Course Change Request

Date Submitted: 12/11/25 2:20 pm

Viewing: **MATH 465 : Mathematics of Data Science**

Last approved: 05/25/21 4:02 am

Last edit: 01/12/26 12:16 pm

Changes proposed by: csausvil

Catalog Pages referencing this course

[Department of Mathematical Sciences](#)

[Mathematics (MATH)](#)

Select modification type:

[Substantial](#)

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. 12/11/25 2:55 pm
   Maria Emelianenko
   (memelian):
   Approved for MATH
   Chair

History

1. May 25, 2021 by
   Catherine Sausville
   (csausvil)

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

Yes ~~No~~

Requestor:

Name	Extension	Email
Sarah Khankan	3-1461	skhankan@gmu.edu

Effective Term: Summer 2026

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 ~~or STAT~~ 350 or STAT 360 or STAT 356) ~~356~~

Recommended Corequisite(s):

Required Prerequisite(s) / Corequisite(s) (Updates only):
   Math 214 and Math 322 and CS112 ~~464~~

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 464	C	UG		
Or		MATH 464	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 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 recommended and required Prerequisites.
Why: Some Data Science concentration students have been changing their concentration because of the requirement to take Math 464 before Math 465. To address this, we are adjusting Math 464 to a recommended prerequisite rather than a required one, while maintaining its existing prerequisites—Math 322 and CS 112—as the required prerequisites for Math 465.

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