

UNIVERSITY OF  
Southampton

# ENGINEERING CONSTRUCTIONS OF THE FUTURE



**CIVIL ENGINEERING**

POSTGRADUATE TAUGHT COURSES 2020

FOUNDING  
MEMBER OF THE  
**RUSSELL  
GROUP**

# CHOOSE SOUTHAMPTON



**Top 100**

global university\*



**Top 20**

UK university\*\*

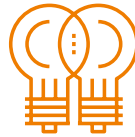


**Top 10**

in the UK for  
research intensity\*\*\*

Our  
**Large Structures  
Testing  
Laboratory**

accommodates single and  
double-storey facilities  
for testing structures,  
components and materials  
at a range of scales



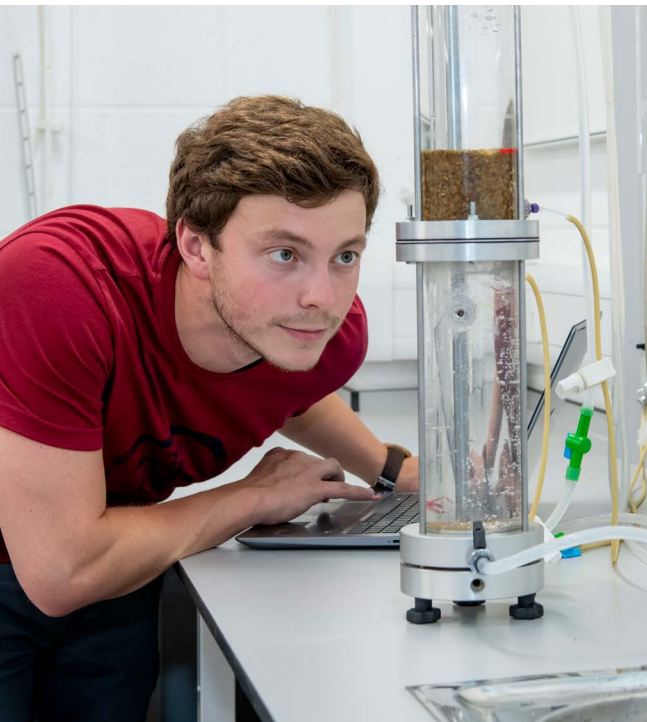
**1st**

for research  
power in General  
Engineering\*\*\*

Our  
**geotechnical  
centrifuge**

enables 'whole life'  
long-term behaviour  
of infrastructure to be  
simulated and observed

\*QS World University Rankings, 2020 \*\* Complete University Guide, 2020 \*\*\* Latest REF, 2014



“Southampton was perfect for me; it has a fantastic reputation and is a very well respected Russell Group university for civil engineering. More specifically, the department has one of the largest geotechnical departments in Europe. The new Boldrewood Campus houses brand new laboratories and equipment for geotechnics and infrastructure.”

**Matthew Vowles**  
MSc Civil Engineering, 2019



# RESEARCH EXCELLENCE

Civil Engineering at Southampton offers students a vibrant and multidisciplinary research community working with our world-renowned academics. Our cutting-edge facilities and dedicated research groups provide the foundations for our research, education and enterprise activities.

Our Boldwood Innovation Campus is home to the new National Infrastructure Laboratory (NIL), a major facility in the new UK Collaboratorium for Research on Infrastructure and Cities, a network of 13 universities in the UK.

The NIL is tasked with finding ways of improving the efficiency of maintaining and upgrading infrastructure. The building houses five engineering laboratories. There are new geotechnical, materials and energy laboratories, a 30m x 15m strong floor for testing structural components and assemblies at full scale, and a cutting-edge 6m diameter geotechnical centrifuge.

We have research expertise in:

- Geomechanics and Environmental Geotechnics
- Structures and Solid Mechanics
- Transportation
- Water and Environment



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We have provided the National Traffic Control Centre (NTCC) with methods to forecast traffic flows on UK motorways



We work with some of the world's largest utility companies to generate renewable bioenergy and recover resources from waste

Our geotechnical engineering expertise has created innovative methods of monitoring, modelling and analysis, which are improving transport infrastructure in the UK



We lead **Track to the Future**, a £5.2m EPSRC project which aims to improve railway track performance



# TAUGHT PROGRAMMES

## Key facts

Unless otherwise stated

### Key entry requirements:

**MSc Civil Engineering:** UK bachelors degree with upper second-class honours or higher in civil engineering  
**MSc Civil Engineering with Integrated Qualifying Year:** UK bachelors degree with upper second-class honours in engineering or a relevant science or technology subject. Relevant science or technology subjects are considered to be those in numerate and/or scientific disciplines related to engineering (e.g. physics, mathematics, chemistry, geology). All applicants will need to demonstrate their competence at mathematics and preferably physics.

See international equivalent qualifications

[www.southampton.ac.uk/pg/entry](http://www.southampton.ac.uk/pg/entry)

**English language:** band B, IELTS 6.5 overall, with a minimum of 5.5 in all components. For more information, visit [www.southampton.ac.uk/pg/](http://www.southampton.ac.uk/pg/)

**Assessment:** examinations, presentations, coursework and dissertation

**Duration:** MSc Civil Engineering: 1 year  
MSc Civil Engineering with Integrated Qualifying Year: 2 years

**Start date:** September

**Applying:** University application form with transcripts and two references

**Closing date:** 31 July

**Fees and funding:** [www.southampton.ac.uk/pg/fees](http://www.southampton.ac.uk/pg/fees)

Our MSc Civil Engineering and MSc Civil Engineering with Integrated Qualifying Year provide you with the tools to solve problems in building design, water supply, infrastructure, structural and bridge engineering, geotechnical engineering, and earthquake engineering to enable our world to be resilient under the pressures of increasing urbanisation, climate change, and natural disasters.

We offer two programmes:

- MSc Civil Engineering: a one-year masters for those with an undergraduate degree in Civil Engineering
- MSc Civil Engineering with Integrated Qualifying Year: a two-year conversion pathway for non-civil engineering graduates.

Each year is divided into two semesters. Each semester, you will select from a range of specialist modules, including earthquake engineering and groundwater hydrology and contamination. You also have the option to develop your knowledge of project economics, and law and contracts.

You'll be taught to apply the latest analysis tools in the design of buildings, bridges, roads, foundations, flood defences, water supply and treatment systems and renewable energy systems by world-leading researchers.

Practical sessions form a large part of the course. Depending on your module choice, you will have access to specialist facilities, including large structures, hydraulics and geotechnical laboratories. You will also complete a final research project to evolve your critical-thinking and technical expertise.

Cutting-edge topics that you could be involved in for your MSc dissertation include:

- nonlinear structural analysis
- structural mechanics
- seismic analysis and design of structures and bridges
- coastal flood defence
- nanotechnology in water treatment

- railway systems
- underground structures
- geotechnical engineering.

Both our MScs in Civil Engineering will help you meet the further learning requirements to become a Chartered Engineer, as they are accredited by the Institution of Civil Engineers.

If you live in the UK or EU you will have the option to take the MSc with an 11-month industrial placement. This provides you with the opportunity to carry out up-to-the-minute applied research on real projects, whilst working with major Civil Engineering companies and research centres.

You will be prepared for employment as a graduate engineer in the civil engineering industry. Students graduating from our MSc courses obtain employment as graduate engineers with many leading employers in the civil engineering industry, both consultants and contractors and also regulatory authorities and local authorities.

In addition to careers in civil engineering, the transferrable skills that you gain will make you attractive to a wide range of graduate recruiters, from financial services through to IT and management consultancy.



## Find out more:

[www.southampton.ac.uk/pgengineering](http://www.southampton.ac.uk/pgengineering)

Or to have specific questions answered:

**T:** +44 (0)23 8059 9699

**E:** [enquiry@southampton.ac.uk](mailto:enquiry@southampton.ac.uk)

# TAUGHT PROGRAMMES

## MSc Civil Engineering with Integrated Qualifying Year only (two years)

**Programme Director:**  
**Dr Antonis Zervos**

**Deputy Director:**  
**Dr Sheida Afshan**

This degree is a two-year conversion pathway for non-civil engineering graduates.

### All modules in the qualifying year are compulsory and include:

- Structural Analysis
- Structural Design and Materials
- Design 2
- Highway and Traffic Engineering
- Soil Mechanics
- Hydraulics
- Urban Water and Wastewater Engineering
- Railway Engineering and Operations

“As an international student, I first came here for pre-sessional classes to improve my English and found there was plenty of support and interesting activities to prepare me for my Masters.”

**Bo Liu**

MSc Civil Engineering, 2018  
(pictured overleaf)

## MSc Civil Engineering (one year)

**Programme Director:**  
**Dr Antonis Zervos**

**Deputy Director:**  
**Dr Sheida Afshan**

### Compulsory modules include:

- Data Analysis and Experimental Methods for Civil and Environmental Engineering
- MSc Research Project

### Optional modules include:

- Geotechnical Engineering
- Structural Engineering
- Applied Hydraulics
- Railway Engineering and Operations
- Coastal and Maritime Engineering and Energy
- Waste Resources Planning and Management
- Advanced Structural Engineering
- Advanced Foundation Engineering
- Coastal Flood Defence
- Earthquake Engineering
- Energy Performance Assessment of Buildings
- Project Economics and Management
- Groundwater Hydrology and Contamination
- Advanced Wastewater Engineering
- Water Resources Planning and Management
- River Engineering
- Transport Management and Safety
- Highway and Traffic Engineering
- Advanced Finite Element Analysis



Our programmes are accredited by the Institution of Civil Engineers, and will help you meet the further learning requirements to become a Chartered Engineer.

## HOW DO I APPLY?

Before applying for postgraduate taught study, you should:

- check you meet the entry requirements
- if applicable, ensure that you meet any special requirements for international students
- identify how you will fund your postgraduate study
- obtain supporting documentation to include as part of your application

## APPLY NOW

Apply to Southampton for postgraduate taught degrees and for more information on PhD opportunities



**Find out more:**

[www.southampton.ac.uk/pg](http://www.southampton.ac.uk/pg)



## Find out more:

[www.southampton.ac.uk/  
pgengineering](http://www.southampton.ac.uk/pgengineering)

UK enquiries:

[enquiry@southampton.ac.uk](mailto:enquiry@southampton.ac.uk)

+44 (0)23 8059 9699

International and EU enquiries:

[international@southampton.ac.uk](mailto:international@southampton.ac.uk)

+44 (0)23 8059 9699



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