Why study Engineering and Motor Vehicle?

The Engineering and Motor Vehicle industries stretch across many different career paths, and can give you the opportunity to step into many different jobs throughout the world of motor vehicle, electronic and engineering trades.

The courses we offer make it easy for you to quickly progress into Higher Education or even straight into employment because they help you to develop the necessary skills needed within your chosen career path.

The outstanding facilities contained within our campus are fully equipped for all areas of the engineering, manufacturing and technology industries including engineering workshops, specially fitted classrooms and a motor vehicle workshop that has been built to the high standards of a modern car dealer’s workshop.

Go Higher

From the BTEC Level 3 Extended Diploma in Engineering, you can progress onto a two year Foundation Degree in Engineering at the College. Successful completion of the Foundation Degree will allow you to complete the final year of an Honours Degree at a local university in electrical/electronic or mechanical engineering.

Some Career Options
- Avionics Instrument Calibration Technician
- Body Repair Technician
- CAD Operator or Cutter
- Engineering Fitter
- Heavy Vehicle Engineer
- Jig Welder
- Light Vehicle Technician
- Manufacturing Operator
- Maintenance Welder (semi skilled)
- Manufacturing Calibration Control Technician
- Mechanical Engineer
- MOT Inspector
- Production CAD Programmer
- Production Control Operator or Planner
- Production Fabricator
- Quality Control Operator
- Refinishing (Paint) Technician
- Test Engineer
- Welder/Fabricator

Case Study

Mark Tasker
Queen’s Park High School, Chester
Motor Vehicle Maintenance and Repair Level 1

“This course was recommended to me by a friend and it has been really good so far. I want to become a mechanic in the future so it has been ideal for me. I’ve learnt lots of new skills, from vehicle electrics to brake systems and wheel alignments, so it covers all aspects of car repair. The course is also very hands-on and gives you the chance to do lots of practical work in the motor vehicle workshop. I was a bit nervous when I first came here but now I can honestly say that everyone in the group is my friend.”
## Engineering and Motor Vehicle – Vocational Courses

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<tr>
<td><strong>Foundation</strong></td>
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<tr>
<td>EN4206A One year</td>
<td>Practical Skills Entry Level 3/ Level 1 – Edexcel</td>
<td>No formal entry qualifications are required.</td>
<td>This course is a practical introduction to a number of different trades which you might be thinking about following as a career. In addition to gaining qualifications in the functional skills of Maths, English and ICT, you will also gain useful skills in electrical engineering, practical mechanical engineering, motor vehicle maintenance, construction (woodwork and household repairs) and health and safety.</td>
<td>Students who successfully complete this course will be able to move onto Level 1 programmes in Construction, Engineering or Motor Vehicle.</td>
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<tr>
<td>EN4158A One year</td>
<td>Engineering BTEC Level 1 Diploma – Edexcel</td>
<td>Four GCSE grades E to G, including English Language grade E, or an equivalent qualification.</td>
<td>This course will give you an introduction to a range of engineering topics and will help you to progress onto a BTEC Level 2 Diploma. It includes core units on working in engineering and being responsible at work. Optional units include making a machined product and assembling mechanical or electrical components. You learn and use a variety of skills throughout the course, which are in demand and are recognised and valued by employers and colleges.</td>
<td>Because Level 1 Diploma Engineering students develop the skills and the key skills that employers are looking for, you can consider a wide range of employment opportunities in the engineering and manufacturing sectors. Other students like to progress onto the Level 2 Diploma in Engineering.</td>
</tr>
<tr>
<td>EN4186A One year</td>
<td>Motor Vehicle Maintenance Introductory Diploma – IMI</td>
<td>Four GCSEs at grades C to E including English grade E. Alternatively a Level 2 Diploma in Motor Vehicle Engineering or City and Guilds 383, 398 or 381 part one. In addition, all prospective students must have successfully complete an aptitude test and workshop introduction session.</td>
<td>This course is designed to give you introductory skills in vehicle maintenance and repair. Areas that are covered by underpinning knowledge and workshop based learning include working safely and effectively, foundation skills, vehicle construction and routine maintenance, operating principles of tyres, brakes, steering, suspension systems, engines, transmission systems, electrical and electronic systems.</td>
<td>Following completion of the first year students have the option to: 1) Progress to a Level 2 course or enter the world of work 2) A Level 2 qualification is generally considered to be the minimum level acceptable to the motor vehicle trade.</td>
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<tr>
<td><strong>Level 2</strong></td>
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<tr>
<td>EN4144A One year</td>
<td>Engineering BTEC Level 2 Diploma – Edexcel</td>
<td>A minimum of four GCSEs at grade D, including grade D in Maths and DD in Core and Additional Science.</td>
<td>The BTEC Level 2 Diploma is designed to prepare you for work within the engineering industries or to progress to the Level 3 course. It’s a practical, work-related course with projects and assignments based on realistic workplace situations, activities and demands. It covers the basic knowledge and technical practical skills, providing a good foundation for future career or qualification opportunities.</td>
<td>On successful completion of this course, a student can progress to the BTEC Level 3 Extended Diploma in Engineering, or into employment in the sector.</td>
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<tr>
<td>EN4205A One year</td>
<td>Motor Vehicle - Light Vehicle Maintenance and Repair Intermediate Diploma – IMI</td>
<td>IMI Level 1 Diploma or a BTEC Level 1 in Motor Vehicle Engineering. All new students must have a formal interview.</td>
<td>This motor vehicle programme builds on the Level 1 Diploma with new underpinning knowledge and workshop-based skills. Areas that are covered at this level include chassis technology, engine technology, transmission systems, electrical and electronic technology and general aspects such as health and safety.</td>
<td>On successful completion of this Level 2 Diploma, students can either progress to the Level 3 Diploma, or into employment in the motor vehicle maintenance/repair industries.</td>
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<td><strong>Level 3</strong></td>
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<td>EN4145A1 Two years</td>
<td>Engineering BTEC Level 3 Extended Diploma – Edexcel</td>
<td>Entry onto the Level 3 Subsidiary or Extended Diploma pathway will depend on your GCSE grades.</td>
<td>This BTEC Level 3 Extended Diploma is a vocational course designed to equip you with the skills to work in engineering or to progress to higher education and is valued by universities and employers. Projects and assignments use realistic workplace situations, activities and demands. There are 5 core and 12 specialist units which allow greater depth of study in areas of interest to you, including analogue electronics, programmable logic controllers, CAD and digital systems. The course provides a clear career route into Manufacturing Engineering. Students with a grade D in English or Maths will study for the Level 3 Subsidiary Diploma in Year 1 before progressing to the full Extended Diploma.</td>
<td>On successful completion of this course, students can progress onto the Foundation Degree in Engineering course or a graduate programme at university.</td>
</tr>
<tr>
<td>EN4184A One year</td>
<td>Motor Vehicle - Light Vehicle Maintenance and Repair Advanced Diploma – IMI</td>
<td>IMI Level 2 Diploma</td>
<td>This IMI Diploma will develop your skills further in the areas of braking, engine operation and fault diagnosis, chassis systems and fault diagnosis and fault finding techniques in auxiliary systems. It’s an ideal progression route into the motor industry, where trained vehicle technicians are always in demand.</td>
<td>Students could progress into Higher Education, employment in the motor trade or start a modern Apprenticeship with a motor dealer or service centre.</td>
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A-Level Subjects

Electronics

Code:    H6AS
Level:    A-Level
Board:    Edexcel
Duration:   Two Years

Additional Entry Requirements:
GCSE Physics grade B or grade BB in Core and Additional Science.

Course summary:
Electronics is a fun and exciting way of discovering how things work. Electronics is the future, it’s found in all industries and found all around you everywhere, from mobile phones and games consoles to household appliances and industrial control systems. The course applies basic electronic principles and a systematic approach in order to lift the lid on many modern electronics systems encountered in everyday life. It also promotes an awareness of the social, economic and cultural impact of electronics.

What other subjects can I study with this course?
The logical options for students taking Electronics are Maths and Physics, but many students combine this subject with Music Technology, Media Studies or Art.

What can I do next?
An A-Level in Electronics is valuable for anyone wishing to study electronics, physics or engineering at a higher level, and opens the doors to careers in areas like aerospace, automotive, audio, medical instrumentation, computer maintenance, communications and robotics.
We pride ourselves at South Cheshire College on the academic standing of our staff, and the breadth of their industry experience, which is reflected in the number of teaching staff who hold Honour degrees and the previous industry experience that many possess. It means you can have the confidence that the teaching staff on our Engineering and Motor Vehicle courses really know their subject area from both academic study and industry experience over a number of years.

Rob Stanton
Lecturer in Electrical and Electronic Engineering

Robert gained his B.Eng (Hons) in Electrical Engineering at the University of Wales, Bangor, a PCGE at UCLAN along with his A1 Assessor Award and various City & Guild qualifications. Robert’s career commenced at the Carillion Rail Plant as a Technical Engineer and Training Assessor. He recently joined the College and prior to this taught at Wigan & Leigh College for four years.

Robert said “Electrical (Power) and Electronic Engineering courses at the College open up a wide range of opportunities for students who wish to progress into an engineering career.

Dr Ciaron Murphy
-Lecturer in Engineering

Ciaron Murphy is a UK Chartered Engineer, who gained his PhD in 2002 from Liverpool John Moores University in the field of ‘Reconfigurable Computing using Dynamic FPGAs’, and his MSc with distinction in ‘Microelectronics and Information Systems’. He has over eight years’ industrial experience in designing electronics and microcontroller firmware and hardware, and has worked for a number of companies including General Electric. He has previously taught Electronics and Programming at Liverpool John Moores University, and more recently Maths and Electronics at Yale College, Wrexham.

Ciaron said: “I have just commenced teaching at College in 2012 and I am looking forward to working with the students and passing on my engineering knowledge to them”.

Craig Conroy
Lecturer in Motor Vehicle

Craig started his Motor Vehicle career in D & D Tyres and worked his way up the career ladder there. He then moved on to become a Bentley Experimental Engine Builder. He also helped to design the cylinder deactivation and variable valve timing programmes at Bentley. Craig is Level 3 qualified in IMI Motor Vehicle. He has a Cert Ed and has completed many dealer-specific courses and updates. He is now working towards a Business Management degree at MMU. Craig has been teaching the first year students at the College for five years and also delivers practical workshops to all motor vehicle students.

Craig said: “Here at College students are given every opportunity to gain practical skills which helps them progress onto to their chosen motor vehicle career path”.

Meet Some of our Staff
Meet Some of our Staff

Darren Blinkhorn
Lecturer in Electric & Electronic Engineering

Darren achieved his B.Eng Hons in 1997 at John Moores University in Liverpool and gained his CertEd in 2003 and has other technical certificates such as HNC & HND in Electrical & Electronic Engineering. He also has a range of technical skills which he gained in the industry including five years in Poole, Dorset as a Test Engineer. He previously taught in schools and then Canterbury College for five years before commencing his career at the College in 2001.

Darren said: “I am delighted to pass on the experience I gained in the industry to students and also to instil the qualities needed for a career in the Electric and Electronic Engineering industry.”

Martyn Johnston
Lecturer in Motor Vehicle Engineering

Martyn completed his apprenticeship in 1977-1980 at Rolls Royce. He then went on to achieve his HNC & HND in Mechanical Engineering (1999 – 2001) and Cert Ed (2003 – 2004) at South Cheshire College. He also holds certificates in Air Conditioning, Multiplex systems, and Diagnostics within Motor Vehicle.

Martyn has 20 years’ experience in both the Luxury Motor Vehicle Production Sector & Vehicle Repair. During this time, he worked as an Experimental Development Technician, Engine Management Specialist Trainer & Driveline Development Engineer.

For the past 10 years he has worked at the College developing and delivering Motor Vehicle Engineering courses at levels 1, 2 and 3. Martyn also acts as the Institute for the Motor Industry Awards (IMI Awards) Centre Co-ordinator for the College.

Martyn said: “The Motor Vehicle courses offered by the College give the students an opportunity to cover a broad range of skills needed within the motor vehicle industry and allows them to enhance these skills with work experience.”
Trips and visits are an important part of the Engineering and Motor Vehicle courses at South Cheshire College. They enable students to gain a better insight into genuine work environments and the potential careers available once they finish their programmes here. Visits may be made each year to local employers and also to relevant exhibitions or shows such as:

- **Jaguar**
- **Shell Thornton 2009**
South Cheshire College’s Engineering and Motor Vehicle students achieve excellent results and many are able to progress to their preferred university or follow their chosen career within the engineering/motor vehicle industries.

**Coventry University**
B.Eng (Hons) Mechanical Engineering

**Manchester Metropolitan University - Cheshire**
B.Eng (Hons) Electrical Engineering

**Manchester Metropolitan University - Cheshire**
B.Eng (Hons) Mechanical Engineering

**Salford University**
B.Eng (Hons) Mechanical Engineering

**Staffordshire University**
B. Eng (Hons) Motor Sports

Other students have gained employment in the industry and followed a career path in the following sectors:

<table>
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<tr>
<th>Careers</th>
<th>Employers</th>
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<tr>
<td>Engineers and Motor Vehicle</td>
<td>Bentley Motors Ltd</td>
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<tr>
<td>Engineering Apprenticeships</td>
<td></td>
</tr>
<tr>
<td>Technical Services Engineer</td>
<td>Extronics Ltd</td>
</tr>
<tr>
<td>Engineer</td>
<td>Newfield Fabrication</td>
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<tr>
<td>Engineer/Apprenticeships</td>
<td>Rolls-Royce Generation</td>
</tr>
<tr>
<td>Engineer</td>
<td>Scott Wilson Railway Engineering</td>
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<tr>
<td>Motor Vehicle Service Engineers</td>
<td>Various Car Dealerships</td>
</tr>
</tbody>
</table>
Applications, Interviews and Enrolment

Choosing what to do when you leave school is a really big decision and one you’ll want to get right.

Our application and interview process is designed to help you make the best possible choice, so that whatever you finally choose to do, you’ll enjoy it and be successful.

Every student who applies for a place at South Cheshire College will be invited to come for an interview. The interview will give you the opportunity to find out more details about the course you want to study, to make sure that the course you’re applying for is the right one for you, that it’s what you expected, and that it’s at the right level.

On interview evenings, we have careers staff on hand, so if you change your mind about what to study you can speak to them and then arrange a fresh interview (the same evening, if there’s time).

After your interview you should receive an offer of a provisional place at the College, and then you are free to concentrate on getting the results you need.

We’ll invite you back in for enrolment following GCSE Results Day. If you get the grades you need, then just turn up to enrol. If you don’t get your expected grades, or perhaps have changed your mind about what to study, then don’t worry. Just call us and we can arrange for you to meet staff to help you find and enrol onto a more suitable course.

Full-time courses all start in September. You will be told at enrolment when your exact start date is and where you need to go to on your first day.

What do I do now?

Decide early on in Year 11 what course(s) you want to apply for.

Get your application in – either using the online application form at www.s-cheshire.ac.uk, using the form at the back of the full-time prospectus or contact us and we’ll send you one.

You should aim to do this early, before Christmas if possible, because popular courses fill up fast and in some cases spaces are limited. The College has a deadline of 30th April 2012 for most courses, for you to be guaranteed a place on your first choice of course (subject to you meeting the entry requirements).