SMALL SATELLITE ENGINEERING GRADUATE CERTIFICATE

Banner Code: EC-CERG-SSEN

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The Department of Electrical and Computer Engineering (http://catalog.gmu.edu/colleges-schools/engineering-computing/engineering/electrical-computer/), in conjunction with the Department of Systems Engineering and Operations Research (http://catalog.gmu.edu/colleges-schools/engineering-computing/engineering/systems-operations-research/), offers the certificate in small satellite engineering. This graduate certificate provides a broad understanding of small satellite mission and operations and of technologies for spacecraft design and engineering, satellite bus, hardware and software systems, and communications. A two-semester hands-on project course is included to exercise a transition of theory into engineering practice in satellite and ground station engineering. Coursework for the graduate certificate can be used for credit toward the MS in Electrical (http://catalog.gmu.edu/colleges-schools/engineering-computing/engineering/electrical-computer/electrical-engineering-ms/) or Computer (http://catalog.gmu.edu/colleges-schools/engineering-computing/engineering/electrical-computer/computer-engineering-ms/) Engineering. However, the certificate's primary purpose is to provide a well-defined body of information for students who want to advance or update their knowledge in small satellite technologies, but who do not necessarily wish to complete requirements for the MS degree. The certificate may be pursued concurrently with any of the graduate degree programs in the College of Engineering and Computing (http://catalog.gmu.edu/colleges-schools/engineering-computing/).

Admissions & Policies

Admissions

The graduate certificate is open to all students who hold BS degrees in scientific and engineering disciplines from accredited universities and can hold graduate status (either degree or non-degree) in the Volgenau School.

Policies

The certificate is awarded on completion of four required graduate courses (12 credits) in space systems. A cumulative GPA of 3.00 is required, and at most one course with a grade of C may be applied toward the certificate.

For policies governing all graduate certificates, see AP.6.8 Requirements for Graduate Certificates. (http://catalog.gmu.edu/policies/academic/graduate-policies/#ap-6-8)

Requirements

Certificate Requirements

Total credits: 12

This certificate may be pursued on a part-time basis only.

Code	Title	Credits
ECE 580	Small Spacecraft Engineering	3
ECE 639	Satellite Communications	3
ECE 691	CubeSat Design	1.5
ECE 692	CubeSat Engineering	1.5
SYST 682	Space Systems Engineering	3
Total Credits		12