

# A VM347 Unmanned Aircraft Foundational Theory

**Level:** 3

**Credit Units:** 5 Credit Units

**Language:** ENGLISH

**Presentation Pattern:** EVERY REGULAR SEMESTER

## Synopsis:

Unmanned Aircraft Systems (UAS) is the future of aviation. Its application in both the civil and military context has grown significantly over the past decade. UAS are designed to suit various purposes and their principle of operations differ. As the UAS share the skies with manned aircraft, operators and pilots require knowledge that will enable the safe conduct of the flight. Students will gain an understanding of these principles, laws and requirements to operate UAS safely in Singapore.

## Topics:

- Human Factors
- UAS General Knowledge
- Principles of flight
- UA Safety and Operations
- Navigation
- Meteorology
- Air Law
- Basic Safety Elements
- Automation in UA operations
- Mass and Balance
- Aeronautical Decision Making and Judgement
- Future of UA technology (eVTOL)

## Learning Outcome:

- Compare the flight characteristics of the various types of Unmanned Aircraft.
- Verify the effects of current regulations on flight operations.
- Determine the effects of different environmental factors on aircraft performance.
- Use the various models related to human factors and safety with given case studies.
- Compute mass and balance effects on aircraft operations.
- Appraise the application of automation in UA operations to the future of UA technology.

## Assessment Strategies - Regular Semester (Evening Class):

Components	Description	Weightage Allocation (%)
Overall Examinable Components	External Assessment	100
<b>Total</b>		<b>100</b>

\*The information listed is subject to review and change.