



Module Specification

Surveying, Gis, Drawing and Cad

Version: 2023-24, v1.0, 25 Jul 2023

Contents

Module Specification	1
Part 1: Information	2
Part 2: Description	2
Part 3: Teaching and learning methods	3
Part 4: Assessment.....	5
Part 5: Contributes towards	6

Part 1: Information

Module title: Surveying, Gis, Drawing and Cad

Module code: UBGLWD-30-1

Level: Level 4

For implementation from: 2023-24

UWE credit rating: 30

ECTS credit rating: 15

Faculty: Faculty of Environment & Technology

Department: FET Dept of Geography & Environmental Mgmt

Partner institutions: None

Field: Geography and Environmental Management

Module type: Module

Pre-requisites: None

Excluded combinations: Introduction to Cad for Construction 2022-23

Co-requisites: None

Continuing professional development: No

Professional, statutory or regulatory body requirements: None

Part 2: Description

Overview: Not applicable

Features: Not applicable

Educational aims: In addition the Learning Outcomes, the educational experience may explore, develop, and practise, but not formally discretely assess the following:

Carry out tests and checks for quality assurance purposes on surveying equipment.

Work as a team member.

Outline syllabus: SURVEYING:

Automatic levels: 2 peg test, level surveys, distance measurement with steel tapes.

Total stations: angle measurement, distance measurement by EDM, detailing, Bowditch Adjustment, setting out.

Accuracy and errors.

GIS:

GIS data structures

GIS analytical methods

Data visualisation

Effective cartography

Practical exercises using GIS software

DRAWING and CAD:

Observe and sketch details

Perspective drawing and shading

Engineering drawings (plans, elevations, sections: 1st and 3rd angle projection)

Elements of design (line, colour, value, form, space, texture / balance, rhythm, emphasis, proportion, unity)

Introduction to CAD

Part 3: Teaching and learning methods

Teaching and learning methods: Students will receive on average 3.4 hours contact time per week. This will be in a range of formats including lectures, tutorials, surveying practicals, computer laboratories and drawing exercises.

The amount of time spent on activities in this module is shown below:

ActivityHours

Contact time75

Assimilation and development of knowledge150

Exam and coursework preparation75

Total study time300

GIS: lectures and computer sessions.

Surveying: lectures with follow up practicals.

Drawing: lectures and practical exercises.

CAD: computer lab practicals and exercises.

Module Learning outcomes: On successful completion of this module students will achieve the following learning outcomes.

MO1 Collect data using surveying instruments pertinent to the construction industry to accurately record the topographical environment for use in engineering design.

MO2 Set out construction works from design plans.

MO3 Use GIS software in practical exercises, leading to problem solving involving primary and secondary data.

MO4 Produce final maps with an understanding of cartographic considerations.

MO5 Apply drawing design principles.

MO6 Produce engineering drawings using CAD software.

Hours to be allocated: 300

Contact hours:

Independent study/self-guided study = 225 hours

Face-to-face learning = 75 hours

Total = 300

Reading list: The reading list for this module can be accessed at [readinglists.uwe.ac.uk](https://uwe.rl.talis.com/modules/ubglwd-30-1.html) via the following link <https://uwe.rl.talis.com/modules/ubglwd-30-1.html>

Part 4: Assessment

Assessment strategy: Assessment 1- Practical Exam Surveying. Learning outcomes 1 and 2.

Surveying: practical exam (40% of the module).

Assessment 2 - GIS assignment. Learning outcomes 3 and 4.

GIS: coursework assignment (40% of the module).

Assessment 3- Drawing/CAD portfolio. Learning outcomes 5 and 6.

Drawing / CAD: portfolio (20% of the module).

In the computer, surveying and drawing laboratories, students can develop their understanding through interaction with teaching staff from whom they will receive formative feedback, and will receive regular summative feedback on their work.

Assessment tasks:

Portfolio (First Sit)

Description: Drawing / CAD Portfolio

Weighting: 18 %

Final assessment: No

Group work: No

Learning outcomes tested: MO5, MO6

Written Assignment (First Sit)

Description: GIS coursework (1500 words)

Weighting: 42 %

Final assessment: No

Group work: No

Learning outcomes tested: MO3, MO4

Examination (First Sit)

Description: Practical exam – surveying (1.5 hours within a 3 hour slot)

Weighting: 40 %

Final assessment: Yes

Group work: No

Learning outcomes tested: MO1, MO2

Portfolio (Resit)

Description: Drawing / CAD Portfolio

Weighting: 18 %

Final assessment: No

Group work: No

Learning outcomes tested:

Written Assignment (Resit)

Description: GIS coursework (1500 words)

Weighting: 42 %

Final assessment: No

Group work: No

Learning outcomes tested:

Examination (Resit)

Description: Practical exam – surveying (1.5 hours within a 3 hour slot)

Weighting: 40 %

Final assessment: Yes

Group work: No

Learning outcomes tested:

Part 5: Contributes towards

This module contributes towards the following programmes of study: