Guidance to Instructors on Subject Delivery

PRINCIPLES OF AIRMANSHP

Programme of learning:

- This is a suggested programme for the delivery of this subject.
- The main headings are the Learning Outcomes (LO1, LO2, etc), with sub headings related to topics within those Learning Outcomes (see Glossary of Terms).

Activities:

- Some practical activities are suggested throughout the programme as a way of reinforcing the learning and adding interest.
- It may be not be practical to undertake all of these activities at the suggested part of the programme.
- Instructors may have to adapt this programme to prevailing circumstances.

Method of delivery:

- Learning resources can be found on Ultilearn and may be adapted by the instructor, if required.
- Lesson delivery should be as practical as possible and should contain the maximum amount of cadet participation and interaction.

Check of understanding:

- Each lesson should contain a check of understanding (see Glossary of Terms).
- At the start of each lesson, the previous check of understanding should be reviewed in order to consolidate previous learning before moving on to new learning.

Formative assessment:

- There should be a formative assessment at the conclusion of each Learning Outcome (see Glossary of Terms).

Summative assessment:

- This is the test of knowledge or understanding of the Assessment Criteria for this subject (see Glossary of Terms).
- Assessment Criteria (see Glossary of Terms) are found on the final page of this document.
# PRINCIPLES OF AIRMANSHIP

## Introduction:
- Introduction to the subject and assessment method

### LO1: Know the features of an airfield

## Features of an airfield:
- Introduce the features of an airfield
- Introduce the development and types of airfields and runways
- Explain the development of airfields and runways through history
- Explain the different airfield types, eg grass, triangle pattern and main instrument runway
- Explain the advantages and disadvantages of each type of airfield

## Runways:
- Introduce runways
- Explain the identification of markings and numbering of runways
- Explain how to identify various components of runway marking, including:
  - Taxiways
  - Centre lines
  - Runway
  - Threshold markers
- Explain the method of take-off/landing into wind
- Explain the identification of runway numbering, including magnetic heading

## Layout of an airfield:
- Explain the layout of an airfield
- Explain the correct terminology and description

## Main components of an airfield:
- Introduce the main components of an airfield
- Explain the main features of an airfield, including:
  - Control tower
  - Wind sock
  - Runway
  - Taxi-way
  - Barriers
  - Dispersal areas
  - Hangers
- Operational readiness platforms
- Aircraft servicing platforms
- Overrun areas
- Arrestor gear

### Airfield lighting:
- Introduce airfield lighting
- Explain the identification of types and locations, including:
  - Airfield identification beacon
  - Obstruction lights
  - Floodlighting
  - Taxiway lights
  - Holding position
  - Approach lighting
  - Threshold lights
  - Runway lights

### Activity 1:
- Cadets could research aerial maps and aviation charts to compare different airfield layouts
- Google Earth and Memory Map are good sources

### Activity 2:
- Cadets could build a simple model of an airfield, including layout runways, features and components

### Review:
- Review the features of an airfield

### Formative assessment:
- Formative assessment of the features of an airfield
### PRINCIPLES OF AIRMANNSHIP

**LO2: Know requirements for pre-flight briefings**

**Introduction:**
- Introduce the requirements for pre-flight briefings

**Passenger pre-flight briefing:**
- Introduce what is required for a passenger pre-flight briefing
- Introduce the pre-flight briefing
- Explain the weather briefing
- Explain safety around the aircraft
- Explain getting into the aircraft

**Safety equipment:**
- Introduce safety equipment
- Explain the fitting of safety equipment
- Explain the function and operation of the helmet
- Explain the function and operation of the parachute
- Explain the function and operation of the buoyancy aid

**Dealing with emergency:**
- Introduce the processes of dealing with emergency in air
- Explain dealing with emergencies
- Explain exiting aircraft on the ground
- Explain exiting the aircraft in flight
- Explain emergency radio contact

**Activity 1:**
- Cadets should watch the pre-flight safety video

**Activity 2:**
- Cadets could practice emergencies in a flight simulator

**Review:**
- Review what is required for a passenger pre-flight briefing

**Formative assessment:**
- Formative assessment of what is required for a passenger pre-flight briefing
<table>
<thead>
<tr>
<th><strong>PRINCIPLES OF AIRMANKSHIP</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>LO3: Know features and types of aircraft used for Air Cadet flying and gliding</strong></td>
</tr>
<tr>
<td><strong>Introduction:</strong></td>
</tr>
<tr>
<td><strong>Types of aircraft:</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Flight instruments:</strong></td>
</tr>
<tr>
<td></td>
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<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
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<tr>
<td></td>
</tr>
<tr>
<td><strong>Control surfaces:</strong></td>
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<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Review:</strong></td>
</tr>
<tr>
<td><strong>Formative assessment:</strong></td>
</tr>
</tbody>
</table>
### PRINCIPLES OF AIRMANSHIP

**LO4: Know processes used to launch gliders and maintain flight**

**Introduction:**
- Introduce the processes used to launch gliders and maintain flight

**Launch methods for gliders:**
- Introduce the process to get gliders airborne
- Explain how winch launch gliders get airborne and use of the winch, using the Viking as an example
- Explain how self-launched gliders get airborne using the Vigilant as an example

**Soaring:**
- Explain the purpose and methods of soaring in gliders
- Explain the principles of thermals and lift
- Explain the use of instruments aid soaring, including the variometer

**Review:**
- Review the processes used to launch gliders and maintain flight

**Formative assessment:**
- Formative assessment of processes used to launch gliders and maintain flight

**Activity 1:**
- Cadets should practice flying skills and instrument recognition on flight simulators

**Activity 2:**
- Cadets visit an operational airfield and if possible a second airfield to look for differences

**Activity 3:**
- Cadets undertake a flight in a powered light aircraft or glider and experience the safety aspects, pre-flight and post-flight checks, use of instruments and controls, circuit procedures and ground handling methods
<table>
<thead>
<tr>
<th>PRINCIPLES OF AIRMANSHP</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Subject review:</strong></td>
</tr>
<tr>
<td>• Review of the subject and activities</td>
</tr>
<tr>
<td><strong>Preparation for summative assessment:</strong></td>
</tr>
<tr>
<td>• Prepare for overall summative assessment, if not assessed throughout the training</td>
</tr>
<tr>
<td>Subject</td>
</tr>
<tr>
<td>-------------------------------</td>
</tr>
<tr>
<td>Classification</td>
</tr>
<tr>
<td>BTEC Aviation Studies</td>
</tr>
<tr>
<td>Learning Outcome</td>
</tr>
<tr>
<td>The learner will:</td>
</tr>
<tr>
<td>LO1: Know the features of an</td>
</tr>
<tr>
<td>airfield</td>
</tr>
<tr>
<td>LO2: Know requirements for pre-flight briefings</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
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</tr>
<tr>
<td>of aircraft used for Air Cadet</td>
</tr>
<tr>
<td>flying and gliding</td>
</tr>
<tr>
<td>LO4: Know processes used to</td>
</tr>
<tr>
<td>launch gliders and maintain</td>
</tr>
<tr>
<td>flight</td>
</tr>
</tbody>
</table>
# ACO Aviation Training Syllabus

## Glossary of Terms

<table>
<thead>
<tr>
<th>Term</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learning outcomes</td>
<td>What a cadet is expected to know, understand or be able to do.</td>
</tr>
<tr>
<td>Assessment criteria</td>
<td>The standard a cadet is expected to meet to demonstrate that a learning outcome, or set of learning outcomes, has been achieved.</td>
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<tr>
<td>Guidance to instructors on subject delivery</td>
<td>A programme that gives the instructor guidance on the content and suggested order of delivery for a particular subject. It will include the learning outcomes, what should be covered to achieve those outcomes and any relevant practical activities.</td>
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<tr>
<td>Formative assessment</td>
<td>Regular and informal assessment that provides feedback throughout the learning process that supports the cadet’s progress. This can take the form of checks of understanding through question and answer sessions or demonstration of an activity.</td>
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<td>Summative assessment</td>
<td>Assessment of learning by an HQ Air Cadets paper-based examination or online assessment. A cadet will have to correctly answer a question that directly relates to an assessment criterion.</td>
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<td>Examination</td>
<td>Paper-based exclusive choice question paper for the old syllabus subjects for Leading, Senior and Master Air Cadet.</td>
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<tr>
<td>Online assessment</td>
<td>Online assessment process, accessed through Ultilearn, for Leading Cadet from Sep 10 and Senior and Master Air Cadet from Sep 11.</td>
</tr>
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<td>Lesson check of understanding</td>
<td>Throughout and at the end of each lesson there should be a check of understanding. At the start of the next lesson, the previous check of understanding should be reviewed in order to consolidate previous learning before moving on to new learning.</td>
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<tr>
<td>Check of understanding for First Class Cadet</td>
<td>This is a competence-based assessment process for First Class Cadet which should test understanding through practical demonstration, activity observation, oral questioning and inspection.</td>
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</tbody>
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