



"The course opened new sources of thinking from all aspects of industry, which were not limited to the construction sector. This has enabled me to take a more holistic view in the decision-making process."

**John Hannah,**  
CEM student, 2011-2013



"The opportunity to discuss processes and innovations within the industry with such a range of different companies, from small independent firms to multinationals and Government bodies, has enabled me to increase the breadth of my knowledge and opened up opportunities to become involved myself."

**Angela Beckwith,**  
CEM student, 2012-2014

"The strong support the CEM programme has received is a clear indication of the importance that those at the very top of industry are placing on educating the future leaders of construction and the faith that they have in the University of Cambridge to be able to do so."



**Professor Dame Anne Dowling,**  
President of the Royal  
Academy of Engineering

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## Construction Engineering Masters World Class Leadership Programme



2016 - 2018 Prospectus



## Construction Engineering Masters

delivered by

**Department of Engineering**

in association with

**Cambridge Judge Business School**

The course explores the future of construction, seeking new paradigms and innovative models that draw on the latest research in management, construction technologies and processes.

The course is a two-year part-time research degree targeted at students who have several years' professional experience and have already attained a leadership role or been identified as potential leaders in their organisations.

This part-time format enables students to continue with their professional careers whilst studying. It is designed to contribute to the students' own career development and enhance the performance of their companies.

The course prepares students to act as agents of change in the industry, helping them to improve the performance, efficiency and sustainability of the construction sector by applying state-of-the-art technical knowledge, skills and techniques.

## Aims

The Construction Engineering Masters (CEM) programme encompasses the full spectrum of the construction industry. The topics covered in the course range from the high-level financing requirements of mega-projects through to the latest innovations in analysis, design and materials technology.

The course aims to revolutionise construction by challenging widely held assumptions.

## Course Outcomes

This programme is multidisciplinary. It covers the full range of construction activities including buildings, major civil works, transport, infrastructure, energy and water. Each area produces its own unique challenges – yet core methods and practices apply to all.

The fundamental goal is to further educate and inspire emerging leaders in the industry so that they can take the latest technical and managerial skills back to the workplace to improve the performance, efficiency and sustainability of the construction sector, whilst promoting innovation and new technologies.







**“The course changed my way of thinking ... it gave me the space to look at things differently ... I’m now applying the skills learnt to meet challenges at work ...”**

**Karl Wilkinson,**  
CEM student, 2013-2015



**“There cannot be a course in any other discipline that manages to attract the level of industry experts and high-flyers as well as academics”**

**Scott Kelley,**  
CEM student, 2011-2013

## Course Themes

The CEM programme focuses on the following themes:

- **Finance, planning and procurement**
- **Advanced construction management and methods**
- **Advanced construction technologies**
- **Design for construction, value and performance**
- **Sector specialisation**
- **Innovation, research and the future of construction**
- **Leadership**

In addition, the themes of sustainability, whole-life performance and whole-systems thinking are woven through the entire course.

## Course Structure

The Construction Engineering Masters programme is a two-year part-time course. Students spend a total of seven residential weeks in Cambridge - four weeks in the first year and three in the second. Attendance for all weeks is compulsory.

A typical residential week includes:

- lectures, seminars and workshops
- group projects and presentations
- individual meetings with Supervisors and the Director of Studies.

The course is delivered by a combination of academic staff and industry experts who provide lectures and seminars on the latest technologies and cutting-edge ideas.

Students become full members of Queens’ College – a college founded in 1448 that sits astride the River Cam with its two halves joined across the river by the famous Mathematical Bridge. The college provides accommodation for the residential weeks.

## Course Assessment

The course is primarily assessed through students’ written work, which is completed between residential weeks. The course assignments are as follows:

- one 5,000-word case study
- two 3,000-word essays
- one 15,000-word dissertation.

Topics may be based on an individual’s interests, experience and current employment, and are selected with guidance from the Director of Studies.



## Speakers, Contributors and Supervisors

**Our leading industry and academic experts include:**

**Mike Barlow**  
Partner, *MacRoberts*

**Mark Bew**  
Chairman, *BIM Task Group*

**Andrew Bowen**  
Engineering Director, *Dubai Ports*

**Dr Ioannis Brilakis**  
*Cambridge University*

**Simon Bucknall**  
*The Art of Connection*

**Dr Azad Camyab**  
CEO, *Pearlstone Energy*

**Tristram Carfrae**  
Director, *Arup*

**Keith Clarke**  
Former CEO, *Atkins*

**Dr Mohammed Elshafie**  
*Cambridge University*

**Julian Foster**  
Delivery Director, T3/T5,  
*Heathrow Airport Ltd*

**Steve Gooding**  
Director, *RAC Foundation*

**Paul Gosling**  
Journalist, Researcher

**Prof. Peter Guthrie**  
*Cambridge University*

**Peter Hansford**  
UK Chief Construction  
Adviser

**Julian Huppert**  
Former MP for Cambridge

**Dr Benn Lawson**  
*Judge Business School*

**Prof. Christoph Loch**  
*Judge Business School*

**Prof. David Mackay**  
*Cambridge University*

**Prof. Lord Robert Mair**  
*Cambridge University*

**Andrew McNaughton**  
Technical Director, *HS2*

**Dr Graham McShane**  
*Cambridge University*

**Heiko Meyer**  
VP Strategy/Portfolio  
Management, *Wintershall*

**Prof. Campbell Middleton**  
*Cambridge University*

**Prof. John Miles**  
*Cambridge University*

**Brad Miller**  
Development Director,  
*Manchester Airports Group*

**Dr Darryl Murphy**  
Global Infrastructure, *KPMG*

**Doug Oakervee**  
Former Chairman, *HS2*

**Liam O’Keefe**  
MD, *Credit Agricole and Calyon*

**Richard Patterson**  
*Mott MacDonald*

**Dr David Pencheon**  
Director, *NHS Sustainable Development Unit*

**Nick Raynsford**  
Former MP and Honorary  
Vice-Chairman of the  
*Construction Industry Council*

**Roger Ridsdill Smith**  
Senior Partner, *Foster + Partners*

**Peter Rogers, CBE**  
Partner, *Lipton Rogers LLP*

**Richard Saxon CBE**  
*Consultancy for the Built Environment*

**Prof. Stefan Scholtes**  
*Judge Business School*

**Paul Shone**  
HES Manager Global  
Technology, *Chevron Energy*

**Geoffrey Spence**  
CEO, *Infrastructure UK*

**Andrew Wolstenholme**  
CEO, *Crossrail*

**John Wright**  
Partner, *Goodman Derrick LLP*

## Dates and Fees

### Residential weeks

Students spend a total of seven residential weeks in Cambridge during the two years of the programme.

Residential weeks 2016 - 2018	
<b>2016</b>	11-16 September 11-16 December
<b>2017</b>	2-7 April 2-7 July 10-15 December*
<b>2018</b>	25-30 March* 1-6 July* * (provisional dates)

### Course fees

The fees for the entire two-year CEM programme are as follows:

Costs†	Total
<b>University and College Fees</b>	£22,236
<b>Accommodation</b> (based on an average of £250 per residential week)	£1,750
<b>Course total</b> (for the entire two years)	<b>£23,986</b>

† Please note that college fees and accommodation rates are set independently by Queens’ College. The above costs exclude meals.

Most of our students obtain full or partial funding from their employer. Where this is not possible, bursaries may be available for a proportion of the tuition fee. Please contact the CEM Programme Manager for more information.

You should consider carefully your capacity for balancing personal and professional commitments before submitting your application.



### How to apply

To apply for this course you will need to have:

- a first or upper second class UK honours degree or overseas equivalent in a construction related discipline
- at least three years’ professional experience.

If you have alternative experience or qualifications, you should contact the CEM office for advice. We are looking for people who are passionate about making a difference.

Applications for the Construction Engineering Masters programme are managed online by the Institute of Continuing Education at the University of Cambridge. To apply online please click the link on the Construction Engineering Masters home page.

### To find out more

Visit our website:

**[www.construction.masters.cam.ac.uk](http://www.construction.masters.cam.ac.uk)**

Email: **[cem.admin@construction.cam.ac.uk](mailto:cem.admin@construction.cam.ac.uk)**

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