

Liverpool John Moores University

Title: Drone Operations
Status: Definitive
Code: **7301DRO** (125805)
Version Start Date: 01-08-2020

Owning School/Faculty: Engineering
Teaching School/Faculty: Engineering

Team	Leader
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Academic Level: FHEQ7 **Credit Value:** 20 **Total Delivered Hours:** 33

Total Learning Hours: 200 **Private Study:** 167

Delivery Options

Course typically offered: Semester 1

Component	Contact Hours
Lecture	11
Practical	22

Grading Basis: 50 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Report	AS1	Prepare a mission plan accordingly to the LJMU operations manual.	50	
Test	AS2	Test on law and operations of UAV in the UK	50	

Aims

To acquire the knowledge required to safely plan and implement a drone mission.

Learning Outcomes

After completing the module the student should be able to:

- 1 Prepare a complete mission plan.
- 2 Describe how current aviation laws relating to UAV's apply to Drone operations in the UK.
- 3 Generate a method statement describing the necessary practical preparation required to execute a mission plan.
- 4 Define the operational limits of a UAV.

Learning Outcomes of Assessments

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

Mission Plan	1	3	4
UAV Operations and Law	2		

Outline Syllabus

- *Drone Operations Technology*
- *Safe drone operation.*
- *UAV airspace operating principles.*
- *Navigation and charts.*
- *Airmanship and aviation safety.*
- *Privacy and data protection laws relating to drone use in the UK.*
- *Standard manual flight control systems.*
- *Way-point operating. Way-point software systems such as "Mission Planner" and "Ground Control System".*
- *Practical instruction in flying and operating skills.*
- *Practical planning and preparation for drone missions.*
- *Operational constraints due to energy storage and power management.*
- *Geo-fencing and emerging anti-drone measures.*

Learning Activities

The module will be taught by a combination of lectures and practical exercises mimicking typical operations (flight simulator and checklist e.g.).

Notes

This module does not result in any form of CAA recognised permission to fly commercial drone missions. Individuals who intend to operate commercially must follow current CAA procedures for registration and/or assessment, and must seek permissions to operate on an independent basis.

