



# **Aviation ATAR course**

## **Practical (performance)**

### **examination requirements**

#### **2017**

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## Aviation ATAR course Practical (performance) examination

This document contains general advice to teachers, candidates and parents on the Aviation practical (performance) examination.

Students who are enrolled in a Year 12 ATAR course pair of units are required to sit both the practical and written ATAR course examination. There are no exemptions and if candidates fail to sit and do not have an approved sickness/misadventure claim then the grades for the course units will not contribute to any of the WACE requirements.

The practical (performance) examination for the Aviation ATAR course will be held during the period from **Saturday, 23 September** to **Sunday, 1 October 2017** (Saturday, Sunday and the public holiday included) at a metropolitan location. Candidates must be available to complete their practical (performance) examination during this time. A *Personalised practical examination timetable* (Appendix 1) for each candidate will be made available from **Friday, 8 September 2017** for schools/providers to download via SIRS and for students to download via the Authority's student portal. Non-school candidates will be notified directly by mail and are not reimbursed for any associated travel costs. Country candidates must take their practical (performance) examination at the Authority's designated examination centre.

For Aviation, the ATAR course examination weightings are:

- Written examination paper 80%
- Practical (performance) examination 20%

### 1. Reporting achievement

Teachers are responsible for ensuring the practical (performance) requirements are met and making sure candidates are adequately prepared for the practical (performance) examination. Teachers must ensure they are using the current syllabus. Any further advice on matters related to the syllabus or assessment will be published in the *11to12 Circular* which is available on the Authority website at

<http://www.scsa.wa.edu.au/publications/circular-ecircular>. Teachers should also refer to the ATAR course examination information published in Section 6 of the *WACE Manual 2017*, which is available on the Authority website at <http://www.scsa.wa.edu.au/publications/wace-manual>.

For all ATAR courses with a practical examination, for the pair of units, schools are required to submit to the Authority a:

- course mark out of 100 (weighted for each component)
- mark out of 100 for the written component
- mark out of 100 for the practical component
- grade for the completed pair of units.

### 2. Candidates with an injury, illness or disability

Candidates who have a permanent disability that could prevent them demonstrating their knowledge, understanding or skills in a standard practical examination may apply to be assessed under special examination arrangements. Candidates with a long-term injury or illness which existed prior to the beginning of Term 3 are to apply for special arrangements to be examined in an alternative format if the injury or illness will affect their participation in the standard practical examination. Application is made on the form available at all schools

and must be received at the Authority by **Friday, 28 July 2017**. These candidates will not be granted sickness/misadventure approval.

Additional application forms may be obtained on request or from the Authority website at <http://www.scsa.wa.edu.au/forms/forms>.

### **3. Provision for sickness/misadventure**

Consideration may be given to candidates (except non-school candidates) who believe their performance in a practical examination may have been affected by an unexpected sickness, or unforeseen event beyond their control, close to or during the examinations. Such candidates may apply for sickness/misadventure consideration. Application is made by the candidate by the prescribed date using the form available in schools or from the Authority website at <http://www.scsa.wa.edu.au/forms/forms>. Candidates with an injury or illness existing at the start of Term 3 are not entitled to apply for sickness/misadventure consideration on the basis of the existing injury or illness.

### **4. Principles of external assessment**

The marking process preserves the anonymity of candidates and their school. This requires that candidates are identified only by their SCSA student number.

Markers apply a consistent standard to assess the candidate's work. This requires:

- attendance at a marker training meeting prior to the commencement of marking
- trial marking of work to ensure a common understanding of the marking guide
- that each candidate's work is double marked to ensure the independence of individual markers
- that the chief marker ensures consistency throughout by monitoring the marking process and reconciling significant differences where necessary.

### **5. Examination procedure**

On the day of the practical (performance) examination, the candidate must bring their *Personalised practical examination timetable*. Candidates are required to sign this timetable and hand it to the supervisor when registering at the examination venue for the practical (performance) examination.

Candidates must ensure that nothing they carry or wear can identify either them, their school, club or achievements. If this does occur, candidates will be referred to the Breach of Examination Rules committee.

A candidate who has not reported to a supervisor once their scheduled examination time has commenced will not be admitted to the practical (performance) examination and the examination cannot be rescheduled. For Aviation, the scheduled examination time is the commencement of the preparation time.

### **6. Breach of examination rules**

An alleged breach of examination rules is referred to the Breach of Examination Rules committee. Further information related to breach of examination (malpractice) can be found at <http://www.scsa.wa.edu.au/publications/year-12-information>.

A breach of one of these rules can result in cancellation of a part or all of the practical raw examination mark.

## 7. Criteria for marking

The practical examination is based on a simulated flight of approximately 20 minutes duration. During the flight, candidates will be assessed on their ability to carry out a selection of flight manoeuvres listed in the practical section of the syllabus within the tolerances set out in *Standard operating procedures* (Appendix 2). At the start of the 15 minutes preparation time prior to the examination candidates will be given details of the sequences to be performed. Detailed instructions will be provided by one of the markers during the examination and the candidates will be expected to comply with these instructions.

Each flight manoeuvre comprises one or more elements from *Standard operating procedures*. For example, a 30° angle of bank turn at constant altitude and levelling out onto an assigned heading has three elements: the angle of bank, altitude maintenance and levelling out. One mark is assigned to each element that the candidate is able to demonstrate within the set tolerance. Where the element must be demonstrated for a period of time (e.g. angle of bank), the assessment is based on the candidate's performance being within the tolerance for the majority of the time period.

The chief marker sets the standards based strictly on the criteria set down in the practical (performance) examination marking key.

The weighting of marks is as follows:

- Take-off and climb 5%
- In-flight manoeuvres (turns, stall) 7%
- Use and interpretation of nav aids 3%
- Descent and landing 5%

## 8. Practical examination information

The candidate is required to simulate a flying sequence in a Cessna 172 aircraft using *Microsoft Flight Simulator FSX*, and a *Logitech Extreme 3D Pro* joystick. The sequence will comprise a series of non-aerobatic manoeuvres that can be legally accomplished in an actual Cessna 172 in the time allocated.

The candidate will be provided with a document setting out the required flight sequence 15 minutes before the examination is conducted.

The candidate will be assessed on their ability to complete the manoeuvres by complying with the marker's instructions. These will be given in a manner similar to that expected from a Flight Instructor who is instructing in a real aircraft.

If the candidate is unable to comply with any particular instruction, the marker will guide the candidate through the required action, but the candidate will not receive any marks for that part of the sequence.

If, due to inaccurate manipulation, the candidate loses control of the aircraft or the aircraft moves outside the limits of the 'exercise area', the marker will assume control and return the aircraft to its correct attitude within the intended pattern. The candidate will not receive any additional penalty specific to the marker's intervention.

## 9. Practical examination support materials

To support candidates in preparing for the examinations, *Standard operating procedures* indicate the elements of practical skills and knowledge that can be examined and the allowable tolerances for each flight manoeuvre.

## 10. Key dates

|                                |                                                                                                                                                                                                                                                                                    |
|--------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 28 July 2017                   | <ul style="list-style-type: none"><li>• Last date for completed application forms for alternative format ATAR course practical examinations</li><li>• Last date for upload into SIRS of withdrawal of enrolment from ATAR courses with a practical examination component</li></ul> |
| 8 September 2017               | <ul style="list-style-type: none"><li>• Personalised practical examination timetables can be downloaded by schools/providers from SIRS</li><li>• Students can access their personalised examination timetables via the Authority's student portal</li></ul>                        |
| 23 September to 1 October 2017 | Aviation practical (performance) examination                                                                                                                                                                                                                                       |

## Appendix 1: Personalised practical examination timetable



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|                                                                                                                                                          |
|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>2017 ATAR Course examinations</b><br><b>Personalised practical examination timetable</b><br>Practical (performance) examination in<br><b>Aviation</b> |
|----------------------------------------------------------------------------------------------------------------------------------------------------------|

SCSA student number:

|   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|
| 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
|---|---|---|---|---|---|---|---|

Candidate: Sample Candidate

School name: Sample School

School code: 4188

### Examination details

Course: Aviation

Date: Friday, 29 September 2017

Reporting time: 3:15PM

Examination time: 3:35PM

Venue: Sample Venue

Reporting Location: Reception

Refer to the map on the back

|                                                                        |
|------------------------------------------------------------------------|
| <b>These examination details are final and no changes can be made.</b> |
|------------------------------------------------------------------------|

Candidates who have not reported to a supervisor once their scheduled examination time has commenced will not be admitted to the practical (performance) examination and the examination cannot be rescheduled.

Candidates must not wear or carry anything that identifies either them, their school, club or achievements. If this does occur, candidates will be referred to the Breach of Examination Rules committee.

Candidates are required to sign this sheet prior to the examination. This signed timetable is shown to the supervisor when registering at the examination venue for the practical (performance) examination.

Candidates must leave the examination area once they complete the examination. Candidates must not have contact with candidates waiting to be examined, or teachers, or other parties who are seeking feedback from the examination. Failure to do so may result in a breach of examination rules.

Candidates must not contact the venue about the examination arrangements. Any queries must be directed to the School Curriculum and Standards Authority on 9273 6377.

Signature .....Date .....

**Emergency contact for candidates: Phone 9273 6377**

## Appendix 2: Standard operating procedures



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### Standard Operating Procedures (SOP) *Microsoft Flight Simulator FSX—Cessna 172*

#### 1. Flight simulator parameters

- Cessna 172
- Day
- Nil wind
- Auto rudder 'on'.

#### 2. Circuit procedures

##### Take-off (normal)

- Smoothly apply full power
- Maintain directional control (mains either side of centre line)
- Rotate at 55 kt ( $\pm 5$  kt)
- Climb out 75 kt ( $\pm 5$  kt)
- Maintain runway heading ( $\pm 5^\circ$ )
- Trim for the attitude.

##### Crosswind

- Turn onto a heading  $90^\circ$  ( $\pm 5^\circ$ ) of runway heading
- Turn should commence not below 500 AGL ( $\pm 50$  ft)
- Maintain 75 kt ( $\pm 5$  kt).

##### Downwind

- Power 2200 RPM
- Heading reciprocal ( $\pm 10^\circ$ ) of runway designator
- Height 1000 ft ( $\pm 100$  ft) AGL.

##### Base

- Reduce power—nominally 1500 RPM
- Maintain level attitude
- Flaps  $20^\circ$  (in the white arc)
- Adopt 65 kt ( $\pm 5$  kt)
- Trim for the attitude.

##### Final

- The aircraft will be positioned on the runway centre line not below 500 ft AGL in the pre-final configuration
- Full flap
- Reduce speed to 60 kt ( $\pm 5$  kt)
- Power as required
- Maintain tracking on runway extended centre line
- Trim for the attitude
- Power off on round-out

## Appendix 2: Standard operating procedures

- Land after the runway threshold
- Touch down with mains either side of centre line
- Maintain centre line whilst decelerating to a stop.

### 3. Flight manoeuvres

#### Cruise

- Adopt straight and level attitude (heading  $\pm 5^\circ$ , altitude  $\pm 100$  ft)
- Allow airspeed to increase to 100 kt
- Reduce power to 2400 RPM
- Trim as required.

#### Transition—cruise to climb

- Apply full power
- Raise the nose to anticipated climb attitude
- Climb at 75 kt ( $\pm 5$  kt)
- Maintain heading ( $\pm 5^\circ$ )
- Trim for the attitude.

#### Climbing turn

- Apply full power
- Roll to  $20^\circ$  angle of bank
- Maintain 75 kt
- Trim for the attitude.

#### Cruise descent

- Reduce power to 2000 RPM
- Lower the nose
- Recommended rate of descent not less than 500 ft/min
- Maintain heading ( $\pm 5^\circ$ )
- Trim for the attitude.

#### Glide descent

- Power off
- Maintain altitude
- Reduce speed to 70 kt.
- Lower the nose to maintain an airspeed of 70 kt ( $\pm 5$  kt)
- Maintain required heading ( $\pm 5$  kt).

#### Medium turns

- Power 2400 RPM
- Roll to  $30^\circ$  ( $\pm 5^\circ$ )
- Maintain  $30^\circ$  ( $\pm 5^\circ$ )
- Maintain altitude ( $\pm 100$  ft)
- Roll out of turn  $15^\circ$  before nominated/reference heading.
- New heading ( $\pm 5^\circ$  of nominated heading).

## Appendix 2: Standard operating procedures

### Steep turns (45°/60°)

- Power as required
- Roll to 45°/60° ( $\pm 5^\circ$ )
- Maintain 45°/60° ( $\pm 10^\circ$ )
- Maintain altitude ( $\pm 200$  ft)
- Roll out of turn 20°/30° before nominated/reference heading
- New heading ( $\pm 5^\circ$  of nominated heading).

### 4. Additional flight manoeuvres

#### Stall—Entry

- Select and maintain reference altitude
- Power off
- Maintain altitude (increase angle of attack) with full up elevator until stalled
- Maintain heading ( $\pm 10^\circ$ ).

#### Stall—Recovery

**Note:** Only when the aircraft is stalled will you no longer be able to maintain your height. The airspeed will be approximately 44 kt.

#### When you are no longer able to maintain height:

- Ease forward on the control (reduce the critical angle)—nose attitude should approximate that of the horizon
- Apply full power
- When airspeed has increased to 60 kt, regain lost height
- Maximum height loss 200 ft.

### 5. Navigation

- Interpret whether the aircraft is to the left, right or on a given VOR radial or LLZ
- Interpret whether the aircraft is above, below or on a glide path, PAPI or T-VASIS
- Using an ADF, determine the direction to turn to track to a station
- Using an ADF, home/track to an NDB/Locator
- Using an ADF, interpret when the aircraft is passing over the top of an NDB/Locator
- Using the DME indicator, determine the distance to a DME station.