Program Change Request

Date Submitted: 02/06/25 11:40 am

Viewing: : Mechanical Engineering, BS/Applied

and Engineering Physics, Accelerated MS

Last approved: 05/23/22 1:25 pm

Last edit: 02/07/25 8:53 am

Changes proposed by: jbazaz

Catalog Pages Using this Program <u>Applied and Engineering Physics, MS</u> <u>Mechanical Engineering, BS</u>

Are you completing this form on someone else's behalf? No				
Effective Catalog:	2025-2026			
Program Level:	Undergraduate & Graduate (BAMs)			
Program Type:	Bachelor's/Accelerated Master's			
Title: Mechanical Engineeri Accelerated MS	ing, BS/Applied and Engineering Physics,			
Registrar's Office Use Only – Program Start Term				
Registrar/OAPI Use Only – SACSCOC Status				
Concentration(s):				
College/School:	College of Science			
Department / Academic Unit:	Physics & Astronomy			
Jointly Owned Program?	Yes			

In Workflow

- 1. Registrar-Programs:Workflow Review
- 2. PHYS GR Committee
- 3. PHYS Chair

- 4. ME Chair-Undergraduate
- 5. SC Curriculum Committee
- 6. EC Undergraduate Studies Committee Chair
- 7. SC Assistant Dean
- 8. EC Associate Dean-Undergraduate
- 9. Assoc Provost-Graduate
- 10. Assoc Provost-Undergraduate
- 11. Registrar-Programs

Approval Path

- 02/07/25 10:07 am Deborah Mcgarrah (dmcgarra): Approved for Registrar-Programs:Workflow Review
- 2. 03/07/25 2:33 pm Paul So (paso): Approved for PHYS GR Committee

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Participating C

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College

College of Engineering and Computing

Participating

Departments

	Department
1	Mechanical Engineering

Justification

- 3. 03/07/25 2:54 pm **Ernest Barreto** (ebarreto): Approved for PHYS Chair
- 4. 03/14/25 10:49 am **Colleen Berg** (cberg8): Approved for ME Chair-Undergraduate

History

- 1. Feb 7, 2019 by Jennifer Bazaz Gettys (jbazaz)
- 2. Feb 1, 2021 by creagle
- 3. May 5, 2022 by Jennifer Bazaz Gettys (jbazaz)
- 4. May 23, 2022 by Tory Sarro (vsarro)

What: Removing requirement for "immediate" graduate coursework to begin. Removing specific "B" grade requirement.

Why: As this program aligns with the university's BAM requirements, we're removing some duplicative language, the links provided direct students to university-level policies.

Catalog Published Information

Accelerated **Description/Dual** Degree **Description:**

Mechanical Engineering, BS/Applied and Engineering Physics, Accelerated MS

Overview

This program allows academically strong undergraduates with a demonstrable commitment to research to obtain the <u>Mechanical Engineering, BS</u> and <u>Applied and Engineering Physics, MS</u> degrees by successfully completing 139 credits. Upon completion, students are well-prepared for entering into the professional workforce, or a PhD program in physics or a related engineering discipline.

Admitted students take selected graduate courses after having completed 75 undergraduate credits and are able to use 3-12 graduate credits in partial satisfaction of requirements for the undergraduate degree. Upon completion and conferral of the bachelor's degree and with satisfactory performance (grade of 'B' or better) in each of the graduate courses, students are given advanced standing in the master's program and complete an additional 18-27 credits to receive the master's degree.

For more detailed information, see <u>AP.6.7 Bachelor's/Accelerated Master's Degrees</u>. For policies governing all graduate degrees, see <u>AP.6 Graduate Policies</u>.

Application Requirements

Applicants to all graduate programs at George Mason University must meet the admission standards and application requirements for graduate study as specified in the <u>Graduate Admission Policies</u> section of this catalog. Successful applicants majoring in Mechanical Engineering will have completed at least 60 credits toward their undergraduate degree with an overall GPA of at least 3.00, and the following courses with a GPA of 3.00 or better:

<u>CS 112</u>	Introduction to Computer Programming (<u>Mason Core)</u>	4
<u>ME 212</u>	Solid Mechanics	3
<u>ME 231</u>	Dynamics	3
<u>ME 313</u>	Material Science	3
<u>ME 322</u>	Fluid Mechanics	3
<u>ME 323</u>	Heat Transfer	3
<u>ME 351</u>	Analytical Methods in Engineering	3

One or more recommendation letters from one or more research supervisors are also required. Interested applicants majoring in <u>Mechanical Engineering, BS</u> should submit a letter to the undergraduate Mechanical Engineering coordinator and the Physics Graduate Coordinator, respectively, requesting admission along with the aforementioned recommendation letter(s). Contact the Mechanical Engineering undergraduate and the Physics graduate coordinator for further details.

Students who are accepted into the BAM Pathway will be allowed to register for graduate level courses after successful completion of a minimum of 75 undergraduate credits and course-specific pre-requisites

Accelerated Option Requirements

At the beginning of the student's final undergraduate semester, students must submit a <u>bachelor's/accelerated</u> <u>master's transition form</u> to the <u>College of Science's Office of Academic and Student Affairs</u>. Students must begin their master's program in the semester immediately following conferral of the bachelor's degree. Students must maintain an overall GPA of 3.00 or higher in graduate coursework.

Reserve Graduate Credit

While still in undergraduate status, a maximum of 6 additional graduate credits may be taken as reserve graduate credit and applied to the master's program. Reserve graduate credits do not apply to the undergraduate degree.

Graduate Course Suggestions

The following list of suggested courses is provided for general reference. To ensure an efficient route to graduation and career-readiness, students are strongly encouraged to meet with an advisor before registering for graduate-level courses.

<u>PHYS 510</u>	Computational Physics I	3
<u>PHYS 613</u>	Computational Physics II	3
<u>PHYS 620</u>	Continuum Mechanics	3
<u>PHYS 690</u>	Engineering Thermodynamics	3

Program Outcomes

Have you reached out to the Libraries to determine whether there are adequate resources to support your program? If not, please email Meg Meiman, Associate University Librarian for Learning, Research, and Engagement at mmeiman2@gmu.edu.

OAPI Use Only – Determination of SACSCOC Impact

Comments or Notes

 Additional
 PHYS_BS_ME_BS_PHAE_MS_ProgramApprovalForm_COSCC.pdf

 Attachments
 Reviewer

 Comments
 Comments

Additional Comments

Is this course required of all students in this degree program?

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