



University  
Centre  
Somerset

PROSPECTUS 2023 - 24

CONSTRUCTION  
ENGINEERING, NUCLEAR  
AND MOTORSPORT



somerset.ac.uk

THE FIRST NEW NUCLEAR POWER STATION TO BE BUILT  
IN THE UK IN OVER 20 YEARS IS RIGHT ON OUR DOORSTEP.

CONSTRUCTION WILL NEED **216,800 NEW**  
**WORKERS** by 2025

(citb.co.uk)

THE AVERAGE SALARY FOR AN ENGINEER IS  
**£48,000** A YEAR, **62%** HIGHER  
THAN THE NATIONAL AVERAGE.

(ukjobted.com)

**4,300** UK BUSINESSES OPERATE  
IN THE MOTORSPORT SECTOR, SUSTAINING  
NEARLY **41,000** JOBS

(www.theengineer.co.uk)

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# Faculty Facilities

With professional staff and advanced modern facilities, the construction and engineering departments at University Centre Somerset offer a comprehensive range of HNCs, HNDs and degree-level programmes. All courses involve a mix of practical and theoretical learning and open up a world of possibilities in your chosen career.

We provide state-of-the-art, bespoke workshops and teaching areas for construction professions and various disciplines within engineering from manufacturing to nuclear. Significant investment in recent years across our campuses has seen these departments

thrive. As our partnerships with EDF Energy, the Nuclear Decommissioning Authority and the National Skills Academy (Nuclear) demonstrate, we deliver education that is grounded in the requirements and expectations of the 21st century.

### Advanced Engineering Centre (AEC)

The AEC at our Bridgwater campus has created a perfect environment to support this fast-paced industry. Creative problem solving, a key skill for all engineers, is promoted in the design thinking rooms, while hands-on learning in the materials lab develops understanding of the key principles in composites.

There are also CNC machines and additive manufacturing tools for experience of modern manufacturing methods.

### Energy Skills Centre

Our flagship Energy Skills Centre at our Bridgwater campus provides opportunity and inspiration in equal measure. Our industry-standard laboratories and workshops are installed with an array of equipment that makes your learning experience all the richer. This includes the very latest computer-aided design facilities, robotic engineering equipment and space for fabrication, maintenance and modification.





### Motorsport

Built in 2022, the motorsport workshop at our Bridgwater campus provide a race car bay for up to four vehicles and is equipped with state-of-the-art tools and diagnostic equipment. Students have the opportunity to work on our own racing car and customer cars in fully equipped workshops using the latest tooling, diagnostics and IT equipment. Our Motorsport Race Team, currently national champions, have taken 'Poppet', our Radical PR6 race car, all over the country, competing regularly at circuits including Silverstone and Brands Hatch.

### Construction

Our Construction provision is based in our newly refurbished Industry Skills Centre at our Taunton campus.

Our lecturing team are experienced Construction & Civil Engineering specialists who are dedicated to supporting your progression through your HNC and HND journey. We have invested significantly in our IT equipment and BIM software packages including Revit, AutoCad and Trimble Business Centre all of which you will have access to on campus and remotely.

The Surveying Equipment includes the latest Trimble Total Station and a complete GNSS surveying package. You will also experience the use of Drone technology and software for surveying.



Our new Materials Lab includes full testing equipment to enhance your study with practical learning whilst studying units such as Hydraulic Principles, Geology, Soil Mechanics and Science & Materials.

**National College for Nuclear**

Our Cannington campus is home to one of two National College for Nuclear (NCfN) hubs in England. NCfN delivers high-level technical training to thousands of learners, and is developing and delivering new qualifications and training courses that meet the demand for highly skilled workers in the nuclear sector. The building boasts virtual reality environments and a bespoke nuclear engineering workshop complete with flow rig.



## Access to HE

An Access to Higher Education Diploma is designed to provide a route for learners aged 19 or over who possess few or no formal qualifications to progress to university-level study. It can lead to a wide range of career and Higher Education opportunities here at University Centre Somerset or at another university of your choice.

We currently offer four different routes, each with particular progression opportunities linked to them.

Courses include:

- Nursing, Midwifery and Healthcare\*
- Science\*
- Social Science\*
- Computing\*

In addition, the Access to HE course includes core study skills sessions to support learning and progression. These include:

- Research and Study Skills
- Digital Skills
- English
- Maths
- UCAS application support
- Tutorial.

\*subject to approval

### Teaching & Assessment

The majority of modules are taught via lectures; other teaching methods include seminars, tutorials, workshops and guided learning/independent activities. The Access to HE course utilises a blended learning approach, and some sessions will be delivered online.

### Where does it lead?

Successful completion of this course will provide you with a qualification that will allow you to apply to study a university-level course. In recent years, students have gone on to study a wide range of subjects including Biomedical Science at UWE Bristol, Occupation Therapy at the University of Plymouth, Social Work at the University of Bath and Nursing, right here at University Centre Somerset.



If you complete an Access to HE course and then go on and complete a degree or other recognised higher education course, you will not have to repay the remaining loan for the Access to HE course.

*If you are looking for an Art & Design course to prepare for entry to a creative degree at university, please see the Art & Design Foundation Diploma (Pathways to HE) on our website, or on page 12 of the Creative Arts prospectus.*

**Duration:** 30 weeks

**Location:** Taunton

### Entry requirements:

Whilst there are no specific academic entry requirements, candidates will need a sound grasp of basic skills in English and maths. Given the course is an intensive and demanding one-year programme, students will require determination and resilience, and evidence of this will be asked for at interview.

You are required to be aged 19 or over and may be eligible for a loan to cover your course fees.



## Higher & Degree Level Apprenticeships

With the introduction of the Apprenticeship Levy in April 2017, employers are offering more Apprenticeships at higher levels. Our expertise and partnerships with industry enable us to facilitate opportunities that address the increasing demand for higher-level skills in Somerset and beyond. Higher and degree level Apprenticeships are a popular choice and provide you with the chance to gain applicable skills and knowledge about an industry. Please see our list of courses opposite, check our website or call for more information on the types of Apprenticeships we offer and our employer partners.

### What is an Apprenticeship?

Apprenticeships are an effective way of studying, enabling you to gain a nationally recognised qualification whilst obtaining practical on-the-job experience. In our recent Ofsted inspection our Apprenticeship provision was rated Outstanding with Ofsted

inspectors stating that “Apprentices develop an extensive range of skills and knowledge and many extend and deepen specialist skills beyond the requirements of their qualifications.”

Higher Apprenticeships refers to Apprenticeships that may include the achievement of academic/vocational qualifications at Level 4 and 5 such as HNCs, HNDs and Foundation Degrees, while degree level Apprenticeships can provide qualifications up to Level 6 or 7, such as a full BA, BSc or BEng Honours Degree, or in some cases even a Masters Degree.

Increasingly, you may hear Apprenticeships referred to as standards. These were introduced by the government as part of ongoing Apprenticeship reforms to meet the needs of employers. Standards are occupation-focused, they are not qualification-led and the content is decided by each employer, depending on their business requirements.

### Why choose an Apprenticeship?

They are a great option for anyone looking for a fast track into a career. A Higher or Degree Level Apprenticeship brings together the best of higher and vocational training and enables higher education study plus invaluable on-the-job training without having to cover the cost of tuition. Fees for Apprenticeships are subsidised by employers and the government, and a salary is then paid to the individual undertaking the Apprenticeship programme – meaning that doing a Degree Apprenticeship can leave you debt-free and provide you with many years’ industry experience.

### What can I study on an Apprenticeship?

Today you can study anything from human resources to mechanical engineering, health & social care to cyber security, and much more. We have more than 20 on offer and are continually updating our portfolio to support industry demand.

### How long is an Apprenticeship?

A Higher Apprenticeship will likely last as long as 3 years, while a Degree Apprenticeship could take as long as 4 to 6 years. As an apprentice, you would be employed full-time, although the combination of work and study can vary from one employer to another. Generally, you’ll be required to work 30 hours per week, to leave you time to study, but that could take one of several forms - options include:

- **Day release**  
Studying at UCS one day per week
- **Block learning**  
Studying for 1-2 weeks at a time
- **Blended Learning**  
A mixture of online learning and traditional face-to-face

### Full-time education

For some employers apprentices will study full-time for the first year of their Apprenticeship, working with the employer during UCS holidays, and starting full-time employment after that first year.

### What should I do next?

If you feel that an Apprenticeship may be for you, get in touch with our dedicated team who can talk through your options and what to do next. Call 01278 655111 or email apprenticeshiphelp@btc.ac.uk.

## Higher and Degree Level Apprenticeships

Our Apprenticeship offer is continually developing and changing due to business demands and changes to the Apprenticeship structure. Therefore, this list should only be considered as a guide.

### BUSINESS

Project Manager Level 4  
HR Consultant/Partner Level 5  
Operations/Departmental Manager Level 5

### COMPUTING AND DIGITAL TECHNOLOGIES

Data Analyst Level 4  
Cyber Security Technologist Level 4  
Network Engineer Level 4  
Software Developer Level 4  
Digital Technology Solutions Level 6 Degree

### CONSTRUCTION

Construction Quantity Surveying Technician Level 4  
Construction Design and Build Technician Level 4  
Construction Site Engineering Technician Level 4  
Construction Site Supervisor Level 4

### CREATIVE ARTS

Fashion & Textiles Product Technologist Level 4

### ENGINEERING AND NUCLEAR

Engineering Manufacturing Technician Level 4  
Process Leader Level 4  
Aerospace Engineer Level 6 Degree  
Nuclear Engineer Level 6 Degree

### HEALTH AND SOCIAL CARE

Lead Practitioner in Adult Care Level 4  
Leader in Adult Care Level 5  
Healthcare Assistant Practitioner Level 5  
Leadership and Management for Adult Care Level 5  
Nursing Associate Level 5  
Registered Nurse Level 6 Degree

### LAND-BASED

Agriculture Level 4

Please visit [www.somerset.ac.uk](http://www.somerset.ac.uk) for more information.

# Construction & the Built Environment

HNC Level 4

PEARSON

## ENTRY REQUIREMENTS

People come to this course from a range of backgrounds, and there is no single specific entry requirement. However, applicants would be expected to have at least one of the following:

- A full Level 3 qualification in a relevant subject
- A Level 3 National Diploma in Construction.

Other appropriate qualifications may be taken into consideration, or relevant work experience.

Type:	HNC Level 4
Attendance:	Part-time
Location:	Taunton
Awarding body:	Pearson

This course equips you with a nationally recognised qualification that enhances your workplace skills and helps prepare you to advance your career in the construction industry.

This is a professional qualification that provides the ideal foundation for further study, or helps you secure a job. It can be studied part-time or as part of an Apprenticeship.

The Higher National Certificate (HNC) consists of eight units, covering key knowledge and practical skills for the sector.

The modules studied may include:

- **Construction Practice and Management**
- **Legal and Statutory Responsibilities in Construction**
- **Construction Information (drawing, detailing and specification)**
- **Surveying, Measurement and Setting out**
- **Tendering and Procurement.**

### Teaching and Assessment

Assessment is by a mix of assignments, project work and some exams. Each module is assessed by means of a series of internally set assignments that involve a combination of scenario-based tasks linked to project work, practical exercises, timed tasks, individual study and presentations.

### Progression Opportunities

There are a huge range of career choices within the construction professions, so successful completion of the HNC really does open doors. In addition, you could go on to study at HND or degree level.

After completing the Level 3 Apprenticeship I wanted to widen my knowledge and gain a higher qualification.

I have learnt a lot about different areas in construction, which is interesting as my workplace is quite specific to a small aspect of the industry.

I have enjoyed having access to online resources, this has made it easier to research information and view what we went through in class. The staff are supportive, and they are always available to give advice on assignments.

Jed Parfitt, Construction and the Built Environment Apprenticeship Level 4



# Construction & the Built Environment (Civil Engineering)

HNC Level 4

I like studying at UCS as it fits around my work schedule. The lecturers are from the industry and can answer any questions I might have.

The lessons are suited to the work I am doing, and it gives me the extra knowledge I need to help move up the career ladder.

Patrick Tanner, Construction and the Built Environment Apprenticeship Level 4



PEARSON

## ENTRY REQUIREMENTS

Typically entrants will possess at least one of the following:

- AS/A2 Levels
- Level 3 in Maths
- A National Certificate in Civil Engineering
- A National Diploma in Construction
- Relevant work experience.

Other appropriate qualifications may be taken into consideration.

Type: HNC Level 4

Attendance: Part-time

Location: Taunton

Awarding body: Pearson

Would you like to work towards a nationally recognised qualification that builds on the skills you have already developed in the workplace, to enhance your employability? If so, our Higher National Certificate in Civil Engineering could be the perfect course to choose.

This professional qualification provides the perfect foundation for a career in civil engineering. It is also a great basis from which to pursue degree level study and blend theoretical and practical aspects of the discipline.

During your course you will cover a range of topics that may include:

- Construction Practice and Management
- Construction Information (Drawing, Detailing and Specification)
- Mathematics for Construction
- Principles of Structural Design
- Surveying, Measurement and Setting out.

## Teaching and Assessment

Assessment is by a mix of assignments, project work and some exams. Each module is assessed by means of a series of internally set assignments that involve a combination of scenario-based tasks linked to project work, practical exercises, timed tasks, individual study and presentations.

## Progression Opportunities

Successful completion of the HNC in Construction and the Built Environment (Civil Engineering) enables you to apply for membership of the Institute of Civil Engineers. With this behind you, the world of work presents a variety of possibilities.

You could go on to study the HND in Construction and the Built Environment at UCS. Alternatively, graduates may apply to study the discipline at degree level.

## Career Progression

Our students have gone on to pursue careers such as Civil Engineer, Project Manager, Highway Engineer, Site Manager, Utilities Engineer and Structural Engineer.



# Aeronautical Engineering

HNC Level 4

PEARSON

This course is designed for those looking to develop their career prospects in the aeronautical industry after successfully completing a relevant Level 3 course, or direct entry for those with practical work experience.

You will study in new, state-of-the-art engineering facilities and will be supported by a team of experienced professionals.

The Level 4 Higher National Certificate in Aeronautical Engineering offers students a broad introduction to

the subject area via a mandatory core of learning, while allowing for the acquisition of some sector-specific skills and experience through the specialist units.

The course has four core units:

- **Engineering Design**
- **Engineering Maths**
- **Engineering Science**
- **Managing a Project.**

One specialist unit:

- **Aircraft Aerodynamics.**

And three optional units, which may include:

- **Aircraft Electrical Power and Distribution Systems**
- **Airframe Mechanical Systems**
- **Composite Materials for Aerospace Applications.**

Holders of a Higher National Certificate in Aeronautical Engineering meet the academic requirements for the Engineering Council Engineering Technician Standard (EngTech).

There may be opportunities for local work placements to further your practical experience and employability.

## Teaching and Assessment

Continuous assessment of performance is carried out by means of assignments and may include verbal presentations, projects, group-work, practical exercises, written reports and integrative assignments that link various subject areas.

This full-time course is delivered over one academic year. The part-time option is delivered over two years.

## Progression Opportunities

You could choose to progress on to an HND course or study a degree level course at a university of your choice. Alternatively, you could progress into employment.

## ENTRY REQUIREMENTS

Typically, entrants will possess:

- Level 3 qualification in a relevant subject, e.g. Level 3 Extended Diploma or A Levels.

Mature applicants with relevant experience who do not have the stated entry requirements are encouraged to apply.

Applicants with English as their second language must demonstrate a capability of English at a standard commensurate with IELTS 5.5, with a minimum of 5.0 being awarded on individual sections.

Type:	HNC Level 4
Attendance:	Full-time or part-time
Location:	Bridgwater
Awarding body:	Pearson



# Electrical & Electronic Engineering

HNC Level 4

PEARSON

## ENTRY REQUIREMENTS

Typically entrants will possess:

- Level 3 qualification in a relevant subject.

Mature applicants with relevant experience who do not have the stated entry requirements are encouraged to apply.

Type:	HNC Level 4
Attendance:	Part-time
Location:	Bridgwater
Awarding body:	Pearson

This part-time, one day per week course is designed for those looking to develop a career in electrical and electronic engineering, with the emphasis on applying electrical, electronic and control principles to practical situations such as PLC and robot work cells. You will be studying in state-of-the-art engineering facilities, with industry-standard equipment such as robotic, PLC and process control technology.

You will be taught by staff with strong industry experience and links to key employers. In addition, fellow students will come from a broad range of employers. This course can also form the academic part of a Higher Apprenticeship.

## Teaching and Assessment

Continuous assessment of your performance will be carried out by means of assignments and may include laboratory work, investigations, projects, practical exercises and integrative assignments that link various subject areas.

## Progression Opportunities

You could choose to progress on to an HND course at University Centre Somerset or study a degree course at a university of your choice. Alternatively, you could progress to employment. Graduates find roles within industries such as manufacturing, automotive, aerospace, energy and water.

The modules studied may include:

- Engineering Design
- Engineering Maths
- Engineering Science
- Managing a Professional Engineering Project
- Electrical and Electronic Principles
- Instrumentation and Control Systems
- Digital Principles
- Automation Robotics & PLCs.

I chose UCS due to the long-term relationship between EDF and UCS which means that the course is really suited to my role at Hinkley Point C Power Station.

My job is one that I greatly enjoy, I work on developing the supply chain at HPC which is really fulfilling. My work has been boosted by the knowledge I am learning on my course. Moving into this job role is by far my greatest achievement since beginning the course!

Brett Shaw, Electrical and Electronic Engineering  
Higher National Certificate



# Manufacturing Engineering

HNC Level 4



This part-time, one day per week course is designed for those looking to develop a career in manufacturing engineering, with the emphasis on applying engineering principles to practical situations such as CAD/CAM and production lines. You will study in state-of-the-art engineering facilities, with industry-standard equipment. The units studied offer a broad understanding of key principles in production and manufacturing.

The course is designed to provide the knowledge and understanding of how advanced and innovative engineering underpins the manufacturing industry. This course can also form the academic part of a Higher Apprenticeship.

Modules may include:

- Engineering Design
- Engineering Maths
- Engineering Science
- Managing a Professional Engineering Project
- Production Engineering for Manufacture
- Quality and Process Improvement
- Machining and Processing of Engineering Materials
- Computer Aided Design and Manufacture (CAD/CAM).

## Teaching and Assessment

Continuous assessment of your performance will be carried out by means of assignments and may include laboratory work, investigations, projects, practical exercises and integrative assignments that link various subject areas.

## Progression Opportunities

You could choose to progress on to an HND course at University Centre Somerset or study a degree course at a university of your choice. Alternatively, you could progress to employment. Graduates find roles within industries such as manufacturing, automotive, aerospace, energy and water.

PEARSON

## ENTRY REQUIREMENTS

Typically entrants will possess:

- Level 3 qualification in a relevant subject.

Mature applicants with relevant experience who do not have the stated entry requirements are encouraged to apply.

Type: HNC Level 4

Attendance: Part-time

Location: Bridgwater

Awarding body: Pearson



# Mechanical Engineering

HNC Level 4



This part-time, one day per week course is designed for those looking to develop a career in mechanical engineering, with the emphasis on applying mechanical theory to practical situations. You will study in state-of-the-art engineering facilities, with industry-standard equipment.

Mechanical engineers research, develop and manage projects devising innovative solutions in design and manufacture. The course is designed to provide the knowledge and understanding of how advanced and innovative engineering underpins the mechanical design, advanced manufacturing and technical service areas of the industry. This course can also form the academic part of a Higher Apprenticeship.



Modules may include:

- Engineering Design
- Engineering Science
- Engineering Maths
- Managing a Professional Engineering Project
- Mechanical Principles
- Fundamentals of Thermodynamics and Heat Engines
- Fluid Mechanics
- Materials, Properties and Testing.

### Teaching and Assessment

Continuous assessment of your performance will be carried out by means of assignments and may include laboratory work, investigations, projects, practical exercises and integrative assignments that link various subject areas.

### Progression Opportunities

You could choose to progress on to an HND course at University Centre Somerset or a degree course at a university of your choice. Alternatively, you could progress to employment.

Graduates find roles within industries such as manufacturing, automotive, aerospace, energy and water.



PEARSON

### ENTRY REQUIREMENTS

Typically entrants will possess:

- Level 3 qualification in a relevant subject.

Mature applicants with relevant experience who do not have the stated entry requirements are encouraged to apply.

Type: HNC Level 4

Attendance: Part-time

Location: Bridgwater

Awarding body: Pearson



# General Engineering

HNC Level 4

PEARSON

## ENTRY REQUIREMENTS

- Students will progress on to this course having studied a relevant Level 3 qualification at a college or sixth form, e.g. A Level or Level 3.

Applicants who are non-native English speakers, or who have not studied the final two years of school in English, must demonstrate a capability of English at a standard commensurate with IELTS 5.5, with a minimum of 5.0 being awarded on individual sections.

Type:	HNC Level 4
Attendance:	Full-time
Location:	Bridgwater
Awarding body:	Pearson

**This full-time course is delivered over one academic year. Lessons are held over two full college days per week.**

The course is designed for those looking to develop their career prospects after successfully completing a relevant Level 3 course, or direct entry with practical work experience. You will study in engineering state-of-the-art facilities and supported by a team of experienced professionals.

Modules may include:

- Automation, Robotics & PLCs
- Engineering Design
- Engineering Management
- Engineering Maths
- Engineering Science
- Machining and Processing of Engineering Materials
- Project
- Quality & Process Improvement.

## Teaching and Assessment

Continuous assessment of performance is carried out by means of assignments and may include verbal presentations, projects, group-work, practical exercises, written reports and integrative assignments that link various subject areas.

Attend UCS for two full days a week and will be expected to complete written assignment work in self-study time at home.

## Progression Opportunities

Following this course you can look for work in a broad range of engineering occupations. Many graduates will join a Higher Apprenticeship or progress to study a Level 5 HND course (one-year) at University Centre Somerset before 'topping up' to a full degree. Others secure senior positions within leading engineering businesses as engineers, managers and project team leaders.



# General Engineering

HND Level 5



PEARSON

## ENTRY REQUIREMENTS

- This is a top-up programme following the successful completion of HNC in Engineering (RQF).
- Students will progress on to this course having studied one of the current HNC Engineering programmes (RQF) within University Centre Somerset's Engineering department. HNCs awarded by other institutions will also be considered providing they meet the requirements of the RQF specification.

Applicants who are non-native English speakers, or who have not studied the final two years of school in English, must demonstrate a capability of English at a standard commensurate with IELTS 5.5, with a minimum of 5.0 being awarded on individual sections.

Type:	HND Level 5
Attendance:	Full-time or part-time
Location:	Bridgwater
Awarding body:	Pearson

**This top-up course is delivered using a blended approach; one day per week on campus with some additional learning via remote delivery.**

The course is designed for those already working in a relevant engineering role and looking to develop their career after successfully completing their HNC course (RQF). You will study in state-of-the-art engineering facilities and will be supported by a team of experienced professionals. This course can also form the academic part of a Higher Apprenticeship.

The course builds on the units completed during an HNC programme to 'top-up' to a Level 5 qualification.

The course includes the following units:

- Virtual Engineering
- Research Project
- Professional Engineering Management
- Further Maths
- Lean Manufacturing
- Sustainability
- Computer Aided Design (CAD) for Engineering.

## Teaching and Assessment

Continuous assessment of performance is carried out by means of assignments and may include verbal presentations, projects, group-work, practical exercises, written reports and integrative assignments that link various subject areas. You will attend the Bridgwater campus for one full day a week and will be expected to complete additional study via remote learning, lectures and self-study time at home.

## Progression Opportunities

Successful completion can lead to opportunities in a variety of engineering occupations.

Many graduates from the HND course have gone on to study at degree level or have secured higher positions within their companies as engineers, managers and project team leaders.



# Engineering with Nuclear

BEng (Hons)



The multi award-winning National College for Nuclear @BTC has truly dedicated state-of-the-art facilities including a reactor simulator and virtual reality training environment and will provide tomorrow's engineers with high-tech, specialist training to support the nuclear industry.

Working with our industrial partners such as EDF Energy, AWE, Cavendish Nuclear and Magnox ensures the training and education provides a world-class experience that develops the skills needed in this high profile, technical and demanding sector.

These partnerships allow you to gain technical knowledge and real practical experience, along with behavioural and personal skills, required for your future career. These are acquired through a mix of learning in the workplace, learning through the National College for Nuclear and the opportunity to practise and embed new skills in a real-world context.

There are 4 modules taught per year (full-time), covering a range of mechanical, electrical and control engineering, alongside nuclear specific modules. These are taught in seminar-style classroom and workshop settings, in a mix of face-to-face and online study.

Mathematics is embedded throughout, rather than taught as a separate module. A total of 12 modules will be taught from the following list, depending on which degree pathway discipline is chosen.

- **Module 1: Nuclear Science, Materials, and Design**
- **Module 2: Solid Mechanics**
- **Module 3 Thermofluidic Dynamics**
- **Module 4: Electromechanical Systems Engineering**
- **Module 5: Electrical Supply and Machines**
- **Module 6: Heat Transfer and Power**
- **Module 7: Electromechanical Systems and Design**
- **Module 8: Electromechanical Systems Analysis**
- **Module 9: Advanced Nuclear Science and Project Management**
- **Module 10: Electronic Systems**
- **Module 11: Electronic Control Systems Design**
- **Module 12: Stress, Materials and FEA**
- **Module 13: Thermofluid Systems and CFD**
- **Module 14: Industrial Nuclear Science and Technology**
- **Module 15: Nuclear Project Dissertation.**

## ENTRY REQUIREMENTS

- Typically entrants will possess:
- A minimum of 102 UCAS points from a full Level 3 qualification in a relevant subject area, such as maths, science or engineering
- Grade C or equivalent in maths at Level 3 (A Level, BTEC or equivalent)
- At least five GCSEs at grade 5 or above, including maths and English.

Type: **Bachelors Degree**

UCAS code: **H821**

Institution code: **B70**

Attendance: **Full-time**

Location: **Cannington**

Awarding body: **UWE Bristol**



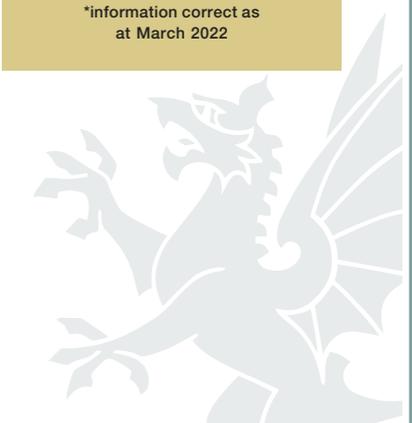
**83% of UCS Engineering with Nuclear graduates have achieved A FIRST CLASS DEGREE\***

\*information correct as at March 2022

My favourite aspect of studying at NCfN is the enthusiasm for nuclear and wealth of knowledge that the teaching staff have, this creates a great atmosphere for learning.

The course has taught me many engineering skills along with giving me sound advice which I will carry forward in my career.

Joe Carlon, Mechanical Engineering with Nuclear BEng (Hons)





The facilities and teaching at UCS are of a high quality and strongly linked to my employer, EDF Energy.

Every time I have completed a module throughout this course, I have felt a sense of achievement and satisfaction. The course has helped me build a strong academic foundation to accompany and enhance the engineering skills and knowledge I have gained while working on placement at HPC.

Genevieve Baker, Mechanical Engineering with Nuclear BEng (Hons)

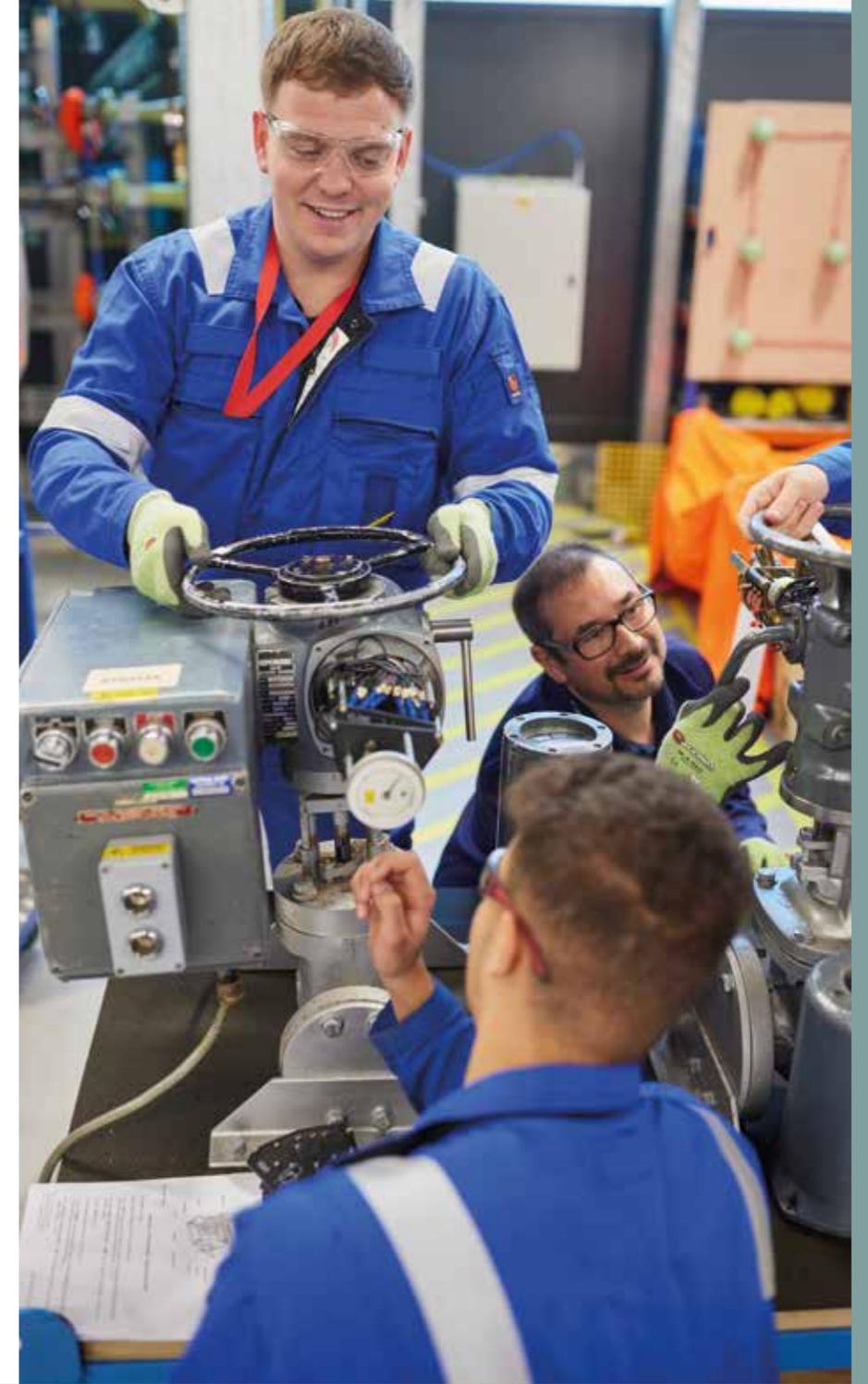


#### Teaching and Assessment

This course is delivered on a modular block basis, completing 4 modules per year (if full-time) of 5 weeks each, following a typical academic year. There may be opportunities for residential trips during the course, which will require separate payment of fees. You are assessed on your knowledge and skills on an ongoing basis and will have to demonstrate that you can meet the required standards throughout your degree. There will be a mixture of coursework, projects, vivas and exams.

#### Progression Opportunities

This degree programme is designed to maximise employment opportunities within the nuclear (or broader engineering) sector. It may also be used for progression onto a Masters course.



# Nuclear Engineering

Higher & Degree Level  
Apprenticeships

Higher and degree apprenticeships offer an exciting new way to enter professional careers and gain valuable work experience while achieving a degree level qualification. This gives you a clear pathway to reach your career ambition in the workplace and will result in higher earning capacity, recognition and professional status.

Nuclear Engineering remains one of the UK's most important industries, offering a diverse range of challenging apprenticeship opportunities within the Nuclear and Energy sectors including power generation, decommissioning, nuclear new build, defence and renewable energy.

Apprenticeships delivered in the National College for Nuclear (NCfN) have been developed with industry partners, educational partners and government to deliver tomorrow's nuclear workforce. NCfN has truly dedicated state-of-the-art facilities including reactor simulator and virtual reality training environment and provides tomorrow's engineers with high-tech, specialist training to support the nuclear industry.

### Teaching and Assessment

You are assessed on your knowledge and skills on an ongoing basis and will have to demonstrate that you can meet the required standards throughout your training. There will be a mixture of coursework, projects, vivas, exams end-point assessment.

### Progression Opportunities

The Higher or Degree Apprenticeship will provide you with excellent career progression opportunities. Fully qualified engineers are in high demand, both at home and abroad. Graduates could progress onto suitable Masters programmes and further industry specific professional training programmes.

### ENTRY REQUIREMENTS

- A minimum of 102 UCAS points
- A National Certificate/Diploma in a numerate or engineering discipline with a merit profile, to include maths, or equivalent qualifications
- or A Levels in relevant subjects.

For mature applicants we will accept a wide range of non-standard and professional qualifications and experience, but if candidates are unsure as to whether they qualify, we encourage them to contact us.

In order to undertake this course, you are required to have a relevant employer.

Duration	Up to 5 years, dependent on level and employer
Location:	Cannington



# Motorsport Engineering

## Foundation Degree

### ENTRY REQUIREMENTS

Typically entrants will possess at least one of the following:

- A minimum of one pass at A Level Maths, Physics or a closely related subject
- A National Certificate or Diploma or other full equivalent Level 3 qualification, in a discipline related to Engineering, including merits in the applied units.

Type:	Foundation Degree
UCAS Code:	H335
Institution code:	O66
Attendance:	Full-time
Location:	Bridgwater
Awarding body:	Oxford Brookes University

*There may be the opportunity to study our full-time courses on a part-time basis, please contact us to discuss.*

This course aims to develop the knowledge and skills that you will need to become a highly qualified engineer. Our excellent facilities include a rolling road, CAD suite, wind tunnel, damper dynamometer, advanced chassis set-up equipment, CNC and machine shop and cylinder head flow analysis equipment amongst a whole host of software packages.

I stay in student accommodation as I'm from Cornwall, this has been a great experience and I have enjoyed living away from home.

I have progressed through the levels to higher education which helped me build up the skills I need for the Foundation course, it's more advanced and complex which I enjoy.

Roland Magyar, Motorsport Engineering Foundation Degree

This programme is accredited by the IET and IMechE as partially meeting the academic requirements for IEng status. To get full IEng recognition you will need to study an accredited BEng (Hons) Top-up. We have carried out a large range of industry partner visits to the likes of Xtrac, Williams, Force India and other related motorsport engineering companies. We also have a series of guest lectures throughout each year. You may also be given the opportunity to participate in the College race team.

Modules may include:

- Engineering Science
- Engine Technology
- Composites and Materials Technology
- Vehicle Dynamics and Performance Engineering
- Fluid Dynamics
- Electronics and Microprocessors.

### Teaching and Assessment

You will undertake classroom lectures, coupled with practical sessions in manufacturing, composites, aerodynamics, chassis and engine technology. You will also be required to do a significant amount of self-study and research.

Assessment will include assignments, reports, portfolio, project, presentations, drawing work and practical skills assessments.

### Progression Opportunities

On successful completion of this course you have the opportunity to progress to the BEng (Hons) Top-up Degree in Motorsport Technology at University Centre Somerset or at a university of your choice.

Alternatively, graduates can apply for a variety of roles in motorsport and other engineering disciplines. Past graduates work with companies including McLaren GT, Bentley Motors, Jaguar Land Rover, MOD, Hyundai Motorsport (WRC), McLaren F1 and Neil Brown Engines.



# Motorsport Technology

BEng (Hons) Top-up



I chose Motorsport as I have always loved Formula One, cars and engineering and this course combines all of these.

Doing the Level 2 and 3 courses in Motorsport before starting my Foundation has giving me lots of hands-on and practical experience. My dream job is to be a race mechanic for a Formula One team.

Justin Elliott, Motorsport Engineering Foundation Degree

## ENTRY REQUIREMENTS

Typically entrants will possess:

- A minimum of a Pass grade in the Foundation Degree in Motorsport Engineering (to include Motorsport Fluid Dynamics & Maths II) coupled with relevant prior qualifications including GCSEs.

Applicants with a Higher National Diploma or similar Foundation Degree are also encouraged to apply.

Type:	Bachelors Degree
UCAS Code:	H333
Institution code:	O66
Attendance:	Full-time
Location:	Bridgwater
Awarding body:	Oxford Brookes University

*There may be the opportunity to study our full-time courses on a part-time basis, please contact us to discuss.*

This course has been developed as preparation for a range of technical and management careers in motorsport engineering. The course aims to build upon the knowledge and skills developed from studying our Foundation Degree. This programme is accredited by the IET and by the IMechE for IEng status.

Graduates of the course should be able to work effectively in industry as part of design, development or research teams with the skills necessary to turn concepts into drawings and through to the manufacturing and assembly processes.

- Modules may include:
- **Advanced Automotive Electronics**
  - **Motorsport Engine Technology**
  - **Project (double)**
  - **Vehicle Dynamics**
  - **Advanced CAD/CAM**
  - **Management, Ethics and Energy and Sustainability (double).**

**Teaching and Assessment**  
You will undertake a range of classroom lectures, coupled with lab sessions. You will also be required to complete a significant amount of self-study at home.

Assessment will be via a variety of methods including assignments, reports, dissertation, portfolio, and presentations.

**Progression Opportunities**  
Upon completion you may progress to a range of Masters level courses that should result in a further year top-up, dependent upon study mode and compatibility of modules.

Alternatively graduates can apply for a variety of roles in motorsport and other engineering disciplines. Past graduates work with companies including McLaren GT, Bentley Motors, Jaguar Land Rover, MOD, Hyundai Motorsport (WRC), McLaren F1 and Neil Brown Engines.



## Where to find us

One of the benefits of University Centre Somerset is our accessibility. So however you're travelling, you will find us easy to get to.

### Rail

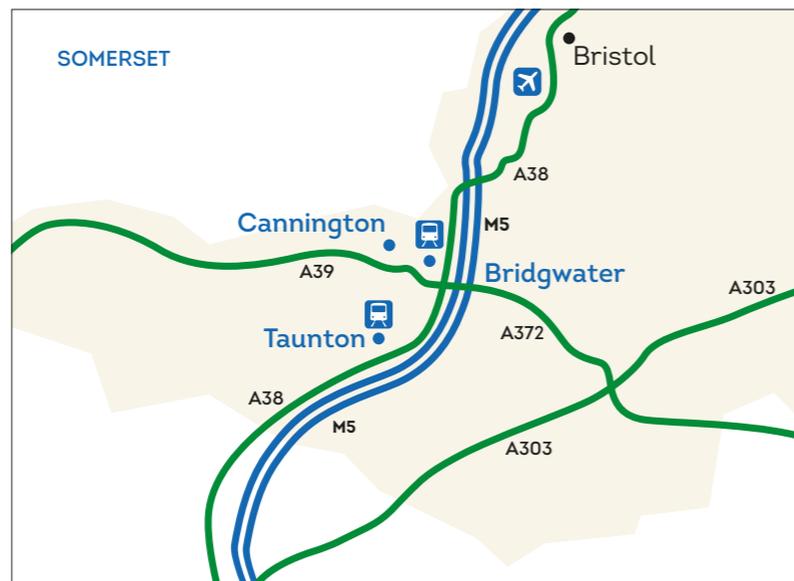
Our Taunton and Bridgwater campuses are easily accessible by train. Both towns are on the main line from Bristol to Exeter, and our campuses are within an easy walk or taxi ride of the station.

### Bus

We have bus stops on each of our campuses, served by local bus routes. A regular connection runs between the Bridgwater and Cannington campuses.

### Car

All three campuses are easily accessible from the M5 motorway. Each campus offers limited parking, including designated areas for disabled parking, mopeds and bicycles. You will be charged **£1 per day to park at our Taunton campus**, while parking is free at the Bridgwater and Cannington campuses.



#### Taunton campus

Wellington Road  
Taunton  
Somerset  
TA1 5AX

01278 455464  
info@somerset.ac.uk



#### Bridgwater campus

Bath Road  
Bridgwater  
Somerset  
TA6 4PZ

#### Cannington campus

Rodway  
Cannington  
Somerset  
TA5 2LS

## UCS course list

### COMPUTING AND DIGITAL TECHNOLOGIES AND PROFESSIONAL STUDIES

**Computing and Digital Technologies**  
BSc (Hons)

**Computing and Digital Technologies**  
Foundation Degree

**Computing and Digital Technologies**  
BSc (Hons) Top-up

**Business Management**  
HNC/HND

**Management and Leadership**  
Level 5 Award /  
Certificate / Diploma

**People Management Associate Diploma**  
Level 5 Diploma

**Education & Training**  
Level 4 Certificate

**Education & Training**  
Level 5 Diploma

**Certificate in Education**  
Level 5 Certificate

### PGCE

Level 6 Diploma

**Counselling Practice**  
Level 4 Diploma

**Psychotherapeutic Counselling**  
Level 5 Diploma

### Apprenticeships

**Project Manager**  
Level 4

**Operations/Departmental Manager**  
Level 5

**HR Consultant/Partner**  
Level 5

**Data Analyst**  
Level 4

**Cyber Security Technologist**  
Level 4

**Software Developer**  
Level 4

**Network Engineer**  
Level 4

**Digital Technology Solutions**  
Level 6 Degree (subject to approval)

### LAND-BASED

**Agricultural Management**  
Foundation Degree

**Agricultural Management**  
BSc (Hons) Top-up

**Animal Management and Wildlife Conservation**  
BSc (Hons)

**Animal Management and Wildlife Conservation**  
Foundation Degree

**Animal Management and Wildlife Conservation**  
BSc (Hons) Top-up

**Animal Management**  
Level 4 Professional Certificate

**Wildlife Conservation**  
Level 4 Professional Certificate

### Apprenticeships

**Agriculture**  
Level 4

*This course list is correct at time of print (March 2022).  
For information about all of our courses visit  
[www.somerset.ac.uk](http://www.somerset.ac.uk) where you can also  
request prospectuses for each subject area.*

## CONSTRUCTION, ENGINEERING, NUCLEAR & MOTORSPORT

### Construction & the Built Environment

HNC Level 4

### Construction & the Built Environment (Civil Engineering)

HNC Level 4

### Aeronautical Engineering

HNC Level 4

### Electrical & Electronic Engineering

HNC Level 4

### Manufacturing Engineering

HNC Level 4

### Mechanical Engineering

HNC Level 4

### General Engineering

HNC Level 4

### General Engineering

HND Level 5

### Motorsport Engineering

Foundation Degree

### Motorsport Technology

BEng (Hons) Top-up

### Apprenticeships

### Construction Quantity

### Surveying Technician

Level 4

### Construction Design and Build Technician

Level 4

### Construction Site Engineering Technician

Level 4

### Construction Site Supervisor

Level 4

### Engineering Manufacturing Technician

Level 4

### Process Leader

Level 4

### Nuclear Engineer

Level 6 Degree

## HEALTH, CHILDHOOD STUDIES, SPORT AND PUBLIC SERVICES

### Nursing (Adult)

BSc (Hons)

### Nursing (Mental Health)

BSc (Hons)

### Early Childhood Education and Care

BA (Hons)

### Early Childhood Education and Care

Foundation Degree

### Early Childhood Education and Care

BA (Hons) Top-up

### Early Years Senior Practitioner

Level 5 Diploma

### Health and Social Care

BA (Hons) Top-up

### Adult Care

Level 4 Diploma

### Leadership & Management for Adult Care

Level 5 Diploma

### Assistant Practitioner (Health)

Foundation Degree

(subject to approval)

### Sports Science with Sports Coaching Education

Foundation Degree

### Applied Sports Science and Coaching

BSc (Hons) Top-up

### Public Services and Criminology

Foundation Degree

### Apprenticeships

### Registered Nurse

Level 6

### Nursing Associate

Level 5

### Lead Practitioner in Adult Care

Level 4

### Leader in Adult Care

Level 5

### Healthcare Assistant Practitioner

Level 5

### Leadership and Management for Adult Care

Level 5

## CREATIVE ARTS

### Art & Design

Foundation Diploma

### Creative Fashion and Textiles

BA (Hons)

### Creative Fashion and Textiles

Foundation Degree

### Creative Fashion and Textiles

BA (Hons) Top up

### Fine Art

BA (Hons)

### Fine Art

Foundation Degree

### Fine Art

BA (Hons) Top-up

### Creative Digital and Graphic Design

BA (Hons)

### Creative Digital and Graphic Design

Foundation Degree

### Creative Digital and Graphic Design

BA (Hons) Top up

### Media Make-up

BA (Hons)

### Media Make-up

Foundation Degree

### Media Make-up

BA (Hons) Top-up

### Content Creation and Videography

Foundation Degree

(subject to approval)

### Music Production

HND

### Performance Arts

Level 4

### Apprenticeships

### Fashion & Textiles Product Technologist

Level 4

### Access to HE

### Nursing, Midwifery and Healthcare

(subject to approval)

### Science

(subject to approval)

### Social Science)

(subject to approval)

### Computing

(subject to approval)

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