Program Change Request

Date Submitted: 04/04/23 9:19 am

Viewing: IN-MS-P002 : INTO Mason: Science Graduate Pathways

Last approved: 07/13/22 3:55 pm

Last edit: 04/04/23 9:19 am

Changes proposed by: cbrady12

INTO Mason: Science Graduate Pathways

Catalog Pages Using this Program

No Longer Anticipated closure

Are you completing this form on someone else's behalf?		
	No	
Effective Catalog:	2023-2024	
Program Level:	Graduate	
Program Type:	INTO-Mason	
Title:	INTO Mason: Science Graduate Pathways	
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h Has CDE confirmed the proposes		
a lies the instructor		

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In Workflow

- 1. IN Academic Director
- 2. IN Academic Affairs Dean
- 3. SC Curriculum Committee
- 4. SC Associate Dean
- 5. SC CAT Editor
- 6. Assoc Provost-Graduate
- 7. Registrar-Programs

Approval Path

- 1. 10/27/22 12:19 pm Steven Scott (sscott4): Approved for IN Academic Director
 2. 10/28/22 11:25 am Marcy Glover (mglover2): Approved for IN
 - Academic Affairs
 - Dean

https://workingcatalog.gmu.edu/courseleaf/approve/?role=SC Curriculum Committee

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5. Is this badge co-sponsored with and
5. Is this badge to-sponsored with and
a What is the organization program o
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Assessments
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Education
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Skills Tog
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Achievement Type:
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Time Commitment:
Cost
Inductry Standarde
Recommendations
Issuance information and Pricing

Brising: See https://cpa.gmu.edu/digitalbadgeprising/ for more information Estimated Number of Radges Expected to be Issued:

Notor

• A Mason Digital Credentials Advisory Group may be developed to r

Denner

Is this a retitling of an existing Existing Program

Registrar/OAPI Use

Registrar's Office Use Only – Program Start Term 3. 11/18/22 11:00 am Gregory Craft (gcraft): Approved for SC Curriculum Committee

- 4. 11/22/22 11:29 am Jennifer Bazaz Gettys (jbazaz): Approved for SC Associate Dean
- 5. 11/22/22 2:11 pm
 Jennifer Bazaz
 Gettys (jbazaz):
 Approved for SC CAT
 Editor
- 6. 04/03/23 6:24 pm Jason McKnight (jmckni): Rollback to Initiator
- 7. 04/04/23 12:15 pm Steven Scott (sscott4): Approved for IN Academic Director
- 8. 04/04/23 12:37 pm
 Marcy Glover
 (mglover2):
 Approved for IN
 Academic Affairs
 Dean

History

1. Jul 13, 2022 by Tory Sarro (vsarro)

Only – SCHFV Registrar/OAPI Use

Registrar/OAPI Use

Only – SACSCOC

Status

Concentration(s):

	Associated Concentrations	Registrar's Office Use Only: Concentration Code
1	Accelerated INTO	ACC
2	Extended INTO	EXT
3	Standard INTO	STD

INTO Major(s):

	Associated Majors	Registrar's Office Use only: Major Code
1	Bioinformatics & Comp Biology	BCB
2	Bioinformatics Management	BNFM
3	Computational Science	COMP
3 4	Earth Systems Science	ESSC
4 5	Environmental Science & Policy	EVSP
5 6	Forensic Science	FRSC
6 7	Geographic & Cartographic Sci	GECA
7 8	Mathematics	MATH
8 9	Applied & Engineering Physics	PHAE

Registrar/IRR Use

Only –

College/School: INTO Mason

IN-MS-P002: INTO Mason: Science Graduate Pathways

Department / Academic Unit:	INTO Mas	son
Jointly Owned Program?	Yes	
Participating Colleges		College
concepto	1	College of Science
Participating Departments		
Justification	Replacing	g two INTO Mason special topics courses with permanent courses:
	EAP 405 >	> EAP 401
INYO 508 > INYO 505		5 > INYO 505
Replacing INTO Mason EAP 508 with EAP 507 in order to simplify curriculum. Deactivating the Standard and Accelerated Pathways to the MS in Computational Science		

Catalog Published Information

Total Credits

Registrar's Office Use Only - Program Code:

IN-MS-P002

Registrar/IRR Use Only – Program CIP Code

Admission **Requirements:** Program-Specific Policies:

Degree Requirements:

D۵

Plan of Study:

Honors Information:

Accelerated Description/Dual Degree Description:

INTO-Mason Requirements:

Applied and Engineering Physics Graduate Pathway

The following grid is for the first semester of the standard, 2-semester pathway into the Master of Science in Applied and Engineering Physics degree:

Standard semester 1 of 2

<u>PHYS 502</u>	Introduction to Quantum Mechanics and Atomic Physics	3
or <u>PHYS 684</u>	Quantum Mechanics I	
<u>EAP 506</u>	Graduate Communication in the Disciplines I	4

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<u>INYO 504</u>	Transitions for International Graduate Students	3
<u>EAP 410</u>	Language Support for International Students	2
Total Credits		12

The following grid is for the second semester of the standard, 2-semester pathway into the Master of Science in Applied and Engineering Physics degree:

Standard semester 2 of 2

<u>PHYS 513</u>	Applied Electromagnetic Theory	3
or <u>PHYS 68</u>	5 Classical Electrodynamics I	
<u>EAP 507</u>	Advanced Graduate Communication Across the Disciplines	4
EAP 405	Special Topics in Advanced English for Academic Purposes	1
INYO 508	Special Topics Content Support in the Disciplines	£
<u>INYO 505</u>	Intercultural Competence and Professional Development for Multilingual Graduate Students	1
<u>EAP 401</u>	Advanced English Grammar for Multilingual Students	1
Total Credi	ts	9

The following grid is for the single semester of the accelerated, 1-semester pathway into the Master of Science in Applied and

Engineering Physics degree:

Accelerated semester 1 of 1

EAP 508	Graduate Communication in the Disciplines III	4
EAP 405	Special Topics in Advanced English for Academic Purposes	1
<u>PHYS 705</u>	Classical Mechanics	3
<u>PHYS 502</u>	Introduction to Quantum Mechanics and Atomic Physics	3
or <u>PHYS 684</u>	Quantum Mechanics I	
<u>EAP 507</u>	Advanced Graduate Communication Across the Disciplines	4
<u>INYO 504</u>	Transitions for International Graduate Students	3
<u>EAP 401</u>	Advanced English Grammar for Multilingual Students	1
Total Credits		14

Bioinformatics and Computational Biology/Management Graduate Pathway

The following grid is for the first semester of the standard, 2-semester pathway into the Master of Science in Bioinformatics and Computational Biology / Management degree:

4/20/23, 3:36 PM	IN-MS-P002: INTO Mason: Science Graduate Pathways				
Standard seme	ester 1 of 2				
<u>BINF 631</u>	Molecular Cell Biology for Bioinformatics	3			
or <u>BINF 630</u>	Bioinformatics Methods				
<u>EAP 506</u>	Graduate Communication in the Disciplines I	4			
<u>INYO 504</u>	Transitions for International Graduate Students	3			
<u>EAP 410</u>	Language Support for International Students	2			
Total Credits		12			
The followin	g grid is for the second semester of the standard, 2-semester pathway into the Master of Science in Bioinformatics an	d			
Computatior	nal Biology / Management degree:				
Standard seme	ester 2 of 2				
<u>BINF 631</u>	Molecular Cell Biology for Bioinformatics	3			
or <u>BINF 630</u>	Bioinformatics Methods				
<u>EAP 507</u>	Advanced Graduate Communication Across the Disciplines	4			
EAP 405	Special Topics in Advanced English for Academic Purposes	<u>+</u>			
INYO 508	Special Topics Content Support in the Disciplines	£			
<u>INYO 505</u>	Intercultural Competence and Professional Development for Multilingual Graduate Students	1			
<u>EAP 401</u>	Advanced English Grammar for Multilingual Students	1			
Total Credits		9			
The following	The following grid is for the single semester of the accelerated, 1-semester pathway into the Master of Science in Bioinformatics and				
Computational Biology / Management degree:					
Accelerated se	Accelerated semester 1 of 1				
EAP 508	Graduate Communication in the Disciplines III	4			
EAP 405	Special Topics in Advanced English for Academic Purposes	1			
INYO 504	Transitions for International Graduate Students	3			
CSI 690	Numerical Methods	3			
CSI 695	Scientific Databases	3			
Total Credits		θ			
	Accelerated semester 1 of 1				
EAP 508	Graduate Communication in the Disciplines III	4			
EAP 405	Special Topics in Advanced English for Academic Purposes	1			

<u>BINF 631</u>	Molecular Cell Biology for Bioinformatics	3
or <u>BINF 634</u>	Bioinformatics Programming	
<u>BINF 630</u>	Bioinformatics Methods	3
or <u>BINF 633</u>	Molecular Biotechnology	
EAP 507	Advanced Graduate Communication Across the Disciplines	4
<u>INYO 504</u>	Transitions for International Graduate Students	3
<u>EAP 401</u>	Advanced English Grammar for Multilingual Students	1
Total Credits		14

Computational Science Graduate Pathway The following grid is for the first semester of the standard, 2-semester pathway into the Master of Science in ComputationalScience degree: The following grid is for the second semester of the standard, 2-semester pathway into the Master of Science in ComputationalScience degree: The following grid is for the single semester of the accelerated, 1-semester pathway into the Master of Science

in ComputationalScience degree: Earth Systems Science Graduate Pathway

Standard seme	ester 2 of 2	
EAP 507	Advanced Graduate Communication Across the Disciplines	4
EAP 405	Special Topics in Advanced English for Academic Purposes	1
INYO 508	Special Topics Content Support in the Disciplines	±
CSI 690	Numerical Methods	3
Total Credits		θ
Standard seme	ester 1 of 2	
EAP 506	Graduate Communication in the Disciplines I	4
EAP 410	Language Support for International Students	2
INYO 504	Transitions for International Graduate Students	3
CSI 695	Scientific Databases	3
Total Credits		θ

The following grid is for the first semester of the standard, 2-semester pathway into the Master of Science in Earth Systems Science degree:

Standard semester 1 of 2

<u>GGS 553</u>	Geographic Information Systems	3
or <u>GGS 560</u>	Quantitative Methods	
or <u>GGS 579</u>	Remote Sensing	
<u>EAP 506</u>	Graduate Communication in the Disciplines I	4
<u>INYO 504</u>	Transitions for International Graduate Students	3
<u>EAP 410</u>	Language Support for International Students	2
Total Credits		12

The following grid is for the second semester of the standard, 2-semester pathway into the Master of Science in Earth Systems Science

degree:

Standard seme	ster 2 of 2	
GEOL 513	Hydrogeology	3
or <u>GEOL 532</u>	Paleoclimatology	
<u>CLIM 512</u>	Physical Oceanography	3
or <u>GEOL 506</u>	Soil Science	
EAP 507	Advanced Graduate Communication Across the Disciplines	4
EAP 405	Special Topics in Advanced English for Academic Purposes	1
INYO 508	Special Topics Content Support in the Disciplines	1
INYO 505	Intercultural Competence and Professional Development for Multilingual Graduate Students	1
<u>EAP 401</u>	Advanced English Grammar for Multilingual Students	1
Total Credits		12

The following grid is for the single semester of the accelerated, 1-semester pathway into the Master of Science in Earth Systems Science

degree:

Accelerated semester 1 of 1

EAP 508	Graduate Communication in the Disciplines III	4
EAP 405	Special Topics in Advanced English for Academic Purposes	£
<u>GGS 553</u>	Geographic Information Systems	3
or <u>GGS 560</u>	Quantitative Methods	

or <u>GGS 579</u>	Remote Sensing	
<u>GEOL 506</u>	Soil Science	3
or <u>GEOL 513</u>	Hydrogeology	
or <u>GEOL 532</u>	Paleoclimatology	
or <u>CLIM 512</u>	Physical Oceanography	
EAP 507	Advanced Graduate Communication Across the Disciplines	4
<u>INYO 504</u>	Transitions for International Graduate Students	3
EAP 401	Advanced English Grammar for Multilingual Students	1
Total Credits		14

Environmental Science and Policy Graduate Pathway

The following grid is for the first semester of the standard, 2-semester pathway into the Master of Science in Environmental Science and				
Policy deg	Policy degree:			
Standard se	emester 1 of 2			
<u>EAP 506</u>	Graduate Communication in the Disciplines I	4		
<u>EVPP 506</u>	Science of the Environment I	3		
<u>INYO 504</u>	Transitions for International Graduate Students	3		
<u>EAP 410</u>	Language Support for International Students	2		
Total Credit	S	12		
The follow	The following grid is for the second semester of the standard, 2-semester pathway into the Master of Science in Environmental Science			
and Policy degree:				
Standard se	emester 2 of 2			
<u>EVPP 507</u>	Science of the Environment II	3		
<u>EAP 507</u>	Advanced Graduate Communication Across the Disciplines	4		
EAP 405	Special Topics in Advanced English for Academic Purposes	1		
INYO 508	Special Topics Content Support in the Disciplines	1		
<u>INYO 505</u>	Intercultural Competence and Professional Development for Multilingual Graduate Students	1		
<u>EAP 401</u>	Advanced English Grammar for Multilingual Students	1		
Total Credit	Total Credits 9			

The following grid is for the single semester of the accelerated, 1-semester pathway into the Master of Science in Environmental Science and Policy degree:

Accelerated semester 1 of 1

EAP 508	Graduate Communication in the Disciplines III	4
EAP 405	Special Topics in Advanced English for Academic Purposes	1
EVPP or PUAD cour	se	3
EVPP or PUAD cour	se	3
EAP 507	Advanced Graduate Communication Across the Disciplines	4
<u>INYO 504</u>	Transitions for International Graduate Students	3
<u>EAP 401</u>	Advanced English Grammar for Multilingual Students	1
Total Credits		14

Forensic Science Graduate Pathway

The following grid is for the first semester of the standard, 2-semester pathway into the Master of Science in Forensic Science degree: Standard semester 1 of 2

FRSC 500	Introduction to Forensic Science	3
<u>EAP 506</u>	Graduate Communication in the Disciplines I	4
INYO 504	Transitions for International Graduate Students	3
EAP 410	Language Support for International Students	2
Total Credits		12

The following grid is for the second semester of the standard, 2-semester pathway into the Master of Science in Forensic Science degree: Standard semester 2 of 2

FRSC 510	Basic Crime Analysis	3
FRSC 570	Trace and Physical Evidence Concepts	3
<u>EAP 507</u>	Advanced Graduate Communication Across the Disciplines	4
EAP 405	Special Topics in Advanced English for Academic Purposes	1
INYO 508	Special Topics Content Support in the Disciplines	£
<u>INYO 505</u>	Intercultural Competence and Professional Development for Multilingual Graduate Students	1
EAP 401	Advanced English Grammar for Multilingual Students	1
Total Credits		12

The following grid is for the single semester of the accelerated, 1-semester pathway into the Master of Science in Forensic Science degree:

Accelerated semester 1 of 1

EAP 508	Graduate Communication in the Disciplines III	4
EAP 405	Special Topics in Advanced English for Academic Purposes	1
FRSC 500	Introduction to Forensic Science	3
FRSC 510	Basic Crime Analysis	3
<u>EAP 507</u>	Advanced Graduate Communication Across the Disciplines	4
<u>INYO 504</u>	Transitions for International Graduate Students	3
<u>INYO 504</u> <u>EAP 401</u>	Transitions for International Graduate Students Advanced English Grammar for Multilingual Students	3 1

Geographic and Cartographic Sciences Graduate Pathway

The following grid is for the first semester of the standard, 2-semester pathway into the Master of Science in Geographic and Cartographic Sciences degree:

Standard semester 1 of 2

<u>GGS 551</u>	Cartographic Design	3
or <u>GGS 553</u>	Geographic Information Systems	
or <u>GGS 560</u>	Quantitative Methods	
or <u>GGS 579</u>	Remote Sensing	
<u>EAP 506</u>	Graduate Communication in the Disciplines I	4
<u>INYO 504</u>	Transitions for International Graduate Students	3
<u>EAP 410</u>	Language Support for International Students	2
Total Credits		12

The following grid is for the second semester of the standard, 2-semester pathway into the Master of Science in Geographic and

Cartographic Sciences degree:

Standard semester 2 of 2

Required Major Courses (student will take two of the following):

<u>GGS 551</u>	Cartographic Design
or <u>GGS 553</u>	Geographic Information Systems

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or <u>GGS 560</u>	Quantitative Methods	
or <u>GGS 579</u>	Remote Sensing	
<u>EAP 507</u>	<u>P 507</u> Advanced Graduate Communication Across the Disciplines	
EAP 405	- 405 Special Topics in Advanced English for Academic Purposes	
INYO 508	2 508 Special Topics Content Support in the Disciplines	
<u>INYO 505</u>	INYO 505 Intercultural Competence and Professional Development for Multilingual Graduate Students	
<u>EAP 401</u>	Advanced English Grammar for Multilingual Students	1
Total Credits		12
The following gr	The following grid is for the single semester of the accelerated, 1-semester pathway into the Master of Science in Geographic and	
Cartographic Sciences degree:		
Accelerated semester 1 of 1		
EAP 508	Graduate Communication in the Disciplines III	4
EAP 405	Special Topics in Advanced English for Academic Purposes	t
Required Major Courses (student will take two of the following):		6
<u>GGS 551</u>	Cartographic Design	
or <u>GGS 553</u>	Geographic Information Systems	
or <u>GGS 560</u>	Quantitative Methods	
or <u>GGS 579</u>	Remote Sensing	
<u>EAP 507</u>	Advanced Graduate Communication Across the Disciplines	4
<u>INYO 504</u>	Transitions for International Graduate Students	3
EAP 401	Advanced English Grammar for Multilingual Students	1
Total Credits		14

Mathematics Graduate Pathway

The following grid is for the first semester of the standard, 2-semester pathway into the Master of Science in Mathematics degree:

Standard semester 1 of 2

<u>MATH 315</u>	Advanced Calculus I	3
or <u>MATH 675</u>	Linear Analysis	
<u>EAP 506</u>	Graduate Communication in the Disciplines I	4
<u>INYO 504</u>	Transitions for International Graduate Students	3

<u>EAP 410</u>	Language Support for International Students	2
Total Credits		12
The following grid is for the second semester of the standard, 2-semester pathway into the Master of Science in Mathematics degr		
Standard semeste	indard semester 2 of 2	
<u>MATH 321</u>	Abstract Algebra	3
or <u>MATH 621</u>	Algebra I	
<u>MATH 322</u>	Advanced Linear Algebra	3
<u>EAP 507</u>	Advanced Graduate Communication Across the Disciplines	4
EAP 405	Special Topics in Advanced English for Academic Purposes	1
INYO 508	Special Topics Content Support in the Disciplines	1
<u>INYO 505</u>	Intercultural Competence and Professional Development for Multilingual Graduate Students	1
<u>EAP 401</u>	Advanced English Grammar for Multilingual Students	1
Total Credits		12

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:

Related

Departments

Could this program prepare students for any type of professional licensure, in Virginia or elsewhere?

Additional SCHEV & SACSCOC Information

Is the content of the new program closely related to that of an existing approved program at the same instructional level (i.e., baccalaureate, master's, doctoral)?

Which existing approved program(s)?

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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 Which existing approved program(s)?

Which existing approved program(s)?

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

Which existing approved program(s)?

Is this a re-opening of a program that was closed to admission within the last five years?

Date of Program Closure

What are the methods of delivery for the program?

Does this program include a course/credit-based competency-based education delivery optior

Is this change a simple retitling of an existing program, with no other changes, to any existing program content, curriculum requirements, etc?

Does this change represent a repackaging of content in an existing approved degree/certificat program at the same instructional level (i.e., baccalaureate, master's, or doctoral)?

Which existing approved program(s)?

Percentage of total credits containing new course content. ("New course content" is defined b SACSCOC as content that is not currently included in an existing approved degree/certificate program at the same instructional level. Do not exclude gen ed credits in calculations for undergraduate programs.) Does this change include the addition of a distance education or face-to-face method of delivery for this program?

What is the new method of delivery?

Does this change include the addition of a course/credit-based competency-based education delivery option?

OAPI Use Only – Determination of SACSCOC Impact

Comments or Notes

Green Leaf Program Designation

Is this a Green Leaf

program?

Green Leaf

Decignotion

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

Relationship to

Evicting Courses

Relationship to

Evicting Drograms

List sustainability-

focused courses

currently required

in the degree

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

List sustainabilityrelated courses

Does this program cover material which crosses into another department?

No

Impacted

Additional

Attachments

SCHEV Proposal

Executive Summary

Reviewer Comments	Jason McKnight (jmckni) (04/03/23 6:24 pm): Rollback: Rollback per request of Christina Brady
Additional	Deactivating the Standard and Accelerated Pathways to the MS in Computational Science.
Comments	Looking into proposing Pathways to certificates instead.

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

%wi_required.eschtml%

Attached