



**QUEEN'S
UNIVERSITY
BELFAST**

CIVIL, STRUCTURAL AND ENVIRONMENTAL ENGINEERING

STRONG INDUSTRIAL ENGAGEMENT

Employers are engaged in teaching and we have more Knowledge Transfer Partnerships than any other UK university.

INDUSTRY READY GRADUATES

High employment rates.

DESIGN THAT IS CHALLENGING, AWARD WINNING AND FUN

**SHAPING A
BETTER WORLD**
SINCE 1845



CIVIL, STRUCTURAL AND ENVIRONMENTAL ENGINEERING



Why study Civil, Structural and Environmental Engineering?

Civil Engineering was one of the founding degrees at Queen's, making it one of the oldest in the UK and Ireland. However, it remains one of the most sought-after careers with the potential to solve the challenges facing modern society.

It is a broad discipline that deals with the very infrastructure of society from our bridges to our water and energy resources, and our roads. Our degree programmes are concerned with the planning, design, construction, sustainability, management and maintenance of this infrastructure. Fields of activity include structures, transportation, foundations and water engineering.

You will have the opportunity to tailor your studies according

to your skills and interest after a common first year with our three complementary pathway programmes:

- Civil Engineering
- Structural Engineering with Architecture
- Environmental and Civil Engineering

However, you choose to specialise, you'll be tackling some of the biggest challenges of the modern world, such as achieving sustainable living in an increasingly urbanised society.

As the demands on resources like water, energy and land increase, there is a strong need for qualified Civil Engineers with the relevant technical skills but who also possess an ethical awareness of the environmental impact of the projects they undertake.



Professor Gerry Hamill
Head of Civil Engineering

Who will be teaching you?

Queen's is a leader in civil engineering research, and our exceptional teaching is informed by the latest research into global challenges like environmentally sustainable urban development and prosperity, and technological innovation. You'll learn from staff and guest lecturers who are engaged in international, award-winning research and practice. Our exceptional teaching is reflected in our subject rankings: in the Guardian University Guide 2019, we are ranked 10th in the UK for Civil Engineering. We're also ranked in the top 200 universities in the world for Engineering and Technology (Times Higher Education World University Rankings 2018).

Your study options

Our pathway options offer you the flexibility to choose the right direction for your future career and include Civil/Environmental/Structural Engineering with a Year in Industry, which incorporates a placement year with a top employer.

There are further opportunities to work or study abroad through the International Association for the Exchange of Students for Technical Experience (IAESTE), Erasmus and Study USA exchange programmes.

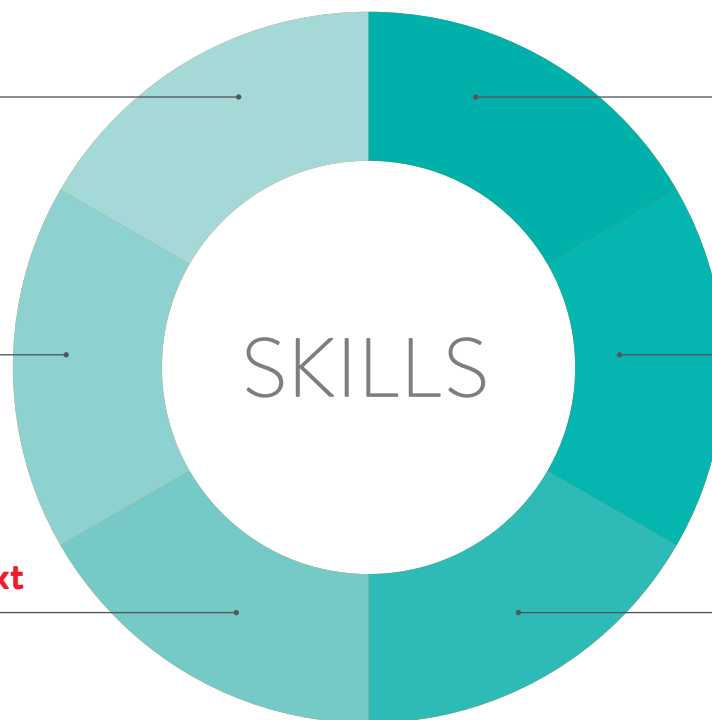
There are two honours degree structures available in Civil Engineering: BEng and MEng, along with an MEng honours degree in either Environmental and Civil Engineering, or Structural Engineering with Architecture. Many of the elements of the BEng are in common with the MEng programme, and you'll have the opportunity to transfer between the two pathways, subject to meeting the appropriate programme requirements at the end of Stage Two.

WHAT YOU'LL LEARN

Science and Mathematics

Engineering Analysis

Economic, legal, social, ethical and environmental context



Design

Engineering Practice

Professionalism and other transferable skills

Our subject areas

Stage 1: You will study the fundamentals of civil engineering theory and practice. This forms the transition from the basic mathematics and sciences studied at secondary level to engineering applications. At the end of Stage 1 all students take part in a week-long residential surveying field course.

Stage 2: This is a very important year of study, when the major knowledge of civil engineering subjects and their application within design are developed.

Students following the sandwich degree will take an Industrial Placement Year between Stages 2 and 3 for both BEng and MEng students, or between Stages 3 and 4 for MEng students.

Meanwhile, Structural Engineering with Architecture students are introduced to site layout and design, architectural design and the application of communications in a professional context is further enhanced.

Stage 3: Theory is applied in a professional context in Stage 3. Students are introduced to management and economics within the civil engineering profession. All students undertake a major individual research project. BEng students graduate at the end of this year.

Stage 4: The MEng is an Integrated Master's programme, therefore Stage 4 is set at Master's level. In this year students develop knowledge of building construction and business management. They work in teams on large integrated designs, which form a substantial part of their studies. They broaden their knowledge through a wide choice of modules, while being required to take relevant core civil engineering subjects to advanced level.

Professional accreditation

Civil Engineering at Queen's is an academic partner of the Institution of Civil Engineers, and our degrees are accredited by the Institution of Civil Engineers, the Institution of Structural Engineers, the Chartered Institution of Highways and Transportation, and the Institute of Highway Engineers

The BEng degree is accredited as partially satisfying the educational base for a Chartered Engineer (CEng). A programme of accredited Further Learning will be required to complete the educational base for CEng. All Queen's MEng degrees are accredited as fully satisfying the educational base for a Chartered Engineer (CEng). www.jbm.org.uk

'Scientists investigate that which already is; Engineers create that which has never been.'

Albert Einstein

OUR PEOPLE



I am from Lancaster, England and have been at Queens studying Civil Engineering for the past 3 years. At university, my passion for civil engineering has continually grown, owing to the unwavering support from lecturers and the interesting projects we have been exposed to. The knowledge and transferable skills I have gained from Queens University helped me to easily adjust to working life at my industrial placement that I am currently completing at AECOM.

Philippa Thiele
Civil Engineering MEng



Queen's has provided me with a vast number of opportunities to further my education and adapt and grow my abilities as an engineer. In lectures you learn the theory behind construction and materials and we apply that theory in extensive practical applications. With access to concrete mixing and testing facilities, to extensive hydraulic laboratories, Queen's helps prepare you for all aspects of a career in engineering. I have found that Queen's has prepared me greatly for future employment through the multitude of collaborative projects undertaken with a wide range of architects and other engineering disciplines.

Sam Cowle
Structural Engineering with Architecture MEng



I started at Taylor and Boyd LLP a Civil and Structural Engineering Consultancy straight after graduating from Queen's in 2017. At Queen's, you have the opportunity to meet various industry professionals that can provide assistance and expertise throughout your University Design projects. Learning about their experience and day to day tasks assists you in the preparation of your future career. I had the chance not only to focus on Structural Engineering but study geotechnical engineering and even get involved in laboratory research. Having the chance to study all aspects of Civil and Structural Engineering lets you understand the efforts of all team members within real-world construction projects.

Laura Moore
Structural Engineering with Architecture MEng
Graduate Structural Engineer at Taylor and Boyd LLP

Your career prospects

Our strong links with employers give you access to a range of opportunities, for example the opportunity for sponsorship through the national QUEST Scholarship Scheme. We also have a Civil Engineering Advisory Panel, which includes members from the major employers.

Our graduates can not only choose from a range of rewarding and challenging careers in civil engineering, but are also sought after in accountancy, commerce, education and research.

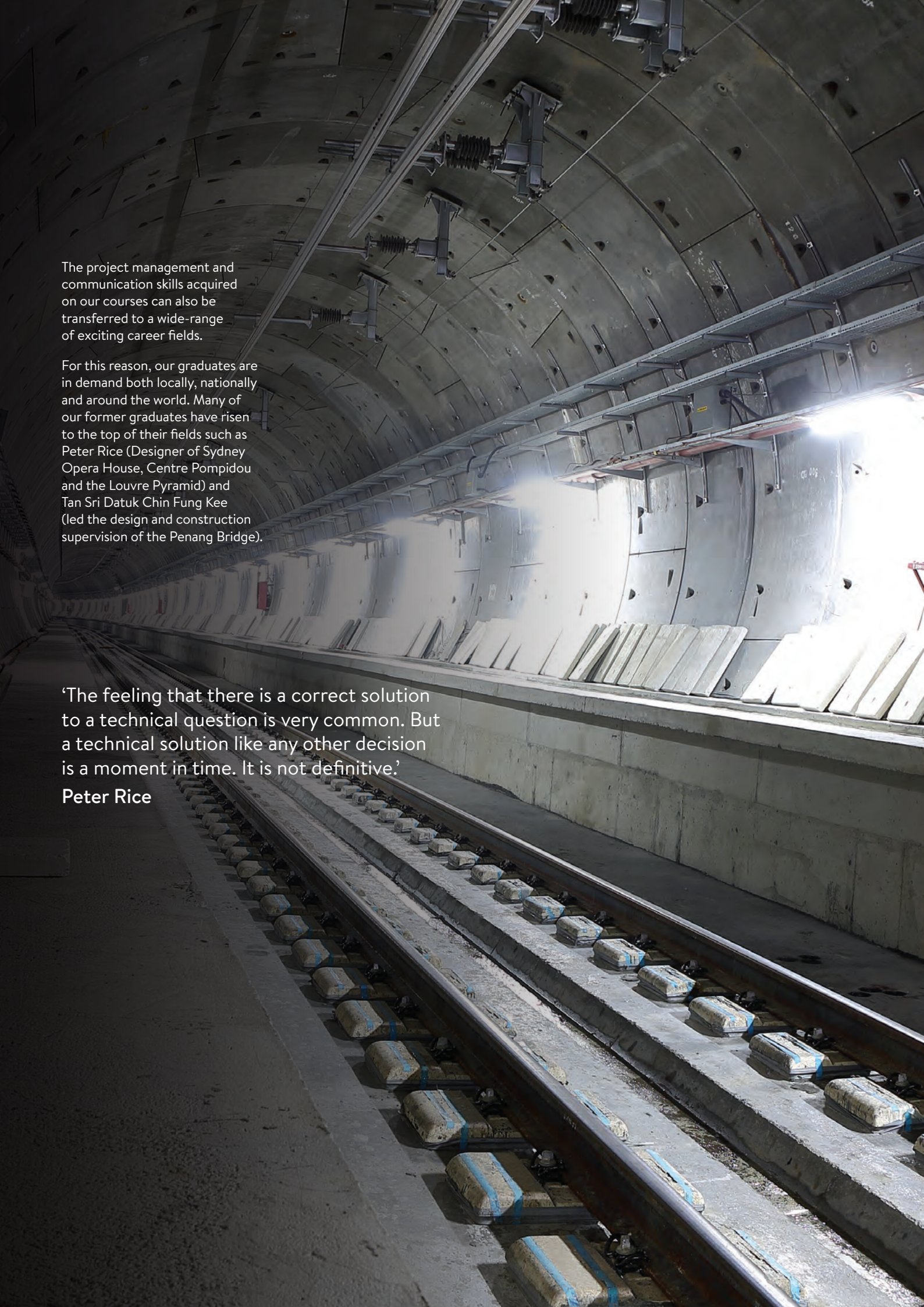
All major building projects require structural engineers for concept, design and construction. They complement the expertise of architects and, with their broad knowledge of structures, materials and services, Structural Engineering with Architecture graduates are ideally suited to this role. They may also expect to find employment in the expanding area of civil engineering, building management, maintenance and refurbishment.

Our graduates are also to be found in many other areas of employment where the skills and discipline of evaluating facts, decision-making and management have provided them with the basis for rewarding and interesting careers.

Studying for one of our degrees will help you develop the core skills and employment related experiences that are valued by employers, professional organisations and academic institutions.

Further study is also an option open to our graduates – graduates can choose from several Master's programmes as well as a comprehensive list of research topics; see the School website for further information.



A photograph of a large, curved tunnel under construction. The tunnel's interior is lined with concrete segments. On the right side, there are overhead power lines and support structures. The floor of the tunnel features railway tracks with concrete sleepers and metal rails. The perspective is from the end of the tunnel, looking down its length, with bright light coming from the right side, creating a strong contrast and highlighting the curved walls and tracks.

The project management and communication skills acquired on our courses can also be transferred to a wide-range of exciting career fields.

For this reason, our graduates are in demand both locally, nationally and around the world. Many of our former graduates have risen to the top of their fields such as Peter Rice (Designer of Sydney Opera House, Centre Pompidou and the Louvre Pyramid) and Tan Sri Datuk Chin Fung Kee (led the design and construction supervision of the Penang Bridge).

‘The feeling that there is a correct solution to a technical question is very common. But a technical solution like any other decision is a moment in time. It is not definitive.’

Peter Rice

**To discuss your options in more detail
or if you have any questions contact:**



UK, Ireland and EU
Louise McElvanna
l.mcelvanna@qub.ac.uk
+44 (0) 28 90975502



Rest of the World
Anna Lyttle
a.lyttle@qub.ac.uk
+44 (0) 28 90975469

FIND OUT MORE ABOUT OUR CIVIL, STRUCTURAL AND ENVIRONMENTAL
ENGINEERING COURSES:

<http://go.qub.ac.uk/civilstructural>

CONTACT US

askeps@qub.ac.uk
www.qub.ac.uk



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