# Centre for Automotive Engineering | University of Surrey**Job title:** Automotive Engineer

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| **Job title:**  | Automotive engineers design, develop, test and build cars and motorbikes. |
| **Routes and Entry requirements:**  | **University**You’ll usually need a foundation degree, higher national diploma or degree, before joining a company training scheme.Relevant subjects include:* mechanical engineering
* electrical or electronic engineering
* design engineering
* manufacturing engineering
* automotive engineering

A course with a work placement or an internship will be especially useful.You'll usually need:* at least 1 A level, or equivalent, for a foundation degree
* between 1 and 3 A levels, or equivalent, for a higher national diploma or degree

**Apprenticeship**You could get into this job through a manufacturing engineer degree apprenticeship or product design and development engineer degree apprenticeship.You'll usually need:* 4 or 5 GCSEs at grades 9 to 4 (A\* to C) and A levels, or equivalent, for a degree apprenticeship
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| **Skills required:**  | You'll need:* maths knowledge
* knowledge of engineering science and technology
* design skills and knowledge
* knowledge of physics
* to be thorough and pay attention to detail
* analytical thinking skills
* the ability to use, repair and maintain machines and tools
* thinking and reasoning skills
* to be able to use a computer and the main software packages competently
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| **What you'll do:**  | You might work on:* body, chassis and engine systems
* electrical and electronic instrumentation and control systems
* thermodynamics, aerodynamics and fluid mechanics
* fuel technology and emissions
* You could work in:
* design – turning ideas into blueprints for development and testing, taking into account safety, cost-effectiveness, environmental impact and look
* development – building and testing prototypes using computer simulations and physical models to assess components' strengths, weaknesses, performance and safety
* production – planning the production run, including redesigning machine tools, equipment and processes to make new parts, monitoring costs and production schedules, and overseeing quality control
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| **What you’ll earn:**  | £20,000 Starter *to* £45,000 Experienced |
| **Working hours, patterns and environment:** | * Typical hours (a week) 39 to 41
* You could work evenings, on shifts
* You could work in an office, at a research facility or at a manufacturing plant.
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| **Career path and progression:** | With experience, you could progress to senior engineer roles, project team management, general management or consultancy. |