

LEVELS OF PROJECT LEADERSHIP

The levels of project leadership are guideposts as to when during an individual’s career a course can be taken. Individuals should attend courses as they see fit to enhance competencies within their current positions, or for future development requirements.

**Examples of Positions
(Read down for suggested courses)**

Team Practitioners/ Technical Engineers	Subsystem Leads	Project Managers/ Project Systems Engineers	Program Managers/ Chief Engineers
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CORE COURSES

The core curriculum provides fundamental knowledge for NASA’s technical workforce.

<ul style="list-style-type: none"> • Foundations of Aerospace at NASA 	<ul style="list-style-type: none"> • Project Management and Systems Engineering 	<ul style="list-style-type: none"> • Advanced Project Management and Advanced Systems Engineering • International Project Management* 	<ul style="list-style-type: none"> • Executive (TBD)
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IN-DEPTH COURSES

These courses are intended to provide in-depth, detailed, and supplemental knowledge and skills for achieving current and future job requirements and augment the core curriculum.

PROGRAM/PROJECT MANAGEMENT

Program and project management (P/PM) training courses are designed to promote the conceptual and practical use of modern P/PM theories and applications throughout all phases of the NASA project life cycle.

<ul style="list-style-type: none"> • Project Scheduling • Project Planning Analysis and Control • Risk Management 	<ul style="list-style-type: none"> • Assessing Project Performance • Orbital Debris Mitigation and Reentry Risk Management** • Performance-Based Statement of Work • Project Acquisition Workshop 	<ul style="list-style-type: none"> • Analysis of Alternatives • International Project Management* • Passing the PMP Examination • Strategic Thinking for Project Success 	<ul style="list-style-type: none"> • Analysis of Alternatives (EXEC)
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	<ul style="list-style-type: none">• Project Review Processes and Strategies• Risk Management II• Scheduling and Cost Control		
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**Course can be taken by anyone in a role that deals with international project management issues.*

***Also listed under Engineering (same course).*

EARNED VALUE MANAGEMENT

The Academy provides extensive training in earned value management (EVM) to ensure that NASA project practitioners understand the uses of this tool for measuring and assessing project performance.

- Understanding EVM
- Integrated Baseline Review
- Earned Value Management Systems
- Scheduling Virtual Learning Lab
- Control Account Manager

- Advanced EVM

COMMUNICATION AND LEADERSHIP

These courses are designed to help internalize the skills that help facilitate open and continuous communications with colleagues, develop personal leadership qualities, and improve negotiation skills.

- Communicating Technical Issues
- Negotiations
- Team Membership
- Technical Writing for the NASA Engineer

- Crucial Conversations
- Team Leadership
- Project Management Leadership Lab

- Leading Complex Projects

- Executive Presence and Skills
- *Consider taking agency leadership courses offered by OHCM.*

SYSTEMS ENGINEERING

The Academy's systems engineering curriculum provides training in systems engineering processes and tools, and promotes experience-driven technical leadership development.

<ul style="list-style-type: none"> • Fundamentals of Systems Engineering • Life Cycle, Processes, and Systems Engineering • Requirements Development and Management • Requirements Development and Management—Team 	<ul style="list-style-type: none"> • Concept Exploration and Systems Architecture • Decision Analysis • Developing and Implementing SEMP • Exploration and Space Operations • Mars Mission and System Design Lab • Space Launch Transportation Systems • Space Systems V & V • Science Mission Systems Design and Ops Course/Lab • Transition, Product Delivery, and Mission Ops 		
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ENGINEERING

The Academy’s engineering courses focus on engineering essentials, critical thinking, lessons learned, and space systems to strengthen NASA-specific engineering expertise and capabilities.

<ul style="list-style-type: none"> • Essentials of Astronomy for Engineers • Introduction to Aeronautics • Introduction to Green Engineering • NASA Missions: Engineering 	<ul style="list-style-type: none"> • Creativity and Innovation • Design for Manufacturability and Assembly • Earth, Moon, and Mars • Orbital Debris Mitigation and Reentry Risk Management** 		
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Exploration	<ul style="list-style-type: none">• Planetary Protection• Seven Axioms of Good Engineering• Space System Development: Lessons Learned		
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EXAMPLES OF KNOWLEDGE-SHARING ACTIVITIES

These are only examples; each center should identify experiences specific to their needs.

- Obtain a mentor
- Demonstrate working knowledge of agency policy documents
- Benchmark and/or gather best practices to incorporate in your team's project
- Attend a technical forum
- Join national and international affiliations or technical bodies (e.g., INCOSE, PMI)

- Write and present a technical paper at an internal learning event
- Attend a Knowledge Forum
- Attend a non-NASA scientific or technical forum
- Actively document and share lessons learned from your project/program

- Write and propose a technical paper for presentation at a forum
- Lead a learning session at your center or directorate
- Write and facilitate a case study

- Become a mentor
- Conduct storytelling sessions
- Instruct or become a guest speaker at Academy courses
- Submit an article for possible publication in *ASK Magazine* or *ASK the Academy* newsletter