

Program Change Request

Date Submitted: 09/17/20 3:03 pm

Viewing: : **Mechanical Engineering, BS/Computational Science, Accelerated MS**

Last approved: 09/26/19 2:47 pm

Last edit: 02/04/21 11:49 am

Changes proposed by: creagle

In Workflow

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

Approval Path

1. 09/17/20 3:42 pm
Tory Sarro (vsarro): Approved for Registrar-Programs:Workflow Review
2. 12/07/20 2:06 pm
Jason Kinser (jkinser): Approved for CDS Chair
3. 12/07/20 2:26 pm
Colin Reagle (creagle): Approved for ME Chair-Undergraduate
4. 12/15/20 10:22 am
Gregory Craft

Catalog Pages Using this Program [Mechanical Engineering, BS](#)
[Computational Science, MS](#)

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

No

Effective Catalog: 2021-2022

Program Level: Undergraduate & Graduate (BAMs)

Program Type: Bachelor's/Accelerated Master's

Title: Mechanical Engineering, BS/Computational Science, Accelerated MS

Registrar's Office Use Only – Program Start Term
Fall 2019

Registrar/OAPI Use Only – SACSCOC Status

Concentration(s):

College/School: College of Science

Department / Academic Unit: Computational & Data Sciences

Jointly Owned Program? Yes

Participating Colleges

	College
1	Volgenau School of Engineering

**Participating
Departments**

	Department
1	Mechanical Engineering

Justification

Updated language to take advantage of new BAM policies. Correction to total # of credits for UG degree

Catalog Published Information

**Accelerated
Description/Dual
Degree
Description:**

- (gcraft): Approved for SC Curriculum Committee
- 5. 12/16/20 10:08 am
Jennifer Bazaz
Gettys (jbazaz): Approved for SC Associate Dean
- 6. 01/21/21 3:23 pm
Colin Reagle
(creagle): Rollback to CDS Chair for VS Undergraduate Studies Committee Chair
- 7. 01/25/21 10:52 am
Jason Kinser
(jkinser): Approved for CDS Chair
- 8. 01/25/21 1:27 pm
Colin Reagle
(creagle): Approved for ME Chair- Undergraduate

History

- 1. Feb 7, 2019 by
Jennifer Bazaz
Gettys (jbazaz)
- 2. Sep 26, 2019 by
Jennifer Skorzawski-
Ross (jskorzaw)

Mechanical Engineering, BS/Computational Science, Accelerated MS

Overview

This option enables enthusiastic, highly qualified, undergraduates to obtain the [Mechanical Engineering, BS](#) and the [Computational Science, MS](#) within the accelerated time frame of five years. The program requires **139 145** credits total, allowing students to undertake graduate coursework during their final year in the bachelor's degree. Upon completion of this

~~139~~ ~~145~~ credit BS/MS combined program, students are exceptionally well prepared for undertaking doctoral studies or entering the professional workforce.

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 catalog¹. Application information for this Accelerated Master's program can be found on the [Department of Computational and Data Sciences](#) website. Applicants must have an overall undergraduate GPA of at least 3.00 and have completed at least ~~60~~ **90** credits. Additionally, applicants will have completed 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
Total Credits		22

Students must maintain an overall GPA of 3.00 or higher in graduate coursework and should consult with their faculty advisor to coordinate their academic goals within the modeling and simulation or data science emphases of the [Computational Science, MS](#).

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

¹GRE-general scores are waived for graduates of BS degrees from any program in the College of Science or the Volgenau School of Engineering at George Mason University.

Accelerated Option Requirements

Students must complete all credits that satisfy requirements for both the BS and MS programs, with up to twelve credits overlap chosen from the following courses:

~~Reserve Graduate Credit~~

CSI 500	Computational Science Tools	3
CSI 501	Introduction to Scientific Programming	3
CSI 600	Quantitative Foundations for Computational Sciences	3

Select one course from the following options: 3

Any CDS, CSI, or CSS-prefixed courses numbered 500-689, or

[STAT 544](#) Applied Probability

[STAT 554](#) Applied Statistics I

Total Credits 12

While **still** in undergraduate status, a ~~student may take a~~ maximum of **6 additional six** graduate credits **may be taken** as reserve graduate **credit credits** and **applied apply those credits** to **the a** master's program. Reserve graduate credits **do are** not **apply to** ~~counted toward~~ the ~~120 credits required in the~~ undergraduate degree.

Program Outcomes

OAPI Use Only – Determination of SACSCOC Impact

Comments or Notes

Additional Attachments

[MechEngBSCompMSAccelerated.pdf](#)

Reviewer Comments

Colin Reagle (creagle) (01/21/21 3:23 pm): Rollback: Additions/Edits/Modifications made to the Accelerated Options Requirement section. Specifically the addition of a defined course list for students. We've been told from the provost office that all BAMs should have this list. Please review and edit as you see fit.

Additional Comments

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

%wi_required.eshtml%