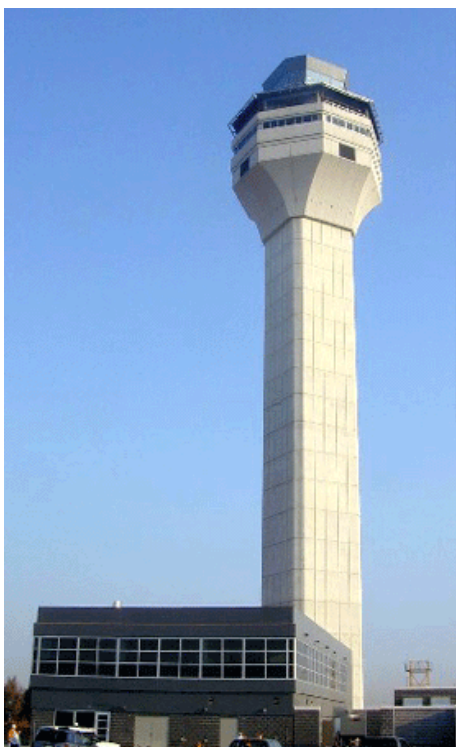




VATUSA Training

Controller Rating Guidelines Proposal



Prepared by the VATUSA Training Department

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Foreward

This document was designed as an expansion on the proposed changes to the VATUSA structure, organization and operations in compliance with the new VATUSA Controller Rating Standardization Policy, dated December 1, 2007.

This guide is in no way meant to reflect any official policy that has been approved or enacted by the VATUSA staff.

Introduction

With the recently established changes to its training program, the VATUSA Training Department has developed this document as a proposal for the Controller Rating Guidelines. These guidelines encompass a comprehensive set of *core competencies* in which each controller must show proficiency to qualify for the applicable rating level.

For purposes of application, the *core competencies* for each rating - Student (S1) through Controller (C1) are generally divided into Knowledge Areas and Practical Suites. The Knowledge Areas identify the primary elements on which a controller's proficiency may be evaluated via written examinations. It is envisioned that proficiency in the elements included in the Practical Suites will be measured through over-the-shoulder (OTS) evaluations.

Examples

In an effort to assist the understanding of this document, an example has been provided below of how to correctly read and understand the information provided.

Written/Practical Test Example

A. **Section 1 – The Meaning of Life**

- B. What does it mean?
 - C. Are you sure that's what it means?

1. Core Competency - This is the basic concept
2. Job Task - This is the individual job task within a competency. There may be several job tasks within one core competency.
3. Description - A description of any minimum criteria for proficiency and is provided for clarification

Symbols on the Practical Test Guidelines are slightly different however they mean the same thing.

Student (S1)
Required Knowledge
Areas of Concentration

****PROPOSED****

The following are proposed guidelines for the written test knowledge areas for the Student level test. These topics are proposed areas that the student should have knowledge in to pass the written test. Questions on the written test will be pulled from a bank of questions relating to each of these areas.

Section 1 – Introduction to the ATC System

- Duty Priority and Traffic Management
 - First Come, First Serve rule
 - Priority of service based on type of aircraft or flight
- Communications procedures
 - Basic radio phraseology
 - The phonetic alphabet and numbers
- Emergencies
 - Types of emergencies
 - Emergencies authorized for use on VATSIM
 - Controller's emergency acceptance criteria

Section 2 – The National Airspace System

- Types of airspace
 - Class A,B,C,D,E and general descriptions
 - Special Use/Restricted Airspace
- Navigation equipment
 - VOR's, NDB's, VORTAC's, GPS
 - Aircraft Equipment Prefixes and Suffixes
- Airways and Routes
 - High Altitude Airways
 - Low Altitude Airways
 - RNAV Routes
- Weather (basic principles and required minimums for airspace operation)
 - How to read weather products
 - Minimums for airspace operation

Section 3 – Tower Cab Operations

- Direction of flight and altitude assignment
 - VFR flight altitudes vs. IFR flight altitudes
 - RVSM altitudes and requirements
- VFR vs. IFR Operations
 - VFR Flight plan vs. IFR flight plan
 - VFR clearance vs. IFR clearance
- Ground movement areas and operations
 - Difference between movement and non-movement area
 - Following procedures and sequencing to runway
- Runway Procedures
 - Selection of operational runway(s)
 - Sequencing aircraft for departure and arrival
 - Taxi Into Position and Hold
 - Land and Hold Short
- The VFR Traffic Pattern
 - Segments of the pattern
 - Separation and Sequencing in the pattern
 - Clearance types in the pattern (direction of pattern and type of landing)
 - When the pattern is not authorized

It should be noted that not every description would be a question on the test. Each area with its description will have an available number of questions that the test can access but just like the FAA Written Tests, not every individual area will be tested.

Below are the guidelines for issuing a Student Practical Examination. The Areas of Concentration are broken down into Job Tasks with their own description. The student will have to pass each Job task satisfactorily to pass the Practical Examination.

I. General Control Procedures

A. Pre-Control Setup and Configuration

- i.** Configuration of sector file and appropriate overlays
- ii.** Setup and selection of proper communications frequencies
- iii.** Selection and Activation of ATIS Information (Voice for VRC)

B. Network Procedures

- i.** Uses appropriate call sign and credentials
- ii.** Selection of appropriate visibility range settings based on recommended settings for position

C. Position Relief Briefing

- i.** If relieving a previous controller, properly conducts the position relief briefing to receive all critical information for the current traffic situation
- ii.** If no previous controller is online, student will explain the procedure he/she would use

II. Flight Plan Procedures

A. Accessing Flight Strip Data

- i.** Properly accesses correct aircraft flight strip

B. Flight Plan Amendments

- i.** Consistently evaluates flight paths for accuracy and applicability
- ii.** Properly corrects flight plan errors using appropriate key commands or user interface
- iii.** Exhibits appropriate coordination procedures as needed

C. Preferred and Non-Standard Routing Procedures

- i.** In compliance with local procedures, attempts whenever possible to ensure the aircraft is on the correct preferred routing to its destination
- ii.** Provides preferred routing information for aircraft that do not have one filed
- iii.** Assists the pilot in identifying and providing the easiest departure for their aircraft capability

III. Clearance Delivery Procedures

A. VFR and IFR Clearance Procedures

- i.** Demonstrates knowledge of difference between VFR and IFR clearance
- ii.** Demonstrates knowledge of Class Bravo VFR clearances

B. Squawk Code Assignments

- i.** In compliance with local procedures, attempts whenever possible to assign aircraft a preferred facility squawk code appropriate for the aircraft's type of flight

C. Clearance Issuance

- i.** Issues clearance to aircraft in correct phraseology
- ii.** Ensures correct readback by aircraft before proceeding

IV. Ground Control Procedures

A. Movement and Non-Movement Areas

- i.** Demonstrates knowledge of difference between two areas
- ii.** Correctly identifies each area at the airport controlling

B. Taxi and Ground Movement Operations

- i.** Correctly sequences aircraft to runway
- ii.** Demonstrates appropriate use of valid progressive taxi instructions
- iii.** Demonstrates use of correct phraseology

C. Helicopter Taxi Operations

- i.** Understands difference between Air Taxi and Hover Taxi
- ii.** Keeps aircraft clear of helicopter taxi path

V. Local Control Procedures

A. Runway Selection

- i.** Selects appropriate runway based on current winds and local procedures
- ii.** In compliance with local procedures, the student shall attempt whenever possible to select as many runways possible to meet the current traffic volume

B. ATIS Issuance

- i.** The student will demonstrate the ability to correct record a valid ATIS broadcast
- ii.** The student will advise all aircraft on the ground or within Tower airspace of current ATIS and ATIS updates
- iii.** The student will ensure all departing aircraft have the current ATIS information if not specified by the previous controller or notated on the flight strip

C. Departure Procedures

- i. The student will demonstrate the ability to provide an aircraft with an appropriate departure release
- ii. The student shall, in compliance with local procedure, provide aircraft with the appropriate departure heading for their route of flight

D. Arrival Procedures

- i. The student will demonstrate knowledge of the different types of landing modes used by aircraft and the appropriate phraseology to use for landing clearances (landing, low approach, touch-and-go, etc.)

E. Spacing and Sequencing

- i. In compliance with local procedures and adhering to regulated priority, the student shall whenever possible, ensure that timing between arrivals and departures is appropriate to safely depart all awaiting aircraft and land all arriving aircraft as orderly and expeditiously as possible

F. Taxi Into Position and Hold (TIPH) and Land and Hold Short (LAHSO)

- i. The student shall at all times observe the regulations regarding each of these procedures as specified in FAA Order 7110.65R
- ii. Where applicable, the student shall demonstrate appropriate use of Taxi Into Position and Hold (TIPH) and Land and Hold Short (LAHSO)

G. VFR Traffic Pattern

- i. Understands and demonstrates knowledge of segments of the VFR Traffic Pattern
- ii. Correctly issues appropriate instructions to VFR Aircraft utilizing the pattern
- iii. Maintains proper sequencing and separation between all VFR Traffic in the pattern and all other arriving/departing traffic

H. Wake Turbulence Separation

- i. The student shall at all times remain in compliance of Wake Turbulence regulations as specified by FAA Order 7110.65R during ALL operations
- ii. The student will demonstrate phraseology when providing Wake Turbulence advisories to all affected aircraft

I. Converging or Parallel Runway Operations

- i. When applicable, the student will provide advisories for aircraft arriving on parallel or converging runways
- ii. If available the student will correctly use Land and Hold Short operations while operating with converging runways

J. Missed Approach Procedures

- i. Understands missed approach procedures and go around operations

VI. Emergency Procedures

A. Declaration of Emergencies

- i.** Understands all types of emergencies acceptable on VATSIM
- ii.** Understands and demonstrates knowledge of when an emergency has been declared
- iii.** Correctly identifies type of emergency when advised by aircraft

B. Providing Emergency Assistance

- i.** Demonstrates appropriate procedures in providing assistance to emergency aircraft
- ii.** Takes appropriate and concise action to handle the emergency while maintaining control of all other aircraft

VII. Human Factors

A. Professionalism

- i.** At all times while connected to the VATSIM network, the student will demonstrate a professional attitude towards the examining instructor and all members of the control team and staff

B. Appropriate Behavior

- i.** The student understands the expected behavior while controlling and while observing and demonstrates this behavior at all times

C. Courteous Attitude

- i.** The student shall at all times, regardless of situation or incident, maintain a courteous attitude towards all pilots and controllers

The sequence of the items is in no particular order. However, it is recommended that for continuity during the exam and for reference afterward, the order be followed progressively during the exam.

In addition, a number of items that have been deemed as critical to any phase of control are considered Critical Areas of Concentration. These Critical Areas are separate from the tasks above and must be complied with during all phases of the control period. Failure of any of these Critical Areas will result in failure of the examination.

I. Critical Areas of Concentration

I. Positive Situational Awareness

- i.** The student shall at all times be aware of the traffic situation in his/her airspace as well as all environmental conditions that may affect the control of aircraft

II. Clear, Understandable Communications

- i.** The student shall at all times communicate over the radio and interphone in a clear, concise manner. It is understood that the accent and tongue of individuals is hard to overcome so some leeway may be given as long as the instruction is understandable
- ii.** The student shall be capable of competent text communications with aircraft in a timely and efficient manner

Decision Making

- iii.** The student shall demonstrate clear, concise and definite decision making during the control period. Any decisions that could adversely affect the safety of the aircraft or the flow of traffic is considered undesirable decision making

III. Controller Coordination

- i.** The student shall at all times coordinate with the other members of the control team. This includes pointouts, non-automated handoffs and other aircraft requests that affect both controllers
- ii.** The student should not use a demanding attitude but rather a concise attitude with understanding that the other controller may not be able to accommodate a request or be able to coordinate immediately due to traffic load

IV. Compliance with Local Procedures

- i.** The student shall at all times be in direct compliance of all local facility standard operating procedures applicable to the airspace being controlled

V. Compliance with Inter/Intra-Facility Agreements

- i.** The student shall at all times be in direct compliance with all Letters of Agreement that have been established either inside the facility or between facilities

Senior Student (S3)
Required Knowledge
Areas of Concentration

****PROPOSED****

The following are proposed guidelines for the written test knowledge areas for the Senior Student level test. These topics are proposed areas that the student should have knowledge in to pass the written test. Questions on the written test will be pulled from a bank of questions relating to each of these areas.

Section 1 – General Knowledge

- Radar Systems and Characteristics
 - ARTS and STARS systems
 - Radar Phenomena on VATSIM such as misaligned track, incorrect speed
- Controller Positions and Responsibilities
 - Departure Controller
 - Approach Controller

Section 2 – General Radar Procedures

- Aircraft Separation Requirements
 - Vertical, Lateral and Longitudinal Separation
 - Separation based on altitude requirements
- Wake Turbulence Separation
 - Separation on an Instrument Approach
- Radar Additional Services
 - Traffic Advisories
 - Safety Alerts and Advisories

Section 3 – Standard Instrument Departures and Standard Terminal Arrivals

- Defining Standard Instrument Departure Procedures
 - Identifying key elements of a SID
 - Types of SIDs (Vector, RNAV)
- Defining Standard Terminal Arrival Routes
 - Types of STARs (Vector, RNAV)
- Reading Departure and Arrival Charts
 - Identifying the key elements on the chart
 - Understanding use during control of aircraft
- Departure and Arrival Phraseology
 - Clearance on a SID or STAR
 - Vectored vs. RNAV Phraseology

Section 4 – Instrument Approach Procedures

- Defining Non-Precision Approaches
 - Localizer, VOR, NDB, LDA, SDF, GPS, TACAN, ASR
 - Characteristics of a Non-Precision Approach
- Defining Precision Approaches
 - ILS, MLS, PAR, GPS with WAAS or EGNOS, GCA
 - Characteristics of a Precision Approach
- Reading Approach Charts
 - Identifying key elements of approach chart
 - Understanding use during control of aircraft
- Approach Clearance Phraseology
 - Vektored Approach Phraseology
 - RNAV Approach Phraseology

Section 5 – Radar Control Procedures

- Radar Identification and Termination
 - Tracking an Aircraft Datatag
 - Positive Radar Identification
- Holding Procedures
 - Identify key elements of the hold
 - Holding Phraseology

Section 6 – Uncontrolled Airport Operations

- Providing Service at Uncontrolled Airports
 - IFR Clearances and Void Times
 - When Controlled Airports become Uncontrolled
- Approaches to Uncontrolled Airports
 - Approach Clearance
 - IFR Cancellation or Downtime Clearance
 - Release to UNICOM Frequency

It should be noted that not every description will be a question on the test. Each area with its description will have an available number of questions that the test can access but just like the FAA Written Tests, not every individual area will be tested.

Below are the guidelines for issuing a Senior Student Practical Examination. The Areas of Concentration are broken down into Job Tasks with their own description. The student will have to pass each Job task satisfactorily to pass the Practical Examination.

I. General Control Procedures

A. Provide VFR Traffic Advisories

- i.** The student shall whenever possible provide traffic advisories to IFR aircraft of VFR aircraft in the vicinity of their flight path.

B. Provide Additional Services

- i.** Understands and Demonstrates knowledge of different types of additional service
- ii.** The student shall whenever possible provide additional services to aircraft requesting them

C. Provide Clearance to In-flight Aircraft

- i.** Understands and Demonstrates knowledge of in-flight clearances
- ii.** Provides for both VFR and IFR aircraft in-flight requesting a clearance

D. Uncontrolled Airport Operations

- i.** Demonstrates knowledge and understanding of Uncontrolled Airport Operations
- ii.** The student shall, in compliance with all local procedures, successfully issue instructions to aircraft arriving at Uncontrolled Airports to begin their approach or to contact UNICOM and report IFR Cancellation or Downtime
- iii.** The student shall, in compliance with all local procedures and based on current traffic volume provide service to aircraft on the ground at uncontrolled airports with departure services including but not limited to; clearance, ground movement, takeoff/landing clearance

II. General Radar Procedures

A. Ensure Separation Requirements

- i.** In compliance with local policies and inter/intra-facility agreements, the student shall at all times ensure that positive separation is maintained between aircraft with at least the minimum separation requirements established by FAA Order 7110.65R

B. Aircraft Vectoring

- i.** Understands knowledge of different types of vectoring
- ii.** Demonstrates ability to successfully vector an aircraft onto a pre-filed route or around traffic or weather
- iii.** Maintains positive separation with other traffic during the entire vector procedure

C. Wake Turbulence Separation

- i. Understands the principles of wake turbulence
- ii. Demonstrates ability to separate traffic from heavy class aircraft

D. Issuing Speed Control Instructions

- i. Determining appropriate speed for desired track
- ii. Demonstrates ability to adjust speed to maintain desired separation

III. Non-Radar Control Procedures

A. Timed Spacing and Separation

- i. The student shall demonstrate the ability to separate or space aircraft based on time crossing NAVAIDs or other points instead of distance

B. Non-Radar Holding Procedures

- i. Understands the principles of non-radar holding procedures
- ii. Using non-radar holding procedures successfully

IV. Radar Control Procedures

A. Radar Tracking an Aircraft

- i. Understands principle of radar tracking an aircraft target
- ii. Correctly establishes track using appropriate key commands

B. Radar Identifying an Aircraft

- i. Understands difference between Radar Track and Radar Identifying
- ii. Successfully radar identifies an aircraft with correct phraseology

C. Aircraft Vectoring Procedures

- i. The student shall, in compliance with all local procedures, vector the aircraft appropriately according to the filed standard departure
- ii. Understands basics of non-standard departure vectoring
- iii. In compliance with all local procedures, the student shall vector an aircraft to safely exit the departure area and to begin the en-route course with the most direct route
- iv. The student shall, in compliance with all local procedures, vector the aircraft based on the filed standard terminal arrival route and to have the aircraft arrive the approach area safely and efficiently
- v. Aircraft arriving other than on a standard terminal arrival route shall be vectored to join arriving traffic safely and expeditiously as to not congest the arrival corridor

D. Pointout Procedures

- i. Understands the principles of a pointout
- ii. The student shall successfully complete a pointout with another controller which includes positive identification of the aircraft by the affected sector

E. Satellite Airport Operations

- i.** The student shall, in compliance with local procedures and based on current traffic volume, provide service for all satellite airports located in his/her airspace.
- ii.** Services for satellite airports include but are not limited to; IFR/VFR clearance, Takeoff/Landing Clearance, Departure and Approach Vectoring

V. Approach Vectoring

A. Vectoring to Initial Approach Fix

- i.** Understands and Demonstrates knowledge of IAF for individual approach being used
- ii.** In compliance with local procedures, the student shall successfully vector the aircraft to the Initial Approach Fix or to a pre-determined point on the Approach which satisfies as the IAF to join the approach

B. Vectoring to Final Approach Course

- i.** The student shall, in compliance with local procedures, successfully vector an aircraft to join the final approach course of the approach specified by the aircraft

C. Precision Approach Procedures

- i.** Understands and Demonstrates knowledge of types of approaches that fall under precision category
- ii.** Identifies aircraft with a filed precision approach or arriving at an airport where the default type of approach is a precision approach
- iii.** The student shall, in compliance with all local procedures, successfully vector an aircraft to join their precision approach using standard vectoring techniques to pre-determined points on the approach
- iv.** The student shall provide a clearance for the approach using correct phraseology

D. Non-Precision Approach Procedures

- i.** Understands and Demonstrates knowledge of types of approaches that fall under non-precision category
- ii.** Identifies aircraft with a filed non-precision or arriving at an airport where the default type of approach is a precision approach
- iii.** The student shall, in compliance with all local procedures, successfully vector an aircraft to join their non-precision using standard vectoring techniques to pre-determined points on the approach
- iv.** The student shall provide a clearance for the approach using correct phraseology

E. Missed Approach Procedures

- i.** Understands and Demonstrates knowledge of missed approach procedure for an individual approach
- ii.** Is able to identify the missed approach procedure on the approach chart

- iii. Correctly issues a missed approach instruction to an aircraft declaring a missed approach using correct phraseology
- iv. Successfully vectors aircraft to attempt the approach again

VI. Emergency Procedures

A. Declaration of Emergencies

- i. Understands and demonstrates knowledge of when an emergency has been declared
- ii. Takes appropriate and concise action to handle the emergency while maintaining control of all other aircraft

B. Providing Emergency Assistance

- i. In compliance with local procedures and based on current traffic volume, the student will make every effort to assist the pilot as necessary to ensure a safe outcome

C. Understanding Emergency Effects on Traffic

- i. Demonstrates understanding of potential effects of the emergency on other traffic in the airspace
- ii. Correctly vectors as necessary, all other traffic to provide expeditious handling of the aircraft in distress

VII. Human Factors

A. Professionalism

- i. At all times while connected to the VATSIM network, the student will demonstrate a professional attitude towards the examining instructor and all members of the control team and staff

B. Appropriate Behavior

- i. The student understands the expected behavior while controlling and while observing and demonstrates this behavior at all times

C. Courteous Attitude

- i. The student shall at all times, regardless of situation or incident, maintain a courteous attitude towards all pilots and controllers

D. Understanding Pilots

- i. The student should demonstrate understanding for pilots with less advanced knowledge and skill and should treat them accordingly by not giving them confusing instructions or speaking too quickly

- ii.** The student should not become aggravated by a pilot who does not follow the instruction given correctly. Instead the student should work with the pilot to provide a successful outcome to the situation

The sequence of the items is in no particular order. However, it is recommended that for continuity during the exam and for reference afterward, the order be followed progressively during the exam.

Controller Level (C1)
Knowledge Areas
Areas of Concentration

****PROPOSED****

The following are proposed guidelines for the written test knowledge areas for the Controller level test. These topics are proposed areas that the student should have knowledge in to pass the written test. Questions on the written test will be pulled from a bank of questions relating to each of these areas.

Section 1 – General Knowledge

- Military Aircraft Operations
 - Callsigns and Aircraft
 - Military Operations Areas
 - VR and IR Military Training Routes
 - Mid-Air Refueling Routes and Procedures
- Additional Services
 - Types of additional services
 - Providing VFR aircraft additional services

Section 2 – En-Route Radar Procedures

- En-route Vectoring
 - Vectoring to maintain established spacing between aircraft on the same route
 - Compliance with Inter-Facility Letter of Agreements
 - Coordination with other Center controller on desired spacing for same route or same destination aircraft
- Radar Handoff and Pointout Procedures
 - Pointout to other Center Sectors
 - Datatag Transfer to other Center Sectors
 - Radio Handoff Procedures to other Center Sectors
- IFR Cancellation
 - Receipt of IFR cancellation Request
 - Ensure no other traffic are immediately affected
- TCAS Advisories and Resolutions
 - Understanding TCAS Operation
 - TCAS Resolution Advisories and Deviations
 - Control Procedures for TCAS Resolution Advisories
- VFR On Top
 - Regulations pertaining to VFR On Top Procedures
 - Determining availability of VFR On Top in requested area
- Descent Profile Procedures
 - Understanding formula for descent profile
 - Descending based on standard arrival routing

Section 3 – Aircraft Separation En-Route

- Aircraft Separation Requirements
 - Based on altitude and equipment capability
- Different types of Traffic Separation and Rules
 - Converging Routes
 - Opposite Direction Traffic
 - Overtaking Traffic
 - Right of Way Rules
- Separation from Airspace
 - Special Use Airspace separation
 - Separation in an active Military Operations Area
 - Vectoring around prohibited airspace

Section 4 – En-Route Emergency Procedures

- Communications Emergencies
 - Loss of Communication or Intermittent Communication
- Equipment Failures
 - Types of equipment failures
 - Procedures for equipment failures
- In-flight Emergencies
 - Types of in-flight emergencies
 - Coordinating with other Center sectors for handoff or pointout

It should be noted that not every description will be a question on the test. Each area with its description will have an available number of questions that the test can access but just like the FAA Written Tests, not every individual area will be tested.

Below are the guidelines for issuing a Controller Level Practical Examination. The Areas of Concentration are broken down into Job Tasks with their own description. The student will have to pass each Job task satisfactorily to pass the Practical Examination.

I. General Control Procedures

A. Special Flight Operations

- i.** Understands knowledge of types of special flight operations

B. Weather Procedures

- i.** Demonstrates knowledge of weather effects on aircraft routing
- ii.** The student shall, in compliance with all local procedures, successfully accommodate aircraft deviations around weather

C. VFR On Top

- i.** Demonstrates knowledge and understanding of VFR On Top Procedures
- ii.** The student shall, in compliance with all local procedures, identify the availability and properly issue using correct phraseology a VFR On Top clearance to the requesting aircraft

II. En-Route Radar Operations

A. Service to VFR Aircraft

- i.** The student shall, in compliance with local procedures and based on current traffic volume, provide service to VFR aircraft including but not limited to; VFR flight following, traffic advisories, lost procedures
- ii.** Aircraft under VFR Flight Following will also be alerted of any conflicting IFR traffic

B. Request for Altitude Change

- i.** Demonstrates knowledge and understanding of altitude change requests
- ii.** The student shall, in compliance with local procedures, determine the availability and honor or decline the request for altitude change if requested by the pilot
- iii.** If the altitude change is required, student will inform the aircraft and ask for acceptance or alternative altitude that is acceptable

C. Successive Arrivals and Departures

- i.** Recognizes aircraft that are arriving or departing on the same route and/or at the same altitude
- ii.** The student shall, in compliance with all local procedures and inter/intra-facility agreements, separate the aircraft to approved separation minimums

D. Approach Control Saturation

- i.** Demonstrates understanding of Approach saturation
- ii.** The student shall, in compliance with all local procedures and after coordinating with Approach Control, determine the necessary action in order to relieve Approach Control airspace without creating further congestion in the students own airspace

E. Loss of Radar Contact

- i.** Recognizes Radar Contact loss
- ii.** Takes appropriate action to determine aircraft existence on network or total aircraft loss
- iii.** Prepares for mid-flight aircraft reconnect and takes appropriate pre-emptive action to prevent a mid-air conflict

F. Clearance to Alternate

- i.** Determines most direct and available route from aircraft's present position to filed alternate airport
- ii.** Provides aircraft correct clearance instruction using proper phraseology
- iii.** Does not execute the alternate deviation until successful readback of the amended clearance is received

G. Route Change in Flight

- i.** If requested by the pilot, the student will determine the availability of the requested route. If route is not available, the student will provide an alternative route
- ii.** If route change is required, the student will, in compliance with all local procedures, coordinate with the pilot for acceptance of the amended route
- iii.** The student will provide a correct amendment issuance to the pilot and not execute the amended route in control until the aircraft has successfully read back the amended route

H. Pilot Deviations

- i.** Demonstrates reasons for pilot requested deviations
- ii.** Coordinates with pilots requesting deviations and provides as available and/or necessary

I. Cancellation of IFR

- i.** The student shall, in compliance with all local procedures, determine if the aircraft request affects any traffic in the vicinity
- ii.** The student will follow normal IFR cancellation procedures

III. Coordination With Other Controllers

A. Request Control from Adjacent Sector

- i.** The student shall, in compliance with all local procedures and inter/intra-facility agreements, coordinate with adjacent sector controllers for aircraft control if necessary

B. Release Control to Adjacent Sector

- i.** The student shall, in compliance with all local procedures and inter/intra-facility agreements, coordinate with adjacent sector controllers for release of aircraft control if necessary

C. Handoffs and Pointouts with Other Centers

- i.** Demonstrates knowledge and determines need of pointout to other Center sectors
- ii.** Coordinates with other Center controllers for handoffs and pointouts

D. Refusal of Handoff or Pointout

- i.** The student shall, in compliance with all local procedures and intra/inter-facility agreements, coordinate with the sector the handoff or pointout was refused from or refused to

IV. Application of Separation Rules

A. Crossing, Converging, and Opposite Direction Traffic

- i.** Demonstrates knowledge and understanding of traffic situation
- ii.** Identifies crossing, converging or opposite direction traffic situation
- iii.** The student shall, in compliance with all local procedure, take appropriate action to vector the aircraft to avoid a mid-air conflict

B. Overtaking Aircraft

- i.** Demonstrates knowledge and understanding of overtaking aircraft operations
- ii.** The student shall advise both aircraft of the situation and monitor until possible conflict is clear

C. Right of Way Rules

- i.** Demonstrates knowledge and understanding of right of way rules
- ii.** Enforces rules with aircraft that may come into possible conflict

D. Separation From Airspace

- i.** The student shall, in compliance with all local procedures and all intra/inter-facility agreements, separate all aircraft from airspace that has been determined to be prohibited for flight by aircraft

V. Emergency Procedures

A. Loss of Communication

- i.** Identifies positive communication loss with aircraft
- ii.** Takes appropriate measures to re-establish communication with aircraft using both voice and text protocols
- iii.** Plans vectors for traffic around the affected aircraft as to not create any possible conflicts with aircraft that is out of contact
- iv.** Takes appropriate action per VATSIM policy

B. In-flight Emergencies

- i.** Understands different types of emergencies
- ii.** Demonstrates knowledge of accepted emergencies in VATSIM
- iii.** Takes appropriate action to coordinate with pilot and traffic in the vicinity of the aircraft in distress to provide a safe outcome to the situation

C. Equipment Malfunctions

- i.** Understands different type of equipment malfunctions
- ii.** Demonstrates knowledge of equipment malfunction procedures and appropriate action
- iii.** Coordinates with pilots to continue to provide assistance

D. Loss of Mode C or Transponder Failure

- i. Demonstrates knowledge of difference between Mode C failure and Transponder Unit failure
- ii. Coordinates with pilot to continue to provide assistance during Mode C or transponder failure

E. Unexpected Aircraft Performance

- i. Coordinates with pilot to determine performance issue and re-plans aircraft profile as necessary to maintain proper separation with traffic

VI. Human Factors

A. Professionalism

- i. At all times while connected to the VATSIM network, the student will demonstrate a professional attitude towards the examining instructor and all members of the control team and staff

B. Appropriate Behavior

- i. The student understands the expected behavior while controlling and while observing and demonstrates this behavior at all times

C. Courteous Attitude

- i. The student shall at all times, regardless of situation or incident, maintain a courteous attitude towards all pilots and controllers

D. Understanding Pilots

- i. The student should not become aggravated by a pilot who does not follow the instruction given correctly. Instead the student should work with the pilot to provide a successful outcome to the situation

E. Providing New Pilot Help

- i. The student shall, based on current traffic volume, provide assistance to new pilots who are confused with operation on the network or operation of their aircraft to perform the required maneuver as instructed by ATC

The sequence of the items is in no particular order. However, it is recommended that for continuity during the exam and for reference afterward, the order be followed progressively during the exam.

Appendix 1

Example Forms for Practical Test Evaluation

To assist ARTCC Training Staff in ensuring that all criteria are met and to provide the staff with an easy evaluation sheet, VATUSA Training has developed this form to be used for all practical examinations.

Figure 1. VATUSA Form 1400.1 Student Level Practical Exam Evaluation

VATUSA TRAINING DEPARTMENT PRACTICAL EXAM EVALUATION FORM STUDENT LEVEL CONTROLLER										
1. Name		2. Date		3. Position Manned						
4. Weather <input type="checkbox"/> VFR <input type="checkbox"/> MVFR <input type="checkbox"/> IFR <input type="checkbox"/> Other _____		5. Workload <input type="checkbox"/> Light <input type="checkbox"/> Moderate <input type="checkbox"/> Heavy		6. Complexity <input type="checkbox"/> Not Difficult <input type="checkbox"/> Occasionally Difficult <input type="checkbox"/> Mostly Difficult <input type="checkbox"/> Very Difficult		7. Total Hours As Controller <hr/> 8. Total Hours This Position				
9. Purpose <input type="checkbox"/> Certification <input type="checkbox"/> Re-check <input type="checkbox"/> Evaluation					10. Facility Conducted At					
Performance	Area of Concentration	Job Task		Observed	Comment	Satisfactory	Needs Improvement	Unsatisfactory	Simulation Evaluation	
	Pre-Control Setup and Configuration	1. Radar Program Configuration								
		2. Network Procedures								
		3. Position Relief Briefing								
	Flight Plan Procedures	4. Accessing Flight Strip Data								
		5. Flight Plan Amendments								
		6. Follow Preferred Routing Procedures								
		7. Non-Standard Routing Procedures								
	Clearance Delivery Procedures	8. VFR and IFR Clearance Procedures								
		9. Squawk Code Assignments								
		10. Clearance Issuance								
	Ground Control Procedures	11. Movement and Non-Movement Areas								
		12. Taxi and Ground Movement Ops								
		13. Helicopter Taxi Operations								
	Local Control Procedures	14. Runway Selection								
		15. ATIS Issuance								
		16. Spacing and Sequencing								
		17. TIPH and LAHSO Operations								
		18. VFR Traffic Pattern								
		19. Wake Turbulence Separation								
		20. Converging or Parallel Runway Ops								
21. Missed Approach Procedures										

12. Comments	12A. References
Signature: _____ Date: _____	
13. Recommendation <input type="checkbox"/> Certification <input type="checkbox"/> Continuation of Exam <input type="checkbox"/> Suspension of Exam	
14. Controller Comments: This report has been discussed with me (Signature) _____ Date: _____	
15. Certification I certify that this controller meets the qualification requirements and is capable of working the position certified above Signature of Examining Instructor: _____ Date: _____	

**VATUSA TRAINING DEPARTMENT
PRACTICAL TEST EVALUATION FORM
SENIOR STUDENT LEVEL CONTROLLER**

1. Name Enter name here		2. Date Enter date here	3. Position Manned Enter position here	
4. Weather <input type="checkbox"/> VFR <input type="checkbox"/> MVFR <input type="checkbox"/> IFR <input type="checkbox"/> Other _____	5. Workload <input type="checkbox"/> Light <input type="checkbox"/> Moderate <input type="checkbox"/> Heavy	6. Complexity <input type="checkbox"/> Not Difficult <input type="checkbox"/> Occasionally Difficult <input type="checkbox"/> Mostly Difficult <input type="checkbox"/> Very Difficult		7. Total Hours As Controller Enter total position hours here
				8. Total Hours This Position Enter total hours here
9. Purpose <input type="checkbox"/> Certification <input type="checkbox"/> Re-check <input type="checkbox"/> Evaluation			10. Facility Conducted At Enter facility name here	

Performance	Area of Concentration	Job Task	Observed	Comment	Satisfactory	Needs Improvement	Unsatisfactory	Simulation Evaluation
	General Control Procedures	1. Provide VFR Traffic Advisories						
2. Provide Additional Services								
3. Provide Clearance to In-Flight Aircraft								
4. Uncontrolled Airport Operations								
General Radar Procedures	5. Ensure Separation Requirements							
	6. Aircraft Vectoring							
	7. Wake Turbulence Separation							
	8. Speed Control Instructions Issuance							
Non-Radar Control Procedures	9. Timed Separation and Separation							
	10. Non-Radar Holding Procedures							
Radar Control Procedures	11. Radar Tracking an Aircraft							
	12. Radar Identifying an Aircraft							
	13. Aircraft Vectoring Procedures							
	14. Pointout Procedures							
	15. Satellite Airport Operations							
Approach Vectoring	16. Vectoring to Initial Approach Fix							
	17. Vectoring to Final Approach Course							
	18. Precision Approach Procedures							
	19. Non-Precision Approach Procedures							
Emergency Procedures	20. Missed Approach Procedures							
	21. Declaration of Emergencies							
	22. Providing Emergency Assistance							
Human Factors	23. Emergency Effects on Traffic							
	24. Professionalism							
	25. Appropriate Behavior							
	26. Courteous Attitude							
	27. Understanding Pilots							

**VATUSA TRAINING DEPARTMENT
PRACTICAL TEST EVALUATION FORM
LEVEL 1 CONTROLLER**

1. Name Enter name here	2. Date Enter date here	3. Position Manned Enter position here
4. Weather <input type="checkbox"/> VFR <input type="checkbox"/> MVFR <input type="checkbox"/> IFR <input type="checkbox"/> Other _____	5. Workload <input type="checkbox"/> Light <input type="checkbox"/> Moderate <input type="checkbox"/> Heavy	6. Complexity <input type="checkbox"/> Not Difficult <input type="checkbox"/> Occasionally Difficult <input type="checkbox"/> Mostly Difficult <input type="checkbox"/> Very Difficult
7. Total Hours As Controller Enter total position hours here		8. Total Hours This Position Enter total hours here
9. Purpose <input type="checkbox"/> Certification <input type="checkbox"/> Re-check <input type="checkbox"/> Evaluation		10. Facility Conducted At Enter facility name here

Performance	Area of Concentration	Job Task	Observed	Comment	Satisfactory	Needs Improvement	Unsatisfactory	Simulation Evaluation
		General Control Procedures	1. Special Flight Operations					
	2. Weather Procedures							
	3. VFR On Top							
	En-Route Radar Operations	4. Service to VFR Aircraft						
		5. Request for Altitude Change						
		6. Successive Arrivals and Departures						
		7. Approach Control Saturation						
		8. Loss of Radar Contact						
		9. Clearance to Alternate						
		10. Route Change in Flight						
		11. Pilot Deviations						
		12. Cancellation of IFR						
		Coordination with Other Controllers	13. Request Control from Adjacent Sector					
	14. Release Control to Adjacent Sector							
	15. Handoffs/Pointouts with Other Center							
	16. Refusal of Handoff/Pointout							
	Application of Separation Rules	17. Types of Traffic Situations						
		18. Overtaking Aircraft						
		19. Right of Way Rules						
		20. Separation from Airspace						
	Emergency Procedures	21. Loss of Communication						
		22. In-Flight Emergencies						
		23. Equipment Malfunctions						
		24. Loss of Mode C or Transponder						
		25. Unexpected Aircraft Performance						
	Human Factors	25. Professionalism						
		26. Appropriate Behavior						
		27. Courteous Attitude						
		28. Understanding Pilots						
		29. Providing New Pilot Help						

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