

ZAB Training Syllabus

OBS->S1

Milestone GC1 - Basic ATC and Delta Introduction

Timeframe: 1 session, 2-3 hours

Airfield: KFLG

- **Prerequisite qualifications:**
 - Signed up on VATSIM, assigned to ZAB
 - Passing score ZAB S1 Knowledge exam
- **Prerequisite Reading:**
 - Aircraft Suffix Codes
 - VFR Minimums
 - S1 section of Phraseology guide
 - S1 section of Training Standards
 - Minor Field Reference for KFLG
 - 7210.001 (Controller Policy Manual)
 - 7210.002 (Training Operations Manual)
 - VATUSA (S1) CBT's
- **Files to download:**
 - Sector File/Alias/POF
 - ZAB Quick Reference Guide
 - ZAB VOR Guide
- Initial training session shall be conducted at KFLG. Only a single session is required for this Milestone. Concepts that have to do with roles and responsibilities will be introduced at this stage:
 - IFR vs VFR
 - Classes of Airspace (including entry requirements)
 - Control Positions and their responsibilities
 - Basic Phraseology
 - Chart reading, primarily AD/SID (STAR and IAP to be introduced, but covered in depth at S2->S3 level)
 - CRAFT
 - METAR decoding and how it relates to airport flows (wind, etc.)
 - NEODD/SWEVEN, RVSM and lowest usable FL based on altimeter
- Student is introduced to KFLG and its airspace class. Student is instructed that while this training is only taking place at KFLG, the concepts learned can be applied to any Class D airport, and that controlling at Class C/B will build upon these concepts
- Student will be walked through the setup of VRC (including SweatBox setup), using a list of standard options (so that each student has the SAME setup at first). Certain settings may be tuned to their liking should it be necessary
 - Configure a VRC "Profile" for specific positions

- Communications Panel setup; i.e.: VOX server, VOX channel, frequencies
 - Using Diagrams to display airport layouts, SID/STARs, special airspace
 - Discuss functions of the “F” keys and their associated commands
- Student will connect to SweatBox and work several VFR/IFR aircraft until proficiency is demonstrated
- Debrief student on the topics and material that were covered in the training session and field any questions
- Assign new reading material for KABQ Class C operations
- Update training notes

Milestone GC2 - Class C Operations

Timeframe: 1-2 session(s), 4-5 hours total

Airfield: KABQ

- **Prerequisite qualifications:**
 - Milestone GC1 completed
- **Prerequisite reading:**
 - Albuquerque ATCT SOP (Only CD/GC sections)
 - ZAB/KABQ LOA
- **Files to download:**
 - No additional files
- Student starts training at KABQ. No more than 2 sessions should be required for this Milestone
- Introduction to the KABQ airspace
- Recap airspace Classes and discuss other Class C airports within ZAB (KABQ, KTUS, KELP, KAMA)
- Create separate VRC profile for KABQ
- Student is instructed that while this training is only taking place at KABQ, the concepts learned can be applied to any Class C airport and that controlling at KPHX will build on these concepts
- Student will run through 2 separate situation files for KABQ on Sweatbox and will continue practicing with them until proficiency is demonstrated:
 - File 1: IFR/VFR with complete, correct flight plans
 - File 2: IFR/VFR with a mix of correct and incorrect (and incomplete for VFR) flight plans
- Debrief student on the topics and material that were covered in the training session and field any questions
- Assign new reading material for KPHX Class B operations
- Update training notes
- **Once milestone is completed:**
 - Issue student S1 rating with minor field endorsement

Milestone GC3 - Class B Operations

Timeframe: 2-4 sessions, 5+ hours total

Airfield: KPHX

- **Prerequisite qualifications:**
 - S1 Rating
 - Milestone GC2 completed
- **Prerequisite reading:**
 - Phoenix ATCT SOP (Only CD/GC sections)
 - ZAB/ZLA LOA (Specifically the sections that pertain to KPHX)
 - P50/PHX ATCT LOA
 - KPHX Terminal map
 - P50 RNAV SIDs Cheat Sheet
- **Files to download:**
 - No additional files
- Student starts training at KPHX. At least 2 sessions are to be conducted here: at least one on SweatBox and one on the live network
- Introduction to the KPHX Class B airspace
- Recap airspace Classes
- Create separate VRC profile for KPHX
- Introduce the concept of the VFR Class B clearance and what it means to clear “into”, “out of” and “through”
- Student will run through 4 separate situation files for KPHX on Sweatbox and will continue practicing with them until proficiency is demonstrated:
 - File 1: IFR/VFR with complete, correct flight plans
 - File 2: VFR only with some complete flight plans and some blank flight plans
 - File 3: IFR only with a mix of correct and incorrect flight plans
 - File 4: IFR/VFR with a mix of correct and incorrect (and incomplete for VFR) flight plans
- Student shall conduct at least 3 hours of training on the live network with a Mentor/Instructor monitoring them
- Debrief student on the topics and material that were covered in the training session and field any questions
- Update training notes
- **Once milestone is completed:**
 - Issue student the S1 Major (KPHX) exam. Advise that the exam is open book and untimed

Milestone GC4 - KPHX OTS

Timeframe: 1 session, 1 hour

Airfield: KPHX

- **Prerequisite qualifications:**
 - S1 Rating
 - Milestone GC3 completed

- Passing score on S1 Major (KPHX) exam
- **Prerequisite reading:**
 - No additional reading
- **Files to download:**
 - No additional files
- This OTS is to be conducted on the SweatBox server. Student will run through the S1 OTS file and will be graded using the OTS rubric
- Advise score of OTS evaluation and field any questions
- Update training notes
- **Once milestone is completed:**
 - Issue student S1 major endorsement for KPHX

S1->S2

- When a student expresses interest in beginning S2 training, issue the ZAB S2 Knowledge exam. This exam will test the student's ability to use their resources. All answers to questions on this exam can be found in documentation on either VATUSA or the ZAB website

Milestone LC1 - Basic Class D/C Operations

Timeframe: 2 sessions, 3-4 hours

Airfield: KFLG & KABQ

- **Prerequisite qualifications:**
 - S1 Rating
 - Milestone GC2 completed
 - Passing score on ZAB S2 Knowledge exam
 - 5+ hours combined on class C/D GC or CD positions
- **Prerequisite reading:**
 - S2 sections of Phraseology guide
 - S2 section of training standards
 - Albuquerque ATCT SOP (LC sections)
 - VATUSA (S2) CBT's
- **Files to download:**
 - No additional files
- Student will be introduced to basic LC concepts at Class D and C airports. Student will mainly focus on departures during this Milestone:
 - Airspace (Ceilings, floors and the "-30" notation on charts)
 - VFR outbound
 - Traffic pattern departures
 - Landing/Takeoff clearances and what they mean
 - LAHSO, LUAW and Runway crossings
 - Rolling releases (C only)
 - Same Runway Separation
 - Wake turbulence

- Student will run through 2 separate situation files on Sweatbox, one for KFLG and one for KABQ, and will continue practicing with them until proficiency is demonstrated:
 - File 1: KFLG - IFR/VFR with a mix of correct and incorrect flight plans
 - File 2: KABQ - IFR/VFR with a mix of correct and incorrect flight plans
- Debrief student on the topics and material that were covered in the training session and field any questions
- Update training notes
- **Once milestone is completed:**
 - Issue student VATUSA S2 exam. Advise that exam is open book and untimed

Milestone LC2 - Advanced Class D/C Operations

Timeframe: 1-2 session(s), 2-3 hours

Airfield: KFLG & KABQ

- **Prerequisite qualifications:**
 - Milestone LC1 completed
 - Passing score on VATUSA S2 exam
- **Prerequisite reading:**
 - No additional reading
- **Files to download:**
 - No additional files
- Student will be introduced to advanced LC concepts at Class D and C airports. Arrival/pattern procedures will be added in during this milestone:
 - VFR in the pattern, including pattern entry phraseology
 - Which legs of the pattern follow others
 - Traffic point outs (using non-radar phraseology), “follow”
 - Separation techniques:
 - Extend UW/CW/DW
 - 360s
 - Crossing over the field
 - Breaking planes out of the pattern
 - Sidestep/runway changes
 - Short approaches (less than ¼ mile final)
 - IFR releases from Class D fields
 - Pop-up IFR clearances in the pattern
 - Military: Overhead Maneuver, Simulated Flameout and “check gear down”
- Student will run through 2 separate situation files on SweatBox, one for KFLG and one for KABQ, and will keep practicing with them until proficiency is demonstrated:
 - File 1: KFLG - IFR/VFR with a mix of correct and incorrect flight plans (including several arrivals and VFR in the pattern)
 - File 2: KABQ - IFR/VFR with a mix of correct and incorrect flight plans (including several arrivals and VFR in the pattern)

- Reiterate that while the sessions conducted during Milestones LC1 and LC2 are focused on 2 specific fields, the concepts learned can be applied at any Class C/D field
- Debrief student on the topics and material that were covered in the training session and field any questions
- Assign new reading material for all Class C/D operations
- Update training notes
- **Once milestone is completed:**
 - LC3 “unlocked”

Milestone LC3 - Class C Tower Live Monitoring

Timeframe: 5+ hours

Airfield: KABQ, KTUS, KERP, KAMA

- **Prerequisite qualifications:**
 - S1 Rating
 - Milestone LC2 completed
- **Prerequisite reading:**
 - No additional reading
- **Files to download:**
 - No additional files
- Once the student has completed LC2, they are cleared for training on the live network with a Mentor/Instructor monitoring them. The student shall put in at least 1 hour at each Class C airport listed. It is highly encouraged to use your time in LC3 wisely
- **Once milestone is completed:**
 - Issue student S2 rating with minor TOWER endorsements.

Milestone LC4 - Class B Operations

Timeframe: 2-4 sessions, 6+ hours total

Airfield: KPHX

- **Prerequisite qualifications:**
 - S2 Rating
 - Milestones LC3 and GC4 completed
 - 10+ hours combined on PHX_GND or PHX_DEL
- **Prerequisite reading:**
 - Phoenix ATCT SOP (LC section)
 - ZAB/ZLA LOA (Specifically the sections that pertain to KPHX)
 - P50/PHX ATCT LOA
- **Files to download:**
 - No additional files
- Student will be introduced to LC concepts at KPHX
- Student starts training at KPHX. At least 2 sessions are to be conducted here: at least one on SweatBox and one on the live network
- Discuss in-the-air Class B clearances and when to use them

- Discuss KPHX VFR transition routes (East/West transitions)
- Reiterate rolling releases
- Student will run through 2 separate situation files for KPHX and will continue practicing with them until proficiency is demonstrated:
 - File 1: IFR/VFR with complete, correct flight plans
 - File 2: IFR/VFR with a mix of correct and incorrect (and incomplete for VFR) flight plans
- Student shall conduct at least 4 hours of training on the live network with a Mentor/Instructor monitoring them
- Debrief student on the topics and material that were covered in the training session and field any questions
- Update training notes
- **Once milestone is completed:**
 - Issue student the S2 Major (KPHX) exam. Advise that the exam is open book and untimed

Milestone LC5 - KPHX SMT

Timeframe: 10+ hours

Airfield: KPHX

- **Prerequisite qualifications:**
 - S2 Rating
 - Milestone LC4 completed
 - Passing score on S2 Major (KPHX) exam
- **Prerequisite reading:**
 - No additional reading
- **Files to download:**
 - No additional files
- Once the student has completed LC4, a Mentor/Instructor can recommend them for SMT certification (per ZAB 7210.002 section 6). Although this Milestone quotes 10+ hours in the timeline, only 5 hours will be required to proceed to LC6. It is highly encouraged to use your time in LC5 wisely
- **Once milestone is completed:**
 - N/A

Milestone LC6 - KPHX OTS

Timeframe: 1 session, 1-2 hours

Airfield: KPHX

- **Prerequisite qualifications:**
 - S2 Rating
 - Milestone LC5 completed
 - 5+ hours SMT on PHX_TWR
- **Prerequisite reading:**
 - No additional reading
- **Files to download:**

- No additional files
- This OTS is to be conducted on the SweatBox server. Student will run through the S2 OTS file and will be graded using the OTS rubric
- Advise score of OTS evaluation and field any questions
- Update training notes
- **Once milestone is completed:**
 - Issue student S2 major endorsement for KPHX

S2->S3

- When a student expresses interest in beginning S3 training, issue the ZAB S3 Knowledge exam. This exam will test the student's ability to use their resources. All answers to questions on this exam can be found in documentation on either VATUSA or the ZAB website
- As there are no approach sectors for Class D airports, training for AD milestones will begin at KABQ

Milestone AD1 - Basic Class C Operations

Timeframe: 2+ sessions, 4+ hours

Focus TRACON: KABQ

- **Prerequisite qualifications:**
 - S2 Rating
 - Milestone LC3 completed
 - Passing score on ZAB S3 Knowledge exam
 - 10+ hours combined on Class C/D LC positions
- **Prerequisite reading:**
 - S3 sections of Phraseology guide
 - S3 section of training standards
 - Albuquerque TRACON SOP
 - VATUSA training site (S3)
 - S3/C1 IAP guide
- **Files to download:**
 - No additional files
- Student will be introduced to basic TRACON concepts at Class C airports. Student will mainly focus on departures during this milestone:
 - Radar Identification
 - Chart reading, esp. STAR, IAP and sectionals/TACs
 - Separation requirements in Class C/D/E (VFR/VFR, VFR/IFR, IFR/IFR)
 - Vectoring best practices (traffic pattern like)
 - Review airspace entry requirements
 - Traffic point-outs and methods to mitigate conflicts
 - RNAV vs Vectoring SIDs
- Student will run through 2 separate departure situation files on Sweatbox and will continue practicing with them until proficiency is demonstrated:
 - File 1: KABQ departures using ATC Nav/Hybrid SIDs (radar vectors)

- File 2: KABQ departures using RNAV SIDs
- Debrief student on the topics and material that were covered in the training session and field any questions
- Update training notes
- **Once milestone is completed:**
 - Issue student VATUSA S3 exam. Advise that exam is open book and untimed

Milestone AD2 - Advanced Class C Operations

Timeframe: 2+ sessions, 4+ hours

Focus TRACON: KABQ

- **Prerequisite qualifications:**
 - Milestone AD1 completed
 - Passing score on VATUSA S3 exam
- **Prerequisite reading:**
 - No additional reading
- **Files to download:**
 - No additional files
- Student will be introduced to advanced AD concepts at Class C airports. Arrival/VFR procedures will be added in during this milestone:
 - Airspace layouts and splits
 - STAR descents and vectoring
 - IAP vectoring and “PTAC”
 - Sequencing
 - VFR popup and flight following
 - IFR uncontrolled (use E80)
- Student will run through 4 separate situation files on SweatBox and will continue practicing with them until proficiency is demonstrated:
 - File 1: IFR arrivals into KABQ, mixed RNAV and vectoring
 - File 2: IFR arrivals into KABQ and KAEG mixed RNAV and vectoring
 - File 3: IFR arrivals into KABQ/KAEG/E80 and some VFR flights
 - File 4: IFR/VFR arrivals and departures to/from all airports (KABQ, KAEG, E80)
- Student is instructed that while the sessions conducted during milestones AD1 and AD2 will focus on the Albuquerque TRACON, the concepts learned can be applied at any Class C TRACON
- Debrief student on the topics and material that were covered in the training session and field any questions
- Update training notes
- **Once milestone is completed:**
 - N/A

Milestone AD3 - Class C TRACON Live Monitoring

Timeframe: 10+ hours

Focus TRACONS: KABQ, U90, KELP, KAMA

- **Prerequisite qualifications:**
 - S2 Rating
 - Milestone AD2 completed
- **Prerequisite reading:**
 - No additional reading
- **Files to download:**
 - No additional files
- Once the student has completed AD2, they are cleared for training on the live network with a Mentor/Instructor monitoring them. Although this milestone quotes 10+ hours in the timeline, only 8 hours (2 at each Class C airfield) will be required to proceed to AD4. It is encouraged that the Student use their time in AD3 wisely
- **Once milestone is completed:**
 - Issue student S3 rating with minor TRACON endorsement

Milestone AD4 - Departure Procedures - *THE* P50 TRACON

Timeframe: 5+ hours, 2+ sessions

Focus TRACON: P50

- **Prerequisite qualifications:**
 - S3 Rating
 - Milestones AD3 and LC6 completed
- **Prerequisite reading:**
 - P50 TRACON SOP
 - P50 TRACON/ZAB SOP
- **Files to download:**
 - P50 Delta Cheat Sheet
 - P50 VFR Cheat Sheet
 - P50 RNAV STARs Cheat Sheet
- Student will be introduced to departure concepts in a Class B TRACON environment
- The P50 Milestones require significant work and practice, however, training will begin with KPHX departures and then layer on more complex scenarios with each Milestone
- Student will run through 2 separate situation files on SweatBox and will continue practicing with them until proficiency is demonstrated:
 - File 1: IFR KPHX departures, “top down”
 - File 2: VFR and IFR KPHX departures, “top down”
- Debrief student on the topics and material that were covered in the training session and field any questions
- Update training notes
- **Once milestone is completed:**
 - N/A

Milestone AD5 - Arrival Procedures - THE P50 TRACON

Timeframe: 5+ hours, 2+ sessions

Focus TRACON: P50

- **Prerequisite qualifications:**
 - Milestone AD4 completed
- **Prerequisite reading:**
 - No additional reading
- **Files to download:**
 - No additional files
- Student will be introduced to arrival concepts in a Class B TRACON environment
- Student will run through 2 separate situation files on SweatBox and will continue practicing with them until proficiency is demonstrated:
 - File 1: IFR KPHX departures and arrivals, “top down”
 - File 2: VFR and IFR KPHX departures and arrivals, “top down”
- Debrief student on the topics and material that were covered in the training session and field any questions
- Update training notes
- **Once milestone is completed:**
 - N/A

Milestone AD6 - Satellite Procedures - THE P50 TRACON

Timeframe: 5+ hours, 2+ sessions

Focus TRACON: P50

- **Prerequisite qualifications:**
 - Milestone AD5 completed
- **Prerequisite reading:**
 - SDL, FFZ, IWA, CHD, GEU, GYR, DVT, PRC, FLG and LUF Minor Reference Guides
 - P50/SDL LOA
- **Files to download:**
 - No additional files
- Student will be introduced to satellite concepts in a Class B TRACON environment.
- Student will run through 4 separate situation files on SweatBox and will keep practicing with them until proficiency is demonstrated
 - File 1: TRACON IFR departures, “top down”
 - File 2: TRACON VFR and IFR departures, “top down”
 - File 3: TRACON IFR departures and arrivals, “top down”
 - File 4: TRACON VFR and IFR departures and arrivals, “top down”
- Debrief student on the topics and material that were covered in the training session and field any questions
- Update training notes
- **Once milestone is completed:**

- Issue the S3 Major (KPHX) exam. Advise that the exam is open book and untimed

Milestone AD7 - Live Monitoring - *THE* P50 TRACON

Timeframe: 10+ hours

Focus TRACON: P50

- **Prerequisite qualifications:**
 - Passing score on the S3 Major (KPHX) exam
 - Milestone AD6 completed
- **Prerequisite reading:**
 - No additional reading
- **Files to download:**
 - No additional files
- Once the student has completed AD6, they are cleared for training on the live network with a Mentor/Instructor monitoring them. The student shall put in at least 10 hours of controlling time at the TRACON, although more time is encouraged. It is encouraged that the Student use their time in AD7 wisely
- **Once milestone is completed:**
 - N/A

Milestone AD8 - SMT - *THE* P50 TRACON

Timeframe: 10+ hours

Focus TRACON: P50

- **Prerequisite qualifications:**
 - S3 Rating
 - Milestone AD7 completed
- **Prerequisite reading:**
 - No additional reading
- **Files to download:**
 - No additional files
- Once the student has completed AD7, a Mentor/Instructor can recommend them for SMT certification (per ZAB 7210.002 section 6). Although this Milestone quotes 10+ hours in the timeline, more time is encouraged. It is encouraged that the Student use their time in AD8 wisely
- **Once milestone is completed:**
 - N/A

Milestone AD9 - OTS - *THE* P50 TRACON

Timeframe: 1 session, 3 hours

Focus TRACON: P50

- **Prerequisite qualifications:**
 - Milestone AD8 completed
 - 10+ hours of SMT on PHX_APP

- S3 rating
- **Prerequisite reading:**
 - No additional reading
- **Files to download:**
 - No additional files
- This OTS is to be conducted on the live network. A supervisor will announce the OTS and the Student will be graded using the OTS rubric
- Advise score of OTS evaluation and field any questions
- Update training notes
- **Once milestone is completed:**
 - Issue Student S3 major endorsement for P50

S3->C1

- When a student expresses interest in beginning C1 training, issue the ZAB C1 Knowledge exam. This exam will test the student's ability to use their resources. All answers to questions on this exam can be found in documentation on either VATUSA or the ZAB website.
- **Due to the requirement by GRP to provide "top down" service as a center, the student must be S3 Major Certified to begin C1 training**

Milestone EN1 - Live Monitoring, Albuquerque Center

Timeframe: 10+ hours

- **Prerequisite qualifications:**
 - S3 Rating
 - Milestone AD9 completed
 - Passing score on ZAB C1 Knowledge exam
 - 10+ hours on each TRACON (P50, U90, ABQ, ELP, AMA)
- **Prerequisite reading:**
 - Albuquerque Center SOP
 - ZAB/ZLA LOA
 - ZAB/ZDV LOA
 - ZAB/ZKC LOA
 - ZAB/ZFW LOA
 - ZAB/ZHU LOA
- **Files to download:**
 - No additional files
- All training sessions will be conducted live on the network on Albuquerque Center
- Discuss enroute concepts:
 - IFR Uncontrolled
 - MIA
 - Routing shortcuts
 - Speed separation (enroute sequencing)
 - Holding

- Weather deviations and hazardous weather advisories
- IAS < FL300, Mach Number > FL300
- Debrief student on the topics and material that were covered in the training session and field any questions
- Update training notes
- **Once milestone is completed:**
 - Issue student VATUSA C1 exam. Advise that exam is open book and untimed

Milestone EN2 - SMT, Albuquerque Center

Timeframe: 10+ hours

- **Prerequisite qualifications:**
 - S3 Rating
 - Milestone EN1 completed
 - Passing score on VATUSA C1 exam
- **Prerequisite reading:**
 - No additional reading
- **Files to download:**
 - No additional files
- Once the student has completed EN1, a Mentor/Instructor can recommend them for SMT certification (per ZAB 7210.002 section 6). Although this milestone quotes 10+ hours in the timeline, more time is encouraged. It is encouraged that the Student use their time in EN2 wisely
- **Once milestone is completed:**
 - N/A

Milestone EN3 - OTS, Albuquerque Center

Timeframe: 1 session, 3 hours

- **Prerequisite qualifications:**
 - Milestone EN2 completed
 - 10+ hours of SMT on ABQ_CTR
 - S3 rating
- **Prerequisite reading:**
 - No additional reading
- **Files to download:**
 - No additional files
- This OTS is to be conducted on the live network. A supervisor will announce the OTS and the Student will be graded using the OTS rubric
- Advise score of OTS evaluation and field any questions
- Update training notes
- **Once milestone is completed:**
 - Issue Student C1 rating, with all endorsements