

ADVANCED SIMULATION TRAINING

Collaborative Workgroup
Recommendations

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Advanced Simulation Training (AST)

General

Advanced simulation training (AST) is designed to evaluate, develop, and enhance the trainee's ability to apply the ATC knowledge and skills required to certify with minimal On-The-Job Training (OJT) time.

AST requires high-fidelity simulation to be used. High-fidelity simulation approximates most of the sensory experiences with the actual operation and includes AT Coach, Enhanced Target Generator (ETG), Test and Training Lab (TTL), etc.

Upon successfully completing AST, the trainee is allotted and must complete twenty percent of the facility's OJT time allocation on the first position/sector in accordance with the 3120.4. On subsequent positions/sectors the trainee is allotted and must complete ten percent of the facility's OJT time in accordance with the 3120.4. A certification skill check must be conducted on live traffic upon reaching the allotted OJT time.

A Training Review Board (TRB) may recommend removal from the AST process. In all cases, unsuccessful completion of AST shall result in the trainee returning to legacy OJT in accordance with 3120.4.

Types of AST

A. Individual Employee Transfer (IET)

1. Training designed to evaluate, develop, and enhance the trainee's ability to apply the ATC knowledge and skills required to certify on individual or normally combined positions with minimal OJT time.

B. Airspace Relocation (AR)

1. Training designed to prepare the trainee's ability to apply the ATC knowledge and skills required to certify on individual or normally combined positions with minimal OJT time.

EXAMPLE: Control of airspace is being relocated from facility A to facility B. With approval as outlined in this document, facility B may conduct training utilizing AST for the newly relocated airspace.

Definition/Requirements

A. Integrated Sector Simulation (ISS)

1. Multiple sectors actively engaged in simulation training simultaneously.
2. The purpose of ISS is to recreate the control room operations as they will be configured for live traffic. Multiple controllers/trainees are engaged in a simulation where they must work together to ensure the safety and separation of air traffic.

B. ISS Requirements

1. Multiple positions working with adjacent internal positions.
2. Interaction with live controllers on individual and routinely combined positions that interact regularly.
3. Split and combine position(s) during simulation.
4. Receive and provide relief briefings during active simulation while aircraft occupy the sector.
5. ISS may not be used during the final evaluation.

AST Prerequisite

A. Prior to implementing AST at a facility, the following shall occur:

1. The ATM and FacRep shall receive a briefing on the AST process by at least one (1) FAA and one (1) NATCA representative of the AST Collaborative Workgroup or their mutually agreed upon designee(s).
2. All AST scenarios must be reviewed and approved by one (1) FAA and one (1) NATCA representative of the AST Collaborative Work Group (CWG) or their mutually agreed upon designee(s).

AST Premium Pay

Premium pay shall be paid at the rate of ten percent (10%) of the applicable hourly rate of Base Pay times the number of hours and portions of an hour during which the employee is providing on-the-job training (OJT) while the employee receiving training is directly involved in advanced simulation.

Individual Employee Transfer (IET)

A. General

1. A realistic scenario utilizing multiple RPOs or computer-generated voice variations.
2. Scenarios must include position relief briefings, opening and closing sectors/positions, combined sectors/positions, and mid-shifts procedures.
3. AST will be completed on individual or routinely combined positions.
4. Scenario development, evaluation, and grading will be in accordance with this document and the 3120.4R.
5. Simulated OJT will be conducted in accordance with the 3120.4R.
6. Must be a CPC-IT, OS-IT or TMC-IT (Trainee) to participate.
 - a. The trainee must have been certified and maintained currency for 52 weeks during the last 18 months in a like-type facility (TRACON or En Route)
 - b. The trainee must have transferred from a facility that is the same, higher, or no more than two levels below the facility's current level. (e.g. level 9 to a level 11)
7. A trainee may withdraw from AST-IET at any time. The withdrawal shall not constitute a request to withdraw from the facility's training program or be related to the NEST process provisions.

B. Training Team

1. The Training Team must consist of the following:
 - a. Training Team lead (an OS that is familiar with the positions)
 - b. Two (2) instructors. One must be an FAA OJTI and must provide a majority of the instruction. One instructor may be a contract instructor so long as they have held facility certification within the previous three years.
 - c. The trainee
2. The Training Team must:
 - a. Meet at a minimum of once per week to discuss the trainee's progress
 - b. Have open communication among all Training Team members to ensure that training plan objectives are being met
 - c. Conduct all of the training

C. Training Plan

1. Each trainee must have a training plan that includes:
 - a. Training objectives
 - b. Training Team members
 - c. Hours of simulations required before a Certification Skill Check (CSC) on live traffic can be conducted

D. Performance Assessment (PA)

1. Be reviewed by the OS with the trainee immediately and include feedback and recommendations for improvement.
2. The OS must conduct a Training Team meeting, as soon as practicable, to discuss the PA.
3. PA will be completed at 25, 50, 75, 100% of the target hours.
4. Performance assessments shall not be counted toward the target hours.

E. Process

1. Required OJF provides an opportunity for the Training Team to familiarize the trainee with the position through observation of adjacent sectors/positions, monitoring live traffic, sharing information about sector nuances, and discussing "what-if" situations etc. OJF may be accomplished remotely or via FALCON.
2. The simulation time (instructional, recovery, and pre-evaluation) shall be equal to or greater than the position/sector OJT minimum hours as defined in the local training order. It shall not normally exceed the target hours.

Example - Final North Sector:

- Facility OJT hour allocation Minimum Hours 50, Target Hours 100
- AST-IET scenario allotment equals between 50-100 hour

F. Simulation Schedule

1. 0-34% of target hours - instructional, performance assessments, pre-evaluation, and recovery scenarios.
2. 35% of target hours - A simulation evaluation will be conducted.
3. 36-59% of target hours - ISS must be used for instructional, performance assessments, pre-evaluation, and recovery scenarios.
4. 60% of target hours – A simulation evaluation will be conducted utilizing ISS.
5. 61-100% The parties at the local level will collaboratively determine the use of ISS from 61-100% of the target hours.
6. A final simulation evaluation will occur on or prior to 100% of the target time being completed.

G. Evaluations

1. Simulation evaluations must occur on individual or routinely combined position(s).
2. Evaluation times shall not be counted toward the target hours.
3. A pre-evaluation scenario must be completed prior to an evaluation. Pre-evaluation scenarios count towards the target hours.
4. Three simulation evaluations will be achieved to complete AST.
 - a. Initial Simulation Evaluation
 - i. A passing score is defined as at least 80%.
 - ii. If a passing score is not achieved, a second evaluation shall be conducted. The average score between the two evaluations must be at least 80% to continue AST.
 - iii. If the average score is less than 80%, AST training is suspended, and a TRB must be conducted.
 - b. Integrated Sector Simulation (ISS) Evaluation
 - i. An ISS simulation evaluation will be conducted at 60% of the target OJT hours.
 - ii. A passing score is defined as at least 80%.
 - iii. If a passing score is not achieved, a second evaluation shall be conducted. The average score between the two evaluations must be at least 80% to continue AST.
 - iv. If the average score is less than 80%, AST training is suspended, and a TRB must be conducted.
 - c. Final Simulation Evaluation
 - i. A 110% complexity and/or volume scenario must be utilized during the final pre-evaluation simulation.
 - ii. A 100% complexity and/or volume scenario must be utilized during the final simulation evaluation.
 - iii. Be conducted following a Training Team meeting where a majority of the team members recommend a final evaluation simulation. The OS must be among the majority.
 - iv. All training objectives must be completed prior to conducting the final evaluation scenario.
 - v. The facility's minimum OJT hours for the sector/position must be met or exceeded prior to conducting the final evaluation scenario.
 - vi. A passing score is defined as at least 80%.
 - vii. If a passing score is not achieved, a second evaluation shall be conducted. The average score between the two evaluations must be at least 80% to continue AST.
 - viii. If the average score is less than 80%, AST training is suspended, and a TRB must be conducted.

H. Simulation Schedule Table

| Target Hours Percentage | Type of Simulation | Volume Percentage |
|-------------------------|---|-------------------|
| 0-24 | Instructional, Recovery | 50-80 |
| 25 | Performance Assessment | |
| 26-34 | Instructional, Recovery, Pre-evaluation | |
| 35 | Initial Evaluation | 70 |
| 36-49 | Instructional, Recovery | 70-90 |
| 50 | Performance Assessment | |
| 51-59 | Instructional, Recovery, Pre-evaluation | |
| 60 | ISS Evaluation | 80 |
| 61-74 | Instructional, Recovery, Pre-evaluation (ISS may be used) | 80-110 |
| 75 | Performance Assessment | |
| 76-99 | Instructional, Recovery, Pre-evaluation (ISS may be used) | |
| 100 | Final Evaluation | 100 |

*Note: The final evaluation may be conducted at any time when requirements in Section G are complete

I. Post AST Certification

1. Upon successfully completing AST, the trainee is allotted and must complete twenty percent of the facility's OJT time allocation on the first position/sector in accordance with the 3120.4. On subsequent positions/sectors the trainee is allotted and must complete ten percent of the facility's OJT time in accordance with the 3120.4. A certification skill check must be conducted on live traffic upon reaching the allotted OJT time.
2. Certification Skill Checks (CSC)
 - a. If a CSC does not result in certification, a Training Team meeting must be conducted as soon as possible to determine a future course of action.
 - b. The TRB may recommend removal from the AST process.
3. Upon certification, the trainee must complete 20 hours of proficiency time prior to resuming AST for their next sector/position.

Airspace Relocation (AR)

A. General

1. Prerequisite and classroom training shall be in accordance with the local training order of the facility where the airspace is being relocated from.
2. A realistic scenario utilizing multiple RPOs or computer-generated voice variations.
3. Scenarios must include position relief briefings, opening and closing sectors/positions, combined sectors/positions, and mid-shifts procedures.
4. AST will be completed on individual or routinely combined positions.
5. Scenario development, evaluation, and grading will be in accordance with this document and the 3120.4R.
6. Simulated OJT will be conducted in accordance with the 3120.4R.

B. Training Team

1. The Training Team must consist of the following:
 - a. Training Team lead (an OS that is familiar with the positions)
 - b. Two (2) instructors. One must be an FAA OJTI and must provide a majority of the instruction. One instructor may be a contract instructor so long as they have held facility certification within the previous three years.
 - c. The trainee
2. The Training Team must:
 - a. Meet at a minimum of once per week to discuss the trainee's progress
 - b. Have open communication among all Training Team members to ensure that training plan objectives are being met
 - c. Conduct all of the training

C. Training Plan

1. Each trainee must have a training plan that includes:
 - a. Training objectives
 - b. Training Team members
 - c. Hours of simulations required before a Certification Skill Check (CSC) on live traffic can be conducted

D. Performance Assessment (PA)

1. Be reviewed by the OS with the trainee immediately and include feedback and recommendations for improvement.
2. The OS must conduct a Training Team meeting, as soon as practicable, to discuss the PA.
3. PA will be completed at 25, 50, 75, 100% of the target hours.
4. Performance assessments shall not be counted toward the target hours.

E. Process

1. Required OJF provides an opportunity for the Training Team to familiarize the trainee with the position through observation of adjacent sectors/positions, monitoring live traffic, sharing information about sector nuances, and discussing "what-if" situations etc. OJF may be accomplished remotely or via FALCON.
2. The number of (instructional, pre-evaluation, and evaluation) scenarios shall be equal to but not less than 80% of the position/sector target hours and shall not normally exceed the target hours.

Example - Final North Sector:

- Facility OJT hour allocation Minimum Hours 50, Target Hours 100
- Scenario allotment equals 80-100 hours

3. Facility Collaborative Workgroup (CWG) Established

- a. A CWG will be formed to facilitate the establishment of the AST process at the facility the airspace is being relocated to
- b. The CWG will address site-specific issues not contained in this document

F. Simulation Schedule

1. 0-35% of target hours - instructional, performance assessments, pre-evaluation, and recovery scenarios.
2. 35% of target hours - A simulation evaluation will be conducted.
3. 36-59% of target hours - ISS must be used for instructional, performance assessments, pre-evaluation, and recovery scenarios.
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1. Simulation evaluations must occur on individual or routinely combined position(s).
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 - a. Initial Simulation Evaluation
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 - b. Integrated Sector Simulation (ISS) Evaluation
 - i. An ISS simulation evaluation will be conducted at 60% of the target OJT hours.
 - ii. A passing score is defined as at least 80%.
 - iii. If a passing score is not achieved, a second evaluation shall be conducted. The average score between the two evaluations must be at least 80% to continue AST.
 - iv. If the average score is less than 80%, AST training is suspended, and a TRB must be conducted.
 - c. Final Simulation Evaluation
 - i. The trainee must complete 80% of the target hours to be eligible for a final simulation evaluation.
 - ii. A 110% complexity and/or volume scenario must be utilized during the final pre-evaluation simulation.
 - iii. A 100% complexity and/or volume scenario must be utilized during the final simulation evaluation.
 - iv. Be conducted following a Training Team meeting where a majority of the team members recommend a final evaluation simulation. The OS must be among the majority.
 - v. All training objectives must be completed prior to conducting the final evaluation scenario.
 - vi. The facility's minimum OJT hours for the sector/position must be met or exceeded prior to conducting the final evaluation scenario.
 - vii. A passing score is defined as at least 80%.
 - viii. If a passing score is not achieved, a second evaluation shall be conducted. The average score between the two evaluations must be at least 80% to continue AST.
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