

<p>APEX Aerospace Medicine and Surgery Fellowship (US citizens)</p>	<p><i>**Even if you are not a US citizen, there are many fantastic resources on the APEX Academics page.</i></p> <p><b>About APEX</b></p> <p>The Arizona Program for Exploration Medicine and Surgery (APEX) started as an idea for a new aerospace training pathway to encourage procedural physicians to get involved with human space flight. Conceptualized by Drs. Eric Petersen and Anil Menon during the SpaceX Demo-2 mission, APEX has become a University of Arizona-hosted fellowship. Housed under the Department of Surgery, the inaugural fellow is slated to start in 2023.</p> <p>APEX was created to address the challenges of deep space procedural and critical care. Aerospace medicine is a field historically dedicated to keeping healthy individuals optimized in abnormal environments and relies on preventive medicine techniques. The reality of commercial space flight necessitates redefining aerospace medicine to include the care of pathology in abnormal environments. This requires tackling the knowledge, technological, and training gaps in implementing procedural and critical care in deep space. APEX is designed to research and solve these inevitabilities, and to translate these findings to rural and global surgical platforms.</p> <p>To accomplish this goal, APEX has partnered with the largest commercial space provider, SpaceX. This unique program will train physicians in the fundamentals of traditional aerospace medicine, provide training in austere surgical care, and pursue multidisciplinary research in surgical research topics. <a href="https://www.apexmedicineandsurgery.com/home">https://www.apexmedicineandsurgery.com/home</a></p>
<p>Baylor College of Medicine 'Space Medicine Pathway'</p>	<p>The Baylor College of Medicine Center for Space Medicine offers cutting-edge electives and a Space Medicine Pathway to undergraduate medical students at Baylor College of Medicine. All courses are taught by Baylor faculty as well as experts from other institutions and NASA. The electives are popular and receive excellent reviews from students. See information about the <a href="#">curriculum</a> and <a href="#">lecture videos</a> (Even if it's not practical for you to undertake the pathway, it is great that the set of lecture videos is available on YouTube.)</p>
<p>Bioastronautics@Hopkins - Johns Hopkins Human Spaceflight Lab</p>	<p>Bioastronautics@Hopkins is an initiative at Johns Hopkins University in Baltimore, Maryland, USA, that brings together Bioastronautics, Space Medicine, and Space Health Research. They host an occasional seminar series. Via this web page you can join the mailing list and join the Slack channel: <a href="https://www.jhuhs1.space/bioastronauticshopkins/">https://www.jhuhs1.space/bioastronauticshopkins/</a>. There is also an archive of free recordings from the Johns Hopkins Group space symposia/mini-symposia: <a href="https://cgpo.jhu.edu/human-spaceflight-special-interest-group-2/">https://cgpo.jhu.edu/human-spaceflight-special-interest-group-2/</a>.</p>
<p>A Brief History of Human Spaceflight' Course</p>	<p>The University of Houston offers a free course, <a href="#">'A Brief History of Human Spaceflight'</a>, on the <a href="#">Coursera</a> platform.</p>
<p>Dartmouth Space Medicine Elective</p>	<p>Welcome to <a href="#">Dartmouth Space Medicine</a>. We are approaching a new era in spaceflight. Commercial spaceflight is now a reality, NASA has plans to send humans to the Moon, and SpaceX to Mars within the next decade. This means that YOU, as current medical students/residents, can be the future physicians needed to ensure the health and safety of space travelers. Learn about Space Medicine, what it entails, and how the challenges of microgravity affect human physiology. Led by Dr. Jay C Buckey, Geisel's very own astronaut physician from the Dartmouth Space Medicine Innovations Lab, this website and elective course provides students with an introduction to Space Medicine.</p>
<p>Duke University 'Space Medicine' Course</p>	<p>Duke University offers a free Space Medicine course on the <a href="#">Coursera</a> platform. Follow <a href="#">Dominic Tanzillo on Twitter</a> for updates. Read more about the course and its founders <a href="#">here</a>.</p>
<p>ESA Short Courses</p>	<p>The European Space Agency's ESA Academy offers an annual Human Space Physiology Training Course. Visit this link to find out more about the ESA Academy courses: <a href="https://www.esa.int/Education/ESA_Academy/Portfolio_of_ESA_Academy_training_sessions">https://www.esa.int/Education/ESA_Academy/Portfolio_of_ESA_Academy_training_sessions</a>. There are some entrance requirements (aimed at medicine/life sciences university students and a degree of affiliation with ESA is required).</p>

IIAS	<a href="#">International Institute for Astronautical Sciences</a> The International Institute for Astronautical Sciences (IIAS) produces future scientists, engineers, operations professionals, and educators of the international space community by providing immersive educational experiences that produce peer-reviewed scientific publications, mature space technologies, and educate and inspire the next generation of space professionals. (Paid content)
Medical Student Electives	The <a href="#">University of Colorado Department of Emergency Medicine Section of Wilderness and Environmental Medicine</a> offers a number of wilderness and space-related courses and medical student electives, including <a href="#">Medical Student Elective IDPT 8059 – Space Medicine: Human Spaceflight Factors &amp; Medical Risk Assessment</a>
NASA Engineering and Safety Center (NESC) Academy - Human Factors	These training modules were compiled by the Human Factors Discipline Team (TDT). The discipline of Human Factors advances human-centered design and operations of complex aerospace systems through analysis, experimentation, and modeling of human capability and performance. Practice of the Human Factors discipline has made dramatic improvements in safety, efficiency, and mission success. <a href="https://nescacademy.nasa.gov/catalogs/humanfactors">https://nescacademy.nasa.gov/catalogs/humanfactors</a>
Space Health 'Meet an Expert' Series	The archive of the 'Meet an Expert' series from the University of Melbourne "Human Health in the Space Environment" subject for 2022-2025 is available on the <a href="#">YouTube playlist</a>
Space Medicine Didactics	Welcome to <i>Space Medicine Didactics</i> , a collaboration between the UCLA, UT Houston, MGH/Baylor, and CU Anschutz Space Medicine programs! We're excited to provide this to all who are interested and welcome you to share this site to others you think would benefit. <a href="#">Website</a> for link to Zoom meetings, prior recordings, and to join the email list <a href="#">Google Drive for Prior Didactics Meetings</a>
UTMB 'Principles of Aviation and Space Medicine'	<p>The University of Texas Medical Branch (UTMB) Department of Preventive Medicine and Population Health offers an annual four-week course, typically held in July. The goal of the course is to provide a thorough familiarization with the history of aviation, spaceflight and the specialty of aerospace medicine, human physiology in aviation and spaceflight, human factors engineering concepts related to aviation and spaceflight, the role of aerospace specialists in the selection, training, standards, medical certification and health maintenance of aviation and spaceflight personnel. Evaluation is determined by participation in class, an oral presentation on a topic from the field of aerospace medicine.</p> <p>Students who complete this course will be prepared to:</p> <ul style="list-style-type: none"> <li>* Identify a circumstance in which human factors impose undesirable limitations on current or proposed aerospace operations</li> <li>* Identify the physiologic effects of flight and spaceflight on humans</li> <li>* Analyze relationships among systems that influence the health of humans in the flight and spaceflight environments</li> <li>* Understand the design of air and flight space equipment, biomedical equipment, and vehicles to promote flight safety</li> </ul> <p>The following core and specialty competencies are addressed: Patient Care, Medical Knowledge, Systems-Based Practice, Interpersonal &amp; Communication Skills, and Professionalism.</p> <p>Applications normally close in mid-March. For more information, visit: <a href="https://www.utmb.edu/spph/aerospace-medicine/principles-of-ASM">https://www.utmb.edu/spph/aerospace-medicine/principles-of-ASM</a>. Some scholarships have been offered in the past. (Paid content)</p>