

Liverpool John Moores University

Title: ENGINEERING RESEARCH PROJECT
Status: Definitive
Code: **6006UGSL** (120287)
Version Start Date: 01-08-2020

Owning School/Faculty: Civil Engineering and Built Environment
Teaching School/Faculty: ICBT, Colombo

| Team | Leader |
|------------------|--------|
| Patryk Kot | Y |
| Andy Shaw | |
| Rafid Al Khaddar | |

Academic Level: FHEQ6 **Credit Value:** 24 **Total Delivered Hours:** 18
Total Learning Hours: 240 **Private Study:** 222

Delivery Options

Course typically offered: Standard Year Long

| Component | Contact Hours |
|-----------|---------------|
| Lecture | 18 |

Grading Basis: 40 %

Assessment Details

| Category | Short Description | Description | Weighting (%) | Exam Duration |
|--------------|-------------------|--------------|---------------|---------------|
| Dissertation | AS1 | Report | 5 | |
| Dissertation | AS2 | Presentation | 10 | |
| Dissertation | AS3 | Dissertation | 85 | |

Aims

To enable students to complete a substantial piece of individual work and build on their expertise in a Civil Engineering subject.

To develop students research, time management, presentation and written communication skills.

Learning Outcomes

After completing the module the student should be able to:

- 1 Identify a research question, problem or hypothesis and establish aims and objectives to support the investigation.
- 2 Collate, and appraise existing knowledge in an Engineering field relevant to your programme and present a critical evaluation in the form of a literature review.
- 3 Develop and refine a research and data collection strategy appropriate to the research question / problem posed.
- 4 Source, collect, and analyse relevant and original qualitative and / or quantitative data.
- 5 Conduct an appropriate practical and/or laboratory programme to validate theoretical research.
- 6 Synthesise, analyse and critically evaluate the research findings using reasoned and logical arguments within a structured written framework.
- 7 Present the outcomes and methodology of your research

Learning Outcomes of Assessments

The assessment item list is assessed via the learning outcomes listed:

| | | | | | |
|--------------|---|---|---|---|---|
| Report | 1 | | | | |
| Presentation | 7 | | | | |
| Dissertation | 2 | 3 | 4 | 5 | 6 |

Outline Syllabus

1. Introduction to the Dissertation

- *The selection of a Research Topic and formulation of a research question.*
- *Establishing a research aim and setting / tailoring objectives to fulfil that goal*
- *The structure and purpose of a dissertation*

2. Research Approaches and Strategies

- *The Inductive versus Deductive Approach*
- *Qualitative and Quantitative Research*
- *Data Collection Strategies (Interviews, Field Tests, Lab Tests, Surveys, Questionnaires, Case Studies)*
- *The Knowledge Database. Effective Literature Searching and Literature Reviews*

3. Data Collection and Analysis

- *Data Collection Tools including Bristol on-line surveys*
- *Qualitative and Quantitative Data Analysis*
- *Data Analysis tools including SPSS and NVivo*

Learning Activities

Individual study and investigation, supported by nominated Supervisor; lectures; workshops.

Notes

The dissertation enables students to personally select, and complete an in-depth study on, a topic related to Civil Engineering. The module develops students' practical research skills and enhances their knowledge and expertise in Civil Engineering. As the completion of a dissertation is principally student-led the module offers the opportunity to further develop time management, presentation and communication skills.