VATSIM San Juan CERAP – Developing Controller (S1) Training Syllabus

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Document Information

Purpose

This document provides an outline of the Developing Controller (S1) training course at VATSIM San Juan CERAP and to be used as a guideline for both controllers and their mentors. Download this document and save locally for easy access to information. This information will also be discussed within the introduction module of the course.

Distribution

The San Juan CERAP Developing Controller (S1) Training Syllabus is distributed to all members in training for the Developing Controller rating (S1) at VATSIM San Juan CERAP.

Responsibility

The San Juan CERAP Air Traffic Manager (ATM) and Training Administrator (TA) are responsible for the maintenance of this document. Prior to public release this document requires the approval of the VATSIM Caribbean Division (VATCAR) Training Director.

Updates and changes

This version is the initial release of this document. Any updates to this document are noted in the Table of Revisions section of this document.

Cancellation

This document cancels any previous release version of Developing Controller (S1) training syllabus at the San Juan CERAP.

Table of Revisions

Date (mm/dd/yyyy)	Revision	Editor
04/01/2025	v1.0 - Initial Release	Alfred Tang

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Preface

Welcome to the VATSIM San Juan CERAP S1 Course!

The San Juan CERAP (Consolidated En-Route Approach Control) (ZSU) is part of the Caribbean Division of the VATSIM network, known as VATCAR. We are pleased you have chosen to join our team of controllers.

The following document is designed to provide you with an overview and details of the training course for Developing Controller (S1) at ZSU. The course is designed in compliance with the VATSIM Global Controller Administration Policy (VATSIM-POL-GCAP) (also known as GCAP) and VATCAR Training Policies with additional materials to supplement controller learning. This syllabus provides students, mentors and instructors a guideline and flow to plan for each lesson and learning outcomes to accomplish.

We are here to ensure you succeed in your goal of becoming a VATSIM controller and look forward to working with you.

Francis Reilly
Air Traffic Manager – San Juan CERAP

Alfred Tang
Training Administrator – San Juan CERAP

General Course Information

Course Description

This course provides new ZSU controllers the necessary theoretical and practical knowledge to perform tasks independently as a Clearance Delivery Controller and a Ground Controller within the San Juan CERAP airspace on VATSIM.

Learning Outcomes

The learning outcomes of this course should be the competencies outlined in the VATSIM GCAP for Developing Controller (S1):

a. General

i. Demonstrates an understanding of the Clearance Delivery and Ground Controller positions.
ii. Uses prescribed phraseology with allowable local variances.
iii. Shows an understanding of flight strips (if used) and radar data blocks.
iv. Demonstrates situational awareness and basic scan techniques.
v. Demonstrates an understanding of weather conditions.
vi. Demonstrates ability to read METARs and TAFs
vii. Demonstrates an understanding of different Airspace Classes.
viii. Demonstrates an understanding of the role of each Air Traffic Control position plays in the Air Traffic System.
ix. Ability to connect to the network and configure the controlling and audio client to work Clearance Delivery and Ground positions.

b. Clearance Delivery Concepts

i. Defines all parts of a clearance (CRAFT)
ii. Demonstrates a basic understanding of:
- Altimetry
- Navigation and Equipment Codes
- Types of Navigational Aids

iii. Ability to issue a clearance correctly
iv. Ability to edit flight plans and issue reroutes to pilots.

c. Ground Control Concepts

i. Define and give examples of movement and non-movement areas.
ii. Ensure aircraft have proper weather information.
iii. Issue ground movement instructions efficiently and correctly
iv. Sequence aircraft on the ground for efficient departure flow.
v. Correctly transfer aircraft to Local (Tower) Control.

d. Coordination

i. Coordination with tower for crossing active runways.
ii. Coordination with other controllers for pushback sequencing.
iii. Coordination with other parties as necessary

Course Design

Lessons

Lessons for this course are divided into self-learning and trainer-led. Students are expected to complete the video lectures or Computer Based Training (CBT) on their own for the self-learning portion of the course but are strongly encouraged to ask questions to their assigned mentor or instructor ("assigned trainer" hereafter) of VATSIM San Juan CERAP.

Note:

1. *UND ATCast is a free educational video series produced by the John D. Odegard School of Aerospace Sciences at The University of North Dakota, available through their website (Link). The videos are also available through YouTube in the links listed.*
2. *UND ATC Strip Marking Tutorial is a free educational video series produced by the John D. Odegard School of Aerospace Sciences at The University of North Dakota, available through their website (Link).*
3. *In any part of this training, students are welcome to accelerate or skip ahead as needed if he/she possess past experience and knowledge in a particular topic from the real world or other simulation networks.*
4. *Suggested maximum length of each trainer-led session is two hours. Mentor-led lessons can be combined into one lesson at the discretion of the assigned trainer provided that good progress are made.*
5. *Modules in trainer-led sessions are to be repeated until the assigned trainer deems the student to have possession of adequate proficiency prior to moving on to the next module.*

Lesson	Self-learning or mentor-led	Module # and title	Lesson Content or Lesson Plan
[redacted]	Self-learning	101 – Introduction to the Air Traffic Control System	CBT Presentation UND ATCast: 18 - Introduction to the Air Traffic Control System Part 1 (Link), Part 2 (Link), Part 3 (Link)
	Self-learning	102 – Aviation Weather	CBT Presentation Weather BASICS explained by Free Pilot Training on YouTube
	Self-learning	103 – ATIS, METAR & TAF	CBT Presentation UND ATCast: 10 – ATIS (Link) Breaking the WEATHER CODE! by Free Pilot Training on YouTube
	Self-learning	104 – National Airspace System	CBT Presentation Types of Airspace by Free Pilot Training on YouTube Class B Airspace by Free Pilot Training on YouTube Class C Airspace by Free Pilot Training on YouTube Class D Airspace by Free Pilot Training on YouTube Class E Airspace by Free Pilot Training on YouTube Class G Airspace by Free Pilot Training on YouTube
	Self-learning	105 – Basic Communication	CBT Presentation
	Self-learning	106 - Charts	CBT Presentation How To Read A VFR Sectional Chart - MzeroA Flight Training on YouTube VFR Sectional Explained! (All About Airports) by Free Pilot Training on YouTube

			Chart Supplement by FLY8MA.com Flight Training on YouTube
	Self-learning	107 – Clearance Delivery	CBT Presentation UND ATCast: 9 – Clearance Delivery (Link)
		108 – Flight Progress Strip and Tower Data Link Services (TDLS)	CBT Presentation *UND ATC Strip Marking Tutorial:* 01: Introduction to Flight Progress Strips 02: Clearance Delivery/Ground Control
	Self-learning	109 – Ground Control	CBT Presentation UND ATCast: 19 – Ground Control Part 1 (Link), Part 2 (Link), Part 3 (Link)
1	Trainer-led	110 – ZSU Local Procedures for Clearance Delivery and Ground Control	Trainer should review knowledge from Modules 201 to 210 with the students. If the trainer finds any area of deficiency, the trainer shall either provide remedial training during this session or ask the student to review the appropriate materials on their own. Once the trainer has verified that the student is proficient with the previous modules, the trainer will spend the rest of the session Clearance Delivery and Ground Control procedures with ZSU and the relevant Standard Operation Procedure (SOP) document. The trainer will also introduce all relevant charts and documents. This module is to be repeated until the student is deemed proficient in all local procedures related to local control and all of the previous modules.
Theory Exam (S1 GCAP and ZSU S1 Facility)			Once Module 110 is completed, the assigned trainer will request the S2 GCAP exam and S2 ZSU facility exam from the TA. Complete the exams on the VATCAR Exam Portal after the assigned trainer deemed the student to possess the knowledge to pass the exams. The TA will review and approve the request. In the absence of the TA, the Air Traffic Manager (ATM) may respond to the request. In case the student fails either or both of the exams, the assigned trainer should schedule a special lesson with the students to review questions that were answered incorrectly on the exam, unless the student has indicated that he/she has reviewed the exam on their own, and he/she understands why the answers they provided were incorrect. The failed exam will be reassigned according to the GCAP document, Section 8.5(f)(ii): *"Should a candidate fail a written examination, that candidate may be subject to a "cooling off" period. If such a period is imposed, it must not exceed 72 hours from the scoring of the exam. Following a second failure of the same written exam by the candidate then a Division may extend the cooling off period to enable further study."*
2	Trainer-led	111 – SJU Clearance Delivery Sweatbox 1	Scenario: "Ground Template", "NK Ground" and/or equivalent Topic: - CRC installation and set up - Basic Tower Cab functionality - Flight plan review - Flight plan amendment referencing SOP and LOA - Create VFR flight plan

			- CRAFT clearance format (voice/text only)
3	Trainer-led	112 – SJU Clearance Delivery Sweatbox 2	Scenario: “Ground Template”, “NK Ground”, “SJU Local 1”, “SJU Local 2” and/or equivalent Topic: - vStrip Tutorial - vTDLS Tutorial - Clearance delivery via PDC - Review topics in Module 111 in a higher traffic situation
4	Trainer-led	113 – SJU Ground Control Sweatbox	Scenario: “Ground Template”, “NK Ground”, “SJU Local 1”, “SJU Local 2” and/or equivalent Topic: - Movement area and non-movement area - Pushback procedures - Taxi clearance and hold short instructions - Runway crossing procedures - Helicopter operation
5	Trainer-led	114 – ZSU Ground Control Sweatbox	Scenario: “SIG Local 1”, “SIG Local 2”, “STT Local 1”, “Ground Template”, “NK Ground”, “SJU Local 1”, “SJU Local 2” and/or equivalent Topic: - Clearance delivery and ground operations at other ZSU airfields - OTS practical exam preparation
Over-the-Shoulder (OTS) Practical Exam			When the mentor determines that the student can perform the tasks required of clearance delivery and ground control independently without supervision, the mentor may submit a request for scheduling the practical exam with an instructor (I1/I3) at ZSU other than the assigned mentor of the S1 training. The certified instructor (I1/I3) of ZSU will conduct the practical exam with the student under an online session or a simulated lab session using Sweatbox or ATCTrainer. The practical exam will be evaluated using VATCAR score sheet and VATCAR practical exam criteria. Following the GCAP, the instructor shall inform the student about which of the specific criteria are deemed to be deficient and inform the Training Administrator of ZSU to schedule another practical exam. After a passed exam, the instructor shall submit the score sheet to the VATCAR Academy and Director of Training at VATCAR (VC3) for rating upgrade.

Text, Materials, Required Reading and References

Required Reading

San Juan CERAP Tower Cab Training Manual (ZSU-TRG-901) **(TCTM)**

San Juan CERAP Phraseology Manual (ZSU-TRG-900) **(PM)**

ZSU-SOP-TJSJ - San Juan ATCT

ZSU-LOA-BQNT - Aguadilla LOA

ZSU-LOA-SIG - Isla Grande LOA

ZSU-LOA-STT - St. Thomas LOA

ZSU-LOA-STX - St. Croix LOA

ZSU-REF-903 - Facility Reference Sheet

FAA Order JO 7110.65AA - Air Traffic Control **(7110.65)**
(https://www.faa.gov/air_traffic/publications/atpubs/atc_html/)

CRC Tower Cab Mode Manual (Link)

CRC STARS Manual (Link)

CRC Tower Cab Mode Manual (Link)

vStrips Controller Manual (Link)

vTDLS Controller Manual (Link)

Optional Reading

Code of Federal Regulations, Title 14, Part 91— General Operating and Flight Rules (**14 CFR 91 or Part 91**)
(https://www.ecfr.gov/current/title-14/part-91)

Pilot's Handbook of Aeronautical Knowledge, FAA-H-8083-25B **(PHAK)**
(https://www.faa.gov/regulations_policies/handbooks_manuals/aviation/phak)

Aviation Weather Handbook, FAA-H-8083-28A (**AWH**)
(https://www.faa.gov/regulationspolicies/handbooksmanuals/aviation/faa-h-8083-28a-aviation-weather-handbook)

Other Useful References

Pilot/Controller Glossary (**PCG**) (https://www.faa.gov/air_traffic/publications/atpubs/pcg_html/)

Aeronautical Information Manual (**AIM**)
(https://www.faa.gov/air_traffic/publications/atpubs/aim_html/)

Reading Assignments by Lesson & Module

Students are responsible for self-study of these materials (ideally prior to) taking the Lesson they are assigned.
** indicates the reading assignment is optional and for educational purposes.*
*** VFR TAC, VFR Aeronautical Chart, and Chart Supplements are digitally available for free on the FAA website. No purchase of hard copy is necessary.*

Lesson	Module	TCTM	7110.65	PM	PHAK*	Others
[redacted]	101 – Introduction to the Air Traffic Control System	1.1, 1.2, 2.1-2.5	2-1, 2-10			
	102 – Aviation Weather	5.1-5.7	2-7		12	AWH 3-14*
	103 – ATIS, METAR & TAF	4.6	2-9			
	104 – National Airspace System	3.1-3.8	7-8, 7-9		15	Part 91*: 91.126,127,129,130, 131, 135
	105 – Basic Communication	6.1-6.5	2-4-1 to 2-4-9, 2-4-14 to 2-4-22, 2-5		14-22 to 14-26	
	106 – Navigation and Charts	4.1-4.6			14-3, 16-22 to 16-35	VFR TAC: Puerto Rico – Virgin Islands VFR Aeronautical Chart: Caribbean 2 Chart Supplement: Southeast *
	107 – Clearance Delivery	7-1 to 7.8	4-2	1.1 to 1.4 2.1 to 2.4		
	108 – Flight Progress Strip and Tower Data Link Services (TDLS)	7.9	2-3			vStrips Controller Manual vTDLS Controller Manual
	109 – Ground Control	8.1 to 8.8	2-1-17, 3-1-4, 3-1-7, 3-7	3.1 to 3.10		
1	110 – ZSU Local Procedures for Clearance Delivery and Ground Control					ZSU-SOP-TJSJ - San Juan ATCT ZSU-LOA-BQNT - Aguadilla LOA ZSU-LOA-SIG - Isla Grande LOA ZSU-LOA-STT - St. Thomas LOA ZSU-LOA-STX - St. Croix LOA ZSU-REF-903 - Facility Reference Sheet
2	111 – SJU Clearance					CRC Tower Cab Mode Manual vStrips Controller Manual

	Delivery Sweatbox 1					vTDLS Controller Manual ZSU-REF-903 - Facility Reference Sheet
3	112 – SJU Clearance Delivery Sweatbox 2					
4	113 – SJU Ground Control Sweatbox					
5	114 – ZSU Ground Control Sweatbox					