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 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

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.

<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>
<td>MAE 6243</td>
<td>Advanced Mechanical Engineering Design</td>
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<td>MAE 6246</td>
<td>Electromechanical Control Systems</td>
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<td>MAE 6287</td>
<td>Applied Finite Element Methods</td>
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