Program Description

**Systems Engineering** is an interdisciplinary field of engineering that focuses on how to design and manage complex engineering systems over their life cycles. System engineers are typically responsible for ensuring system requirements are met and systems are reliable. In addition, they must manage system logistics, coordinate different teams, test and evaluate, while also maintaining system(s) to ensure successful system development, design, implementation, and ultimately the decommission of a system. These job duties become more difficult when dealing with large or complex projects. System engineers also deal with work-processes, optimization methods, and risk management tools during projects. Their job usually overlaps technical expertise with human-centered disciplines such as control engineering, industrial engineering, software engineering, organizational studies, and project management. Systems engineering ensures that all likely aspects of a project or system are considered, and integrated into a whole.

**Sample Occupations**
- Systems Engineer
- Industrial Engineer
- Operations Researcher
- IT Systems Engineer
- Safety Engineer

**Sample Work Settings**
- Industrial Engineering
- Cognitive Systems Engineering
- Configuration Management
- Control Engineering
- Interface Design
- IT Systems Engineering
- Mechatronic Engineering
- Scheduling
- Enterprise Systems Engineering
- Reliability Engineering

**Job Search & Career Planning Resources**

Use Career Center online resources (GWork, GoingGlobal, Vault)
Keywords: Industrial, Systems, Operations, Risk Management

**Top Employer in this field:**
- Decisive Analytics
- Lockheed Martin
- Systems Engineering Services Corporation
- MITRE Corporation
- Delta Systems Engineering
- Power Systems

**Job Search Sites**

Engineering Central: [www.engcen.com](http://www.engcen.com)
Engineering Jobs: [www.engineerjobs.com](http://www.engineerjobs.com)
Graduating Engineer: [www.graduatingengineer.com](http://www.graduatingengineer.com)
Engineering Careers: [www.thecareerengineer.com](http://www.thecareerengineer.com)

**Professional Organizations**

Tips: Join professional organizations to network and find out more about your field.
- IAENG Society of Industrial Engineering [http://www.i-aeng.org/ISINDE.html](http://www.i-aeng.org/ISINDE.html)