ASTRONAUT BIOGRAPHY

National Aeronautics and Space Administration

Lyndon B. Johnson Space Center
Houston, Texas 77058

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Zena Cardman

NASA Astronaut

Summary:
Zena Cardman was selected by NASA as a member of the 2017 “Turtles” astronaut class. The Virginia native holds a bachelor of science degree in Biology and a master of science degree in Marine Sciences from the University of North Carolina, Chapel Hill. Her research focused primarily on geobiology and geochemical cycling in subsurface environments, from caves to deep sea sediments. Cardman’s experience includes multiple Antarctic expeditions. Since completing initial training, Cardman has supported real-time station operations and lunar surface exploration planning. Cardman served as commander for NASA’s SpaceX Crew-11 mission, which launched on August 1, 2025, to the International Space Station. Upon her arrival to the space station, she became a flight engineer of Expeditions 73/74 for a long-duration science expedition aboard the orbiting laboratory. NASA’s SpaceX Crew-11 mission safely splashed down on January 15, 2026 in the Pacific Ocean off the coast of San Diego, concluding a more than five-month mission aboard the International Space Station.

Personal Data:
Born in Urbana, Illinois, Cardman considers Williamsburg, Virginia, to be home. Her parents, Helen and Larry Cardman, still live in Williamsburg. Cardman enjoys rock climbing, poetry, and power lifting.

Education:
Cardman graduated from Bruton High School in Williamsburg, Virginia. She received a bachelor of science in Biology from the University of North Carolina at Chapel Hill and a master of science in Marine Sciences from the University of North Carolina at Chapel Hill. At the time of her selection as an astronaut, Cardman was working on doctorate degree in Geosciences at time of selection.

Experience:
At the University of North Carolina, Cardman studied microbial systems in hydrocarbon seeps, hydrothermal vents, and the Arctic. During that time, she also worked with the Palmer Long-Term Ecological Research group in Antarctica, analyzing ecosystem changes as part of a multi-decadal study. Cardman has experience with NASA-supported research in British Columbia, the Canadian high Arctic, Idaho, and Hawaii, helping to develop operational architectures for science-driven planetary EVA. She briefly worked for the Sea Education Association, sailing as Assistant Engineer. At the time of her selection in June 2017, Cardman was a National Science Foundation Graduate Research Fellow at the Pennsylvania State University, where she studied nitrogen- and sulfur-cycling in chemosynthetic biofilms.

NASA Experience:
Cardman reported for duty in August 2017 and completed two years of training as an Astronaut Candidate. Prior to her career as an astronaut, she worked with NASA-supported field tests, including Pavilion Lake and BASALT.

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Cardman previously was assigned to NASA's SpaceX Crew-9 mission. NASA decided to reassign Cardman to NASA's SpaceX Crew-11 mission in overall support of planned activities aboard the International Space Station.

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Awards/Honors:

NSF Graduate Research Fellowship (2012-2017); Pennsylvania Space Grant Consortium Fellowships (2015-2016); Royster Society Distinguished Graduate Fellowship (2012-2014); Irene F. Lee Chancellor's Award for Most Outstanding Senior Woman (2010); North Carolina Space Grant Fellowships (2008-2010, 2013-2014); Chancellor's Carolina Scholarship (2006-2010).