

# NAVAL SHIP DESIGN GRADUATE CERTIFICATE

**Banner Code:** EC-CERG-NSDN

## Academic Advising

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The graduate certificate in naval ship design provides students with the fundamentals and hands-on experience to be effective ship designers and design managers. Through coursework and experiential learning, students will develop specific knowledge in the art of naval ship design and acquire the skills to support the management of new and in-service design programs.

Upon completion of the certificate program, graduates will be able to:

- Design a vessel to execute a specified mission profile.
- Critically assess the impact of vessel design decisions on the concept of operations.
- Support programmatic needs by translating fleet requirements to design specifications while managing cost.

## Admissions & Policies

### Admissions

The following admission requirements apply to all graduate program applicants across the university. All applicants must:

- Submit a completed online application for graduate study.
- Submit a nonrefundable application fee.
- Submit one unofficial transcript from all institutions previously attended.
- Have earned a baccalaureate degree from a regionally accredited institution of higher education, or international equivalent.
- Have earned a minimum 3.00 GPA on a 4.00 scale in baccalaureate study.

In addition, students who have not earned a baccalaureate degree in the U.S. must submit:

- Official English translations of all diplomas, certificates, and transcripts that are not already in English. Also, documents from foreign institutions must meet the university’s guidelines for international transcript submission.
- Proof of English proficiency: either TOEFL, IELTS academic exam, or Pearson Test of English meeting the minimum requirements:
  - TOEFL: 88 points total and a minimum of 20 points in each section (IBT) or 570 (PBT)
  - IELTS: 6.5 total band score
  - Pearson: 59 overall score

The Department of Mechanical Engineering (<http://catalog.gmu.edu/colleges-schools/engineering-computing/engineering/mechanical/>) will also require applicants to have earned an ABET-accredited engineering

degree. Applicants seeking to enroll without an ABET-accredited engineering degree must seek approval, in writing, from the program director.

## Requirements

### Certificate Requirements

Total credits: 15

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

#### Core Courses

Code	Title	Credits
ME 551	Naval Engineering	3
ME 552	Fundamentals of Naval Architecture	3
ME 553	Ship Design Process and Tools	3
ME 554	Naval Project Management	3
Total Credits		12

#### Elective

Code	Title	Credits
Any relevant elective course at the 5XX level or above <sup>1</sup>		3
Total Credits		3

<sup>1</sup> Elective courses may be from any academic department, but must be pre-approved, in writing, by the program director.