# Programme Specification

**Undergraduate**

Applicable to all non-clinical undergraduate programmes*

Please click [here](#) for guidance on completing this specification template.

*Excluding Integrated Master’s degrees.

## Part A: Programme Summary Information

1. **Title of programme:** Architectural Engineering

2. **Programme Code:** HK26

3. **Entry Award:**
   - ☐ BA (Hons)
   - ☐ BSc (Hons)
   - ☒ Other (please specify below):
     - **Credit:** 360 (BEng Hons)
     - **Level:**
       - Year 1 (120 credits): majority at level 4 (As per H200)
       - Year 2 (120 credits): majority at level 5 (As per H200)
       - Year 3 (120 credits): majority at level 6 (As per H200)

4. **Exit Awards:**
   - ☒ Diploma in Higher Education (Dip HE)
     - **Credit:** 240
     - **Level:**
       - At least 90 credits at Level 2.
       - Year 1 (120 credits): majority at Level 4 (As per H200)
       - Year 2 (120 credits): majority at Level 5 (As per H200)
       - Year 3 (120 credits): majority at Level 6 (As per H200)
   - ☒ Certificate in Higher Education (Cert HE)
     - **Credit:** 120
     - **Level:**
       - At Level 1 or above.
       - Year 1 (120 credits): majority at Level 4.
       - Year 2 (120 credits): majority at Level 5.
       - Year 3 (120 credits): majority at Level 6.

5. **Date of first intake:** September 2016
6. **Frequency of intake:**
   - Annually in September

7. **Duration and mode of study:**
   - 3 years full-time

8. **Applicable framework:**
   - Model for Non-Clinical First Degree Programmes

   - **Framework exemption required:**
     - ☒ No (please go to section 9)
     - ☐ Yes (please provide a brief summary below)

   - **Date exemption approved by AQSC:**

9. **Applicable Ordinance:**
   - 37(A) General Ordinance for Non-Clinical Undergraduate Degrees
   - Ordinance 38: Certificate/Diploma in Higher Education

   - **New/revised Ordinance required:**
     - ☒ No (please go to section 10)
     - ☐ Yes (please provide a brief summary below)

   - **Date new/revised Ordinance approved by Council:**

10. **Faculty:**
    - Science and Engineering

11. **Level 2 School/Institute:**
    - School of Engineering

12. **Level 1 unit:**
    - School of Engineering

13. **Campus:**
    - Liverpool

14. **Other contributors from UoL:**
    - School of Architecture, School of Mathematical Sciences, School of Environmental Sciences, Central Teaching Laboratory.

15. **Teaching other than at UoL:**
    - Field trip to Ness Gardens (Neston) in Y1 under the CIVE152 Module.

16. **Director of Studies:**
    - Dr Ryan Judge

17. **Board of:**
    - Civil Engineering and Risk
<table>
<thead>
<tr>
<th>Studies:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>18. Board of Examiners:</td>
<td>School of Engineering</td>
</tr>
</tbody>
</table>
| 19. External Examiner(s): | Professor Tim Ibell  
FREng, CEng, BSc (Eng) PhD, FIStructE, FICE, FHEA  
Associate Dean (Research),  
University of Bath  
Specialism: Structural Engineering & Architecture  
http://www.bath.ac.uk/ace/people/ibell/  
http://www.bath.ac.uk/ace/people/ibell/  
  
Professor John Bridgeman  
BEng, MSc, PhD, CEng, CSci, FICE, FCIWEM  
Head of Civil Engineering  
University of Birmingham  
Specialism: Environmental Engineering  
http://www.birmingham.ac.uk/staff/profiles/civil/bridgeman-john.aspx |
| 20. Professional, Statutory or Regulatory body: | As per programmes H200, H220 and H202 - Joint Board of Moderators: Institution of Civil Engineers (ICE), Institution of Structural Engineers (IStructE), Institution of Highway Engineers and Chartered Institution of Highways and Transportation. |
| 21. QAA Subject benchmark Statements(s): | Engineering |
| 22. Other reference points: | UKSPEC |
| 23. Fees: | Standard Home/EU and International Fees |
| 24. Additional costs to the student: | Optional Attendance at Constructionarium, National Construction College, East Anglia: students will be charged a subsidised charge of £250.  
Students will generally be required to wear a lab coat for all laboratory sessions. Students can purchase a lab coat at the start of the year from the Student Support Office at a subsidised coat of £15.  
Students will be required to wear safety shoes or boots (that is to say with both toe cap and midsole protection conforming to European safety legislation) for some activities and these must be provided by the students themselves. The cost of a suitable pair of safety boots or shoes should be no more than £50. |
| 25. AQSC approval: | 15th April 2016 |

**Part B: Programme Aims & Objectives**
26. Aims of the Programme

The Architectural Engineering BEng/MEng degree at Liverpool is an interdisciplinary programme delivered by both the School of Engineering and School of Architecture. The primary aim of the programme is to create engineering graduates with the required multidisciplinary skill set to design building structures, bridges and critical infrastructure utilising not only the solid technical grounding a typical accredited civil/structural engineering degree provides but also a robust and wider appreciation of the architectural, societal, economic and environmental aspects of their design solutions. On completion of the programme, Architectural Engineering graduates will be able to work across both disciplines applying engineering principles to the planning, design and construction of the built environment. The programme will prepare graduates to take responsibility for the design of different systems within a building or aspect of critical infrastructure with a particular focus on key areas such as: creating innovative design strategies to improve our cities and infrastructure, structural integrity to sustain earthquakes, fires, vibrations, wind pressure and explosions and impacts, modelling and design of heating, ventilation & air conditioning systems to make an environment hospitable for the user, acoustic performance and lighting design and sustainability and energy efficiency.

No.  Aim:

1. To develop to Honours degree level Architectural Engineering graduates who possess the technical knowledge, skills and competencies (as defined by UK-SPEC) to pursue a successful professional career in Architectural Engineering that meets the requirements of industry and society.

2. To provide graduates with deep knowledge of Architectural Engineering principles and demonstrate how together Civil and Structural Engineers combine with Architecture to develop, enhance and maintain the built environment around us.

3. To provide graduates with a broad knowledge of technical and non-technical subjects and skills which scale the boundaries between, and link together, Civil Engineering and Architecture to enable them to practice and develop their career to any scientific, technical, or managerial level worldwide.

4. To enable graduates to attain a level of competence and experience with on-the-job training for professional registration as an Incorporated Engineer. Incorporated Engineers maintain and manage applications of current and developing technology, and may understand engineering design, development, manufacture, construction and operation. To satisfy the requirements for registration as a Chartered Engineer, candidates would need to either register for HK28 (MEng) during the course of HK26 on the condition that the candidate is averaging greater than 55% at the end of Year 2 or register for a separate master’s programme after graduation e.g. MSc.

27. Learning Outcomes

No. Learning outcomes – Bachelor’s Honour’s degree

1. Demonstrate an ability to use a combination of general and specialist engineering knowledge and understanding to apply existing and emerging concepts, theories, and principles in all areas of Architectural Engineering and maintain and extend a sound theoretical approach to Architectural Engineering practice and its underpinning science and mathematics.

2. Demonstrate an ability to apply appropriate theoretical and practical methods to design, develop, construct, commission, operate, maintain, decommission, and re-cycle Architectural Engineering processes, systems and services and identify, review and select procedures and methods to undertake engineering tasks.
### Learning Outcomes

**No.**  Learning outcomes – Bachelor’s Non-Honour’s degree

By completing Year 3 of the programme, students will have attained the large majority of the outcomes on the Honours degree programme, but will not have attained some of the outcomes at the appropriate level due to insufficient module credits. This will vary from student to student and will be judged on a case by case basis.

**Learning Outcomes**

**No.**  Learning outcomes – Diploma in Higher Education award

By completing Year 2 of the programme, students will have attained a core understanding of Architectural Engineering and the history and theory of architecture and its important link to Civil and Structural Engineering. Students will have obtained a wide range of skills, including critical analysis of data (e.g. Mathematical Techniques for Engineers and Structural Analysis) and team working via field work (e.g. Surveying and Project Management) and group design project. Students will also have obtained core engineering analysis and design skills in structure and construction, environmental design, soil mechanics, reinforced concrete and steelwork.

**Learning Outcomes**

**No.**  Learning outcomes – Certificate in Higher Education award

By completing Year 1 of the programme, students will be able to demonstrate familiarity with core concepts underpinning Architectural Engineering, including general design skills (sketching, data analysis and computer-aided design), history of architecture, structure and construction, solids and structures, engineering mathematics and surveying. Students will have had the opportunity to develop key, transferable skills relevant to the workplace.

**27a. Mapping of learning outcomes:**
<table>
<thead>
<tr>
<th>Learning outcome No.</th>
<th>Module(s) in which this will be delivered</th>
<th>Mode of assessing achievement of learning outcome</th>
<th>PSRB/Subject benchmark statement (if applicable)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>MATH198, MATH199, ENGG110, CIVE113, CIVE114, CIVE152, ENGG209, CIVE202, CIVE224, MATH299, CIVE 344, ENGG302, ENGG301, ENGG 341, ENGG320, CIVE340</td>
<td>Formal exam, lab work, reports, assignments, field work, design portfolios, oral presentations</td>
<td>Maths, Engineering Analysis</td>
</tr>
<tr>
<td>2</td>
<td>ENGG110, CIVE152, ENGG209, CIVE202, ARCH211, CIVE241, CIVE224, CIVE242, ENGG341, CIVE344, CIVE343, ARCH311, CIVE342, ENGG302, ENGG301, CIVE320</td>
<td>Formal exam, lab work, reports, assignments, field work, design portfolios, oral presentations</td>
<td>Science</td>
</tr>
<tr>
<td>3</td>
<td>CIVE113, CIVE114, CIVE202, CIVE263, ENGG341, ENGG302, CIVE340</td>
<td>Formal exam, lab work, reports, assignments, field work, design portfolios, oral presentations</td>
<td>IT</td>
</tr>
<tr>
<td>4</td>
<td>ARCH161, CIVE113, CIVE114, ARCH171, ARCH271, ARCH211, CIVE241, CIVE263, ENGG341, ARCH321, CIVE343, ARCH311, CIVE320</td>
<td>Formal exam, lab work, reports, assignments, field work, design portfolios, oral presentations</td>
<td>Design</td>
</tr>
<tr>
<td>5</td>
<td>CIVE113, ARCH171, ARCH271, ARCH211, MNGT202, CIVE263, ENGG341, ARCH321, CIVE345, CIVE320, CIVE340</td>
<td>Formal exam, lab work, reports, assignments, field work, design portfolios, oral presentations</td>
<td>Economics, Social &amp; Environmental</td>
</tr>
<tr>
<td>6</td>
<td>ARCH161, CIVE113, CIVE114, CIVE152, CIVE202, ARCH211, CIVE241, MNGT202, CIVE263, ENGG341, CIVE343, ARCH311, CIVE342, ENGG302, CIVE345, CIVE320, CIVE340</td>
<td>Formal exam, lab work, reports, assignments, field work, design portfolios, oral presentations</td>
<td>Engineering Practice</td>
</tr>
<tr>
<td>7</td>
<td>CIVE113, CIVE114, ARCH171, ARCH271, ARCH211, MNGT202, CIVE263, CIVE242, ENGG341, ARCH321, CIVE345, CIVE340</td>
<td>Formal exam, lab work, reports, assignments, field work, design portfolios, oral presentations</td>
<td>Engineering Practice, Economics, Social &amp; Environmental</td>
</tr>
<tr>
<td>8</td>
<td>CIVE113, CIVE114, CIVE263, CIVE340</td>
<td>Formal exam reports, assignments, design portfolios, oral presentations</td>
<td>Engineering Analysis, Design, Engineering Practice</td>
</tr>
</tbody>
</table>

28. Skills and Other Attributes
No. | Skills and attributes:
--- | ---
| Graduates must have developed transferable skills, additional to those set out in the other learning outcomes, that will be of value in a wide range of situations, including the ability to: |
1 | Demonstrate self-direction and originality in tackling and solving problems and act in planning and implementing tasks at a professional level |
2 | Make sound judgements in the absence of complete data |
3 | Comprehensive understanding of techniques applicable to their own research |
4 | Exercise initiative and personal responsibility |
5 | Originality in application of knowledge and understanding of research techniques |
6 | Evaluate critically current research and advanced scholarship |
7 | Communicate effectively using both written and oral presentation to specialist and non-specialist audiences |
8 | Apply number though coursework and examination to problems related to Architectural Engineering and sustainable development |
9 | Use information technology to solve problems in Architectural Engineering using advanced numerical modelling tools |
10 | Understand the Health and Safety regulation in Architectural Engineering and use of relevant information in practices |

### 28a. Mapping of skills and other attributes:

<table>
<thead>
<tr>
<th>Skills and other attributes No.</th>
<th>Module(s) in which this will be delivered and assessed</th>
<th>Learning skills, research skills, employability skills</th>
<th>Mode of assessing achievement of the skill or other attribute</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>CIVE202, CIVE263, ENGG341, CIVE340</td>
<td>Understanding of lecture materials, Project development, planning, management and implementation</td>
<td>Formal exam, lab work, reports, assignments, field work, design portfolios, oral presentations</td>
</tr>
<tr>
<td>2</td>
<td>CIVE202, CIVE263, MNGT202, ENGG341, CIVE340</td>
<td>Understanding of lecture materials, Project development, planning, management and implementation</td>
<td>Formal exam, lab work, reports, assignments, field work, design portfolios, oral presentations</td>
</tr>
<tr>
<td>3</td>
<td>CIVE263, ENGG341, CIVE340</td>
<td>Understanding of lecture materials, Project development, planning, management and implementation</td>
<td>Formal exam, lab work, reports, assignments, field work, design portfolios, oral presentations</td>
</tr>
<tr>
<td>4</td>
<td>CIVE114, ARCH171, ARCH271, ARCH211, CIVE202, CIVE263, ARCH321, ARCH311, ENGG341, CIVE340</td>
<td>Understanding of lecture materials, Project development, planning, management and implementation</td>
<td>Formal exam, lab work, reports, assignments, field work, design portfolios, oral presentations</td>
</tr>
<tr>
<td>5</td>
<td>ARCH171, ARCH271, ARCH211, CIVE202, CIVE263, ENGG341, ARCH321, ARCH311, CIVE340</td>
<td>Understanding of lecture materials, Project development, planning, management and implementation</td>
<td>Formal exam, lab work, reports, assignments, field work, design portfolios, oral presentations</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>6</td>
<td>ENGG341, CIVE340</td>
<td>Understanding of lecture materials, Project development, planning, management and implementation</td>
<td>Formal exam, lab work, reports, assignments, field work, design portfolios, oral presentations</td>
</tr>
<tr>
<td>7</td>
<td>CIVE113, CIVE114, ARCH171, ARCH271, ARCH211, CIVE263, ENGG341, ARCH321, ARCH311, CIVE340</td>
<td>Understanding of lecture materials, Project development, planning, management and implementation</td>
<td>Formal exam, lab work, reports, assignments, field work, design portfolios, oral presentations</td>
</tr>
<tr>
<td>8</td>
<td>ENGG110, CIVE152, ARCH171, ARCH271, ARCH211, ENGG209, CIVE202, CIVE241, CIVE224, CIVE263, CIVE242, ENGG341, CIVE344, CIVE343, CIVE342, ENGG302, CIVE345, CIVE320, ARCH321, ARCH311, CIVE340</td>
<td>Understanding of lecture materials, completion of coursework and project report</td>
<td>Formal exam, lab work, reports, assignments, field work, design portfolios, oral presentations</td>
</tr>
<tr>
<td>9</td>
<td>MATH198, MATH199, ARCH171, ARCH271, ARCH211, CIVE202, MATH299, ENGG302, ENGG341, ARCH321, ARCH311, CIVE340</td>
<td>Understanding of lecture materials, completion of coursework and project report</td>
<td>Formal exam, lab work, reports, assignments, field work, design portfolios, oral presentations</td>
</tr>
<tr>
<td>10</td>
<td>CIVE152, CIVE241, MNGT202, CIVE263, ENGG341, CIVE345, CIVE340</td>
<td>Understanding of lecture materials, participation in lab and field work, completion of coursework and project report</td>
<td>Formal exam, lab work, reports, assignments, field work, design portfolios, oral presentations</td>
</tr>
</tbody>
</table>

29. **Career opportunities:**

Architectural Engineering graduates are in great demand. Civil and Architectural Engineering offer the highest paid jobs for graduates in the UK (Source: Telegraph ‘10 best paid jobs for graduates’, Aug 2015). Graduates from
Liverpool will be provided with a skill set which enables them to work freely across the boundaries i.e. being a structural engineer within an architectural practice and vice-versa. Career opportunities include Structural Engineering, Bridge Engineering, Civil and Highway Engineering, Façade Engineering, Lighting and Acoustic Design, Planning, Land Surveying, Large Scale Development and much more. Graduates of this programme will be able to pursue chartered status with their chosen institution (typically the Institution of Civil Engineers or Institution of Structural Engineers). This is generally achieved through structured graduate development schemes within major engineering consultancies, contracting organisations, utility companies, and local and central government sectors. A small proportion may move into non-engineering positions where their analytical, communication, problem solving, management and IT skills are highly sought after (e.g. engineers working in finance).

### Part C: Entrance Requirements

30. **Academic Requirements:**

The entry requirements for HK26 can be found here:

[https://www.liv.ac.uk/study/undergraduate/courses/architectural-engineering-beng-hons/entry-requirements/](https://www.liv.ac.uk/study/undergraduate/courses/architectural-engineering-beng-hons/entry-requirements/)

31. **Work experience:**

Students are not required/expected to have undertaken prior work experience. Applicants who wish to defer their studies for work or more general personal development will normally be granted it, as will be registered students who request a year out for work experience during their programme of study.

32. **Other requirements:**

None.

### Part D: Programme Structure

33. **Programme Structure:**

<table>
<thead>
<tr>
<th>Year 1 (BEng Hons)</th>
<th>Module</th>
<th>Credits</th>
<th>Level</th>
<th>Semester</th>
<th>Exam-CW</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARCH161</td>
<td>Technology 1.2: Structure and Construction</td>
<td>15</td>
<td>4</td>
<td>2</td>
<td>50-50</td>
</tr>
<tr>
<td>CIVE113</td>
<td>Introduction to Civil &amp; Architectural Engineering</td>
<td>15</td>
<td>4</td>
<td>1</td>
<td>0-100</td>
</tr>
<tr>
<td>CIVE114</td>
<td>Civil &amp; Architectural Design and Technology</td>
<td>7.5</td>
<td>4</td>
<td>2</td>
<td>0-100</td>
</tr>
<tr>
<td>MATH198</td>
<td>Engineering Mathematics</td>
<td>22.5</td>
<td>4</td>
<td>1+2</td>
<td>80-20</td>
</tr>
<tr>
<td>or</td>
<td>MATH199 Mathematical Techniques for Engineers</td>
<td>22.5</td>
<td>4</td>
<td>1+2</td>
<td>80-20</td>
</tr>
<tr>
<td>ENGG110</td>
<td>Solids and Structures 1</td>
<td>15</td>
<td>4</td>
<td>1+2</td>
<td>70-30</td>
</tr>
<tr>
<td>ENGG105</td>
<td>Fluid Mechanics and Thermodynamics</td>
<td>15</td>
<td>4</td>
<td>1+2</td>
<td>90-10</td>
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<tr>
<td>ARCH171</td>
<td>Context 1.1: History of Architecture</td>
<td>15</td>
<td>4</td>
<td>1</td>
<td>50-50</td>
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<tr>
<td>CIVE152</td>
<td>Surveying</td>
<td>15</td>
<td>4</td>
<td>2</td>
<td>0-100</td>
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</tbody>
</table>

TOTAL CREDITS OBTAINED **120**
### Year 2 (BEng Hons)

<table>
<thead>
<tr>
<th>Module</th>
<th>Credits</th>
<th>Level</th>
<th>Semester</th>
<th>Exam-CW</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARCH271 Context 2.1: History &amp; Theory of Architecture</td>
<td>15</td>
<td>5</td>
<td>1</td>
<td>50-50</td>
</tr>
<tr>
<td>ENGG209 Solids and Structures 2</td>
<td>15</td>
<td>5</td>
<td>1</td>
<td>90-10</td>
</tr>
<tr>
<td>CIVE202 Structural Behaviour and Modelling</td>
<td>7.5</td>
<td>5</td>
<td>1</td>
<td>0-100</td>
</tr>
<tr>
<td>ARCH211 Environmental Design 2</td>
<td>15</td>
<td>5</td>
<td>2</td>
<td>80-20</td>
</tr>
<tr>
<td>CIVE241 Reinforced Concrete and Steelwork</td>
<td>15</td>
<td>5</td>
<td>1</td>
<td>90-10</td>
</tr>
<tr>
<td>CIVE224 Soil Mechanics</td>
<td>15</td>
<td>5</td>
<td>1</td>
<td>80-20</td>
</tr>
<tr>
<td>MATH299 Mathematics Engineering II</td>
<td>7.5</td>
<td>5</td>
<td>1</td>
<td>90-10</td>
</tr>
<tr>
<td>MNGT202 Project Management</td>
<td>7.5</td>
<td>5</td>
<td>2</td>
<td>60-40</td>
</tr>
<tr>
<td>CIVE263 Group Design Project</td>
<td>15</td>
<td>5</td>
<td>2</td>
<td>0-100</td>
</tr>
<tr>
<td>CIVE242 Construction Materials</td>
<td>7.5</td>
<td>5</td>
<td>1</td>
<td>80-20</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS OBTAINED** 120

**Constructionarium (OPTIONAL)**

During the second semester of Year 2 students can opt to attend the 'Constructionarium' (see link for useful info and background: [http://www.constructionarium.co.uk/](http://www.constructionarium.co.uk/)). This entails students spending a week at the National Construction College and involves the construction of a real civil engineering structure. The National Construction College is the training division of CITB-Construction Skills. The week away is non-credit bearing but offers students a simulative experience of the construction phase of major civil and architectural engineering project and is generally a key highlight item of the degree programme. It is the student’s responsibility to appropriately balance and manage their time effectively to ensure their attendance at the Constructionarium does not hinder credit bearing module performance.

### Year 3 (BEng Hons)

<table>
<thead>
<tr>
<th>Module</th>
<th>Credits</th>
<th>Level</th>
<th>Semester</th>
<th>Exam-CW</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGG341 Individual Project</td>
<td>30</td>
<td>6</td>
<td>1+2</td>
<td>0-100</td>
</tr>
<tr>
<td>ARCH321 Context 3.1: History &amp; Theory of Architecture</td>
<td>15</td>
<td>6</td>
<td>1</td>
<td>100-0</td>
</tr>
<tr>
<td>CIVE344 Structures 3</td>
<td>7.5</td>
<td>6</td>
<td>1</td>
<td>100-0</td>
</tr>
<tr>
<td>CIVE343 Prestressed Concrete Design (OPTIONAL)</td>
<td>7.5</td>
<td>6</td>
<td>1</td>
<td>90-10</td>
</tr>
<tr>
<td>ARCH311 Environmental Design 3</td>
<td>15</td>
<td>6</td>
<td>2</td>
<td>70-30</td>
</tr>
<tr>
<td>CIVE342 Earthquake Engineering</td>
<td>7.5</td>
<td>6</td>
<td>2</td>
<td>100-0</td>
</tr>
<tr>
<td>ENGG302 Introduction to Finite Elements (OPTIONAL)</td>
<td>7.5</td>
<td>6</td>
<td>1</td>
<td>50-50</td>
</tr>
<tr>
<td>CIVE345 Construction Management</td>
<td>7.5</td>
<td>6</td>
<td>2</td>
<td>50-50</td>
</tr>
<tr>
<td>ENGG303 Structural Dynamics</td>
<td>7.5</td>
<td>6</td>
<td>1</td>
<td>90-10</td>
</tr>
<tr>
<td>CIVE320 Geotechnical Engineering</td>
<td>15</td>
<td>6</td>
<td>2</td>
<td>80-20</td>
</tr>
<tr>
<td>CIVE340 Individual Design Project (New Module)</td>
<td>7.5</td>
<td>6</td>
<td>2</td>
<td>0-100</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS OBTAINED** 120

34. **Industrial placement/work placement/year abroad:**

None.

35. **Liaison between the Level 2 Schools/Institutes involved:**

Representatives from the Schools of Architecture, Mathematical Sciences and Environmental Sciences will attend meetings of the Boards of Studies and will maintain regular contact with the programme director and relevant lecturers on the programme.

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**Part E: Learning, Teaching And Assessment Strategies**

TQSD/15.16
2016-17 v.1; AQSC April 2016

10 of 14
36. **Learning, Teaching and Assessment Strategies:**

This programme complies with the University’s Code of Practice on Assessment which can be found here:

https://www.liv.ac.uk/tqsd/code-of-practice-on-assessment/

and with the School of Engineering’s Teaching and Learning Strategy, published in the Handbook for Undergraduate Students which can be found here:

https://www.liv.ac.uk/student-administration/student-administration-centre/student-handbooks/

Particular emphasis is placed on design, including the issues of creativity and sustainability linked to the CDIO initiatives (an educational framework which provides students with an education stressing engineering fundamentals set in the context of Conceiving-Designing-Implementing-Operating real-world systems and products).

Most teaching is carried out by academic staff and University-recognised teachers; experimental officers, research staff and trained postgraduate students undertake some teaching (particularly laboratory classes) under supervision of academic staff.

36a. **Learning, Teaching and Assessment methods:**

Lectures, large group seminars/tutorials, small group seminars/tutorials, laboratory work, fieldwork, industrial visits, exposure to industry leaders, group work, project work (individual and group), online discussion and wiki forums etc, workshop practice skills development e.g. orals, report writing, peer-to-peer learning, private study.

37. **Assessment information for students:**

**Code of Practice on Assessment**

The University has a Code of Practice on Assessment which brings together the main institutional policies and rules on assessment. The Code is an authoritative statement of the philosophy and principles underlying all assessment activities and of the University's expectations in relation to how academic subjects design, implement and review assessment strategies for all taught programmes of study.

The Code of Practice includes a number of Appendices which provide more detail on the regulations and rules that govern assessment activity; these include:

- The University marks scale, marking descriptors and qualification descriptors;
- The model for non-clinical first degree programmes;
- The system for classifying three-year, non-clinical, undergraduate degrees;
- The system for classifying four-year, non-clinical, undergraduate degrees that include a year in industry or a year abroad;
- Information about students’ progress, including guidance for students;
- The procedure for assessment appeals;
- Regulations for the conduct of exams;
- The University’s policy on making adjustments to exam arrangements for disabled students.
• The code of practice relating to external examining (see also below).
• The Academic Integrity Policy, which covers matters such as plagiarism and collusion and includes guidance for students;
• The policy relating to mitigating circumstances which explains what you should do if you have mitigating circumstances that have affected assessment; and
• The policy on providing students with feedback on assessment.

Please click here to access the Code of Practice on Assessment and its appendices; this link will also give you access to assessment information that is specific to your cohort:

A summary of key assessment information is also available in the 'Your University' handbook.

### Marking criteria:

For individual assessment tasks or questions where there is no definitive right answer (such as a discussion or evaluation of a concept or theory, a design solution to an open-ended problem, a report on a project), a range of possible answers could satisfy, to a greater or lesser extent, the question or task posed. In such cases the following marking descriptors are used. These criteria also apply to the overall assessed performance on modules.

<table>
<thead>
<tr>
<th>Knowledge and Understanding</th>
<th>Intellectual Skills</th>
<th>Transferable Skills</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>100%</strong></td>
<td>Total coverage of the task set. Exceptional demonstration of knowledge and understanding appropriately grounded in theory and relevant literature.</td>
<td>Extremely creative and imaginative approach. Comprehensive and accurate analysis. Well-argued conclusions. Perceptive self-assessment.</td>
</tr>
<tr>
<td><strong>90-99% 'Outstanding’</strong></td>
<td>As 'Outstanding’ but with some minor weaknesses or gaps in knowledge and understanding.</td>
<td>As 'Outstanding’ but slightly less imaginative and with some minor gaps in analysis and/or conclusions</td>
</tr>
<tr>
<td><strong>70-79% 'Very Good’</strong></td>
<td>As 'Very Good’ but with more and/or more significant gaps in knowledge and understanding and some significant gaps in grounding</td>
<td>As 'Very Good’ but analysis and conclusions contain some minor weaknesses.</td>
</tr>
<tr>
<td><strong>60-69% 'Comprehensive’</strong></td>
<td>Covers most of the task set. Patchy knowledge and understanding with limited grounding in literature.</td>
<td>Rather limited creative and imaginative features. Patchy analysis containing significant flaws. Rather limited</td>
</tr>
<tr>
<td><strong>50-59% 'Competent’</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Student representation and feedback:

A Staff-Student Liaison Committee (SSLC) operates in accordance with the University Code of Practice on Student Representation, a copy of which can be accessed at:  

The SSLC will normally meet at least three times a year. The membership of the SSLC, its terms of reference, and the manner in which it conducts its business will conform to the requirements of the Annex to the Code of Practice on Student Representation. Elections to the SSLC will be carried out within the structure determined by the University Student Representation Steering Group, and Programme Representatives will be encouraged to attend the training provided for them by the Guild of Students.

Student representatives are invited to attend meetings of the 1) Civil and Architectural Engineering Board of Studies 2) Architecture Board of Studies and 3) SSLC in both the School of Engineering and School of Architecture.

Module and Programme evaluation is conducted via questionnaires and open forums organised by the Programme Director.

Feedback is encouraged via the SSLC.
39. **Status of Professional, Statutory or Regulatory Body Accreditation:**

The programme will be fully accredited under UK-SPEC by the Joint Board of Moderators (JBM) on behalf of ICE, IStructE and IHT. This is likely to happen just before or shortly after the programme commences and thus will be completed before the first group of students graduate at the end of Year 3. Those who obtain a BEng (Hons) degree may satisfy the academic requirements for Corporate Membership by subsequently completing a period of ‘Further Learning’. After this, and a subsequent period of professional development and initial professional responsibility, they may apply to the Institutions for full Corporate Membership and Chartered Engineer status.

40. **Diversity & Equality of Opportunity and Widening Participation:**

The programme design, structure and content are consistent and compliant with the University’s Diversity and Equality of Opportunity Policy.

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**Annex 1**

Annex of Modifications Made to the Programme

Please complete the table below to record modifications made to the programme.

<table>
<thead>
<tr>
<th>Description of modification (please include details of any student consultation undertaken or confirm that students’ consent was obtained where this was required)</th>
<th>Minor or major modifications</th>
<th>Date approved by FAQSC</th>
<th>Date approved by AQSC (if applicable)</th>
<th>Cohort affected</th>
</tr>
</thead>
</table>