



## CURRICULUM CHANGE PROPOSAL

Prepare proposal in accordance with the guidelines below and the format shown on the following pages. Should any item under the headings not pertain to your proposal, write N/A.

**PROPOSAL NUMBER: 25-26-12**

**REVISION** (label Revision #1, #2, etc.): Click or tap here to enter text.

### SECTION 1: CONTACT INFORMATION

Name:	Robert J Niichel
Title:	Associate professor of Mathematics
E-mail Address:	rniichel@fairmontstate.edu
Phone Number:	x4701

### SECTION 2: PROGRAM INFORMATION

College:	Science and Technology
Department:	Computer Science and Mathematics
Title of Degree Program/Certificate:	B.S. Mathematics
Degree Program Level:	Undergraduate
Date Originally Submitted:	Click or tap to enter a date.
Implementation Date Requested:	August 2026

### APPROVAL

The Deans of the affected colleges must sign below to indicate their notification and departmental approval of this proposal. Should this proposal affect any course or program in another college, a memo must be sent to the Dean of each college impacted and a copy of the memo(s) must be included with this proposal.

By signing below, you are indicating your college and department(s)'s approval of this proposal.

College	Dean's Signature
Science and Technology	

## Addendum

Re: Mathematics Curriculum Proposals, November 2025

Date: 11/10/25

I approve the following curriculum proposals bearing the temporary names:

- Math Program revision
- Mathematical Modeling
- Data Science Minor Revision
- Supervised Machine Learning
- Unsupervised Machine Learning

Dr. Deb Hemler, Interim Dean of the College of Science and Technology

Signature: Deb Hemler



I approve the following curriculum proposals bearing the temporary names:

- Data Science Minor Revision
- Supervised Machine Learning
- Unsupervised Machine Learning

Dr. James Matthews, Interim Dean of the College of Liberal Arts

Signature: James Matthews



**ADDITIONAL COMMENTS:**

**SECTION 3: Curriculum Change Request**

**A. PROPOSAL ABSTRACT.**

<b>Write a brief abstract, not exceeding 150 words, describing proposed changes.</b>
The math modeling class is being added as an elective. We are also removing Math Logic from the electives list and catalog

**B. DESCRIPTION OF THE PROPOSAL**

1. Full Program Name:	Bachelor of Science, Mathematics
2. Current number of credit hours required for the program:	120
3. Is the program changing the number of credit hours required for the program?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
4. How many credit hours will be added to the program?	N/A
5. How many credit hours will be deleted from the program?	N/A

6. Added Course(s) (if applicable): List the course(s) to be added to program (if applicable). Indicate whether the course is an existing course or will be a proposed new course.
MATH 2545 Math Modeling
7. Deleted Courses (if applicable): List course(s) to be deleted from the program (if applicable). Indicate the term in which the course will no longer be available for students to take and the catalog in which students will not have the option to take the course.
MATH 2510 Math Logic
8. Teach-out Arrangement: If a required course will be deleted from the program, how will you accommodate current students in the program to complete the required course?
<input type="checkbox"/> Courses will continue of be offered for students to complete program under previous catalog. (Typical)
<input type="checkbox"/> Students must transition to new catalog and meet all requirements. (Student advising required)
<input type="checkbox"/> Students in old catalog will take new or existing courses as outlined below. (Student advising required)
<input type="checkbox"/> Department will petition course changes for each student. (Not recommended)
<input type="checkbox"/> Change is only editorial and will not impact student progress.

### C. CHANGE IN PROGRAM DESCRIPTION (if applicable)

<b>1. Current Program Description</b>
NA
<b>2. Proposed Program Description</b>
NA

### D. RATIONALE

<b>1. What is the rationale for this change?</b>
<input type="checkbox"/> Annual assessment results <input type="checkbox"/> Program review <input type="checkbox"/> Program accreditation <input type="checkbox"/> College or Department strategic plan <input type="checkbox"/> To align with University policy or standard <input checked="" type="checkbox"/> Other
<b>2. Description of the Rationale.</b> Describe the evidence that supports changing the program's curriculum. For example, indicate the types of assessment data (e.g., surveys, interviews, capstone courses, projects, licensure exams, nationally-normed tests, locally developed measurements, accreditation reports, etc.) collected and analyzed to determine that curricular changes were warranted. Is it due to market trends? Does it reflect changes in the discipline? What are the expected results of the change?
The department has been running mathematical modeling as a special topics course. That course has been well-received and so we are looking to turn it into a full course. Moreover, we hope the course would be popular with a variety of other degree programs on campus.

### E. RESOURCES

<b>1. Will new faculty, be needed to support the program change? If no new faculty are required and the revision is adding classes or substituting courses, identify how current faculty will meet the demand.</b>
NO. The course is an elective and will be offered in rotation with other electives.
<b>2. Will new facilities, equipment, space modification, and/or library materials/services be needed to support the program change? Provide an estimate of the increased cost, or reduction in cost of implementation (if applicable).</b>
No


### F. PROGRAM CHANGE SUMMARY

- A. **APPENDIX A:** For degree programs, majors, and concentrations (only), use the format in Appendix A to show the Current Program and Proposed Changes.
- B. For changes to minors and certificates, please attach a document showing the current program and proposed changes. You do not need to complete Appendix A for minors and certificates.

**APPENDIX A  
B.S. Degree in Mathematics  
Current Program**

**[NOTE: For current program requirements, you can copy paste your program information from the [Digital Catalog](https://catalog.fairmontstate.edu/index.php?catoid=23) below. Program information can be found here <https://catalog.fairmontstate.edu/index.php?catoid=23> ]**

**Degree Requirements**

<b>Core Curriculum Courses</b>		
If a core curriculum course is also listed as a required major course, place an X in the 'credits' column. 		
Core Area	Course Prefix and Number	Credit Hours
First Year Seminar	SOAR 1199, HONR 1100, BSBA 1100, NURS 1025	1-3
Written Communication	ENGL 1101, ENG 1102, ENG 1103	6-7
Oral Communication	COMM 2200, COMM 2201, or COMM 2202	3
Mathematics	MATH 1407, MATH 1507, MATH 1510, MATH 1430, MATH 1530, MATH 1540, MATH 1585, MATH 2501	3-4 X
Humanities	ENGL 2220, ENGL 2221, ENGL 2240, FOLK 2200, HIST 2211, HIST 2212, HIST 2213, PHIL 2200, PHIL 2250, PHIL 2275	3
Fine Arts	ART 1120, ART 1141, MUSI 1106, MUSI 1120, MUSI 1167, MUSI 1168, MUSI 1169, MUSI 2247, MUSI 2277, MUSI 2279, THEA 1120	2-3
Natural Science	BIOL 1104, BIOL 1105, BIOL 1106, BIOL 1180 & 1181, CHEM 1101, CHEM 1105, GEOL 1101, GEOL 1102, PHYS 1101, PHYS 1105, SCIE 1100, SCIE 1103, SCIE 1105 SCIE 1107, SCIE 1115, SCIE 1120, SCIE 1130, SCIE 1210, SCIE 1250, SCIE 2200	4-5
Social Science	BSBA 2200, BSBA 2211, CRIM 1100, CRIM 2202, GEOG 2210, MANG 2205, POLI 2200, PSYC 1101, SOCY 1110, SOCY 2205, TECH 1100	3
Citizenship	HIST 1107, HIST 1108, POLI 1100, RECR 1141	3

Personal Development	<p><b>Global Awareness:</b> FREN 2202, SPAN 2202, LANG 1110, POLI 2210, POLI 2220</p> <p><b>Fitness &amp; Wellness:</b> CRIM 2212, CHEP 1100, CHEP 1110, HLTA 1100, HLTA 2203, NUTR 1110, PHED 1100</p> <p><b>Technology:</b> ART 2245, BISM 1200, CIVL 2210, EDUC 2201, MATH 1550, MANF 2250, MUSM 1100, TECH 1101</p>	2-3
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Required Major Courses (33-34 Credit Hours)		
Course Prefix & Number	Course Name	Credit Hours
MATH 2501	Calculus 1	4
MATH 2502	Calculus 2	4
MATH 1550	Applied Statistics	3
MATH 1561	Mathematical Reasoning	3
MATH 2563	Transition to Higher Mathematics	3
MATH 3520	Linear Algebra	3
MATH 3550	Probability	3
MATH 3503	Calculus 3	4
MATH 4520	Abstract Algebra	3
COMP 1110	Introduction to Programming	3
or		or
COMP 1125	Principles of Programming I	4


Major Elective Courses (12 Credit Hours) – IF APPLICABLE [Electives are selected from a specific major or program]		
Course Prefix & Number	Course Name	Credit Hours
Group B Electives (students choose 6-9 hours)		
Math 2520	Number Theory	3
MATH 2562	Introduction to Discrete Mathematics	3
MATH 3504	Differential Equations	3
MATH 3570	Geometry	3
MATH 2510	Mathematical Logic	3
Group A Electives (students choose at least 3 hours)		
MATH 4580	Topology	3
MATH 4590	Real Analysis	3

<b>Total Core Curriculum Credit Hours:</b>	<b>25-28</b>
<b>Total Required Major Courses Credit Hours:</b>	<b>33-34</b>
<b>Total Required Concentration Credit Hours:</b>	<b>0</b>
<b>Total Elective Credit Hours (If applicable):</b>	<b>12</b>
<b>Total Free Electives Credit Hours:</b>	<b>46-50</b>
<b>TOTAL CREDIT HOURS</b>	<b>120</b>

## B.S. Degree in Mathematics

### Proposed Program

#### Degree Requirements

Core Curriculum Courses		
If a core curriculum course is also listed as a required major course, place an X in the 'credits' column. 		
Core Area	Course Prefix and Number	Credit Hours
First Year Seminar	SOAR 1199, HONR 1100, BSBA 1100, NURS 1025	1-3
Written Communication	ENGL 1101, ENG 1102, ENG 1103	6-7
Oral Communication	COMM 2200, COMM 2201, or COMM 2202	3
Mathematics	MATH 1407, MATH 1507, MATH 1510, MATH 1430, MATH 1530, MATH 1540, MATH 1585, MATH 2501	3-4
Humanities	ENGL 2220, ENGL 2221, ENGL 2240, FOLK 2200, HIST 2211, HIST 2212, HIST 2213, PHIL 2200, PHIL 2250, PHIL 2275	3
Fine Arts	ART 1120, ART 1141, MUSI 1106, MUSI 1120, MUSI 1167, MUSI 1168, MUSI 1169, MUSI 2247, MUSI 2277, MUSI 2279, THEA 1120	2-3
Natural Science	BIOL 1104, BIOL 1105, BIOL 1106, BIOL 1180 & 1181, CHEM 1101, CHEM 1105, GEOL 1101, GEOL 1102, PHYS 1101, PHYS 1115, SCIE 1100, SCIE 1103, SCIE 1105, SCIE 1107, SCIE 1115, SCIE 1120, SCIE 1130, SCIE 1210, SCIE 1250, SCIE 2200	4-5
Social Science	BSBA 2200, BSBA 2211, CRIM 1100, CRIM 2202, GEOG 2210, MANG 2205, POLI 2200, PSYC 1101, SOCY 1110, SOCY 2205, TECH 1100	3
Citizenship	HIST 1107, HIST 1108, POLI 1100, RECR 1141	3
Personal Development	<p><b>Global Awareness:</b> FREN 2202, SPAN 2202, LANG 1110, POLI 2210, POLI 2220</p> <p><b>Fitness &amp; Wellness:</b> CRIM 2212, CHEP 1100, CHEP 1110, HLTA 1100, HLTA 2203, NUTR 1110, PHED 1100</p> <p><b>Technology:</b> ART 2245, BISM 1200, CIVL 2210, EDUC 2201, MATH 1550, MANF 2250, MUSM 1100, TECH 1101</p>	2-3

Required Major Courses (XX Credit Hours)		
Course Prefix & Number	Course Name	Credit Hours
MATH 2501	Calculus 1	4
MATH 2502	Calculus 2	4
MATH 1550	Applied Statistics	3
MATH 1561	Mathematical Reasoning	3
MATH 2563	Transition to Higher Mathematics	3
MATH 3520	Linear Algebra	3
MATH 3550	Probability	3
MATH 3503	Calculus 3	4
MATH 4520	Abstract Algebra	3

Major Elective Courses (9-12 Credit Hours) – IF APPLICABLE [Electives are selected from a specific major or program]		
Course Prefix & Number	Course Name	Credit Hours
Group B Electives (students choose 6-9 hours)		
MATH 2520	Number Theory	3
<b>MATH 2545</b>	<b>Mathematical Modeling</b>	3
MATH 2562	Introduction to Discrete Mathematics	3
MATH 3504	Differential Equations	3
MATH 3570	Geometry	3
MATH 2299,3399,4499	Special Topics	3
Group A Electives (students choose at least 3 hours)		3
MATH 4580	Topology	3
MATH 4590	Real Analysis	3

<b>Total Core Curriculum Credit Hours</b>	<b>25-28</b>
<b>Total Required Major Courses Credit Hours</b>	<b>33-34</b>
<b>Total Required Concentration Credit Hours (if applicable)</b>	<b>0</b>
<b>Total Elective Credit Hours (if applicable)</b>	<b>12</b>
<b>Total Free Electives Credit Hours (if applicable)</b>	<b>46-50</b>
<b>TOTAL CREDIT HOURS</b>	<b>120</b>