

## Feasibility Study

|                |                                                |
|----------------|------------------------------------------------|
| Module Code:   | CSE6003-B                                      |
| Academic Year: | 2018-19                                        |
| Credit Rating: | 20                                             |
| School:        | Department of Civil and Structural Engineering |
| Subject Area:  | Civil and Structural Engineering               |
| FHEQ Level:    | FHEQ Level 6                                   |
| Module Leader: | Dr Xianghe Dai                                 |

Additional Tutors:

Pre-requisites:

Co-requisites:

### Contact Hours

| Type           | Hours |
|----------------|-------|
| Lectures       | 12    |
| Tutorials      | 12    |
| Laboratory     | 24    |
| Directed Study | 152   |

### Availability Periods

| Occurrence | Location/Period                                                |
|------------|----------------------------------------------------------------|
| IPA        | INTI International College, Penang / Semester 1 (Sep - Jan)    |
| IPA        | INTI International College, Penang / Semester 2 (Feb - May)    |
| IPA        | INTI International College, Penang / Semester 3 (June - Oct)   |
| IIA        | INTI International University / Semester 1 (Sep - Jan)         |
| INA        | INTI International University, Nilai / Semester 1 (Sep - Jan)  |
| INA        | INTI International University, Nilai / Semester 2 (Feb - May)  |
| INA        | INTI International University, Nilai / Semester 3 (June - Oct) |
| BDA        | University of Bradford / Semester 1 (Sep - Jan)                |

## Module Aims

- (1) To develop solutions to civil engineering problems by a process of critical appraisal & review using information obtained from a reconnaissance survey & other sources.
- (2) To provide an opportunity to be creative and innovative.
- (3) To further develop presentation, team working and personal management skills

## Outline Syllabus

The feasibility study is set against the backdrop of the social and economic problems facing the town of Whitby in North Yorkshire. The study includes reconnaissance surveys of selected parts of the town; site investigation; development of a detailed brief from the Client's outline brief; evaluation and analysis of evidence and data gained in the field and from other sources; development of detailed proposed solutions to the series of civil engineering problems by a process of critical appraisal and review. The nature of the data and evidence collected and the solutions developed will vary depending on the Client's outline brief and the area selected. Factors to be considered by the design teams will vary but are likely to include most of: geology, weathering processes and properties of surface and near-surface deposits; ground conditions; flood and tidal risk; construction methods including temporary works, plant access and materials availability; historical perspective; architectural vernacular; alternative structural forms; aesthetics; noise pollution; health and safety considerations including risk assessment; durability and materials performance; financial risk; project planning; sustainability (economic, ecological, environmental and socio-economic factors); designing for ease of inspection, low maintenance, demolition and re-cycling; buildability and planning constraints. Presentation of results of feasibility study by written report and oral presentation to an audience of students, academic staff and invited practising engineers.

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## Module Learning Outcomes

*On successful completion of this module, students will be able to...*

- 1
  - 1.1 Synthesise the knowledge and understanding from previous study to develop solutions to open-ended civil engineering problems.
  - 1.2 Investigate and define a problem and the constraints to the solutions.
  - 1.3 Apply the principles of sustainable development to develop solutions to open-ended civil engineering problems.
- 2
  - 2.1 Synthesise, prioritise and critically evaluate information obtained from a range of sources to establish design objectives.
  - 2.2 Formulate creative and innovative solutions by a systematic process of critical appraisal and review by judging alternative proposals against the design objectives.
- 3
  - 3.1 Collect, manage, interpret and use design data obtained from a variety of sources; use IT skills to aid the presentation of technical solutions to a problem; demonstrate written and oral communication skills.

## Learning, Teaching and Assessment Strategy

Theory and critical analysis gained in Lectures and field studies (at residential course, Whitby, North Yorkshire) and design team-led tutorials is assessed by team-based project work.

### Mode of Assessment

| Type      | Method       | Description                                          | Length  | Weighting | Final Assess' |
|-----------|--------------|------------------------------------------------------|---------|-----------|---------------|
| Summative | Presentation | 1 oral presentation per design team                  | 0 hours | 20%       | Yes           |
| Summative | Coursework   | 1 report per design team (approx 5400 words/student) | 0 hours | 80%       | No            |
| Referral  | Coursework   | Supplementary: 1 report (approx 6000 words)          | 0 hours | 100%      | No            |

### Legacy Code (if applicable)

ENG3007D

### Reading List

To view Reading List, please go to [rebus:list](#).