ATC Refresher Training Baseline

Training Topic	Types of refresher training	Description of the topic	Scenarios	Training objectives	Relevant ATC Licence Ratings	Desired Outcomes	ATC Competencies									
							SITU	TRAF	SEPC	COMM	CORD	NONR	PROB	SELF	WORK	TEAM
Communication issues	SPP and AES	This is a general focus area that is concerned with any situations where correct and clear communication is required to ensure safe operations. This includes air-ground and ground-ground communication.	**Communications Failure** - one or more aircraft experience a partial or complete loss of communications.	Manage a complete loss of radio communication with an aircraft effectively Manage a partial loss of radio communication with an aircraft effectively	All	Identifies that a loss, or partial loss of communications has occurred	x			x	x	x	x			
						Identifies the reason for the loss of communications				x	x		x			
						Executes appropriate procedure	x	x	x	x	x	x			x	x
						Anticipates possible outcomes and likely consequences	x						x			
						Manages consequences		x	x	x	x	x				
			Misunderstandings - one or more persons in a communication, misunderstanding the message. This may be between the controller and air crews or ground actors (e.g. other controllers, supervisors etc.).	Manage communication misunderstandings effectively	All	Recognise that a misunderstanding may have occurred	x			x			x	x		
						Takes action to clarify if a misunderstanding has occurred				x	x			x		
						Corrects misunderstandings, when applicable				x	x					
						Manages any consequences of the misunderstanding	x	x	x	x	x		x			
						Takes extra care when language difficulties are apparent				x						
			Radio Discipline - any situation where communication is required.	Use appropriate radio telephony phraseology Apply correct radio communication techniques	All	Uses clear and unambiguous phraseology at all times				x	x					
						Use standard RT phraseology, when prescribed				x	x					
						Insists on complete readbacks of clearances and instructions from pilots at all times				x						
						Corrects any error in read-back and insist on further read-back until certain that the clearance has been correctly copied				x						
						Issues conditional clearances that are correct and complete				x						
						Avoids distractions when listening to readbacks				x						
						Avoids issuing more than two instructions in the same transmission				x						
						Uses standard coordination phraseology, when prescribed				x	x					
						Does not pass RTF frequency changes as part of a multi-part clearance				x						
			Callsign confusion - two or more aircraft on the same frequency, in the same airspace with similar callsigns that are likely to cause confusion.	Manage callsign confusion issues	All	Identifies callsigns that could potentially lead to confusion	x						x			
						Monitors flight crew compliance with RTF call sign use				x						
						Warns the pilots of aircraft on the same RT frequency having similar call signs that call sign confusion may occur				x			x			
						Pronounces call signs at a lower speed and more clearly				x						
						Instructs one or both aircraft to use alternative call signs while they are on the frequency, if callsign confusion is problematic				x			x			
Stabilised Approaches	SPP	This is a general focus area for approach surveillance that is concerned with any situation where the controller has an impact on a flight crew's ability to achieve a stabilised approach.	**Speed instructions** - any approach traffic situation where ATC speed control could have an impact on a flight crew's ability to achieve a stabilised approach.	Ensure that own actions do not contribute to a destabilised approach Ensure effective and appropriate use of speed control techniques for approach sequencing purposes	APS	Issues speed instructions that are appropriate for the aircraft type and its position in relation to the final approach track	x	x	x	x			x		x	
						Avoids issuing instructions that include both a descent clearance and a speed reduction	x	x					x			
						Recognises traffic situations where speed restrictions are having an impact on the flight crew ability to stabilise their approach	x						x			
						Cancel speed restrictions at a time that will enable the flight crew to stabilise their approach	x	x	x	x			x			
			Distance to touchdown - any approach traffic situation where ATC information concerning distance to touchdown can have an impact on a flight crew's ability to achieve a stabilised approach.	Ensure that own actions do not contribute to a destabilised approach Ensure effective and appropriate use of vectoring for approach sequencing purposes Provide distance to touchdown information appropriately	APS	Avoids routine vectoring for the sole purposes of shortening the flight path		x								
						Always passes accurate distance to touchdown information when aircraft are being vectored to final approach				x						
						Vectors aircraft so that they intercept the glide slope from below	x	x								
						Recognises when an aircraft are unlikely to stabilise their approach due to excessive height relative to their distance to touchdown	x						x			
						Avoids close-in turns onto final approach	x	x		x						
			Late changes of runway - any approach traffic situation where a change of runway, given at short notice could have an impact on flight crews' ability to achieve a stabilised approach.	Ensure that own actions do not contribute to a destabilised approach Manage late changes of runway effectively	APS	Recognises situations where a late change of runway will result in a significantly increased workload for the flight crew	x	x								
						Issues instructions that takes into consideration the flight crews requirement to achieve a stabilised approach, during a necessary late change of runway	x	x	x	x			x			
						Monitors the forecast and actual trend in wind velocity regularly	x									
						Avoids offering a change of runway (including a parallel runway) to aircraft below FL100 simply to achieve a reduction in ground delay		x								

ATC Refresher Training Baseline

Training Topic	Types of refresher training	Description of the topic	Scenarios	Training objectives	Relevant ATC Licence Ratings	Desired Outcomes	ATC Competencies									
							SITU	TRAF	SEPC	COMM	CORD	NONR	PROB	SELF	WORK	TEAM
Adverse Weather	AES	This topic is concerned with threats that arise from adverse weather conditions that are either impacting the management of air traffic or affecting the flight capabilities of aircraft.	**Severe weather avoidance** - any situation where adverse weather is affecting the standard flow of traffic, reducing the available airspace, creating new conflict points, increasing frequency occupation time, increasing coordination, creating a rapidly changing situation, degrading RVSM capability, increasing the risk of non-notified airspace penetration and limiting the ability to use radar vectoring.	Manage traffic during adverse weather conditions	ALL	Maintains awareness of the adverse weather location using which ever sources are available	x				x					x
						Requests details from flight crew on their planned avoiding actions	x	x	x	x	x	x	x		x	x
						Implements strategies for crosschecking the current, planned and intended actions of flight crew with regard to weather avoidance actions				x	x	x	x			x
						Coordinates timely information to adjacent sectors when aircraft deviations may penetrate their airspace	x	x	x		x	x				x
						Actively seeks information about aircraft that appear likely to enter own sector	x	x	x		x	x	x			x
						Requests assistance, when necessary	x	x			x			x		x
						Builds in extra safety margins including increased lateral and vertical separation, when considered necessary	x	x	x	x	x					
						Informs flight crew if their weather avoidance will take aircraft outside of controlled airspace	x									
			Icing - any situation where one or more flight crew report in-flight icing, or meteorological reports indicate areas of possible icing.	Manage traffic taking into account the icing conditions in area of responsibility Assist aircraft experiencing in-flight icing	APP APS ACP ACS	Informs aircraft of icing conditions	x			x	x	x				
						Expedites traffic through or away from icing area	x	x				x				
						Anticipates effects of in-flight icing on aircraft performance	x	x				x				
						Responds to promptly to flight crew requests for change of level or heading	x			x		x				
			Strong low level/surface winds - any situation where aircraft at low altitude (usually approach, landing and climbing phases of flight) are affected by strong, low level winds that can be particularly dangerous as any loss of control that may occur is so close to terrain that recovery may be difficult or impossible. Includes, but not limited to windshear related to thunderstorms, microbursts and severe cross-winds.	Manage traffic taking into account the effects of strong low level wind	TWR APP APS	Manages traffic taking into account the possible actions of aircraft encountering windshear and microbursts	x			x		x			x	
						Provides traffic information and instructions, as appropriate, when an aircraft announces a go-around due windshear	x	x		x		x				
						Informs aircraft of relevant strong low level wind conditions	x	x								

System Wide Event	AES	This topic is concerned with the response of air traffic controllers to a system-wide catastrophic event. System-wide events include, but are not limited to, events related to volcanic eruptions, nuclear fallout, earthquakes, floods, acts of war or any other catastrophic event which might render many airports and extensive airspace volumes unusable in a wide geographic area for an uncertain amount of time.	**En-route Control Units** - any chosen system-wide event that increases the volume of traffic, the complexity of operations due to non-standard traffic (diverting aircraft and re-routing actions), missing and/or incorrect flight plans, congested radio frequency due to clarification requests and prolonged individual communications, missed radio calls and increases coordination with adjacent ATC units.	Manage traffic situation during system wide event	ACP ACS	Manages traffic in accordance with information received concerning the system wide event	x	x	x			x	x		x	x
						Provides information pertinent to the situation and to flight crews decision-making		x		x	x	x				
						Responds to flight crew requests taking into account the constraints imposed by the system wide event	x	x								
			Approach Control Units - any chosen system-wide event that increases the volume of traffic, creates airspace and aerodrome capacity problems, increases the coordination with adjacent units and introduces flight crews into the airspace who may not be immediately familiar with the approach procedures and aerodrome details.	Manage traffic situation during system wide event	APP APS	Manages traffic in accordance with information received concerning the system wide event	x	x	x			x	x		x	x
						Advises flight crews on details regarding aerodromes they may not be familiar with	x	x		x						
						Provides any pertinent information that helps improve the flight crews situational awareness and make informed decisions about the continuation of their flight	x	x		x						
						Provides information, related to the specifics of approach procedures, to flight crews who are likely to be unfamiliar with the procedures due to the changed destination	x	x		x		x				
			Tower Control Units - any chosen system-wide event that creates capacity problems due to the extra inbound traffic, increases	Manage traffic situation during system wide event	TWR	Manage traffic in accordance with information received concerning the system wide event	x	x	x			x	x		x	x

ATC Refresher Training Baseline

Training Topic	Types of refresher training	Description of the topic	Scenarios	Training objectives	Relevant ATC Licence Ratings	Desired Outcomes	ATC Competencies									
							SITU	TRAF	SEPC	COMM	CORD	NONR	PROB	SELF	WORK	TEAM
			communication with crews requesting start up, increases coordination, introduces flight crews who are not familiar with the aerodrome layout and consequently taxi slower and have poorer situational awareness.			Coordinates with airport authorities the availability of parking stands and the possibilities to park aircraft on taxiways if the capacity problem is severe					x					
						Provides additional assistance to flight crews not familiar with aerodrome	x	x		x						
						Provides any pertinent information to departing flight crews that aids their decision-making concerning the continuation of their flight	x	x		x						
In-flight emergencies	AES	This topic covers a wide variety of in-flight emergencies. These types of emergencies are often characterised by rapidly changing circumstances and require the controller to evaluate the situation, often with limited or incomplete information, and then decide on the effective way to offer assistance. For many of these in-flight emergencies, there are prescribed actions and procedures however circumstances may dictate that the controller create solutions because there is no defined procedure.	**Smoke or fire in the cockpit** - during any phase of flight, the crew reports either smoke or fire in the cockpit and requests to divert to the nearest suitable airfield or priority landing if already approaching the destination aerodrome. At a certain point during the diversion, the pilot reports very poor visibility in the cockpit due to smoke. The scenario may include an emergency descent.	Manage the traffic situation whilst dealing with an aircraft with fire or smoke in the cockpit	All	Offers any appropriate assistance	x		x			x	x			
						Coordinates with appropriate ATC units and other services, as required					x					
						Prioritises actions depending on the evolution of the situation						x			x	
						Uses appropriate elements of the unit emergency checklist						x				
						Evaluates overall workload and requests support, when necessary									x	
						Provides information to flight crew regarding closest and/or most suitable aerodromes when appropriate		x				x				
			Electrical problems - during any phase of flight, the crew experiences either partial or complete electrical failure. The effects of the electrical failure can vary from affecting the navigational systems, to anti-cing, transponders, controls and indicators, lighting.	Manage the traffic situation whilst dealing with an aircraft with electrical problems	All	Offers any appropriate assistance	x			x		x	x			
						Coordinates with appropriate ATC units and other services, as required					x					
						Prioritises actions depending on the evolution of the situation						x			x	
						Uses appropriate elements of unit emergency checklist						x				
						Evaluates overall workload and requests support, when necessary									x	
						Provides information to flight crew regarding closest and/or most suitable aerodromes when appropriate		x				x				
			Hydraulics problems - during any phase of flight, the crew reports a problem with hydraulics. This might range from partial/total loss of control whilst flying, difficulties extending/retracting landing gear, lack of auto-pilot or reduced braking upon landing, high approach speed.	Manage the traffic situation whilst dealing with an aircraft with hydraulics problems	All	Provides increased separation between affected aircraft and other aircraft	x		x							
						Offers any appropriate assistance	x			x		x	x			
						Coordinates with appropriate ATC units and other services, as required					x					
						Prioritises actions depending on the evolution of the situation						x			x	
						Uses appropriate elements of unit emergency checklist						x				
						Evaluates overall workload and requests support, when necessary									x	
						Provides information to flight crew regarding closest and/or most suitable aerodromes when appropriate		x				x				
			Fuel problems - during any phase of flight, the crew reports a fuel problem that may range from being below the legal minimum to fuel exhausted.	Manage the traffic situation whilst dealing with an aircraft with fuel problems	All	Identifies accurately the fuel status of the affected aircraft						x				
						Provides control actions that ensure efficient use of remaining fuel	x					x				
						Coordinates with appropriate ATC units and other services, as required					x					
						Uses appropriate elements of the unit emergency checklist						x				
						Provides aerodrome and weather information		x								
						Prioritises actions depending on the evolution of the situation	x	x							x	
						Evaluates overall workload and requests support, when necessary									x	
			Bird strike - a bird or birds hits an aircraft shortly after take-off or before landing and either the windshield, engine, fuselage, landing gear or hydraulics or a combination are damaged.	Manage the traffic situation whilst dealing with an aircraft that has experienced a birdstrike	TWR	Prioritises actions based on the seriousness of the situation	x					x			x	
						Offers any appropriate assistance	x			x		x	x			
						Uses appropriate elements of the unit emergency checklist						x				
						Coordinates with appropriate ATC units and other services, as required					x					

ATC Refresher Training Baseline

Training Topic	Types of refresher training	Description of the topic	Scenarios	Training objectives	Relevant ATC Licence Ratings	Desired Outcomes	ATC Competencies									
							SITU	TRAF	SEPC	COMM	CORD	NONR	PROB	SELF	WORK	TEAM
In-flight emergenci	AES	often with limited or incomplete information, and then decide on the effective way to offer assistance. For many of these in-flight emergencies, there are prescribed actions and procedures however circumstances may dictate that the controller create solutions because there is no defined procedure.				Evaluates overall workload and requests support, when necessary									x	
			Pressurisation problems - aircraft performs an emergency descent, with or without warning, due to pressurisation problems. On reaching FL100, aircraft requests priority landing at nearest suitable aerodrome.	Manage the traffic situation whilst dealing with an aircraft experience pressurisation problems	ACP ACS	Clears airspace immediately below and in the vicinity of emergency aircraft	x	x	x			x				
						Provides separation and/or issues essential traffic information, as required	x	x	x			x				
						Provides information to flight crew regarding closest and/or most suitable aerodromes, when appropriate		x								
						Uses appropriate elements of the unit emergency checklist						x				
						Coordinates with appropriate ATC units and other services, as required					x					
						Evaluates overall workload and requests support, when necessary									x	
Workload Management	SPP	This topic is concerned with the controller's ability to manage their workload under varying conditions.	**Working at the limits of airspace capacity** - any scenario where the controller is required to work at maximum, or 10-20% above maximum capacity, without the addition of non-routine situations.	Provide safe and efficient ATC service during over capacity conditions Take action to reduce the workload to normal operating capacity Take action to ensure personal workload capacity is not exceeded	All	Plans tasks effectively in response to the workload	x	x	x						x	
						Prioritises tasks based on the workload	x								x	
						Requests assistance, when necessary								x		x
						Uses flow control actions to achieve optimal workload	x	x								
			Unusual operating configurations - any scenario where the traffic capacity remains normal to high, but the operating configuration of the airspace or aerodrome is non-standard. This could include reduced runway lengths, significant taxiways closed, non-standard airspace sector configurations and non-standard reductions in available airspace.	Provide safe and efficient ATC service whilst subject to unusual operating configurations	All	Plans tasks to take into account the unusual configuration	x	x	x						x	
						Uses flow control actions to achieve optimal workload	x	x								
						Requests assistance, when necessary								x		x
Aircraft Engines	AES	This topic is focused on emergency scenarios involving aircraft engines. In the case of engine failure, the degree of urgency is dependent on what stage of the flight the aircraft is at and how many engines the aircraft has.	**Engine Failure** - any scenario where an aircraft experiences engine fire. The aircraft may have one or multiple engines.	Manage the traffic situation whilst dealing with an aircraft experiencing engine failure	All	Identifies accurately the urgency of the situation						x				
						Anticipates aircraft's altitude and navigational requirements	x					x				
						Coordinates with appropriate ATC units and other services, as required					x					
						Uses appropriate elements of the unit emergency checklist						x				
						Prioritises actions depending on the evolution of the situation		x								
						Evaluates overall workload and requests support, when necessary									x	x
						Provides information to flight crew regarding closest and/or most suitable aerodromes when appropriate		x				x				
			Engine Fire - any scenario, either in the air or on the ground, where an aircraft experiences engine fire. The aircraft may have one or multiple engines.	Manage the traffic situation whilst dealing with an aircraft experiencing engine failure	All	Anticipates aircraft's altitude and navigational requirements						x				
						Coordinates with appropriate ATC units and other services, as required					x					
						Uses appropriate elements of unit emergency checklist						x				
						Prioritises actions depending on the evolution of the situation		x								
						Evaluates overall workload and requests support, when necessary									x	x
						Provides information to flight crew regarding closest and/or most suitable aerodromes when appropriate		x				x				
			Bomb Warning - flight crew reports that they have been notified that the aircraft has a	Manage the traffic situation whilst dealing with a bomb warning on an	All	Offers any appropriate assistance	x			x		x	x			
						Performs procedures in accordance with local instructions						x				

ATC Refresher Training Baseline

Training Topic	Types of refresher training	Description of the topic	Scenarios	Training objectives	Relevant ATC Licence Ratings	Desired Outcomes	ATC Competencies									
							SITU	TRAF	SEPC	COMM	CORD	NONR	PROB	SELF	WORK	TEAM
Unlawful Interference	AES	This topic is focussed on the high stress situations that are brought about by unlawful interference. These situations are often characterised by high unpredictability and at the same time, the need for the controller to follow the instructions of other authorised personnel who are trained specifically to deal with these situations. Calm and clear communication is essential during the management of these situations.	bomb onboard, or have identified a potential bomb onboard. The aircraft may be in the air or on the ground.	aircraft		Anticipates aircrafts altitude requirements, if required	x					x				
						Communicates all information to the flight crew in a calm manner				x						
						Takes action to clear the airspace immediately below and/or around the affected aircraft	x	x								
						Coordinates with appropriate ATC units and other services, as required					x					
			Hi-jack - an aircraft is hi-jacked, either on the ground or in the air. The scenario is characterised at first, by confusing messages being passed by the flight crew and unexpected manoeuvre from the flight. As the scenario develops, the hi-jacker makes demands that the controller will need to manage. The demands can vary from diverting to a different destination, to actions that are outside of the controller's responsibility (e.g. release of political prisoners).	Manage the traffic situation whilst dealing with a hi-jack situation	All	Identifies that a hi-jack situation has occurred	x									
						Manages unexpected and unannounced course/level deviations, as they occur	x	x	x			x				
						Use appropriate RT phraseology and communication procedures for hi-jack situation				x						
						Communicates all information to the flight crew in a calm manner				x						
						Performs procedures in accordance with local instructions						x				
						Coordinates with appropriate ATC units and other services, as required					x					
			Lazer Interference - pilots report that, in vicinity of an aerodrome, someone is directing lazer beams at aircraft and in some instances into the cockpit.	Manage the traffic situation whilst dealing with lazer interference	TWR APP APS	Informs aircraft of the situation				x						
						Follows local procedures for dealing with lazer interference	x	x				x				
Runway Management	SPP and AES	This topic is concerned the management of runways when aircraft, for various reasons cause the runway to be closed for a period of time or enter the runway without clearance. The controller not only has to manage the event but also the remaining traffic that will not be able to use the blocked runway.	**Incursions** - an aircraft or vehicle attempts to enters/crosses an active runway without clearance to do so. The incursion should occur at a time when safety could be compromised if not detected. Incorrect readbacks and misunderstanding could be the cause for the incursion.	Manage a runway incursion Take action to prevent a runway incursion	TWR	Detects the possibility of a runway incursion and takes action	x	x								
						Takes immediate action to resolve a runway incursion once it has occurred	x					x				
			Excursions - an aircraft overruns on take off, or undershoots the runway on landing, or deviates off the side of the runway during either landing or take off	Manage a runway excursion	TWR	Offers any appropriate assistance						x				
						Follows local procedures for dealing with runway excursions						x				
						Manages traffic taking into account the closure of the affected runway	x	x				x				
			Gear problems - aircraft arriving at aerodrome reports no gear or only partial gear deployment	Manage the traffic situation whilst dealing with an aircraft with gear problems	TWR	Clears runway according to local instructions						x				
						Coordinates with emergency services, as required					x					
						Plans traffic taking into account potential go around manouevres and a blocked runway	x	x								
						Requests technical assistance, if necessary and available						x				
			Braking problems - the flight crew report brake problems. The aircraft lands and blocks the runway due to damaged to its tyres.	Manage the traffic situation whilst dealing with an aircraft with braking problems	TWR	Clears runway according to local instructions						x				
						Coordinates with emergency services, as required					x					
						Plans traffic taking into account potential go around manoeuvres and a blocked runway	x	x								
						Requests technical assistance, if necessary and available						x				
			Go-arounds - any situation, initiated by either controller or pilot, where a go-around manouevre is carried out	Manage the traffic situation whilst dealing with a go-around.	TWR, APP, APS	Issues instructions that enable the flight crew to perform the published missed approach procedure										
						Issues instructions to flight crew that would modify the execution of the published missed approach only when essential to maintain safety										
						Folows local procedures for dealing with go-arounds										
		This topic deals with	**Level bust and collision avoidance** - any scenario where at least one aircraft comes into close proximity (below standard separation minimum) with another aircraft	Manage a loss of separation situation	APS, ACS	Identifies that separation has been lost	x					x				
						Issues appropriate collision avoidance instructions			x							
						Communicates collision avoidance instructions is a clear manner, using correct phraseology and with an appropriate degree of urgency				x						

ATC Refresher Training Baseline

Training Topic	Types of refresher training	Description of the topic	Scenarios	Training objectives	Relevant ATC Licence Ratings	Desired Outcomes	ATC Competencies									
							SITU	TRAF	SEPC	COMM	CORD	NONR	PROB	SELF	WORK	TEAM
Collision Avoidance	AES	This topic deals with situations where there is either imminent or gradual risk of collision. The reason for the risk of collision is not the focus of this training. The focus is on the ability of the controller to take immediate and decisive action, faced with a collision risk situation and to then recover the traffic flow after separation has been re-established.	due to a level bust. The traffic could be head on with one aircraft climbing/descending, one aircraft catching up with another and one or both aircraft climbing/descending.			Issues follow-up instructions to normalise the traffic flow after separation has been re-established, if appropriate		x	x							
			Airspace infringement - an aircraft enters controlled airspace without a clearance or radio communication. The path of the aircraft conflicts with other controlled aircraft in the airspace. The aircraft may transit the airspace or land at an aerodrome within the airspace.	Manage an airspace infringement situation	APS, ACS	Identifies that an airspace infringement has taken place	x					x				
						Issues appropriate instructions to other aircraft, including collision avoidance instructions, if necessary			x							
						Attempts to establish identity of aircraft and intentions, using whatever means is available						x				
						Coordinates with appropriate ATC units and other services, as required					x					
			TCAS Resolution Advisory - aircraft reports responding to TCAS RA	Recover traffic situation after a TCAS RA	APS, ACS	Follows correct procedures for responding to a TCAS RA						x				
						Issues follow-up instructions to normalise the traffic flow after aircraft completion of RA manoeuvre, if appropriate		x	x							