

MEMORANDUM TO: Ogden College of Science and Engineering Curriculum Committee

Ms. Robin Ayers
Dr. Nahid Gani
Dr. Scott Grubbs
Dr. Ting-Hui Lee
Dr. Jeremy Maddox

Dr. Andy Mienaltowski
Dr. Les Pesterfield
Dr. Todd Willian
Mr. Jason Wilson

FROM: Dr. Stuart Burris, Chair

SUBJECT: Agenda for Thursday, October 6, 2022

A. OLD BUSINESS:

- I. Consideration of the minutes of the September 1, 2022 meeting.

B. NEW BUSINESS:

Type of item	Description of Item & Contact Information
Informational	<u>Temporary Course Proposal:</u> PHYS 415: Physics Teaching Seminar: Forces and Interactions, 1 hr
Informational	<u>The following items were sent through the expedited process:</u> Proposal to Change Course Prefix: SEAS 271 to MFGE 271 SEAS 310 to MFGE 310 SEAS 371 to MFGE 371 SEAS 390 to MFGE 390 SEAS 394 to MFGE 394 SEAS 430 to MFGE 430
Action	Proposal to make Multiple Course Revisions AS 375, Special Architectural Problems, 3 hrs. Contact: Fatemeh Orooji, Fatemeh.orooji@wku.edu , x2176
Action	Proposal to make Multiple Course Revisions AS 380, Independent Study in Sciences, 3 hrs. Contact: Fatemeh Orooji, Fatemeh.orooji@wku.edu , x2176
Action	Proposal to make Multiple Course Revisions SEAS 475, Selected Topics in Industry Contact: Shahnaz Aly, Shahnaz.aly@wku.edu , x5849

C. OTHER BUSINESS

Minutes – OCSE Curriculum Committee

September 2022

Members Present:

Dr. Melanie Autin

Dr. Nahid Gani

Dr. Scott Grubbs

Dr. Ting-Hui Lee

Dr. Jeremy Maddox

Dr. Les Pesterfield

Dr. Andy Mienaltowski

Mr. Jason Wilson

FROM: Dr. Stuart Burris, Chair

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

OLD BUSINESS:

Minutes from the April 2022 meeting required no corrections and were approved as posted.

NEW BUSINESS:

Action Agenda

Autin/Pesterfield motioned to approve the Proposal to Create a New Course: PSYS 332. Motion passed.

Other Business:

None

Course Change Request

Temporary Course New Course Proposal

Date Submitted: 09/26/22 3:06 pm

Viewing: **PHYS 415 : Physics Teaching Seminar: Forces and Interactions**

Last revision: 09/26/22 3:06 pm

Changes proposed by: tng17992

Proposed Action
Temporary

Contact(s)

Name	E-mail	Phone
Ting-Hui Lee	ting-hui.lee@wku.edu	270-745-6472

Term for implementation
Spring 2023

Academic Level
Undergraduate

Course prefix (subject area)
PHYS - Physics

Course number 415

Department
Physics & Astronomy

College
Science and Engineering

Course title
Physics Teaching Seminar: Forces and Interactions

In Workflow

1. **PHYA Approval**
2. **SC Dean**
3. Professional Education Council
4. Undergraduate Curriculum Committee
5. Provost
6. Course Inventory

Approval Path

1. 09/26/22 3:14 pm
Michael Carini
(mike.carini):
Approved for PHYA Approval

Abbreviated course title PHYS TEACH SEM: INTERACTIONS

Course description Course developing pedagogical content knowledge for teaching introductory physics at any level, particularly 7-12 grade. Topics related to forces and interactions, including kinematics, Newton's laws, forces (mechanical, electrical and magnetic), momentum and impulse. The class will be taught in an interactive, hands-on format in an investigative environment to allow students to build physics concepts through practicing them. May be counted as a restricted elective for a physics major or minor that is obtaining teaching certification.

Credit hours 1

Repeatable Yes

Number of repeats 2

For maximum credits 1

Default grade type Standard Letter Alternate grade type(s)

Is this course intended to span more than one term?

No

Schedule type Lecture/Lab

CIP Code 13.1329 - 13.1329

Does this course have prerequisites

Yes

Prerequisites

And/Or	(	Course/Test Code	Min Grade/Score	Academic Level	)	Concurrency?
		PHYS 231	C	UG		
Or		PHYS 255	C	UG		

Corequisites

Equivalent Courses

Restrictions:

College restriction? No

Field of study
restriction/major? No

Classification
restriction? No

Departmental
Restrictions

Reason for
developing the
proposed course

There is a great need for high school physics teachers and middle school teachers with stronger physics knowledge. The Physics Department currently offers a 3-credit hour course focused on developing pedagogical content knowledge for teaching physics, Physics 410, which currently is offered once every other year but which in recent years has had very low enrollment. We propose to replace this 3-credit-hour course with a series of one-credit-hour courses offered every semester and which can be taken in any order, replicating a successful model developed at Bridgewater State University that has increased the number of students going into high school physics teaching. Topics covered in this course sequence would include force and interactions in the first course, energy in the second, and waves and applications in the third. We expect that this change will both strengthen the preparation of pre-service teachers and help recruit additional students into physics teaching for the following reasons:

a. We expect this approach to build a stronger cohort of students planning to go into teaching physics. This will (1) provide them a place to belong, (2) provide a support network to encourage persistence, and (3) promote continued mutual support via the same network once the students are out teaching in schools, which is of particular value as few high schools employ more than one physics teacher.

b. This will make it easier for physics students who have not yet chosen to go into physics teaching to “try it out” for one semester and, if they enjoy it, continue and pursue a career as a high school teacher.

c. Offering a course every semester would provide greater assurance to middle school and high school physics pre-service teachers for planning their schedules.

d. Students planning careers in academia would also benefit from taking these courses, as there is significant overlap of issues related to teaching at the high school level and to introductory college level physics. This course would not count towards graduation requirements for physics majors not pursuing teaching certification, but it would nevertheless be a valuable addition to a transcript when applying for graduate school. Further, the one-credit hour format would make it easier for students to fit it into what are generally full schedules.

e. Sometimes high school math and (non-physics) science teachers are pressed into teaching a physics class if their school has no dedicated physics teacher. This sequence would make it easier for future math and science teachers to fit some of these single credit hour classes into their schedules, strengthening their physics knowledge.

We plan to offer this course in Spring 2023 as a temporary course to start the rotation of the series of courses. We will submit all three course proposals for the full series in time to teach the next course in the series in Fall 2023.

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.

SKyTeach Melissa Rudloff, March, April, and September 12, 2022

SKyTeach Catherine Poteet, March, April, and September 12, 2022

SKyTeach Dr. Les L. Pesterfield, September 2022

How many sections of this course per academic year will be offered? one every two years

How many students per section are expected to enroll in 8

this proposed course?

How many students per academic year are expected to enroll? 8

How were these projections calculated? Explain any supporting evidence/data you have for arriving at these projections:

This course is the beginning of a curriculum revision for the physics teacher track. This revision will encourage students to explore teaching at various levels as a career option, in the meantime addressing the current teacher shortage nationwide. With appropriate marketing and recruitment, we believe we will be able to have at least 8 students enrolled.

Is this course part of a program that leads to teacher certificate? Yes

Learning outcomes

#	Learning outcomes
1	<p>As a result of working through this course, the students should be able to design and implement good physics lessons to demonstrate their knowledge of:</p> <ul style="list-style-type: none">• common student misconceptions and difficulties.• the use of the epistemic framework of the Investigative Science Learning Environment to design classes for an active learning classroom.• the role of multiple representations in physics education.• how to write content, procedural, metacognitive, and epistemic goals for lessons.

Content outline

#	Topic
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#	Topic
1	kinematics, Newton's laws, forces (mechanical, electrical and magnetic), momentum and impulse.

Student expectations and requirements

Tentative texts and course materials

Five Easy Lessons, Strategies for Successful Physics Teaching, Randall D. Knight
 Active Learning Guide, Etkina, Planinisc, & Brookes (free)
 Physics Union Mathematics, Kinematics & Dynamics Modules (free)

Special equipment, materials, or library resources needed

N/A

Additional information

Supporting documentation

[Phys415 example syllabus.docx](#)

Reviewer Comments

Course Change Request

Date Submitted: 09/16/22 2:01 pm

Viewing: **MFGE SEAS 271 : Industrial Statistics**

Also listed as: **SEAS 271**

Formerly known as: **MFGE 271 / SEAS 271**

Last approved: 10/22/21 3:13 am

Last revision: 09/23/22 2:10 pm

Changes proposed by: grg81142

Catalog Pages referencing this course
SEAS 271:
[Manufacturing Engineering Technology](#)
[School of Engineering and Applied Science \(SEAS\)](#)
[School of Engineering and Applied Sciences](#)

Programs
SEAS 271:
[522: Construction Management, Bachelor of Science](#)

Proposed Action
Active

Contact(s)

Name	E-mail	Phone
Greg Arbuckle Bryan Reaka	greg.arbuckle@wku.edu bryan.reaka@wku.edu	270-745-2403 270.745.7032

Review Type
Expedited

Term for implementation
Fall 2023

Academic Level
Undergraduate

In Workflow

1. **EAS Approval**
2. **SC Dean**
3. Provost
4. Course Inventory

Approval Path

1. 09/19/22 9:40 am
Stacy Wilson
(stacy.wilson):
Approved for EAS Approval
2. 09/19/22 10:40 am
Stuart Burris
(stuart.burris):
Rollback to EAS Approval for SC Dean
3. 09/23/22 2:10 pm
Shahnaz Aly
(shahnaz.aly):
Approved for EAS Approval

History

1. Oct 22, 2021 by
Bryan Reaka

Course prefix (subject area) **MFGE - Manufacturing Engineering Technology**
 Department **SEAS - Sch of Engr & App Sci**
 Engineering & Applied Sciences, School of
 College Science and Engineering
 Course title Industrial Statistics
 Abbreviated course title INDUSTRIAL STATISTICS

Course number 271

(bryan.reaka)

Course description A study of statistical techniques typically used in industry for purposes of Statistical Process Control, material science research, and system planning and operation.

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		

And/Or	(	Course/Test Code	Min Grade/Score	Academic Level	)	Concurrency?
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 142	D	UG		
Or		MATH 206	D	UG		
Or		MATH 237	D	UG		
Or		MATH 240	D	UG		
Or		MATH 275	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 **This course is delivered by Manufacturing Engineering Technology faculty and the content is focused on the manufacturing environment. The new prefix is more appropriate. SEAS is a more appropriate fit for the course prefix as this course has 3 different disciplines within the School of Engineering and Applied Sciences feeding into it as compared to a course that may only have one or two programs of studies feeding into a specific course.**

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.

N/A

Are you seeking Colonnade approval for this course? No

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

Learning outcomes

#	Learning outcomes
1	• Identify types of variables and appropriate tools to organize data.

#	Learning outcomes
2	Construct and use various diagrams, charts, and other tools.
3	Understand variability and its implications.
4	Understand various distributions.
5	Calculate and interpret simple statistics.

Content outline

#	Topic
1	Students will demonstrate an understanding of systematic statistical process control tools and techniques, construct and interpret quality diagrams, explain the basic theorems of probability, and know the rules for compound probability

Student expectations and requirements

Tentative texts and course materials

Special equipment, materials, or library resources needed

Additional information

Supporting documentation

Reviewer Comments **Stuart Burris (stuart.burris) (09/19/22 10:40 am):** Rollback: Returned at Stacy's request

Course Change Request

Date Submitted: 09/16/22 2:03 pm

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

Also listed as: **SEAS 310**

Formerly known as: **MFGE 310 / SEAS 310**

Last approved: 02/26/22 3:13 am

Last revision: 09/23/22 2:11 pm

Changes proposed by: grg81142

Catalog Pages referencing this course	SEAS 310: School of Engineering and Applied Science (SEAS) School of Engineering and Applied Sciences
Programs	SEAS 310: 548P, 548: Environmental and Occupational Health Science, Bachelor of

Proposed Action
Active

Contact(s)

Name	E-mail	Phone
Greg Arbuckle Bryan Reaka	greg.arbuckle@wku.edu Bryan.Reaka@wku.edu	270-745-2403 2707457032

Review Type
Expedited ~~Full~~
~~Review~~

Term for implementation
Fall 2023

In Workflow

- EAS Approval**
- SC Dean**
- Provost
- Course Inventory

Approval Path

- 09/19/22 9:41 am
Stacy Wilson
(stacy.wilson):
Approved for EAS Approval
- 09/19/22 10:41 am
Stuart Burris
(stuart.burris):
Rollback to EAS Approval for SC Dean
- 09/23/22 2:11 pm
Shahnaz Aly
(shahnaz.aly):
Approved for EAS Approval

History

- Feb 26, 2022 by
Jason Wilson

(jason.wilson)

Academic Level	Undergraduate	Course number	310
Course prefix (subject area)	MFGE - Manufacturing Engineering Technology SEAS - Sch of Engr & App Sci		
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		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 142	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 **This course is delivered by Manufacturing Engineering Technology faculty and the content is focused on the manufacturing environment. The new prefix is more appropriate. As industry has evolved, it has evolved with new technologies. The industrial advisory board for SEAS has indicated a need for students to potentially come out with OSHA specific training. The change from MFGE to SEAS allows for a broader audience reflecting the importance of safety throughout multiple industries in SEAS.**

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

Are you seeking
Colonnade approval
for this course? No

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

Learning outcomes

#	Learning outcomes
1	Describe what OSHA is and its importance in the workplace.
2	Identify safety hazards within a work area and evaluate potential solutions.
3	Recognize and investigate the issues related to safety and human protection equipment in a workplace environment.
4	Assess the safety policies and procedures for a given workplace

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

Supporting
documentation

Reviewer Comments **Stuart Burris (stuart.burris) (09/19/22 10:41 am):** Rollback: Returned at Stacy's request

Course Change Request

Date Submitted: 09/16/22 2:04 pm

Viewing: **MFGE SEAS 371 : Quality Assurance**

Also listed as: **SEAS 371**

Formerly known as: **MFGE 371 / SEAS 371**

Last approved: 10/22/21 3:13 am

Last revision: 09/23/22 2:11 pm

Changes proposed by: grg81142

Catalog Pages referencing this course	SEAS 371: School of Engineering and Applied Science (SEAS) School of Engineering and Applied Sciences
Programs	SEAS 371: 738: Molecular Biotechnology, Bachelor of Science

Proposed Action
Active

Contact(s)

Name	E-mail	Phone
Greg Arbuckle Bryan Reaka	greg.arbuckle@wku.edu bryan.reaka@wku.edu	270-745-2403 2707457032

Review Type Expedited

Term for implementation Fall 2023

Academic Level Undergraduate

In Workflow

1. **EAS Approval**
2. **SC Dean**
3. Provost
4. Course Inventory

Approval Path

1. 09/19/22 9:41 am
Stacy Wilson
(stacy.wilson):
Approved for EAS Approval
2. 09/19/22 10:41 am
Stuart Burris
(stuart.burris):
Rollback to EAS Approval for SC Dean
3. 09/23/22 2:12 pm
Shahnaz Aly
(shahnaz.aly):
Approved for EAS Approval

History

1. Oct 22, 2021 by
Bryan Reaka

Course prefix (subject area) **MFGE - Manufacturing Engineering Technology**
 Department **SEAS - Sch of Engr & App Sci**
 Engineering & Applied Sciences, School of
 College Science and Engineering
 Course title Quality Assurance
 Abbreviated course title QUALITY ASSURANCE

Course number 371

(bryan.reaka)

Course description A study of quality assurance techniques. Application of Statistical Process Control (SPC), acceptance sampling, military standards 105D & 414. Quality organizations and standards.

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		

And/Or	(	Course/Test Code	Min Grade/Score	Academic Level	)	Concurrency?
Or		MA 116C	C	UG		
Or		MATH 117	D	UG		
Or		MA 117	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 142	D	UG		
Or		MATH 137	D	UG		
Or		MATH 206	D	UG		
Or		MATH 237	D	UG		
Or		MATH 240	D	UG		
Or		MATH 275	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 **This course is delivered by Manufacturing Engineering Technology faculty and the content is focused on the manufacturing environment. The new prefix is more appropriate. SEAS is a more appropriate fit for the course prefix as this course has 4 different disciplines within the School of Engineering and Applied Sciences feeding into it as compared to a course that may only have one or two programs of studies feeding into a specific course.**

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.

N/A

Are you seeking Colonnade approval for this course? No

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

Learning outcomes

#	Learning outcomes
1	Discuss the basic principles associated with total quality.

#	Learning outcomes
2	Describe techniques and tools for quality and process improvement, including kaizen, Deming cycle, Six Sigma DMAIC, lean thinking, 7 QC tools, and statistical process control.
3	Demonstrate the use of analytical tools in Quality Control.
4	Discuss the importance of teamwork, employee engagement and leadership for quality improvement.

Content outline

#	Topic
1	Total Quality Management and Quality Philosophies
2	Frameworks for Quality
3	Tools and Techniques for Quality Design and Control
4	Tools and Techniques for Quality Improvement
5	Quality Planning and Leadership for Quality Improvement
6	Engagement, Empowerment, and Motivation for Quality Improvement

Student expectations and requirements

Tentative texts and course materials

Special equipment, materials, or library resources needed

Additional information

Supporting
documentation

Reviewer Comments **Stuart Burris (stuart.burris) (09/19/22 10:41 am):** Rollback: Returned at Stacy's request

Course Change Request

Date Submitted: 09/16/22 2:16 pm

Viewing: **MFGE SEAS 390 : Project Management**

Also listed as: **SEAS 390**

Formerly known as: **SEAS 390**

Last revision: 09/23/22 2:12 pm

Changes proposed by: grg81142

Catalog Pages
referencing this
course

SEAS 390:
[Construction Management \(CM\)](#)
[Manufacturing Engineering Technology](#)
[School of Engineering and Applied Science \(SEAS\)](#)
[School of Engineering and Applied Sciences](#)
SEAS 390:

Proposed Action
Active

Contact(s)

Name	E-mail	Phone
Greg Arbuckle	greg.arbuckle@wku.edu	270-745-2403

Review Type

Expedited

Term for
implementation

Fall 2023

Academic Level

Undergraduate

Course prefix

MFGE - Manufacturing Engineering

Course number 390

In Workflow

1. **EAS Approval**
2. **SC Dean**
3. Provost
4. Course Inventory

Approval Path

1. 09/19/22 9:41 am
Stacy Wilson
(stacy.wilson):
Approved for EAS
Approval
2. 09/19/22 10:41 am
Stuart Burris
(stuart.burris):
Rollback to EAS
Approval for SC
Dean
3. 09/23/22 2:12 pm
Shahnaz Aly
(shahnaz.aly):
Approved for EAS
Approval

(subject area) **Technology** ~~SEAS -- Sch of Engr & App Sci~~

Department Engineering & Applied Sciences, School of

College Science and Engineering

Course title Project Management

Abbreviated course title PROJECT MANAGEMENT

Course description Core concepts of project management based on processes of initiating, planning, executing, controlling, and closing projects. Topics include project proposals, project selection, scope definition, CPM and PERT scheduling, budgeting, control techniques, and project manager skills.

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?
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And/Or	(Course/Test Code	Min Grade/Score	Academic Level)	Concurrency?
	(MATH 116	C	UG		
Or		MA 116C	C	UG)	
Or	(	MATH 117	D	UG		
Or		MA 117C	D	UG)	

Corequisites

Equivalent Courses

Restrictions:

College restriction? No

Field of study restriction/major? Yes

Select: Include

Major:

Field of stud/major restriction
506 – Advanced Manufacturing
575 – Technology Management
5006 – Manufacturing Engineering Technology
599 – Industrial(Voc,Career,Tech)Ed
518 – Architectural Science
533 – Construction Management
555 – Computer Information Tech
506 - Advanced Manufacturing
575 - Technology Management

Field of stud/major restriction
5006 - Manufacturing Engineering Technology
599 - Industrial(Voc,Career,Tech)Ed
518 - Architectural Science
533 - Construction Management
555 - Computer Information Tech

Classification restriction? No

Departmental Restrictions

Reason for changing the course **This course is delivered by Manufacturing Engineering Technology faculty and the content is focused on the manufacturing environment. The new prefix is more appropriate.**

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.

N/A

Are you seeking Colonnade approval for this course? No

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

Learning outcomes

#	Learning outcomes
1	Describe basic project management terminology including project objectives, constraints, integration, and structures
2	Develop project scope management using work breakdown structures
3	Given a project network, calculate activity times, floats, and a critical path schedules
4	Categorize project costs and develop a project budget
5	Develop a basic structure for a project quality management plan
6	Create a human resources management plan and allocate resources

Content outline

#	Topic
1	The Project Life Cycle (Phases)
2	Scope Planning
3	Work Breakdown Structures
4	Project Planning
5	Budgeting Projects

Student expectations and requirements

Tentative texts and course materials

Special equipment, materials, or library resources needed

Additional

information

Supporting
documentation

Reviewer Comments **Stuart Burris (stuart.burris) (09/19/22 10:41 am):** Rollback: Returned at Stacy's request

Key: 9377

Course Change Request

Date Submitted: 09/16/22 2:17 pm

Viewing: **MFGE SEAS 394 : Lean Systems**

Also listed as: **SEAS 394**

Formerly known as: **MFGE 394 / SEAS 394**

Last approved: 10/22/21 3:13 am

Last revision: 09/23/22 2:12 pm

Changes proposed by: grg81142

Catalog Pages referencing this course
SEAS 394:
[Manufacturing Engineering Technology](#)
[School of Engineering and Applied Science \(SEAS\)](#)
[School of Engineering and Applied Sciences](#)

Programs
SEAS 394:
[555D, 555E: Computer Information Technology, Bachelor of Science](#)

Proposed Action
Active

Contact(s)

Name	E-mail	Phone
Greg Arbuckle Bryan Reaka	greg.arbuckle@wku.edu bryan.reaka@wku.edu	270-745-2403 2707457032

Review Type
Expedited

Term for implementation
Fall 2023

Academic Level
Undergraduate

In Workflow

1. **EAS Approval**
2. **SC Dean**
3. Provost
4. Course Inventory

Approval Path

1. 09/19/22 9:42 am
Stacy Wilson
(stacy.wilson):
Approved for EAS Approval
2. 09/19/22 10:41 am
Stuart Burris
(stuart.burris):
Rollback to EAS Approval for SC Dean
3. 09/23/22 2:12 pm
Shahnaz Aly
(shahnaz.aly):
Approved for EAS Approval

History

1. Oct 22, 2021 by
Bryan Reaka

Course prefix (subject area) **MFGE - Manufacturing Engineering Technology**
 Department **SEAS - Sch of Engr & App Sci**
 Engineering & Applied Sciences, School of
 College Science and Engineering
 Course title Lean Systems
 Abbreviated course title LEAN AND SUPPLY CHAIN SYSTEMS

Course number 394

(bryan.reaka)

Course description Applications of lean and supply chain principles across disciplines. This is the enhancement of customer value, elimination and reduction of all forms of waste from supplier to end user.

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		

And/Or	(	Course/Test Code	Min Grade/Score	Academic Level	)	Concurrency?
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 142	D	UG		
Or		MATH 206	D	UG		
Or		MATH 237	D	UG		
Or		MATH 240	D	UG		
Or		MATH 275	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 **This course is delivered by Manufacturing Engineering Technology faculty and the content is focused on the manufacturing environment. The new prefix is more appropriate. SEAS is a more appropriate fit for the course prefix as this course has 3 different disciplines within the School of Engineering and Applied Sciences feeding into it as compared to a course that may only have one or two programs of studies feeding into a specific course.**

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.

N/A

Are you seeking Colonnade approval for this course? No

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

Learning outcomes

#	Learning outcomes
1	To learn the basics of lean system within an industry

#	Learning outcomes
2	To learn how to develop organizational wide lean strategies
3	Designing lean facilities, layout, and applications for improving productivity
4	To learn practical problem solving skills for lean implementation

Content outline

#	Topic
1	The birth of lean production system
2	Inventory and Variation
3	The significance of lead time
4	Strategies to becoming Lean
5	How to implement Lean

Student expectations and requirements

Tentative texts and course materials

Special equipment, materials, or library resources needed

Additional information

Supporting documentation

Reviewer Comments **Stuart Burris (stuart.burris) (09/19/22 10:41 am):** Rollback: Returned at Stacy's request

Course Change Request

Date Submitted: 09/16/22 2:18 pm

Viewing: **MFGE SEAS 430 : Technology Management / Supervision / Team Building**

Also listed as: **SEAS 430**

Formerly known as: **MFGE 430 / SEAS 430**

Last approved: 10/22/21 3:13 am

Last revision: 09/23/22 2:13 pm

Changes proposed by: grg81142

Catalog Pages referencing this course
SEAS 430:
[School of Engineering and Applied Science \(SEAS\)](#)
[School of Engineering and Applied Sciences](#)

Programs
SEAS 430:
545: Organizational Leadership, Bachelor of Science

Proposed Action
Active

Contact(s)

Name	E-mail	Phone
Greg Arbuckle Bryan Reaka	greg.arbuckle@wku.edu bryan.reaka@wku.edu	270-745-2403 270.745.7032

Review Type
Expedited

Term for
Fall 2023

In Workflow

1. **EAS Approval**
2. **SC Dean**
3. Provost
4. Course Inventory

Approval Path

1. 09/19/22 9:42 am
Stacy Wilson
(stacy.wilson):
Approved for EAS Approval
2. 09/19/22 10:41 am
Stuart Burris
(stuart.burris):
Rollback to EAS Approval for SC Dean
3. 09/23/22 2:13 pm
Shahnaz Aly
(shahnaz.aly):
Approved for EAS Approval

History

1. Oct 22, 2021 by
Bryan Reaka

(bryan.reaka)

implementation

Academic Level Undergraduate

Course prefix **MFGE - Manufacturing Engineering** Course number 430
(subject area) **Technology SEAS -- Sch of Engr & App Sci**

Department Engineering & Applied Sciences, School of

College Science and Engineering

Course title Technology Management / Supervision / Team Building

Abbreviated course title TECHNOLOGY MGT/TEAM BUILDING

Course description This course will provide an introduction to the fundamentals of industrial supervision. Students will develop the skills, knowledge, and philosophies required to function in a highly technical, industrial environment in a supervisory capacity. Content includes a study of leadership, management, management-labor relations, supervisory intuition, and various legal issues.

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

No

Corequisites
Equivalent Courses

Restrictions:

College restriction? No

Field of study
restriction/major? No

Classification
restriction? Yes

Select: Exclude

Classification:

Classification restriction
Freshman
Sophomore

Departmental
Restrictions

Reason for changing
the course **This course is delivered by Manufacturing Engineering Technology faculty and the content is focused on the manufacturing environment. The new prefix is more appropriate. SEAS is a more appropriate fit for the course prefix as this course has 5 different disciplines within the School of Engineering and Applied Sciences feeding into it as compared to a course that may only have one or two programs of studies feeding into a specific course.**

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.

N/A

Are you seeking Colonnade approval for this course? No

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

Learning outcomes

#	Learning outcomes
1	Understanding of the fundamentals of industry supervision
2	Development of the skills, knowledge, and philosophies required to function in a highly technical, industrial environment in a supervisory capacity.
3	Study of leadership, management, management labor relations, supervisory intuition.

Content outline

#	Topic
1	How to build and maintain a successful team based environment
2	Develop individual leadership abilities for the supervisor
3	Develop and implementation of communication skills for the supervisor
4	Explore and understand management skills in planning, organization, and controlling
5	Explore typical problems faced by supervisor such as performance appraisals, worker complaints, and discipline

Student expectations and requirements

Tentative texts and course materials

Special equipment,
materials, or library
resources needed

Additional
information

Supporting
documentation

Reviewer Comments **Stuart Burris (stuart.burris) (09/19/22 10:41 am):** Rollback: Returned at Stacy's request

Key: 9339

Course Change Request

Date Submitted: 09/23/22 2:04 pm

Viewing: **AS 375 : Special Architectural Problems**

Last revision: 09/23/22 2:04 pm

Changes proposed by: ftm04740

Catalog Pages referencing this course [Architectural Sciences \(AS\)](#)
[School of Engineering and Applied Sciences](#)

Other Courses [As A Banner Equivalent:](#)

Proposed Action
Active

Contact(s)

Name	E-mail	Phone
Fatemeh Orooji	fatemeh.orooji@wku.edu	(270) 745-2176

Review Type **Full Review**

Term for implementation Fall 2023

Academic Level Undergraduate

Course prefix (subject area) AS - Architectural Sciences Course number 375

Department Engineering & Applied Sciences, School of

College Science and Engineering

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. 09/23/22 2:01 pm
Shahnaz Aly (shahnaz.aly):
Rollback to Initiator
2. 09/23/22 3:17 pm
Shahnaz Aly (shahnaz.aly):
Approved for EAS Approval

Course title Special Architectural Problems
Abbreviated course title SPECIAL ARCHITECTURAL PROBLEMS

Course description A research project ~~is required~~ that includes a written report ~~or and~~ an innovative design of a non-standard **structure is required.** ~~dwelling done on CAD or with conventional drafting tools. Lecture and laboratory.~~

Credit hours 3

Repeatable Yes

Number of repeats 2

For maximum credits **6 3**

Default grade type Standard Letter Alternate grade type(s)

Is this course intended to span more than one term?

No

Schedule type ~~Lecture/Lab~~
Applied Learning
Independent Study
Research

CIP Code **040999 150613 - Architectural Sciences and Technology, Other.** ~~Manufacturing Engineering Technology/Technician.~~

Does this course have prerequisites

No

Corequisites

Equivalent Courses

Restrictions:

College restriction? No

Field of study restriction/major? No

Classification restriction? No

Departmental Restrictions

Reason for changing the course **Updating the course description to align with the AS program.**

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.

NA

Are you seeking Colonnade approval for this course? No

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

Learning outcomes

#	Learning outcomes
1	Research/ applied learning course objectives will be determined by the faculty teaching the course.

Content outline

#	Topic
1	Research/ applied learning course topics will be determined by the faculty teaching the course.

Student expectations and requirements

Tentative texts and course materials

Special equipment, materials, or library resources needed

Additional information

Supporting documentation

Reviewer Comments **Shahnaz Aly (shahnaz.aly) (09/23/22 2:01 pm):** Rollback: Change to full review and change date of implementation

Course Change Request

Date Submitted: 09/23/22 2:13 pm

Viewing: **AS 380 : Independent Study in Architectural Industrial Sciences**

Last revision: 09/23/22 2:13 pm

Changes proposed by: ftm04740

Catalog Pages referencing this course [Architectural Sciences \(AS\)](#)
[School of Engineering and Applied Sciences](#)

Other Courses [As A Banner Equivalent:](#)

Proposed Action
Active

Contact(s)

Name	E-mail	Phone
Fatemeh Orooji	fatemeh.orooji@wku.edu	(270) 745-2176

Review Type **Full Review**

Term for implementation
Fall 2023

Academic Level
Undergraduate

Course prefix (subject area) AS - Architectural Sciences Course number 380

Department Engineering & Applied Sciences, School of

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. 09/23/22 2:09 pm
Shahnaz Aly (shahnaz.aly):
Rollback to Initiator
2. 09/23/22 3:18 pm
Shahnaz Aly (shahnaz.aly):
Approved for EAS Approval

College Science and Engineering
Course title Independent Study in **Architectural** ~~Industrial~~ Sciences
Abbreviated course title IND STUDY IN **ARCHITECTURAL SC INDUSTRIAL**
SCIENCES

Course description This course is designed for the undergraduate student who would like to study different aspects of **the profession, technology**, that **is may or may not be** included in existing formal courses of instruction. ~~Both the theoretical and empirical parts of the investigation will be reported in a formal document.~~ **Note: Special permission required prior to enrollment.**

Credit hours 3

Repeatable Yes

Number of repeats 2

For maximum credits **6 3**

Default grade type Standard Letter Alternate grade type(s)

Is this course intended to span more than one term?

No

Schedule type ~~Lecture~~
Applied Learning
Research

CIP Code **040999 150613 - Architectural Sciences and Technology, Other.** ~~Manufacturing Engineering Technology/Technician.~~

Does this course have prerequisites

No

Corequisites

Equivalent Courses

Restrictions:

College restriction? No

Field of study
restriction/major? No

Classification
restriction? **No** ~~Yes~~

Departmental
Restrictions

Reason for changing
the course **Industrial Science program is closed and not offered anymore, so the course title and description are updated to align with the current program.**

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.

NA

Are you seeking
Colonnade approval
for this course? No

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

Learning outcomes

#

Learning outcomes

#	Learning outcomes
1	Independent study course objectives will be determined by the faculty teaching the course.

Content outline

#	Topic
1	Independent study course topics will be determined by the faculty teaching the course.

Student expectations and requirements

Tentative texts and course materials

Special equipment, materials, or library resources needed

Additional information

Supporting documentation

Reviewer Comments **Shahnaz Aly (shahnaz.ali) (09/23/22 2:09 pm):** Rollback: Change term of implementation, All CAPS for course name

Course Change Request

Date Submitted: 09/23/22 4:00 pm

Viewing: **SEAS 475 : Selected Topics in Industry**

Last approved: 12/14/21 10:25 am

Last revision: 09/26/22 11:48 am

Changes proposed by: shh64934

Catalog Pages referencing this course
[School of Engineering and Applied Science \(SEAS\)](#)
[School of Engineering and Applied Sciences](#)

Programs
[555P, 555: Computer Information Technology, Bachelor of Science](#)

Proposed Action
Active

Contact(s)

Name	E-mail	Phone
Shahnaz Aly	shahnaz.aly@wku.edu	2707455849

Review Type
Full Review

Term for implementation
Fall 2023

Academic Level
Undergraduate

Course prefix (subject area)
SEAS - Sch of Engr & App Sci

Course number
475

Department
Engineering & Applied Sciences, School of

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. 09/23/22 2:05 pm
Shahnaz Aly (shahnaz.aly):
Rollback to Initiator
2. 09/23/22 4:01 pm
Shahnaz Aly (shahnaz.aly):
Approved for EAS Approval
3. 09/23/22 4:15 pm
Stuart Burris (stuart.burris):
Rollback to EAS Approval for SC Dean

College Science and Engineering
Course title
Selected Topics in Industry
Abbreviated course title SELECTED TOPICS IN INDUSTRY

4. 09/26/22 11:48 am
Shahnaz Aly
(shahnaz.aly):
Approved for EAS
Approval

Course description

Varying topics of significant interest and current developments in **various SEAS disciplines. manufacturing technology.**

Credit hours 1-3

Repeatable Yes

Number of repeats **5**

For maximum credits 6

Default grade type Standard Letter Alternate grade type(s)

Is this course intended to span more than one term?

No

Schedule type Independent Study

CIP Code 150613 - Manufacturing Engineering
Technology/Technician.

Does this course have prerequisites

No

Corequisites

Equivalent Courses

Restrictions:

College restriction? No

History

1. Aug 13, 2021 by
Jennifer Hammonds
(jennifer.hammonds)
2. Dec 14, 2021 by
Jessica Dorris
(jessica.dorris)

Field of study restriction/major? No

Classification restriction? Yes

Select: Exclude

Classification:

Classification restriction
Academy Junior
Sophomore
Academy Senior
Freshman

Departmental Restrictions

Reason for changing the course **The course description has been modified to better reflect the School of Engineering and Applied Sciences.**

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.

NA

Are you seeking Colonnade approval for this course? No

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

certificate?

Learning outcomes

#	Learning outcomes
1	Since the course is an independent study course the learning outcomes will be set by the faculty teaching the course.

Content outline

#	Topic
1	Since the course is an independent study course the course outlines will be set by the faculty teaching the course.

Student expectations and requirements

Tentative texts and course materials

Special equipment, materials, or library resources needed

Additional information

Supporting documentation

Reviewer Comments **Shahnaz Aly (shahnaz.aly) (09/23/22 2:05 pm):** Rollback: Change term of implementation, full review and number of repeats

Stuart Burris (stuart.burris) (09/23/22 4:15 pm): Rollback: Rolled back at Shahnaz's request