Operations Manual Part D
Appendix C – IFT

Revision 2
August 2020

0 Record of Amendments

Change	Date Entered	Amended By
Rev 2	August 2020	Simon Kelsey

0.1 Revision Highlights

Rev 2 August 2020

Updated introduction

Updated Skill Test Schedule and Standard to reflect new PPL MCS

Rev 1 July 2019

New format

Added details of IFI Training course

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1 Initial Flying Training Course (Full)

1.1 Introduction

The BAVirtual Initial Flying Training Course is designed to train and assess the trainee in all items required for the issue of a VATSIM Private Pilot's Licence (Aeroplane) (P1) rating.

Throughout the course the trainee is expected to self-study through the use of e-learning material, supplied BAVirtual training manuals and documentation and the supplied Cessna 172SP POH. The trainee will in this way gain the technical knowledge and understanding necessary to pass the theory examination.

Practical training is integrated with the theoretical material and is conducted using JoinFS and the Cessna 172SP. The course is based at Wycombe Air Park (EGTB).

The VATSIM PPL(A) (P1) rating will be issued upon successful completion of the skills test.

To be accepted for the Initial Flying Training Course the trainee must by a current BAVirtual member. Applications to join the course should be made to FTM Initial Flying Training, as detailed on the Moodle course description.

1.2 Course Overview

Initial Flying Training Course Theory Syllabus	
Section	**Subject**
1	Shared Cockpit Setup and Introduction to Training Concepts
	Preparation for Flight
2	Straight and Level Flight
	Flying Straight and Level
3	Climbing and Descending
4	Medium Level Turns
5	Climbing and Descending Turns
6	Slow Flight
	Meteorology
7	Basic Stalling
	Altimetry
8	Steep Turns
9	Circuit Introduction
	Takeoff
	Landing
10	Leaving the Circuit
	Joining the Circuit
11	Navigation

	Flight Planning
	Performance
12	Glide Approaches
13	Emergencies including Forced and Precautionary Landings
	Engine Failure after Takeoff
14	Bad Weather Circuits
15	Short Field Operations

1.3 Theory Training

1.3.1 Shared Cockpit Setup and Introduction to Training Concepts

Shared Cockpit Setup and Introduction to Training Concepts	
Section	**Subject**
1a	**Course Introduction**
	Course introduction
	Training Methods
	Shared cockpit configuration
	Teamspeak Configuration
	Crib Sheets
	Shared cockpit quick configuration reference
	Teamspeak quick configuration reference
1b	**Preparation for Flight**
	Effects of Controls
	Powerplant
	Fuel System
	Instruments
	Flight (Lift/Weight/Thrust/Drag)
	Emergencies
	Airport & Weather
	Taxiways
	Restrictions

1.3.2 Straight and Level Flight

Straight and Level Flight	
2a	**Forces of Flight**
	The Four Forces of Flight

	Centre of Gravity, Centre of Pressure, Couples & Moments
	Lift/Drag Ratio
	Trimming
	Angle of Attack and Relative Wind
	Datums
	Lookout
2b	**Flying Straight and Level**
	The Horizon
	Level flight attitude
	Power, Attitude, Trim
	Balance & Rudder Usage
	Lookout, Attitude, Instruments
	Regaining Straight and Level
	Straight and Level at Different Power Settings

1.3.3 Climbing and Descending

3	**Climbing and Descending**
	Forces of Flight
	Energy Management
	Centre of Gravity, Centre of Pressure, Couples & Moments
	Effect of Flap

1.3.4 Medium Level Turns

4	**Medium Level Turns**
	Forces of Flight
	Lift Vectors
	Adverse Yaw
	Overbanking
	Sight Picture
	Instruments

1.3.5 Climbing and Descending Turns

5	**Climbing and Descending Turns**
	Forces of Flight
	Lift Vectors
	Rate and Angle of Climb

1.3.6 Slow Flight

6	**Slow Flight**
	Lift and Angle of Attack
	Effects of Controls
	Flaps – Types and Effects
	HASELL Checks
	Meteorology
	The Atmosphere
	Atmospheric Processes
	Standard Atmosphere
	Pressure Systems
	Fronts
	Clouds & Cloud Types
	Thunderstorms

1.3.7 Basic Stalling

7	**Basic Stalling**
	Critical Angle of Attack
	Stall Speed
	Symptoms
	Recovery
	Altimetry
	The Pressure Altimeter
	Altimeter Settings
	Influence of Surface Pressure
	Altimeter Errors
	Calculating QFE and QNH

1.3.8 Steep Turns

8	**Steep Turns**
	Forces in a Steep Turn
	Effect of Bank Angle on Stalling Speed
	Power and Airspeed
	Spiral Dives
	MSFS Idiosyncrasies

1.3.9 Circuit Introduction

9	**Circuit Introduction**
	The Aerodrome Traffic Circuit
	Circuits at Wycombe Air Park
	Takeoff
	Torque
	Slipstream
	Effect of Wind
	Ground Roll & Takeoff Distance
	Climb Angle
	Effect of Flap
	Power
	Landing
	Effect of Wind
	Effect of Flap
	Power
	Braking
	Approach
	Roundout & Flare
	Illusions

1.3.10 Joining and Leaving the Circuit and Introduction to Navigation

10	**Leaving the Circuit**
	Legs of the Circuit
	Leaving the Circuit
	Joining the Circuit
	Approaching the Circuit
	Landing Direction
	Achieving the Circuit Altitude
	Communications

1.3.11 Navigation

11	**Navigation**
	Speeds
	The Magnetic Compass
	Bearings, Heading and Track

	Flight Time
	Drift
	Flight Planning
	Weather
	Weather Minima
	Cloud Base and Ceiling
	NOTAMs
	Restricted and Prohibited Areas
	Danger Areas
	Controlled Airspace
	Selecting Turning Points
	Performance
	Mass
	Payload
	Maximum Takeoff Mass
	Balance
	Fuel Consumption and Planning
	Trip Fuel Calculation
	Takeoff and Landing Performance

1.3.12 Glide Approaches

12	**Glide Approaches**
	Techniques
	Use of Flaps

1.3.13 Emergencies

13	**Emergencies including Forced and Precautionary Landings**
	Causes of Engine Failure
	Forced Landing without Power
	Effect of Height
	Trouble Checks
	Shutdown Checks
	Landing Areas
	Engine Failure after Takeoff
	Rejected Takeoff
	EFATO Actions

	Takeoff Safety Brief

1.3.14 Bad Weather Circuits

	Bad Weather Circuits
14	Usage
	Considerations

1.3.15 Short Field Operations

	Short Field Operations
	Takeoff Considerations
	Factors Affecting Takeoff Performance
	Takeoff Performance Calculation
15	Short Field Takeoff Technique
	Landing Considerations
	Factors Affecting Landing Performance
	Landing Performance Calculation
	Short Field Landing Technique

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1.4 Flight Training

1.4.1 Detail 1 – Air Experience

Detail 1 Air Experience			
	Exercise	**Student**	**Instructor**
1d	Establish Shared Cockpit Connection	✓	✓
	Pre-flight Checks		
	Taxi Out		✓
	Take Off and Route to Training Area		✓
	Primary Effects of Controls: Elevator, Aileron & Rudder		
	Further Effects of Controls: Elevator, Aileron & Rudder		
	Effect of Engine Controls		
	Effect of Flaps		
	Trimming		
	Taxi In	✓	
	Parking	✓	

1.4.1.1 Objectives

- Successfully establish a shared cockpit connection
- Introduce the course, Cessna 172SP aircraft and the concepts and practicalities around dual training in FS
- Operate the primary controls and observe the secondary effects on the aeroplane in flight.
- Operate the ancillary controls and experience the feel and effect on the aeroplane in flight.

1.4.1.2 Session Proficiency Criteria

- To demonstrate an understanding of the primary and further effects of the primary flight controls
- To demonstrate an understanding of the effects of the ancillary controls

1.4.2 Detail 2 – Straight and Level Flight

Detail 2 Straight and Level Flight			
	Exercise	**Student**	**Instructor**
2c	Establish Shared Cockpit Connection	✓	✓
	Pre-flight Checks		
	Taxi Out	✓	
	Take Off and Route to Training Area		✓
	Identify the Horizon		
	Demonstrate Level Flight Attitude		✓
	Straight and Level Flight	✓	
	Regaining Straight and Level		
	Effect of Imbalance		
	Straight and Level at Lower Airspeed		
	Straight and Level at Higher Airspeed		
	Return to Airfield	✓	
	Land		✓
	Taxi In	✓	

1.4.2.1 Session Proficiency Criteria

- To demonstrate the ability to establish and maintain straight and level flight, at a constant airspeed, constant altitude, in a constant direction and in balance
- To demonstrate the ability to regain straight and level flight
- To demonstrate the ability to maintain straight and level flight at selected airspeeds or power settings

1.4.2.2 Preview Item

- Attitudes for climbing and descending

1.4.3 Detail 3 – Climbing and Descending

Detail 3 Climbing and Descending			
	Exercise	**Student**	**Instructor**
	Establish Shared Cockpit Connection	✓	✓
	Pre-flight Checks	✓	
	Taxi Out	✓	
	Take Off and Route to Training Area	✓	
	Level off at Selected Altitude	✓	
	Powered Descent		
3c	Normal Climb		
	Glide Descent		
	V_X Climb		
	Powered Descent		
	V_Y Climb		
	Return to Airfield	✓	
	Land		✓
	Taxi In	✓	

1.4.3.1 Session Proficiency Criteria

- To demonstrate the ability to enter the climb and the descent from straight and level flight
- To demonstrate the ability to maintain a climb and a descent at a constant speed, in a constant direction and in balance
- To demonstrate the ability to level off at specific altitudes

1.4.3.2 Preview Item

None

1.4.4 Detail 4 – Medium Level Turns

Detail 4 Medium Level Turns			
	Exercise	**Student**	**Instructor**
4c	Establish Shared Cockpit Connection	✓	✓
	Pre-flight Checks	✓	
	Taxi Out	✓	
	Take Off and Route to Training Area	✓	
	Turn to the Left	✓	
	Turn to the Right		
	Return to Airfield	✓	
	Land		✓
	Taxi In	✓	

1.4.4.1 Session Proficiency Criteria

- To demonstrate the ability to change direction through 360 degrees at a constant rate using 20 degrees angle of bank, whilst maintaining a constant altitude and keeping the aeroplane in balance

1.4.4.2 Preview Item

- Climbing and descending turns – demonstrate relevant nose attitude and explain the need to limit bank angle in climbing turns

1.4.5 Detail 5 – Medium Climbing and Descending Turns

Detail 5 Medium Climbing and Descending Turns			
	Exercise	**Student**	**Instructor**
5b	Establish Shared Cockpit Connection	✓	✓
	Pre-flight Checks	✓	
	Taxi Out	✓	
	Take Off and Route to Training Area	✓	
	Turn to the Left	✓	
	Turn to the Right	✓	
	Return to Airfield	✓	
	Land	✓	
	Taxi In	✓	

1.4.5.1 Session Proficiency Criteria

- To demonstrate the ability to complete a medium turn while climbing
- To demonstrate the ability to complete a medium turn while descending

1.4.5.2 Preview Item

None

1.4.6 Detail 6 – Slow Flight

Detail 6 Slow Flight			
	Exercise	**Student**	**Instructor**
6b	Establish Shared Cockpit Connection	✓	✓
	Pre-flight Checks	✓	
	Taxi Out	✓	
	Take Off and Route to Training Area	✓	
	HASELL Checks		✓
	Slow Flight (Clean)	✓	✓
	Slow Flight (With Flap)	✓	✓
	Go Around Simulation	✓	
	Return to Aerodrome	✓	
	Land	✓	
	Taxi In	✓	

1.4.6.1 Session Proficiency Criteria

- To slow the aeroplane and maintain straight and level flight at low airspeed (1.2 V_S)
- To maintain straight and level flight at low airspeed in various configurations
- To maintain a constant altitude whilst turning at low airspeed
- To return to normal operating airspeeds

1.4.6.2 Preview Item

- If time permits, demonstrate stall entry and recovery

1.4.7 Detail 7 – Basic Stalling

Detail 7 Basic Stalling			
	Exercise	**Student**	**Instructor**
7b	Establish Shared Cockpit Connection	✓	✓
	Pre-flight Checks	✓	
	Taxi Out	✓	
	Take Off and Route to Training Area	✓	
	HASELL Checks	✓	
	Stalling Demonstration		✓
	Full Stall and Recovery	✓	
	Recovery at Onset	✓	
	Return to Aerodrome	✓	
	Land	✓	
	Taxi In	✓	

1.4.7.1 Session Proficiency Criteria

- To control the aeroplane to the point of stall, recognise the symptoms of the approaching stall, experience the stall itself and recover with minimum height loss
- To control the aeroplane to the point of stall, recognise the symptoms of the approaching stall, and recover at stall onset with minimum height loss

1.4.7.2 Preview Item

None

1.4.8 Detail 8 – Steep Turns

Detail 8 Steep Turns			
	Exercise	**Student**	**Instructor**
8b	Establish Shared Cockpit Connection	✓	✓
	Pre-flight Checks	✓	
	Taxi Out	✓	
	Take Off and Route to Training Area	✓	
	HASELL Checks	✓	
	Steep turn to the left	✓	✓
	Steep turn to the right	✓	✓
	Spiral dive recognition and recovery	✓	✓
	Return to Aerodrome	✓	
	Land	✓	
	Taxi In	✓	

1.4.8.1 Session Proficiency Criteria

- To change direction through 360 degrees at a constant rate, using 45° angle of bank, maintaining a constant altitude and in balance
- To become familiar with the sensations of high bank angles and high rates of turn
- To recognise and recover from a spiral dive

1.4.8.2 Preview Item

- The aerodrome traffic circuit – discuss positioning, circuit legs and altimetry

1.4.9 Detail 9 – Circuit Introduction

Detail 9 Circuit Introduction			
	Exercise	**Student**	**Instructor**
9d	Establish Shared Cockpit Connection	✓	✓
	Pre-flight Checks	✓	
	Taxi Out	✓	
	Circuits	✓	✓
	Land	✓	
	Taxi In	✓	

1.4.9.1 Session Proficiency Criteria

- To take off and follow published procedures that conform to the aerodrome traffic circuit, avoiding conflict with other aircraft
- To carry out an approach and landing using the most suitable runway

1.4.9.2 Preview Item

None

1.4.10 Detail 10 – Joining and Leaving the Circuit and Introduction to Navigation

Detail 10 Joining and Leaving the Circuit and Introduction to Navigation			
	Exercise	**Student**	**Instructor**
10c	Establish Shared Cockpit Connection	✓	✓
	Pre-flight Checks	✓	
	Taxi Out	✓	
	Leave Circuit	✓	
	Return and Rejoin	✓	
	Depart to Oxford	✓	
	Standard Overhead Join	✓	
	Touch and Go	✓	
	Return to Booker	✓	
	Land	✓	
	Taxi In	✓	

1.4.10.1 Session Proficiency Criteria

- To vacate and join the circuit in accordance with applicable procedures
- To join an uncontrolled circuit in accordance with the standard overhead join procedure

1.4.10.2 Preview Item

- Navigation principles – altimetry, plog, timing

1.4.11 Detail 11 – Navigation Exercise

Detail 11 Navigation Exercise			
	Exercise	**Student**	**Instructor**
11d	Establish Shared Cockpit Connection	✓	✓
	Pre-flight Checks	✓	
	Taxi Out	✓	
	Navigation	✓	✓
	Land	✓	
	Taxi In	✓	

1.4.11.1 Session Proficiency Criteria

- To complete all elements of VFR planning for the route prescribed with particular reference to planned altitudes and safe levels of operation
- To identify position visually by reference to ground features and map
- To navigate by means of calculated headings, ground speed and time
- To complete all necessary checks and drills
- To adjust and monitor fuel consumption for range or endurance as appropriate
- To obtain and comply with ATC clearances and appropriate level of service as necessary

1.4.11.2 Preview Item

- Glide approach on return WAP if time, ATC and student confidence/workload permits

1.4.12 Detail 12 – Approach to Landing with Idle Power (Glide Approach)

Detail 12 Approach to Landing with Idle Power (Glide Approach)			
	Exercise	**Student**	**Instructor**
12b	Establish Shared Cockpit Connection	✓	✓
	Pre-flight Checks	✓	
	Taxi Out	✓	
	Circuit to Base Leg	✓	
	Glide Approach	✓	✓
	Repeat until Consistent	✓	
	Land	✓	
	Taxi In	✓	

1.4.12.1 Session Proficiency Criteria

- To select and achieve the appropriate touchdown area at the recommended speed
- To adjust descent and roundout (flare) to achieve a safe landing with little or no float with appropriate drift and crosswind correction
- To fly the aircraft at best glide speed
- To recognise and take appropriate action when the aircraft is too high or too low during a glide approach

1.4.12.2 Preview Item

None

1.4.13 Detail 13 – Emergencies including Forced and Precautionary Landings

Detail 13 Emergencies including Forced and Precautionary Landings			
	Exercise	**Student**	**Instructor**
13b	Establish Shared Cockpit Connection	✓	✓
	Pre-flight Checks	✓	
	Taxi Out	✓	
	HASELL checks	✓	
	Practice Forced Landing	✓	✓
	Land	✓	
	Taxi In	✓	

1.4.13.1 Session Proficiency Criteria

- Recognises engine failure and establishes best glide speed
- Carries out trouble checks by recall promptly and correctly
- Simulates emergency transmission using correct phraseology
- Selects appropriate landing area
- Demonstrates a planned and structured glide approach to a position from which a safe landing would be assured
- Carries out correct shutdown checks by recall
- Carries out appropriate go-around action when directed

1.4.13.2 Preview Item

None

1.4.14 Detail 14 – Engine Failure After Takeoff

Detail 14 Engine Failure After Takeoff			
	Exercise	**Student**	**Instructor**
13d	Establish Shared Cockpit Connection	✓	✓
	Pre-flight Checks	✓	
	Taxi Out	✓	
	RTO	✓	
	Taxi out	✓	
	EFATO	✓	
	Circuits as required	✓	
	Taxi In	✓	

1.4.14.1 Session Proficiency Criteria

- Reacts to engine failure after takeoff by promptly and positively lowering the nose
- Establishes best glide speed
- Selects and identifies a suitable landing area
- Demonstrates a planned approach such that a safe touchdown within the identified landing area would be assured
- Simulates emergency transmission using correct phraseology
- Carries out shutdown checklists from recall as appropriate
- Carries out appropriate go-around action when directed.

1.4.14.2 Preview Item

1.4.15 Detail 15 – Bad Weather Circuits

Detail 15 Bad Weather Circuits			
	Exercise	**Student**	**Instructor**
14b	Establish Shared Cockpit Connection	✓	✓
	Pre-flight Checks	✓	
	Taxi Out	✓	
	Low level navigation	✓	
	Return to airfield	✓	
	Bad weather circuits	✓	
	Land	✓	
	Taxi In	✓	

1.4.15.1 Session Proficiency Criteria

- Understands the purpose of carrying out a bad weather circuit
- Configures aircraft correctly for operation in poor visibility
- Can fly consistent bad weather circuits at 600ft aal in accordance with standard operating procedures

1.4.15.2 Preview Item

1.4.16 Detail 16 – Short Field Operations

Detail 16 Short Field Operations			
	Exercise	**Student**	**Instructor**
15b	Establish Shared Cockpit Connection	✓	✓
	Pre-flight Checks	✓	
	Taxi Out	✓	
	Performance Takeoff	✓	
	Circuit	✓	
	Precision Landing	✓	
	Circuits as required	✓	
	Taxi In	✓	

1.4.16.1 Session Proficiency Criteria

- Consistently able to carry out a Performance Takeoff according to the documented technique
- Applies rudder correctly to ensure aircraft tracks straight during takeoff
- Climbs at V_X to Obstacle Clearance Height followed by acceleration to V_Y
- Able to consistently demonstrate use of the POH precision (short field) landing technique
- Lands consistently in the designated touchdown zone at the correct airspeed

1.4.16.2 Preview Item

None

1.4.17 Detail 17 – Cross Country Flight

Detail 17 Qualifying Cross Country Flight			
16a	**Exercise**	**Student**	**Instructor**
	QXC	✓	✓

1.4.17.1 Session Proficiency Criteria

A Cross Country flight is no longer a requirement for the issue of a VATSIM PPL(A) rating. Nevertheless, BAV consider that trainees should complete some cross-country flights in order to build experience prior to the skills test.

After completing the flight, the trainee must ensure that they upload their completed Navigation Log to Moodle. The flight must be recorded using Merlin and the Pirep number recorded in the Moodle text submission area.

1.4.18 Detail 18 – General Skills Test

Detail 18 General Skills Test			
	Exercise	**Student**	**Instructor**
17a	Establish Shared Cockpit Connection		
	General Skills Test		

1.4.18.1 Session Proficiency Criteria

- All handling to GST Standard
- All aspects of the operation in accordance with BAV C172SP SOPs
- Effective BAV Pilot Competencies were displayed with no major debrief points
- All items on the Skill Test Schedule were completed to the required standard

1.4.18.2 Conduct of the General Skills Test

The flight will be assessed as a private, passenger carrying flight. The safety and comfort of passengers must be considered. The candidate shall demonstrate ability to:

- Operate the aeroplane within its limitations
- Complete all manoeuvres with smoothness and accuracy
- Exercise good judgement and airmanship
- Apply aeronautical knowledge of procedures and regulations as currently apply
- Maintain control of the aeroplane at all times in a manner that the successful outcome of a procedure or manoeuvre is never in doubt

Throughout the flight the aeroplane should be flown as accurately as possible. The tolerances for operation are given as guidance to candidates, but do not necessarily indicate that a failure will result if any boundary is exceeded. Similarly, flight within the tolerances should not be achieved at the expense of smoothness and co-ordination.

The Examiner will make allowances for adverse weather conditions such as turbulence, the handling qualities and performance of the aeroplane used and simulator limitations. The skill test tolerances shown in the Appendix are for general guidance.

1.4.18.3 Examiner Notes

- Refer to VATSIM PPL(A) Member Certification Standards (as published by the VASTIM PTD and amended from time to time – these documents are available at https://my.vatsim.net).
- Refer to Appendix 1 for the full Skill Test Schedule and Standard

2 IFI Training

2.1 Introduction

2.1.1 Aims

The objective of the IFI course is to train to the level of proficiency necessary for the issue of a Flying Instructor (Virtual) rating with Single Engine Piston privileges. The course is designed to give training to the applicant in theoretical knowledge instruction and in-flight instruction in order to instruct on single engine piston aircraft and the Initial Flying Training Course.

2.1.2 Pre-entry Requirements

In order to be accepted on to the IFI course, the candidate must:

- Hold at least a VATSIM PPL(A) (P1) rating
- Meet the general staff requirements outlined in OM-D (General)

2.1.3 Objectives

The aim is for candidates to:

- Learn how to use JoinFS as an instructor
- Develop the instructional skills acquired during the Initial Instructor Training course
- Learn to train and assess pilots using the BAVirtual Pilot Competencies
- Gain familiarity with the Initial Flying Training Course exercises
- Learn to assess when a trainee has achieved the General Skills Test (GST) standard
- Reach a satisfactory standard for a final Assessment of Competence
- Achieve FI(V) certification

2.1.4 Training Methodology

During the course the Trainee Instructor will:

- Operate JoinFS and vPilot as an instructor
- Develop his/her instructional technique
- Give briefings on Initial Flying Training Course details
- Demonstrate aircraft handling and instructional patter
- Identify and correct errors
- Give and receive feedback and tutoring

2.1.5 Terminology

- **TRAINEE INSTRUCTOR (TI):** The candidate
- **SENIOR INSTRUCTOR (SI):** The Instructor Tutor who will conduct the Familiarisation phase, acting as the trainee instructor's student when necessary
- **MENTOR:** A fully-qualified Flying Instructor (Virtual) who will supervise and assist the trainee instructor during the Consolidation phase
- **EXAMINER:** The Senior Instructor conducting the final Assessment of Competence

2.1.6 Course Overview

Phase	Duration
Initial Instructor Training	4 sessions
IFI Familiarisation	3 sessions planned; minimum of 1 session
Consolidation	Minimum of 16 details: candidate must teach every detail in the syllabus at least once
Final Check	1 session observation

After successful completion of the Initial Instructor Training course, the trainee instructor will complete a period of familiarisation on the Cessna 172SP aircraft and the specifics of instructing on the Initial Flying Training course with a course Senior Instructor. The length of this familiarisation will vary depending on the candidate's background and experience but should be largely candidate-driven – the aim is to ensure that the candidate is both competent and, most importantly, confident and comfortable to begin operating as an instructor. Three sessions are planned for reference but the minimum requirement is for one session. Some candidates with relevant real-world/FS experience may only require a single session, whereas less confident candidates may require more than the planned three sessions. The objective of this familiarisation phase is to provide the candidate with the necessary support to enable them to operate the required equipment (e.g. JoinFS, Moodle etc) and teach the IFT syllabus independently.

In all cases, the Senior Instructor will work with the candidate to reach a position where both parties are mutually happy that the candidate is comfortable conducting IFT sessions independently, including both administration (e.g. processes for filing reports/picking up sessions etc) and practical matters (e.g. JoinFS setup & troubleshooting etc).

Normally the candidate will start off working one-on-one with the Senior Instructor who will act as a 'dummy' student. Once comfortable the candidate will move on to working with 'live' students under the observation of a Senior Instructor who will provide feedback and suggestions for improvement.

Once the candidate has met the required standard (see 2.1.7 Standard Required) and is confident to continue unsupervised they will be issued the **Assistant Flying Instructor (Virtual) (AFI(V))** rating and 'released' to conduct sessions independently.

This marks the commencement of the second phase. In this phase the newly-qualified Assistant Flying Instructor is assigned a mentor, who will be a 'fully qualified' Flying Instructor (Virtual).

The mentor is expected to work with the candidate throughout the 'consolidation' phase in order to provide support, feedback and answer any questions the candidate may have as they build their instructional experience. The exact form the mentoring will take is not strictly prescribed but mentors and Student Instructors should come to an arrangement which best fits the needs of the Student Instructor. As a suggestion, this phase could (and almost certainly will) include a combination of 'remote' support via e-mail/forum PM, informal observations by the mentor of sessions conducted by the Student Instructor from time to time, observations by the Student Instructor of sessions conducted by the mentor, Discord chats and so on.

The mentor is not required or expected to formally record the results of any session observations, however it will likely be useful for the mentor to make use of the Instructor Competencies and the Examiner's Report Form for the FI(V) check as a framework for debriefing and measuring the student's progress.

To progress to the final check, the student must:

- Have taught every lesson in the IFT syllabus at least once
- Have recorded a minimum of 25 hours of Flight Instruction time (requirement for issue of an FI(V) rating)
- Be recommended by their mentor

The final check will be conducted by a Senior Instructor in the form of a session observation with a 'live' student. If the candidate meets the required standard (see 2.1.7 Standard Required) they will be issued with the full **Flying Instructor (Virtual) (FI(V))** rating.

2.1.7 Standard Required

2.1.7.1 Progression from Familiarisation phase to Consolidation Phase (AFI(V) rating issue)

The minimum standard required for issue of the AFI(V) rating is at least Grade 4 in all Instructor Competencies (see OM-D Appendix G).

2.1.7.2 Completion of Consolidation Phase (full FI(V) rating issue)

The minimum standard required for issue of the Flying Instructor (Virtual) rating is at least Grade 3 in all Instructor Competencies (see OM-D Appendix G).

2.1.8 Pre-Course Preparation

Trainee Instructors should obtain the following:

- Instructor access to Moodle
- JoinFS Guide
- Revise the C172 and BAVirtual Flying Club documentation paying particular attention to the Flying Orders, checklists, limitations, standard operating procedures etc.
- Gain familiarity with the Operations Manual Part D (General) and Appendix C (Initial Flying Training), noting in particular the BAVirtual Pilot Competencies and the Observable Behaviours
- Review Initial Instructor Training course notes and consider practical application of core skills
- Preview the Initial Flying Training Course in Moodle
- Revise ATC phraseology (CAP 413)
- Revise relevant VATSIM regulations (ATO Policies and Procedures and Code of Conduct).

2.1.9 Instructional Techniques

The techniques required include briefing, demonstration, observation, objective analysis, correction, feedback and report writing. These are the six primary training skills learnt on the Core Course and these will be reinforced and developed throughout the course. *The SI and Mentor will also develop the Trainee Instructor with reference to the Instructor Competencies as defined in OM-D Appendix G.*

2.1.9.1 Briefing

During the Initial Instructor Training course the SI will give at least one example of a pre-flight briefing upon which the TI can model their briefings. In addition there will be opportunities during the Familiarisation Phase for the TI to observe the SI giving briefings, and during the Consolidation Phase for the TI to observe their mentor giving briefings.

A 'textbook' briefing will:

- Start from where the trainee is
- Be clear and contain all the necessary technical information required
- Include the necessary 'how' as well as the 'when and where'
- Include visual aids where appropriate
- Contain a bullet point summary in conclusion
- Contain questions to check a satisfactory level of transfer of information and understanding

It is vitally important that the TI understands that the purpose of the briefing is to prepare for the flying session; to provide the 'how to' knowledge such that the trainee will know, before commencing the flying detail, what techniques and skills will achieve a successful outcome to the exercise. The purpose is not to just repeat information/diagrams which the trainee should already have read in Moodle. This knowledge should be checked by appropriate facilitation.

- The TI should establish the background and previous experience of the trainee
- Consider any personal factors: is he/she hungry, tired or otherwise distressed?
- Use facilitation to check that the trainee has prepared thoroughly and understands the subject matter. Use instruction to eliminate points of confusion.
- Concentrate on the practical aspects, pass on tips and hints, and try to raise (or maintain) the trainee's confidence
- Try to engage and motivate the trainee with suitable 'WIIFM' (What's In It For Me?)
- Give context to the exercise such as airfield, weather conditions etc
- Explain **how to** rather than simply **what** they will do
- Guard against any tendency to intimidate or impress the trainee with superior knowledge
- Remember, the purpose of the briefing is not simply to repeat information which has already been studied through Moodle
- Keep it simple

2.1.9.2 Demonstration

During the Initial Instructor Training course the example of a 'textbook' pattered demonstration are provided. During the Familiarisation Phase the SI will ask the TI to demonstrate particular exercises.

It is important as the TI gains confidence and experience in the Consolidation Phase to be able to recognise when a demonstration is appropriate and intervene accordingly.

The ideal pattered demonstration will consist of:

- The setting of the scene
- Pre-emptive patter which describes in advance the technique to be used
- The accurate reproduction of the pattered technique
- Bullet point summary of the highlights after the demonstration is complete

It is absolutely vital that the demonstration is not allowed to become a 'running commentary' as the trainee will have little capacity left to assimilate the important features of the demonstration.

2.1.9.3 Observation

The analysis of 'why' a manoeuvre was incorrectly flown or conducted is of significant importance. The TI must be encouraged to look for the 'root cause' of inconsistency or difficulty with a manoeuvre.

2.1.9.4 Correction

The TI must be able to correct with appropriate use of the 'how' factor. This will necessitate a level of empathy with the trainee and an understanding of 'what' particular aspect of the technique the trainee is likely to find difficult. A key skill for the TI is to be able to identify the skills and behaviours that constitute a successful execution of the manoeuvre as this will assist them in being proactive in identifying and correcting trainee difficulties.

2.1.9.5 Debrief

A 'textbook' debrief is clear, concise, objective and of appropriate length. It will focus on both technical and non-technical issues, in relation to the BAV Pilot Competency Observable Behaviours and contain elements of praise and criticism where necessary. Feedback is wasted and the learning value will be diminished if there is any element of disagreement between the instructor and the trainee as to what happened. The imperative is to seek agreement on what happened, why it happened and how the trainee will proceed to correct the technique.

2.2 Initial Instructor Training Course

See OM-D Appendix G Initial Instructor Training for more information on IIT.

2.3 Familiarisation Phase

2.3.1 IFI 1

2.3.1.1 Overview

IFI 1 is led by a Senior Instructor. The primary aim is for the Trainee Instructor to familiarise themselves with operating JoinFS and vPilot as an instructor, the process for entering reports in to the Moodle system, and practice demonstration and observation skills.

2.3.1.2 Briefing

SI Brief:

- JoinFS setup and instructor operation
- vPilot shared cockpit operation and quirks
- Level turns
- Landing

TI Brief:

- None

2.3.1.3 Air Exercise

SI:

- Transfer of controls using JoinFS
- Teaching level turns
- Teaching landings

TI:

- Practice JoinFS operation
- Practice demonstration & observation skills (level turns & landing)

2.3.1.4 Debrief

- Summarise lessons learned
- Point toward IFI 2
- Allocate briefing topic for IFI 2 -- Stalling

2.3.2 IFI 2

2.3.2.1 Overview

IFI 2 is a joint SI/TI exercise where the TI starts to take responsibility for setting up, briefing and conducting a basic handling detail from the IFT course. The aim is to prepare the TI for the AFI(V) AoC that follows.

2.3.2.2 Briefing

SI Brief:

- Overview
- Briefing and demonstration skills

TI Brief:

- JoinFS/vPilot session setup
- Brief SI for Air Exercise 7 – Basic Stalling (inexperienced IFT trainee)

SI:

- Provide feedback on TI brief

2.3.2.3 Air Exercise

TI:

- Run Ex 7 air exercise

SI:

- Act as 'dummy' trainee
- Introduce 'common errors' as appropriate to develop TI's observation/correction skills
- Provide feedback on TI's performance as appropriate

2.3.2.4 Debrief

TI:

- Debrief SI on performance as a 'trainee'

SI:

- Provide feedback on TI's debrief
- Provide feedback on TI's performance during the Air Exercise with respect to the Instructor Competencies
- Point toward next session - AoC
- Subject allocation for next session – Ex 9 Circuit Introduction

2.3.3 IFI 3

2.3.3.1 Overview

IFI 3 is the AFI(V) Assessment of Competence. Training administration processes (i.e. Moodle) will also be covered.

2.3.3.2 Briefing

SI:

- Training Admin – checking trainee progress
- Invite TI to ask questions during the briefing
- Purpose of the AoC
- Explain the the assessment is based on overall performance in the Instructor Competencies – the SI will therefore not debrief each phase separately but the whole exercise on completion.
- Remind the TI that part of the assessment is the efficient use of time, both in briefing and the exercise itself

- Explain that the SI, whilst playing the role of student, should be treated as such and all aspects of his performance should be regarded in context. If it is considered that the student would benefit from a demonstration, the TI should give one.
- In the air exercise the TI should proceed with the student's training until a satisfactory standard is achieved or it is judged that the student will not benefit from continuing, or the SI asks him to move on. As with any training detail, the student's needs may preclude completion of the lesson plan.
- Should there be a fault with JoinFS, Merlin or FS at either end the TI is responsible for leading the process of resolving (e.g. common fault finding, attempting to contact the JoinFS server admin/BAV Technical Team etc). If the fault cannot be rectified the TI must decide whether to continue.
- Ask the TI if he has all the briefing aids required
- At the end of the briefing, ask the TI if he fully understands the briefing

TI:

- Session setup (JoinFS, vPilot, Discord etc)
- Brief SI for IFT Exercise 9 – Circuit Introduction

2.3.3.3 Conduct of the AoC

The AoC must be an assessment of the applicant's skills as an instructor, not as an examiner.

On initial AoCs, the examiner must take into account that a newly trained instructor's ability can reflect only unconsolidated skills which have been acquired during the instructor course and cannot, for obvious reasons, draw on expertise gained from instructional experience.

The applicant should demonstrate his ability to devise a lesson plan for the allocated exercises, and manage time efficiently with the intention of completing this lesson plan. However, the test should be based on a principle of quality rather than quantity, and kept as straightforward as possible.

Instructional exercises do not need to be complex or advanced. Basic exercises (e.g. turning, stalling, visual approach and landing etc) can reveal a great deal about instructional skills.

Student role play should be aeroplane-related rather than personality based. Errors made should be typical technical and non-technical student errors for the type and exercise (e.g. not trimming, inadequate knowledge of procedures etc.) and kept to a relatively small number. The student's performance should reflect the quality and content of the instruction given.

After the AoC has been completed, the examiner should complete the instructor test report and enter the details and completed form in to Moodle, retaining a copy for his own records.

Examiners should advise successful applicants to maintain a personal record of their instructor activity. This record will be required for the upgrade to FI(V) at the end of the Consolidation Phase.

2.3.3.4 Air Exercise

TI:

- Run briefed air exercise with SI as ‘dummy’ trainee

SI:

- Act as ‘dummy’ trainee
- Introduce ‘common errors’ as appropriate

2.3.3.5 Debrief

TI:

- Debrief SI on performance as a ‘trainee’

SI:

- Provide feedback on TI’s performance with respect to the Instructor Competencies
- Training Admin – entering reports
- Point toward the Consolidation Phase
- Complete associated admin (AoC report, VATSIM rating upgrade etc)

2.3.3.6 Instructor Competencies

Refer to OM-D Appendix G (Initial Instructor Training) for information on Instructor Competencies.

2.4 Consolidation Phase

2.4.1 Overview

The Consolidation Phase is a period where the newly-qualified Assistant Flying Instructor is 'released' to practice and develop their instructional skills in a 'live' environment with real trainees.

During this period the AFI will build the experience and competence required to pass the Flying Instructor (Virtual) AoC and obtain the full FI(V) rating.

2.4.2 Mentoring

In the Consolidation Phase the newly-qualified Assistant Flying Instructor is assigned a mentor, who will be a 'fully qualified' Flying Instructor (Virtual).

The mentor is expected to work with the candidate throughout the 'consolidation' phase in order to provide support, feedback and answer any questions the candidate may have as they build their instructional experience. The exact form the mentoring will take is not strictly prescribed but mentors and Student Instructors should come to an arrangement which best fits the needs of the Student Instructor. As a suggestion, this phase could (and almost certainly will) include a combination of 'remote' support via e-mail/forum PM, informal observations by the mentor of sessions conducted by the Student Instructor from time to time, observations by the Student Instructor of sessions conducted by the mentor, Discord chats and so on.

The mentor is not required or expected to formally record the results of any session observations, however it will likely be useful for the mentor to make use of the Instructor Competencies and the Examiner's Report Form for the FI(V) check as a framework for debriefing and measuring the student's progress.

2.4.3 Final Assessment of Competence

To progress to the final check, the student must:

- Have taught every lesson in the IFT syllabus at least once
- Have recorded a minimum of 25 hours of Flight Instruction time (requirement for issue of an FI(V) rating)
- Be recommended by their mentor

The final check will be conducted by a Senior Instructor in the form of a session observation with a 'live' student. If the candidate meets the required standard (see 2.1.7 Standard Required) they will be issued with the full **Flying Instructor (Virtual) (FI(V))** rating.

2.4.3.1 Conduct of the FI(V) AoC

The AoC must be an assessment of the candidate's skills as an instructor, not as an examiner.

The AoC is in the form of an observation of the candidate conducting a standard IFT training session by a nominated Senior Instructor. The candidate should conduct the session normally in every respect – for instance, if the student's needs preclude completion of the lesson plan then so be it. Likewise simulator/JoinFS technical faults should be dealt with by the candidate in the normal manner.

No role play is expected of the student who should simply act normally throughout.

After the AoC has been completed, the examiner should complete the instructor test report and enter the details and completed form in to Moodle, retaining a copy for his own records.

2.4.3.2 Examiner Briefing Prior to the FI(V) AoC

- Invite the candidate to ask questions during the briefing
- Purpose of the AoC
- Explain to the candidate that the assessment is based on overall performance in the Instructor Competencies – the examiner will therefore not debrief each phase separately but the whole exercise on completion.
- Remind the candidate that part of the assessment is the efficient use of time, both in briefing and the exercise itself
- Remind the candidate that the examiner's role is simply to observe and not to play an active part in the session in any respect
- At least one demonstration must be seen in order for this aspect of the Instructor Competencies to be assessed. The examiner will normally select an exercise to observe where a demonstration forms part of the standard lesson plan.
- Explain that all aspects of the session should be conducted normally as if the examiner were not present. If it is considered that the student would benefit from an additional demonstration, the candidate should give one.
- In the air exercise the candidate should proceed with the student's training until a satisfactory standard is achieved or it is judged that the student will not benefit from continuing. As with any training detail, the student's needs may preclude completion of the lesson plan.
- Should there be a fault with JoinFS, Merlin or FS at either end the candidaet is responsible for leading the process of resolving (e.g. common fault finding, attempting to contact the JoinFS server admin/BAV Technical Team etc). If the fault cannot be rectified the candidate must decide whether to continue.
- Ask the candidate if he has all the briefing aids required
- At the end of the briefing, ask the candidate if he fully understands the briefing

The examiner should also separately brief the student:

- Remind the student that no role-play is required or expected
- Remind the student to simply act normally and ignore the presence of the examiner

2.4.3.3 Debrief

The debrief should take the form of all other assessment of competence de-briefs. It should focus on the positives, avoid being chronological or nit-picking and highlight areas for development and improvement. Assessment of the whole session should be measured against the behavioural markers of the BAV Pilot Competencies making use of the language of the BAV Pilot Competency Observable Behaviours as an integral part of the de-brief and assessment criteria.

2.4.4 Instructor Competencies

Refer to OM-D Appendix G (Initial Instructor Training) for information on Instructor Competencies.

3 FE Training

3.1 Introduction

Examiners shall not conduct:

- Skill tests or assessments of competence of applicants for the issue of a licence, rating or certificate:
    - To whom they have provided more than 25% of the flight instruction for the licence, rating or certificate for which the skill test or assessment of competence is being taken; or
    - When they have been responsible for the recommendation for the skill test

- Skill tests, proficiency checks or assessments of competence whenever they feel that their objectivity may be affected. (Examples of a situation where the examiner should consider if his/her objectivity is affected are when the applicant is a relative or a friend of the examiner, or when they are linked by economic interests or political affiliations, etc.)

3.1.1 Pre-Entry Requirements

Applicants for a TRI(V)/FE(V) certificate shall:

- Hold the relevant VATSIM Pilot ratings
- Hold a BAVirtual Instructor rating
- For the initial issue of a TRI(V)/FE(V) certificate, have completed at least 25 hours of flight instruction in the applicable type (this requirement is not applicable for an Examiner extending their privileges to a new type)

3.2 Examiner Standardisation Course

3.2.1 Introduction

BAVirtual will strive to provide an outstanding course through appropriately qualified staff, suitable facilities and a relevant training syllabus. The Chief Tutor will be prepared to provide a practical demonstration of the course, as required, to the satisfaction of a Primary Operations Inspector or other representative of the VATSIM Pilot Training Department.

The course is a generic course for all fleets and must be attended by all suitably qualified Type Rating Instructors (Virtual) (TRI(V))/Flying Instructors (Virtual) (FI(V)) prior to the initial issue of an Examiner's Certificate.

Following successful completion of the Examiner Standardisation Course, the trainee examiner will practice conducting checks under the supervision of an experienced examiner and then complete an Examiner Assessment of Competence (EAoC) on a 'live' crew observed by a Senior Examiner. BAV require a minimum of 2 'observation' details prior to the EAoC which is conducted by a Senior Examiner (SE).

Prior to the initial issue of a TRI(V)/FE(V) Certificate candidates shall have logged at least at least 500 hours flight time on the VATSIM network including at least 500 BAVirtual hours, and 25 hours of flight instruction as a TRI(V) or FI(V) in the applicable type/class. Waivers may be granted by the Training Department to suitably qualified and experienced candidates if deemed necessary.

When an examiner adds or transfers to a different aircraft type/class he will qualify on that type/class as an examiner using the EAoC format. There is no need to complete a further Examiner Standardisation Course.

3.2.2 Objectives

The aim of the BAVirtual TRE(V) Standards Course is to provide candidates with the basic skills necessary to become an examiner. By the end of the course the candidate should be able to conduct a VATSIM Pilot Rating Examination and BAVirtual Proficiency Check, including the briefing, assessment and debriefing, to the standard required by the VATSIM PTD.

3.2.3 Training Methodology

TBC

3.2.4 Course Overview

TBC

3.2.5 Course Material

TBC

3.2.6 Assessment

TBC

3.2.7 FE(V) Standardisation Course Tutors

- John Pettit
- Simon Kelsey

3.3 Observations

Newly appointed FE(V)'s who will conduct Ratings Examinations, Proficiency Checks and Assessments of Competence on behalf of BAVirtual are required to complete 2 observations. These will be undertaken under the supervision of a qualified FE(V).

3.4 Examiner Assessment of Competence

The EAoC is conducted by a Senior Examiner. The trainee will conduct a Rating Examination in accordance with the VATSIM PTD standards and BAVirtual Training Manuals as approved by the VATSIM PTD on a 'Live Candidate'.

4 Appendix 1: Skill Test Schedule and Standard

4.1 Applicant's Notes

These notes are intended to give applicants a detailed account of the exercises that may, at the discretion of the Examiner, be required in each section. It is emphasised that during the skill test candidates should concern themselves only with flying and operating the aeroplane to the best of their ability. The application of the test standards are the responsibility of the Examiner.

4.2 Examiner's Notes

These guidance notes are published to establish the test standard required for a skill test. Any flight test can only be a brief 'snapshot' of a pilot's ability and therefore, to ensure overall pilot competence, instructors are expected to use these standards when preparing candidates for the test. The Examiner must apply the standards fairly, evenly and without prejudice. The flight, however, may be conducted in any sequence to achieve a complete and efficient test.

4.3 Section 1: Pre-Flight Preparation

(a) Pilot Qualifications and Aircraft Airworthiness

- Check all documents required for a VFR flight on the VATSIM network are correct
- Obtain and assess BAVirtual and VATSIM Network NOTAMs
- Check and confirm all aspects of aircraft serviceability and identify, assess and mitigate risks encompassing flying unfamiliar aeroplanes, operating with unfamiliar flight display systems and avionics, or failed/inoperative equipment

(b) Weather Information

- Obtain and assess all elements of the prevailing and forecast weather conditions
- Correlate given weather information to make a competent go/no go decision

(c) Cross Country Planning

- Complete an appropriate flight navigation log based on the prevailing weather conditions for the flight and taking in to account airspace, weather and sim-appropriate navigation landmarks. The use of electronic planning material is acceptable.
- The navigation log must include a calculation of ETAs for each turning point, ETEs between each turning point and total estimated enroute time.
- Calculate the minimum fuel requirement in accordance with Operations Manual requirements and ensure that the aeroplane is correctly fuelled for the flight. Electronic fuel planning is acceptable but the member must be able to show an understanding of the planning process and how any computer-generated data was arrived at.
- File a VATSIM VFR flight plan for the flight

(d) Operation of Systems

- Demonstrate an understanding of aeroplane systems to include primary and secondary flight controls, power plant, electrical system, avionics and flight instrument, the pitot-static system, vacuum system and associated flight instruments.
- The examiner will verify the candidate's knowledge of a minimum of three of the above systems orally during the test.

(e) Airspace, ATC and Communications

- Correctly identify airspace and operate in accordance with associated communication and equipment requirements
- Explain the requirements for basic VFR weather minimums and flying in particular classes of airspace
- Select appropriate VATSIM ATC position
- Maintain two-way R/T communication using correct phraseology throughout
- Obtain ATC clearances and appropriate level of service
- Comply with ATC clearances and instructions when required
- Display sound airmanship and cockpit management

4.4 Section 2: Preflight Procedures

(a) Engine Starting

- Complete all recommended engine starting and after starting procedures

(b) Taxiing

- Complete all recommended taxiing checks and procedures
- Comply with airport markings and signals
- Follow ATC instructions
- Complete all departure checks and drills including engine operation
- Obtain ATC departure clearance or announce on UNICOM as appropriate
- Confirm any aeroplane performance criteria including crosswind conditions

4.5 Section 3: Takeoffs, Landings and Go-Arounds

(a) Normal Takeoff and Climb

- Complete all recommended checks and procedures
- Follow ATC instructions and make radio calls as appropriate
- Verify the assigned/correct runway
- Verify wind direction and confirm within published limitations (e.g. crosswind)
- Use proper application of controls for the wind conditions
- Position the aeroplane correctly for take-off and advance the throttle to take-off power with appropriate checks
- Use the recommended takeoff technique, rotate at the recommended airspeed and accelerate to V_Y
- Establish a pitch attitude to maintain the manufacturer's recommended speed or V_Y +10/-5 kt to a safe manoeuvring altitude
- Configure the aeroplane in accordance with the recommended checks and procedures
- Maintain directional control and proper drift correction throughout the takeoff and climb
- Complete all necessary after takeoff checks

(b) Normal Approach and Landing

- Complete all recommended checks and procedures
- Follow ATC instructions and make radio calls as appropriate
- Ensure the aeroplane is aligned with the correct/assigned runway/landing surface
- Maintain adequate lookout and collision avoidance
- Maintain recommended approach airspeed or 1.3 x V_{SO}, +10/-5 knots with gust factor applied

- Maintain crosswind correction and directional control throughout the approach and landing
- Touch down at a proper pitch attitude, in the touchdown zone or first half of the runway (whichever is less), with no side drift and the aeroplane's longitudinal axis aligned with and over the runway centreline
- Maintain directional control and apply brakes as appropriate

(c) Go Around/Rejected Landing

- Execute a timely decision to discontinue the approach when instructed or as considered necessary
- Apply appropriate power and control aeroplane attitude to initiate a safe climb maintaining balance and heading
- Adjust configuration and speed to achieve a positive climb at V_X or V_Y as appropriate
- Maintain take off power until a safe manoeuvring altitude is reached and then adjust to a normal climb configuration and airspeed
- Complete all necessary checks and drills

(d) Circuit/Traffic Pattern

- Carry out appropriate checks and drills
- Set altimeters and cross check in accordance with checklist or as required
- Comply with published arrival procedure or clearance
- Correct for wind drift to maintain the proper ground track
- Maintain adequate lookout and collision avoidance

4.6 Section 4: Performance Manoeuvres

(a) Steep Turns

- Demonstrate by explaining verbally to the Examiner the correct lookout technique before, during and after turns
- Establish and maintain throughout the turn the nominated altitude/level and speed
- Co-ordinate the entry to steep turns to achieve at least 45° bank and maintain the turn through at least 360°
- Co-ordinate the recovery from turns to straight and level flight as directed by the Examiner without loss/gain of height
- Perform a second steep turn in the opposite direction upon completion of the first.

4.7 Section 5: Navigation

(a) Navigation Systems and Radar Services

- Use an airborne electronic navigation system, if installed
- Determine the aeroplane's position using GPS or radio navaids as installed
- Intercept and track a given course, radial or bearing as assigned by the examiner
- Recognise and describe the indication of station or waypoint passage if appropriate
- Recognise loss of signal or interference and take appropriate action is applicable
- Maintain the nominated altitude/level +/- 300ft and heading +/- 20°

4.8 Section 6: Slow Flight and Stalls

(a) Power-Off Stalls

- Consider safety checks (e.g. HASELL) before stalling
- Establish the stall entry as appropriate from straight or turning flight as directed and select the required aeroplane configuration
- Maintain heading (or bank angle 10°-30° as required) to stall entry
- Recognise the symptoms of the stall or approaching stall and initiate the correct recovery action as directed by the Examiner
- Recover with minimum height loss and return to a clean configuration at V_Y
- Complete all necessary checks and drills
- Maintain lookout throughout

4.9 Section 7: Postflight Procedures

(a) After Landing, Parking and Securing

- Complete all after landing checks and drills
- Return aeroplane to parking area and complete engine shutdown
- Secure aeroplane and complete documentation

4.10 Section 8: Abnormal and Emergency Procedures

(a) Loss of Communications

- Be able to explain procedures to follow int he event of lost communication on the VATSIM network during various phases of flight including techniques for re-establishing communications (e.g. climbing, trying a new controller/frequency etc)
- Identify and mitigate possible reasons for loss of communication