

Overview

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| Programme Code | 36392 |
| Programme Title | Civil Engineering |
| Awarding Institution | Liverpool John Moores University |
| Programme Type | Degree |
| Programme Leader | |
| Link Tutor(s) | Amr Sourani |

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| Partner Name | Partnership Type |
| Oryx Universal College WLL | Franchised |

Awards

| Award Type | Award Description | Award Learning Outcomes |
|-------------------|--|--|
| Target Award | Bachelor of Science with Honours - BSH | See Learning Outcomes Below |
| Alternative Exit | Certificate of Higher Education - CHE | Demonstrate a sound knowledge of the basic concepts of civil engineering related subjects and have learned how to take different approaches to solving engineering problems. Demonstrate a sound knowledge of the basic concepts of civil engineering related subjects and have learned how to take different approaches to solving engineering problems. |
| Alternative Exit | Diploma of Higher Education - DHE | Demonstrate analytical and evaluation skills and be able to apply them to a deeper knowledge of the principles and concepts of civil engineering and related subjects. Students will also be able to apply these principles widely within the context of the civil engineering profession. Critically evaluate the appropriateness of different approaches to design and problem solving within civil engineering. |

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| Alternate Award Names | |
|------------------------------|--|

External Benchmarks

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| Subject Benchmark Statement | UG-Engineering (2019) |
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Programme Offering(s)

| Mode of Study, Mode of Delivery | Intake Month | Teaching Institution | Programme Length |
|--|---------------------|-------------------------------|-------------------------|
| Full-Time, Face to Face | January | Oryx Universal College WLL | 3 Years |
| Full-Time, Face to Face | September | Oryx Universal College WLL | 3 Years |

Aims and Outcomes

Educational Aims of the Programme

The programme is designed to develop a high level of technical expertise together with the leadership skills needed to practice successfully as a professional engineer in the modern international civil engineering environment. The knowledge and skills gained from this programme are designed to enable graduates to make an immediate contribution to their employers, and to enable them to progress to an MSc or PhD in Civil Engineering. The educational aims of the BEng (Hons) in Civil Engineering are to: Provide a well-balanced education which allows the student to achieve his/her full academic potential and in doing so to facilitate the development of independent logical thought and judgement. Enable the student to develop his/her intellectual, analytical and critical abilities in order that he/she might exercise those abilities within civil engineering. Deliver an educational experience for the students which enables them to develop their knowledge of those scientific, mathematical and computational principles and methods relevant to civil engineering. Develop the students' ability to apply engineering concepts and tools to the solution of civil engineering problems. Facilitate the development of design capability, from the understanding of customer needs through to the development and evaluation of innovative designs. Encourage and enable students to develop the full range of communication skills. Enable students to solve technical and intellectual challenges within the field of civil engineering, taking into consideration business, social, ethical and sustainability issues. Provide the opportunities for students to combine theory with practice through the practical application of engineering skills. Provide graduates with a range of highly relevant transferable skills such as team working, problem solving, self-learning as a foundation for lifelong CPD, and the ability to exercise initiative and personal responsibility. Develop skills to ensure that the graduate will operate within a sound Health and Safety framework as provided by the regulatory framework of the industry. Develop critical awareness of all aspects of sustainability to ensure that graduates operate responsibly within their chosen discipline, and make positive choices in this context. Encourage students to engage with the development of employability skills by completing a self-awareness statement.

Learning Outcomes

| Code | Description |
|-------------|---|
| PLO1 | Apply knowledge of mathematics, statistics, natural science and engineering principles to the solution of complex problems. |

| Code | Description |
|-------------|---|
| PLO2 | Evaluate and mitigate risk, including environmental, commercial and security risk associated with Civil Engineering projects. |
| PLO3 | Work effectively within a group to design, analyse and evaluate Civil Engineering projects, adopting an inclusive approach and recognising the responsibilities, benefits and importance of supporting equality, diversity and inclusivity. |
| PLO4 | Apply practical engineering skills acquired through laboratory work, to the design of complex civil engineering projects. |
| PLO5 | Use a range of land surveying equipment effectively for setting out engineering works and for collecting site data for the production of engineering plans. |
| PLO6 | Exercise initiative and ethical personal responsibility both as a leader and as a team member. |
| PLO7 | Plan and record CPD for personal and professional development. |
| PLO8 | Develop specifications for materials and methods to ensure quality of engineering design solution and its construction. |
| PLO9 | Develop planning and control project schedules with regard to Civil Engineering project management principles, commercial and legal aspects. |
| PLO10 | Ability to write original technical and research reports in compliance to relevant intellectual property and copyrights. |
| PLO11 | Communicate effectively through the written word, engineering drawings, clear use of mathematic notation, orally and through effective use of IT. |
| PLO12 | Analyse complex Civil Engineering problems by collecting, processing and inferring relevant data, facts and information, and by using first principle mathematics, statistics, applied science and engineering principles. |
| PLO13 | Communicate effectively on complex engineering matters with technical and non-technical audiences |
| PLO14 | Select and apply appropriate computational and analytical techniques to simulate complex Civil Engineering systems for planning, designing and construction, with due regard to the limitations of the techniques and scope of applications employed. |
| PLO15 | Select and evaluate technical literature and other sources of information to address complex Civil Engineering problems. |
| PLO16 | Develop a methodology based on the critical evaluation of technical literature, using qualitative and quantitative data to provide recommendations to bring improvement aligned with UN SDG's, through independent research. |
| PLO17 | Design innovative solutions in accordance with current appropriate codes of practice and industry standards. |
| PLO18 | Demonstrate professional and ethical behaviour with regard to Civil Engineering, involving consideration of Health and Safety, diversity, inclusion, cultural, societal, environmental and commercial matters |
| PLO19 | Demonstrate knowledge of the holistic nature of Civil Engineering projects and the wider impact on the society, economy and environment. This will include BIM and life cycle analysis. |

| Code | Description |
|-------------|---|
| PLO20 | Develop an awareness and the ability to identify ethical concerns and to make reasoned and justified ethical choices. |

Programme Structure

Programme Structure Description

The programme is offered in full-time mode.

| Programme Structure - 360 credit points | |
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| Level 4 - 120 credit points | |
| Level 4 Core - 120 credit points | CORE |
| [MODULE] 4500CVQR Engineering Mathematics I Approved 2022.01 - 20 credit points | |
| [MODULE] 4503CVQR Surveying and CAD Approved 2022.01 - 20 credit points | |
| [MODULE] 4504CVQR Geotechnics I Approved 2022.01 - 20 credit points | |
| [MODULE] 4505CVQR Hydraulics Approved 2022.01 - 10 credit points | |
| [MODULE] 4507CVQR Structural Analysis and Design I Approved 2022.01 - 20 credit points | |
| [MODULE] 4508CVQR Introduction to Materials I Approved 2022.01 - 10 credit points | |
| [MODULE] 4509CVQR Infrastructure Design and Skills Project Approved 2022.01 - 20 credit points | |
| Level 5 - 120 credit points | |
| Level 5 Core - 120 credit points | CORE |
| [MODULE] 5500CVQR Materials II Approved 2022.01 - 20 credit points | |
| [MODULE] 5501CVQR Surveying and Transportation Approved 2022.01 - 20 credit points | |
| [MODULE] 5502CVQR Engineering Mathematics II Approved 2022.01 - 10 credit points | |
| [MODULE] 5503CVQR Geotechnics II Approved 2022.01 - 10 credit points | |
| [MODULE] 5504CVQR Water Engineering Approved 2022.01 - 20 credit points | |
| [MODULE] 5505CVQR Structural Analysis and Design II Approved 2022.01 - 20 credit points | |
| [MODULE] 5506CVQR Civil Engineering Project Approved 2022.01 - 20 credit points | |
| Level 6 - 120 credit points | |
| Level 6 Core - 120 credit points | CORE |
| [MODULE] 6502CVQR Applied Geotechnics and Design Approved 2022.01 - 20 credit points | |
| [MODULE] 6503CVQR Structural Design and Risk Management Approved 2022.01 - 20 credit points | |
| [MODULE] 6505CVQR Research Project Approved 2022.01 - 40 credit points | |
| [MODULE] 6506CVQR Water supply and Wastewater Management Approved 2022.01 - 20 credit points | |
| [MODULE] 6507CVQR Transportation and Infrastructure Approved 2022.01 - 10 credit points | |
| [MODULE] 6508CVQR Advanced Materials Approved 2022.01 - 10 credit points | |

Module specifications may be accessed at <https://proformas.ljmu.ac.uk/Default.aspx>

Approved variance from Academic Framework Regulations

Variance

There is an approved variance for this programme: Level 7 Engineering Design Project module is approved as a 60 credit module, and it is approved to run year long.

Teaching, Learning and Assessment

Acquisition of underpinning knowledge is achieved mainly through lectures and directed student-centred learning. Student-centred learning is used where appropriate resource material is available. The economic, Social and Environmental context of engineering operations is delivered by means of lectures and case studies. The use of appropriate case study material is an essential part of teaching in this area. Student-centred learning will be delivered through, tutorials, seminars and workshops, laboratory and computer sessions. There will also be off-site learning through surveying field course and site visits. Testing of the knowledge base is through a combination of unseen written examinations, and coursework assignment submissions. Engineering Analysis is developed through lectures, case-studies and coursework assignments. Fundamental principles are delivered predominantly by lectures and laboratory classes. More advanced techniques are delivered by project work and coursework supported by lectures. Engineering Analysis and problem solving skills are assessed through a combination of unseen written examinations, assessed coursework and laboratory work, and project work. Design is taught by coursework, individual and group project work supported by an appropriate lecture programme. Design skills are assessed by coursework, individual and group written design project reports, and student presentations. Engineering Practice permeates almost every activity within the programme content and assessment. Assessment of Engineering Practice is varied throughout the programme but is mostly coursework based.

Opportunities for work related learning

To put the students' learning into appropriate vocational contexts project modules at all levels are assessed in realistic, industrially relevant contexts. At each level of the course students participate in cross disciplinary project modules and a major design project in the final year, mentored by industry, develops this further.

Entry Requirements

| Type | Description |
|----------------------------------|--|
| Other international requirements | Qatar Associate Degree C/2.75 GPA Advanced entry from Bachelors degree – entry after year 1 of Qatari degree 2.75 GPA, and having completed around 30 credit hours Qatar Academic Bridge Programme with minimum pass mark of 55% Students that have studied other qualifications that are equivalent to 120 level 3 UK credits may be offered a place on the programme, if Oryx do an assessment of the subjects studied as part of the programme to be a suitable foundation to ensure success in the programme. English language: IELTS 6.0 overall with a minimum 5.5 in each component. Any English qualifications that are different from the above, but are equivalent will be accepted if Oryx can provide evidence of equivalence. The Faculty Recognition Group will review the evidence and agree this equivalence before students are admitted onto the programme. |