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MINOR IN COMPUTATIONAL AND APPLIED MATHEMATICS

Program Learning Outcomes for the Minor in Computational and Applied **Mathematics**

Upon completing the minor in Computational and Applied Mathematics, students will be able to:

- 1. Use modern numerical methods to analyze and solve typical problems in linear systems.
- 2. Design and test a mathematical model, following a multi-stage process.

Requirements for the Minor in Computational and Applied Mathematics

Students pursuing the minor in Computational and Applied Mathematics must complete:

- · A minimum of 6 courses (18 credit hours) to satisfy minor requirements
- · A minimum of 5 courses (15 credit hours) taken at the 300-level or above.

The courses listed below satisfy the requirements for this minor. In certain instances, courses not on this official list may be substituted upon approval of the minor's academic advisor or, where applicable, the Program Director. (Course substitutions must be formally applied and entered into Degree Works by the minor's Official Certifier (https:// registrar.rice.edu/facstaff/degreeworks/officialcertifier/)). Students and their academic advisors should identify and clearly document the courses to be taken.

Summary

Code	Title	Credit Hours
Total Credit and Applied	Hours Required for the Minor in Computational Mathematics	18
Minor Re	quirements	
Code	Title	Credit Hours
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C	Core nequirements					
С	MOR 220	INTRODUCTION TO ENGINEERING COMPUTATION	3			
Select 1 course from the following:						
	CMOR 302	MATRIX ANALYSIS				
	CMOR 303	MATRIX ANALYSIS FOR DATA SCIENCE				
	MATH 354	HONORS LINEAR ALGEBRA				
	MATH 355	LINEAR ALGEBRA				
С	MOR 304	DIFFERENTIAL EQUATIONS IN SCIENCE AND ENGINEERING	3			
	or CMOR 360	INTRODUCTION TO OPERATIONS RESEARCH AND OPTIMIZATION				

iotal Credit Hours	18
fferings at the 400-level or above	
Select 2 elective courses from departmental (CMOR) course	6
fferings at the 300-level or above	
Select 1 elective course from departmental (CMOR) course	3

Total Credit Hours

Footnotes and Additional Information

To fulfill the remaining Computational and Applied Mathematics minor requirements, students must complete a total of 3 additional courses (9 credit hours) at the 300-level or above from Computational and Applied Mathematics and Operations Research (CMOR) departmental course offerings. The elective courses completed must be taken for a minimum of 3 credit hours each. At least 2 of these 3 elective courses (6 credit hours) must be completed at the 400-level or above. Elective Requirements may not include CMOR 494, CMOR 495, or independent study courses (such as CMOR 490 or CMOR 491).

Policies for the Minor in Computational and Applied Mathematics

Program Restrictions and Exclusions

Students pursuing the minor in Computational and Applied Mathematics should be aware of the following program restriction:

- As noted in Majors, Minors, and Certificates (https://ga.rice.edu/ undergraduate-students/academic-opportunities/majors-minorscertificates/), i.) students may declare their intent to pursue a minor only after they have first declared a major, and ii.) students may not major and minor in the same subject.
- · Students pursuing the minor in Computational and Applied Mathematics may not additionally declare the major in Operations Research.

Transfer Credit

For Rice University's policy regarding transfer credit, see Transfer Credit (https://ga.rice.edu/undergraduate-students/academic-policiesprocedures/transfer-credit/). Some departments and programs have additional restrictions on transfer credit. The Office of Academic Advising maintains the university's official list of transfer credit advisors (https:// oaa.rice.edu/advising-network/transfer-credit-advisors/) on their website: https://oaa.rice.edu. Students are encouraged to meet with their academic program's transfer credit advisor when considering transfer credit possibilities.

Departmental Transfer Credit Guidelines

Students pursuing the minor in Computational and Applied Mathematics should be aware of the following departmental transfer credit guidelines:

· Requests for transfer credit will be considered by the program director (and/or the program's official transfer credit advisor) on an individual case-by-case basis.

Additional Information

For additional information, please see the Computational Applied Mathematics and Operations Research website: https://cmor.rice.edu/.

Opportunities for the Minor in Computational and Applied Mathematics Academic Honors

The university recognizes academic excellence achieved over an undergraduate's academic history at Rice. For information on university honors, please see Latin Honors (https://ga.rice.edu/undergraduate-students/honors-distinctions/university/) (summa cum laude, magna cum laude, and cum laude) and Distinction in Research and Creative Work (https://ga.rice.edu/undergraduate-students/honors-distinctions/university/). Some departments have department-specific Honors awards or designations.

Additional Information

For additional information, please see the Computational Applied Mathematics and Operations Research website: <u>https://cmor.rice.edu/</u>.