

GRADUATE CERTIFICATE IN COMPUTER-INTEGRATED DESIGN IN MECHANICAL AND AEROSPACE ENGINEERING

The computer-integrated design certificate program has been created to provide working engineers with a coordinated four-course sequence that emphasizes hands-on experience with current professional design methodologies, and software.

Analysis and design techniques utilizing industry-standard computer codes are beginning to be addressed in some of today's undergraduate engineering programs, but many working engineers lack sufficient training in this area and are required to gain their expertise while on the job. The computer-integrated design certificate program has been created to provide such engineers with a coordinated four-course sequence that emphasizes hands-on experience with current professional design methodologies, and software.

This certificate program offers an alternative to a master of science degree (MS) program for professionals who wish to expand their education beyond the bachelor's degree but might not have the time to commit to a full graduate degree program. The graduate certificate in computer-integrated design serves as a path towards the MS degree (since the MS program accepts all certificate courses) in mechanical and aerospace engineering at The George Washington University.

The program comprises four courses (12 credit hours) – three courses focus on numerical design and analysis tools, and the fourth course is the capstone course in which students apply these tools to individual projects in aircraft, mechanical, or spacecraft design. Each of the classes meets in the evening once per week.

Visit the program website (<https://www.mae.seas.gwu.edu/certificate-computer-integrated-design/>) for additional program information.

ADMISSIONS

Admission Fall – January 15 deadlines:

Spring – September 1

Summer – March 1

Standardized The Test of English as a Foreign Language (TOEFL) or test scores: the academic International English Language Testing System (IELTS) is required of all applicants except those who hold a bachelor's, master's, or doctoral degree from a college or university in the United States or from an institution located in a country in which English is the official language, provided English was the language of instruction.

Prior academic records:

Transcripts are required from all colleges and universities attended, whether or not credit was earned, the program was completed, or the credit appears as transfer credit on another transcript. Unofficial transcripts from all colleges and universities attended must be uploaded to your online application. Official transcripts are required only of applicants who are offered admission.

If academic records are in a language other than English, a copy in the original language and an English language translation must be uploaded. Transcript evaluations should not be uploaded. Applicants with degrees from Indian universities should upload transcripts and/or detailed marksheets.

Statement of purpose: In an essay of 250 to 500 words, state your purpose in undertaking graduate study at The George Washington University; describe your academic objectives, research interests, and career plans; and discuss your related qualifications, including collegiate, professional, and community activities, and any other substantial accomplishments not already mentioned.

International applicants only: International applicants requiring a visa from GW are not eligible to apply for admission to this program, but may apply for the MS, PhD, or a professional degree (AppSc or Engr) in computer science with an area of focus in design of mechanical engineering systems.

For additional information about the admissions process visit the SEAS Admissions Frequently Asked Questions (<https://graduate.engineering.gwu.edu/admissions-frequently-asked-questions/>) page.

Contact for questions:

engineering@gwu.edu

202-994-1802 (phone)

202-994-1651 (fax)

Hours: 9:00 am to 5:00 pm, Monday through Friday

REQUIREMENTS

The following requirements must be fulfilled: 12 credits in required courses.

Code	Title	Credits
Required		
MAE 6220	Applied Computational Fluid Dynamics	
MAE 6243	Advanced Mechanical Engineering Design	

MAE 6246 Electromechanical Control Systems

MAE 6287 Applied Finite Element Methods