

MEMORANDUM TO: Ogden College of Science and Engineering Curriculum Committee

Dr. Melanie Autin
Dr. Royhan Gani
Dr. Scott Grubbs
Dr. Ting-Hui Lee

Dr. Andy Mienaltowski
Dr. Les Pesterfield
Dr. Todd Willian
Dr. Bangbo Yan
Dr. Rong Yang

FROM: Dr. Stuart Burris, Chair

SUBJECT: Agenda for Thursday, January 9, 2025

A. OLD BUSINESS:

- I. Consideration of the minutes of the November 2024 meeting.

B. NEW BUSINESS:

Type of item	Description of Item & Contact Information
Action	Proposal to Revise a Program Ref. 578: Meteorology, Bachelor of Science Contact: Greg Goodrich, Gregory.goodrich@wku.edu , 2703203897
Action	Proposal to Revise a Program Ref. 728: Mathematics, Bachelor of Arts Contact: Ngoc Nguyen, ngoc.nguyen@wku.edu , 2704219876
Action	Proposal to Revise a Course MFGE 310: Safety in Industry Contact: Bryan Reaka, bryan.reaka@wku.edu , 2707457032

C. OTHER BUSINESS

Members Present: Dr. Melanie Autin, Dr. Andy Mienaltowski, Dr. Les Pesterfield, Dr. Scott Grubbs, Dr. Todd Willian, Dr. Ting-Hui Lee, Dr. Bangbo Yan, Dr. Rong Yang
Guests: Dr. Doug McElroy & Dr. Simran Banga

FROM: Dr. Stuart Burris, Chair

The meeting was called to order at 4:00pm.

OLD BUSINESS:

Minutes from the October 2024 meeting were approved as posted.

NEW BUSINESS:

Action Agenda:

BIOL 328: Willian/Autin; approved
BIOL 331: Autin/Lee; approved
BIOL 336: Pesterfield/Autin; approved
BIOL 338: Autin/Willian; approved
BIOL 382: Pesterfield/Willian; approved
BIOL 472: Autin/Lee; approved
Ref. 525: Willian/Mienaltowski; approved with a friendly amendment
Ref. 617: Autin/Willian; approved with a friendly amendment
PSYS 357: Willian/Autin; approved
Ref. 434: Grubbs/Autin; approved
New Program, User Experience, BS: Mienaltowski/Willian; approved

Other Business:

None

Program Change Request

Date Submitted: 11/11/24 2:05 pm

Viewing: **578 : Meteorology, Bachelor of Science**

Last approved: 07/06/23 10:27 am

Last edit: 11/11/24 2:05 pm

Changes proposed by: grg07567

Catalog Pages

Using this Program

[Meteorology, Bachelor of Science \(578\)](#)

Proposed Action

Active

Contact Person

In Workflow

1. **GEO Approval**
2. **SC Dean**
3. **SC Curriculum Committee**
4. Undergraduate Curriculum Committee
5. University Senate
6. Provost
7. Program Inventory

Approval Path

1. 11/22/24 11:10 am
Leslie North
(leslie.north):
Approved for GEO Approval
2. 01/07/25 1:53 pm
Stuart Burris
(stuart.burris):
Approved for SC Dean

History

1. May 26, 2021 by
Rheanna Plemons
(rheanna.plemons)
2. Sep 27, 2021 by
Jennifer Hammonds
(jennifer.hammonds)
3. Feb 27, 2023 by
Gregory Goodrich
(gregory.goodrich)
4. Jul 6, 2023 by Ryan
Wilson (ryan.wilson)

Name	Email	Phone
Gregory Brian Goodrich	gregory.goodrich@wku.edu	2703203897

Term of Implementation 2025-2026

Program Reference Number 578

Review Type Full Review

Academic Level Undergraduate

Program Type Major

Degree Types Bachelor of Science

Department Geography & Geology

College Science and Engineering

Program Name (eg. Biology) Meteorology, Bachelor of Science

Will this program have concentrations?
No

CIP Code 40.0404 - Meteorology.

Will this program lead to teacher certification? No

Does the proposed program contain 25% or more new content not previously taught in another course at WKU? If yes, contact the Office of the Provost for additional SACSCOC proposal requirements

Catalog Content

Program Overview (Catalog field: Overview tab)

The B.S. in Meteorology degree at WKU is the first and largest meteorology program in Kentucky or Tennessee that meets all the Federal Civil Service requirements (GS-1340) for employment by the National Weather Service and enables TV broadcast meteorologists to immediately pursue the "Certified Broadcast Meteorologist" program of the American Meteorological Society upon graduation. In addition to preparing students for immediate employment as meteorologists, the combination of advanced theoretical and applied coursework as well as experience with meteorological instrumentation and computer programming will provide a foundation for students who wish to pursue graduate school in the atmospheric sciences. Students will become more directly involved in faculty-sponsored research, increased co-authorship of peer-reviewed research articles, and increased presentation of research results at professional meetings and conferences. Students will also have the opportunity to work for White Squirrel Weather (WSWX), which acts as the WKU weather service, where students make weather observations and weather forecasts to provide decision support to a variety of WKU entities, including WKU Athletics, Environmental Health and Safety, and WKU Admissions.

Curriculum Requirements (Catalog field: Program Requirements)

Program Requirements (50 hours)

Approved Shared Content from /shared/undergraduate-major-requirements/

Last Approved: Jul 3, 2024 1:10pm

A baccalaureate degree requires a minimum of 120 unduplicated semester hours. More information can be found at www.wku.edu/registrar/degree_certification.php.

Students who began WKU in the Fall 2014 and thereafter should review the Colonnade requirements located at: <https://www.wku.edu/colonnade/colonnaderequirements.php>.

The major in Meteorology leads to a Bachelor of Science in Meteorology and requires a minimum of 50 semester hours of meteorology, geography, GIS, and computer science. A minor program is not required. Other required courses in physics and mathematics total an additional 25 semester hours. Students majoring in meteorology will learn the key concepts and skills necessary to qualify as a meteorologist for the National Weather Service, and to meet the standards of the American Meteorological Society.

Required Courses

METR 121	Meteorology	3
METR 122	Aviation Meteorology	3
CS 170	Problem Solving and Programming	3
GEOG 300	Writing in the Geosciences	3
GISC 316	Geographic Information Systems I	4
METR 324	Weather Analysis and Forecasting	3
GEOG 391	Geoscience Data Analysis	4
METR 431	Dynamic Meteorology I	3
METR 432	Synoptic Meteorology	3
METR 433	Dynamic Meteorology II	3

METR 437	Mesoscale Meteorology	3
METR 438	Physical Meteorology	3
Meteorology Technique Course		
METR 325	Meteorological Instrumentation and Measurement	3
or METR 335	Satellite/Radar Meteorology	
Total Hours		41

In addition to the required courses, select 9 hours from any 200-level or above METR course

Suggested courses include:		9
METR 322	Global Climate Systems	
METR 325	Meteorological Instrumentation and Measurement	
METR 326	Applied Meteorology / Climatology	
METR 335	Satellite/Radar Meteorology	
METR 422	Physical Climatology	
METR 425	Field Methods in Severe Weather Analysis and Forecasting	
METR 430	Meteorological Computing	
METR 439	Atmospheric Modeling	
METR 460	Climate Teleconnections	
METR 475	Selected Topics in Meteorology	
Total Hours		9

Additional Courses Required Outside of the Major

PHYS 255 & PHYS 256	University Physics I and University Physics I Lab	5
PHYS 265 & PHYS 266	University Physics II and University Physics II Laboratory	5
MATH 136	Calculus I	4
MATH 137	Calculus II	4
MATH 237	Multivariable Calculus	4
MATH 331	Differential Equations	3
Total Hours		25
4-Year Plan		

Finish in Four Plan

First Year

Fall	Hours	Spring	Hours
<u>METR 121</u>	3	<u>MATH 137</u>	4
<u>ENG 100</u>	3	<u>METR 122</u>	3
<u>MATH 136</u>	4	<u>HIST 101</u> or <u>HIST 102</u>	3
<u>GEOG 110</u>	3	<u>COMM 145</u>	3
<u>GEOG 175</u>	2	<u>ENG 200</u>	3
	15		16

Second Year

Fall	Hours	Spring	Hours
<u>MATH 237</u>	4	<u>MATH 331</u>	3
<u>CS 170</u>	3	<u>METR 324</u>	3
<u>GISC 316</u>	4	World Language or Elective	3
<u>GEOG 226</u>	3	Colonnade - Social & Behavioral	3
		General Elective	3
	14		15

Third Year

Fall	Hours	Spring	Hours
<u>METR 431</u>	3	<u>METR 433</u>	3
<u>GEOG 300</u>	3	Colonnade - Arts & Humanities	3
<u>METR 335</u>	3	<u>METR 438</u>	3
<u>PHYS 255</u>	5	<u>PHYS 265</u>	5
& <u>PHYS 256</u>		& <u>PHYS 266</u>	
METR Elective	3		
	17		14

Fourth Year

Fall	Hours	Spring	Hours
<u>METR 432</u>	3	<u>METR 437</u>	3
<u>GEOG 391</u>	4	METR Elective	3
Colonnade - Connections	3	Colonnade - Connections	3
METR Elective or Independent Research	3	Colonnade - Connections	3
<u>METR 325</u>	3	General Elective	1
	16		13

Total Hours 120

120 Hours total are required in the program, with 42 hours at the 300/400 level.

Summer courses, including Study Abroad, Field Camps, and other independent research opportunities, can reduce the number of hours required in the regular semesters.

Any of the courses can be moved from semester to semester to take advantage of courses when offered.

The WKU Colonnade Program requires a minimum of 39 hours, with several required courses in the Geography program that can be double-counted. METR/GEOG courses marked * count for Colonnade Credit.

Colonnade Connections courses are restricted to Juniors/Seniors, unless 21 credit hours of Colonnade Explorations and Foundations courses have already been completed. Three disciplines are required for Connections credit (METR, GEOG, GEOL, and GISC count as separate disciplines).

REQUIRED IN THE MAJOR (48 hours): **CORE COURSES** = METR 121*, 122, CS 170, GEOG 300*, 391, METR 324, 431, 432, 433, 437, GEOG 499 (36 hours); **ELECTIVE COURSES** = any 12 hours of approved METR or equivalent

coursework; **PLUS** PHYS, 255 256, 265, 266, MATH 136*, 137*, 237, 331.

Will this program be managed or owned by more than one department?

No

Does this program include courses from outside your department?

Please insert one Learning Outcome per box. Click green plus sign for additional LO boxes

Learning Outcomes
and Measurement
Plan

	List all student learning outcomes of the program.	Measurement Plan
SLO 1	Students completing the Meteorology program will be able to demonstrate understanding of the theoretical principles surrounding the basic equations and conservation laws that govern atmospheric motion and energy transfer. (Theoretical Meteorology)	A comprehensive exam is given during the final senior semester to all students completing the Meteorology program. The exam partly consists of four questions that represent key concepts from the each of the five theoretical upper-division courses in the B.S. degree in Meteorology curriculum. The average grade on the 20-question theoretical portion of the exam will be no less than 75%. For no individual course will the four-question average score be less than 60%.
SLO 2	Students completing the Meteorology program will be able to demonstrate understanding of the technical principles surrounding the fundamentals of remote sensing and in situ weather instrumentation as well as weather forecasting. (Technical Meteorology)	A comprehensive exam is given during the final senior semester to all students completing the Meteorology program. The exam partly consists of four questions that represent key concepts from each of the three technical upper-division courses in the B.S. degree in Meteorology curriculum. The average grade on the 12-question technical portion of the exam will be no less than 80%. For no individual course will the four-question average score be less than 60%.
SLO 3	Sophomore Meteorology students will be able to quickly and accurately analyze a surface map and present a weather forecast discussion based on their analysis (Applied Meteorology)	As part of Weather Analysis and Forecasting (METR 324), sophomore-level students will be given a surface map for analysis. Each week a different student will be responsible for leading a map discussion of current and future weather conditions. Both the map analysis and map discussion will be scored on a rubric. The average score of METR 324 students on the map analysis and map discussion will be no less than 80%. On no individual rubric category

	List all student learning outcomes of the program.	Measurement Plan
		will the average score be less than 70% of the possible points.

Assessment Template: https://www.wku.edu/academicaffairs/ee/assurance_learning_resources.php

Upload Assessment Plan

Delivery Mode

Is 25% or more of this program offered at a location other than main campus?

No

Enter Location(s) and Percentage of Program Offered at Location(s)

Is 50% or more of this program offered by distance education (online asynchronous, online synchronous, connected classrooms, etc.)?

No

Do you plan to offer 100% of this program online?

No

If no, enter the percentage of the program that will be taught online.

0

Do you plan to offer 100% of this program face-to-face?

Yes

Do you plan to offer at least 25% of this program as a direct assessment competency-based educational program?

No

See the SACSCOC Policy on Direct Assessment Competency-based Educational Programs.

<https://www.sacscoc.org/pdf/081705/DirectAssessmentCompetencyBased.pdf>

Library Resources

Attach library resources

Rationale for the program proposal?

We added two courses (METR 326 and METR 422) to the list of suggested courses to complete the major requirements.

Additional
Attachments

Additional information or attachments

Reviewer Comments

Program Change Request

Date Submitted: 12/10/24 8:45 am

Viewing: **728 : Mathematics, Bachelor of Arts**

Last approved: 04/22/24 10:42 am

Last edit: 12/10/24 8:45 am

Changes proposed by: ngc72640

Catalog Pages
Using this Program
[Mathematics, Bachelor of Arts \(728\)](#)

Proposed Action

In Workflow

1. **MATH Approval**
2. **SC Dean**
3. **SC Curriculum Committee**
4. Professional Education Council
5. Undergraduate Curriculum Committee
6. University Senate
7. Provost
8. Program Inventory

Approval Path

1. 12/05/24 1:45 pm
Kanita DuCloux (kanita.ducloux):
Approved for MATH Approval
2. 12/09/24 2:40 pm
Josiah Super (josiah.super):
Rollback to Initiator
3. 12/09/24 3:39 pm
Kanita DuCloux (kanita.ducloux):
Approved for MATH Approval
4. 12/10/24 8:01 am
Heidi Fortenberry (heidi.fortenberry):
Rollback to Initiator
5. 12/11/24 10:40 am
Kanita DuCloux (kanita.ducloux):
Approved for MATH Approval
6. 01/07/25 1:53 pm
Stuart Burris (stuart.burris):

Approved for SC
Dean

History

1. May 25, 2021 by Rheanna Plemons (rheanna.plemons)
2. Sep 27, 2021 by Jennifer Hammonds (jennifer.hammonds)
3. Mar 7, 2022 by Jessica Dorris (jessica.dorris)
4. Jul 20, 2022 by Ryan Wilson (ryan.wilson)
5. Jun 8, 2023 by ptr05178
6. Apr 22, 2024 by ptr05178

Active

Contact Person

Name	Email	Phone
Ngoc Nguyen	ngoc.nguyen@wku.edu	2704219876

Term of Implementation 2025-2026

Program Reference Number 728

Review Type Full Review

Academic Level Undergraduate

Program Type Major

Degree Types Bachelor of Arts

Department Mathematics

College Science and Engineering

Program Name (eg. Biology) Mathematics, Bachelor of Arts

Will this program have concentrations?
Yes

Concentrations

Concentrations

Teacher Education (TCHR)

General (Non-Teacher Certifiable) (MATN)

CIP Code 27.0101 - Mathematics, General.

Will this program lead to teacher certification? Yes

Does the proposed program contain 25% or more new content not previously taught in another course at WKU? If yes, contact the Office of the Provost for additional SACSCOC proposal requirements

No

Catalog Content

Program Overview (Catalog field: Overview tab)

This major is intended for students that are pursuing a basic math major for employment purposes and/or are interested in mathematics as part of a degree with two majors. Students pursuing teacher certification will also major in [Science and Mathematics Education \(774\)](#).

Curriculum Requirements (Catalog field: Program Requirements)

Program Requirements (39 hours)

Approved Shared Content from /shared/undergraduate-major-requirements/

Last Approved: Jul 3, 2024 1:10pm

A baccalaureate degree requires a minimum of 120 unduplicated semester hours. More information can be found at www.wku.edu/registrar/degree_certification.php.

Students who began WKU in the Fall 2014 and thereafter should review the Colonnade requirements located at: <https://www.wku.edu/colonnade/colonnaderequirements.php>.

A major in mathematics provides a Bachelor of Arts degree and require a minimum of 39 semester hours for a general major with a minor or second major. Note: All mathematics courses listed as prerequisites for other mathematics courses must have been completed with a grade of "C" or better.

The general mathematics major (728) offers two options:

Teacher Certifiable Option (Secondary Mathematics Teacher Certification)

General (Non-teacher Certifiable) Option

Students in the general mathematics major (728) are required to satisfy a computational requirement as detailed within the options below.

Students must complete a minimum of 39 hours of mathematics with a minor or second major giving a total of at least 59 hours (53 unduplicated) with the following requirements.²

Core Mathematics Courses

All students in the general mathematics (728) major must complete the following core mathematics courses:

MATH 136	Calculus I	4
MATH 137	Calculus II	4
MATH 237	Multivariable Calculus	4
MATH 307	Introduction to Linear Algebra	3
MATH 310	Introduction to Discrete Mathematics	3
MATH 317	Introduction to Algebraic Systems	3
MATH 337	Elements of Real Analysis	3
MATH 498	Senior Seminar	3
Total Hours		27

Teacher Certifiable Option (TCHR)

Students in the Teacher Certifiable Option must complete a second major in Science and Mathematics Education (774). In addition to the Core Mathematics Courses, students must complete 12 additional hours as follows:

Required Courses: ³

MATH 304	Functions, Applications and Explorations	3
MATH 323	Geometry I	3
MATH 421	Problem Solving for Secondary Teachers	3
STAT 301	Introductory Probability and Applied Statistics	3
Total Hours		12

Students in the Teacher Certifiable Option must satisfy a computational requirement by completing either CS 170 or CS 180.

General (Non-Teacher Certifiable) Option (MATN)

Students in the Non-Teacher Certifiable Option must complete a minor or second major giving a total of at least 59 hours (53 unduplicated).

In addition to the Core Mathematics Courses, students must complete 12 additional hours as follows:

Select six (6) hours from the following: ¹

6

MATH 405	Numerical Analysis I	
MATH 406	Numerical Analysis II	
MATH 415	Algebra and Number Theory	
MATH 417	Algebraic Systems	
MATH 431	Intermediate Analysis I	
MATH 435	Partial Differential Equations	
MATH 439	Topology I	

MATH 450	Complex Variables	
MATH 470	Introduction to Operations Research	
MATH 473	Introduction to Graph Theory	
MATH 482	Probability and Statistics II	
Select six (6) hours from the following: ¹		6
MATH 305	Introduction to Mathematical Modeling	
MATH 323	Geometry I	
MATH 331	Differential Equations	
MATH 370	Applied Techniques in Mathematics	
MATH 382	Probability and Statistics I	
MATH 398	Seminar ((up to 3 hours))	
MATH 405	Numerical Analysis I	
MATH 406	Numerical Analysis II	
MATH 415	Algebra and Number Theory	
MATH 417	Algebraic Systems	
MATH 435	Partial Differential Equations	
MATH 439	Topology I	
MATH 450	Complex Variables	
MATH 470	Introduction to Operations Research	
MATH 475	Selected Topics in Mathematics ((up to 3 hours))	
MATH 482	Probability and Statistics II	
STAT 301	Introductory Probability and Applied Statistics	
Total Hours		12

Students in the General Option must satisfy a computational requirement by completing either [CS 180](#), [PHYS 316](#), [PHYS 318](#) or [STAT 330](#).

¹

Students may take certain 500-level mathematics courses for undergraduate credit with the approval of the Department Chair in place of courses listed in the elective sections of the General Option.

²

Note: This major is not intended to prepare students adequately for graduate mathematics. Students intending to seek a graduate degree in mathematics should pursue major 528.

[The Department of Mathematics offers a Joint Undergraduate Master's Program \(JUMP\) which provides academically outstanding students the opportunity to complete both an undergraduate Bachelor of Arts degree and a graduate Master of Science degree in an accelerated timeframe. The MS in Mathematics prepares students to be competitive applicants for admission into a Ph.D. program and/or for positions where strong research skills are needed. Contact the graduate program coordinator for additional information, see <https://catalog.wku.edu/graduate/science-engineering/mathematics/mathematics-ms/>](#)

This JUMP program allows students to start working toward their MS in Mathematics with a concentration in General Mathematics, Computational Mathematics, or Mathematical Economics (Ref: 085) while completing their Bachelor of Arts degree in Mathematics (Ref: 528 and 728) or a Bachelor of Science degree in Mathematical Economics (Ref: 731). Undergraduate students admitted into JUMP may take graduate courses that count toward both undergraduate and graduate degrees. Up to 12 credit hours can be double-counted toward both degrees, and up to 15 hours of graduate courses can be taken while a student is completing the undergraduate degree. The key benefit of the JUMP program is that it allows students to earn a bachelor's and a master's degree in an accelerated timeframe. For more information, see <https://www.wku.edu/math/>.

To be considered for admission to the JUMP program to earn a BA in Mathematics (or a BS in Mathematical Economics) and a MS in Mathematics in an accelerated timeframe, a student must meet the following requirements:

- Be a Mathematics or a Mathematical Economics major (includes programs with reference numbers 528, 728, and 731);
- Have completed at least 60 hours total, with at least 24 hours earned at WKU;
- Have at least 15 or more credit hours remaining to complete the bachelor's degree;
- Have completed or be enrolled in 15 credit hours in Mathematics;
- Have a minimum cumulative undergraduate GPA of 3.25;
- Have one of the following:
 - a. 3.25 GPA in the Mathematics or Mathematical Economics major AND a grade of B or higher in at least one of the courses: MATH 307, MATH 310, MATH 317, MATH 337, MATH 439;
 - b. 3.0 GPA in the Mathematics or Mathematical Economics major AND a grade of B or higher in at least two of the courses: MATH 307, MATH 310, MATH 317, MATH 337, MATH 439.

4-Year Plan

Teacher Certifiable Option (TCHR)

First Year

Fall	Hours	Spring	Hours
<u>MATH 136</u>	4	<u>MATH 137</u>	4
<u>SMED 101</u>	3	<u>SMED 102</u>	3
<u>CS 180</u> or <u>CS 170</u>	3-4	<u>COMM 145</u>	3
<u>ENG 100</u>	3	<u>HIST 101</u> or <u>HIST 102</u>	3
Colonnade - Natural & Physical Sciences w/ lab	3-5 16-19	Colonnade - Social & Behavioral Science	3 16

Second Year

Fall	Hours	Spring	Hours
<u>MATH 307</u>	3	<u>MATH 310</u>	3
<u>MATH 237</u>	4	<u>MATH 304</u>	3
<u>SMED 310</u>	3	<u>SMED 320</u>	3
<u>ENG 200</u>	3	Colonnade - Arts & Humanities	3
Colonnade - Natural & Physical Sciences w/ no lab	3 16	World Language Requirement or General Elective	3 15

Third Year

Fall	Hours	Spring	Hours
<u>MATH 317</u>	3	<u>MATH 337</u>	3
<u>MATH 323</u>	3	<u>MATH 421</u>	3
<u>SMED 340</u>	3	<u>STAT 301</u>	3
Colonnade - Writing in the Disciplines	3	<u>SMED 360</u>	3

First Year			
Fall	Hours	Spring	Hours
Colonnade - Local to Global	3	Colonnade - Systems	3
	15		15
Fourth Year			
Fall	Hours	Spring	Hours
<u>MATH 498</u>	3	<u>SMED 489</u>	3
<u>SMED 470</u>	3	<u>SEC 490</u>	10
Colonnade - Social & Cultural	3		
General Elective	3		
General Elective	2-3		
	14-15		13
Total Hours 120-124			

General (Non-Teacher Certifiable) Option (MATN)

First Year			
Fall	Hours	Spring	Hours
<u>MATH 136</u>	4	<u>MATH 137</u>	4
Computational Requirement	3-4	General Elective	3
<u>ENG 100</u>	3	<u>COMM 145</u>	3
Colonnade - Natural & Physical Sciences w/ lab	3-5	<u>HIST 101</u> or <u>HIST 102</u>	3
	13-16	Colonnade - Social & Behavioral Science	3
			16
Second Year			
Fall	Hours	Spring	Hours
<u>MATH 307</u>	3	<u>MATH 310</u>	3
<u>MATH 237</u>	4	Minor Elective	3
Minor Course	3	Colonnade - Social & Cultural	3
<u>ENG 200</u>	3	Colonnade - Arts & Humanities	3
Colonnade - Natural & Physical Sciences w/ no lab	3	World Language Requirement or General Elective	3
	16		15
Third Year			
Fall	Hours	Spring	Hours
<u>MATH 317</u>	3	<u>MATH 337</u>	3
Math upper-division Elective	3	Math upper-division Elective	3
Minor Course	3	Minor Course	3
Colonnade - Local to Global	3	Colonnade - Systems	3
Colonnade - Writing in the Disciplines	3	General Elective	3
	15		15
Fourth Year			
Fall	Hours	Spring	Hours
Math upper-division Elective	3	<u>MATH 498</u>	3
Minor Course	3	Math upper-division Elective	3
Minor Course or General Elective	3	Minor Course	3
General Elective	3	General Elective	3
General Elective	3	General Elective	3

First Year

Fall

Hours

Spring

Hours

15

15

Total Hours 120-123

Will this program be managed or owned by more than one department?

No

Does this program include courses from outside your department?

No

Please insert one Learning Outcome per box. Click green plus sign for additional LO boxes

Learning Outcomes
and Measurement
Plan

	List all student learning outcomes of the program.	Measurement Plan
SLO 1	Students will be prepared for employment in government, industry, or academic settings.	Employment prospects of seniors will be monitored in an exit survey.
SLO 2	Students will be able to use technology and apply mathematics to solve problems effectively.	Technology usage will be monitored in an exit survey.
SLO 3	Students will have well-developed abilities to utilize critical thinking and communicate ideas effectively.	Completion of a capstone project in MATH 498.

Assessment Template: https://www.wku.edu/academicaffairs/ee/assurance_learning_resources.php

Upload Assessment
Plan

Delivery Mode

Is 25% or more of this program offered at a location other than main campus?

No

Enter Location(s)
and Percentage of
Program Offered at
Location(s)

Is 50% or more of this program offered by distance education (online asynchronous, online synchronous, connected classrooms, etc.)?

No

Do you plan to offer 100% of this program online?

No

If no, enter the percentage of the program that will be taught online.

0

Do you plan to offer 100% of this program face-to-face?

Yes

Do you plan to offer at least 25% of this program as a direct assessment competency-based educational program?

No

See the SACSCOC Policy on Direct Assessment Competency-based Educational Programs.

<https://www.sacscoc.org/pdf/081705/DirectAssessmentCompetencyBased.pdf>

Library Resources

Attach library resources

Rationale for the program proposal?

Adding the JUMP statement at the end of the Program Requirements.

Additional Attachments

Additional information or attachments

Reviewer Comments

Josiah Super (josiah.super) (12/09/24 2:40 pm): Rollback: rollback for further edits.

Heidi Fortenberry (heidi.fortenberry) (12/10/24 8:01 am): Rollback: Dr. Nguyen asked for it to be rolled back a second time.

Course Change Request

Date Submitted: 11/01/24 3:23 pm

Viewing: **MFGE 310 : Safety in Industry**

Formerly known as: **SEAS 310**

Last approved: 06/05/24 3:17 am

Last revision: 11/01/24 3:23 pm

Changes proposed by: bry60656

[548P, 548: Environmental and Occupational Health Science, Bachelor of Science](#)
[533: Construction Management, Bachelor of Science](#)
[5006: Mechatronics, Bachelor of Science](#)
[5007: Engineering Technology Management, Bachelor of Science](#)
[723: Management, Bachelor of Science](#)

Proposed Action

In Workflow

1. **EAS Approval**
2. **SC Dean**
3. **SC Curriculum Committee**
4. Undergraduate Curriculum Committee
5. University Senate
6. Provost
7. Course Inventory

Approval Path

1. 11/01/24 3:15 pm
Mark Cambron (mark.cambron):
Rollback to Initiator
2. 11/30/24 8:31 pm
Shahnaz Aly (shahnaz.aly):
Approved for EAS Approval
3. 01/07/25 1:53 pm
Stuart Burris (stuart.burris):
Approved for SC Dean

History

1. Feb 26, 2022 by Jason Wilson (jason.wilson)
2. Oct 22, 2022 by Gregory Arbuckle (greg.arbuckle)
3. Jan 21, 2023 by Jessica Dorris (jessica.dorris)

- 4. Nov 28, 2023 by
Hanna Khouryieh
(hanna.khouryieh)
- 5. Jun 5, 2024 by
Jessica Dorris
(jessica.dorris)

Active

Contact(s)

Name	E-mail	Phone
Bryan Reaka	bryan.reaka@wku.edu	270.745.7032

Review Type

Full Review Expedited

Term for
implementation

Summer 2025

Academic Level

Undergraduate

Course prefix
(subject area)

MFGE - Manufacturing Engineering Technology Course number 310

Department

Engineering & Applied Sciences, School of

College

Science and Engineering

Course title

Safety in Industry

Abbreviated course
title

SAFETY IN INDUSTRY

Course description

Safety and management techniques necessary to address the unique interaction of how industrial issues relate to safety in the workplace will be identified and regulated. This includes a study of applicable standards and methods of recognition, avoidance and prevention of potential hazards.

~~Students will have to opportunity to complete Occupational Safety and Health Administration (OSHA) 30-hour safety training certification. The certification will be in either Construction or General Industry.~~

Credit hours

3

Repeatable

Yes

Number of repeats 2

For maximum credits 3

Default grade type

Standard Letter

Alternate grade type(s)

Is this course intended to span more than one term?

No

Schedule type

Lecture

CIP Code 150613 - Manufacturing Engineering
Technology/Technician.

Does this course have prerequisites

Yes

Prerequisites

And/Or	(	Course/Test Code	Min Grade/Score	Academic Level	)	Concurrency?
	(	MATH 116	C	UG		
Or		MATH 116E	C	UG		
Or		MA 116C	C	UG)	
Or	(	MATH 117	D	UG		
Or		MA 117C	D	UG		
Or		MATH 118	D	UG		
Or		MATH 119	D	UG		
Or		MATH 127	D	UG		
Or		MATH 121	D	UG		
Or		MATH 136	D	UG		
Or		MATH 137	D	UG		
Or		MATH 206	D	UG		
Or		MATH 237	D	UG		
Or		MATH 240	D	UG		
Or		MATH 304	D	UG		
Or		MATH 305	D	UG		
Or		MATH 306	D	UG)	

Corequisites

Equivalent Courses

Restrictions:

College restriction? No

Field of study restriction/major? No

Classification restriction? No

Departmental Restrictions

Reason for changing the course

Course description removal of

Students will have to opportunity to complete Occupational Safety and Health Administration (OSHA) 30-hour safety training certification. The certification will be in either Construction or General Industry. due to part time instructor now sometimes teaching the course and the full time faculty members OSHA Outreach trainer status is expiring and will not be reinitialized.

Is this related to other courses at WKU?

No

What departments/programs have been consulted concerning potential impact (e.g. to possible duplication or conflict, changed corequisite or prerequisite for equivalent courses, etc.)? Please provide names and dates for individuals consulted.

None

Is this course part of a program that leads to teacher certificate? No

Are you seeking Colonnade approval for this course? No

Student Learning Outcomes

#	Student Learning Outcomes
1	Explain value of OSHA within a workplace
2	Identify effects of excessive noise on hearing loss

#	Student Learning Outcomes
3	Locate potential fall hazards in the workplace setting
4	Summarize effects of working in extreme conditions on the human body

Content outline

#	Topic
1	Accident costs
2	Workers Compensation
3	OSHA as it relates to Toxic Substances
4	OSHA as it relates to Noise and Vibration
5	OSHA as it relates to Bloodborne Pathogens
6	Violence in the Workplace
7	OSHA as it relates to Emergency Preparation
8	OSHA as it relates to Accident Investigation

Student expectations and requirements

Tentative texts and course materials

Dul, Jan and Weerdmeester, Bernard (2008), Ergonomics for beginners, A quick reference guide, 3rd edition, CRC Press
 - ISBN 13: 978-1-4200-7751-3
 - ISBN: 1-4200-7751-1

OSHA 1910 (General Industry)

OSHA 1926 (Construction Industry)

Special equipment, materials, or library resources needed

Additional information

[Even though OSHA will still be discussed in the course as it is a safety course, the opportunity to complete Occupational Safety and Health Administration \(OSHA\) 30-hour safety training certification will not be available.](#)

Supporting
documentation

Reviewer Comments

Mark Cambron (mark.cambron) (11/01/24 3:15 pm): Rollback: needs to be full review.

Key: 9328
