Meeting Learning Needs At The Aerospace Corporation

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The Aerospace Corporation

- Created in 1960 as a nonprofit corporation working for or in the interest of the Government in areas of science and technology critical to national security.
- Operates a Federally Funded Research and Development Center (FFRDC) in the planning, development, and acquisition of space and launch systems for the U.S. Government.
- Leader in the development of U.S. military space systems.
- Works for DOD and non-DOD clients.
- Employs ~3000 people including ~2000 technical staff (28% Ph.D., 42% MS).
- Principal tasks: advanced planning, system engineering and integration, readiness verification, technical oversight of contractors, and anomaly resolution.
The Role of The Aerospace Institute

Information Resources
- Library Services
- Knowledge Management
- Records Management/Archives

Learning Programs and Products
- Critical Technical Skills Development
- Computer Skills Training
- Multimedia Learning Products
- Management/Business Skills Development

Learning Resources and Services

External Programs and Services
- University Affiliates Program
- Sponsored Conferences
- The Aerospace Press

Employee Development Systems

Your Average Young Employee Wondering How To Pursue Career Learning at Aerospace

Technical Staff

Administrative Staff

Support Staff

Technical Competency Development System

Corporate Business Competency Development System

Office Competency Development System

Management and Leadership Competency Development System
**Space Systems Architecting, Acquisition, and Engineering**

- Developing System Innovations (SPI) Core System
- New Concepts for Space Systems Design
- System Life Cycle Management
- Space Systems Life Cycle Engineering
- Space Systems Engineering Management

**Space Technologies and Engineering Disciplines**

- **Communication Systems Engineering**
  - Network Architecture, Design, and Applications
  - Microwave Antenna Design and Applications
  - Microwave Principles and Applications
  - Microwave Optics System Design
  - Microwave System Design, Simulation, and Testing
  - Space Communication System Components
  - Traveling Wave Tube Principles

- **Computation Systems Engineering**
  - Object-Oriented Concept and Applications

- **Space and Technical Systems Engineering**
  - New Technology Trends - Computer Systems/Technologies
  - New Technology Trends - Communication System Technologies

- **Engineering Systems Analysis**
  - Multi-Disciplinary Systems Design
  - Space/Working Conditions, Human Factors, and Integration (IFS) for Attitude Determination
  - Critical Analysis and Reasoning
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**Technical Teaming and Systems Thinking**

- **Systems Engineering Teams**
  - Understanding Teams for Technical Performance
  - Developing and Testation Skills
  - Decision Making

**Aerospace Systems Architecture and Engineering Certificate Program**

- **Core Course** - Aerospace Roles in Space Systems Architecting, Acquisition, and Engineering
  - Core Course

- **Systems Engineering Teams Course**
  - Core Course

- **ASAP**
  - Internship/OJT Programs

- **SSEP**
  - Internship/OJT Programs

**Skills-Reinforcement Segment**

- "ASAE" Certificate
Software Acquisition Versus Software Engineering

- **Software Acquisition**
  - The process (i.e., the set of policies, procedures, methodologies, tools, etc.) used by the Government to acquire software

- **Software Engineering**
  - The process (i.e., the set of policies, procedures, methodologies, tools, etc.) used by the developer to build software

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Software Acquisition (42 hour course)

- DoD Acquisition Environment
- Software Process Definition and Improvement
- Contractor Capability Evaluation
- Software Risk Management
- Joint Technical Architecture
- Software Cost and Schedule Estimation
- COTS and Reuse Software
- Software and System Life Cycle Models
- Software Development Product-Oriented Activities
- System Metrics