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## Viewing: : **Computational and Data Sciences, BS/Computational Science, Accelerated MS**

Last approved: 10/30/17 4:19 pm

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Changes proposed by: jbazaz

### Catalog Pages

#### Using this Program

[Computational and Data Sciences, 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:** Computational and Data Sciences, BS/Computational Science, 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:** Computational & Data Sciences

**Jointly Owned Program?** Yes ~~No~~

**Participating Colleges**

### In Workflow

1. Registrar-Programs:Workflow Review
2. CDS Chair
3. SC Curriculum Committee
4. SC Associate Dean
5. SC CAT Editor
6. Assoc Provost-Graduate
7. Assoc Provost-Undergraduate
8. Registrar-Programs: Duration
9. Registrar-Programs

### History

1. Oct 30, 2017 by clmig-jwehrheim

## Participating Departments

### Justification

Updating this BAM pathway to accommodate the new policy revisions: 1. Ability to complete programs in 138 credits, 2. Admission into BAM program by at least 60 UG credits, 3. Begin graduate coursework at 75 UG credits, 4. Allow 3-12 credits to be applied to the UG and GR degree, 5. Including a curated list of graduate courses.

Inserting a college "template" for BAM entries so that the college has consistent and clear messaging.

## Catalog Published Information

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Accelerated  
Description/Dual  
Degree  
Description:

# Computational and Data Sciences, BS/Computational Science, Accelerated MS

## Overview

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This **bachelor's/accelerated master's degree program allows academically strong ~~option enables enthusiastic, highly qualified,~~ undergraduates with a commitment to advance their education to obtain both the Computational and Data Sciences, BS and the Computational Science, MS degrees within an ~~within the~~ accelerated **timeframe. time frame of five years. The program requires 144 credits total, allowing students to undertake graduate coursework during their final year in the bachelor's degree.** Upon completion of this **138 144** credit **accelerated BS/MS combined** program, students **will be** ~~are~~ exceptionally well prepared for **entry into their careers undertaking doctoral studies or into a doctoral program in entering the field or in a related discipline. professional workforce.** **Students are eligible to apply for this accelerated program once they have earned at least 60 undergraduate credits and can enroll in up to 18 credits of graduate coursework after successfully completing 75 undergraduate credits. This flexibility makes it possible for students to complete a bachelor's and a master's in five years.** 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](#). **For more information on undergraduates enrolling in graduate courses, see [AP.1.4.4 Graduate Course Enrollment by Undergraduates](#).****

## Application Requirements

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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**.

~~catalog1.~~

**Important application** ~~Application~~ information **and processes** for this **accelerated master's** ~~Accelerated Master's~~ program can be **found here.** ~~found on the Department of Computational and Data Sciences website.~~

**Students should seek out the graduate program's advisor who will aid in choosing the appropriate graduate courses and help prepare the student for graduate studies.**

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

Applicants must have an overall undergraduate GPA of at least **3.00.** ~~3.00 and have completed at least 90 credits.~~

Additionally, applicants will have completed the following courses with a GPA of 3.00 or better:

~~1 GRE-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.~~

<u>CDS 205</u>	Introduction to Agent-based Modeling and Simulation	3
or <u>CDS 251</u>	Introduction to Scientific Programming	
<u>CDS 230</u>	Modeling and Simulation I	3
<u>CDS 301</u>	Scientific Information and Data Visualization	3
<u>CDS 302</u>	Scientific Data and Databases	3
<u>CDS 303</u>	Scientific Data Mining	3
<u>CDS 411</u>	Modeling and Simulation II	3
Select one from the following:		3
<u>CDS 461</u>	Molecular Dynamics and Monte Carlo Simulations	
<u>CDS 490</u>	Directed Study and Research	
<u>CSI 500</u>	Computational Science Tools	
Total Credits		21

~~**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.**~~ **Reserve Graduate Credit**

**Accelerated master's students** ~~While in undergraduate status, a student~~ may **also** take **up to 6** ~~a maximum of six~~ graduate credits as reserve graduate **credits.** ~~credits and apply those credits to a master's program. These credits do not apply to the undergraduate degree, but will reduce the master's degree by up to 6 credits. With 12~~ **Reserve** graduate **credits** ~~credits are not~~ counted toward **the undergraduate degree plus the maximum 6 reserve graduate credits, the credits necessary for the graduate degree can be reduced by up to 18.** ~~the 120 credits required in 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 post-graduation readiness, students are strongly encouraged to meet with an advisor before registering for graduate-level courses.

For students focusing on Data Science, the following courses are suggested:

**CSI 501** Introduction to Scientific Programming 3

**STAT 544** Applied Probability 3

For students focusing on Modeling, the following courses are suggested:

**CSI 501** Introduction to Scientific Programming 3

**CSI 600** Quantitative Foundations for Computational Sciences 3

### Program Outcomes

#### OAPI Use Only – Determination of SACSCOC Impact

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Comments or Notes

Additional  
Attachments

Reviewer  
Comments

Additional  
Comments

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

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