Course Handbook

BEng (Hons) Civil Engineering and Construction Management

2020-2021

Michael Gorges

School of Engineering

Please read this Handbook in conjunction with the University’s Student Handbook.

All course materials, including lecture notes and other additional materials related to your course and provided to you, whether electronically or in hard copy, as part of your study, are the property of (or licensed to) UCLan and MUST not be distributed, sold, published, made available to others or copied other than for your personal study use unless you have gained written permission to do so from the Dean of School. This applies to the materials in their entirety and to any part of the materials.
Contents

1 Welcome to the Course
2 Structure of the Course
3 Approaches to teaching and learning
4 Student Support
5 Assessment
6 Classification of Awards
7 Student Feedback
8 Appendices
  8.1 Programme Specification(s)
1. Welcome to the course

Welcome to Civil Engineering and Construction management at UCLan. We hope to provide you with an interesting and challenging education, and to develop competences appropriate to Civil Engineering and construction management. You have taken the first step along a challenging, interesting and rewarding career, both at a personal and a professional level.

Please read the handbook carefully as it is a source of information on the academic, administrative and operational aspects of your course and it is intended to explain what is required of you. Feel free to discuss any aspects with myself or any member of the course team.
Enjoy your time studying with us!

1.1 Rationale, aims and learning outcomes of the course

The BEng (Hons) Civil Engineering and Construction Management course aim is to develop graduates with a broad understanding of current technology and practice in civil engineering, covering the relevant aspects of civil infrastructure, systems, design and analysis. In addition the programmes have been designed to achieve a logical and planned development from fundamental principles to specific applications in each course component together with an increasing level of integration between the components over the duration of the course. Construction management Core themes include the following:

- management focused on construction economics and allowing the development of executive skills including, programming, planning, finance, project and risk management and negotiating skills
- legal skills commencing with basic principles applicable to the construction industry and the development of the construction project. The development of contractual knowledge through the study of standard forms of contract. The contextual study of case law and statutory legislation applicable to construction contract claims and dispute resolution methods
- technical skills relating to fundamental principles and applications of technological and engineering sciences relevant to construction and surveying works

The course is three years (BEng). The Civil engineering and Construction Management programme are designed:

- To provide a focused education at an academic level appropriate for the target awards: BEng (Hons) Civil Engineering and Construction Management, as well as the exit awards.
- To meet the requirements for accreditation of the programme by the Joint Board of Moderators/Engineering Council and Chartered Institute of Building.
- To provide an extended, enhanced, and industrially relevant integrated
undergraduate programme of study in preparation for professional practice.

- To produce resourceful, competent, clear-thinking professional engineers with a range of skills and experience relevant to today’s engineering industry.

- To equip graduates of the programme with knowledge, skills, experience, and understanding which underpin a professional career in engineering.

The programmes have been designed to achieve a logical and planned development from fundamental principles to specific applications in each course component together with an increasing level of integration between the components over the duration of the course in the core areas of financial management, legal skills, technical knowledge and professional ability. Whether you become a Chartered Civil Engineer or a Chartered Construction Project Manager you will be expected to take overall responsibility for many aspects of construction and the built environment, such as the planning, management, co-ordination and financial control of a construction project, or the surveying and maintenance of existing buildings.

The technology of buildings continues to develop, involving new uses, new materials and new methods of construction. These permit radically new building forms and may also enable buildings to be conserved and re-used in ways which were not previously technically feasible.

The discipline of Civil Engineering encompasses a wide skills base and the emphasis of this course is placed on system-level design rather than that of individual component devices. By concentrating on the principles fundamental to multi-system integration, the course equips graduates with the knowledge, skills and confidence to thrive in the rapidly evolving field of civil engineering, produce designs suitable for a variety of applications and the transferrable skills to find employment in a diverse set of industrial and commercial sectors.

The full program specifications, including learning outcomes, are referenced in the Appendices.
1.2 Course Team
The course team consists of the following:

**Paul Watson**  BSc (Eng), PhD, MCIHT
Academic Lead for Construction and Civil Engineering
E-mail: PDJWatson@uclan.ac.uk

**Godfaurd John**  BEng, MSc, PhD, FHEA
Senior Lecturer in Civil Engineering and Construction Management
E-mail: gaJohn@uclan.ac.uk

**John Pescatore**  BSc, MSc, PhD, PE
Lecturer in Hydraulics and Water Engineering
E-mail: JPescatore@uclan.ac.uk

**Michael Gerges**  BEng (Hons), MSc, MSc, PGcert HE, FHEA, MCIOB, MIET, MASCE
Lecturer in Civil Engineering/Course Leader BEng (Hons) Civil Engineering and Construction Management
E-mail: mgerges1@uclan.ac.uk

**Julie Marsh**  BEng (Hons), CEng, MICE
Senior Lecturer in Civil Engineering/Course Leader BEng (Hons) Civil Engineering
E-mail: JMarsh6@uclan.ac.uk

**Alison Robinson**  BSc, FHEA
Senior lecturer in Geology and Hydrogeology
E-mail: AJRRobinson@uclan.ac.uk

**Fiona Wallbank-Blakey**  BSc, MRICS
Lecturer in Civil Engineering Technology and Design
E-mail: FMWallbank-blakey@uclan.ac.uk

**John Ashton-Yamnikar**  BSc (Hons), MCIOB, MRICS
Senior lecturer in Construction Management
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**John Picken**  BSc (Hons), MSc, PGCE, FCIOB
Lecturer in Quantity Surveying
E-mail: jpicken1@uclan.ac.uk
Chris Boothman  BSc (Hons), MA, C.Build.E, FCABE, FCIOB, FHEA  
Senior Lecturer in Building Surveying  
E-mail: jcboothman1@uclan.ac.uk

Adrienne Yarwood  BSc (Hons), MSc, FRICS, MCIarb  
Senior Lecturer in Quantity Surveying  
E-mail: AYarwood1@uclan.ac.uk

Adebayo Oladapo  BSc (Hons), MSc, PGcert, PhD, FHEA, MNiOS  
Senior Lecturer in Quantity Surveying  
E-mail: aaoladapo@uclan.ac.uk

Abulkadni Ganah  BESc, MSc, MA, PhD, ICIOB  
Senior Lecturer in Architecture  
E-mail: AGanah@uclan.ac.uk

Campus Admin Services is located in the Computer and Technology Building room.  
Hub contact details are as follows:

☎ 01772 89 1994 or 01772 89 1995, ✉ CandThub@uclan.ac.uk

1.3 Expertise of staff  
All of the tutors on your course will be from professional or academic backgrounds or a combination of the two. They will endeavour to bring to the course aspects reflecting their interests and specialisms.

1.4 Academic Advisor  
You will be assigned an Academic Advisor who will provide additional academic support during the year. They will be the first point of call for many of the questions that you might have during the year. Your Academic Advisor will be able to help you with personal development, including developing skills in self-awareness, reflection and action planning.

1.5 Administration details  
Campus Admin Services provides academic administration support for students and staff and are located in the following hubs which open from 8.45am until 5.15pm Monday to Thursday and until 4.00pm on Fridays. The hub can provide general assistance and advice regarding specific processes such as extenuating circumstances, extensions and appeals.

Allen Building  
Medicine  
Dentistry  
telephone: 01772 895566  
email: AllenHub@uclan.ac.uk

Harris Building  
Lancashire Law School  
Humanities and the Social Sciences
Centre for Excellence in Learning and Teaching
telephone: 01772 891996/891997
email: HarrisHub@uclan.ac.uk

Foster Building
Forensic and Applied Sciences
Pharmacy and Biomedical Sciences
Psychology
Physical Sciences
telephone: 01772 891990/891991
email: FosterHub@uclan.ac.uk

Computing and Technology Building
Art, Design and Fashion
Computing
Journalism, Media and Performance
Engineering
telephone: 01772 891994/891995
email: CandTHub@uclan.ac.uk

Greenbank Building
Sport and Wellbeing
Management
Business
telephone: 01772 891992/891993
email: GreenbankHub@uclan.ac.uk

Brook Building
Community, Health and Midwifery
Nursing
Health Sciences
Social Work, Care and Community
telephone: 01772 891992/891993
email: BrookHub@uclan.ac.uk

1.6 Communication

The University expects you to use your UCLan email address and check regularly for messages from staff. If you send us email messages from other addresses they risk being filtered out as potential spam and discarded unread.

There is a Blackboard course level space, Engineering@UCLan:
https://portal.uclan.ac.uk/webapps/blackboard/content/listContent.jsp?course_id

There you will find documentation relating to your course – for example student handbooks, support and advice regarding student placements and job hunting, along with other useful
We will provide additional information using the Blackboard® (vle) system, but the primary communication takes place in the classroom and all students are expected to attend all sessions, it is therefore the responsibility of the student who misses any sessions to ‘catch-up’ on what they have missed.

1.7 External Examiners

External examiners have particular responsibility for ensuring that standards and comparability are maintained, assuring fairness in the application and implementation of assessment processes and procedures in accordance with the approved programme/course regulations, and for judging whether students have fulfilled the learning outcomes of courses to a satisfactory standard.

The University has appointed an External Examiner to your course who helps to ensure that the standards of your course are comparable to those provided at other higher education institutions in the UK. The External Examiner is Dr Ramesh Marasimi

External Examiner reports for the Engineering courses can be accessed electronically via the Engineering@UCLan Blackboard pages.

2. Structure of the course
2.1 Overall structure

Table 1 illustrate the programme structure for BEng (Hons) Civil Engineering and Construction Management. The award requires that a student pass 360 credits total for BEng (Hons)

Each full-time year of study requires you to pass modules to the value of 120 credits. Most modules on the programmes are standard sized and worth 20 credits, although there are examples of modules worth 10, and 30 credits.

Please note that the programme structures may be subject to minor modifications to reflect improvements/developments in the course or within industry. If this is the case your current year of study will not be affected and you will be notified of the changes for future year(s) of study.
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<thead>
<tr>
<th>Year 1</th>
<th>Level Four</th>
<th>Module code</th>
<th>Module title</th>
<th>Credit value</th>
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<td></td>
<td></td>
<td>ER1430</td>
<td>Civil Engineering Design and Technology</td>
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<td></td>
<td>ER1432</td>
<td>Civil Engineering Hydraulics and Materials</td>
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<td></td>
<td></td>
<td>ER1433</td>
<td>Civil Engineering Structures and Geotechnics</td>
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<tr>
<td></td>
<td></td>
<td>BN2501</td>
<td>Structural Analysis and Element Design</td>
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<tr>
<td></td>
<td></td>
<td>BN2506</td>
<td>Soil Mechanics</td>
<td>20</td>
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<td></td>
<td></td>
<td>BN2509</td>
<td>Construction Engineering Materials</td>
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<td></td>
<td></td>
<td>BN2507</td>
<td>Civil Engineering Design and CAD</td>
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<td></td>
<td></td>
<td>BN2104</td>
<td>Construction Law</td>
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<th>Module title</th>
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<td></td>
<td></td>
<td>BN3501</td>
<td>Structural Engineering (Optional)</td>
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<td></td>
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<td>BN3506</td>
<td>Geotechnical Engineering (Optional)</td>
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<td>BN3060</td>
<td>Project Analysis and Appraisal</td>
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<td>BN3503</td>
<td>Risk and Value Management</td>
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<td></td>
<td>NT3048</td>
<td>Engineering Dissertation</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>BN3010</td>
<td>Project Management &amp; BIM</td>
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</tr>
</tbody>
</table>

Table 1 BEng (Hons) Civil Engineering and Construction Management Programme Structure
2.2 Modules available

Each module is a self-contained block of learning with defined aims, learning outcomes and assessment. A standard module is worth 20 credits. It equates to the learning activity expected from one sixth of a full-time undergraduate year. Modules may be developed as half or double modules with credit allocated up to a maximum of 120 credits per module.

The module number and title can be seen in the diagram on the previous page and the descriptors for these modules can be found on Blackboard®

2.3 Course requirements

A student who has not passed any modules or has an average mark below 40% is normally recommended as fail/withdraw from programme depending on your circumstances. Students registered for a CIOB accredited award must achieve a minimum mark of 35% or above on each of the assessments.

Where a core module has not been passed after referral and repeat study then a student will either receive an exit award or counselling on the options to achieving an exit award.

Courses that are accredited by the Joint Board of Moderators (JBM) meet the requirements of the UK Standard for Professional Engineering Competence (UK-SPEC), published by the Engineering Council on behalf of the UK engineering profession.

The original document defining the requirements of UK-SPEC is available from the Engineering Council: [http://www.engc.org.uk/professional-qualifications/standards/uk-spec](http://www.engc.org.uk/professional-qualifications/standards/uk-spec)

2.4 Module Registration Options

Discussions about your progression through the course normally take place in February each year. It is an opportunity for you to make plans for your study over the next academic year. If either you or the academic team do not feel that you are capable of completing your chosen course of study then advice may be given on alternative routes or exit awards. However, it is not usually prudent to make decisions about this until results are known in June. Most likely you will be advised to finish all your modules to the best of your abilities and to seek advice once results are available.

2.5 Study Time

2.5.1 Weekly timetable

A timetable will be available once you have enrolled onto the programme, through the Student Portal.

2.5.2 Expected hours of study

20 credits is a standard module size and equals 200 notional learning hours.

As outlined in the school handbook the normal amount of work involved in achieving a successful outcome to your studies is to study for 10 hours per each credit you need to achieve – this includes attendance at UCLan and time spent in private study.

This translates to a total of 6 hours per 20 credit module per week. We expect that you commit 36 hours study per week (pro-rata for part-time students and/or semester-based
modules), inclusive of your contact hours. So for a typical module you may have a 2 hour lecture, and a 1 hour tutorial, leaving you approximately 3 hours for self-directed study (further reading, tutorial questions, assignments, revision). You will also need to use equipment such as computer and laboratory facilities for practical work, again sometimes outside the scheduled class times.

2.5.3 Attendance Requirements
You are required to attend all timetabled learning activities for each module. Notification of illness or exceptional requests for leave of absence must be made to the following:

Notification of illness should be made to the Campus Admin Services:
☎ +44 1772 891994 or 01772 891995 | ✉ CandThub@uclan.ac.uk

Exceptional absence requests are made to Paul Watson (Academic Lead for Civil Engineering):
☎ +44 1772 893320 | ✉ pdjwatson@uclan.ac.uk

You are encouraged to seek the advice of your Academic Advisor and/or Course Leader if your personal circumstances make it difficult to meet your study obligations.

3. Approaches to teaching and learning
3.1 Learning and teaching methods

The range of teaching methods we have included in your programme specification and the expectations we have of you are that you will undertake all necessary pre-reading, accessing of materials from Blackboard site prior to (or after) sessions. As a learner it is expected that you will progress from being a dependant learner when you arrive to an independent learner by the time you graduate.

Evidence of achievement, upon which assessment will be based, will be gained through a programme of practical exercises, assignments and exams. Each week you may be involved in some practical work such as a laboratory exercise, a computer-based assignment, group or individual project work etc. You will often work in groups and make group presentations but you will write up and submit work individually so that you gain credit for your contribution, not that of somebody else.

3.2 Study skills
Study Skills - ‘Ask Your Librarian’

https://www.uclan.ac.uk/students/support/study/it_library_trainer.php

You can book a one to one session with a subject Librarian via Starfish. These sessions will help with questions such as "My lecturer says I need a wider variety of sources in my references, what do I do?"
"I need to find research articles, where do I start?"
"How do I find the Journal of ...?"
"How do I use RefWorks?"
3.3 Learning resources

3.3.1 Learning Information Services (LIS)
The best place to start when exploring the Library resources available to you is;
- Your ‘Subject Guide’ can be found in the Library Resources
- Your ‘My Library’ tab in the Student Portal
- Library search
  - Your module reading list – this can be found in your electronic module space.

Generic information is included in the Student Handbook, but you may wish to include additional information here. How does LIS provide resources and support particularly relevant for this course, such as subject guides or access to online databases? Please contact your subject liaison officer if you’d like more information to add here.

3.3.2 Electronic Resources
LIS provide access to a huge range of electronic resources – e-journals and databases, e-books, images and texts. Materials, such as ICE, IStructE, CIOB and other relevant guides, can either be accessed from the library database or upon request can be uploaded by lecturers on Blackboard.

3.4 Personal development planning
Personal development planning is closely related to the acquisition of personal transferable skills and developing such skills is an integral part of the course. Academic skills alone are clearly insufficient to meet the demands of Civil Engineers and Construction Managers. The development of additional interpersonal qualities is essential to enable you to initiate, plan, direct and control events effectively. To help achieve this objective, much of the tutorial and assignment work in modules will provide you with the opportunity for practical project work and the development of problem solving skills. Additional skills such as team working, applied ICT and Surveying will be introduced and developed. All designed to assist in the preparation of your PDP.

Employers do not simply look for basic competences such as in numeracy, literacy and communication skills, but also for motivation, time management, decision making, reliability, team work and leadership skills. Your programme of study has been designed to help you to develop all of the above mentioned skills and more.

3.5 Preparing for your career
Your future is important to us, so to make sure that you achieve your full potential whilst at university and beyond, your course has been designed with employability learning integrated into it at every level. This is not extra to your degree, but an important part of it which will help you show future employers just how valuable your degree is. These “Employability Essentials” take you on a journey of development that will help you to write your own personal story of your time at university:

- To begin with, you will explore your identity, your likes and dislikes, the things that are important to you and what you want to get out of life.
- Later, you will investigate a range of options including jobs and work experience, postgraduate study and self-employment.
- You will then be ready to learn how to successfully tackle the recruitment process.
It’s your future: take charge of it!

Careers offers a range of support for you including:- career and employability advice and guidance access to work placements, internships, voluntary opportunities, part-time employment and live projects workshops, seminars, modules, certificates and events to develop your skills business start-up, freelance and self-employment advice. For more information, come along and visit the team or access our careers and employability resources via https://www.uclan.ac.uk/students/support/careers/index.php.

The School has strong links with industries and often we do receive vacancies from companies requiring graduate engineers. That information will be forwarded to the students who are seeking employment and in most cases they are successful in securing a job before graduation.

4. Student Support
Information on the support available is at: https://www.uclan.ac.uk/students/

4.1 Academic Advisors
You will be assigned an Academic Advisor on your arrival at the university and it is their responsibility to engage with you to ensure that your time at university is used wisely, they are the person who will monitor your attendance and progression and advice you if necessary about academic issues.

Use Starfish to identify who your Academic Advisor and Teaching Team is.

Although Academic Advisors and Course Leaders will deal with most of the day-to-day questions which arise, the Academic Lead in Construction and Civil Engineering section is always willing to see students and an appointment can be made through the Student Hub. Advice relating to administrative issues may be obtained from the Student Hub.

4.2 Students with disabilities

Students with disabilities are supported on the course should you require further information. Please contact the course leader in the first instance, or let one of the course team know as soon as possible.

If you have a disability that may affect your studies, you can also contact the Disability Advisory Service - disability@uclan.ac.uk. With your agreement information will be passed on to the Disability Advisory Service. The University will make reasonable adjustments to accommodate your needs and to provide appropriate support for you to complete your study successfully. Where necessary, you will be asked for evidence to help identify appropriate adjustments.

4.3 Students’ Union

The Students’ Union offers thousands of volunteering opportunities ranging from representative to other leadership roles. We also advertise paid work and employ student staff on a variety of roles. You can find out more information on our website: http://www.uclansu.co.uk/
5. Assessment

5.1 Assessment Strategy

The assessment strategy for each module will be outlined within the module. The modules will be assessed either as coursework or by a combination of coursework and examinations with the weightings reflecting the course content (theory/practical). The assessment strategy for the course learning outcomes and skill development is mapped in the validated Programme Specification appended to this document.

5.2 Notification of assignments and examination arrangements

You will be notified of assessments by your module tutors. They will advise you of the requirements, the marking criteria and of the respective submission dates or exam arrangements, during one or more of the timetabled sessions. In general, the examination arrangements are available from the University web site. These arrangements are not generally made by the module tutors.

Submission of coursework assignments is through the Blackboard site for the module, usually using the Turnitin software. Students submit their assignments in accordance with the requirements detailed in the Assessment Submission criteria of their assignment.

5.3 Referencing

For most of your assignments you will be expected to do some further reading, and you are required to think and produce increasingly original work around the work of others. Do not fall into the ‘plagiarism trap’ either deliberately or by accident. You need to give suitable credit to those that have produced the work that you are using.

The default referencing is the Harvard referencing system (a guide to this system can be found on the Engineering@UCLan course space, accessed through the student portal). Please use this unless you are directed differently within your assignment brief.

5.4 Confidential material

As a student on UCLan course, you may be required to access personal records, confidential or sensitive information for completing your assignment. You have an ethical and legal responsibilities to respect confidentiality and maintain the anonymity of individuals. You must be committed to do what is right and honourable in using such information as part of the academic fraternity. Your ethical and legal responsibilities also include compliance with applicable laws, regulations, and standards in the United Kingdom, and compliance with all the organisational rules and policies. One must also hold others accountable and report violations of the ethical and legal responsibilities.

5.5 Cheating, plagiarism, collusion or re-presentation

Please refer to the relevant information included in the University Student Handbook for full definitions. The University uses an online Assessment Tool called Turnitin. A pseudo-Turnitin assignment will be set up using the School space on Blackboard to allow students to check as many drafts as the system allows before their final submission to the 'official' Turnitin assignment. Students are required to self-submit their own assignment on Turnitin and will be given access to the Originality Reports arising from each submission. In operating Turnitin, Schools must take steps to ensure that the University’s requirement for all
summative assessment to be marked anonymously is not undermined and therefore Turnitin reports should either be anonymised or considered separately from marking. Turnitin may also be used to assist with plagiarism detection and collusion, where there is suspicion about individual piece(s) of work.

5.6 How do I know that my assessed work had been marked fairly?

Assessment is an integral part of the course. Module staff work closely together to design assessments, agree the marking criteria and approve final versions of assessments to ensure that these are appropriate. The criteria for assessment will be communicated to you clearly during the module teaching.

All module staff engage in development and training in assessment, marking and feedback. Once the assessments have been completed the module team will discuss the assessment methods and marking criteria, prior to starting to mark, so that there is a common understanding of what is expected of students. All assessed modules have moderation built into the marking process. Moderation involves sampling students’ assessed work to make sure that the learning outcomes and agreed marking criteria have been interpreted and applied in the same way. This ensures that you and your fellow students are treated equitably and that the academic standards are applied consistently. During the marking process the module leader will co-ordinate moderation to ensure that at least 10% of assessed work (or a minimum of three pieces) has been reviewed by other markers and any concerns about consistency or accuracy addressed with the whole module team. Your work may or may not be part of this sample, but the processes for developing assessments and marking criteria as well as moderation mean that you can be confident that teaching staff are marking assessments to the same criteria. Module teams may then use feedback from moderation to improve clarity about the nature and purpose of future assessment, or to make changes if required.

Modules are also moderated externally. The module leader will arrange for the external examiner to receive a sample of work for review and comment. External examiners cannot change individual grades, but can act as ‘critical friends’ and confirm that marking standards are in line with other, similar courses in the sector. If, on reviewing the sample, external examiners feel that the marking criteria have not been applied consistently the work of the whole cohort will be reviewed.

6. Classification of Awards

The University publishes the principles underpinning the way in which awards and results are decided in Academic Regulations. Decisions about the overall classification of awards are made by Assessment Boards through the application of the academic and relevant course regulations.

**BEng:** for Undergraduate Honours Degrees the APM is based on a weighted average of all your Level 5 and Level 6 modules. Higher level study is recognised through weightings applied in the ratio 3:7 for Level 5: Level 6.

7. Student Feedback

You can play an important part in the process of improving the quality of this course through the feedback you give.
You will be asked to provide feedback in a number of ways and we would encourage you to do so, it is only with your help that we can ‘improve the margins’ and make student life better.

7.1 Student Staff Liaison Committee meetings (SSLCs)

Details of the Protocol for the operation of SSLCs is included in section 8.2 of the University Student Handbook.

The purpose of a SSLC meeting is to provide the opportunity for course representatives to feedback to staff about the course, the overall student experience and to inform developments which will improve future courses. These meetings are normally scheduled once per semester. Your Course Leader will facilitate the meetings using Guidelines and provide a record of the meeting with any decisions and / or responses made and / or actions taken as a result of the discussions held. The meetings include discussion of items forwarded by course representatives, normally related to the following agenda items (dependent on time of year). Your Student Liaison Officer will be invited to attend and support the resolution of any issues. The course team encourage student feedback in all areas and recognise that additional items:

- Update on actions completed since the last meeting
- Feedback about the previous year – discussion of external examiner’s report; outcomes of National /UCLan student surveys.
- Review of enrolment / induction experience;
- Course organisation and management (from each individual year group, and the course overall);
- Experience of modules - teaching, assessment, feedback;
- Experience of academic support which may include e.g. Personal Development Planning, personal tutoring arrangements and The Card;
- Other aspects of University life relevant to student experience e.g. resources, IT, library;
- Any other issues raised by students or staff.

Course representatives are elected at the beginning of the Academic year. Usually students either come forward or get nominated by other members of the class. Usually, and depending on the size of the class, one or two student reps can be elected, and where the class is a mixture of full and part timers one for each will represent the class.

Student-staff Liaison meetings take place twice a year; once in each semester. Students will be notified by e-mail about the date, time and place of the scheduled meetings. Thereafter, an action plan will be drafted and students will receive feedback about actions taken as a result of discussions held within 15 working days.
This Programme Specification provides a concise summary of the main features of the programme and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided.

Sources of information on the programme can be found in Section 17

<table>
<thead>
<tr>
<th>1. Awarding Institution / Body</th>
<th>University of Central Lancashire</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Teaching Institution and Location of Delivery</td>
<td>University of Central Lancashire Main Campus</td>
</tr>
<tr>
<td>3. University School/Centre</td>
<td>School of Engineering</td>
</tr>
<tr>
<td>4. External Accreditation</td>
<td></td>
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<tr>
<td>5. Title of Final Award</td>
<td>BEng (Hons) Civil Engineering and Construction Management</td>
</tr>
<tr>
<td>6. Modes of Attendance offered</td>
<td>Full Time Sandwich</td>
</tr>
<tr>
<td>7a) UCAS Code</td>
<td>To be confirmed</td>
</tr>
<tr>
<td>7b) JACS Code</td>
<td>H200</td>
</tr>
<tr>
<td>7c) HECoS Code</td>
<td>100148</td>
</tr>
<tr>
<td>8. Relevant Subject Benchmarking Group(s)</td>
<td>QAA Engineering (2010) and Construction, Property, and surveying 2008</td>
</tr>
<tr>
<td>9. Other external influences</td>
<td>Joint Board of Moderators/ Engineering Council Institution of Civil Engineers (ICE) and Chartered Institute of Building (CIOB) Professional Body Accreditation guidance documentation UK Engineering Council (EC-UK) QAA Academic Infrastructure CIOB Educational Framework 2013</td>
</tr>
<tr>
<td>10. Date of production/revision of this form</td>
<td>May 2018</td>
</tr>
<tr>
<td>11. Aims of the Programme</td>
<td>To provide students with a suitable basis in the fundamentals and principles of Civil Engineering to cope with the future developments during the student’s career.</td>
</tr>
</tbody>
</table>
- To enable students to undertake independent critical thought, enhancing and extending their intellectual development whilst becoming conversant with the nature of the industry, thereby developing the ability to arrive at optimal solutions to civil engineering and technological problems.

- To meet the growing demand shortage for qualified civil engineers in the UK to deliver commissioned projects that are required to be constructed in the region.

- To fill the existing skills gap that will address the changing skills required by civil engineers in the twenty first century to meet the demand of global warming, energy reduction and challenging environmental variables that are being manifested presently.

- To contribute to the teaching, learning, and educational contribution to external students from the newly EU member states as well as the wider European continent.

- To prepare future engineers to respond to the challenges created globally by increasing urbanisation, population growth and ecological degradation.

- To exploit the potential market for employability of our graduates of the existing large concentration of high profile built environment organisations in the North-west region of England.

- To contribute to the development of the region as well as to contribute to the competitive advantage of the region with the rest of the UK.

- To develop knowledge and understanding of construction industry across the themes of technology, management, economics and law to underpin the development of professional competence.

- To encourage students to undertake independent critical thinking and problem solving to enhance and extend their understanding of the profession and industry.

- To prepare students for the vocational problems they will encounter in the procurement of construction work generally, and develop the potential to adapt and contribute to changes.

- To provide a basis from which students can continue their intellectual and professional development by academic study to a higher degree and/or professional qualifications, enhancing employability.
12. Learning Outcomes, Teaching, Learning and Assessment Methods

A. Knowledge and Understanding

A1. Demonstrate a sound knowledge and understanding of the impact of civil engineering solutions in a global, economic, environmental, and societal context.
A2. Demonstrate the ability to apply the conceptual knowledge of mathematics, science, and engineering to solve societal problems that they encounter in their daily interaction with the community.
A3. Demonstrate an understanding of professional and ethical responsibility in the context of civil engineering in the execution of their duties.
A4. The student should have the ability to understand and explain the importance of professional licensure.
A5. Critically appraise current attitudes and methods within the Profession and adopt a creative and innovative approach to Construction Management and related spheres of work.
A6. Produce accurate and appropriate project solutions with supporting project information.

Teaching and Learning Methods

Outcomes A1, A2, A3 and A4 are all achieved by completion of the respective subject based modules at level 4 and 5, using project based assignments and examination papers based upon solving techniques of given problems.

| Lectures, Seminars and Tutorials | A1, A2, A3, A4, A5, A6 |
| Active Learning | A1, A2, A3 |
| Practical Sessions | A1, A2, A3 |
| Supervised Workshops | n/a |
| Project Reviews | A1, A2, A6 |

Assessment methods

The assessments for this course are designed for maximum validity in terms of learning outcomes and learning processes, and are specific to the type of subject or module area involved by completion of assignments and problem based examinations in the engineering and related modules throughout the programme. At level 4 and 5, the students' knowledge and analysis of subject matter will be assessed through graded problem solving techniques. A variety of methods of assessment are utilised appropriate to the learning outcomes of the individual modules. The range of assessments experienced by the students will include formal exams, assignments, continuous assessment, portfolios and design. Student presentations, where they occur, will be used to assess the development of their presentation skills which, in some cases, will be assessed by peer review.

B. Subject-specific skills

B1. Develop the ability to use subject specific techniques, skills, and modern engineering tools necessary for civil engineering professional practice.
B2. Demonstrate the ability to identify, formulate, and solve engineering problems using physical, computational and digital modelling.
B3. Demonstrate the ability to design and conduct experiments, as well as to analyze and interpret data that are related to environmental, structural and transportation problems.
B4. Demonstrate the ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability.
B5. Exhibit an awareness of the key aspects of the process of construction project management, including customer and stakeholder care, the management of integrated teams and processes, a quality driven agenda and a commitment to people and the environment in a sustainable manner.

B6. To review and analyse procurement issues and seek to meet the needs of the project in terms of time, cost and quality.

### Teaching and Learning Methods

Learning outcomes are achieved across the course modules. At level 5 and 6 the use of design project and dissertation modules which focus upon individual study and group based activities enables learning outcomes. The importance of the design project modules which run throughout the programme. Each module will adopt a range of learning and teaching strategies that aim to meet the needs of students with diverse practice and educational experiences.

- Key lectures to introduce themes and concepts
- Class room based tutorials to enable students to undertake practical exercises and share ideas
- Laboratory experimentation and testing of materials
- Student seminar – individual and group
- Group work activity e.g. problem solving exercises, case studies and presentations
- Use VLE/ Blackboard to provide supplemental reading/activity, module information and a student discussion board.

### Assessment methods

Assessed by presentations, professional reports and design based projects

- Written Exam: B1, B2, B4
- Coursework: B1, B2, B3, B4, B5, B6
- Practical assessment: B1, B2, B3, B5

### C. Thinking Skills

At the end of the course the student will:

C1. Demonstrate an ability to identify, analyse and design and conduct experiments, as well as to analyze and interpret data that will solve the prevailing civil engineering problems encountered.

C2. Demonstrate a knowledge of contemporary issues that impacts on the lives of the society in which the professional will be engaged with during his career.

C3. Demonstrate an ability to be recognised as critical, creative, and independent thinker, applying underlying concepts and principles outside the context in which they were first studied.

C4. Demonstrate an understanding of the limits of their knowledge and how this influences analyses and interpretations based on this knowledge.

C5. Apply technical economic and legal theories, concepts and principles.

### Teaching and Learning Methods

Each module will adopt a range of learning and teaching strategies that aim to meet the needs of students with diverse practice and educational experiences.

- Key lectures to introduce themes and concepts
- Class room based tutorials to enable students to undertake practical exercises and share ideas
- Laboratory experimentation and testing of materials
- Student seminar – individual and group
- Group work activity e.g. problem solving exercises, case studies and presentations
- Use VLE/ Blackboard to provide supplemental reading/activity, module information and a student discussion board.
Assessment methods

A variety of methods of assessment are utilised appropriate to the learning outcomes of the individual modules. The range of assessments experienced by the students will include formal exams, assignments, continuous assessment, portfolios and design. Student presentations, where they occur, will be used to assess the development of their presentation skills which, in some cases, will be assessed by peer review.

| Written Exam | C1,C2,C3 |
| Coursework   | C2,C3,C4,C5 |
| Practical assessment | C1,C3,C4 |

D. Other skills relevant to employability and personal development

At the end of the course the student will:

D1. Demonstrate an ability to explain basic concepts in management, business, public policy, and leadership.

D2. Demonstrate the ability to function on multi-disciplinary teams, in a cooperative, collaborative environment to produce sustainable results that the world increasingly requires.

D3. Demonstrate the ability to communicate effectively in work and to the wider community.

D4. Demonstrate an ability to recognise the need for, and an ability to engage in lifelong learning in his professional life.

D5. Develop the ability to use of information and communication technology particularly applied to the construction process including the use of computer aided design.

D6. Complete problems and tasks in a realistic team-working environment based upon workplace scenarios.

Teaching and Learning Methods

Each module will adopt a range of learning and teaching strategies that aim to meet the needs of students with diverse practice and educational experiences.

- Key lectures to introduce themes and concepts
- Classroom based tutorials to enable students to undertake practical exercises and share ideas
- Laboratory experimentation and testing of materials
- Student seminar – individual and group
- Group work activity e.g. problem solving exercises, case studies and presentations
- Use VLE/Blackboard to provide supplemental reading/activity, module information and a student discussion board

Assessment methods

Student presentations, group work, design projects, examination and dissertation.

| Written Exam | D1,D2 |
| Coursework   | D3,D4,D5,D6 |
| Practical assessment | D1,D2,D3,D5,D6 |
### 13. Programme Structures*

<table>
<thead>
<tr>
<th>Level</th>
<th>Module Code</th>
<th>Module Title</th>
<th>Credit rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level 6</td>
<td>BN3504</td>
<td>Engineering Design Project</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>BN3501</td>
<td>Structural Engineering (Optional)</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>BN3506</td>
<td>Geotechnical Engineering (Optional)</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>BN3060</td>
<td>Project Analysis and Appraisal</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>BN3503</td>
<td>Risk and Value Management</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>NT3048</td>
<td>Engineering Dissertation</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>BN3010</td>
<td>Project Management &amp; BIM</td>
<td>20</td>
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</tbody>
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**Level 5**

<table>
<thead>
<tr>
<th>Module Code</th>
<th>Module Title</th>
<th>Credit rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>BN2105</td>
<td>Management and Project Planning</td>
<td>20</td>
</tr>
<tr>
<td>BN2501</td>
<td>Structural Analysis and Element Design</td>
<td>30</td>
</tr>
<tr>
<td>BN2506</td>
<td>Soil Mechanics</td>
<td>20</td>
</tr>
<tr>
<td>BN2508</td>
<td>Materials (one semester only)</td>
<td>10</td>
</tr>
<tr>
<td>BN2507</td>
<td>Civil Engineering Design and CAD</td>
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<tr>
<td>BN2104</td>
<td>Construction Law</td>
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**Level 4**

<table>
<thead>
<tr>
<th>Module Code</th>
<th>Module Title</th>
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<tbody>
<tr>
<td>ER1010</td>
<td>Engineering Analysis A</td>
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<tr>
<td>ER1430</td>
<td>Civil Engineering Design and Technology</td>
<td>30</td>
</tr>
<tr>
<td>ER1432</td>
<td>Civil Engineering Hydraulics and Materials</td>
<td>30</td>
</tr>
<tr>
<td>ER1433</td>
<td>Civil Engineering Structures and Geotechnics</td>
<td>30</td>
</tr>
</tbody>
</table>

**BEng (Hons) in Civil Engineering and Construction Management**
Requires 360 credits including a minimum of 220 at Level 5 or above and 120 at Level 6.

**BEng Degree in Civil Engineering and Construction Management**
Requires 320 credits including a minimum of 180 at Level 5 or above and 60 at Level 6.

**MP2899**

<table>
<thead>
<tr>
<th>Industrial Placement</th>
<th>Credit Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>120</td>
</tr>
</tbody>
</table>

### 14. Awards and Credits*

**BEng (Hons) in Civil Engineering and Construction Management**
Requires 360 credits including a minimum of 220 at Level 5 or above and 120 at Level 6.

**BEng Degree in Civil Engineering and Construction Management**
Requires 320 credits including a minimum of 180 at Level 5 or above and 60 at Level 6.

**Students who successfully complete MP2899, Industrial placement will receive will receive the award with sandwich.**

**Diploma of Higher Education in Civil Engineering and Construction Management**
Requires 240 credits including a minimum of 120 at Level 5 or above.

**Certificate of Higher Education**
Requires 120 credits at Level 4 or above.

### 15. Personal Development Planning

Personal development planning (PDP) is closely related to the acquisition of core discipline skills as well as personal transferable skills. Academic skills and knowledge alone are not going to be enough to the demand required of an engineer in society. Students are expected to develop additional interpersonal qualities that are essential to enable them to initiate and actively participate in team based discussions and decision making effectively. Such transferable skills include: team work,
communication skills, time management, problem solving and decision making, information management and leadership qualities.

To help students develop these skills, many of the learning activities and much of the assignment work will provide them with the opportunity for practical project work in a group setting, the development of problem solving skills as well as critical appraisal skills. Such project work will involve, were possible other student disciplines (i.e. architectural students, quantity survey students, etc.) within the school to create a realistic project scenario.

Students will require to make oral presentations and present design work in ‘reviews’ at intervals throughout the course. In some instances staff will record presentations on video, which gives the student instant feedback on their performance. Group discussion on contentious points will be encouraged especially for ‘interviews’ held ‘in camera.’

The course team will encourage students to organise their PDP on the same structure as the ‘professional diary’ or daily ‘log book’ that will undertake if on a ‘year out’. On completion of each assessment students will receive a feedback form with tutor feedback graded. They will be expected to complete the reflection element of the form and roll-forward personal development targets to the next assessment.

Students will be encouraged to record their PDP progress in a student progress file. This file in conjunction with a student’s portfolio will provide the basis for discussions with the personal tutor about the ‘year out’ placements following completion of the BEng (Hons) in Civil Engineering and Construction Management.

16. Admissions criteria

Programme Specifications include minimum entry requirements, including academic qualifications, together with appropriate experience and skills required for entry to study. These criteria may be expressed as a range rather than a specific grade. Amendments to entry requirements may have been made after these documents were published and you should consult the University’s website for the most up to date information.

Students will be informed of their personal minimum entry criteria in their offer letter.

1. BCC from three A2 qualifications or equivalent, including Mathematics
2. GCSE – English Language and Mathematics at grade C (grade 4) or above.
3. Typically applicants will be invited to attend an applicant’s open day.
4. MMM in BTEC extended diploma in construction or equivalent.

Other acceptable qualifications include:

- Applications from individuals with non-standard qualifications or relevant work/life experience who can demonstrate the ability to cope with and benefit from degree-level studies are welcome. Applicants who have not studied recently may need to undertake a Foundation Entry programme first.

For International Students … IETLS 6.0 overall with minimum 5.5 in each component (listening, speaking, writing and reading).

17. Key sources of information about the programme

- www.uclan.ac.uk/courses
- www.engc.org.uk
- www.qaa.ac.uk/publications/information-and-guidance
- www.ice.org.uk
### 18. Curriculum Skills Map

Please tick in the relevant boxes where individual Programme Learning Outcomes are being assessed

<table>
<thead>
<tr>
<th>Level</th>
<th>Module Code</th>
<th>Module Title</th>
<th>Core (C), Compulsory (COMP) or Option (O)</th>
<th>Knowledge and understanding</th>
<th>Programme Learning Outcomes</th>
<th>Other skills relevant to employability and personal development</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>A1</td>
<td>A2</td>
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<tr>
<td>LEVEL 6</td>
<td>BN3504</td>
<td>Engineering Design Project</td>
<td>COMP</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td></td>
<td>BN3501</td>
<td>Structural Engineering (Optional)</td>
<td>Option</td>
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<td>✓</td>
<td>✓</td>
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<tr>
<td></td>
<td>BN3506</td>
<td>Geotechnical Engineering (Optional)</td>
<td>Option</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>BN3060</td>
<td>Project Analysis and Appraisal</td>
<td>COMP</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td></td>
<td>BN3503</td>
<td>Risk and Value Management</td>
<td>COMP</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td></td>
<td>NT3048</td>
<td>Engineering Dissertation</td>
<td>COMP</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td></td>
<td>BN3010</td>
<td>Project Management &amp; BIM</td>
<td>COMP</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>LEVEL 5</td>
<td>BN2105</td>
<td>Management and Project Planning</td>
<td>COMP</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<td>BN2501</td>
<td>Structural Analysis and Element Design</td>
<td>COMP</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
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<td>BN2506</td>
<td>Soil Mechanics</td>
<td>COMP</td>
<td>✓</td>
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<td>BN2509</td>
<td>Construction Engineering Materials</td>
<td>COMP</td>
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<td>BN2507</td>
<td>Civil Engineering Design and CAD</td>
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<tr>
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<td>BN2104</td>
<td>Construction Law</td>
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</tbody>
</table>
### Note:
*Mapping to other external frameworks, e.g. professional/statutory bodies, will be included within Student Course Handbooks*

| LEVEL 4 | Course Title                                | Component | A1 | A2 | A3 | A4 | A5 | A6 | B1 | B2 | B3 | B4 | B5 | B6 | C1 | C2 | C3 | C4 | C5 | D1 | D2 | D3 | D4 | D5 | D6 |
|---------|--------------------------------------------|-----------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| ER1010  | Engineering Analysis                       | COMP      | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  |
| ER1430  | Civil Engineering Design and Technology    | COMP      | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  |
| ER1432  | Civil Engineering Hydraulics and Materials | COMP      | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  |
| ER1433  | Civil Engineering Structures and Geotechnics| COMP      | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  | ✓  |

26
19. Learning Outcomes for Exit Awards

**BEng (Hons) Civil Engineering and Construction Management**

The BEng (Hons) Civil Engineering and Construction Management award is based on meeting the learning outcomes listed in Section 12.

**Industrial Placement**

The learning outcomes for an award of BEng (Hons) Civil Engineering and Construction Management with Industrial Placement are the same as for BEng (Hons) Civil Engineering and Construction Management but in addition the module MP2989 must be passed.

**Diploma in Higher Education**

The learning outcomes for the Diploma in Higher Education gained through this programme are as follows and the award is based on meeting the learning outcomes listed:

**A1.** Demonstrate a sound knowledge and understanding of the impact of civil engineering solutions in a global, economic, environmental, and societal context.

**A2.** Demonstrate the ability to apply the conceptual knowledge of mathematics, science, and engineering to solve societal problems that they encounter in their daily interaction with the community.

**A3.** Demonstrate an understanding of professional and ethical responsibility in the context of civil engineering in the execution of their duties.

**A5.** Critically appraise current attitudes and methods within the Profession and adopt a creative and innovative approach to Construction Management and related spheres of work.

**B1.** Develop the ability to use subject specific techniques, skills, and modern engineering tools necessary for civil engineering professional practice.

**B2.** Demonstrate the ability to identify, formulate, and solve engineering problems using physical, computational and digital modelling.

**B3.** Demonstrate the ability to design and conduct experiments, as well as to analyze and interpret data that are related to environmental, structural and transportation problems.

**B4.** Demonstrate the ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability.

**C1.** Demonstrate an ability to identify, analyse and design and conduct experiments, as well as to analyze and interpret data that will solve the prevailing civil engineering problems encountered.

**C2.** Demonstrate a knowledge of contemporary issues that impacts on the lives of the society in which the professional will be engaged with during his career.

**C3.** Demonstrate an ability to be recognised as critical, creative, and independent thinker, applying underlying concepts and principles outside the context in which they were first studied.
C5. Apply technical economic and legal theories, concepts and principles.

D1. Demonstrate an ability to explain basic concepts in management, business, public policy, and leadership.

D2. Demonstrate the ability to function on multi-disciplinary teams, in a cooperative, collaborative environment to produce sustainable results that the world increasing requires.

D3. Demonstrate the ability to communicate effectively in work and to the wider community.

D4. Demonstrate an ability to recognise the need for, and an ability to engage in life-long learning in his professional life.

D5. Develop the ability to use of information and communication technology particularly applied to the construction process including the use of computer aided design.

Certificate in Higher Education

The learning outcomes for the Certificate in Higher Education gained through this programme are as follows and the award is based on meeting the learning outcomes listed:

A1. Demonstrate a sound knowledge and understanding of the impact of civil engineering solutions in a global, economic, environmental, and societal context.

A2. Demonstrate the ability to apply the conceptual knowledge of mathematics, science, and engineering to solve societal problems that they encounter in their daily interaction with the community.

A3. Demonstrate an understanding of professional and ethical responsibility in the context of civil engineering in the execution of their duties.

B2. Demonstrate the ability to identify, formulate, and solve engineering problems using physical, computational and digital modelling.

B3. Demonstrate the ability to design and conduct experiments, as well as to analyze and interpret data that are related to environmental, structural and transportation problems.

C1. Demonstrate an ability to identify, analyse and design and conduct experiments, as well as to analyze and interpret data that will solve the prevailing civil engineering problems encountered.

C4. Demonstrate an understanding of the limits of their knowledge and how this influences analyses and interpretations based on this knowledge.

D1. Demonstrate an ability to explain basic concepts in management, business, public policy, and leadership.

D2. Demonstrate the ability to function on multi-disciplinary teams, in a cooperative, collaborative environment to produce sustainable results that the world increasing requires.

D3. Demonstrate the ability to communicate effectively in work and to the wider community.

D5. Develop the ability to use of information and communication technology particularly applied to the construction process including the use of computer aided design.