Aerospace Physiology Programs

Explore one of the fastest-growing industries in our aerospace physiology master’s and certificate programs. Whether you’re already working in a relevant field or preparing to launch your career, our programs will equip you for success. Here, you’ll gain an understanding and enhance your competencies in acceleration, spatial disorientation, the physiology of decompression, thermoregulation, hypobarics, respiration and cardiovascular function.

Career Opportunities

Whether you pursue your master’s degree or a certificate, in our program, you’ll be prepared to fill positions in the rapidly expanding aerospace initiatives commercially, federally and in the military. These industries are currently hampered by an absence of scientists, physicians, educators, and physiologists with expertise in the human challenges of the aerospace environment—and we’re here to help you answer that call.

Your training will qualify you for aerospace physiologist roles with titles such as:

- Aviation Medical Examiner for the Federal Aviation Administration
- Human Performance Scientist for a government contractor
- Aerospace Medicine Specialist/Flight Surgeon for NASA, the Air Force or the Navy
- Aerospace Experimental Psychologist for the Navy
- Space Medical Research Engineer for a commercial space company
Curriculum

Offered in person and online, both the 30-credit-hour master's degree and 15-credit-hour certificate are adaptable to fit your needs through a mix of required and elective courses.

Certificate Program Required Courses
- Introduction to Aerospace Physiology I
- Introduction to Aerospace Physiology II
- Aerospace Physiology Laboratory (4-day on-campus residency required)
- Sleep Physiology

Master’s Program Required Courses
All certificate courses, plus
- Physiology of Movement: Introduction to Exercise Physiology
- Sports Nutrition
- Human Factors in the Aerospace Environment
- Physiological Contributors to Aviation Mishaps

Elective Course Options
- Basic Oxygen and Physiologic Function
- Comparative and Evolutionary Physiology
- Clinical Reasoning II
- Independent Study in Physiology
- Research in Physiology*
- Leadership and Interpersonal Skills
- Human Musculoskeletal Anatomy*
- Research Ethics and Regulation*
- Translational & Patient-Oriented Research Theory*
- Physiological Psychology*
*Available in-person only

Application Requirements
- Online application
- Personal statement
- Bachelor's degree in the physical or biological sciences from an accredited institution (either already complete, or will be complete before you enroll)
- Unofficial transcripts
- Resume/CV
- Two letters of recommendation

“Aspiring to be a Space Nurse, I’m embracing CWRU’s challenging Aerospace Physiology accredited coursework to enhance my clinical understanding of aerospace medicine and human spaceflight research. This training is vital for my future in space nursing within the commercial spaceflight industry.”

- Donna Fearon, RN, FNP

Ready to learn more? Contact our admissions team at apply-aero@case.edu or scan to visit our website.