Course Change Request

Date Submitted: 08/31/26 1:40 pm

Viewing: MATH 465 : Mathematics of Data Science

Last approved: 04/29/26 5:06 am

Last edit: 09/25/26 2:14 pm

Changes proposed by: skhankan

Catalog Pages referencing this course

Department of Mathematical Sciences

Mathematics (MATH)

Select modification type:

~~Simple~~

Substantial

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

No

Effective Term: Spring 2027

In Workflow

1. **MATH Chair**
2. **SC Curriculum Committee**
3. SC Assistant Dean
4. Assoc Provost-Undergraduate
5. Registrar-Courses
6. Banner

Approval Path

1. 09/01/26 6:04 pm Maria Emelianenko (memelian): Approved for MATH Chair

History

1. May 25, 2021 by Catherine Sausville (csausvil)
2. Mar 6, 2026 by Catherine Sausville (csausvil)
3. Apr 29, 2026 by Jennifer Bazaz Gettys (jbazaz)

Subject Code: MATH - Mathematics **Course Number:** 465

Bundled Courses:

Is this course replacing another course? No

Equivalent Courses:

Catalog Title: Mathematics of Data Science

Banner Title: Mathematics of Data Science

Will section titles vary by semester? No

Credits: 3

Schedule Type: Lecture

Hours of Lecture or Seminar per week: 3

Repeatable: May be only taken once for credit, limited to 3 attempts (N3)

Max Allowable Credits: 9

Default Grade Mode: Undergraduate Regular

Recommended Prerequisite(s):
MATH 352 and Math 464 and (STAT 350 or STAT 360 or STAT 356)

Recommended Corequisite(s):

Required Prerequisite(s) / Corequisite(s) (Updates only):
Math 214 and Math 322 and CS112

Changes: Math 214 and Math 322 and (CS112 or CS 109)

Registrar's Office Use Only - Required Prerequisite(s)/Corequisite(s):

And/Or	(	Course/Test Code	Min Grade/Score	Academic Level	)	Concurrency?
	(	MATH 214	C	UG		
Or		MATH 214	XS	UG	)	
And	(	MATH 322	C	UG		
Or		MATH 322	XS	UG	)	

And/Or	(	Course/Test Code	Min Grade/Score	Academic Level	)	Concurrency?
And	(	CS 112	C	UG		
Or		CS 112	XS	UG	)	

Registration Restrictions (Updates only):

Registrar's Office Use Only - Registration Restrictions:

Field(s) of Study:

Class(es):

Level(s):

Degree(s):

School(s):

Catalog Description:

Covers mathematical aspects of data science/artificial intelligence (AI) including theory of linear and nonlinear dimension reduction, elements of spectral graph theory, function spaces and regularity in regression, and data-driven dynamics identification and discovery. Computational and analytic assignments are given.

Justification:

What: Updating pre-reqs/co-reqs.

Why: CS 108-109 is a sequence that is equivalent to CS 112.

Does this course cover material which crosses into another department? No

Learning Outcomes:

Stated on attached syllabus.

Will this course be scheduled as a cross-level cross listed section?

Attach Syllabus

465-syllabus_May12final.pdf

Additional Attachments

Specialized Course Categories:

Have you reached out to the Libraries to determine whether there are adequate resources to support your course? If not, please email Meg Meiman, Associate University Librarian for Learning, Research, and Engagement at mmeiman2@gmu.edu.

Additional Comments:

Reviewer Comments

Key: 17202