

# Civil Engineering

*\*Please note that this programme No longer recruiting.*

<b>Final award</b>	<i>BSc (Hons)</i>
<b>Intermediate awards available</b>	<i>Cert/Dip HE</i>
<b>UCAS code</b>	
<b>Details of professional body accreditation</b>	
<b>Relevant QAA Benchmark statements</b>	<i>Engineering</i>
<b>Date specification last up-dated</b>	September 2011

## Profile

### The summary - UCAS programme profile

#### **BANNER BOX:**

The BSc (Hons) in Civil Engineering benefits from the close links with professional qualified staff and many major employers.

#### **ENTRY REQUIREMENTS**

The entry requirement is 240 UCAS tariff points. Advanced entry at Level 3 is possible upon the successful completion of the UEL FdSc in Civil Engineering. Entry is also possible for Extended BEng Civil Engineering students who have obtained an overall average of 40% in Level 0. Entry is possible in both semester A & B. If English is not the candidates' first language, they will need to demonstrate satisfactory English language skills by achieving an overall IELTS score of 6.0, not less than 5.5 in each component. The admission process is governed by UEL's policy on Equality and Diversity and therefore access to the programme is promoted through the universities Education and Community Partnership Unit to under-represented and socially excluded communities. Admissions practices are to be free from unlawfully discriminatory criteria. Questions relating to the applicant's race, ethnic origin, age, disability, religion, gender, colour, sexuality, marital status or family responsibility do not form part of the selection process.

#### **ABOUT THE PROGRAMME**

##### **What is Civil Engineering?**

For hundreds of years civil engineers have contributed to the health and welfare of society. Roman viaducts and roads, the Suez and Panama canals, the Eiffel tower, the Channel Tunnel and London Eye are just a few of the thousands of great civil engineering accomplishments. Whether it is in design, construction or management civil engineers provide both the innovative and the technical abilities that will ensure a projects success. Civil Engineering is a profession which makes a 'real' contribution to society.

##### **Civil Engineering at UEL**

The University of East London which has evolved from North East London Polytechnic has over 100 years of experience in teaching engineering and has developed programmes that reflect current practices and give students the opportunity to develop an understanding of engineering applications and learning skills. The programmes contain a large proportion of laboratory and practical work to reinforce the theories and practices learnt in the classroom with 'hands on' experience developed through field courses. The programmes also provide an opportunity to study the fundamental knowledge and theories required by all Civil Engineers and apply these to the practical work environment.

### **Programme structure**

Study is based on three years full-time and the programme is modular with 11 core modules and a number of optional modules in Level 2 and 3, which allows for intakes in both September and February. The BSc (Hons) in Civil Engineering will have a common first year with the current UEL full-time FdSc in Civil Engineering.

### **Learning environment**

The programme benefits from access to purpose built laboratories, up-to-date drawing office and IT labs and modern surveying equipment. Teaching is delivered through formal lectures, tutorials, workshops, practical classes and laboratory sessions. Most lectures are supported by programme notes which allow you to concentrate on the lecture and complete some independent studies of your own. Group work is also encouraged in many modules.

### **Assessment**

The type of assessment varies from module to module and could include formal closed book examinations, coursework, project work, laboratory reports, time constrained and open book assignments and tests on competence in practical sessions.

### **Work experience/placement opportunities**

The School has strong links with industry and hosts a number of visits from the employers within the industry at which informal interviews for full-time and part-time employment opportunities take place. We have an Industrial Placement Tutor who will assist in making applications.

### **Project work**

Project work is an important feature of this programme. Throughout your studies you will undertake a number of small projects. During the final year of the programme you will be required to complete a research project in the form of independent research and study into a technical subject. This project will be supervised by a member of staff with an interest in the field and will normally include some laboratory work or the analysis of a specific engineering problem. The project constitutes one third of the final year of the programme.

### **Added value**

Suitable performance on this programme can give you entry to one of our Masters degrees.

## **IS THIS THE PROGRAMME FOR ME?**

### **If you are interested in...**

- Design and application
- management
- surveying
- construction
- environmental engineering
- buildings & structures
- hydraulics
- highways and transportation
- geology and geotechnics

### **If you enjoy...**

- designing infrastructure
- group work
- indoor and outdoor work
- mathematics
- science
- physics
- information technology

### **If you want...**

A traditional degree with a real practical emphasis geared to meet the needs of employers and the opportunity to study specialisms such as Building Engineering, Highways & Traffic, Water or Geotechnical Engineering.

### **Your future career**

Opportunities are available in civil, structural, water engineering, geotechnics, IT or highways and transportation. Many graduates have also successfully moved into careers in business, management and finance.

### **How we support you**

The School prides itself on its student support systems. Personal development tutors, Personal Tutors and Programme leaders will monitor your progress and can provide assistance and advice with academic and personal problems.

The School facilities include dedicated computer labs and technical support is readily available supported by academics.

Employer links are maintained through our Industrial Liaison Group and employers are invited to attend the University to talk to students about careers in civil engineering. The professional bodies also visit the University regularly and provide details on the qualification process and the advantages available to members.

## **Bonus factors**

Civil Engineering is studied at the Docklands Campus at the heart of East London. Transport links are available via bus or tube to Central London and major airports.

# **Outcomes**

## **Programme aims and learning outcomes**

### **What is this programme designed to achieve?**

This programme is designed to give you the opportunity to:

The general aim is to provide a programme of study for civil engineering technicians to meet the demands of their profession and to enable them to progress to the status of Incorporated Engineer. A specific aim of the programme is to promote an active interest in applying and managing technology to engineering problem and to encourage students to respond to changes and developments within their profession.

Throughout the programme there are overlapping objectives:

- To train engineering technicians to a level that will enable them to function effectively in industry
- To provide a knowledge and understanding of current theories and technologies in civil engineering field
- To enhance their understanding of the design and management processes relevant to civil engineering
- To contribute to the development of the Incorporated Engineer as an important professional in society and the built environment
- To allow progression in career and educational development giving opportunities to study for a technical Masters degree.

### **What will you learn?**

Knowledge and understanding of;

- science, mathematics and associated engineering disciplines
- engineering analysis
- design principles
- economic, social and environmental context
- civil engineering construction

and be able to apply them effectively in the civil engineering field.

### **Knowledge**

- To provide a knowledge and understanding of current theories and developments in civil engineering

### **Thinking skills**

- To enhance their understanding of the design and management processes relevant to civil engineering
- To encourage critical awareness and understanding of other professionals in the civil engineering industry

### **Subject-Based Practical skills**

- To train civil engineering technicians to a level that will enable them to function effectively in industry
- To allow progression in career and educational development.

### **Skills for life and work (general skills)**

- To contribute to the personal development of the individual by developing confidence in their abilities and to help them become a valued professional in shaping the built environment.

## **Structure**

### **The programme structure**

#### **Introduction**

All programmes are credit-rated to help you to understand the amount and level of study that is needed.

One credit is equal to 10 hours of directed study time (this includes everything you do e.g. lecture, seminar and private study).

Credits are assigned to one of 5 levels:

- 0 equivalent in standard to GCE 'A' level and is intended to prepare students for year one of an undergraduate degree programme
- 1 equivalent in standard to the first year of a full-time undergraduate degree programme
- 2 equivalent in standard to the second year of a full-time undergraduate degree programme
- 3 equivalent in standard to the third year of a full-time undergraduate degree programme
- M equivalent in standard to a Masters degree

#### **Credit rating**

The overall credit-rating of this programme is 360 credits.

#### **Typical duration**

The typical duration of this programme is 3-years full-time or 5-years part-time. It is possible in certain circumstances to move from full-time to part-time study and vice-versa to accommodate any external factors such as financial constraints or domestic commitments.

Many of our students make use of this flexibility and this may impact on the overall duration of their study period.

### How the teaching year is divided

The teaching year is split into two Semesters A and B. Semester A begins in September A whilst Semester B starts in February. Students can commence the course in either Semester A or Semester B in their first year. Full-time students register for 6 modules in one year (3 modules in each Semester), whilst part-time students register for up to 4 modules in one year (2 modules in each Semester).

### What you will study when

This programme is part of a modular degree scheme. A student registered in a full-time attendance mode will take six 20 credit modules each in Level 1 and 2, and four 20 credit modules and one 40 credit module in Level 3.

LEVEL	TITLE	SKILLS MODULES (Insert Y where appropriate)	CREDITS	STATUS SINGLE
1	CE1201 Skills for Academic Learning	Y Learning Skills	20	Core
1	CE1210 Structures		20	Core
1	CE1211 Geomatics & Construction		20	Core
1	CE1212 Work Based Study		20	Core
1	SV1031 Plane Surveying		20	Core
1	SV1032 Quantitative Methods		20	Core
2	CE2208 Construction & Organisation Management		20	Core
2	CE2211 Professional Studies	Y Employability	20	Core
2	CE2215 Properties of Materials		20	Core
2	CE2216 Soil Properties		20	Core
2	CE2222 Mathematics for Civil Engineers		20	Core
2	CE2225 Structural Form & Element Design		20	Option
2	SV2040 Engineering Measurement		20	Option
3	SV3132 Management Studies		20	Core
3	CE3215 Integrated Project	Y Research Skills	40	Core
3	CE3219 Water Management		20	Option
3	CE3220 Highway & Traffic Engineering		20	Option
3	CE3221 Building Engineering		20	Option
3	CE3222 Geotechnical Design		20	Option

## Requirements for gaining an award

In order to gain an honours degree you will need to obtain 360 credits including:

1. A minimum of 120 credits at Level 1 or higher
2. A minimum of 120 credits at Level 2 or higher
3. A minimum of 120 credits at Level 3 or higher

## Degree Classification

Where a student is eligible for an Honours degree, and has gained a minimum of 120 credits at each Level of BSc in Civil Engineering, the award classification is determined by calculating the arithmetic mean of the 360 credits at all Levels. The final figure obtained will be rounded up to the next whole number. A student with an advanced entry at Level 3, the award classification is determined by calculating the arithmetic mean of the 120 credits at Level 3.

The UEL award classification is found at <http://www.uel.ac.uk/qa/AssessmentPolicy.htm>.

Then by applying the mark obtained as a percentage, with all decimal points rounded up to the nearest whole number, the following classification will apply:

- ≥ 70% 1st Class Honours
- 60% - 69% Upper Second (2:1)
- 50% - 59% Lower Second (2:2)
- 40% - 49% Third (3rd)
- 0% - 39% Fail

## Assessment

### Teaching, learning and assessment

#### Teaching and learning

##### *Knowledge is developed through*

- *Lectures and Seminars*
- *Assignments*
- *Projects*
- *Use of IT*
- *Professional Institutions*

##### *Thinking skills are developed through*

- *Analytical assessment of data*
- *Critical assessment of information*
- *Problem-solving practical applications*

### ***Practical skills are developed through***

- *Case study appraisal*
- *Drawing and design*
- *Field programmes and site visits*
- *Work related assignments*

### ***Skills for life and work (general skills) are developed through***

- *Interactive communication exercises*
- *Individual and group working sessions*

### **Assessment**

#### ***Knowledge is assessed by***

- *Time constrained examinations*
- *Oral presentations & questioning*
- *Assignments and project work*

#### ***Thinking skills are assessed by***

- *Approaches to solving problems*
- *Analysis of alternative solutions*
- *Practical solutions to complex tasks*

#### ***Practical skills are assessed by***

- *Group survey work*
- *Application to practical problem-solving*
- *Work related assignments*

#### ***Skills for life and work (general skills) are assessed by***

- *Oral Presentations*
- *Written communication exercises*
- *Drawing, sketching and design work*

## **Quality**

### **How we assure the quality of this programme**

#### **Before this programme started**

Before this programme started, the following was checked:

- there would be enough qualified staff to teach the programme;
- adequate resources would be in place;
- the overall aims and objectives were appropriate;

- the content of the programme met national benchmark requirements;
- the programme met any professional/statutory body requirements;
- the proposal met other internal quality criteria covering a range of issues such as admissions policy, teaching, learning and assessment strategy and student support mechanisms.

This is done through a process of programme approval which involves consulting academic experts including some subject specialists from other institutions.

### **How we monitor the quality of this programme**

The quality of this programme is monitored each year through evaluating:

- external examiner reports (considering quality and standards);
- statistical information (considering issues such as the pass rate);
- student feedback.

Drawing on this and other information, programme teams undertake the annual Review and Enhancement Process which is co-ordinated at School level and includes student participation. The process is monitored by the Quality and Standards Committee.

Once every six years an in-depth review of the whole field is undertaken by a panel that includes at least two external subject specialists. The panel considers documents, looks at student work, speaks to current and former students and speaks to staff before drawing its conclusions. The result is a report highlighting good practice and identifying areas where action is needed.

### **The role of the programme committee**

This programme has a programme committee comprising all relevant teaching staff, student representatives and other staff who make a contribution towards the effective operation of the programme (e.g. library/technician staff). The committee has responsibilities for the quality of the programme. It provides input into the operation of the Review and Enhancement Process and proposes changes to improve quality. The programme committee plays a critical role in the quality assurance procedures.

### **The role of external examiners**

The standard of this programme is monitored by at least one external examiner. External examiners have two primary responsibilities:

- To ensure the standard of the programme;
- To ensure that justice is done to individual students.

External examiners fulfil these responsibilities in a variety of ways including:

- Approving exam papers/assignments;
- Attending assessment boards;
- Reviewing samples of student work and moderating marks;
- Ensuring that regulations are followed;

- Providing feedback through an annual report that enables us to make improvements for the future.

### **Listening to the views of students**

The following methods for gaining student feedback are used on this programme:

- Module evaluations
- Student representation on programme organising committees
- Student/Staff consultative committee

Students are notified of the action taken through:

- circulating the minutes of the programme committee
- Face to face meetings
- providing details on UEL Direct

### **Listening to the views of others**

The following methods are used for gaining the views of other interested parties:

- Annual student satisfaction questionnaire
- Questionnaires to former students
- Industrial Advisory Board (IAB)
- Placements Officer
- Meetings with work placement partners
- Attending community based initiative groups & careers activities e.g. Capital Xperience

## **Further Information**

### **Alternative locations for studying this programme**

<b>Location Which elements?</b>	<b>Taught by UEL staff</b>	<b>Taught by local staff</b>	<b>Method of Delivery</b>
-	-	-	-

### **Where you can find further information**

Further information about this programme is available from:

- The UEL web site (<http://www.uel.ac.uk>)
- The programme handbook
- Module study guides
- UEL Manual of General Regulations and Policies <http://www.uel.ac.uk/qa/>
- UEL Quality Manual <http://www.uel.ac.uk/qa/>
- Regulations for the Academic Framework <http://www.uel.ac.uk/academicframework/>
- UEL Guide to Undergraduate Programmes
- School web pages