

Liverpool John Moores University

Title: BUILDING AUTOMATION
Status: Definitive
Code: **5505ICBTBS** (126991)
Version Start Date: 01-08-2021

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

| Team | Leader |
|-----------------|--------|
| Alison Cotgrave | Y |

Academic Level: FHEQ5
Credit Value: 15
Total Delivered Hours: 63
Total Learning Hours: 150
Private Study: 87

Delivery Options

Course typically offered: Semester 2

| Component | Contact Hours |
|-----------|---------------|
| Lecture | 45 |
| Off Site | 3 |
| Tutorial | 15 |

Grading Basis: 40 %

Assessment Details

| Category | Short Description | Description | Weighting (%) | Exam Duration |
|----------|-------------------|--------------------------|---------------|---------------|
| Essay | AS1 | Assignment (1500 words) | 40 | |
| Test | AS2 | Online Multi Choice Test | 60 | 2 |

Aims

Aim(s) of the module is to provide students knowledge and understanding on automatic centralization of all building services in a particular building.

Learning Outcomes

After completing the module the student should be able to:

- 1 Identify the basic principles of building automation.
- 2 Demonstrate understanding on building automation system applications.
- 3 Identify the energy efficiency through building automation.
- 4 Identify the sustainability through building automation.

Learning Outcomes of Assessments

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

| | | |
|--------------------------|---|---|
| Assignment | 1 | 2 |
| Online Multi Choice Test | 3 | 4 |

Outline Syllabus

Introduction to building automation

History of Building Automation, Building Types and Key Requirements, Current and Future Trends, Delivery of Building Automation Systems

Building Automation Systems

Building HVAC Basics, Space Condition Controls, Air Handler Controls, Central Utilities, Energy Conservation Control Strategies, BAS Fire/Safety Systems, Security Systems, BAS Surveillance Systems

Energy efficiency and sustainability implications

Energy Efficiency, Operating and Maintenance Costs, Indoor Air Quality improvement, Occupant Comfort and Productivity

Learning Activities

Students will be supported in their learning, to achieve the above learning outcomes, in the following ways:

By a series of lectures and practical approach

A recommended resource list - indicating key reading, virtual and physical learning assistance, is provided to help enable students to undertake self-directed study.

Notes

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