







# **Engineering and Technology Directorate** at NASA's Goddard Space Flight Center







**NASA's Goddard Space Flight Center** is interested in making a connection with students that are interested in the various disciplines of Engineering for our NASA Internship Opportunities.

As a leader in engineering and technology, Goddard:

- Developed more planetary instruments than any other institution on Earth
- Led space communications since the inception of human space flight
- Has over 40 years of experience managing the development of NOAA weather satellites
- Built and operated more research satellites dedicated to the study and protection of our home planet than any other institution in the World

But that's just the beginning! Goddard is embarking on great missions and seeking fresh ideas!

Don't miss out on the possibility of becoming a part of the NASA team and developing job skills that could take you farther than you ever imagined. NASA is recognized as one of the best places to work in the Federal government. The opportunities are "**Out of this World**!" Visit the Engineering website at: http://etd.gsfc.nasa.gov for more information about us.

# **Diversity and Inclusion at NASA**



**Uur commitment**: We promote the principles of diversity and inclusion in an effort to identify the best talent, achieve scientific and engineering excellence, and ultimately realize mission success.

Our Programs: We support a diverse, welcoming, inclusive and equitable NASA community through Special Emphasis Programs and Employee Resources Groups that are focused on nine critical segments of our workforce:

ETD is committed to cultivating and maintaining a work environment of trust, respect, and opportunity for all members of its diverse workforce. ETD's work environment will enable people to achieve their individual success and maximize their personal contributions while fulfilling the Directorate's objective of product excellence. ETD promises a diverse workplace which will expand horizons to include exciting projects, expand space technologies, and make us the premier provider of space systems.





# **Goddard's Engineering and Technology Directorate (ETD)**

#### **Mechanical Systems Division (MSD)**

(Code 540)

Provides mechanical systems leadership and technology in the discipline areas of materials, structural dynamics and stress analysis, computer aided design, composites, electromechanical/ powered mechanisms, thermal and heat transport systems, contamination, specialized coatings, manufacturing, and integration and environmental test facilities for the verification and validation of space and Earth science and exploration missions and support systems.

https://etd.gsfc.nasa.gov/540/index.php

### Instrument Systems & Technology Division (ISTD)

(Code 550)

Provides leadership and vision in developing and implementing technology programs to identify new and emerging instrument technology requirements. The technologies developed range from subsystems such as optics, cryogenics, detectors, asers, or microwave elements to complete instruments such as hyper-spectral imagers, LIDAR systems, or microwave systems aimed at satisfying needs and enabling future space and Earth science missions, reducing mission cost, enhancing instrument performance, and/or simplifying instrument design and development.

https://etd.gsfc.nasa.gov/550/index.php

## **Electrical Engineering Division (EED)**

(Code 560)

Provides expert leadership in the design, development, and verification of space avionics systems including electronics parts and radiation effects, microelectronics and signal processing, electrical power processing, command and data handling, communications and tracking, end-to-end data transport, flight harnessing, integration and test, and electrical ground support equipment for NASA space missions and science instruments.

https://etd.gsfc.nasa.gov/560/index.php

# Software Engineering Division (SED)

(Code 580)

Provides leadership for end-to-end software engineering solutions and technology to both NASA's Earth science, space science, exploration missions, and external customers in the areas of flight, ground, science analysis software systems, mission operations, and on-orbit support.

https://etd.gsfc.nasa.gov/580/index.php

# Mission Engineering & Systems Analysis Division (MESA)

(Code 590)

Provides leadership and expertise in mission systems engineering, mission design, navigation, propulsion, attitude control, attitude control sensor and actuator technologies, and space systems protection technologies through the entire life cycle of NASA's Earth science, space science, and exploration missions.

https://etd.gsfc.nasa.gov/590/index.php

To learn more about ETD, visit: http://etd.gsfc.nasa.gov/ or contact us at 301-286-6218 To learn more about Goddard, visit: https://www.nasa.gov/goddard .....



Goddard's Engineering and Technology Directorate (ETD) is keenly interested in increasing all levels of our Engineering workforce (Senior/Experienced, Junior/Recent Graduates, Pathways Intern/Co-Op Students, and OSTEM Intern Students) in the following discipines:

#### Aerospace • Mechanical • Electrical • Computer/Software • Computer Science • Artificial Intelligence • Chemical • Physics • Math • Optics

Examples of the Engineering positions that we offer are:

**Active/Passive Radiomenter Instrumentation** (Code 550) Analog/Mixed Signal Design (Code 560) Avionics Packaging (Code 560) Chemical (Code 540) **Coatings/Contamination** (Code 540) **Composites/Composites Design** (Code 540) Cyber Security/Information Science (Code 580) **Cryogenics/Low Temp Physics** (Code 550) **Detector Systems** (Code 550) EEE Parts (Code 560) Electrical Ground Support Equipment (Code 560) Electrical Systems (Code 560) **Electromechanical** (Code 540) Electronic Parts (Code 560) Electro-Optics/Lasers (Code 550) EMI/EMC (Code 560) Fiber Optics (Code 560) Flight Harness (Code 560) Flight/Ground Data Systems Software (Code 580) Flight/Ground Data Systems (Code 580) Guidance, Navigation & Control (Code 590) **Instrument Manager** (Code 505) **Instrument Systems Engineering** (Code 505) Integration & Test (Code 540/560) Lasers (Code 550) Materials (Code 540) Mechanical Design (Code 540) Mechanical Test (Code 540) **Microelectronics Development** (Code 560)

Active/Passive Radiomenter Instrumentation (Code 550) **Mission Systems Engineering** (Code 590) **Optics** (Code 550) **Optical Coatings** (Code 550) **Optical Communications** (Code 550/560) **Optical Mechanical** (Code 550) **Orbit Determination** (Code 590) **Power Systems** (Code 560) **Programmable Logic Design/FPGA** (Code 560) **Spacecraft Propulsion** (Code 590) Radar (Code 550) Radiation, Environment & Effects (Code 560) **Reconfig/Embedded Program** (Code 580) Robotics (Code 540) **Satellite Navigation** (Code 590) Satellite Propulsion (Code 590) Science Data Processing (Code 580) Software Development (Code 580) Space Mission Design (Code 590) **Spacecraft Attitude Control** (Code 590) Structural Mechanical Analysis (Code 540) Systems Analysis (Code 590) **Systems Engineering** (Code 590) Test Conductor for I&T (Code 560) **Thermal Analysis** (Code 540) **Thermal Systems** (Code 540) Vibroacoustics (Code 540) Virtual Data System (Code 580) Quantum (Code 550)

#### **Interested – Next Steps**

 To directly apply for Entry-level, Mid-level, and Senior-level positions, visit USAJobs (search NASA Goddard): http://www.usajobs.gov/





# Pathways Internship Employment Program (IEP) Opportunity at NASA

NASA is embarking on new missions and seeking fresh ideas! Don't miss out on the opportunity to join the NASA team and develop cutting edge job skills. NASA is consistently recognized as one of the best places to work in the Federal government.

Pathways Internship Employment Program (IEP) opportunities are open to current undergraduate and graduate students.

The IEP is a flexible cooperative education experience that allows students to work as federal employees while attending school.

We offer full or part-time work schedules for students attending school onat least a half-time basis (following your school's definition).

NASA accepts applications via USAJobs: http://www.usajobs.gov.

We are currently seeking students who can begin working January/June.

• Pathways Fall 2023 applications deadline: September 11-15, 2023

U.S. Citizenship is required. If you are not a U.S. Citizen, please visit: https://www.nasa.gov/feature/other-opportunities-at-nasa/

# **Office of STEM Education Internship Program at NASA**

### **One NASA System • One Submitted Application • One Amazing Opportunity**

Uther Opportunities: NASA's Office of Education sponsors seasonal opportunities including internships, fellowships, and scholarships. If you are interested in non-federal service student research-based science, technology, engineering, and math (STEM) opportunities (e.g. 10-week summer assignments) sponsored by NASA's Office of Education, apply directly at: http://intern.nasa.gov/.

- OSTEM Fall Internship Cycle: Application Deadline-February 23
- OSTEM Spring Internship Cycle: Application Deadline- August 31
- OSTEM Summer Internship Cycle: Application Deadlines- October 20th (Early Decision Track)
  & February 2nd (Rolling Decisions Track)

U.S. Citizenship is required. If you are not a U.S. Citizen, please visit the International Intern page: https://www.nasa.gov/stem/international-internships-for-students.html.

For more information on NASA, visit the following website: http://www.nasa.gov.





nasa.gov/careers

### **Engineering and Technology Directorate**

etd.gsfc.nasa.gov

### **ETD Career Path Tool**

careerpath.gsfc.nasa.gov/Code500





twitter.com/nasapeople

twitter.com/nasainterns

facebook.com/NASAinterns





#### NASA's Goddard Space Flight Center 8800 Greenbelt Road Greenbelt, MD 20771

nasa.gov/goddard

NASA's Wallops Flight Facility Wallops Island, VA 23337

nasa.gov/centers/wallops/home



NP-2022-8-839-GSFC