

Flight Operations Directorate

Flight Integration - Training Branch

JSC Crew Training Overview

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3 Phase Spaceflight Training Concept

Generic

Flight Specific

BASIC

ADVANCED

Flight Controller & Astronaut Training Curriculum

Content

- Vehicle systems
- Displays & Controls
- Operational Concepts
- Basic procedures

<u>Media</u>

- Classroom lessons
- Training manuals
- Computer and Web Based Training
- Part-task training

Content

- Skills-based Training
- Nominal Operations
- Malfunctions
- System Interaction

Media

- Part-task training
- Full fidelity simulation training
- Standalone Simulations
- Mockups

Content

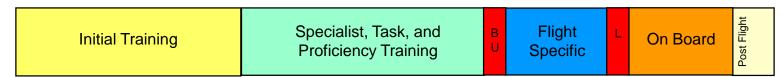
- Team Training
- Flight specific training
- Nominal and malfunctions
- Media
- Full fidelity simulation training
- Standalone Simulations
- Integrated simulations
- Mockups





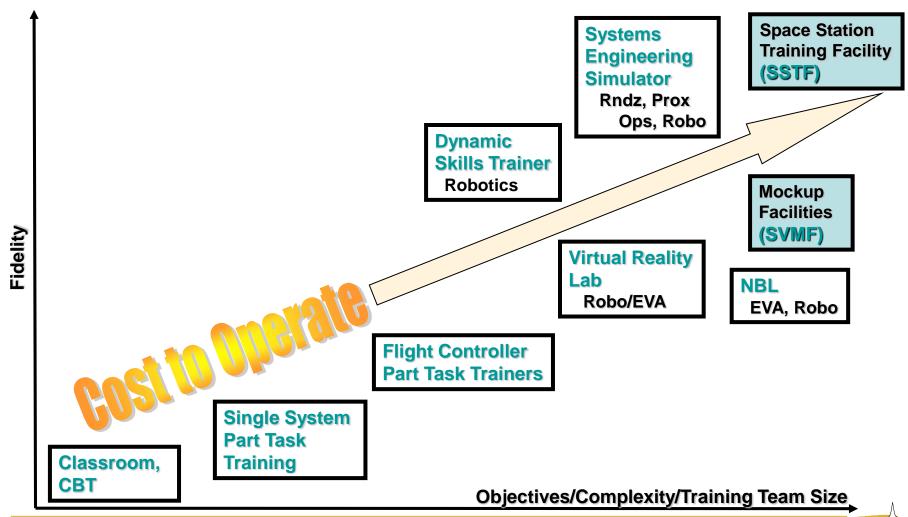
Crew Training Approach

- The amount and depth of the Crew training is based on their assigned qualification level
- User
 - Utilize systems to safely live on ISS
- Operator
 - Nominal and maintenance tasks
 - Off-nominal with immediate safing
 - All User tasks
- Specialist
 - Off-nominal tasks with ground help
 - All Operator tasks





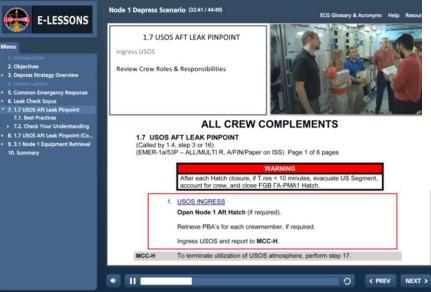
Training Facility Selection





Online Training Library







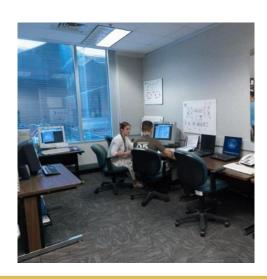


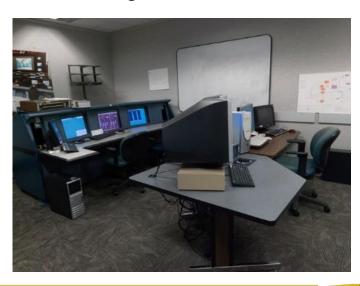


Part Task Trainers

- PTT Part Task Trainer
 - Single System nominal and off nominal instruction
 - Procedure execution and display navigation skills
- FCPTT Flight Controller Part Task Trainer
 - Multi-system, Integrated scenario training
 - Team coordination and communication in 'mini-flight control room'









Space Station Training Facility

- Full scale, multi-system integrated scenarios
- Simulated crew and crew station mockups

Full team coordination and communication in training Flight

Control Rooms (FCRs)



Space Vehicle Mockup Facility

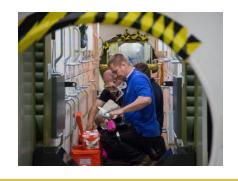
- Full scale ISS mockups
- Routine Ops / Day in the Life training
- Emergency response scenarios
- Payload racks and hardware training













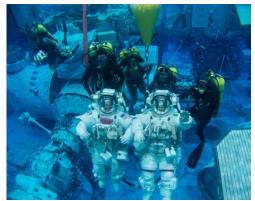


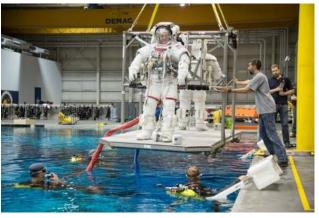
Neutral Buoyancy Lab

- Full scale ISS mockups / Truss segments
- Extra-vehicular Activity (EVA) Training
- Commercial Crew / Orion recovery















Medical / Physical Training









Ellington Airfield Operations







