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| <b>Module Title:</b>   | Multi-crew Pilot Licence (MPL)   |
| <b>Language of Instruction:</b>  | English  |
| <b>Credits:</b>  | 20   |
| <b>NFQ Level:</b>  | 7  |
| <b>Module Delivered In</b>   | <a href="#">1 programme(s)</a>   |
| <b>Teaching &amp; Learning Strategies:</b>   | Teaching will be conducted using briefings and practical work in an aircraft simulator. At the end of each practical section, students will be debriefed as to their progress and will be graded accordingly.  |
| <b>Module Aim:</b>   | To provide a student with a multi-crew pilot licence (MPL) by training one to the level necessary to operate as a co-pilot in a multi-engine, multi-pilot, turbine-powered commercial air transport aeroplane under visual flight rules (VFR) and instrument flight rules (IFR). |
| <b>Learning Outcomes</b>   |  |
| <i>On successful completion of this module the learner should be able to:</i>  |  |
| LO1  | Perform core flying skills (specific basic single-pilot training)  |
| LO2  | Perform basic flying skill in a multi-crew operation under instrument flight rules.  |
| LO3  | Apply multi-crew operations to a multi-engine turbine aeroplane certified as a high performance aeroplane.   |
| LO4  | Achieve a Type Rating within an airline environment.   |
| <b>Pre-requisite learning</b>  |  |
| <b>Module Recommendations</b><br><i>This is prior learning (or a practical skill) that is recommended before enrolment in this module.</i>         |  |
| No recommendations listed  |  |
| <b>Incompatible Modules</b><br><i>These are modules which have learning outcomes that are too similar to the learning outcomes of this module.</i> |  |
| No incompatible modules listed   |  |
| <b>Co-requisite Modules</b>  |  |
| No Co-requisite modules listed   |  |
| <b>Requirements</b><br><i>This is prior learning (or a practical skill) that is mandatory before enrolment in this module is allowed.</i>          |  |
| No requirements listed   |  |

## Module Content & Assessment

| Indicative Content                                |  |
|---|--|
| <b>Flight Controls</b>                            | Rolling, Yawing, Pitching, Power Adjustment, Mixture Adjustment.   |
| <b>Human Performance Principles.</b>              | Cooperation, Leadership and management skills, situation awareness, decision making.   |
| <b>Flying</b>                                     | Take-Off, Climb, Cruise, Descend, Landing, Short field landing,  |
| <b>Aircraft ground and pre-flight Operations.</b> | demonstrate attitudes and behaviours appropriate to the safe conduct of flight, including recognising and managing potential threats and errors; perform dispatch duties; provide flight crew and cabin crew briefings; perform pre-flight checks and manage abnormal and emergency situations; cockpit preparation: perform engine start, perform taxi out: communicate with cabin crew, passengers and company |
| <b>Airmanship</b>                                 | Lookout, Aircraft Management, Radio procedures, Cockpit management, scanning instruments.  |
| <b>Take-off</b>                                   | Take-off and predeparture preparation; perform take-off roll; perform transition to instrument flight rules; perform initial climb to flap retraction altitude; perform rejected take-off; perform navigation; manage abnormal and emergency situations;   |
| <b>Emergencies</b>                                | Stalls, Simulated single engine failure, slow flight, loss of communication procedures. Stalls with and without power, instrument failure, Adverse weather procedures, abnormal attitude recovery, critical attitudes.   |
| <b>Climb</b>                                      | SID, complete climb procedures and checklists; modify climb speeds, rate of climb and cruise altitude; perform systems operations and procedures; manage abnormal and emergency situations; communicate with cabin crew, passengers and company;   |
| <b>Navigation</b>                                 | VFR Navigation, Cross Country. IFR Cross Country, Holding patterns, Circling, distance to a Navaid station, SID, STAR.   |
| <b>Cruise</b>                                     | Monitor navigation accuracy; monitor flight progress; perform descent and approach planning; perform systems operations and procedures; manage abnormal and emergency situations; communicate with cabin crew, passengers and company;   |
| <b>ADF</b>  | Orientation, Relative bearing, Homing, Station passage, QDM/QDR concept and practice, Limitations, Holding patterns, Type of holdings, Different holding entries (EM-30 / EM-31), Wind drift correction techniques, ADF approaches   |
| <b>Descent</b>                                    | Initiate and manage descent; monitor and perform en route and descent navigation; monitor and perform en route and descent navigation; perform holding; perform systems operations and procedures; manage abnormal and emergency situations; communicate with cabin crew, passengers and company;  |
| <b>VOR / DME</b>                                  | Orientation and interpretation, Concept, demonstration and practice of radial, heading and course, Station passage, TO/FROM concept and practice, Limitations.   |
| <b>Approach</b>                                   | Execute approach according to procedures and situation; perform precision approach; perform non-precision approach; perform approach with visual reference to ground; monitor the flight progress; perform systems operations and procedures; manage abnormal and emergency situations; perform missed approach and go-around; communicate with cabin crew, passengers and company;                              |
| <b>ADF/ VOR/DME</b>                               | Concept of position fixing and radio fixing, Demonstration and practice with two lines of position fixing, Relationship among OBS/HEADING/CDI, in the different phases of the holding entries.   |
| <b>Landing</b>                                    | Land the aircraft; Perform systems operations and procedures; manage abnormal and emergency situations.  |
| <b>ILS</b>  | ILS, CDI versus localizer  |
| <b>Post Flight Operations.</b>                    | Perform taxiing and parking; perform aircraft post-flight operation; perform systems operations and procedures; manage abnormal and emergency situations; communicate with cabin crew, passengers and company.   |
| <b>Navigation</b>                                 | IFR Cross Country, Holding patterns, Circling, distance to a Navaid station, SID, STAR   |
| <b>Threat and error management.</b>               | The components of the TEM model; Threats, Errors, Undesired aircraft states; Countermeasures;  |
| <b>Airmanship</b>                                 | Cockpit management, scanning instruments   |
| Assessment Breakdown                              |  |
| Practical   | %<br>100.00%   |
| No Continuous Assessment                          |  |
| No Project  |  |

| <b>Practical</b>            |                               |                          |                   |                        |
|-----------------------------|-------------------------------|--------------------------|-------------------|------------------------|
| <i>Assessment Type</i>      | <i>Assessment Description</i> | <i>Outcome addressed</i> | <i>% of total</i> | <i>Assessment Date</i> |
| Practical/Skills Evaluation | Skills test                   | 1,2,3,4                  | 100.00            | n/a                    |

|                                     |
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| No End of Module Formal Examination |
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**SETU Carlow Campus reserves the right to alter the nature and timings of assessment**

**Module Workload**

| <b>Workload: Full Time</b> |                  |  |
|----------------------------|------------------|--|
| <i>Workload Type</i>       | <i>Frequency</i> | <i>Average Weekly<br/>Learner Workload</i> |
| Practicals                 | Every<br>Week    | 4.00                                       |
| Total Hours                |                  | 4.00                                       |

**Module Delivered In**

| Programme Code | Programme  | Semester | Delivery         |
|----------------|--|----------|------------------|
| CW_EEPLT_D     | <a href="#">Bachelor of Science in Pilot Studies</a> | 5        | Group Elective 2 |