

Biography – Peggy A. Whitson, Ph.D.

Dr. Peggy Whitson is a former NASA astronaut and is currently a space and science consultant and adjunct assistant professor at Rice University. Over her career, she accrued a cumulative time of over 665 days in space, the most of any U.S. astronaut, most of any woman worldwide, and eighth most all-time. Since her first space flight in 2002, Dr. Whitson has completed three separate long-duration missions to the International Space Station, serving as commander twice. She also has conducted 10 Extra-Vehicular Activities, or “space walks,” totaling over 60 hours, the third most worldwide.

While at the ISS, Dr. Whitson conducted over 320 scientific experiments, ranging from combustion physics to cancer treatment. She also made significant improvements to operating procedures to allow for more efficient scientific and maintenance activities in the future. Her experiences with NASA also took her underwater as an Aquanaut, when she performed numerous studies as the commander of the 5th NASA Extreme Environment Mission Operations mission.

Dr. Whitson received her Bachelor of Science in Biology and Chemistry from Iowa Wesleyan College in 1981 and a Doctorate in Biochemistry from Rice University in 1986. Soon after at NASA, she continued her biochemical research at the Johnson Space Center. By 1992, Dr. Whitson was named the Project Scientist of the Shuttle-Mir Program, where she integrated US and Russian teams to successfully perform joint research on board the Russian MIR and US Shuttle missions, the start of her extensive record of international coordination. In this time, she also served as Deputy Division Chief of NASA’s Medical Science Division, controlling and distributing their \$35M budget to advance cardiovascular, neurovestibular, immunological, and biochemical research.

Following her project scientist role, Dr. Whitson was named Co-Chair of the US-Russian Missions Science Working Group in 1995. There, she negotiated with her Russian counterparts on the details of science hardware shipments and on-orbit crew operations until beginning basic astronaut training in 1996.

After two years of leading the Crew Support Office in Russia, where she supervised integration between Russian and U.S. systems, Dr. Whitson trained to be the backup flight engineer for Expedition 3 to the ISS. Then, as part of Expedition 5, launching in June 2002, she was First NASA Science Officer of the ISS for the six-month mission. During this time Dr. Whitson installed multiple truss elements, shields, and other systems to the International Space Station while conducting 21 biochemistry experiments.

From 2003-2005, Dr. Whitson served as Deputy Chief of NASA’s Astronaut Office. This role included personnel, facility, and budget planning as well as developing crew training and rotation plans, especially for long-duration missions. This culminated in the forming of a new position, ISS Operations Branch Chief, which she served as in 2005, better supporting international ISS crews in training and in orbit.

For ISS Expedition 16, a six-month mission beginning October, 2010, Dr. Whitson became the first ever female Commander on the International Space Station. This role required extensive international training, planning, and coordination. Dr. Whitson's team assembled a new stage of the ISS, resulting in more than 40% increase in internal volume. All planned objectives of the mission were met, as well as 3.5 times more scientific experiments than were originally planned.

Upon returning in 2008, Dr. Whitson was selected as Chairperson of the Astronaut Selection Board, revamping the selection process in choosing the astronaut class of 2009. Dr. Whitson then became the first female and non-military leader to ever serve as NASA's Chief of the Astronaut Office. In this role, she assessed objectives and crews to ensure the success of ISS and Space Shuttle missions. She oversaw astronaut selection, training, and mission support and served as the U.S. representative for the Multilateral Crew Operations Panel, eventually serving as chair of the international board.

Dr. Whitson continued to select and train astronauts from 2012-2016 until she was selected to join ISS Expedition 50-51-52, launching in November 2016. In these missions she served as Flight Engineer and once more as Commander over the 9.5-month mission. In this time Dr. Whitson performed 40% more scientific investigations than what was originally planned and conducted six more spacewalks, conducting maintenance and upgrades to the station.

Over her career, Dr. Whitson has amassed a number of awards and honors, too many to list in full, but they include...

- 2019 Women in Space Science Award
- TIME Magazine's 2018 Most Influential People in the World
- NASA Outstanding Leadership Medal, 2013
- Aviation Hall of Fame of Texas, San Diego, and Iowa