

# IM-1 Mission Fact Sheet

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Morehead State University's Space Science Center (SSC) is once again at the forefront of space exploration with its involvement in Intuitive Machines' IM-1 mission to the Moon.

- Morehead State has one of only a few space systems engineering programs in the nation.
- The SSC is an affiliated node on NASA's Deep Space Network (DSN) and a primary node on the Intuitive Machines commercial Lunar Data Network (LDN).
- The SSC will be among the primary ground control stations for the IM-1 mission.
- Students in MSU's Space Systems Engineering programs will provide tracking, telemetry, and command services for the approximately two-week mission.
- Students in the Space Science Center's Mission Operations Center will communicate with Intuitive Machines' Nova-C lunar lander, Odysseus, during flight to and after landing on the Moon. Students will send commands to the lander and collect data the lander is transmitting back to Earth.
- The IM-1 mission is slated to be the first commercial lunar landing. Odysseus will travel to the Moon aboard the SpaceX Falcon-9 Rocket.
- Intuitive Machines is a diversified space exploration company focused on pioneering the commercial landscape of outer space – with a North Star of landing the United States on the Moon.
- The SSC has been instrumental in several space missions with NASA, government agencies, and private aerospace firms.
- MSU was involved with NASA's Artemis I mission to the Moon, which seeks to create a permanent, sustainable outpost on the Moon that would support future missions to Mars. The Lunar IceCube nanosat, launched as a secondary payload on the mission, was designed, constructed, and tested by MSU students, faculty, and staff. The nanosat investigated the transportation physics of water ice on the lunar surface.

- The SSC is a Research and Education facility containing classrooms, laboratories, and offices. The two-story, state-of-the-art building includes a control center for the 21-meter space antenna system on the ridge top above Nunn Hall, with another 12-meter antenna currently being installed. The center also has RF and electronics laboratories, anechoic chambers that mimic the electromagnetic environment of space, a rooftop antenna test range, and a space systems development laboratory. The Star Theater digital planetarium hosts educational and entertainment programming for the community.