Program Change Request

Date Submitted: 02/26/21 10:27 am

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

Last approved: 02/01/21 12:51 pm

Last edit: 01/13/22 3:12 pm

Changes proposed by: jbazaz

Catalog Pages Using this Program

Applied and Engineering Physics, MS

Mechanical Engineering, BS

Are you completing this form on someone else's behalf?

Yes

Requestor:

In Workflow

1. **Registrar-Programs:Workflow Review**
2. **ME Chair-Undergraduate**
3. **VS Undergraduate Studies Committee Chair**
4. **PHYS Chair**
5. **SC Curriculum Committee**
6. **VS Associate Dean-Undergraduate**
7. **SC Associate Dean**
8. VS CAT Editor-Graduate
9. SC CAT Editor
10. Assoc Provost-Graduate
11. Assoc Provost-Undergraduate
12. Registrar-Programs

Approval Path

1. 02/26/21 6:43 pm Johanna Riemen (jriemen): Approved for Registrar-Programs:Workflow Review
2. 04/02/21 3:14 pm Colin Reagle (creagle): Approved for ME Chair-Undergraduate

3. 04/28/21 1:13 pm Colin Reagle (creagle): Approved for VS Undergraduate Studies Committee Chair
4. 10/25/21 2:05 pm Paul So (paso): Approved for PHYS Chair
5. 11/22/21 8:57 am Gregory Craft (gcraft): Approved for SC Curriculum Committee
6. 11/23/21 3:58 pm Sharon Caraballo (scarabal): Approved for VS Associate Dean-Undergraduate

History

1. Feb 7, 2019 by Jennifer Bazaz Gettys (jbazaz)
2. Feb 1, 2021 by Colin Reagle (creagle)

Name	Extension	Email
Chi Yang	4077	cyang

Effective Catalog: 2021-2022

Program Level: Undergraduate & Graduate (BAMs)

Program Type: Bachelor's/Accelerated Master's

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

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

Participating Colleges

	College
1	College of Engineering and Computing ~~Volgenau School of Engineering~~

Participating Departments

	Department
1	Mechanical Engineering

Justification

What: Adding PHYS 613 as a suggested course for UG students to take in this accelerated pathway.

Why: To ease advising.

What: Clarifying BAM credit counts.

Why: To ease advising.

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 Mechanical Engineering, BS and Applied and Engineering Physics, MS 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** ~~during their senior year~~ and are able to use **3-12** ~~up to 12~~ graduate **credits** ~~credits~~ in partial satisfaction of requirements for the **undergraduate** ~~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** ~~18~~ credits to receive the master's degree.

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

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 Graduate Admission Policies 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:

CS 112	Introduction to Computer Programming	4
ME 212	Solid Mechanics	3
ME 231	Dynamics	3
ME 313	Material Science	3
ME 322	Fluid Mechanics	3
ME 323	Heat Transfer	3
ME 351	Analytical Methods in Engineering	3

One or more recommendation letters from one or more research supervisors are also required. Interested applicants majoring in Mechanical Engineering, BS 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 bachelor's/accelerated master's transition form to the College of Science's Office of Academic and Student Affairs. 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.

PHYS 510	Computational Physics I	3
PHYS 613	**Computational Physics II**	**3**
PHYS 620	Continuum Mechanics	3
PHYS 690	Engineering Thermodynamics	3

Program Outcomes

OAPI Use Only – Determination of SACSCOC Impact

Comments or Notes

Additional Attachments PHYS_BS_ME_BS_PHAE_MS_ProgramApprovalForm_COSCC.pdf

Reviewer Comments

Additional Comments

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

%wi_required.eschtml%

Key: 739