BOSTON ARTCC (vZBW)
TRAINING SYLLABUS

LEVEL: Approach Controller (S3)

"Radar Position: Ensure separation"

(FAA Order 7110.65, Air Traffic Control, 2-10-2(c)1).

RELEASE RECORD			
Version	**Date**	**Author**	**Notes**
1.0	02 Jan 2008	EE	Initial Release
1.1	01 Feb 2009	DO	General/Maintenance update, added VFR Coded Arrivals, added exam request links
2.0	01 Aug 2009	DO	Incorporates changes made as a result of VATSIM GRP 2.0, updates all links
2.1	01 Mar 2010	DO	Updated links, added references/links to new KBOS and A90 SOPs, updated document to reference new KBOS RNAV Departure Procedures, updates VATUSA reference information.
2.2	01 Aug 2010	DO	Implements Minor/Major training tracks
2.3	18 Feb 2014	WY	General Update
2.31	06 Jun 2014	BN	General/Maintenance update, fixed broken links

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Introduction

"While a controller cannot see immediately the development of every situation where a safety alert must be issued, the controller must remain vigilant for such situations and issue a safety alert when the situation is recognized." (FAA Order 7110.65, Air Traffic Control).

Welcome to Radar! As you've undoubtedly discovered, virtual Air Traffic Control can place you into stressful and incredibly exciting situations. Situations which are dynamic and force you to think on your feet quickly become the norm here in ZBW. You've learned the basics of the Delivery, Ground, and Local Control positions, and have learned the even more valuable skill of knowing where to go in order to find information and work problems out on your own.

With the fundamentals behind you, it's time to add another element to the Air Traffic Control puzzle, altitude. As an Approach Controller, you will be working TRACON (Terminal Radar Approach CONtrol) facilities, where you will be responsible for numerous airborne aircraft. As quoted on the front page of this syllabus, above all else, your number one priority at all times is ensuring separation of aircraft under your control.

Just as with the prior syllabi (and associated certifications), the training staff will expect you to complete most of the "book work" on your own. We will provide you with the fundamentals of radar control positions, so that you can gain the experience to remain vigilant and recognize potential safety and separation issues early on, and successfully earn your certification.

Radar Control positions resemble putting together a jigsaw puzzle, while all the pieces of the puzzle remain moving. It's a very dynamic 4-dimensional puzzle which can be frustrating at times, but in the end, will be one of the most rewarding positions you can work on the VATSIM network.

As always, if you have any questions, please feel free to ask the training staff. We're here to assist you. Welcome to the "real" (simulated) scopes, and prepare for an exciting journey.

Regards,

Rich Bonneau (BU)
Air Traffic Manager
Boston ARTCC (vZBW)

1 Approach Control Fundamentals

1.1 Responsibilities

1.1.1 FAAO 7110.65 2-10-2: Terminal Radar/Nonradar Team Position Responsibilities

1.2 Review of Airspace / Class C TRACON SOPs

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1.2.2 G90 TRACON SOP

1.2.3 Y90 TRACON SOP

1.3 ATC Phraseology

1.3.1 FAA Pilot / Controller Glossary

1.4 Radar Identification / Verification

1.4.1 FAAO 7110.65 5-3-2: Primary Radar Identification Methods

1.4.2 FAAO 7110.65 5-3-3: Beacon Identification Methods

1.4.3 FAAO 7110.65 5-2-17: Validation of Mode C Readout

1.4.4 FAAO 7110.65 5-2-18: Altitude Confirmation - Mode C

1.4.5 FAAO 7110.65 5-2-9: VFR Code Assignments

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2.1.2 FAAO 7110.65 5-5-4: Minima

2.1.3 FAAO 7110.65 4-5-1: Vertical Separation Minima

2.2 Transfer of Control

2.2.1 FAAO 7110.65 5-4-2: Terms

2.2.2 FAAO 7110.65 5-4-3: Methods

2.2.3 VRC Documentation or ASRC Documentation

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2.2.5 FAAO 7110.65 5-4-7: Point Out

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2.3.1 FAAO 7110.65 5-7: Speed Adjustment

2.4 Safety Alerts and Advisories

2.4.1 FAAO 7110.65 2-1-6: Safety Alert

2.5 Phraseology / Vectors

2.5.1 FAAO 7110.65 5-6: Vectoring

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3.1 Departure Clearances

3.1.1 FAAO 7110.65 4-3-2: Departure Clearances

3.2 Types of Departure Procedures

3.2.1 Introduction to IAP Symbols

3.2.2 Terminal Procedures Publication Symbols

3.2.3 FAA-H-8083-16 Chapter 2: En Route Operations

3.2.4 Vectored

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3.2.5 Pilot NAV

- Example: WHITE RIVER ONE DEPARTURE

3.2.6 RNAV

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3.2.7 Obstacle

- Example: TAKE-OFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

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3.3.2 FAAO 7110.65 7-6: Basic Radar Service to VFR Aircraft - Terminal

3.3.3 FAAO 7110.65 7-8: Class C Service - Terminal

3.3.4 AIM Chapter 3-2-4: Class C Airspace

3.3.5 FAAO 7110.65 7-5: Special VFR (SVFR)

3.3.6 FAAO 7110.65 7-6: Basic Radar Service to VFR Aircraft- Terminal

3.3.7 SkyVector

3.4 Nontowered Airports

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4.2.1 AIM Chapter 5-4-1: Standard Terminal Arrival (STAR), Area Navigation (RNAV) STAR, and Flight Management System Procedures (FMSP) for Arrivals

4.2.2 FAA-H-8261-1A Chapter 4: Arrivals

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4.3.1 STAR

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4.4 Instrument Approach Procedures (IAP)

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- Example: LOC RWY 26 (PSF)

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4.5.3.1 FAAO 7110.65 7-4-5: Charted Visual Flight procedures (CVFP)

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4.9 Missed Approach Procedures

4.9.1 FAAO 7110.65 4-8-9: Missed Approach

4.9.2 AIM Chapter 5-4-21: Missed Approach

When you have reviewed the previous sections and are comfortable with the information you have been provided, you may: ***Request the ZBW Approach (APP) exam here***

Upon passing, including successful completion of exam corrections, you will begin training with a mentor until basic competency is demonstrated during an Over The Shoulder (OTS) exam.

Once basic competency is demonstrated you will be assigned the ***VATUSA Approach Control (S3) exam.***

Upon passing, including successful completion of exam corrections, you may be promoted to the rating of Approach Controller (S3).

- *VATUSA References*
  - VATUSA Training Resource Center
  - VATUSA S3 Training Page
  - VATUSA S3 Advanced Topics

Note: In the event of a discrepancy between the above VATUSA training material, and that material taught at ZBW, the material taught locally (ZBW) will take precedence.

5 *Students enrolled in the Major Track may now proceed to the next section.Advanced Approach Control*

5.1 Review of A90 TRACON SOP

5.1.1 A90 TRACON SOP

5.2 Class B Radar Services to VFR Traffic

5.2.1 ZBW VFR Tutorial

5.2.2 FAAO 7110.65 7-6: Basic Radar Service to VFR Aircraft - Terminal

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5.2.4 AIM Chapter 3-2-3: Class B Airspace

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5.12.1 AIM Chapter 5-4-9: Procedure Turn

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5.12.3 Procedure Turn

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- Example: ILS RWY 24 (ACK)

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- Example: LOC/DME BC RWY 4 (BHB) - From BST

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5.13 Alternate Missed Approach Procedures

5.13.1 Issued when published directions would cause a hazard to safety

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5.15 VFR On Top

5.15.1 FAAO 7110.65 7-3: VFR-on-top

5.15.2 AIM Chapter 5-5-13: VFR-on-top

5.16 Emergencies

5.16.1 VATUSA General Division Policy

5.16.2 FAAO 7110.65 10-2: Emergency Assistance

5.16.3 VATSIM Code of Conduct - Paragraph (b)8: Pilot's Conduct

5.17 Review of Letters of Agreement (LOA)

5.17.1 Cleveland: ZBW / ZOB Letter of Agreement

5.17.2 Montreal: ZBW / YUL Letter of Agreement

5.17.3 New York: ZBW / ZNY Letter of Agreement

5.17.4 Washington: ZBW / ZDC Letter of Agreement

When you have reviewed the previous sections and are comfortable with the information you have been provided, you may: ***Request the ZBW Advanced Approach exam here***

Upon passing, including successful completion of exam corrections, you will begin training with a mentor and/or instructor until basic competency is demonstrated during an Over The Shoulder (OTS) exam.

Upon passing, you may be awarded your Class B Approach certification.