With around 1000 workstations, ranging from desktop PCs to silicon graphics units, you’ll always find a high-quality environment in which to work. The Octagon also contains state-of-the-art lecture theatres and specialist facilities. It is also the home of our research community.

Choosing to study your computing degree at Staffordshire University means benefiting from considerable technical advice specifically obtained with your course in mind.

There are around 1000 networked computers within the Octagon, with approximately one third upgraded every year. We have ample quiet study areas with PCs and PCs for collaborative work. There are also wireless study areas with laptop ports.

**CISCO labs**

We have 48 Windows XP workstations for student coursework and to serve as hosts on test networks. Devices in the test networks include:

- 18 Catalyst 2950 switches
- 4 CISCO 2501 Routers
- 1 CISCO 2514 Router
- 1 CISCO 2511 Access-router
- 18 CISCO 2620 Routers
- 12 CISCO 2621 Routers
- 3 CISCO PIX 515 Firewalls
- 1 CISCO 2821 CME Router
- 4 Adtran ATLAS 550 WAN Emulators
- 4 CISCO 7900 IP phones

**Mobile computing**

25 Personal Digital Assistants (PDAs) are available for teaching and student work and 24 PCs with software that includes Opnet (Network Simulation), GIS - Geographical Information Systems (complex analysis of map-linked data i.e. logistics planning or 3D environmental impact assessment), Microsoft Mobile development tools and Java (tm) Platform, Micro Edition development tools (J2ME/Java2 ME) used for applications running on mobile phones, PDAs, TV set-top boxes and printers etc.

**Forensic and AI**

22 PCs with Microsoft fingerprint reader are available. We will soon have hand scan and iris scan.

Serious virus analysis equipment will be coming soon, plus forensic disassembly. We use a variety of forensic software tools, the main being Encase.
our placement partners include:

Accenture  
AstraZeneca  
BASF  
BBC  
British Oceanographic Data Centre  
Britvic  
CERN  
Co-Create  
EuroCopter  
GlaxoSmithKline  
GM Europe Vauxhall  
Hewlett Packard  
IBM  
JCB  
Kraft  
Logica  
Ordnance Survey  

starting your own business

Through SPEED (Student Placements for Entrepreneurs in Education), we can assist you in starting up your own business during the placement year of a sandwich degree course instead of going into industry.

Introduced in 2006 - and a collaboration between 13 universities and other partners across the UK and Ireland - SPEED has proved highly popular at Staffordshire University, with 92 students so far being given the chance to learn about enterprise and entrepreneurship, all while being able to start their own business.

For more information about the SPEED scheme:

t: 01785 353495  
e: s.a.rowe@staffs.ac.uk  
www.staffs.com/enterprise

making sure you are highly employable

At Staffordshire University, we never lose sight of the fact that our real role lies in preparing our students for long and successful futures.

That’s why, whatever your chosen career in computing, you can rest assured that our study environments reflect the real world of work as much as possible.

By providing the very best amenities, we also know we can bring out the very best in you. However, we don’t stop there.

We have established broad relationships with local, national and international companies right across the field of computing.

As a result, we are able to arrange the opportunities and placements that provide real-world expertise and can often lead to exciting offers of employment and highly fulfilling careers.

Our approach ensures we are always fully-up-to-date with the latest industry trends and developments - and are able to anticipate and embrace new approaches beyond the world of academia.
Each of the following themes forms part of our computing provision. The structure of all computing awards ensures a breadth of knowledge and understanding, by having a first year where specialist subject areas are introduced alongside core computing subjects, giving you the flexibility to change awards at the end of the first year of study, as all awards follow similar core subjects and it is built into curriculum development to offer flexibility of choice.
computer science and software engineering

BSc(Hons) MEng/BEng(Hons) Computer Science
This award aims to create graduates who will be able to work in a wide variety of computing areas. You will obtain the technical knowledge, skills and background to design, organise and support computer systems. Evolving alongside the computing industry, this award distinguishes itself from the other computing degrees by its greater emphasis on computer systems and the nature of computation. It emphasises the hardware and operating systems of a computer, how they are designed, built and supported. Whether you want to be a software developer or a systems engineer, this award gives you the skills you need.

BSc(Hons) MEng/BEng(Hons) Computing Science
First running in 1965, Computing Science at Staffordshire University was one of the first computing degrees to be offered in the UK. The content has developed considerably since then and continues to be one of our most popular. You will obtain a broad view of computer systems, software engineering and information systems; the building blocks of the study of computing. This course offers you flexibility, as it allows you to choose the majority of the subjects that you will study from the extensive range of computing modules on offer. If you follow this course, you will be qualified to pursue a career in the IT department of most companies, software houses and computer manufacturers. You will be educated to be a professional software and application developer.
**BSc(Hons) MEng/BEng(Hons) Software Engineering**

Software Engineering is the practice of producing quality controlled, cost-effective software solutions. You will study a variety of software development tools, programming paradigms and modelling techniques. You will experience all phases of software development with an emphasis on formality, methodological rigour, effective management and good communication. Graduates of this award have the techniques and knowledge to be application programmers in a large number of industries.

**BSc(Hons) MEng/BEng(Hons) Computer Systems**

The Computer Systems degree provides depth at the technical level. You will study different types of computer systems and look at hardware and software interfaces. A number of advanced areas are covered including safety-critical systems, multiprocessors, multi-tasking operating systems, real-time processing, sensing and control systems. A typical graduate would be involved in problem solving and system development in a technically demanding environment. Careers such as computer system designers, systems manager and technical systems analysis would be possible.

**MEng Fast Track Computing Science**

This award contains the curriculum and structure of the BSc(Hons), MEng/BEng(Hons) Computing Science award but is also delivered as an intensive two-year undergraduate period, followed by a graduate level placement year and then, finishing with a Masters year of study. This award will have higher entrance requirements than its BSc(Hons) MEng/BEng(Hons) counterpart and will require students to study over both summer periods of the first two years, in a combination of intensive, blended learning and distance learning delivery modes.
computer games programming

BSc(Hons) MEng/BEng(Hons) Computer Games Programming

Computer games are the fastest growing area of the media industry. This award focuses on developing games programmers with strong software engineering skills. You will be given the opportunity to study OpenGL and DirectX interfaces which are widely used in the development of PC and console games. The award also teaches Artificial Intelligence and physics programming along with games and graphical systems. Computer Games Programmers are amongst the most highly skilled software engineers. Graduates will have all the necessary skills to work as programmers in the games industry or any other software engineering role. Career prospects are excellent.

BSc(Hons) MEng/BEng(Hons) Multiplayer Online Games Programming

One of the fastest growth areas in the games media industry is that of the online games market. This award will concentrate on games programming but with an explicit bias towards the technologies used in networked, collaborative and distributive gaming whilst also focusing on game related virtual communities and game playing concepts. Subjects studied will include the integration of graphics, online games, networking, internet technology and software engineering principles. This award provides an exciting opportunity for students who are interested in combining networking technologies and programming computer games whilst also gaining skills in software engineering principles. As we are a CISCO Academy, you will also have the opportunity to gain CISCO qualifications alongside your academic studies.
BEng/MEng(Hons) Portable Games Programming
Portable games are distinctive from other games and embody principles of mobile technology which require solutions differing in many aspects from desktop console or PC-based applications. Recent sales figures comparing different game platforms in the Japanese market show that Portable Play Station (PSP) and Nintendo DS, both hand-held devices, dominate the market, which, along with the release of hugely popular game titles specifically for these devices, suggests very healthy demand for expertise in this field. Many UK game companies now develop for PSP and DS and will require experience in this type of game development. This award will concentrate on games programming but with an explicit bias towards the technologies used in mobile and other hand-held devices as well as specific development opportunities for PSP and other portable gaming devices.

BEng/MEng(Hons) Arcade Game and Simulator Development
The success of such platforms as the Nintendo Wii has highlighted the move of game players towards more interactive devices with several UK companies increasing their development in this area. An increase in the demand for a wider range of interactive gaming methods has been highlighted as a significant development area by major games companies and this award will help address this emerging demand. Subjects studied include the principles and programming techniques used in simulation, the underpinning and understanding of motion, dynamics and kinematics used in simulators, 3D graphics programming and the understanding and programming of dedicated device drivers for peripheral devices.

BSc(Hons) MEng/BEng(Hons) Games Artificial Intelligence
Computer games programming is a significant growth area and this award is intended for students who are interested in computer games and the Artificial Intelligence (AI) techniques used to bring life, realism and challenge to computer games. This award emphasises practical scholarship with theoretical underpinning, developing knowledge and skills in the area of Artificial Intelligence, specifically for computer game development. This award will equip graduates with numeric and programming skills which are very much in demand in the labour market. In particular, graduates will be equipped to take up roles within the game programming industry or in commercial AI applications.

BSc(Hons) MEng/BEng(Hons) Computer Graphics
This degree is concerned with the creation of graphical interfaces and visual software products. You will be able to solve industrial and commercial imaging problems effectively and efficiently using computer technology. Subjects studied include 2D and 3D graphical programming, virtual reality, chaos and fractals using state-of-the-art hardware and software. Applications of these technologies include image processing and recognition, special effects and real-time animation. You will require a strong background in mathematics for this subject area. Graduates from this award are able to gain employment in areas where they can apply software engineering techniques to visual systems.
network and mobile computing

BSc(Hons) MEng/BEng(Hons) Network Computing
The Internet could not exist without the supporting infrastructure of hardware network components, the system software that controls them and data communication across them. This award develops you as a specialist in the enabling technologies that underpin the Internet, Intranets and other computer-based information networks. As we are a CISCO Academy, you will have the opportunity to gain CISCO qualifications alongside your academic studies. As a graduate in Network Computing, your knowledge and skills could be used to support and manage networks in any organisation. As this is a role that is essential to the successful running of an organisation, your career prospects are excellent.

BSc(Hons) MEng/BEng(Hons) Computer Networks and Security
Computer Networks are vital to any modern organisation. Securing computer networks from malicious attack or inadvertent damage is of paramount importance. This award produces graduates with the technical skills necessary for the design, deployment and management of secure networks. You will also gain a critical understanding of the broader issues pertinent to computer networks and computer security. As we are a CISCO academy, you will have the opportunity to gain CISCO qualifications alongside your academic studies. Supporting and managing the security of a modern networking environment is a role that is essential to the successful operation of an organisation. Graduates of this award have all the skills necessary to perform this vital role.

BSc(Hons) MEng/BEng(Hons) Computer Networks and Systems Management
Computer systems form the backbone of most modern organisations. Organisations cannot operate without computer systems to manage their data, provide network support and manage the PCs and other hardware that employees, from the shop floor to top management, use on a day-to-day basis. This is a complex set of resources that needs to be managed, requiring real technical knowledge as well as management skills. The computer, network systems and software must be specified, procured, installed and then maintained and developed to provide the rest of the organisation with the services it requires. Software is also an important resource, it too must be maintained and developed. This requires skills in the project management for software development. This award, you will develop the technical and organisational skills required to manage large network systems.
Data is one of the most vital resources that organisations have. It is valuable and it needs to be protected against corruption, loss or theft, whether this occurs by accident or deliberate action. Forensic Computing at Staffordshire University focuses on the protection of systems and data from attack, the investigation where attack or misuse takes place and the recovery and reconstruction of the data. You will also cover legal aspects of Forensic Computing and be able to present your investigative findings as an expert witness. Any organisation that has a computer network or uses the Internet has a security problem and will need people with specialist skills to help protect their systems and data. There are specialist consultancy firms that provide such services to organisations, as well as the Police Service and Law firms specialising in computer-based crime.

BSc(Hons) MEng/BEng(Hons) Computer Security

Computer systems store, process and communicate a wide variety of data. Much of this data is private and the improper access to it can result in significant costs to the organisation or person that owns the data. Securing computer systems against malicious attack or even against inadvertent damage is vital to any computer system. This award gives you the knowledge and skills to enable you to prevent attacks and inadvertent damage to computer systems. You will learn about techniques for establishing secure systems from firewalls to cryptography. This is an important and growing area of work for computing professionals. Any organisation that has a computer network or uses the Internet has a security problem and will need people with specialised skills to help protect their systems and data. You may also find yourself working for a specialist consultancy firm that provides such a service to smaller organisations.

BSc(Hons) MEng/BEng(Hons) Computing Science: Biometrics

Biometric measurements are measurements made of us – fingerprints, iris scans, etc - that can be used to identify us uniquely. The Government wants all UK citizens to have data relating to various biometric measurements on a national database, so that your biometric measurements can be used to verify who you are. This is a massive undertaking. Every shop will need biometric equipment just as they have credit card readers. Access to buildings, such as where you work, might well be protected by biometric access points that use biometric equipment. Computing Science: Biometrics is about understanding these new developments in the use of computers. Since biometrics are used in security systems, you will learn a lot about computer security and like the other two awards in this theme, a great deal about the internal workings of computer systems.
BSc(Hons) Information Systems
Information is the most valuable corporate resource; managing this information is key to the success of all organisations. This degree focuses on the use, management and exploitation of information in organisations, in order to support the activities of the organisation. It considers the use of IT from a more strategic perspective and involves the design and production of database systems. You will be introduced to the psychology of systems, information processes, methods and techniques and management practices. You will also be provided with a sound knowledge of systems analysis and design methodologies, database management systems and commercial applications. Typical employment will be as a Systems Analyst, providing expert knowledge in conventional and alternative analysis and design methods, the design of databases and project management.

BSc(Hons) Logistics Technology
This award focuses on the use of information to ensure the design and management of effective logistical systems. For any organisation to be able to function properly and meet customer demands, it must be supplied with the various goods and services it needs, at the right time. Logistics is the art and science of making sure that you have everything you need, where you need it and at the time that you need it, in order to do your job properly. It is central to the successful operation of any modern organisation. You can no-doubt appreciate that the appropriate use of information is key to this process. As a graduate of this award, you will be able to specify, select, design and implement technological solutions within the domain of logistics and with an understanding of the use and development of business information.
**BSc(Hons) Database Technology**

Database systems are the engines of all companies, from mobile telecoms to e-commerce organisations like Amazon. Modern Database Systems store everything from digital music to film clips. The efficient and effective design and implementation of a company’s information system is crucial to its success and competitive advantage. This award will provide you with practical knowledge and skills required to design and develop mission critical databases to support these information systems. A significant number of key skills required by employers in the IT industry will form an integral part of this award and in addition, you will have the opportunity to gain Oracle certification.

**BSc(Hons) Knowledge Management**

Knowledge Management refers to a range of practices used by organisations to identify, create, represent and distribute knowledge for reuse, awareness and learning across the organisations. Knowledge Management activities support organisational objectives and are intended to achieve specific outcomes, such as improving organisational performance, achieving competitive advantage, sharing intelligence or reaping the benefits of innovation. Knowledge Management may be distinguished from Organisational Learning by its increased focus on the management of specific knowledge assets within the organisation and the development and cultivation of the channels through which this knowledge flows. This is a relatively new field within Computing, but the power of technology is seen as being increasingly important in allowing an organisation to create, store and employ knowledge (rather than just information or data). Examples of such technologies that are studied at Staffordshire University include: Data Mining and Data Warehousing, and Knowledge Management. As well as learning the use of technology, students on the BSc(Hons) Computing Science: Knowledge Management, learn the organisational aspects of Knowledge Management and the use of Intellectual Capital and Organisational Learning. The Final Year Project will pursue the Knowledge Management theme with a detailed study and implementation of a Knowledge Management artefact.
web and multimedia

BSc(Hons) Web Development

Computing applications all increasingly rely on the use of the Internet and web technologies. Web Development is an award for those wishing to become specialist in design and development of computing for the web and related technologies. This award will allow you to become specialist in creating web applications using the latest technologies and programming languages suitable for web development. This award will provide a solid foundation in computing and cover areas in web development including web page design and development, web standards, XML, Web Services, Web 2.0, database development, interaction, accessibility and globalisation. This will also include programming in the latest web languages, including PHP, ASP.NET and options will allow you to gain skills and programming in Adobe software such as Flash and Action Script, or develop your networking skills with our CISCO Academy. In choosing this award you will be signing up to a rapidly developing area of computing with large employment opportunities as nearly all sectors of industry now employing the usage of web-based applications and systems. Job titles include Web Programmer and Web Developer.

BSc(Hons) Web Multimedia

There is a rise in the number of Rich Internet Applications being produced, which incorporate web technologies, graphics and video to increase the user experience. Web technologies are also being used in the development of widgets for desktop computing and also increasingly mobile devices. Web Multimedia is an award for those wishing to become specialist in the design and development of such applications and also high media/broadband web sites. This award covers a solid foundation in computing for web development and includes converting and creating media for web delivery, web design, web standards, web development in Adobe Flash and Microsoft Silverlight, programming in Adobe Action Script and Flex, SMIL, SVG, streaming video and audio in Flash, Real and Windows Media, streaming servers and live web broadcast, and podcasting. You can also take options to develop further skills in gaming, building web applications in languages such as PHP and ASP.NET or building up further multimedia skills. In choosing this award you will be signing up to a rapidly developing area of high bandwidth and media computing with large employment opportunities as most companies and industries now use large elements of media on their websites. Job titles include Web Developer, Web Designer, Web Media Producer, Flash Developer and Flash Programmer.
BSc(Hons) Multimedia Computing

Digital Media is increasing and there is a multitude of devices now that can deliver such media. Also there is an increase of the use of media on desktop environments such as desktop widgets in environments such as Microsoft Vista and Opera browsers. A student studying Multimedia Computing will become specialist in creating and converting digital media. This will include graphics, both 2D and 3D, video, animation and music. Students will make media suitable and useable for all areas of computing including computer-based delivery, games, interactive TV, DVD, web, special effects, and mobile devices. You will also gain skills in areas of multimedia design, computing to enable back-end systems to interact with media, the use of multimedia in education and podcasting. You will be utilising all the latest creation and conversion tools such as 3DS Max, Adobe Flash, Adobe After Effects, Microsoft Expression and Adobe Photoshop. All this will be backed up with a solid foundation in computing in areas such as hardware for multimedia, databases and programming. Options will allow students to develop skills in games development and design, music, film, developing your own business or other areas of computing such as web applications or network computing. In choosing this award you will be signing up to a degree that will help you in the areas of employment such as digital media. Most companies use digital media in marketing or training. Job titles include Media Specialist, Digital Media Specialist, Multimedia Learning Creator, Multimedia Programmer.

BSc(Hons) Web Enterprise *

The web is used as a tool for business and enterprise. Students who study this award will look at both web development and business/enterprise and the way these interact together in the world of e-marketing and e-commerce. This degree will also be suitable for any student who wishes to start their own company in web design and development. Students will study web site design and development using current languages such as ASP.NET and PHP, and cover areas such as e-marketing, e-commerce, project management and business planning. You will learn to understand the needs of a client and be able to plan web projects. Job titles include Web Entrepreneur, Web Project Manager.

BSc(Hons) Web Design *

Front-end web design is becoming increasingly important to attract people to a web site, and make a web site more useable. Web design is also becoming more important as a multitude of devices, from desktop to mobile, handheld games devices and TV, can view web pages. Students studying this degree will become a specialist in the technologies involved and the principles involved in web design. They will also gain a solid foundation in computing, including databases and programming, so that they can communicate and interact with people who will be developing the back end to web applications. They will study user interfaces, web design, web media design, media conversion for web site delivery, web standards. They will study how to gather user requirements and convert these into reality using prototype interfaces. They will become specialist in CSS, user interactions, accessibility and human computer interaction, and use the latest tools such as Dreamweaver, Flash and Microsoft Expression Studio to design the interfaces of web applications. They will also look at future interfaces in the world of ubiquitous computing as many of these interfaces can utilise Internet technologies. They will also be given the opportunity to study e-commerce, e-marketing and web programming modules to further their knowledge. Job titles in this area include Web Designer and Flash Designer.

BSc(Hons) Web Programming *

Traditional programming techniques are being used increasingly in developing web applications. Students who study this degree will become specialist in programming web applications. They will fundamentally be involved in creating the back-end to web applications and work closely with web designers to interact with any front end that has been designed. This award has a solid foundation in computing, especially programming and databases, and then specialises in programming web applications using current languages, including PHP, ASP.NET, and JSP used in the web. It will also cover areas such as web standards, web services and you will be given the option to study areas such as programming for mobile and desktop applications, games programming, web design and web multimedia programming in languages such as Flex and Action Script. Job titles include Web Programmer, Computer Programmer.

* Subject to validation for 2008 start
student profiles

“It was a big decision to give up my well paid, but dull job. Now, five years later, I am reaping the rewards of my decision to go back into full-time education.

During my time at Staffordshire University, I have benefited from excellent tuition and a structured course, however the structure is not rigid. I had the chance to choose from a large and varied list of optional modules during my time, which allowed me to learn a foreign language as part of my course. In addition to this, the social life was excellent and although I only graduated this year I already miss it.

Staffordshire University has given me a lot. I have graduated with a first-class honours degree and got an excellent job doing what I enjoy - working for Oracle Consulting. I have made a lot of new friends over the last four years and many of these will be friends for life. I have done it all whilst working part-time, supporting a young family and also fulfilling my commitments to the Territorial Army. It has been hard work but worth it in the end.”

Danny Roach
BSc Computing Science (Sandwich)

As part of my degree placement, I spent over a year living and working in Southern Germany and while there I managed to visit most of Europe which was awesome. I would highly recommend it to any student if they have the chance to go. Thanks to my highly-regarded Computer Science degree, I have managed to get a superb job working for an online games company in Cambridge.”

Landon Wainwright
BSc Computer Science

The following is from a brother and sister who joined the University at the same time.

“The environment provided by the University was very suitable for studying, but even while working hard towards our degrees, we did have lots of fun in Stafford, with its social activities and SU. The course we started on was BEng Computing Science and although there were certain modules that were necessary, we still had plenty of choice for optional modules to enable us to decide the future path we wanted to take. The staff members during our course were exceptional to say the least. They were ready to help students anytime and the level of understanding they provided us with in our subjects was very beneficial in our final year and beyond in industry. The subject matter was taught with great enthusiasm, which made us want to go to every lecture. Our final year project supervisors were simply great and provided us with enough support to carry out our research and achieve our grades. They made sure that we were on the right track and we feel extremely grateful for that. Therefore, to all the people who are thinking of joining Staffordshire University we say: ‘Stop thinking and go for it’. We have no hesitation in recommending Staffordshire.”

Gaurav and Parul Sondhi

“I started my degree with the opinion that I was a very small fish in a very large pond and in that pond I would surely drown. However, under the guidance of the University, I took each step of my degree and broke it down into small, manageable pieces. I am, of course, not suggesting for one moment that this was not one of the most challenging times of my life, but I never forget the reason I was there. I felt scared, happy, hysterical, ecstatic and vulnerable all at the same time, but believe that feeling the fear and doing it anyway is why I am where I am today. Five years ago, I had a basic education and little confidence, now I have a 2:1 BSc in Computing Science and own a web development company.”

Sarah Brassington
BSc Computing Science

“Studying Computing Science at Staffordshire University gave me the opportunity to gain valuable experience within industry. Whilst on my placement, I worked as a project manager to improve a company’s web presence. Throughout my time as an undergraduate, I gained vast amounts of knowledge and practical experience working in groups and also individually. The final year of the degree was a changing point, as working on the final year project allowed me to work independently, develop my academic skills and develop and mature as a person. My experience at Staffordshire University led me to set up my own web development business. My interest in education continued to grow, so I soon returned and am currently studying a Masters by Research in Computing Science in the area of Distributed Systems.”

Bhupinder Reehal

A placement is an excellent opportunity to complete your first year of professional employment with the support and encouragement of the University. 96% of students who completed a placements survey in 2006 stated that they found the placement experience enjoyable and 91% would recommend doing a placement to other students.

You will leave Staffordshire University already ahead of your peers when you hit the job market with 12 months experience on your CV

Benefits of a Placement
The Placement Scheme is a practical period during which you will have the opportunity to contribute as a team member to the goals of a firm and develop your relevant skill sets within a ‘real’ working environment. This development will include soft skills such as business acumen, communication/personal skills as well as computing and technology skills. You will be able to get involved in projects and programmes doing anything (depending on your award), from networking, web development, forensics and project support to programming and games design.

Future Recruitment
A large number of employers view the placement as a potential induction period leading to a full-time role after graduation. Some of our students, who have recently returned for the final year of the course, are continuing their involvement with their placement firms and are set to return as full-time members of staff after graduation.

Pay
The placement is normally a paid period of employment. The rate is influenced by factors such as the worth of the work undertaken and location. It is rightly left with the employer to set the going rate for the placement. The rate varies but, as a guide, is between £11000 to £14000 outside London and £15000 to £20000 in London for the 48 weeks.

Type of work
The structure of the placement depends on what work the employer requires. The work must be related to your course of study and every role has to be checked by the University. Many of our employers are former students from Staffordshire University who have been on a placement themselves so they are well aware of how you feel. It can be scary to think that a company wants you to work for them before you have graduated, but all the companies that come to Staffordshire University want a Staffs student and many come back to us year-after-year because of the quality of our students.

research and commercial success

Research and Enterprise are at the heart of the Faculty, with activity in the three areas of Computing, Engineering and Technology. Major drivers for specific areas of research include: the Research Councils, DTI Foresight Programme, Industry, European initiatives and the Regional Development Agency. We focus on research activities which underpin developments in our academic provision and also provide a service for the future development of regional, national and international industries.

Research in the Faculty is organised in terms of research groups and centres which are managed by the Informatics and Technology Research Institute (ITRI). Research activity is supported by a dedicated team of MPhil and PhD students.

Our links with commercial and public-sector organisations are critical to the continuing success of the Faculty in maintaining its touchstone of ‘practical scholarship’. These links provide opportunities for organisations to learn from the Faculty and for the staff and the students within the Faculty to learn from other organisations, as well as providing a valuable source for the large number of student placements each year.
Self-employment
You may be a budding entrepreneur with the idea that you want to run your own business. The University has a scheme that can help you to do just that as your placement. You will be set up in equipped offices on a Technology Park next to the University. You will receive a small bursary to help you with the rent and you will attend courses that will help you to make your business a success.

Supervision
You will be allocated an academic tutor to supervise you during your placement year. Your supervising tutor will visit you in the workplace normally twice a year and will be the first port of call for any queries or issues that may arise whilst you are on placement. Your placement company will also arrange for you to have an industrial supervisor who will normally be a direct supervisor, senior co-worker or line manager and who will guide and support you at work.

Track History
The Placement Scheme in the Faculty of Computing, Engineering and Technology at Staffordshire University has a long and established tradition and, therefore, enjoys strong links with a large number of companies. Placements have been successfully completed in recent years with prominent firms such as: JCB, IBM, Accenture, Kraft, Britvic, McDonald’s, Ordnance Survey, British Oceanographic Data Centre, BASF, AstraZeneca, Logica, BBC, Virgin Radio, Office of the Deputy Prime Minister, GlaxoSmithKline and GM Europe Vauxhall.

Staffordshire University students have been placed with a large number of schools and colleges, Local Authorities and hospitals for a range of wide and varied placements. We have successful overseas placements with many large organisations including Hewlett Packard, EuroCopter, Integral, Deutsche Post (owns DHL), CERN and Co-Create.

For any further information please contact the placements unit:

e: placements@staffs.ac.uk
t: 01785 353460 Stafford or Stoke: 01782 294162
f: 01785 353450
We offer a unique range of postgraduate study opportunities for graduates of our computing degrees. Our Computing MSc courses are designed to broaden your understanding and knowledge of an area of computing and enhance your ability to apply it within industry or commerce. In addition to enabling you to gain an in-depth knowledge of state-of-the-art technologies, it also develops your competence and ability to apply them, particularly through the inclusion of an optional period in industry as part of your course. The applied flavour reflects our touchstone of practical scholarship and it addresses the significant market demand for post-graduates with information technology skills appropriate for business and industry in the 21st Century.

MSc Computer Science
This is by far the most flexible MSc programme, with only one core module in research methods and your Masters thesis prescribed. The remaining seven modules are chosen from the extensive portfolio of postgraduate computing modules.

MSc Mobile Computer Systems
Compulsory modules in Networks, Mobile Communications and Mobile Applications, as well as core research methods and your Masters thesis, gives this award a clear focus on one of the growth areas of computing.

MSc Forensic Computing
This award covers many computing and crime-related areas, you will study 3 main subjects: Forensic Science, Computing and Mathematics – all of which are required to create an expert within the field.

MSc Network Computing
This award provides flexibility in curriculum to cater for those students wishing to enhance their undergraduate networking skills and build on these to higher levels of CISCO certified curriculum, as well as for existing computing professionals wishing to update their networking skills.

MSc Computer Games Software
Focusing on specific areas within computer games, this award offers students the opportunity to study subjects including: Game Artificial Intelligence, Image Processing, Real Time Rendering and Animation and Computer Graphics, leading to a Game Development Project.

MSc Multimedia
This award provides specialist study of multimedia and related systems. By studying the award, you will be given the opportunity to build on your undergraduate knowledge, learning further leading-edge technologies used within the context of industry/commerce and developing research perspectives relevant to multimedia.

Masters by Research in Computing Science
The normal route for research within the Faculty, after a first degree in computing, is the Master of Computing Science by Research, in one of the specialist areas listed. The programme of study is agreed between you and your supervisor, in accordance with your background and research interest.

PhD
The Faculty offers students the chance to continue studying after Masters degree to Doctorate level.

MSc Web Development
This course focuses on commercial web-based issues such as method and practical implementation aspects for those already holding a computing undergraduate degree. The award covers topics such as: web standards, multimedia research, mobile web and multimedia, programming for web applications, enterprise database systems, research methods and the opportunity to select module options. At the end of the course, students will be able to implement substantive web-based applications.

MSc Web Multimedia
This is an award that will enable students to follow a postgraduate qualification that focuses specifically on applications that use web multimedia. Students will develop in areas such as emerging web media standards and technologies. Apart from having a deeply rooted focus on industry perspectives, students will also develop strong research perspectives relevant to issues and areas of web multimedia. By following the degree at the end they should find that they are highly employable as there is an increasing need for graduates with web multimedia design and implementation skills and knowledge. The award covers topics such as: web multimedia, multimedia research, mobile web and multimedia, enterprise database systems, research methods and the opportunity to select module choices from a list of available options.

Computing Services and Information Systems Management
This award involves the study of theories and practices related to the social and technological phenomena, which determine the development, use and effects of information systems in organisations and society. it includes Information Systems (IS), IS strategy, IS management, and IS development.

MSc in Knowledge Management and Innovation
KM is a newly emerging, interdisciplinary business model dealing with all aspects of knowledge within the context of the firm, including knowledge creation, codification, sharing, and how these activities promote learning and innovation. In practice, KM encompasses both technological tools and organizational routines in overlapping parts.

MSc Computer Networks and Security
This award provides specialist study of computer networks and computer security. These two areas are strongly related, given the ubiquity of networks and the vulnerability to attack of networks and of systems connected to them. Although, computer network security is covered in the course, the award is a hybrid of computer network study and computer security with the intention to equip you with advanced skills in both areas. The networking topics utilise Cisco networking equipment and support material provided by Cisco Systems Inc.
Multimedia and Web
We have two dedicated labs of PCs, each with two hard disks for media editing purposes. These machines have the latest Adobe Software, Master Collection, which contains Flash, Dreamweaver, Photoshop, After Effects, Premiere and many other Adobe products. These machines also have Flash Media Server, Flex Builder, Helix Streaming Server, 3D Studio Max. For ASP.NET development, these machines have Visual Studio and SQL server installed. As well as these machines, we have a web server for PHP and MySQL for the students.

We have dedicated hardware available to students, including high specification camcorders and cameras.

We also have access to the labs used for film and music technology which includes a full set of professional hardware and software for video and music production.

Games Programming, Games Design and Virtual Reality Resources
Over 120 workstations are available with software for the design and development of computer games and virtual reality. These include Playstation 2 development kits, Xbox 360 consoles, Windows and Unix / Linux-based workstations and Wii, a HCI suite with consoles and PCs, as well as all the software you’ll need to complete your course.

Rare Ltd. Motion Capture Studio has eight tripods, eight Vicon cameras, two motion capture suits, Bodybuilder, Vicon editing software and all the manuals. Plus we offer new and state-of-the-art head-mounted displays; Playstation development kits; Force feedback joysticks, steering wheels, pressure pads (dance mats) plus data gloves; generic data capture cards that are flexible for attachment to many devices; motion capture units; digitisers and stereo projector screens.

MSDN Academic Alliance Software Centre
Software
All of the latest versions of software licensed under the MSDNAA Programme are available for current students and Faculty staff at http://msdn60.e-academy.com/elms/Storefront/Home.aspx?campus=msdnaa_mnh8500. The free software available - all the Microsoft Development software, including Visual Studio, Vista and SQL Server.
what you need...

When considering you for a place on a course, we don’t just look at your qualifications. We look for...

- Motivation
- Commitment
- Willingness to learn

**Entry requirements**

Undergraduate courses: as a general guide 240 UCAS Points or similar qualification, such as BTEC or International Baccalaureate.

Postgraduate courses: please submit a completed on-line postgraduate application form. We will also require two references, a copy of your current curriculum vitae (C.V.) and evidence of existing educational qualifications.

**We value your work and life experience...**

Rest assured, we won’t ignore your life experiences. You may be able to use these to gain credit towards your course. We take into account Accreditation of Prior Experiential Learning (APEL). You can use previous study or work, community or volunteer experience as credit to enable you to achieve qualifications in a shorter time.

By converting informal learning into certificated learning, APEL provides cost-effective routes to qualifications. It has potential significance for people who, through life and work experience, have gained knowledge, skills and analytical abilities that are comparable to those with a higher education award. Please discuss this opportunity with your Award Leader.

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**Undergraduate and Postgraduate Enquiries**

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