

PROGRAMME SPECIFICATION

KEY FACTS

Programme name	MSc in Temporary Works and Construction Method Engineering
Award	MSc
School	Mathematics, Computer Science and Engineering
Department or equivalent	Civil Engineering
Programme code	PSTWCM
Type of study	Part Time
Total UK credits	180
Total ECTS	90

PROGRAMME SUMMARY

Temporary works refers to works enabling the construction of, protection, support or provision of access to permanent works which might or might not remain in place at the completion of a construction project. Examples of temporary works include structures such as gantries for heavy plant, materials or accommodation as well as supports for partially completed or partially dismantled structures, excavations and accesses. The course will be run by the Centre of Excellence in Temporary Works and Construction Method Engineering which is sponsored by the Temporary Works Forum, which promotes best practice within the UK construction industry.

The course will address the regulatory background to temporary works for construction, the design of geotechnical, structural and marine temporary works, demolition, plant, safe working methods and access works. You will gain both the technical understanding to undertake safe but cost effective designs for a full range of temporary works and also a good understanding of the wide range of plant and techniques that can be employed. The programme will be delivered by a combination of industry experts providing insights into current practice in temporary works and academic members of staff experienced in the theory underlying the design methods employed. The programme is delivered online. There will be an opportunity to attend visits to sites and practical exercises either face to face or virtually.

The programme aims to

1. Provide you with advanced knowledge in the design of temporary structural, geotechnical and marine structures.
2. Provide you with specialized knowledge of plant and appropriate working methods in the field of temporary works
3. Provide you with a clear understanding of the statutory obligations and regulatory framework controlling temporary works
4. Ensure that you understand the health and safety and CDM regulations and how they are applied to temporary works

Postgraduate Certificate

For all of you completing the Postgraduate Certificate in Temporary Works and Construction Method Engineering you will be able to examine the theories related to the design of temporary works and synthesis and apply these to the design of novel structures and the assessment of existing structures. You will have critical insight into

problems related to the design of one or more of the main types of temporary works and understand your statutory obligations and how to manage temporary works to ensure safety. You will also use a range of techniques to undertake your scholarly work.

Postgraduate Diploma

For all of you completing the Postgraduate Diploma in Temporary Works and Construction Method Engineering. In addition to the above you will examine the full range of possible temporary works structures to broaden your expertise and skills. You will also evaluate critically the suitability of a range of plant, techniques and forms of temporary works to provide appropriate critiques of knowledge and techniques related to the selection of suitable temporary works and appropriate design methods and analysis techniques to ensure safe and sustainable designs

MA /MSc

For all of you completing the MSc in Temporary Works and Construction Method Engineering you will demonstrate original application of knowledge to the design of temporary works and in choice of approaches to practice. You will be engaged in research or scholarly activity that contributes new views to the safe and sustainable design of temporary works.

WHAT WILL I BE EXPECTED TO ACHIEVE?

On successful completion of this programme, you will be expected to be able to:

Knowledge and understanding:

- Assemble and critically evaluate the scientific principles relevant to temporary works and construction method engineering
- Formulate the particular commercial and safety constraints that apply to temporary works and propose the level of professional and ethical conduct that is required to satisfy these in temporary works and construction method engineering
- Create proposals showing where temporary works and construction method engineering fits within the context of construction management and business practices.
- Appraise and evaluate the regulatory requirements governing temporary works activities and the various roles these impose.
- Evaluate risk issues in the context of temporary works and construction method engineering, including health & safety, environmental and commercial risk.
- Formulate an overview of plant and appropriate working methods in the field of temporary works
- Review current practices and their limitations, and the potential of likely new developments
- Discuss the role of the temporary works coordinator within a construction team and the ability to exercise initiative and personal responsibility, as a team member or leader.

Skills:

- design, construct, implement, and manage temporary works systems including those where information is incomplete or uncertain and to understand the effect this may have on your design.
- apply the latest codes of practice and guidelines used for temporary works design
- generate innovative designs for products, systems, components or processes related to temporary works.

- critically evaluate current problems inherent in temporary works and construction method engineering informed by the state of the art in this field.
- apply appropriate engineering analysis methods to solve complex problems relating to temporary structural, geotechnical and marine structures and assess their limitations
- Critically evaluate the advantages of new temporary works systems and materials
- Collect and analyse research data and use appropriate engineering analysis tools in tackling unfamiliar problems, such as those with uncertain or incomplete data or specifications, by the appropriate innovation, use or adaptation of engineering analytical methods
- problem solve, communicate, retrieve information , work with others, and make effective use of general IT facilities

Values and attitudes:

- discuss how temporary works and construction method engineering activities should promote sustainable development and apply quantitative techniques to the assessment of sustainability where appropriate
- Plan self-learning and improve performance, as the foundation for lifelong learning/CPD

This programme has been developed in accordance with the Framework for Higher Education Qualifications in England, Wales, and Northern Ireland.

HOW WILL I LEARN?

The rationale for learning, teaching and assessment strategies is predicated on the modelling of an active approach to learning in education. Thus, the online learning and teaching strategies for each module will encompass a range of methods which support this objective, including lectures, workshops, group work, case studies, problem-based learning, presentations, and enhanced learning, self-reflection, and peer review.

Workshops, group work, case studies and problem-based learning will be used to build your ability to critically review and assess options for design and assessment of temporary works. These teaching approaches will require you to prepare for group sessions so that you can develop your knowledge further through active engagement. This will also require you to present your work occasionally, participate in peer review sessions and work in teams. There will be a strong practical element with site visits and opportunities to experience decision making in the field; these will be available in person or virtually. Active engagement will be promoted through the use of online forums and by exchanging material with colleagues digitally.

Your learning will be supported by an online learning environment Moodle which will provide resources for independent learning, such as further reading, links to wider sources of information and quizzes for self-assessment.

The learning and teaching approaches will require independent learning through your own reading which will be guided towards both greater understanding and critical evaluation of generic issues and supported by the online learning environment described above. You will be encouraged to use site visits to widen your understanding of temporary works and to examine and critically assess precedents for design in ongoing temporary works activities.

For each module taught in a single term you will spend 4 hours/week in lectures and in addition you should spend 12 - 16 hours in self-studying, reading, and working on assigned coursework depending on your entrance level and prior experience.. Staff will be available for individual face-to-face meetings or through Microsoft Teams if needed to help guide you in your study and general lessons learned material will be posted in online fora.

WHAT TYPES OF ASSESSMENT AND FEEDBACK CAN I EXPECT?

Assessment and Assessment Criteria

Assessment for the programme is based on coursework and written examinations. The assessment strategy is that main fundamental and theoretical topics are primarily assessed by written examinations and applied (practice oriented) topics are assessed by design projects and in some case practical exercises.

The research project is assessed through a dissertation, which is significant written report on an independent piece of work that will enable you to apply knowledge, critical thinking and analysis to a topic which has either not been covered in the taught modules or not in such depth. The topic of the projects may be inspired by current research within civil engineering or by the needs of industry collaborators

Assessment Criteria are descriptions, based on the intended learning outcomes, of the skills, knowledge or attitudes that you need to demonstrate. Grade- Related Criteria are descriptions of the level of skills, knowledge or attributes that you need to demonstrate in order achieve a certain grade or mark in an assessment, providing a mechanism by which the quality of an assessment can be measured and placed within the overall set of marks. Assessment Criteria and Grade-Related Criteria will be made available to you to support you in completing assessments. These may be provided in programme handbooks, module specifications, on the virtual learning environment or attached to a specific assessment task.

Feedback on assessment

Feedback will be provided in line with our Assessment and Feedback Policy. In particular, you will normally be provided with feedback within three weeks of the submission deadline or assessment date. This would normally include a provisional grade or mark. For end of module examinations or an equivalent significant task (e.g. an end of module project), feedback will normally be provided within three weeks. The timescale for feedback on final year projects or dissertations may be longer. The full policy can be found at: https://www.city.ac.uk/_data/assets/pdf_file/0008/68921/assessment_and_feedback_policy.pdf

Assessment Regulations

In order to pass your Programme, you should complete successfully or be exempted from the relevant modules and assessments and will therefore acquire the required number of credits.

The Pass mark for each module is 50%. You need to attain a 50% mark for all assessment components.

If you fail an assessment component or a module, the following will apply:

1. Compensation: where you fail up to a total of 20 credits at first or resit attempt (15 for a Postgraduate Certificate), you may be allowed compensation if:
 - Compensation is permitted for the module involved (see the module specification), and
 - It can be demonstrated that you have satisfied all the Learning Outcomes of the modules in the Programme, and
 - A minimum overall mark of no more than 10 percentage points below the module pass mark has been achieved in the module to be compensated, and
 - An aggregate mark of 50% has been achieved overall.

If you receive a compensated pass in a module you shall be awarded the credit for that module. The original component marks shall be retained in the record of marks and the greater of the original module mark and the minimum pass mark for the module shall be used for the purpose of calculation towards the Award.

2. Resit: you will normally be offered one resit attempt. However, if you did not participate in the first assessment and have no extenuating circumstances, you may not be offered a resit.

If you are successful in the resit, you will be awarded the credit for that module. The mark used for the purpose of calculation towards your Award shall be calculated from the original marks for the component(s) that you passed at first attempt and the minimum pass mark for the component(s) for which you took a resit.

If you do not satisfy your resit by the date specified you will not progress and the Assessment Board shall require that you withdraw from the Programme.

If you fail to meet the requirements for the Programme, but satisfy the requirements for a lower-level Award, then a lower qualification may be awarded as per the table below. If you fail to meet the requirements for the Programme and are not eligible for the award of a lower level qualification, the Assessment Board shall require that you withdraw from the Programme.

If you would like to know more about the way in which assessment works at City, please see the full version of the Assessment Regulations at:

http://www.city.ac.uk/data/assets/word_doc/0003/69249/s19.doc

WHAT AWARD CAN I GET?

Master's Degree:

	HE Level	Credits	Weighting (%)	Class	% required
Taught	7	120	67	With Distinction	70
Dissertation	7	60	33	With Merit	60
				With Pass	50

Postgraduate Diploma:

	HE Level	Credits	Weighting (%)	Class	% required
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Taught	7	120	100	With Distinction	70
				With Merit	60
				With Pass	50
<u>Postgraduate Certificate:</u>					
	HE Level	Credits	Weighting (%)	Class	% required
Taught	7	60	100	With Distinction	70
				With Merit	60
				With Pass	50

WHAT WILL I STUDY?

There are 8 core modules to be taken in addition to the dissertation. The number and credits required to gain an award are identified in the table below.

Module Title	SITS Code	Module Credits	Core/ Elective	Compensation Yes/No	Level
<i>Taught modules</i>					
Introduction to Temporary Works	EPM611	15	Core	Yes	7
Temporary Works Structures 1	EPM612	15	Core	Yes	7
Temporary Works Structures 2	EPM613	15	Core	Yes	7
Geotechnical Temporary Works	EPM614	15	Core	Yes	7
Groundwater Control	EPM615	15	Core	Yes	7
Temporary Works for Marine Construction	EPM616	15	Core	Yes	7
Temporary Works for Demolition and Alteration	EPM617	15	Core	Yes	7
Temporary Works for Plant and Access	EPM618	15	Core	Yes	7
<i>Research modules</i>					
Dissertation	EPM619	60	Core	No	7

You are required to complete all the taught modules successfully before progressing to the dissertation

TO WHAT KIND OF CAREER MIGHT I GO ON?

This programme is for those of you who wish to enhance your understanding of the problems specific to temporary works and construction method engineering. Temporary works are an important aspect of most construction projects and consequently a qualification in this field will have widespread application to all civil engineering fields, whether you are working as an on-site engineer or as a design office engineer. You could also go to the research arena conducting innovative research in the area of temporary works.

If you would like more information on the Careers support available at City, please go to:
<http://www.city.ac.uk/careers/for-students-and-recent-graduates>.

WHAT STUDY ABROAD OPTIONS ARE AVAILABLE?
This is an online programme.

WHAT PLACEMENT OPPORTUNITIES ARE AVAILABLE?
Not appropriate to the programme

WILL I GET ANY PROFESSIONAL RECOGNITION?
This degree is accredited as meeting the requirements for Further Learning for a Chartered Engineer (CEng) for candidates who have already acquired a partial CEng accredited undergraduate first degree.
See www.jbm.org.uk for further information

HOW DO I ENTER THE PROGRAMME?
Qualifications: Minimum Lower Second Class (2:2) degree or equivalent overseas qualification in Civil Engineering or equivalent degree.
For those overseas applicants, whose first language is not English or their country has not been exempted from the English language requirement by the UK Home Office, they will need to provide one of the following English test qualifications:
IELTS: 6.5 in all categories
TOEFL 92 (minimum of 21 in Listening, 23 in Reading, 22 in Speaking, and 24 in Writing)

Version: 4.0
Version date: May 2021
For use from: 2021-22