



NASA Has
SPACE
For You

National Aeronautics and
Space Administration



astronaut candidate requirements



Astronaut Responsibilities

Astronauts are involved in all aspects of on-orbit operations of the International Space Station (ISS). This includes extravehicular activities (EVA), robotics operations using the remote manipulator system, experiment operations, and onboard maintenance tasks. Astronauts are required to have a detailed knowledge of the space station systems, as well as detailed knowledge of the operational characteristics, mission requirements and objectives, and supporting systems and equipment for each experiment on their assigned missions.

Long-duration missions aboard the ISS generally last from 3 to 6 months. Training for missions is arduous and takes approximately 2 to 3 years beyond the initial 2-year training and evaluation period. This training requires extensive travel, including long periods away in other countries training with our international partners. Because trips to and from the space station will be aboard the Russian Soyuz vehicle, astronauts must meet the Soyuz size requirements, as indicated below.

Basic Qualification Requirements

Applicants must **meet** the following minimum requirements **before** submitting an application.

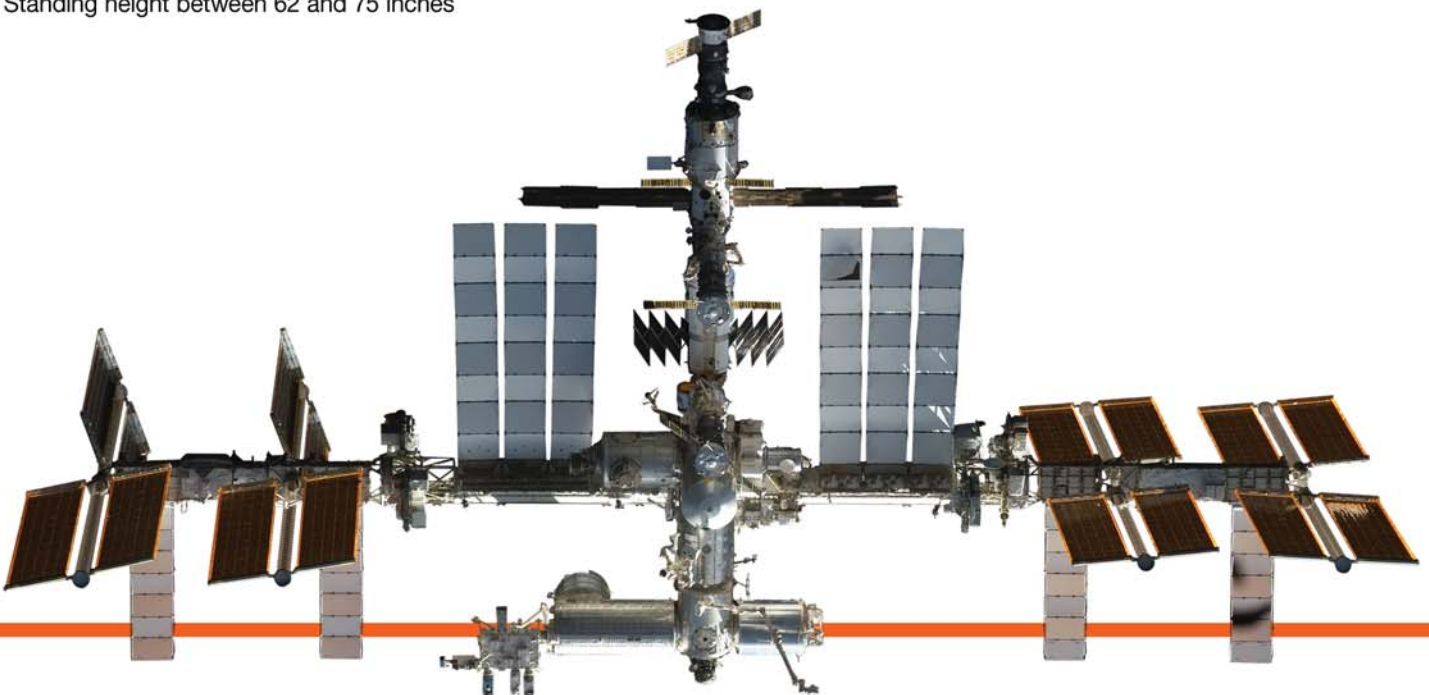
1. Bachelor's degree from an accredited institution in engineering, biological science, physical science, or mathematics. Quality of academic preparation is important.
2. Degree **must be followed** by at least 3 years of related, progressively responsible, professional experience or at least 1,000 hours of pilot-in-command time in jet aircraft. An advanced degree is desirable and may be substituted for experience as follows: master's degree = 1 year of experience, doctoral degree = 3 years of experience. Teaching experience, including experience at the K - 12 levels, is considered to be qualifying experience for the Astronaut Candidate position; therefore, educators are encouraged to apply.
3. Ability to pass the NASA long-duration space flight physical, which includes the following specific requirements:
 - Distant visual acuity: Must be correctable to 20/20, each eye
 - Near visual acuity: Must be correctable to 20/20, each eye
 - The refractive surgical procedures of the eye, PRK and LASIK, are allowed, providing at least 1 year has passed since the date of the procedure with no permanent adverse after effects. For those applicants under final consideration, an operative report on the surgical procedure will be requested.
 - Blood pressure not to exceed 140/90 measured in a sitting position
 - Standing height between 62 and 75 inches

Notes on Academic Requirements

Applicants for the Astronaut Candidate Program must meet the basic education requirements for NASA engineering and scientific positions—specifically: successful completion of standard professional curriculum in an accredited college or university leading to at least a bachelor's degree with major study in an appropriate field of engineering, biological science, physical science, or mathematics.

The following degree fields, while related to engineering and the sciences, are not considered qualifying:

- Degrees in Technology (Engineering Technology, Aviation Technology, Medical Technology, etc.)
- Degrees in Psychology (except for Clinical Psychology, Physiological Psychology, or Experimental Psychology, which are qualifying)
- Degrees in Nursing
- Degrees in Exercise Physiology or similar fields
- Degrees in Social Sciences (Geography, Anthropology, Archaeology, etc.)
- Degrees in Aviation, Aviation Management, or similar fields



Citizenship Requirements

Applicants for the Astronaut Candidate Program must be citizens of the United States.

Applicant Procedures

Civilian

Applications can only be submitted through the Office of Personnel Management's USAJOBS site www.usajobs.gov

Active Duty Military

Active duty military personnel must submit applications through the Office of Personnel Management's USAJOBS Web site www.usajobs.gov and to their respective military service. Contact your military service for additional application procedures.

Selection

Following the preliminary screening of applications, additional information may be requested from some applicants, and individuals listed in the application as supervisors and references may be contacted. Applicants who are being considered as finalists for interview may be required to obtain a flight physical.

A week-long process of personal interviews, medical screening, and orientation will be required for both civilian and military applicants under final consideration. Further interviews and a complete medical evaluation will be conducted prior to selection. Once final selections have been made, all applicants will be notified of the outcome of the process. Complete background investigations will be performed on those selected.

General Program Requirements

Selected applicants will be designated Astronaut Candidates and will be assigned to the Astronaut Office at the Johnson Space Center, Houston, Texas. The astronaut candidates will undergo a training and evaluation period lasting approximately 2 years, during which time they will participate in the basic Astronaut Candidate training program, which is designed to develop the knowledge and skills required for formal mission training upon selection for a flight. Military Astronaut Candidates with a jet piloting background maintain proficiency in NASA aircraft during their candidate period.

As part of the Astronaut Candidate training program, Astronaut Candidates are required to complete military water survival before beginning their flying syllabus, and become SCUBA qualified to prepare them for the EVA training. Consequently, all Astronaut Candidates will be required to pass a swimming test during their first month of training. They must swim 3 lengths of a 25-M pool without stopping, and then swim 3 lengths of the pool in a flight suit and tennis shoes. There is no time limit. They must also tread water continuously for 10 minutes.

Applicants should be aware that selection as an Astronaut Candidate does not ensure selection as an astronaut. Final selection as an astronaut will depend upon satisfactory completion of the training and evaluation period. Graduation from the Astronaut Candidate Program will require successful completion of the following: International Space Station systems training, Extravehicular Activity skills training, Robotics skills training, Russian Language training, and aircraft flight readiness training. Civilian candidates who successfully complete the training and evaluation and are selected as astronauts will become permanent Federal employees. Civilian candidates who are not selected as astronauts may be placed in other positions within NASA, depending upon Agency requirements and workforce constraints at that time. Successful military candidates will be detailed to NASA for a specified tour of duty.

NASA has an affirmative action program goal of having qualified minorities and women among those selected as Astronaut Candidates. Therefore, qualified minorities and women are encouraged to apply.

For additional information about the Astronaut Candidate Program, please go to the Astronaut Selection site www.astronauts.nasa.gov.

Pay and Benefits

Civilians

Salaries for civilian Astronaut Candidates are based on the Federal Government's General Schedule pay scales for grades GS-11 through GS-14, and are set in accordance with each individual's academic achievements and work experience. Other benefits include vacation and sick leave, a retirement plan, and participation in group health and life insurance plans.

Military

Selected military personnel will be detailed to the Johnson Space Center but will remain in an active duty status for pay, benefits, leave, and other similar military matters.



Astronaut Candidate Program



How to become a NASA astronaut...

The National Aeronautics and Space Administration (NASA) is accepting applications for the position of Astronaut Candidate to support the next decade of International Space Station (ISS) missions and future human space exploration. Both civilians and military will be considered for the positions. All positions are located at the Lyndon B. Johnson Space Center in Houston, Texas, and will involve a training and evaluation program which lasts approximately 2 years.

"We cannot now foresee all that may be uncovered on this voyage, but we look forward to the voyage and returning knowledge to extend the human presence beyond and improve life here on Earth."

—William H. Gerstenmaier

Associate Administrator, NASA Space Operations Mission Directorate

International Space Station

The International Space Station (ISS) is the largest international scientific and technological endeavor ever undertaken. The station is a permanent scientific laboratory in which gravity, temperature and atmospheric pressure can be manipulated for scientific and engineering pursuits impossible in ground-based laboratories.

The ISS marked its 10th anniversary of continuous human occupation on Nov. 2, 2010. Since Expedition 1, which launched in October 2000, the station has been visited by more than 200 individuals, travelled more than 1.5 billion miles (equivalent to eight trips to the Sun) and orbited the Earth more than 60,000 times.

NASA and the world have learned much about building in space and about how humans and spacecraft systems function on orbit. However, there is much more to do and learn. The voyage of research and discovery is just beginning as NASA shifts its focus from assembly to scientific research, technology development, exploration, commerce, and education.

Aboard the orbiting laboratory, crew members pursue novel avenues of research and development that impact medical research, advance materials and processes to benefit industries on Earth, and can accelerate breakthroughs in technology and engineering that have proven themselves as practical applications for life on Earth.

The station continues to expand the boundaries of space research. The unique capabilities of its laboratories will lead to discoveries that will benefit missions farther into outer space. Using the station to study human endurance in space and test new technologies and techniques, NASA will prepare for longer journeys to other destinations, such as Mars and beyond.

21st Century Astronauts

The astronauts of the 21st century will continue to work aboard the International Space Station in cooperation with our international partners; help to build and fly a new NASA vehicle, the Orion Multi-Purpose Crew Vehicle (MPCV) designed for human deep space exploration; and further NASA's efforts to partner with industry to provide a commercial capability for space transportation to the space station.

The Orion MPCV draws from more than 50 years of spaceflight experience and is designed to meet the evolving needs of our nation's future human space exploration program. Orion features dozens of technology advancements and innovations that have been incorporated into the spacecraft's subsystem and component design and includes both crew and service modules, a spacecraft adaptor, and a revolutionary launch abort system that will significantly increase crew safety. Its life support, propulsion, thermal protection, and avionics systems, in combination with other deep space elements, will enable extended duration deep space missions. These systems have been developed to make possible the integration of new technical innovations as they become available.

Orion will be capable of carrying astronauts on diverse expeditions beyond Earth's orbit—ushering in a new era of human space exploration.

NASA is in the process of identifying possible near-Earth asteroids to explore with the goal of visiting an asteroid in 2025. With that goal, and keeping in mind that the plan is to send a robotic precursor mission to the asteroid approximately five years before humans arrive, NASA will need to select the first set of targets to explore within the next decade.

