

Astronaut Candidate Program



The National Aeronautics and Space Administration (NASA) announces the opportunity to apply for the position of Astronaut Candidate to support the International Space Station (ISS) Program.

Persons from both the civilian sector and the military services will be considered. All positions are located at the Lyndon B. Johnson Space Center in Houston, Texas, and will involve a training and evaluation program lasting approximately 2 years.

International Space Station Program Description

The ISS is the largest international scientific and technological endeavor ever undertaken. The ISS is a permanent laboratory in a realm where gravity, temperature, and pressure can be manipulated for a variety of scientific and engineering pursuits that are impossible in ground-based laboratories. The ISS is a test bed for the technologies for the future as we learn more about living and working in space. Aboard the international laboratory, crews conduct medical research in space; develop new materials and processes to benefit industries on Earth; and accelerate breakthroughs in technology and engineering that will have immediate, practical applications for life on Earth.

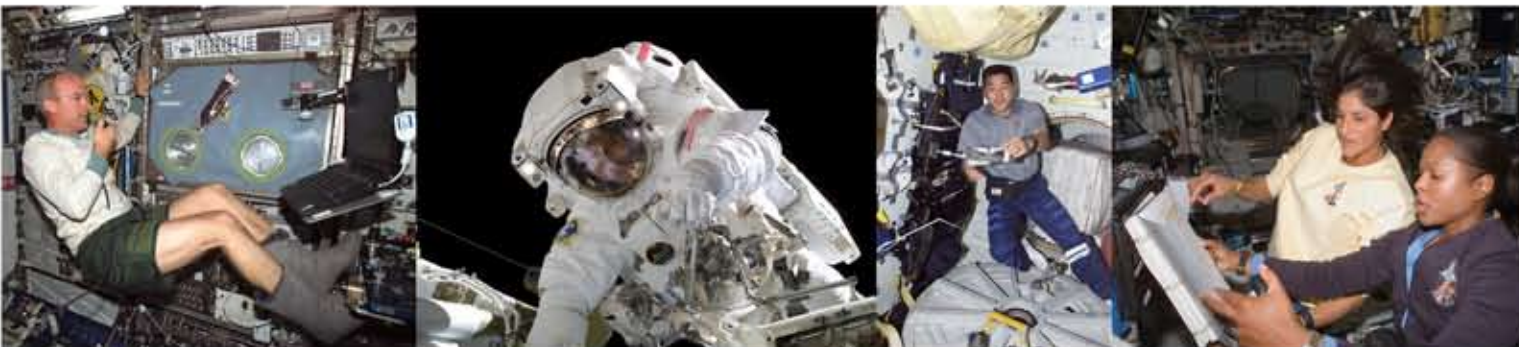
When completed, the ISS will be 356 feet across and 290 feet long, and it will weigh about 940,000 pounds. Six people can live on the ISS. The ISS is forging and maintaining new partnerships with the other space faring nations of the world; and satisfying humanity's need to explore.

Constellation Program Description

The Nation's next major human space flight program is the Constellation Program. From the first short flights of the Mercury Program to the long-duration missions of the ISS Program, NASA has refined its understanding of the challenges associated with human exploration of the cosmos.

NASA's Constellation Program is currently developing spacecraft and launch systems for a new generation of explorers that will go back to the moon, Mars, and beyond. Initial flights of the new Orion spacecraft will be to the ISS in low-Earth orbit, but by 2020 will support the development of an outpost on the moon. Early lunar missions will be about a week long, but eventually stays on the lunar surface are expected to last about 6 months, similar in length to current ISS missions.

Orion will be capable of carrying crews of up to six people to the ISS and remaining docked to the station for 6 months as a crew return vehicle if needed. For lunar missions, Orion will carry four astronauts all the way to the lunar surface and back. The capsule will be capable of orbiting the moon unattended for up to 6 months and will be capable of returning home with the crew at any time.



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National Aeronautics and
Space Administration



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Astronaut Responsibilities

Astronauts are involved in all aspects of on-orbit operations of the 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 ISS 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 long duration missions is arduous and takes approximately 2 to 3 years beyond the initial training and evaluation period. This training requires extensive travel, including long periods away in other countries training with our International partners. Following the Shuttle retirement in 2010, trips to and from the ISS will be aboard the Russian Soyuz vehicle. Consequently, astronauts must meet the Soyuz size requirements, as indicated below.

Basic Qualification Requirements

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

Applicants may meet the minimum requirements in one of two ways:

Astronaut Candidate (Non-piloting background)

1. Bachelor's degree from an accredited institution in engineering, biological science, physical science, or mathematics. Quality of academic preparation is important. Degree must be followed by at least 3 years of related, progressively responsible, professional experience. 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.
2. Ability to pass the NASA long-duration space flight physical, which includes the following specific requirements:

Distance visual acuity must be correctable to 20/20, each eye.

NOTE: For those applicants under final consideration, additional visual screening will be performed to include the following standards: refractive error (distant vision)-cycloplegic refractive error must be between +5.50 and -5.50 diopters in any meridian. Astigmatism may require up to 3.00 diopters of cylinder correction. Anisometropia of up to 3.50 diopters. You are not required to provide this information with your initial application. We will request it later if needed.

Near visual acuity: Must be correctable to 20/20, each eye

The refractive surgical procedures of the eye, PRK and LASIK, are now 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.

Astronaut Candidate (Piloting background)

1. Bachelor's degree from an accredited institution in engineering, biological science, physical science or mathematics. An advanced degree is desirable. Quality of academic preparation is important.
2. At least 1,000 hours pilot-in-command time in jet aircraft. Flight test experience is highly desirable.
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

NOTE: For those applicants under final consideration, additional visual screening will be performed to include the following standards: refractive error (distant vision)-cycloplegic refractive error must be between +3.50 and -4.00 diopters in any meridian. Astigmatism may require up to 2.00 diopters of cylinder correction. Anisometropia of up to 2.50 diopters. You are not required to provide this information with your initial application. We will request it later if needed.

Near visual acuity: Must be correctable to 20/20 each eye

The refractive surgical procedures of the eye, PRK and LASIK, are now 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.

Applicants 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 to their respective military service and not directly to NASA. Each service will disseminate 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 designated to develop the knowledge and skills required for formal mission training upon selection for a flight. Pilot astronaut candidates will 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. Civilian candidates who successfully complete the training and evaluation and are selected as astronauts will become permanent Federal employees and will be expected to remain with NASA for a period of at least 5 years. Civilian candidates who are not selected as astronauts may be placed in other positions within NASA, depending upon Agency requirements and labor 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.nasajobs.nasa.gov/astronauts

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 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.