

## Course Specification

Course Summary Information		
1	<b>Course Title</b>	MSc Civil Engineering
2	<b>Course Code</b>	PT1341
3	<b>Awarding Institution</b>	Birmingham City University
4	<b>Teaching Institution(s)</b> (if different from point 3)	
5	<b>Professional Statutory or Regulatory Body (PSRB) accreditation</b> (if applicable)	

6	Course Description
	<p>The MSc Civil Engineering prepares students for the highest level of achievement in Civil Engineering and beyond. It provides a broad coverage of the state-of-the-art in contemporary Civil Engineering research and practice, equipping graduates with the skills needed to succeed in the contemporary marketplace.</p> <p><b>What's covered in the course?</b></p> <p>The course covers a range of topics that define contemporary Civil Engineering practice and prepares students for the challenges of tomorrow. Emphasis is paid on key areas such as Structural Engineering, Geotechnical Engineering, and Hydrology and Water Engineering. As graduates are expected to develop their careers in leading roles in the industry, construction and project management aspects are also covered. Finally, the defining issues of 21<sup>st</sup> century Civil Engineering, sustainability and engineering for extreme climate events, are given particular prominence throughout the course.</p> <p>The MSc Civil Engineering is primarily aimed at candidates with an educational background (such as a BEng or BSc in Civil Engineering), and/or relevant professional experience in Civil Engineering or an associated discipline. In addition, candidates with an educational background in other engineering or science fields, architecture, or construction will be considered, subject to an entrance exam and/or interview.</p> <p>The teaching staff are all highly experienced academics, with internationally recognised research profiles and/or substantial industry experience. The course is supported by guest speakers from leading consultants and contractors, local government, professional bodies, and research institutions. We are able to draw on Birmingham's privileged position as a construction hub and the major building and infrastructure projects taking place in the area, to provide hands-on knowledge and experience.</p> <p>The MSc Civil Engineering is taught in the prestigious £114m Millennium Point building, while our laboratory facilities are brand new and reflect the state-of-the-art in research and professional practice. We are located at BCU's City Centre Campus, an inspirational place to learn benefitting</p>

from Birmingham's Big City Plan, which is leading the regeneration and development of Britain's Second City, including HS2, the biggest infrastructure project in the UK. The major works taking place in the Birmingham area means that the opportunities of learning and career development for a Civil Engineer are unmatched!

### Tailor your degree

The Professional Placement version of the course is optional and is offered as an alternative to the standard version of the course. This will allow you to complete a credit-bearing, 20 week Professional Placement as an integral part of your Master's Degree. The purpose of the Professional Placement is to improve your employability skills, which will, through the placement experience, allow you to provide evidence for your professional skills, attitudes and behaviours at the point of entry to the postgraduate job market.

<b>7 Course Awards</b>			
<b>7a</b>	<b>Name of Final Award</b>	<b>Level</b>	<b>Credits Awarded</b>
	Master of Science Civil Engineering	7	180
<b>7b Exit Awards and Credits Awarded</b>			
	Postgraduate Certificate Civil Engineering	7	60
	Postgraduate Diploma Civil Engineering	7	120

<b>8 Derogation from the University Regulations</b>	
	<ol style="list-style-type: none"> <li>1. For modules with more than one item of assessment, students must achieve a 40% in each item of assessment in order to pass the module.</li> <li>2. Compensation of marginal failure in up to 20 credits is permitted.</li> <li>3. Condonement of failed modules is not permitted.</li> </ol>

<b>9 Delivery Patterns</b>			
<b>Mode(s) of Study</b>	<b>Location(s) of Study</b>	<b>Duration of Study</b>	<b>Code(s)</b>
Full time (September)	City Centre	12 months	PT1341
Full time (January)	City Centre	12 months	PT1341
Part time (September)	City Centre	15 months	PT1343
Part time (January)	City Centre	15 months	PT1343
Full time September 'with Professional Placement'	City Centre	18 months	PT1367
Full time January 'with Professional Placement'	City Centre	18 months	PT1367

<b>10 Entry Requirements</b>	
<b>Home:</b>	Typically a BEng / BSc in Civil Engineering or a related discipline, with a graduating classification of 2:2 or higher.  Students without this qualification that can exhibit relevant industry experience in a Civil Engineering-related role will also be considered. An interview might be offered in order to assess a candidate's skills and knowledge.
<b>EU:</b>	IELTS 6.0 with no banding below 5.5
<b>International:</b>	IELTS 6.0 with no banding below 5.5
<b>Access:</b>	N/A

<b>11 Course Learning Outcomes</b>	
	<b>Knowledge and Understanding</b>
<b>1</b>	Assess the capacity of buildings and infrastructure to resist extreme events, such as floods and earthquakes, using analytical techniques and taking into account the environmental, techno-economic, and social issues.
<b>2</b>	Evaluate design solutions in a range of engineering materials, using analytical and computational approaches.
<b>3</b>	Assess sustainable construction design solutions, taking into account the implications of the climate emergency for the built environment.
<b>4</b>	Evaluate the theories, methods, and practices that are applied in the management of construction projects.
	<b>Skills and Other Attributes</b>
<b>5</b>	Design buildings and infrastructure taking into account structural, geotechnical, and water aspects, as well as the environmental, technological, regulatory, economic, and social context.
<b>6</b>	Prepare professional presentations, both individually and as part of a group, taking into account the project context and justifying the choices made.
<b>7</b>	Prepare research and industry projects, evaluating the relevant methods, developing an appropriate plan and implementing it, critically assessing its effectiveness and results during the process.
<b>8</b>	Collect research data, analyse it using state-of-the-art scientific methods, and assess the implications of the results for the scientific community, industry, and society.

<b>12</b>	<b>Course Requirements</b>																											
<b>12a</b>	<p><b>Level 7:</b></p> <p><i>In order to complete this course a student must successfully complete all the following CORE modules (totalling 180 credits):</i></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="background-color: #ffffcc;">Module Code</th> <th style="background-color: #ffffcc;">Module Name</th> <th style="background-color: #ffffcc;">Credit Value</th> </tr> </thead> <tbody> <tr> <td>BNV7210</td> <td>Engineering for Extreme Events</td> <td>20</td> </tr> <tr> <td>BNV7209</td> <td>Advanced Structural Engineering</td> <td>20</td> </tr> <tr> <td>BNV7130</td> <td>Project Management Methods</td> <td>20</td> </tr> <tr> <td>BNV7211</td> <td>Infrastructure Design Project</td> <td>40</td> </tr> <tr> <td>BNV7129</td> <td>Sustainable Construction</td> <td>20</td> </tr> <tr> <td>ENG7200</td> <td>Individual Masters Project</td> <td>60</td> </tr> </tbody> </table> <p><b>Level 6:</b></p> <p><b>In order to qualify for the award of MSc Civil Engineering with Professional Placement, a student must successfully complete all of the Level 7 modules listed above as well as the following Level 6 module:</b></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="background-color: #ffffcc;">Module Code</th> <th style="background-color: #ffffcc;">Module Name</th> <th style="background-color: #ffffcc;">Credit Value</th> </tr> </thead> <tbody> <tr> <td>PLA6004</td> <td>Professional Placement</td> <td>60</td> </tr> </tbody> </table>	Module Code	Module Name	Credit Value	BNV7210	Engineering for Extreme Events	20	BNV7209	Advanced Structural Engineering	20	BNV7130	Project Management Methods	20	BNV7211	Infrastructure Design Project	40	BNV7129	Sustainable Construction	20	ENG7200	Individual Masters Project	60	Module Code	Module Name	Credit Value	PLA6004	Professional Placement	60
Module Code	Module Name	Credit Value																										
BNV7210	Engineering for Extreme Events	20																										
BNV7209	Advanced Structural Engineering	20																										
BNV7130	Project Management Methods	20																										
BNV7211	Infrastructure Design Project	40																										
BNV7129	Sustainable Construction	20																										
ENG7200	Individual Masters Project	60																										
Module Code	Module Name	Credit Value																										
PLA6004	Professional Placement	60																										

**12b Structure Diagrams**
**FULL-TIME (September Start)**
**Level 7**
**September Entry**

<b>Year 1 1<sup>st</sup> Semester (Sept – Jan)</b>	BNV7209 Advanced Structural Engineering (20 credits)	BNV7210 Engineering for Extreme Events (20 credits)	BNV7130 Project Management Methods (20 credits)
<b>Year 1 2<sup>nd</sup> Semester (Jan – May)</b>	BNV7211 Infrastructure Design Project (40 credits)		BNV7129 Sustainable Construction (20 credits)
<b>Year 1 3<sup>rd</sup> Semester (June - Sept)</b>	Individual Master's Project (60 credits)		

**FULL-TIME (January Start)**
**Level 7**
**January Entry**

<b>Year 1 1<sup>st</sup> Semester (Jan - May)</b>	BNV7211 Infrastructure Design Project (40 credits)		BNV7129 Sustainable Construction (20 credits)
<b>Year 1 2<sup>nd</sup> Semester (June - Sept)</b>	BNV7209 Advanced Structural Engineering (20 credits)	BNV7210 Engineering for Extreme Events (20 credits)	BNV7130 Project Management Methods (20 credits)
<b>Year 1 3<sup>rd</sup> Semester (Sept - Jan)</b>	Individual Master's Project (60 credits)		

**PART-TIME (September Start)**

**September Entry**

<b>Year 1 1<sup>st</sup> Semester (Sept – Jan)</b>	BNV7209 Advanced Structural Engineering (20 credits)	BNV7210 Engineering for Extreme Events (20 credits)	
<b>Year 1 2<sup>nd</sup> Semester (Jan – May)</b>	BNV7211 Infrastructure Design Project (40 credits)		
<b>Year 1 3<sup>rd</sup> Semester (June - Sept)</b>	BNV7130 Project Management Methods (20 credits)	Individual Master's Project (60 credits)	
<b>Year 2 1<sup>st</sup> Semester (Sept – Jan)</b>	BNV7129 Sustainable Construction (20 credits)		
<b>Year 2 2<sup>nd</sup> Semester (Jan – May)</b>			

**PART-TIME (January Start)**

**Level 7**

<b>Year 1 1<sup>st</sup> Semester (Jan - May)</b>	BNV7209 Advanced Structural Engineering (20 credits)	BNV7210 Engineering for Extreme Events (20 credits)	
<b>Year 1 2<sup>nd</sup> Semester (June - Sept)</b>	BNV7211 Infrastructure Design Project (40 credits)		
<b>Year 1 3<sup>rd</sup> Semester (Sept - Jan)</b>	BNV7130 Project Management Methods (20 credits)	Individual Master's Project (60 credits)	
<b>Year 2 1<sup>st</sup> Semester (Jan - May)</b>	BNV7129 Sustainable Construction (20 credits)		
<b>Year 2 2<sup>nd</sup> Semester (June - Sept)</b>			

**Professional Placement - Full-time mode (January intake)**

<b>Year 1 1<sup>st</sup> Semester (Jan – May)</b>	BNV7209 Advanced Structural Engineering (20 credits)	BNV7210 Engineering for Extreme Events (20 credits)	BNV7130 Project Management Methods (20 credits)
<b>Year 1 2<sup>nd</sup> Semester (June - Sept)</b>	BNV7211 Infrastructure Design Project (40 credits)	BNV7129 Sustainable Construction (20 credits)	
<b>Year 2 1<sup>st</sup> Semester (Sept – Jan )</b>	Individual Master's Project (60 credits)		
<b>Year 2 2<sup>nd</sup> Semester (Jan - May)</b>	Professional Placement (60 credits)		

**Professional Placement - Full-time mode (September intake)**

<b>Year 1 1<sup>st</sup> Semester (Sept - Dec)</b>	BNV7209 Advanced Structural Engineering (20 credits)	BNV7210 Engineering for Extreme Events (20 credits)	BNV7130 Project Management Methods (20 credits)
<b>Year 1 2<sup>nd</sup> Semester (Jan - May)</b>	BNV7211 Infrastructure Design Project (40 credits)	BNV7129 Sustainable Construction (20 credits)	
<b>Year 2 1<sup>st</sup> Semester (May - Sept)</b>	Individual Master's Project (60 credits)		
<b>Year 2 2<sup>nd</sup> Semester (Sept - Jan)</b>	Professional Placement (60 credits)		

### 13 Overall Student Workload and Balance of Assessment

Overall student *workload* consists of class contact hours, independent learning and assessment activity, with each credit taken equating to a total study time of around 10 hours. While actual contact hours may depend on the optional modules selected, the following information gives an indication of how much time students will need to allocate to different activities at each level of the course.

- *Scheduled Learning* includes lectures, practical classes and workshops, contact time specified in timetable
- *Directed Learning* includes placements, work-based learning, external visits, on-line activity, Graduate+, peer learning
- *Private Study* includes preparation for exams

The *balance of assessment* by mode of assessment (e.g. coursework, exam and in-person) depends to some extent on the optional modules chosen by students. The approximate percentage of the course assessed by coursework, exam and in-person is shown below.

#### Level 7

#### Workload

#### 14% time spent in timetabled teaching and learning activity

Activity	Number of Hours
Scheduled Learning	252
Directed Learning	444
Private Study	1104
<b>Total Hours</b>	<b>1800</b>

#### Balance of Assessment

Assessment Mode	Percentage
Coursework	60%
Exam	22%
In-Person	18%