Unit 23: Aviation Communications

Unit code: Y/601/6461

QCF Level 2: BTEC Specialist

Credit value: 4

Guided learning hours: 34

● Aim and purpose

The aim of this unit is to enable the learner to develop the necessary knowledge and understanding of the principles of communication within aviation. This will enable the learner to communicate relevant information, both formally and informally, to all relevant and interested parties. Accurate communication within the industry is paramount.

The knowledge gained from this unit is fundamental to all activities within the aviation industry. This unit is appropriate for all learners prior to them undertaking activities at an airport regardless of specific job.

● Unit introduction

Communication is much more than just talking. It assumes an exchange of information that is clear, accurate and understood correctly by both parties. In the hectic environment frequently experienced in a busy airport, this is not always as straightforward as may be thought. Not only do learners need to examine types of communication and their uses but also how barriers to communication can cause inconvenience, delays, expense and even unsafe situations.

This unit lends itself to the on-the-job training model. All the learning outcomes can be covered by learners working under supervision. In the classroom, there is great scope for role play as, of course, communication involves more than one person – sometimes large groups.

Many people find talking in public uncomfortable. Frequently, job roles within the aviation industry require staff to speak with self-assurance, authority and diplomacy to members of the public and other staff. On completion of this unit, learners should have been given the opportunity to practise and strengthen their communication skills.

● Learning outcomes

On completion of this unit a learner should:

1   Be able to carry out effective aviation communications

2   Be able to carry out effective transfer of aviation information.

Unit content

1   Be able to carry out effective aviation communications

Communicate:

- clear voice

- even pace

- steady volume

- correct wording

Communication methods and systems:

- voice, e.g. fixed line telephone, mobile phone, handheld radio, air to ground radio, public address (PA) system

- unspoken, e.g. lights, hand signals, alarms

- written, e.g. email, SITA, SMS, manuals, flight information display system (FIDS), signs, noticeboard

Terminology and accuracy:

- choice of words

- Civil Aviation Authority (CAA) radiotelephony manual

- phonetic alphabet

- reasons

- AIRIMP (IATA Reservations Interline Message Procedure)

- potential outcomes of errors, e.g. confusion, delays, costs, safety breaches

Protocols:

- standard radiotelephony (R/T) procedures

- ensure understanding

- confirm understanding

- request clarification

- use of jargon, e.g. for staff, passengers

Time codes:

- local time

- Coordinated Universal Time (UTC)

- 'zulu'

- elapsed time

2 Be able to carry out effective transfer of aviation information

Receive and relay accurate information:

- receive, e.g. verbally, electronically, written

- record if necessary

- relay to appropriate people, e.g. staff, public

Reasons for storing aviation communications:

- audit

- evidence

- incident investigation

Flight documents and appropriate persons:

- documents, e.g. passenger manifest, cargo manifest, AAA documents, loadsheets, boarding gate reports

- personnel, e.g. flight dispatcher, flight deck crew, loading supervisor, cabin crew

Types of information:

- flight departures

- flight delays

- special requests

- passenger numbers

- baggage loads

Failures in communication:

- causes, e.g. power failure, noisy environment, incorrect information

- implications, e.g. confusion to passengers and staff, incorrect actions, delays, costs, serious incidents

Assessment and grading criteria

In order to pass this unit, the evidence that the learner presents for assessment needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria for a pass grade describe the level of achievement required to pass this unit.

Assessment and grading criteria		
To achieve a pass grade the evidence must show that the learner is able to:	To achieve a merit grade the evidence must show that, in addition to the pass criteria, the learner is able to:	To achieve a distinction grade the evidence must show that, in addition to the pass and merit criteria, the learner is able to:
P1 Communicate using correct communication methods and protocols [SM, EP]		
P2 Explain systems used for aviation communication	**M1** Compare the methods, systems and protocols used for communicating in different aviation situations	**D1** Discuss how aviation communication systems, methods and protocols ensure information is exchanged clearly and accurately
P3 Identify communication methods used in aviation		
P4 Describe the terminology used in aviation communication		
P5 Explain the importance of accuracy in aviation communication		
P6 Identify protocols that should be adhered to when communicating		
P7 Explain time-related codes relevant to aviation		
P8 Receive and relay appropriate and accurate information to appropriate persons [TW, SM, EP]	**M2** Transfer flight information to appropriate persons confidently and accurately	**D2** Evaluate own performance when receiving and relaying flight information making recommendations for improvement
P9 Explain the reasons for storing aviation communication		
P10 Identify the flight documents involved in the transfer of flight information		
P11 Identify appropriate persons that require flight documents		

Assessment and grading criteria		
To achieve a pass grade the evidence must show that the learner is able to:	To achieve a merit grade the evidence must show that, in addition to the pass criteria, the learner is able to:	To achieve a distinction grade the evidence must show that, in addition to the pass and merit criteria, the learner is able to:
P12 Identify the types of information that must be transferred		
P13 Explain the implications of failures in communication		

PLTS: This summary references where applicable, in the square brackets, the elements of the personal, learning and thinking skills applicable in the pass criteria. It identifies opportunities for learners to demonstrate effective application of the referenced elements of the skills.

Key	IE – independent enquirers	RL – reflective learners	SM – self-managers
	CT – creative thinkers	TW – team workers	EP – effective participators

Essential guidance for tutors

Delivery

Clear, accurate communication is fundamental to the safe and efficient operation of any airport or airline. This is especially so during the high-pressure environment of the turnaround. Low-cost carriers have brought new benchmarks for reducing the amount of time an aircraft spends on the ground. It is not uncommon for a 180-seat aircraft to arrive with a full load of passengers and baggage, disembark and reload with another full complement in less than 30 minutes. Without effective communication between colleagues, staff from other agencies and of course passengers, this would not be able to take place. It is necessary for learners not only to appreciate what good communication is, but also the barriers to, and consequences of, poor communication.

Many learners are able to listen to airband radios. If the centre is near an airport, a radio could be brought into class to monitor conversations between aircraft and air traffic. This should provide an example of how effective communication between work colleagues. Learners can be challenged to interpret the message – What did it mean? Why was it clear to the recipient? Was it clear and fully understood by a non-aviation person? This highlights the danger of using jargon and the assumption of understanding. Learners could then be invited to devise their own series of aviation-related messages which could be passed verbally to colleagues, ideally without seeing each other. Peer assessment (overseen by the tutor) could be used to judge whether the message is clear and has been understood. During these practical activities, learners should use the phonetic alphabet and relevant aviation terminology.

While verbal communication is widely appreciated as a medium for conveying information instantly, most learners will also be familiar with non-spoken systems such as SMS (text) and email. This can be extended to include flight information display systems (FIDS). All of these are becoming increasingly used in the aviation industry and are especially useful in a noisy environment. Traditional systems such as reference books, notices or memos may seem old-fashioned, but they still have an important place in the communication armoury.

Often forgotten is the unspoken, unwritten means of communication frequently used in aviation. Hand signals, pictograms, signs and lights are frequently used in the airport environment.

Learners should be encouraged to consider the different types of information (urgent, routine, simple, complex) that need to be conveyed to a variety of recipients (staff, passengers, external agencies) and decide which medium is the most appropriate in each case. For learners to work towards achieving the merit and distinction criteria tutors will need to create opportunities for them to fully explore the benefits and limitations of all systems, methods and protocols in different aviation communication situations.

Some information must be stored – the main reasons are included in the unit content. Usually these are written documents that will determine the communication method that must be used. Examples of documents should be produced to illustrate the different types. Loadsheets, loading instructions, manifests and weather reports are typical of documents that must be stored.

The transfer of flight information must be accurate, timely and communicated clearly between the relevant aviation personnel in order for flights to depart safely and on time. Learners will need sufficient time to practise receiving and relaying information throughout the duration of the unit. Tutors will need to provide a range of scenarios and if possible relevant equipment such as handheld radios. Learners will need to observe the professional standards used within the aviation environment when transferring flight information either by visiting a terminal, guest speakers or tutor demonstration.

In conclusion, a group discussion could be used to explore the potential consequences of communication failures. To cover this fully, the topic should be broken down into three parts: 1) communication types; 2) barriers to effective communication; 3) potential consequences of poor communication.

Outline learning plan

The outline learning plan has been included in this unit as guidance and can be used in conjunction with the programme of suggested assignments.

The outline learning plan demonstrates one way of planning the delivery and assessment of this unit.

Topic and suggested assignments/activities and/assessment
Introduction to the unit. Discussion of the aircraft turnaround and the different situations requiring the communication of aviation information and the environments in which this must take place. Define 'effective communication' to set the context for the unit.
Classroom activity to identify the different systems and methods used in aviation communication. Introduction to terminology and time codes followed by simulated situations.
Investigation into protocols and discussion of the need for clear and accurate communication. Practise aviation communication following protocols.
Preparation for assignment **Assignment 1: Aviation Communication Systems, Methods and Protocols** (P2, P3, P4, P5, P6, P7, M1, D1) **Feedback on assignment**
Introduction to the transfer of aviation information; the types of information, receiving, recording and relaying to appropriate people (staff, passengers, external agencies). Learners to discuss the appropriate medium for each type of information.
Visit or guest speaker to explain the reasons for storing aviation information with examples of why the stored information is required. Discussion of the causes and implications of failures in communication, supported by relevant case studies to illustrate how inappropriate action may be taken by staff or the impact on passengers.
Preparation for assignment **Assignment 2: Transferring Flight Information** (P9, P10, P11, P12, P13) **Feedback on assignment**
Learners to practise communication in different situations: all learners to practise each method of communication (voice, written, unspoken and unwritten). Learners to work in pairs to ensure protocols are followed and terminology is accurate and appropriate in each situation.
Group work to practise relaying and receiving flight information in different situations. Discussion and evaluation of transmissions to identify areas for improvement. A visit to a terminal or guest speaker would be beneficial.
Preparation for assignment **Assignment 3: Communicating: All Systems Go** (P1, P8, M2, D2) **Feedback on assignment**

Assessment

The assessment criteria shown in the assessment and grading criteria grid can be grouped together to enable learners to expand on one criterion in order to achieve higher grades. Suggested links have been shown below.

P2 – P3 – P4 – P5 – P6 – P7 – M1 – D1

To achieve P2, learners must explain the different communications methods and systems used in aviation. From the range within the unit content, learners must include three for voice, one for unspoken and two for written. The explanations should be brief, with examples, and can be presented in written or verbal format.

To achieve P3, learners must identify the full range of communication methods used in aviation, this can be in the form of a list presented in written or verbal format.

To achieve P4, learners must describe the full range of terminology used in aviation communication. The descriptions should be brief but must be supported by examples and may be presented in written or verbal format.

To achieve P5, learners must explain the importance of accuracy in aviation communication and should include the consequences of inaccurate communication, providing examples in written or verbal format.

To achieve P6, learners must identify the protocols that should be adhered to when communicating aviation information, including the full range within the unit content, presenting evidence in verbal or written format and supporting this with examples. This identification can be in the form of a detailed list.

To achieve P7, learners should explain the use of time-related codes relevant to aviation. Evidence can be presented in written format or verbally, and learners can use examples to support their explanations. The full range within the unit content must be covered.

Evidence to support learner knowledge and understanding for P2–P7 can be linked to the practical activities undertaken to meet P1 and P8. Gaps in coverage within the practical activities can be evidenced separately to ensure achievement.

M1 is an expansion of P2–P6 and requires learners to compare the different systems, methods and protocols used for communicating in different aviation situations, for example landside, check-in, departure lounge, boarding gate and onboard the aircraft. Learners should be able to compare which systems are used in noisy environments, where unspoken communication is used and comment on the appropriateness of each system, method and protocol.

D1 is an expansion of P2–P6 and M1. Learners should extend their responses at pass and merit level by analysing how each system, method and protocol ensures that information is exchanged clearly and accurately. Learners will need to demonstrate in-depth knowledge by providing specific and relevant examples.

P9 – P10 – P11 – P12 – P13

To achieve P9, learners must give a minimum of four reasons for storing aviation information, and this can be presented in written or verbal format using industry examples to support the evidence.

To achieve P10, learners must provide a list including identification of a minimum of six flight documents involved in the transfer of flight information. To achieve P11, learners must provide a list of appropriate persons that require these flight documents and, for P12, learners must identify the types of information being transferred within these documents.

Evidence for P10 and P11 can be integrated with partial coverage of P12. For example, learners could produce a chart on which samples of flight documents can be illustrated. In each case, a statement identifying the type of information included should be attached to partially demonstrate P12. From this, links can be made to the appropriate people who may send and receive these documents, to demonstrate P11.

To achieve P12, learners must identify all types of information that must be transferred as listed in the unit content. Some evidence can come from the activity relating to flight documents but other types of information will need to be added to the list.

To achieve P13, learners must explain the implications of failures in communication. Evidence can be gathered from other assessment activities within the unit. Explanations can be in written or verbal format and must include at least three causes and three implications and be supported with industry examples.

P1 – P8 – M2 – D2

Assessment criterion P1 must be achieved through practical activities (in the workplace or simulated) and this could form the summative assessment for learning outcome 1 and be assessed after meeting assessment criteria P2 to P7. Alternatively, P1 could be the starting point for the unit assessment and P2–P7 could be assessed through oral questioning or written evidence based on the real or simulated activities undertaken to achieve P1.

Assessment criterion P8 must be met through practical activities (real or simulated) covering the full range in the unit content, and this criterion could be integrated with P1. For example, to simulate aviation communications, learners could work in pairs to select different types of information that need to be communicated, for example loadsheet, boarding call, weather charts, passing passenger figures. Learners could decide the most appropriate means of transmission and the most appropriate persons to send and receive this information. Individually, learners need to demonstrate a clear and professional transmission of detailed information to their partners, including use of the phonetic alphabet, different time codes and an instruction and the use of real or simulated handheld radios, ensuring that the communication is clear, unambiguous and understood. The partner should then respond appropriately. Both 'transmissions' should demonstrate the protocols, terminology and accuracy required. Tutors should ensure that full coverage of the unit content is possible through the practical activities.

M2 is an expansion of P8 and requires learners to demonstrate confidence when transferring information to the appropriate persons. This requires learners to work independently and with minimal tutor support in determining how to communicate to the relevant persons. The practical tasks should also incorporate appropriate reference to flight documentation.

D2 relates to the practical tasks undertaken for P8 and M2 and requires learners to evaluate their performance when receiving and relaying flight information, making recommendations for improvement. This should include both verbal and non-verbal methods of transferring flight information. Learners should refer to feedback from recipients and observers. The implications of their communications, positive or otherwise, for example on passengers or staff actions that would have been taken, should also be addressed in the evaluation.

Programme of suggested assignments

The table below shows a programme of suggested assignments that cover the pass, merit and distinction criteria in the assessment and grading grid. This is for guidance and it is recommended that centres either write their own assignments or adapt any Edexcel assignments to meet local needs and resources.

Criteria covered	Assignment title	Scenario	Assessment method
P2, P3, P4, P5, P6, P7, M1, D1	Assignment 1: Aviation Communication Systems, Methods and Protocols	Induction training as a passenger service agent.	Presentation on systems, methods and protocols used for aviation communication
P9, P10, P11, P12, P13	Assignment 2: Transferring Flight Information	Design a training pack for new recruits.	A series of informative documents including examples of completed documentation
P1, P8, M2, D2	Assignment 3: Communicating: All Systems Go	In the terminal as a passenger service agent.	A series of role play activities incorporating reference to flight documentation

Links to other BTEC units

This unit forms part of the BTEC aviation sector suite. This unit has particular links with the following unit titles in the aviation suite.

Key

* indicates unit from the *Edexcel BTEC Level 2 Certificate in Aviation Operations on the Ground (Knowledge) (QCF) qualification*

Level 2	Level 3	Level 4
Unit 4: Airport Check-in Services* Unit 5: Airport Boarding and Arrival Services* Unit 7: Loading and Unloading of Aircraft* Unit 9: Aviation Passengers with Special Requirements* Unit 13: Aircraft Dispatch Process*	Unit 6: Aviation Geography and Terminology Unit 7: Customer Service in the Aviation Industry Unit 19: Handling Air Passengers Unit 22: Onboard Passenger Operations Unit 27: Airfield Operations	n/a

Essential resources

Learners will need access to example flight documentation such as passenger and cargo manifests, AAA documents and loadsheets.

Handheld radios and a microphone are also required for assessment unless assessment can take place in an aviation workplace.

Employer engagement and vocational contexts

It would be beneficial for learners to either visit an airport or have access to a guest speaker to `Indicative reading for learners

Indicative reading for learners

Other publications

CAA – *CAP413* (radiotelephony manual)

IATA Reservations Interline Message Procedures – *Passengers* (AIRIMP) (www.IATA.org/ps/publications/Pages)

Websites

www.caa.co.uk   Civil Aviation Authority – UK aviation regulator

www.mindtools.com   Communication skills

Delivery of personal, learning and thinking skills

The table below identifies the opportunities for personal, learning and thinking skills (PLTS) that have been included within the pass assessment criteria of this unit.

Skill	When learners are ...
Team workers	receiving and relaying appropriate and accurate information to appropriate persons
Self-managers	communicating using correct communication methods and protocols
Effective participators	receiving and relaying appropriate and accurate information to appropriate persons.

Although PLTS are identified within this unit as an inherent part of the assessment criteria, there are further opportunities to develop a range of PLTS through various approaches to teaching and learning.

Skill	When learners are ...
Reflective learners	setting success criteria for effective communication and reviewing own progress throughout practical elements of the unit
Team workers	preparation of and taking part in role play
Self-managers	managing the workload of the unit
Effective participators	proposing suitable courses of action to take when communicating in aviation situations.

● Functional Skills — Level 2

Skill	When learners are ...
ICT — Use ICT systems	
Select, interact with and use ICT systems independently for a complex task to meet a variety of needs	using different systems to research aviation terminology and writing up the assignment
Use ICT to effectively plan work and evaluate the effectiveness of the ICT system they have used	planning the assignment
Manage information storage to enable efficient retrieval	developing assignment work
Follow and understand the need for safety and security practices	ongoing
Troubleshoot	as required.
ICT — Find and select information	
Select and use a variety of sources of information independently for a complex task	using appropriate websites to research aviation terminology
Access, search for, select and use ICT-based information and evaluate its fitness for purpose	using appropriate and trusted online sources.
ICT — Develop, present and communicate information	
Enter, develop and format information independently to suit its meaning and purpose including: ● text and tables ● images ● numbers ● records	presenting information to new employees on communication protocols in a variety of forms such as images and text
Bring together information to suit content and purpose	producing a training presentation for new employees
Present information in ways that are fit for purpose and audience	
Select and use ICT to communicate and exchange information safely, responsibly and effectively including storage of messages and contact lists	relaying flight information via email, paying attention to confidentiality issues and storing messages appropriately for retrieval.

Skill	When learners are ...
English	
Speaking and listening – make a range of contributions to discussions and make effective presentations in a wide range of contexts	communicating using correct methods and protocols
Reading – compare, select, read and understand texts and use them to gather information, ideas, arguments and opinions	receiving and relaying appropriate and accurate information
Writing – write documents, including extended writing pieces, communicating information, ideas and opinions, effectively and persuasively	explaining the implications of failures in communication.