

BSc (Hons) Professional Aviation Pilot Practice

Programme Specification



1. Programme title	BSc (Hons) Professional Aviation Pilot Practice
2. Awarding institution	Middlesex University
3. Teaching institution	Tayside Aviation Ltd / Middlesex University
4. Details of accreditation by professional/statutory/regulatory body	The programme includes Civil Aviation Authority (CAA) approved professional pilot training
5. Final qualification(s) available	BSc (Hons)
6. Year effective from	2019/20
7. Language of study	English
8. Mode of study	Full Time Work Based Learning

9. Criteria for admission to the programme

The following entry criteria for admission onto the BSc (Hons) Professional Aviation Pilot Practice programme incorporate the TA Training programme entry criteria:

- be at least 18 years of age
- have at least 2 'A' level passes at grade C or above, or equivalent academic qualifications;
- hold a Private Pilots Licence (PPL)
- hold a EASA Licence/JAA Class 1 Medical certificate;
- be eligible for issue of an airside pass; and
- be able to demonstrate the ability to use the English language in accordance with Appendix 1 to JAR-FCL 1.200. IELTS 6.0 will be required.

In addition, as the programme is delivered in the UK students admitted to the programme will need to have the right to live, work or study in the EU in their own right, rather than by right of marriage.

10. Aims of the programme

The programme aims:

- To provide opportunities for individuals to combine the achievement of a CAA approved professional aviation pilot license and Flight Instructor qualification with gaining a BSc (Hons) degree through work-based learning
- To broaden opportunities for access to professional pilot careers to meet the projected need for commercial pilots in the UK and international aviation sector
- To enable individuals to develop higher-level knowledge and understanding, and cognitive, practical, personal and enabling skills from the study of their own work-based learning as a preparation for becoming a professional pilot
- To provide opportunities for individuals to develop the high-level knowledge, understanding and skills required to operate single pilot, co-pilot and multi-pilot single and multi-engines in the commercial air transportation sector
- To appropriately prepare individuals to gain employment as a licensed professional pilot and/or flight instructor within the commercial sector
- To contribute to the enhancement of professional practice in the aviation industry by formalising the requirement for ongoing reflective practice and enabling professional pilots to develop their careers as senior leaders in the sector

11. Programme outcomes*

As a work-based learning Honours degree, the programme learning outcomes have been designed to correspond to Middlesex University's Work Based Learning Level Descriptors at levels 4, 5 and 6. These Descriptors define the learning expectations for work-based learning programmes in terms of Knowledge and Understanding (KU), Cognitive Skills (CS), Practical Skills (PS) and Personal and Enabling Skills (PES) at each level of academic achievement. These categories also map directly to Middlesex University's programme outcomes for undergraduate courses as: A – Knowledge and Understanding; B – Cognitive (Thinking) Skills); C – Practical Skills and; D – Graduate Skills.

On successful completion of this programme the student will:

A – Knowledge and Understanding

1. Have a professional knowledge of the key aspects of navigation, meteorology and principles of flight and be able to demonstrate an understanding of how they can be applied in practice (KU, CS)
2. Be able to identify and apply knowledge that demonstrates a critical understanding of the interrelationship between theory and professional aviation pilot practice (KU)
3. Understand key codes of professional aviation practice and demonstrates a coherent and in-depth knowledge of how they apply to the work/practice of self and others (KU)

B – Cognitive (Thinking) Skills

1. Select and apply appropriate complex theories to simulated flight performance scenarios (CS, PS)
2. Be able to demonstrate analysis and synthesis of a range of information, including some advanced theoretical perspectives, that informs judgments and contributes to a critical evaluation of own professional pilot practice (CS)
3. Demonstrate that professional reflection is becoming an established aspect of own practice, informed by critical engagement with other practitioners in the commercial airline sector contributing to their coherent development of own practice (CS)

C – Practical Skills

1. Demonstrate professional standard pilot skills in a range of flying conditions and contexts (PS)
2. React quickly and safely to aircraft unplanned events, applying techniques of analysis and enquiry and making decisions in unpredictable contexts (CS, PS)
3. Systematically develop work-based projects and/or inquiries that are designed to transform and improve an aspect of own or others' professional aviation pilot practice (PS)

D – Graduate Skills

1. Demonstrate the ability to effectively transfer simulated performance scenario skills to a professional work environment (CS, PS, PES)
2. Demonstrate a critical awareness of personal responsibility within the mandated professional pilot framework and can identify exceptions (CS, PES)
3. Be able to negotiate effectively in a professional aviation context and manage conflict, communicating information, ideas, problems and solutions to specialist and non specialist audiences (CS, PES)

Learning and teaching

The programme is delivered through a blended learning and teaching approach in line with the University's Learning, Teaching and Assessment strategy. The following methods are offered to enable students to develop their knowledge and understanding, cognitive skills, practical skills and personal and enabling skills:

- Induction and review of progress workshops
- Tutor-led classroom based lectures
- Computer based individual and group exercises
- Classroom-based teaching
- Simulated and/or actual practical flying instruction
- Peer-reviewed operational exercises
- Practice based learning
- Work-based learning
- Formative feedback on work from tutors through blended approaches including; face to face, via email, webcam, UniHub discussion boards and workshops
- Tutor-led face to face and online seminars and workshops used for discussion and small group work
- Student-led interaction via online discussion forums including UniHub
- Student-led interaction with workplace colleagues and other practitioners (where appropriate)

- Self-directed learning facilitated by programme and module handbooks, UniHub and other learning materials
- Practical application of knowledge and understanding
- Post application reflective practice and debriefing

Assessment

Assessment criteria for the programme are linked to the learning outcomes, in line with the University's Learning, Teaching and Assessment strategy. Knowledge and understanding, cognitive skills, practical skills and personal and enabling skills are assessed via:

- In-class tests (formative assessment)
- Unseen Civil Aviation Authority examination
- Practical flying exercise performance assessment
- Learning logs
- Online Blog
- Review and evaluation of learning
- Reflective report
- Portfolio with reflective commentary
- Close observation of professional tasks with questioning
- Action plans
- Recorded reflective audio and/or visual presentation
- Recorded reflective debriefing sessions

12. Programme structure (levels, modules, credits and progression requirements)

12. 1 Overall structure of the programme

LEVEL 4	LEVEL 5	LEVEL 6
Pilot Review and Professional Development 30 credits	Basic Flying 1 30 credits	Advanced Flying 40 credits
Flight Operations 30 credits	Basic Flying 2 30 credits	Multi Crew Co-operation 20 credits
Navigation 30 credits	Flight Instruction 30 credits	<i>Two of the following option modules:</i> Aircraft Specifics 30 credits Airline Orientation and Integration 30 credits Evaluating and Managing Risks 30 credits Threat and Error Management 30 credits
Aircraft and Air Environment 30 credits	Flight Instruction and Standardisation 30 credits	
120 credits	120 credits	120 credits

12.2 Levels and modules

Level 4

COMPULSORY

OPTIONAL

PROGRESSION
REQUIREMENTS

Students must take all of the following:	There are no optional modules	All Level 4 modules must be passed in order to progress to Level 5.
<ul style="list-style-type: none"> • Pilot Review and Professional Development • Flight Operations • Flight Navigation • Aircraft and Air Environment 		
Level 5		
COMPULSORY	OPTIONAL	PROGRESSION REQUIREMENTS
Students must take all of the following:	There are no optional modules	All Level 4 and 5 modules must be passed in order to progress to Level 5.
<ul style="list-style-type: none"> • Basic Flying 1 • Basic Flying 2 • Flight Instruction • Flight Instruction Standardisation 		
Level 6		
COMPULSORY	OPTIONAL	PROGRESSION REQUIREMENTS
Students must take all of the following:	Two of the following optional modules	All Level 4 and 5 modules and 120 credits of Level 6 modules must be passed by the end of the programme to gain the qualification.
<ul style="list-style-type: none"> • Advanced Flying • Multi Crew Cooperation 	<ul style="list-style-type: none"> • Aircraft Specifics • Airline Orientation and Integration • Evaluating and Managing Risks Threat and Error Management 	

12.3 Non-compensatable modules

Module level	Module code
4, 5 and 6	<i>Not applicable as all modules are non-compensatable</i>

13 Curriculum Map

This section shows the highest level at which programme outcomes are to be achieved by all graduates, and maps programme learning outcomes against the modules in which they are assessed.

Students must study and pass all modules applicable to their selected pathway in order to achieve the programme learning outcomes. Module learning outcomes contribute to the achievement of each programme learning outcome as follows:

Table - Programme Learning Outcomes by Level 4 Modules

<i>Programme Learning Outcomes</i>	<i>Pilot Review Professional Development</i>	<i>Flight Operations</i>	<i>Navigation</i>	<i>Aircraft and Air Environment</i>
Have a professional knowledge of the key aspects of navigation, meteorology and principles of flight and be able to demonstrate an understanding of how they can be applied in practice (KU, CS)	X		X	X
Understand key codes of professional aviation practice and demonstrates a coherent and in-depth knowledge of how they apply to the work/practice of self and others (KU)				X
Demonstrate that professional reflection is becoming an established aspect of own practice, informed by critical engagement with other practitioners in the commercial airline sector contributing to their coherent development of own practice (CS)	X	X		
Demonstrate professional standard pilot skills in a range of flying conditions and contexts (PS)		X		
React quickly and safely to aircraft unplanned events, applying techniques of analysis and enquiry and making decisions in unpredictable contexts (CS, PS)		X		
Demonstrate the ability to effectively transfer simulated performance scenario skills to a professional work environment (CS, PS, PES)		X		

Table - Programme Learning Outcomes by Level 5 Modules

<i>Programme Learning Outcomes</i>	<i>Basic Flying 1</i>	<i>Basic Flying 2</i>	<i>Flight Instruction</i>	<i>Flight Instruction Standardisation</i>
Have a professional knowledge of the key aspects of navigation, meteorology and principles of flight and be able to demonstrate an understanding of how they can be applied in practice (KU, CS)	X	X	X	X
Be able to Identify and apply knowledge that demonstrates a critical understanding of the interrelationship between theory and professional aviation pilot practice (KU)	X	X	X	X
Understand key codes of professional aviation practice and demonstrates a coherent and in-depth knowledge of how they apply to the work/practice of self and others (KU)			X	X
Select and apply appropriate complex theories to simulated flight performance scenarios (CS, PS)			X	X
Be able to demonstrate analysis and synthesis of a range of information, including some advanced theoretical perspectives, that informs judgments and contributes to a critical evaluation of own professional pilot practice (CS)			X	X
Demonstrate that professional reflection is becoming an established aspect of own practice, informed by critical engagement with other practitioners in the commercial airline sector contributing to their coherent development of own practice (CS)	X	X	X	X
Demonstrate professional standard pilot skills in a range of flying conditions and contexts (PS)	X	X	X	X

React quickly and safely to aircraft unplanned events, applying techniques of analysis and enquiry and making decisions in unpredictable contexts (CS, PS)	X	X	X	X
Systematically develop work-based projects and/or inquiries that are designed to transform and improve an aspect of own or others' professional aviation pilot practice (PS)			X	X
Demonstrate the ability to effectively transfer simulated performance scenario skills to a professional work environment (CS, PS, PES)	X	X	X	X
Demonstrate a critical awareness of personal responsibility within the mandated professional pilot framework and can identify exceptions (CS, PES)			X	X
Be able to negotiate effectively in a professional aviation context and manage conflict, communicating information, ideas, problems and solutions to specialist and non specialist audiences (CS, PES)			X	X

Table - Programme Learning Outcomes by Level 6 Modules

<i>Programme Learning Outcomes</i>	<i>Advanced Flying</i>	<i>Multi-crew co-operation</i>	<i>Aircraft Specifics</i>	<i>Airline Integration and Orientation</i>	<i>Evaluating and Managing Risks</i>	<i>Threat and Error Management</i>
Have a professional knowledge of the key aspects of navigation, meteorology and principles of flight and be able to demonstrate an understanding of how they can be applied in practice	X	X	X	X	X	X

(KU, CS)						
Be able to Identify and apply knowledge that demonstrates a critical understanding of the interrelationship between theory and professional aviation pilot practice (KU)	X	X	X	X	X	X
Understand key codes of professional aviation practice and demonstrates a coherent and in-depth knowledge of how they apply to the work/practice of self and others (KU)		X	X	X	X	X
Select and apply appropriate complex theories to simulated flight performance scenarios (CS, PS)	X		X	X		
Be able to demonstrate analysis and synthesis of a range of information, including some advanced theoretical perspectives, that informs judgments and contributes to a critical evaluation of own professional pilot practice (CS)	X	X	X	X	X	X
Demonstrate that professional						

reflection is becoming an established aspect of own practice, informed by critical engagement with other practitioners in the commercial airline sector contributing to their coherent development of own practice (CS)	X	X	X	X	X	X
Demonstrate professional standard pilot skills in a range of flying conditions and contexts (PS)	X		X	X	X	X
React quickly and safely to aircraft unplanned events, applying techniques of analysis and enquiry and making decisions in unpredictable contexts (CS, PS)	X		X	X	X	X
Systematically develop work-based projects and/or inquiries that are designed to transform and improve an aspect of own or others' professional aviation pilot practice (PS)		X	X	X		X
Demonstrate the ability to effectively transfer simulated performance scenario skills to a professional work environment (CS,	X	X	X	X	X	X

PS, PES)						
Demonstrate a critical awareness of personal responsibility within the mandated professional pilot framework and can identify exceptions (CS, PES)		X	X	X	X	X
Be able to negotiate effectively in a professional aviation context and manage conflict, communicating information, ideas, problems and solutions to specialist and non specialist audiences (CS, PES)		X	X	X	X	X

14. Information about assessment regulations

At level 4 CAA approved professional theoretical and practical pilot training is fully integrated into the programme. The CAA requires a pass mark of 75% and do not accept grades lower than this Pass mark. As a consequence the level 4 modules of the programme will be recorded as Pass/Fail and progression will require that all modules are passed.

At level 5 and the first module of level 6, Advanced Flying , the theoretical and practical flying aspect of CAA approved professional pilot training leading to the issue of a frozen ATPL is also fully integrated into the programme and is delivered through a series of supervised flying 'sorties'.

Each sortie or group of sorties has specific and measurable objectives, which defines acceptable trainee performance. Performance is measured against these objectives, applying a five grade assessment scheme:

1. Poor, objectives not achieved - Remedial training will be required if the objectives are to be achieved.
2. Fair, objectives partially achieved - One or more exercises were not of the required standard, requiring remedial training.
3. Satisfactory, objectives achieved - Objectives met, and each of the exercises

was of Course standard or better.

4. Good, objectives exceeded - Objectives exceeded, and each of the exercises was of Course standard or better

5. Excellent, objectives exceeded - Objectives exceeded, and each of the exercises was of Course standard or better

Achievement in relation to corresponding modules will be recorded as Pass/Fail.

All level 6 modules will be assessed in accordance with standard Middlesex University procedures. All assessment for level 6 modules and will be graded accordingly. The grades for these level 6 modules will determine the Final Honours degree classification.

15. Placement opportunities, requirements and support

Not applicable. As a work-based learning programme, the individuals will be engaged in training and work-based activity throughout the programme.

16. Future careers / progression

Those who successfully complete the programme will be able to apply for a position as a professional pilot with a commercial operator or as a Flight Instructor with CAA/EASA Approved Training Organisations.

16. Particular support for learning (if applicable)

Support for learning for individuals undertaking this joint programme provided by Tayside Aviation and Middlesex University will include the following:

From Tayside Aviation

- Instruction to support basic and advanced professional aviation pilot theory
- Flight instruction
- Support from level 4 and 5 Module Tutors and Programme Leader

In addition, a range of resources will be available to enable individuals to undertake practical flight training (subject to additional operational and equipment charges)

- Aircraft (as appropriate to undertake practical flight training)
- Flight simulators (as appropriate to undertake practical flight training)
- Pilot equipment

From Middlesex University

- Support through the University's UniHub and other on-line learning technologies
- Online seminars and discussion activities

- Blended learning support
- Workshops and action learning delivered on-line
- Module resources on UniHub
- Support from Module Tutor, Module Leaders and Programme Leader
- Induction sessions, workshops and seminars
- e-Assessment activities such as Turnitin technologies

From the Workplace

At the end of level 5 and throughout level 6 of the programme the work-based modules will be supported by a Workplace Mentor to:

- Orient and induct students into the work role that the programme is preparing them for.
- Developing a Work Activity Plan to support practice-based learning
- Review progress and other learning or skill needs.
- Observe practice in the workplace and record in Learning Logs
- Provide constructive feedback, with suggestions on how to make improvements

17. JACS code (or other relevant coding system)	X900
18. Relevant QAA subject benchmark group(s)	Not applicable as current QAA Subject Benchmark groups do not cover this area of study. As a work-based learning programme, the Middlesex University Work Based Learning Level Descriptors define the learning expectations for the award of the Honours degree. All programme learning outcomes have been mapped against these descriptors in terms of Knowledge and Understanding (KU), Cognitive Skills (CS), Practical Skills (PS) and Personal and Enabling Skills (PES).

19. Reference points

None of the present Quality Assurance Agency for Higher Education (QAA) Subject Benchmark Statements cover this area of study. For the purpose of this validation, a variety of external reference points have been utilised:

- Middlesex University Work Based Learning Academic Level Descriptors (2011)
- QAA UK Quality Code for Higher Education (2012)

Specification of Apprenticeship Standards for England (SASE) (April 2013)

National Apprenticeship Service Higher Apprenticeship Framework for Professional

Pilots – Level 6 (April 2013)
Oxford Non Technical Skills Scale (NOTECHS)
National Occupational Standards for Professional Pilots (GoSkills for People 1st)
Civil Aviation Authority guidance on licensing
European Union COMMISSION REGULATION (EU) No 1178/2011 (3 November 2011)
Aircrew Regulation (a.k.a Part-FCL) which lays down the basic rules to obtain an CPL
European Aviation Safety Agency, Acceptable Means of Compliance and Guidance
Material to Part-FCL, Initial Issue, (15 December 2011)

20. Other information

The Middlesex University regulations for appeals and complaints apply to this programme and the award of the Honours degree. In addition, the separate Civil Aviation Authority (CAA) procedures for appeals and complaints apply to the award of the CAA examinations and professional pilot licensing tests which are embedded in the programme. Details of these procedures (CAP 1049) can be found at:

<http://www.caa.co.uk/application.aspx?catid=33&pagetype=65&appid=11&mode=detail&id=5617>

The programme will follow the Civil Aviation Authority's entitlement of a maximum of four attempts at examinations, rather than the standard Middlesex University policy of two attempts.

Please note programme specifications provide a concise summary of the main features of the programme and the learning outcomes that a typical student might reasonably be expected to achieve if s/he takes full advantage of the learning opportunities that are provided. More detailed information about the programme can be found in the rest of your programme handbook and the university regulations.