STAFFORDSHIRE UNIVERSITY

accelerate your career

Courses in automotive engineering and motorsport technology

CREATE THE **DIFFERENCE**

"Some university students sit in classrooms all day just learning motorsport theory – and maybe go out to the odd event. That's not the case at Staffordshire, we're actually living the dream!"

Amy Evanson
Foundation Degree in Motorsport

put your automotive career in pole position with Staffordshire University

Across the world, the UK is known as a leader in motorsport. Across the UK, Staffordshire University is renowned as a place to study automotive engineering and motorsport technology.

As Britain continues to show the way in Research and Development and the introduction of new materials and technologies, Staffordshire University continually delivers graduates with the technical and engineering skills to succeed in what has to be one of the world's most competitive, commercial environments.

With courses developed in conjunction with the motorsport and automotive industries, we provide a wide range of awards purpose-designed to secure your place in this vibrant sector.

Benefiting from the latest technology and a hands-on approach, you will gain a detailed understanding of your chosen field along with the qualifications necessary for future success.

With student-prepared, repaired and supported Formula Renault and Formula Ford racecars, excellent industry links, plus enviable placement opportunities, you can take it as read that we'll make sure you are highly employable.

our awards

Foundation degrees
- Foundation Degree in Motorsport Technology
- Foundation Degree in Kit Car Technology

Bachelor courses
- BSc(Hons) Automotive Technology
- BSc(Hons) Motorsport Technology
- BEng(Hons)/MEng Automotive Engineering
- BEng(Hons)/MEng Automotive Electronics

Postgraduate studies
- PgC/PgD/MSc Automotive Engineering/ Autosport Engineering

a pedigree of passion, excellence and expertise

"We are getting thrown in at the deep end. We are in the real world. And this is where it counts."

Matt Fithon, placement year student with James Watt Automotive

Staffordshire University's Faculty of Computing, Engineering and Technology has a reputation for creating graduates with the necessary skills to succeed as high level technicians and engineers in motorsport and the automotive sector.

Automotive engineering, in particular, is going through a period of rapid change, with advancing technology and today's drive for more economical and environmentally-friendly engines impacting considerably on vehicle design.

With over 40 years at the very heart of the engineering sector, strong industry partnerships and enviable relationships with leading race teams, we offer a range of automotive and motorsport courses at all levels.

Our programme for 2009 includes foundation degrees in a variety of disciplines as well as bachelor and masters degree awards that can be studied either full-time or part-time.

All courses have been developed in conjunction with the motorsport and automotive industries and are designed to ensure you hit the ground running in your chosen career. They are led by friendly, enthusiastic teaching staff who eat, breathe and sleep their chosen subjects.

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

- a thorough understanding of the sector
- a greater knowledge of the area you wish to work in
- the skills to become a specialist in automotive engineering, electronics, or motorsport technology

key partnerships with major players

James Watt Automotive

One of the hardest working teams in the Le Mans Series, James Watt has recently welcomed a group of Staffordshire University students for the placement portion of their Foundation Degree in motorsport technology. The cream of these students will assist in supporting the James Watt Automotive Aston Martin Vantage GT2 and Porsche 997 GT3 RSR in the 2008 Le Mans Series.

SlideSports

Another valuable provider of work experience for Staffordshire University Foundation Degree students, SlideSports Race Engineering are the complete and professional racecar preparation specialists. They have over 20 years' experience of competing and winning at National, European and World level. Their activities include: the Volkswagen Cup, Formula Ford Truck Racing and Speedway.

Fuchs

A subsidiary of Fuchs Petrolubag, one of the world's largest manufacturers of lubricants, Fuchs Lubricants UK PLC supplies oil and technical resources for the University's racecars and supports our efforts in automotive and motorsport applications.

Klarius

Klarius manufactures exhaust systems, catalytic converters and filtration systems for all types of vehicles. They regularly have Staffordshire University students on placement, support our work with valuable technical input, provide necessary components and factory tours.

a winning formula

There are some very distinctive features in the way we deliver our automotive courses that have been designed to enhance and enrich the student experience. They include:

- Real life experience
- Practical and theoretical sessions
- Curriculum design supported by Industry
- Commercial race team experience
- Work placement opportunities of the highest calibre

"As soon as I found out about this university, I knew it would be the one that I would join. Everything about it seemed to be better than others, available equipment and resources, quality of teaching and the courses themselves. After being here for a year now, I feel I have learnt a lot and very much look forward to my next year's modules."

high quality teaching and course delivery

Our automotive engineering and motorsport technology courses are run from our Beaconside campus in Stafford. Here, you will find our brand new Automotive and Motorsport preparation and build facilities, along with the latest design and analysis software.

equipped for your success

We offer...

- Brand new purpose-equipped motorsport and automotive facility
- Friendly, highly enthusiastic and experienced teaching staff who will take a positive and supportive approach to your learning
- Fully equipped labs with Alias Auto Studio, Pro Engineer Wildfire, Cambridge Engineering Selector, ANSYS FEA, CHAM Phoenix CFD, Boothroyd Dewhurst DFMA software and Ricardo Wave engine design software
- A design realisation centre and accompanying studio containing cutting-edge hardware, including: Minolta Vi910 laser scanner, TESA co-ordinate measuring machine, ZCorporation and Startasys rapid prototyping, KRYLE 3-Axis Machining Centre and Beaver Turning Centre
- Class-leading electronics facilities enabling the use of both traditional electronic system design tools and modern computer-based technologies
- Outstanding industry partnerships, allowing you access to both historic and modern racecars for telemetry and set-up.

placements and employment

Staffordshire University students typically secure placements and employment with leading names right across the automotive sector.

The organisations our students have found success with include:

- **Toyota**
- **Honda**
- **Klarius**
- **Bowler**
- **Bentley**
- **Ford**
- **JCB**
- **Jaguar**
- **Aston Martin**

Pictured above:
Bowler Nemesis

Right and far right:
Keith Hill and Chris Hunt

Keith Hill recently spent a placement year with rally specialists, Bowler Offroad, who produce vehicles, primarily based on Land Rovers, to compete in endurance rallies such as the Paris-Dakar.

During his time at Bowler, Keith worked on the suspension and jacking equipment of a new vehicle called 'Nemesis'. This vehicle was featured on BBC's Top Gear and is now in production and competing at a number of different events.

Chris Hunt's placement year was split into two halves. The first half was spent as a support engineer on the Paris-Dakar Rally, supporting a Bowler Wildcat during the rally and trying to keep up with the vehicle in his support truck. Chris was the youngest ever British competitor in the event to finish and get a medal.

Chris then went on to work for Honda UK, supporting the Animal Honda team during their British Superbikes racing season. Chris was involved in all aspects of the redesign, upkeep and maintenance of the bike.

"In 2007, no less than 91% of Staffordshire University graduates had gone on to employment or further study just six months after graduating, with the remainder choosing to pursue other activities."

Source: Higher Education Funding Council for England (HEFCE)

our driving force:
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 automotive or motorsport, 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 motorsport.

And 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.

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.

starting your own business

Through SPEED (Student Placements for Entrepreneurs in Education), we can even 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

which course for you?

Use our simple guide to help decide **which course is right for you**

Foundation Degree in Motorsport Technology
Choose this course if you wish to gain the technical and engineering skills required by a professional motorsport team. On completion of the course you may choose to study for a further year to achieve a BSc(Hons) in Motorsport Technology.

Foundation Degree in Kit Car Technology
The growing kit car industry is peculiar to the United Kingdom. This course will provide you with the knowledge to stay at the forefront of the industry as a technician or engineer.

BSc(Hons) Automotive Technology
This dynamic course combines the latest technology with a hands-on approach. By gaining a detailed understanding of automotive principles and even building your own machines, you will achieve the skills to apply your knowledge in an industrial context.

BSc(Hons) Motorsport Technology
Building on the strengths of the University's impressive engineering and computing pedigree, this course is for students who wish to pursue a career in motorsport electronics, data and control systems and technologies.

BEng(Hons)/MEng Automotive Engineering
This course will prepare you for the rapid growth in vehicle technology and provide you with a solid grounding in automotive engineering as well as engine design, aerodynamics and vehicle dynamics.

BEng(Hons)/MEng Automotive Electronics
Choose this course if you are particularly interested in vehicle electronic control systems and related technologies. You will investigate vehicle systems design and analyse automotive systems through study and practice

PgC/PgD/MSc Automotive Engineering/Autosport Engineering
This in-depth course has been designed to provide graduates with an insight into the technologies that are driving the automotive industry, via state-of-the-art computer-based analysis techniques and experimental analysis on real vehicles. For an award at MSc, a major individual project of interest must be completed.

undergraduate and postgraduate courses

Foundation Degree in Motorsport Technology

What it's about

The motorsport industry requires high level technicians and engineers to be at the forefront of competitive racing. This course, developed in conjunction with major players, offers a good grounding and introduction to motorsport.

What you do

You spend the first half of the year at university learning basic skills to allow you to enter a race team. In the second half of the year you are a major part of a motorsport operation working at one of our partner companies. You will be involved in preparing and supporting cars which could potentially race all over the world. In the later part of the second year you return to University to look at subjects such as Aerodynamics and Engine Design.

Levels 1 and 2 of the award provide a solid foundation of technical knowledge and skills in motorsport and racing technology.

Areas covered are Mechanics, Logistics, Race Preparation and Management. After this point you can leave with a Foundation Degree in Motorsport Technology, subject to successful course completion.

Should you choose to continue your studies to honours degree level you will study a choice of Advanced Vehicle Dynamics, Aerodynamics or Engine Design in the top-up year.

In your work experience part of the course, you will undertake a work-based project, which will allow you to demonstrate the skills you have developed over your course.

Where next

The award opens up opportunities within all sectors of motorsport.

Progression onto the top honours degree is also an option, by studying an extra year at University you could achieve a BSc(Hons) in Motorsport Technology.

Foundation Degree in Kit Car Technology

What it's about

The British kit car industry is peculiar to the UK, with a growing market share for these cars. To stay at the forefront of this industry, Technicians and Engineers are required. This course designed with kit car manufacturers, is specifically aimed at people in or wanting to enter this industry as a career. On completion of this course you may wish to top-up to a BSc(Hons) Kit Car Technology.

What you do

The first half of the first year at university is spent learning basic skills, to allow you to enter a placement period. For half of the course, you will be taking part in a kit car build. You will also be undertaking modules, which will allow you to gain an understanding of business structure and entrepreneurship.

Levels 1 and 2 of the award provide a solid foundation of technical knowledge and skills in automotive technology.

Areas covered are Mechanics, Logistics, Vehicle Preparation and Management. After this point you can leave with a Foundation Degree in Kit Car Technology, subject to successful course completion.

Level 3 (top-up year)

In this year, you will study a choice of Advanced Vehicle Dynamics, Aerodynamics or Engine Design.

In your work experience part of the course, you will undertake a work-based project, which will allow you to demonstrate the skills you have developed over your course.

Where next

The award opens up opportunities within all sectors of the automotive indudtry. Progression onto the top honours degree is also an option, by studying further at university, you could achieve a BSc(Hons) in Automotive Technology.

BSc(Hons) Automotive Technology

What it's about

This course is designed to produce graduates who have a detailed understanding of automotive technology and the skills to apply this knowledge in an industrial context. As well as an exciting range of hands-on and build activities you will be introduced to the new toolbox of the Automotive Technologist – the computer. Using a computer you can model, experiment and simulate, design and test before committing resources on the real thing.

What you do

During the first year you will study subjects that allow you to create, manipulate and analyse 3D objects in motion, under load and in hostile environments. During the second year you will further develop these skills to make virtual environments within which your design and simulations can run.

In the first two years you will be introduced to practical projects based around a build project such as a kit car.

In the third year, a major individual project within the automotive field will be undertaken along side a race car build project carried out within a group. This car will then be driven by a professional driver in a race meeting at the end of the project.

Where next

The course has been developed with assistance from automotive suppliers, Motorsport Engineers and manufacturers. Our graduates work within these fields.

Graduates from this award will have a range of skills that place them at the forefront of the design function in the automotive sector. Destinations will include the mainstream car design industry, motor sport, second and third tier suppliers. The ability to apply the right technology makes our graduates highly employable and an asset to any company. Some of our graduates have gone on to work for companies such as Bentley, Ford, Jaguar and JCB. Graduates with exceptional abilities may continue their studies for a taught postgraduate MSc degree or onto postgraduate research for an MPhil or PhD degree.

BSc(Hons) Motorsport Technology

What it's about

This course is designed to produce graduates who have a detailed understanding of the Motorsport industry and the technologies employed within it. With elements of practical experience and theoretical study, you will gain an understanding of subjects within the Motorsport industry.

What you do

During the first year you will study subjects that allow you to understand the complex world of Motorsport Technology, with hands on experience of real race cars, along with computer simulations.

During the second year you will further develop these skills to make virtual environments within which your design and simulations can run. In the third year, a major individual project within the motorsport field will be undertaken alongside a race car build project carried out within a group.

Where next

The course has been developed with assistance from the motorsport industry. Our graduates work within these industries and are core in our delivery mechanisms. Graduates from this award will have a range of skills that place them at the forefront of the design function in the motorsport sector. Destinations will include the motor sport, second and third tier suppliers, the automotive industry and beyond. The ability to apply the right technology makes our graduates highly employable and an asset to any company. Some of our graduates have gone on to work for companies such as UltimaF3, Bowler and Renault World Series. Graduates with exceptional abilities may continue their studies for a taught postgraduate MSc degree or onto postgraduate research for an MPhil or PhD degree.

BEng(Hons)/MEng Automotive Engineering

What it's about
Automotive engineering is going through changes; rapid growth in technology and the threat of climate change has focused attention on many aspects of vehicle design. This course focuses on the mechanical engineering aspects in the automotive field. Students study subjects such as Vehicle Dynamics, Aerodynamics and Engine Design as well as gaining a solid underpinning in mechanical engineering principles.

What you do
During the first year students apply mechanical engineering principles to automotive applications, allowing the development of skills that will enable you to analyse complex automotive systems in the second year. At Level 3 following a possible sandwich year, you will complete a major project along with specialist modules dealing with engine design, Computational Fluid Dynamics (CFD) and Finite Element Analysis (FEA).

Where next
Engineering is an excellent first degree with good job opportunities following completion. Opportunities exist for our graduates to work with suppliers, manufacturers and specialist enterprises in the automotive and motorsport sectors. Graduates from Staffordshire have gone on to work for companies such as Bentley, Ford, Jaguar and JCB.

BEng(Hons)/MEng Automotive Electronics

What it's about
The course has been developed with assistance from first tier suppliers, motorsport engineers and manufacturers. The growth of electronic systems has major implications for vehicle engineering. For example, today's high-end vehicles may have more than four kilometers of wiring. In July 1969, Apollo 11 employed a little more than 150 kbytes of onboard memory to go to the Moon and back. Just 30 years later, a family car might use 500 kbytes just to keep the CD player from skipping! The need for communication, monitoring and control continue to grow, ensuring an increasingly important role for the automotive industry.

What you do
This course allows you to pursue your interest in vehicle electronics, data and control systems and technologies. The analysis of these systems will enhance your understanding and therefore your employability when you graduate.

The course builds on our highly successful engineering and computing programmes and uses some of the modules that are taught within these disciplines. In addition to these subjects the course contains specific modules which investigate vehicle and vehicle systems design and analysis. Practical modules throughout the course enhance the student experience of automotive systems analysis, with sessions in laboratory, workshop and the workplace to complement the lecture and tutorial content of this exciting new course. MEng students can select options from our MSc programme.

Where next
Studying this course will allow graduates a wide choice of future careers in the automotive industry.

Graduates from Staffordshire University have gone on to work for companies such as Bentley, Ford, Jaguar and JCB.

PgC/PgD/MSc Automotive Engineering/Autosport Engineering

What it's about

The MSc course in Automotive Engineering covers the latest state of-the-art computer based analysis and design techniques used in the automotive industry. The course has been developed in conjunction with the Automotive Industry and will provide the graduate with an in-depth insight into the key technological areas that are driving automotive engineering design.

What you do

The course consists of 8 taught modules plus a major personal project leading to a written thesis. The taught modules cover the broad range of activities involved in vehicle design. You will study topics such as solid and surface modelling, rapid prototyping, Finite Element Analysis, advanced engine design and aerodynamics.

The subject area of your final thesis can be selected to suit your own aspirations and interests. You will be assigned a supervisor with whom you will work closely to develop an academically challenging portfolio of work. The focus of this project will determine whether you will opt for the title of MSc Automotive or MSc Autosport.

Where next

Upon graduation you will be ideally placed to work in an automotive engineering company at a senior level working towards Chartered (CEng) status. If you prefer the course also gives a good grounding in research techniques which could allow you to continue your personal research interests to PhD level.

everything we do is for you

Choosing a university is one of the most important decisions you'll make.

That's why everything in our course guide has been designed to help make finding and picking the course that's right for you as easy as possible.

In fact, from the way our courses are described, to the opinions of real students, we've done everything possible to help you make the right choice.

At Staffordshire University, we're proud of what we do and we're especially proud of our students.

We've ploughed millions into facilities. We run over 800 highly respected courses.

And you can take it as read that as well as helping you achieve a superb qualification, we want you to thoroughly enjoy the experience of studying with us.

To find out more about us, and our facilities,
visit www.staffs.ac.uk

The Students' Union provides a variety of services – from free and independent welfare, educational and financial advice to commercial services such as venues and shops. All of these services are available to you as a student.

The Union has a democratic structure that allows any student to become involved in its running. Every year, there are elections and referenda allowing you to run for office or choose student members to run your Union and decide which policies to adopt to take your Union forward. **www.staffsunion.com**

Cont@cts

Catering Services
t: 01782 294450
e: a.presti@staffs.ac.uk
e: a.j.shaw@staffs.ac.uk
www.staffs.ac.uk/facilities_management/catering_services/index.php

Sir Stanley Matthews Sports Centre
t: 01782 294124
e: ssmsc@staffs.ac.uk
www.staffs.ac.uk/commercial/other_services/stoke_sports_centre/

Beaconside Sports Centre
t: 01785 353286
e: bsc@staffs.ac.uk
www.staffs.ac.uk/commercial/other_services/stafford_sports_centre/index.jsp

Student Advice Centre
t: 01782 294629 (Stoke)
t: 01785 353311 (Stafford)

Student Advice Centre

The Students' Union Student Advice Centre provides up-to-date information on a wide range of subjects including grants, loans, benefits, housing, course regulations and any legal matters. There are trained advisers to deal with your needs and they will always point you in the right direction to ensure your individual case is dealt with appropriately. Advice is given free of charge and is completely confidential.

There are centres on both the Stoke and Stafford campuses, which are open weekdays.

Quality catering

Through restaurants and fast food bars, our catering services aim to offer all students an enjoyable and value for money eating experience, where they can socialise, meet and make new friends.

A warm welcome awaits at the Terrace Café, situated in the Beacon building, as well as 'Food for Thought' on Blackheath Lane.

Making fitness for fun...

Life shouldn't be all work and no play! That's why we have first class leisure facilities for our students. We have the Beaconside Sports Centre at Stafford.

This has fully equipped Health Connections fitness suites, a multi-function sports hall and an activities room. In addition, it has an all-weather pitch and playing field suitable for multi sports. The sports centre also offers a wide range of fitness and relaxation classes and fitness programmes to suit all abilities.

"I had a great time at Staffordshire University and enjoyed the social life as well as the educational side. I can definitely recommend staying in the halls of residence."

Paul Sharman

exceeding your expectations

At Staffordshire University, we make sure the learning environment and facilities don't simply match your expectations, but exceed them.

In fact, we have recently invested over £5 million in new buildings and facilities to help make sure the opportunities we provide remain first class.

Our Libraries and IT Centres are located at Stoke, Stafford, Lichfield and Shrewsbury campuses, where you can use computers, take out and reserve books, plug in your laptop, access special collections and short loan items, use printing and photocopying facilities and visit Help Desks.

You can also go on our training courses and borrow professional presentation and audio-visual equipment.

online information

As well as iPac (the library catalogue, where you can search books, journals, videos and CDs, DVDs and access your library account), we provide access to many databases, e-journals and texts and a vast range of other research and learning material available only to HE users.

As a student, you'll also enjoy free Internet access, free University email and access to our Information Services web pages. Access to some network services and your University email is available on any PC anywhere with access to the Internet.

For more information, please visit:

www.staffs.ac.uk/infozone or
www.staffs.ac.uk/uniservices/infoservices/library/offcampus

You can also contact us by phone and email and use our web pages for information, advice and support.

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**
- **Drive.**

Entry requirements

All applicants are individually assessed on their qualifications, skills and experience. However, typical offers are as follows:

- **Foundation Degrees: 100 UCAS tariff points from a minimum of 1 A level or a BTEC National Award, or a level 3 automotive or motorsport vocational qualification or equivalent**
- **Bachelor Degree: 280 UCAS tariff points from a minimum of 2x A levels, BTEC National Certificate or equivalent**
- **Masters Degrees: Undergraduate Degree at 2:ii or above in an Engineering or related discipline**

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.

what you need to know...

Contact us:

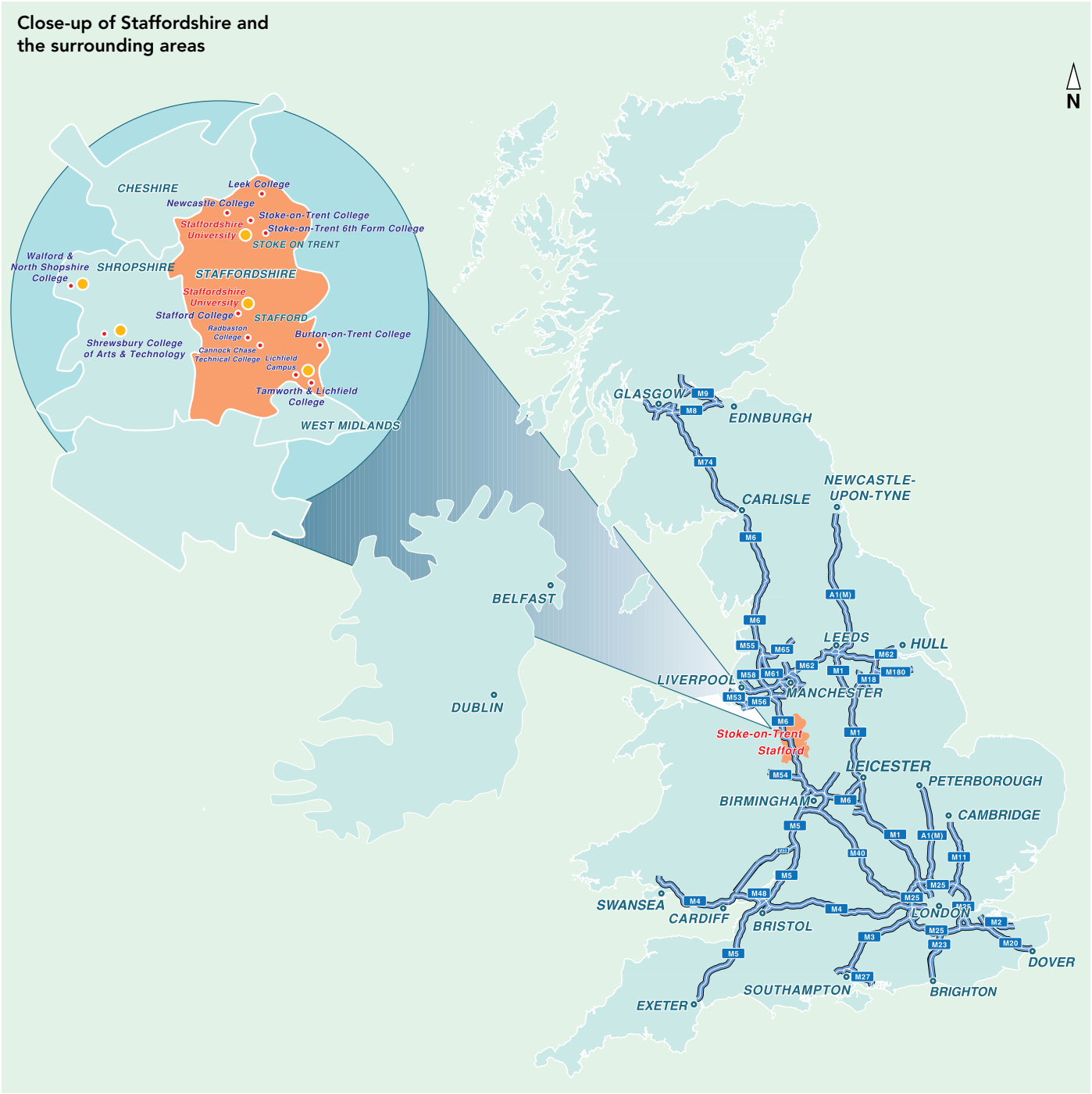
Undergraduate and Postgraduate Enquiries

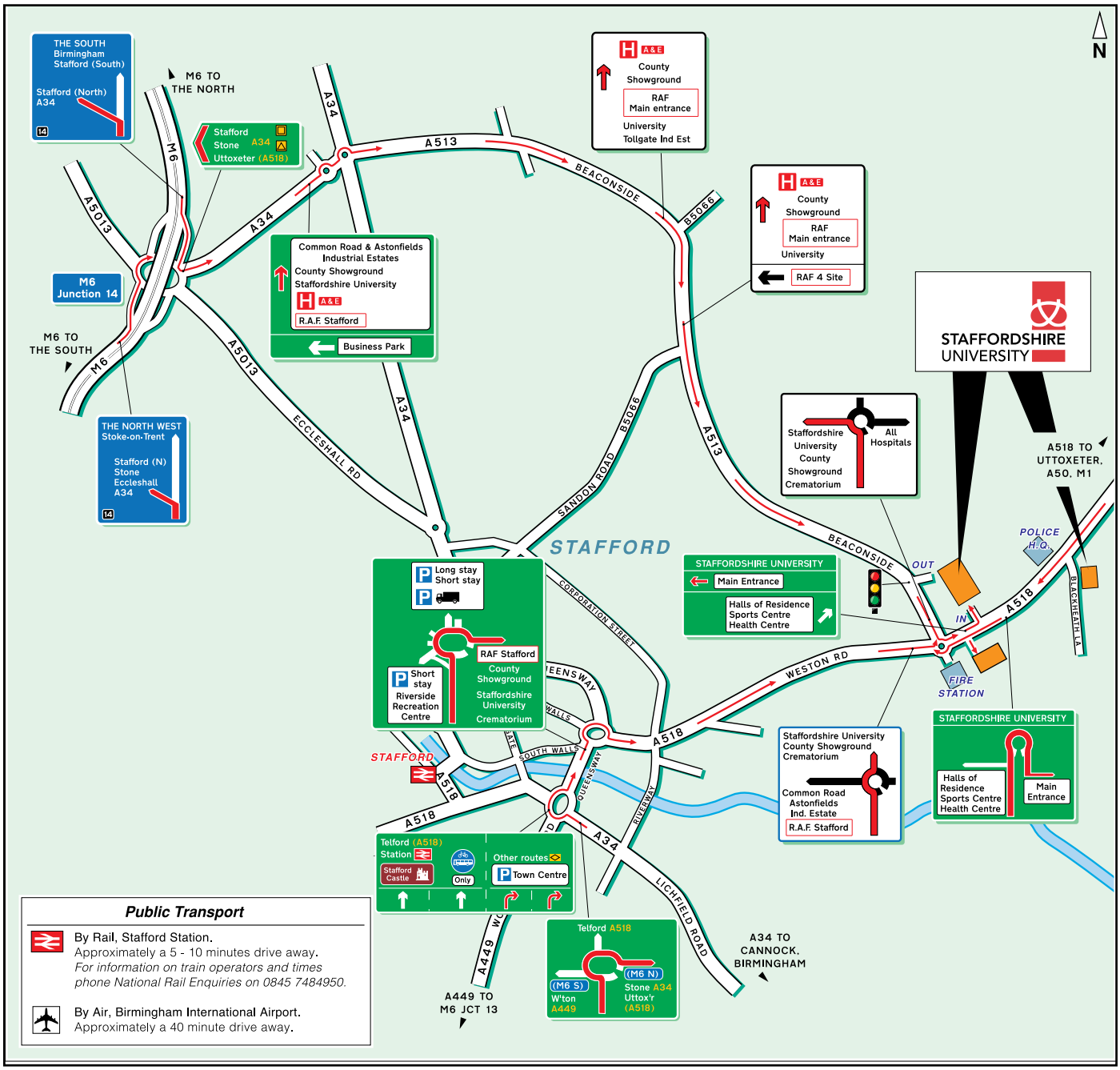
e: fcet@staffs.ac.uk
t: (+44) 01785 353461/3370
f: (+44) 01785 353552

The Recruitment Centre
Faculty of Computing Engineering and Technology
Beaconside
Stafford
Staffordshire. UK
ST18 0AD

Further Information on all our courses is available online **www.staffs.ac.uk**

where to find us





Approach route to the Stafford campus


MCP
TOOLING TECHNOLOGIES LIMITED
HUKTRA
MILL LANE
M
GROUP
STAFFORDSHIRE
UNIVERSITY
METAMARK
myworkwear.co.uk
MOLDEX
jwa

STAFFORDSHIRE UNIVERSITY

Contact Details
The Recruitment Centre
Faculty of Computing Engineering and Technology
Beaconside
Stafford
Staffordshire. UK
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e: fcet@staffs.ac.uk
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www.staffs.ac.uk

CREATE THE **DIFFERENCE**

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