GRADUATE EMBEDDED CERTIFICATE IN ASTROBIOLOGY

The Astrobiology Graduate Certificate Program is part of an initiative linking the schools of Earth and Atmospheric Sciences, Chemistry and Biochemistry, Biological Sciences, Aerospace Engineering, and International Affairs. The purpose of the certificate program is to expand opportunities for students in the interdisciplinary field of 'astrobiology', and to forge innovative links between astrobiology research at Georgia Tech, mission technology, and science communication. The 12-credit certificate program is open to graduate students enrolled in any degree program at the Georgia Institute of Technology. There are no prerequisites for entering the certificate program.

For more information, click here.

Program of Study

Code	Title	Credit Hours
Required courses		
EAS 8001	Seminar (Planetary Science & Astrobiology)	1
EAS/CHEM/ BIOL 8802	Special Topics (Seminal Papers in Astrobiology)	2
Cognate course		**3**
AE 6353	Orbital Mechanics	
AE 6355	Planetary Entry, Descent and Landing	
AE 6450	Rocket Propulsion	
AE 6451	Electric Propulsion	
BIOL/EAS 6765	Geomicrobiology	
BIOL 6410	Microbial Ecology	
BIOL 6428	Population Dynamics	
BIOL 6600	Evolution	
BIOL 6607	Molecular Biology of Microbes: Disease, Nature, and Biotechnology	
BIOL 6720	Environmental Microbial Genomics	
CHEM 6572	Macromolecular Structure	
CHEM 6582	Biophysical Chemistry	
EAS 6122	Biogeochemical Cycles	
EAS 6130	Earth System Modeling	
EAS 6200	Environmental Geochemistry	
EAS 6216	Isotope Geochemistry	
EAS 6224	Mineral Surface Geochemistry	
EAS 6370	Physics of Planets	
EAS 6375	Earth and Planetary Materials	
EAS 6380	Land Remote Sensing	
Special Topics		**3**
BIOL 7111	Molecular Evolution	
BIOL 8744	Microbial Symbiosis & Microbiomes	
BIOL 8803	Special Topics (Origin of Complex Life:Cells to Societies)	
CHEM 8803	Special Topics (Chemistry of the Origins & Early Evolution of Life)	
CHEM 8853	Special Topics in Biochemistry (Structure, Function & Origins of Biological Macromolecules)	
CHEM 8833	Special Topics in Organic Chemistry (Intro to Organic Mechanisms)	
CS 7492	Simulation of Biological Systems	
EAS 8803	Special Topics (Ice-Ocean Moons and Planets)	
EAS 8803	Special Topics (Origin of Planetary Systems)	
EAS 8803	Special Topics (Earth System Evolution in a Planetary Context)	
INTA 8001	Seminar in Science, Technology and International Affairs II	
INTA 8803	Special Topics (Space Policy)	
INTA 8803	Special Topics (Space Security)	
PHYS 8813	Special Topics (Radiative Processes)	
Mission Design course		**3**
AE 6372	Aerospace Systems Engineering	
AE 6561	Reliable Control Software for Aerospace and Embedded Applications	
AE 8803	Special Topics (Satellite Orbit Determination)	
AE 8803	Special Topics (Small Satellite Design I/II)	
AE 8803	Special Topics (Spacecraft Altitude Determination and Control)	
AE/EAS 8803	Special Topics (Space Instrumentation for Life Detection)	
CHEM 8813/8823	Special Topics in Inorganic Chemistry (Instrument Design)	
EAS 6360	Space Physics and Space Instrumentation	
EAS 8803	Special Topics (Team X Spacecraft Design)	
EAS 8803	Special Topics (Planetary Spacecraft Design)	
Total Credit Hours		**12**

- Students may submit documentation to use a course not listed above.
- All courses must be completed with a 'B' grade or higher.