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 deadlines:

- Fall – January 15
- Spring – September 1
- Summer – March 1

Standardized test scores:

The Test of English as a Foreign Language (TOEFL) or 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 more information on the admission process, please visit the SEAS Frequently Asked Questions page. (http://graduate.seas.gwu.edu/apply/faq/)

Contact for questions:

engineering@gwu.edu - 202-994-1802 (phone) - 202-994-1651 (fax)
9:00 – 5:00 pm, Monday through Friday

REQUIREMENTS

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

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>MAE 6220</td>
<td>Applied Computational Fluid Dynamics</td>
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</tr>
<tr>
<td>MAE 6243</td>
<td>Advanced Mechanical Engineering Design</td>
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<tr>
<td>MAE 6246</td>
<td>Electromechanical Control Systems</td>
<td></td>
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<tr>
<td>MAE 6287</td>
<td>Applied Finite Element Methods</td>
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