AFSC 13A4, Staff
AFSC 13A3, Qualified
AFSC 13A1, Entry

ASTRONAUT
(Changed 30 Apr 19)

1. Specialty Summary. Commands, operates, or pilots crewed space vehicle missions. Accomplishes on-orbit duties aboard International Space Station or crewed space vehicles. Operates DoD payloads. Provides crewed space flight consultation to DoD activities and other government agencies. Related DoD Occupational Group: 220700.

2. Duties and Responsibilities:
2.1. Commands crewed space vehicle missions. Responsible for execution of missions, their rules and control directives. Assesses problems and implements deviations from flight plan, procedures, or personnel assignments in the interest of safety or mission accomplishment.
2.2. Pilots crewed space vehicle. Operates space vehicle systems through ascent, on-orbit, and reentry phases of flight. Works with commander and/or ground control to maneuver space vehicle to establish mission parameters.
2.3. Operates space vehicle systems. Serves as integral part of onboard flight operations during ascent, on-orbit, and reentry flight phases. Operates and reconfigures vehicle systems during all phases of flight. Maintains detailed understanding of vehicle systems including nominal and malfunction procedures, and a complete understanding of the impact to mission accomplishment. Works with commander and/or ground control to exchange direction and information.
2.4. Operates vehicle payloads. Operates payloads carried aboard International Space Station or other crewed space vehicles. Operates robotic manipulator systems to effect payloads, construct and maintain vehicle systems, or assist with extra vehicular activities. Performs extra-vehicular activity to accomplish repair, refurbishment, or inspection of satellites or vehicles on orbit.
2.5. Provides space flight consultation. Assists in formulating operational policies for space vehicle employment. Provides crew inputs for developmental engineering and mission planning. Participates in developing training equipment and simulating facilities.
2.6. Maintains flight proficiency. Serves as a crew member aboard National Aeronautics and Space Administration aircraft to remain proficient in aspects of aircraft operations, including flight planning, communications, nominal and emergency checklist procedures, actual aircraft control, and crew resource management.

3. Specialty Qualifications:
3.1. Knowledge. Knowledge is mandatory of crewed space vehicle flight operations, vehicle systems operation, lifting body aerodynamics, solid and liquid rocket performance, crew support systems, space navigation, orbital mechanics, computer programs, extra-vehicular activity, space rendezvous and proximity operations, and electronic, infrared, and optical sensor operations.
3.2. Education. For entry into this specialty, undergraduate academic specialization in an appropriate field of engineering, physical science, life science, or mathematics is mandatory.
3.3. Training. For award of AFSC 13A3 completion of NASA Astronaut Candidate (ASCAN) Training is required (Johnson Space Center Astronaut Evaluation Board determines completion). ASCAN includes but is not limited to:
3.3.1 Proficiency in operating applicable space vehicle or orbiting station systems.
3.3.2 Proficiency with in-flight procedures, mission rules, space vehicle maneuvers, orbiting station procedures, crew support systems, and communications.
3.3.3 Proficiency as an aircrew member in high performance fixed-wing aircraft such as the NASA T-38N.
3.4. Experience. Not used.
3.5. Other. Not used.