Program Change Request

Date Submitted: 09/28/21 11:41 am

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

Last approved: 03/02/21 12:38 pm

Last edit: 09/28/21 11:41 am

Changes proposed by: jbazaz

Catalog Pages Using this Program

Computational and Data Sciences, BS

Computational Science, MS

Rationale for 2022-2023

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

No

Effective Catalog: 2022-2023

Program Level: Undergraduate & Graduate (BAMs)

Program Type: Bachelor's/Accelerated Master's

Degree Type:

Title:

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

Is this a retitling of Existing Program

Registrar/OAPI Use Only – Registrar's Office Use Only – Program Start Term

Registrar/OAPI Use Only – SACSCOC Status

In Workflow

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

Approval Path

1. 09/30/21 10:05 am Tory Sarro (vsarro): Approved for Registrar-Programs:Workflow Review
2. 09/30/21 10:16 am Jason Kinser (jkinser): Approved for CDS Chair

History

1. Oct 30, 2017 by clmig-jwehrheim
2. Mar 2, 2021 by Jennifer Bazaz Gettys (jbazaz)

Concentration(s):

INTO Major(s):

Registrar/IRR Use Only – College/School: College of Science

Department / Academic Unit: Computational & Data Sciences

Jointly Owned Program? Yes

Participating Colleges

Participating Departments

Justification

What: Adding clarifying language about the 12 overlapping credits.

Why: It was noted that the sentence could be clearer, indicating that the 12 credits count toward both the undergraduate AND graduate degrees.

Catalog Published Information

Total Credits

Registrar's Office Use Only - Program Code:

Registrar/IRR Use Only – Program CIP:

Admission Requirements:

Program-Specific Policies:

Degree Requirements:

Retroa

Plan of Study:

Honors Information:

Accelerated Description/Dual Degree Description:

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

Overview

This bachelor's/accelerated master's degree program allows academically strong 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 accelerated timeframe. Upon completion of this 138 credit accelerated program, students will be exceptionally well prepared for entry into their careers or into a doctoral program in the field or in a related discipline.

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

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. Important application information and processes for this accelerated master's program can be found here.

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

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

Reserve Graduate Credit

Accelerated master's students may also take up to 6 graduate credits as reserve graduate credits. These credits do not apply to the undergraduate degree, but will reduce the master's degree by up to 6 credits. With 12 graduate credits counted toward the undergraduate **and graduate degrees** ~~degree~~ plus the maximum 6 reserve **graduate** ~~graduate~~ credits, the credits necessary for the **graduate degree** ~~graduate degree~~ can be reduced by up to 18.

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
CSI 672	Statistical Inference	3
CSI 695	Scientific Databases	3
STAT 544	Applied Probability	3

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

CSI 500	Computational Science Tools	3
CSI 501	Introduction to Scientific Programming	3
CSI 600	Quantitative Foundations for Computational Sciences	3
CSI 690	Numerical Methods	3

INTO-Mason Requirements:

College Requirements & Policies:

Department / Academic Unit Requirements & Policies:

Program Outcomes

Additional Program Information

This information is required by the Office of Accreditation and Program Integrity

Courses offered via distance (if

Indicate whether students are able

What is the primary delivery format for the program?

Does any portion of this program occur off-campus?

Off-campus details:

Are you working with a vendor / other collaborators to offer your program?

Please explain:

Additional SCHEV & SACSCOC Information

Are you changing the total number of credits required for this program?

Are you changing the delivery format in any way (e.g adding an online option)?

Are you adding/removing a licensure option which was approved by SCHEV?

Will any portion of this program be offered at an off-campus location?

What off-campus location(s)? List all

What percentage of credits toward this program are offered at the off-campus lo
Please list percentages by site (i.e. 15% at Site A, 35% at Site B etc.)

Will this program change affect any specialized accreditation?

Is the content of the new program closely related to that of an existing approve program?

Which existing approved program(s)?

Is this new program considered to be "advancing the degree level of a currently approved program" (i.e. existing content is at lower degree level, new content is at the higher degree level)?

Which existing approved program(s)?

Is this new program considered to be "lowering the degree level of a currently approved program" (i.e. existing content is at higher degree level, new content i at the lower degree level)?

OAPI Use Only – Determination of SACSCOC Impact

Comments or Notes

Green Leaf Program Designation

Is this a Green Leaf program?

Green Leaf

Sustainability-focused academic programs require at least one green leaf course. Either that course is its sustainability-focused or else the program requires a set of sustainability-related courses with aggregat

Relationship to

Relationship to

List sustainability-focused courses currently required

Sustainability-related academic programs either require at least one sustainability-relat

List sustainability-

Does this program cover material which crosses into another department?

Impacted

Additional Attachments

SCHEV Proposal

Executive Summary

Reviewer Comments

Additional Comments

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

%wi_required.eschtml%

Attached

Key: 93