

Assessing Student Performance

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Purpose

The purpose of this document is to describe how to assess the performance of ATC students in VACCSCA in simulator training, online training, and examinations (checkouts or CPTs).

Training Assessment Sheet

For each simulator training session, online training, checkout or CPT, the student's performance will be assessed by the mentor or examiner using a training assessment sheet. The assessment sheet includes a list of objectives and a comment area.

The completed assessment sheet is used both by the student to review his/her performance and by mentors and the Training Department to check the progress of the students.

Competencies / Objectives

The student's performance is assessed in relation to the following ATC competencies or objectives. These objectives correspond to the ATC competencies listed in Appendix A to the VATSIM Global Rating Policy.

- ensuring separation between aircraft
- controlling traffic by giving appropriate instructions
- issuing appropriate clearances
- managing traffic flow efficiently
- monitoring that issued instructions and clearances are followed
- coordinating when necessary
- using correct phraseology
- assigning SSR codes and applying SSR/PSR identification procedures
- complying with general rules and operating procedures
- complying with local rules, procedures and LoAs
- providing relevant weather information
- providing relevant traffic information
- prioritising tasks
- making correct system inputs
- demonstrating relevant aviation knowledge
- demonstrating relevant knowledge of local airspace/airports
- demonstrating relevant knowledge of airline call signs, aircraft types, aircraft performance and behaviour

Performance Indicators

The student's performance in relation to each objective is assessed using the following performance indicators.

- **Excellent** The student's performance is perfect or next to perfect. The objective is achieved without errors, or with very few minor errors.
- **Good** The student's performance is above the required standard, but there is room for improvement. The objective is achieved with minor errors.
- **Satisfactory** The student has achieved the standard that is required to pass a checkout / CPT. The objective is achieved with minor errors and exceptionally a major error.

- **Insufficient** The student has not reached the required standard and more training is required. The objective is not achieved, or is achieved with major errors.
- **Unacceptable** The student has not reached the required standard, and there is doubt if the student will be able to complete the training.
- **Not assessed** Performance in relation to this objective was not observed or not considered relevant and is therefore not assessed

Comments on assessing performance as 'Excellent' and 'Unacceptable'

When a student is assessed exceptionally high or exceptionally low, this can have a significant impact on the student. With an assessment as 'Excellent' he/she may become over confident, so the mentor/examiner needs to carefully evaluate the student's performance before assessing the performance as 'Excellent'.

The opposite is true for 'Unacceptable', which is an exceptionally low performance - there is a large risk that a student whose performance is assessed as 'Unacceptable' will become under confident and lose motivation. Do not assess the performance as 'Unacceptable' when the student makes a major mistake, unless the reason for the mistake is, for instance, that the student refuses to take in advice from the mentor. Whenever the performance is assessed as 'Unacceptable', the reason for it should be noted in the comment area on the assessment sheet, and the Training Department should be informed. The Training Department will then decide whether any corrective action is needed, such as assigning the student to a different mentor.

Comments on 'Not assessed'

An objective should be marked as 'Not assessed' whenever the student's performance in relation to an objective was not observed or not considered relevant. For example, if the training situation does not require the student to pass traffic information, it is not possible to assess the objective 'provide relevant traffic information', and if training on an AFIS position 'ensuring separation between aircraft' is not relevant.

Comment Area

The comment area on the assessment sheet is used by the mentor/examiner to write a summary of the training/examination. The summary should include areas where improvement is desired, and any assessment as 'Insufficient' or 'Unacceptable' should be explained here.

The comment area should never be left blank - always write at least a short summary of the training and how it went.

Final assessment of checkout/CPT - Pass/Fail

The examiner does the final assessment of a checkout or CPT to determine if a candidate has passed or failed the examination. A general guideline is that the candidate's performance should be assessed as Satisfactory or higher for all objectives in order to pass an examination. However, each case must be judged individually and the final decision always rests with the examiner. For example, an assessment as Insufficient in one objective may be weighed up by an assessment as Good or Excellent in other objectives.

Amplified training objectives

The following are amplified descriptions of what is included in each training objective, to be used by mentors and examiners for reference.

- **Ensuring separation between aircraft**

- in controlled airspace according to airspace class and type of flight, by issuing clearances and instructions that will ensure that the appropriate separation minima will not be infringed
- when providing a radar service, by applying vertical separation and by using vectors if necessary
- when providing non-radar control, by applying vertical separation or time based or DME based horizontal separation
- in the vicinity of aerodromes, by applying visual separation and geographic separation (i.e. VFR holding points etc.)
- taking into account wake turbulence categories when required
- on taxiways, by giving taxi instructions that will ensure that aircraft collisions are avoided
- *not applicable outside controlled airspace*
- *not applicable on aprons (= outside the manoeuvring area)*
- *not applicable at AFIS aerodromes*

- **Controlling traffic by giving appropriate instructions**

Suitable instructions should be given according to the traffic and weather conditions, e.g:

- start-up approval
- push-back approval
- taxi instructions
- take-off and landing clearances
- climb and descent instructions
- vertical speed instructions
- speed instructions
- holding instructions
- vectors
- approach clearances
- traffic circuit instructions
- go-around and missed approach instructions
- traffic avoidance instructions
- approving deviations due to weather avoidance
- *not applicable at AFIS aerodromes*

- **Issuing appropriate clearances**

- IFR clearance taking into account known traffic conditions, weather conditions and aerodrome conditions

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- VFR clearance to enter and leave TMA and CTR taking into account known traffic conditions, weather conditions and aerodrome conditions
 - issuing revised clearances for diverting aircraft
 - *not applicable at AFIS aerodromes (clearances will be relayed from an ATC unit)*
 - **Managing traffic flow efficiently**
 - aiming to achieve minimum overall delay (e.g. delaying 1 aircraft so 5 aircraft can avoid delay)
 - using conditional clearances when appropriate to maximise runway usage
 - aiming to achieve continuous climb/descent, by using vectors for separation if necessary
 - using speed restrictions or vectoring to establish and maintain an arrival sequence
 - using alternatives to holding when possible (speed restrictions, extra track miles, extended traffic circuits)
 - initiating holding when necessary
 - giving direct routes (shortcuts) when workload permits
 - accommodating pilot requests when workload permits
 - **Monitoring that issued instructions and clearances are followed**
 - continuously checking that aircraft are adhering to clearances and instructions, and give corrective instructions if required
 - **Coordinating when necessary**

Coordinating with other ATS units using verbal means or system coordination

 - when prescribed by local procedures or LoA
 - for all situations that are not covered by standard agreements in local procedures or LoA
 - if an aircraft under the control of another ATS unit strays into own area of responsibility
 - in the case of emergency traffic and diverting traffic, to ensure that all affected ATS units have all available information
 - avoiding unnecessary coordination
 - **Using correct phraseology**
 - in English, according to ICAO doc 4444, doc 9432 and local documentation
 - in local language, according to local documentation
 - checking for correct read-backs and correcting when necessary
 - avoiding "VATSIMisms"
 - **Assigning SSR codes and applying SSR/PSR identification procedures**
 - assigning SSR codes when required and observe that the correct code is set

- o verifying correct mode C indication (pilot reports altitude) before applying vertical separation based on mode C information

Before a radar service is provided to an aircraft, identifying the aircraft by

- o recognising an aircraft identification in a radar label, provided that code/call sign correlation is achieved successfully
- o recognising an assigned SSR code, which has been verified, in a radar label
- o observing compliance with the instruction to set a specific code
- o observing compliance with the instruction to "squawk ident"
- o correlating a position report with a radar position indication (PSR required)
- o correlating an observed radar position indication, which is within 1 NM from the departure runway, with an aircraft that is known to have just departed (PSR required)
- o correlating the movements of a particular radar position indication with movements reported by the pilot or instructed by ATC
- o informing the pilot that the aircraft has been identified by using appropriate phraseology

- **Complying with general rules and operating procedures**

Complying with general rules and operating procedures as described by ICAO (Annex 11 and doc 4444), VATSIM, VATEUD and VACCSCA including

- o provision of service appropriate to the class of airspace and type of flight
- o application of separation minima appropriate to the class of airspace and type of flight
- o flight level allocation (odd/even levels)
- o transfer of control and transfer of communications
- o TWR procedures
- o APP procedures
- o ACC procedures
- o AFIS procedures

- **Complying with local rules, procedures and LoAs**

Complying with local rules and procedures as described in local operating procedures (LOP), LoAs, AIP and NOTAM, e.g:

- o determination of runway in use
- o use of SID/STAR
- o use of other inbound/outbound clearances
- o use of standard flight levels (agreed levels) for arriving and departing traffic
- o use of standard taxi routes
- o restrictions in use of runways and taxiways
- o restrictions in use of approach procedures or departure procedures
- o application of increased separation when prescribed in LOP or LoA
- o coordination procedures according to LOP and LoA
- o transfer of control and transfer of communications according to LOP and LoA

- **Providing relevant weather information**

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- maintain and update ATIS where required
 - ensure that pilots are in receipt of the correct ATIS broadcast where required
 - ensure that all pilots are in receipt of the correct altimeter setting (QNH/QFE)
 - provide information to departing aircraft regarding wind, QNH (or QFE), temperature (to turbine engine aircraft), RVR (if applicable) and runway conditions (if applicable)
 - provide full MET REPORT (METAR) to arriving aircraft, including runway conditions if applicable
 - provide transition level to arriving aircraft, if not given by ATIS
 - provide wind information in connection with take-off, if there is a change in wind from the previous information received by the pilot
 - provide wind information in connection with landing
 - demonstrate a basic understanding of the weather information given, including METAR codes, significance of wind, significance of altimeter setting, significance of RVR and significance of runway conditions
- **Providing relevant traffic information**
 - provide traffic information appropriate to airspace class and type of flight
 - provide traffic information at AFIS aerodromes regarding traffic on the ground and in TIZ/TIA
 - provide information on unknown observed traffic
 - provide traffic information in case of loss of separation
 - provide traffic information if requested by a pilot
 - using the correct format to give traffic information
- **Prioritising tasks**

Prioritise

 - emergency traffic
 - find out what the problem is
 - provide information (e.g. on nearest suitable airport)
 - provide navigational assistance if required
 - coordinate with concerned ATS units
 - request additional information when time permits (e.g. persons and fuel on board)
 - do not forget other traffic
 - airborne aircraft over aircraft on the ground
 - landing aircraft over aircraft waiting to depart
 - IFR traffic over VFR traffic
 - "first come first serve"
 - coordination - avoid unnecessary delays to coordination
 - time-critical instructions, e.g. vector to establish on ILS compared to IFR clearance
 - use of "break break" to maintain control of the frequency

Prepare

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- o check the flight plan and aerodrome information to have departure information and/or clearance available when a departing aircraft makes its initial call
 - o check the details for incoming traffic before it enters the area of responsibility to know what to say when the aircraft calls in, e.g. what levels are available, is a shortcut available, can an inbound clearance or landing clearance be issued in the initial call
- **Making correct system inputs**
 - o set cleared flight level
 - o set correct entry and exit flight level
 - o amend requested flight level if required
 - o amend flight plan if required (route, aircraft type etc.)
 - o select correct SID, STAR and runway
 - o make inputs for direct routings (shortcuts)
 - o set assigned heading
 - o set assigned speed
 - o add appropriate scratchpad text
 - o clear information which is no longer relevant
 - o make sure that information in the label is correct and up-to-date before transferring aircraft to the next controller
 - o make other appropriate inputs depending on the system/setup in use
 - **Demonstrating relevant aviation knowledge**

Demonstrating a basic understanding of general aviation matters, procedures and systems, such as

 - o ILS
 - o VOR
 - o DME
 - o NDB
 - o RNAV
 - o GPS
 - o FMS
 - o primary and secondary radar (PSR and SSR)
 - o TCAS/ACAS
 - o GPWS
 - o charts
 - o instrument approach procedures including precision and non-precision approach
 - o visual approach
 - o SID/STAR
 - o ATS routes
 - o weather minima
 - o the relationship between TAS, IAS, GS, wind and Mach number
 - o the difference between track and heading
 - o magnetic variation
 - o the effect of wind in the take-off, cruise, approach and landing phase

- **Demonstrating relevant knowledge of local airspace/airports**

Demonstrating knowledge of

 - own area of responsibility
 - adjacent ATS area of responsibility
 - division of responsibility depending on online positions
 - airspace classes within own area of responsibility
 - horizontal and vertical airspace boundaries (CTR/TMA, TIZ/TIA, FIR/UIR, sector)
 - local airports, airport names and location indicators
 - available runways and runway designators
 - available taxiways and taxiway designators
 - the use of different terminals, aprons and parking stands
 - available instrument approach procedures
 - local navigation aids
 - local significant points (fixes)
 - local ATS routes (routing and designators)
 - local departure and arrival routes (SID/STAR or other standard routes used)
 - local VFR reporting points
 - local transition altitude
 - prominent restricted areas, danger areas, TRAs and TSAs in the area

- **Demonstrating relevant knowledge of airline call signs, aircraft types, aircraft performance and behaviour**

Demonstrating knowledge of

 - commonly used radiotelephony call signs and ICAO designators for aircraft operating agencies
 - names and ICAO type designators for commonly used aircraft types
 - wake turbulence category for commonly used aircraft types
 - number of engines and engine type (jet, turboprop or piston) for commonly used aircraft types
 - average cruise speeds and cruise levels for commonly used aircraft types
 - climb and descent performance of commonly used aircraft types
 - approach speeds for commonly used aircraft types
 - changes/limitations in performance or handling characteristics due to
 - engine failures
 - pressurisation failures
 - instrument failures
 - flap failures
 - landing gear failures