

ZFW ARTCC Training Guidelines

# FORTWORTH

August 7, 2020

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## Change Log

| Date          | Explanation of Changes            | Initials |
|---------------|-----------------------------------|----------|
| 6 June 2019   | Creation                          | ND       |
| 6 August 2020 | Formatting, update to C1 syllabus | ND       |
|               |                                   |          |
|               |                                   |          |
|               |                                   |          |

# Chapter 1: General

## Section 1: Introduction

### 1-1-1. Purpose

These guidelines direct the ZFW Training Program and define the standards required to be met for certification of controllers. This document should be the primary reference for all home and visiting controllers to reference regarding training at ZFW.

## Section 2. General Operations

### 1-2-1. Familiarization

All ZFW Controllers, home and visiting, are expected to be familiar with the contents of this document.

### 1-2-2. Revisions

Revisions to this document may be initiated by the Training Administrator, the Air Traffic Manager, or the Deputy Air Traffic Manager at any point. Revisions must be approved by VATUSA3 or his deputy. When revisions are made, the relevant changes should be disseminated to the controllers of ZFW.

### 1-2-3. Definitions

|                            |  |
|----------------------------|--|
| Student                    | Any controller who holds a rating not greater than Senior Student (S3).  |
| Controller                 | Any member of the ZFW ARTCC, regardless of home or visiting status.  |
| Mentor                     | A member of the ZFW Training Department that does not hold a rating of I1 or greater.                            |
| Instructor                 | A member of the ZFW Training Department who holds a rating of I1 or greater, including probationary instructors. |
| Probationary Instructor    | A controller who is going through the instructor appointment process as defined by VATUSA Order 3210.311         |
| Division Training Director | VATUSA3 and, unless otherwise specified, VATUSA13  |
| Solo Cert(ification)       | Controller Trainee Solo Validation, per GRP  |
| Solo Authorization         | An S1 working a local control position solo is working under a solo authorization                                |

### 1-2-4. Acronyms

|       |                                  |
|-------|----------------------------------|
| ARTCC | Air Route Traffic Control Center |
| ATD   | Air Traffic Director (VATUSA8)   |
| ATM   | Air Traffic Manager (ZFW)        |

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|        |                                  |
|--------|----------------------------------|
| DATM   | Deputy Air Traffic Manager (ZFW) |
| GRP    | Global Ratings Policy            |
| LOA    | Letter(s) of Agreement           |
| OTS    | Over-the-shoulder examination    |
| TA     | Training Administrator (ZFW)     |
| SOP    | Standard Operations Procedures   |
| VATNA  | North American region of VATSIM  |
| VATUSA | USA Division of VATNA            |

## Chapter 2: Training Procedures

### Section 1: Scheduling

#### **2-1-1. Requesting Training**

The primary method of scheduling training is the ZFW ARTCC website training page. Sessions may be scheduled through other means, but these are not considered guaranteed sessions. Sessions booked through the website must be booked 24 hours in advance.

#### **2-1-2. Cancelling Training**

Students and training staff members are both expected to give reasonable notice through email, text, or other electronic communication when cancelling a session. Reasonable notice is considered greater than 3 hours in advance; however, a 24-hour notice is preferred.

#### **2-1-3. OTS Scheduling**

An OTS should be scheduled only after receiving a recommendation from a mentor. The OTS shall be scheduled by the student sending an email to [instructors@zfwartcc.net](mailto:instructors@zfwartcc.net) with their availability. To expedite this process, please provide at least 3 separate dates.

### Section 2: Expectations

#### **2-2-1. Expectations for Students**

Students are expected to come to sessions on time and prepared. Students should be receptive to feedback and have already completed any 'homework' or study material previously assigned. Students who do not meet these expectations are liable to have their session cancelled by the mentor or instructor conducting the session.

#### **2-2-2. Expectations for Mentors**

ZFW Mentors are expected to come to sessions on time and prepared. This includes having previewed the student's training notes. Mentors should use feedback as an opportunity to build students' abilities. Mentors should always seek to be a positive influence on the ARTCC, both in and outside of training sessions.

#### **2-2-3. Expectations for Instructors**

ZFW Instructors are held to the same standards as ZFW Mentors. Instructors should be more familiar with any relevant ZFW SOP or VATUSA Policies, especially those regarding training. Instructors should be familiar with conducting OTS examinations and promotions. While all training staff members are encouraged to create training documents or files, instructors should be more involved in this process.



## Section 3: General Operations

### 2-3-1. Controller Trainee Solo Validations

1. Solo authorizations/certifications shall be authorized pursuant to GRP.
2. Solo authorizations/certifications may only be authorized by a ZFW Instructor following the recommendation of an instructor or mentor.
3. Solo authorizations/certifications may be revoked by the Training Administrator if an instructor finds cause that the student is unable to act successfully as a solo student.
  - a. Upon revocation of a solo authorization/certification, the instructor who recommended this (if not the training administrator) shall meet with the Training Administrator and the student to debrief the issue. If necessary, the mentor(s)/instructor(s) who recommended the student for solo authorization/certification may be included in this discussion.
4. Solo authorization/certifications should primarily be issued at the Will Rogers World Airport (KOKC) and TRACON.
  - a. The TA or ATM may authorize other facilities on an individual basis.
5. Tower Student solo authorizations (S2) should only be posted on the ZFW website.
6. Approach and Center solo certs (S3/C1) should be posted on both the ZFW and VATUSA websites.

### 2-3-2. Designated Airspace (Major Airport) Endorsements

1. Designated airspace endorsements shall be authorized pursuant to GRP.
2. Designated airspace endorsements checkouts shall be conducted in accordance with the standards laid out in this **document XXXX**. These checkouts shall be conducted by an instructor following the recommendation of any instructor or mentor.
3. Designated airspace endorsements may be revoked by the TA if they find cause that the student or controller is not meeting the standards in **this document**.
  - a. In this event, the TA shall make a note in the student or controllers training file recommending further action and debrief the situation with the student or controller.
4. Designated airspace endorsements shall be recorded on the ZFW website.

### 2-3-3. Training Notes

1. Training notes shall be completed by the training staff member who conducted or oversaw the training session after completing the session. These notes should include, at minimum, the following:
  - a. Session description, including what file was run if on sweatbox
  - b. Student strengths/weaknesses
  - c. Further recommendations
  - d. Homework/study material assigned
2. Training notes are considered confidential. Because of this, training staff members should include always a debrief at the end of the session. This debrief should include all the non-confidential parts of the training note.

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3. Training notes shall be stored in a location defined by the ATM.
4. A student may request a copy of their training file by submitting a written request to the ATM and TA through email. The ATM and TA should use their judgement in determining how to release the file.

### **2-3-4. Initial Rating**

1. Students who previously received a rating shall retain this rating pursuant with GRP.
2. Students who enter ZFW with the rating of OBS should keep this rating until they have been awarded the S1 rating.
3. The S1 rating can be awarded by any instructor following the recommendation of a mentor or instructor. This rating shall not be awarded prior to completing the entire S1 syllabus.
4. An OTS is not required to receive the S1 rating
5. There will be no solo certifications given to students working on their S1 rating

### **2-3-5. Over the Shoulder (OTS) Examinations**

1. An OTS shall not be required for promotion to S1
2. OTS Exams should be conducted in accordance with VATUSA Order 3120.25

### **2-3-6. Live Network Training**

1. The initial phases of training shall never be conducted on the live network.
2. While training on the network, students should connect with the proper callsign for the position they are working. Ie, a student working Love Ground should connect as DAL\_GND.
  - a. The mentor or instructor overseeing the session should connect with the appropriate \_M\_ or \_I\_ tag.
3. At all times while on the network, the mentor or instructor is responsible for the conduct and controlling of their student. This means the training staff member should be ready to take the frequency to prevent a loss of separation, or to regain control as needed.
4. Only major facility training should be conducted at the major facility while on the network.

## Section 4: Instruction Positions

### **2-4-1. Instructor**

1. Instructors are appointed by the Division Training Director at the recommendation of the TA or ATM, pursuant to VATUSA Order 3210.311
2. Responsibilities:
  - a. Reports to the TA and ATM
  - b. Maintains an online presence within the facility and on the VATSIM network
  - c. Functions as a ZFW staff member and attends meetings as necessary to discuss and stay informed with ZFW issues and policies
  - d. Ensures availability to train ZFW students and controllers

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- e. Conduct OTS examinations and certify student competency
  - f. Provide mentoring and supervision for students, mentors
  - g. Create and develop training material and lessons to be shared with the training staff
3. The requirements to become an instructor are laid out in VATUSA Order 3210.311

### **2-4-2. Mentor**

1. Mentors are appointed by the TA or ATM
2. Responsibilities:
  - a. Reports to the TA and ATM
  - b. Maintains an online presence within the facility and on the VATSIM network
  - c. Ensures availability to train ZFW students and controllers
  - d. Provide mentoring and supervision for students
3. Requirements:
  - a. Must have at least a Student 3 (S3) rating. This requirement may be waived at the discretion of the TA or ATM
  - b. Must be an active member of the network in good standing with ZFW
  - c. Contribute positively to ZFW and the training culture here.
4. Limitations:
  - a. Except for Controller 1 (C1) mentors, mentors may not provide training at or beyond their current rating
    - i. Ie, S3 mentors may mentor to a maximum of S2

## Appendix A: Training Syllabuses

### Student 1

#### Unit 1: Welcome and Introduction to ATC

- Lesson 1
  - ZFW ARTCC Welcome and Introduction. Training Department and syllabus review
  - Radar client familiarization
  - Basic ATC System (Top-Down Philosophy)
  - Why we assign Squawk Codes
  - Phonetic Alphabet
  - Focus airport selection
  - VFR vs. IFR
  - Aircraft Identification
  - National Airspace System (Classes, Special Use, Altitudes & Flight Levels)
  - Navigational facilities and methods
  - Basic weather interpretation (METAR/TAF)

#### Unit 2: Clearance Delivery

- Lesson 1 (Focus Airport)
  - CRAFT
  - Flight Plans (Scratch Pads, Flight Strips, Flight Plan Amendments)
  - Types of SIDs (RNAV, Hybrid, Conventional, Radar Vector, and Pilot Nav)
  - Basic IFR Clearances (Radar Vectors and Pilot Nav)
- Lesson 2 (OKC 1st half/DAL 2nd half)
  - Complex IFR Clearances (Hybrid, RNAV, and conventional SIDs)
  - VFR Clearances (D/C/B)
  - SOP's and LOA's (Preferred routing)

#### Unit 3: Ground

- Lesson 1 (Focus Airport)
  - Review: IFR and VFR Clearances
  - Areas of responsibility (Movement vs. Non-movement areas)
  - Runway Selection
  - Taxi Clearances (Aircraft)
  - Helicopter Operations
  - Controller Coordination (Crossing Clearances and position brief/debriefs)

#### Unit 4: KDAL Familiarization

#### Unit 5: KDFW (Major) Training

### Student 2

#### Unit 1: Introduction to Local Control

- Lesson 1:
  - What is Local Control and what role do we play?
  - Tower's Areas of Responsibility

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- Runway Configuration Selection
- Local Control Client Configuration
- Voice ATIS Recording and vATIS
- Focus Airport Selection

### **Unit 2: Runway Operations, VFR, and IFR Procedures**

- Lesson 1: (Focus Airport)
  - Wake Turbulence (Departures and Arrivals)
  - Line Up and Wait procedures
  - Takeoff Clearances (Full Length and Intersection)
  - IFR Departure Procedures, Releases, and SIDs
  - Landing Clearances and LAHSO
  - Missed Approaches and Go-Arounds
- Lesson 2: (Focus Airport)
  - The Traffic Pattern
  - VFR Departures (Class B, C, and D)
  - VFR Arrivals and Airspace Transitions
  - VFR Tower Traffic Advisories and Sequencing
  - Controller Coordination and Position Reliefs
- Lesson 3: (Focus Airport)
  - Unit 2 Practice and Review

### **Unit 3: Helicopter and Military Operations**

- Lesson 1: (KLBB)
  - Helicopter Operations (Arriving and Departing)
    - Movement Areas
    - Non-Movement Areas
  - Military Operations

### **VATUSA S2 Exam**

### **Unit 4: OTS Prep (KOKC and KDAL)**

### **Unit 5: OTS and Major Field Checkout**

- VATUSA Major Tower exam must be taken prior to Major field training.

## Student 3

### **Unit 1: Introduction to Radar**

- Lesson 1:
  - Primary vs Secondary Targets and how to identify them
  - Airspace boundaries, reading video maps
    - Pointouts, handoffs, coordination
  - MVA/MSAs
  - Merging target procedures and safety alerts
  - Identifying towered and non-towered fields
  - Identify arrival/departure corridors
  - Chart reading

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- Identify different types of arrivals/departures and the responsibilities of the radar controller.
- Lesson 2:
  - “Box method” vectoring
  - Introduce speed control
  - Introduce traffic calls
  - Vectoring with climbs and descents
  - What is a deal?

### Unit 2: Departure Radar

- Unit 1:
  - Review identifying primary and secondary targets
  - 5 ways to depart IFR
    - Heading, ODP, direct to first fix, hybrid SID, P-nav SID
  - Departure separation
  - Flight Following
- Unit 2:
  - Non-towered operations
    - One in, one out.
    - Departure releases
    - Identifying departures

### Unit 3: Arrival Radar

- Unit 1:
  - Introduction to approach plates
    - Holds, missed approaches, IAF/FAF
    - How to get someone to join an approach or final approach course
    - Approach plate lecture
  - PTAC
  - Vectors for approaches/sequence
- Unit 2:
  - Non-towered operations
- Final Knowledge
  - VFR operations
  - Military operations

## Controller 1

### Unit 1 - Airspace Familiarization

Goals: Identify major VORs, airspace boundaries/areas, hi/low delegation of airspace

Understand: LOAs, Home facility flows/STARs

Explain: Enroute separation minimums

### Unit 2 - High Sector Operations

Goals: Consistently generate specified MIT to the low sector, effectively communicate/coordinate

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Review: Area names, LOA orders

Continuing education: DAL-HI/TXK-HI problems/videos

### **Unit 3 - Low Sector Operations**

Goals: Finalize sequencing into TRACONS, handle VFR traffic, minor TRACON operations, non-towered operations, effectively communication/coordinate

Review: One-in/one-out, home TRACON flows (STARs), airspace/TRACON boundaries

Continuing education: multi-stream problems

### **Unit 4 - Live Network Observation**

Review: major VORs, airspaces, LOA/Flow compliance

Continuing education: more difficult enroute sequencing problems

### **Unit 5 - OTS**