**MEMORANDUM TO:**  Ogden College of Science and Engineering Curriculum Committee

| | |
|---|---|
| Ms. Robin Ayers | Dr. Andy Mienaltowski |
| Dr. Nahid Gani | Dr. Les Pesterfield |
| Dr. Scott Grubbs | Dr. Todd Willian |
| Dr. Ting-Hui Lee | Mr. Jason Wilson |
| Dr. Jeremy Maddox | |

**FROM:**  Dr. Stuart Burris, Chair

**SUBJECT:  Agenda for Thursday, February 3rd at 4:00 p.m.**

A. **OLD BUSINESS:**
  I.     Consideration of the minutes of the December 2, 2021 meeting.

B. **NEW BUSINESS:**

| Type of item | Description of Item & Contact Information |
|---|---|
| Informational | The following items were sent through the expedited process:<br>**Proposal to Change Course Prefix:** AMS to MFGE 462<br>**Proposal to Change Course Preq/Coreqs (not involving other departments):** PSYS 210 and PSYS 211 |
| Consent | **Proposal to Revise Course Prereq/Corequisites**<br>MFGE 301, Intro to Food Science & Tech, 3 hrs.<br>Contact: John Khouryieh, hanna.khouryieh@wku.edu, x4126 |
| Action | **Proposal to Make Multiple Revisions to a Course**<br>GEOL 350, Petrology, 4 hrs.<br>Contact: Royhan Gani, Royhan.gani@wku.edu, x5977 |
| Action | **Proposal to Change Course Credit Hours**<br>METR/GEOG 422: Physical Climatology<br>Contact: Greg Goodrich, gregory.goodrich@wku.edu, x5986 |
| Action | **Proposal to Revise a Program**<br>Ref. 5008, Geological Sciences Major<br>Contact: Royhan Gani, Royhan.gani@wku.edu, x5977 |
| Action | **Proposal to Revise a Program**<br>Ref. 434, Neuroscience Minor<br>Contact: Andy Mienaltowski, Andrew.mienaltowski@wku.edu, 270-681-0270 |
| Action | **Proposal to Revise a Program**<br>Ref. 440: Psychological Sciences Minor<br>Contact: Andy Mienaltowski, Andrew.mienaltowski@wku.edu, 270-681-0270 |
| Action | **Proposal to Revise a Program**<br>Ref. 747E/747: Psychological Science Major |

| | |
|---|---|
| | Contact: Andy Mienaltowski, Andrew.mienaltowski@wku.edu, 270-681-0270 |
| Action | Proposal to Revise a Program<br>Ref. 629P/629: Computer Science Major<br>Contact: Guangming Xing, Guangming.xing@wku.edu, x8848 |
| Action | Proposal to Revise a Program<br>Ref. 5007: Engineering Technology Management<br>Contact: Greg Arbuckle, greg.arbuckle@wkue.du, x2403 |

C. **OTHER BUSINESS**

**Minutes – OCSE Curriculum Committee**                    **December 2021**

**Members Present:**
Dr. Scott Grubbs
Dr. Ting-Hui Lee
Dr. Jeremy Maddox
Dr. Andy Mienaltowski
Dr. Todd Willian
Mr. Jason Wilson

Guest: Dr. Lance Hahn, Dr. Huanjing Wang, and Dr. Bryan Reaka

**FROM:** Dr. Stuart Burris, Chair

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

**OLD BUSINESS:**
Minutes from November meeting required no corrections and were approved as posted.

**NEW BUSINESS:**

**Consent Agenda**
Mienaltowski/Willian motioned to approve the consent agenda. Motion passed with a friendly amendment.

**Action Agenda**
Willian/Grubbs motioned to approve the Proposal to Create a New Course: ANSC 439. Motion passed.

Grubbs/Wilson motioned to approve the Proposal to Create a New Course: ANSC 458. Motion passed.

Willian/Wilson motioned to approve the Proposal to Create a New Course: PSYS 415. Motioned passed with a friendly amendment.

Mienaltowski/Willian motioned to approve the Proposal to Make Multiple Revisions to a Course: MFGE 310. Motion passed with friendly amendment.

Mienaltowski/Willian motioned to approve the Proposal to Make Multiple Revisions to a Course: MFGE 490B. Motion approved with friendly amendment.

Grubbs/Mienaltowski motioned to table the Proposal to Revise a Program: Ref. 629P/629 Computer Science major. All voted in favor of tabling the proposal.

**Other Business:**
None

# Course Change Request

Date Submitted: 01/18/22 3:03 pm

## Viewing: MFGE ~~AMS~~ 462 : Commodity Food Processing

Also listed as: ~~AMS 462~~

Formerly known as: **AMS 462**

Last revision: 01/26/22 3:11 pm

Changes proposed by: hnn63928

Proposed Action

~~Suspended~~
**Active**

Contact(s)

| Name | E-mail | Phone |
|------|--------|-------|
| **John Khouryieh** | **hanna.khouryieh@wku.edu** | **2707454126** |

| | |
|---|---|
| Review Type | **Expedited** |
| Term for implementation | Fall 2022 |
| Academic Level | Undergraduate |
| Course prefix (subject area) | **MFGE** ~~AMS~~ - ~~Architectural &~~ Manufacturing **Engineering Technology**     Course number    462 |
| Department | Engineering & Applied Sciences, School of |
| College | Science and Engineering |
| Course title | Commodity Food Processing |
| Abbreviated course title | COMMODITY FOOD PROCESSING |

Course description

Principles of food processing, stages and operations, and product formulations for processing and manufacturing different categories of food products such as beverages, cereals, dairy, meats and poultry, and fruits and

vegetables.

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/Lab

CIP Code             011002 - Food Technology and Processing.

Does this course have prerequisites

  Yes

Prerequisites

| And/Or | ( | Course/Test Code | Min Grade/Score | Academic Level | ) | Concurrency? |
|---|---|---|---|---|---|---|
| | | MFGE ~~AMS~~ 352 | D | UG | | No |

Corequisites

Equivalent Courses

## Restrictions:

College restriction?     No

Field of study
restriction/major?     No

Classification
restriction?     No

Departmental
Restrictions

Reason for changing
the course

**The course prefixes for Manufacturing Engineering Technology program have been changed from AMS to MFGE.**

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  No
Colonnade approval
for this course?

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

Learning outcomes

| # | Learning outcomes |
|---|---|
| 1 | **Explain the processing techniques and production procedures used in the manufacture of cereal and bakery, dairy, meat and poultry, beverage, and fruit and vegetable products** |
| 2 | **Describe the selection, functionality and use of ingredients used in food product formulation** |
| 3 | **Describe the methods used for evaluating the quality of the finished products** |

Content outline

| # | Topic |
|---|---|
| 1 | **Topics include:**<br>**- Review to Principles of Food Processing**<br>**- Muffins**<br>**- Cakes**<br>**- Yeast-Leavened Breads**<br>**- Ready-to-Eat Breakfast Cereals**<br>**- Cheese**<br>**- Ice cream**<br>**- Yogurt**<br>**- Milk powders**<br>**- Hot Dogs and Bologna** |

| # | Topic |
|---|---|
| | **- Fermented Meats: Sausages**<br>**- Turkey Ham, Chicken Nuggets**<br>**- Orange Juice Processing**<br>**- Tomato Processing** |

Student
expectations and
requirements

Tentative texts and
course materials

Special equipment,
materials, or library
resources needed

Additional
information

Supporting
documentation

Reviewer Comments

Key: 490

# Course Change Request

Date Submitted: 01/25/22 4:27 pm

## Viewing: **PSYS 210 : Research Methods in Psychology**

Last revision: 01/25/22 4:27 pm

Changes proposed by: and30774

Catalog Pages
referencing this
course
[Department of Psychological Sciences](#)
[Department of Psychology](#)

## Approval Path

1. 01/25/22 4:34 pm
   Kelly Madole
   (kelly.madole):
   Approved for PSYS
   Approval

Proposed Action
  Active

Contact(s)

| Name | E-mail | Phone |
|------|--------|-------|
| **Andrew Mienaltowski** | **andrew.mienaltowski@wku.edu** | **270-681-0270** |

| | |
|---|---|
| Review Type | **Expedited** |
| Term for implementation | Fall 2022 |
| Academic Level | Undergraduate |
| Course prefix (subject area) | PSYS - Psychological Sciences |

Course number    210

| | |
|---|---|
| Department | Psychological Sciences |
| College | Science and Engineering |

Course title
  Research Methods in Psychology

Abbreviated course title    RESEARCH METHODS

Course description
  Introduction to scientific thinking, research design, and research methods in psychology. Includes the nature of
  scientific explanations, validity, reliability, measurement scales, the rationale underlying hypothesis testing,

critical evaluation of scientific evidence presented in journals and popular media, and how to write research reports.

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             420101 - Psychology, General.

Does this course have prerequisites

   Yes

Prerequisites

| And/Or | ( | Course/Test Code | Min Grade/Score | Academic Level | ) | Concurrency? |
|---|---|---|---|---|---|---|
|  | ( | PSY 100 | C | UG |  |  |
| Or |  | PSYC 100C | C | UG |  | No |
| Or |  | PSYS 100 | C | UG |  |  |
| Or |  | PSYS 160 | C | UG |  |  |
| **Or** |  | **PSYS 211** | **C** | **UG** |  |  |
| Or |  | AP85 | 3 |  | ) |  |

Corequisites
   PSYS 211 - Research Methods in Psychology Laboratory

Equivalent Courses

### Restrictions:
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

College restriction?      No

| Field of study restriction/major? | No |

| Classification restriction? | No |

Departmental
Restrictions

Reason for changing
the course

**PSYS 211 is being added as a prerequisite to the course. When students sign up for PSYS 210, if it is their first attempt, they will sign up for PSYS 211 as a co-requisite. Students who earn a C or higher in PSYS 211 but fail PSYS 210 will be able to sign up for only PSYS 210 thereafter without also signing up for PSYS 211.**

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 as this only impacts PSYS 210 and 211**

| 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 | **Understand the scientific method and how it is used in psychology** |
| 2 | **Learn how to generate and test hypotheses** |
| 3 | **Understand the role of ethics in scientific research** |
| 4 | **Understand various types of research approaches, their advantages and disadvantages, and how they are used** |
| 5 | **Evaluate evidence for research claims** |

| # | Learning outcomes |
|---|---|
| 6 | Understand basic principles of statistics used to characterize results of psychology research studies |
| 7 | Communicate psychological science effectively in written and/or form |

Content outline

| # | Topic |
|---|---|
| 1 | Scientific Thinking |
| 2 | Generating Testable Ideas |
| 3 | Research Ethics |
| 4 | Identifying Scientific Variables |
| 5 | Sampling from Populations |
| 6 | Choosing Research Designs |
| 7 | Naturalistic, Qualitative, and Existing Data Types of Designs |
| 8 | Survey and Correlational Observational Research Designs |
| 9 | Experimental and Quasi-Experimental Designs |
| 10 | Basics of Analysis and Interpretation of Descriptive Data |

Student expectations and requirements

**Students complete in class activities, quizzes, and exams over the content in the course.**

Tentative texts and course materials

Special equipment, materials, or library resources needed

Additional information

**This is an existing course, so outcomes and topics have been populated.**

Supporting documentation

Reviewer Comments

Key: 7526

# Course Change Request

Date Submitted: 01/25/22 4:27 pm

## Viewing: **PSYS 211 : Research Methods in Psychology Laboratory**

Last revision: 01/25/22 4:27 pm

Changes proposed by: and30774

Catalog Pages referencing this course

[Department of Psychological Sciences](#)

[Department of Psychology](#)

## In Workflow

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

## Approval Path

1. 01/25/22 4:35 pm
   Kelly Madole
   (kelly.madole):
   Approved for PSYS
   Approval

**Proposed Action**

Active

**Contact(s)**

| Name | E-mail | Phone |
|------|--------|-------|
| **Andrew Mienaltowski** | **andrew.mienaltowski@wku.edu** | **270-681-0270** |

Review Type **Expedited**

Term for implementation — Fall 2022

Academic Level — Undergraduate

Course prefix (subject area) — PSYS - Psychological Sciences    Course number — 211

Department — Psychological Sciences

College — Science and Engineering

**Course title**

Research Methods in Psychology Laboratory

Abbreviated course title — RESEARCH METHODS LAB

**Course description**

Laboratory course to accompany PSYS 210. Laboratory exercises involving research design, methodology, data collection, methods of organizing and presenting data, and research report writing.

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

  Lab

CIP Code                  420101 - Psychology, General.

Does this course have prerequisites


  Yes


Prerequisites

| And/Or | ( | Course/Test Code | Min Grade/Score | Academic Level | ) | Concurrency? |
|--------|---|------------------|-----------------|----------------|---|--------------|
|        | ( | PSY 100          | C               | UG             |   | No           |
| Or     |   | PSYC 100C        | C               | UG             |   | No           |
| Or     |   | PSYS 100         | C               | UG             |   |              |
| Or     |   | PSYS 160         | C               | UG             |   |              |
| **Or** |   | **PSYS 210**     | **C**           | **UG**         |   |              |
| Or     |   | AP85             | 3               |                | ) |              |

Corequisites

  PSYS 210 - Research Methods in Psychology

Equivalent Courses


## Restrictions:

College restriction?      No

Field of study            No
restriction/major?

| Classification restriction? | No |
|---|---|

Departmental
Restrictions

Reason for changing
the course

**PSYS 210 is being added as a prerequisite to the course. When students sign up for PSYS 211, if it is their first attempt, they will sign up for PSYS 210 as a co-requisite. Students who earn a C or higher in PSYS 210 but fail PSYS 211 will be able to sign up for only PSYS 211 thereafter without also signing up for PSYS 210.**

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 as this only impacts PSYS 210 and 211**

| 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 | **Understand the language of the scientific method and its relation to psychological research** |
| 2 | **Explain and identify ethical issues in conducting psychological research** |
| 3 | **Formulate meaningful and testable research questions** |
| 4 | **Locate and evaluate relevant background literature using research tools and journal databases** |
| 5 | **Identify various types of research approaches, their advantages and disadvantages, and apply this knowledge to specific research questions** |
| 6 | **Gain experience in implementing research methods and designs through collecting data in lab** |

| # | Learning outcomes |
|---|---|
| 7 | **Understand basic principles of descriptive and inferential statistics used to characterize psychology research study results** |
| 8 | **Communicate research results in written and oral form in APA style** |

Content outline

| # | Topic |
|---|---|
| 1 | **Science versus Pseudoscience** |
| 2 | **Research Ethics** |
| 3 | **APA Style** |
| 4 | **Finding and Reviewing Literature** |
| 5 | **Variables and Measurement** |
| 6 | **Naturalistic Observation** |
| 7 | **Sampling** |
| 8 | **Survey and Correlational Designs** |
| 9 | **Experimental Design** |

Student
expectations and
requirements

**Student complete in-lab activities, quizzes, and a research proposal/project**

Tentative texts and
course materials

Special equipment,
materials, or library
resources needed

Additional
information

**This course is an existing course, so fields for learning outcomes and topics have been populated**

Supporting
documentation

Reviewer Comments

Key: 7527

# Course Change Request

Date Submitted: 01/25/22 2:12 pm

## Viewing: **MFGE 301 : Introduction to Food Science and Technology**

Also listed as: **AMS 301**

Last revision: 01/25/22 2:12 pm

Changes proposed by: hnn63928

Catalog Pages
referencing this
course

   **AMS 301:**
   Architectural & Manufacturing (AMS)

Proposed Action

Active

Contact(s)

| Name | E-mail | Phone |
|------|--------|-------|
| **John Khouryieh** | **hanna.khouryieh@wku.edu** | **2707454126** |

Review Type     **Full Review**

Term for
implementation     Fall 2022

Academic Level     Undergraduate

## 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. 01/21/22 2:09 pm Mark Cambron (mark.cambron): Approved for EAS Approval
2. 01/21/22 2:35 pm Stuart Burris (stuart.burris): Rollback to Initiator
3. 01/27/22 9:34 am Mark Cambron (mark.cambron): Approved for EAS Approval

| Course prefix (subject area) | MFGE - Manufacturing Engineering Technology | Course number | 301 |
|---|---|---|---|

**Department**        Engineering & Applied Sciences, School of

**College**        Science and Engineering

**Course title**
  Introduction to Food Science and Technology

**Abbreviated course title**      INTRO TO FOOD SCI & **TECH** ~~TECHNOLOGY~~

**Course description**
  A comprehensive introduction to the basic concepts and principles of food science and the role of science in food processing and manufacturing.

**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**        011002 - Food Technology and Processing.

**Does this course have prerequisites**

  **No** ~~Yes~~

**Corequisites**

**Equivalent Courses**
  AMS 301                 Department

                            Engineering & Applied Sciences, School of

                     College

                            Science and Engineering

## Restrictions:

| | |
|---|---|
| College restriction? | No |
| Field of study restriction/major? | No |
| Classification restriction? | No |
| Departmental Restrictions | |

**Reason for changing the course**

**The purpose of this course is to provide students with a basic knowledge of the principals of food science. The course also aims to introduce students to and stimulate their interests in the field of food science. Therefore, removing CHEM105 course as a prerequisite will not affect the students' success in this 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.

**Dr. Kevin Williams, the head of the Chemistry department, was contacted on January 25, 2022.**

**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 | **By the end of this course, students should be able to:**<br>**- Identify basic food science concepts and terminology used by professionals in the food science field.** |

| # | Learning outcomes |
|---|---|
| | **- Describe different functions food components.**<br>**- Explain the effects of food preparation, storage and preservation methods on the quality attributes and nutrient content of foods.** |

Content outline

| # | Topic |
|---|---|
| 1 | **Topics will include:**<br>**Food science terminology**<br>**Food processing industry**<br>**Human nutrition**<br>**Food composition**<br>**Food systems**<br>**Food processing and preservation**<br>**Food safety**<br>**Food regulations**<br>**Food additives**<br>**Sensory evaluation of food products**<br>**Food product development** |

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) (01/21/22 2:35 pm):** Rollback: Needs to go through full review because it effects a course in another department (CHEM 105). This also means contact will need to be made with that department to inform them of the change and discuss if there are potential impacts.

Key: 9326

# Course Change Request

Date Submitted: 11/30/21 9:00 am

## Viewing: **GEOL 350 : Mineralogy and Petrology**

Last revision: 11/30/21 9:00 am

Changes proposed by: ryh84947

Catalog Pages
referencing this
course
  Department of Earth, Environmental, and Atmospheric Sciences
  Geological Sciences, Bachelor of Science (5008)

Proposed Action

Active

Contact(s)

| Name | E-mail | Phone |
|---|---|---|
| M. Royhan Gani | royhan.gani@wku.edu | 270-745-5977 |

| Review Type | **Full Review** |
|---|---|
| Term for implementation | Fall 2022 |
| Academic Level | Undergraduate |
| Course prefix (subject area) | GEOL - Geology |
| Department | Geography & Geology |
| College | Science and Engineering |

Course number    350

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

### Approval Path
1. 12/09/21 8:19 pm Leslie North (leslie.north): Approved for GEO Approval
2. 01/03/22 2:32 pm Stuart Burris (stuart.burris): Approved for SC Dean

Course title
   **Mineralogy and** Petrology

Abbreviated course title     **MINERALOGY AND** PETROLOGY

Course description

The study of the origin, characteristics, **formative processes,** ~~occurrence,~~ and classification of **minerals,** ~~igneous~~ and **igneous** ~~metamorphic rocks,~~ and **metamorphic rocks.** ~~of the processes that lead to their formation.~~ Their occurrence in relation to plate tectonics is stressed. Laboratory work includes **mineral identification, and** petrographic study of igneous **and** ~~and~~ metamorphic rocks in hand specimen **and** ~~and~~ in thin section. A field trip **may be** ~~is~~ required.

Credit hours       4

Repeatable
   Yes
      Number of repeats    **3**

      For maximum credits      4

Default grade type    Standard Letter      Alternate grade type(s)
   NG-No Grade

Is this course intended to span more than one term?

   No

Schedule type
   ~~Lab~~
   ~~Lecture~~
   **Applied Learning**

CIP Code      400601 - Geology/Earth Science, General.

Does this course have prerequisites

   Yes

Prerequisites

| And/Or | ( | Course/Test Code | Min Grade/Score | Academic Level | ) | Concurrency? |
|---|---|---|---|---|---|---|
|  |  | GEOL **111** ~~330~~ | D | UG |  |  |
| **And** |  | **GEOL 113** | **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

**Instead of requiring both GEOL 330 (Mineralogy) and GEOL 350 (Petrology), the common core of the Geological Sciences program is being revised to include only GEOL 350, with the idea that GEOL 350 will include some content of mineralogy. Thus, the revision of GEOL 350 is needed.**

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 and compare important rock-forming minerals based on their crystal structure, and chemical, physical and optical properties.** |
| 2 | **• Employ petrographic microscopy to identify and characterize minerals and rocks in understanding the complexity of the Earth System.** |

| # | Learning outcomes |
|---|---|
| 3 | • Recognize the importance of critical minerals and rocks for a sustainable society, including technology, energy systems and social-economic welfare of humans. |
| 4 | • Evaluate/Asses properties of minerals and rocks to investigate their relevance to mining, processing, and environmental issues. |
| 5 | • Apply advanced tools for mineralogy, petrography, and geochemistry to evaluate the origin and evolution of minerals, and igneous and metamorphic rocks. |

Content outline

| # | Topic |
|---|---|
| 1 | • Introducing systematic mineralogy including mineral chemistry, physical properties, crystal structures, crystal systems, and symmetry.<br><br>• Description of rock-forming minerals including silicate minerals, carbonates, metallic and non-metallic minerals.<br><br>• Ore bodies and economic geology.<br><br>• Optical mineralogy and stability diagrams.<br><br>• Principles of applied and environmental mineralogy<br><br>• Classification of igneous and metamorphic rocks, their textures, structures, field relations, and phase and ternary diagrams.<br><br>• Igneous petrology and geochemistry (Major, Minor, Trace Elements, Isotopes) for magma origin, petrogenesis and evolution, and plate tectonic perspective.<br><br>• Oceanic and Continental Flood Basalts, Island Arcs, Subduction, and Continental igneous rocks<br><br>• Metamorphic structures and texture, Phase rule, equilibrium, reactions, metamorphic facies, Metamorphism of pelitic rocks, Calcareous and ultramafic rocks, fluids, metasomatism<br><br>• Hands-on laboratory assignments in mineralogy, petrology, analytical methods, and geochemical data. |

Student
expectations and
requirements


Tentative texts and
course materials

Special equipment,
materials, or library
resources needed
  **None**

Additional
information

Supporting
documentation

Reviewer Comments

Key: 4239

# Course Change Request

Date Submitted: 01/19/22 5:15 pm

## Viewing: **METR 422 : Physical Climatology**

Also listed as: **GEOG 422**

Last revision: 01/19/22 5:15 pm

Changes proposed by: grg07567

Catalog Pages referencing this course

**METR 422:**
Department of Earth, Environmental, and Atmospheric Sciences

### In Workflow

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

### Approval Path

1. 01/27/22 9:19 pm Leslie North (leslie.north): Approved for GEO Approval

Proposed Action

Active

Contact(s)

| Name | E-mail | Phone |
|---|---|---|
| Greg Goodrich | gregory.goodrich@wku.edu | 270-745-5986 |

| | |
|---|---|
| Review Type | **Full Review** |
| Term for implementation | Spring 2023 |
| Academic Level | Undergraduate |
| Course prefix (subject area) | METR - Meteorology |
| Department | Geography & Geology |
| College | Science and Engineering |
| Course title | Physical Climatology |
| Abbreviated course title | PHYSICAL CLIMATOLOGY |

Course number: 422

Course description
Addresses the complexity of climactic processes at various spatial and temporal scales. Budgets of energy, water, and momentum, and soil-plant-atmosphere interactions at the earth's surface are explored from both a theoretical and practical point of view.

Credit hours          **3** 4

Repeatable
Yes
   Number of repeats       2

   For maximum credits          **3** 4


Default grade type     Standard Letter        Alternate grade type(s)
   ~~NG-No Grade~~

Is this course intended to span more than one term?


   No

Schedule type
   Lecture

CIP Code               400404 - Meteorology.

Does this course have prerequisites


   Yes


Prerequisites

| And/Or | ( | Course/Test Code | Min Grade/Score | Academic Level | ) | Concurrency? |
|--------|---|------------------|-----------------|----------------|---|--------------|
|  |  | METR 324 | C | UG |  |  |
| And |  | MATH 237 | C | UG |  |  |

Corequisites

Equivalent Courses
   GEOG 422              Department

                        Geography & Geology

                     College

                        Science and Engineering


**Restrictions:**

| | |
|---|---|
| College restriction? | No |
| Field of study restriction/major? | No |
| Classification restriction? | No |
| Departmental Restrictions | |

Reason for changing the course

**METR 422 is a legacy course that predates the development of the Meteorology program curriculum. It was created as a 4 credit hour course and taught by a faculty member that is no longer employed by WKU. The course has not been taught since 2017, but we are reviving the course as a three hour course to better align it with other upper division Meteorology courses that are all three hours. Changing it to three hours will also make for easier scheduling.**

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.

**Since this is a course that unique to the Meteorology program, no outside departments/programs were consulted outside of EEAS.**

| | |
|---|---|
| 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 | **1) Demonstrate knowledge of radiation transfer in the Earth-Atmosphere system**<br>**2) Demonstrate knowledge of methods of estimating surface heat fluxes**<br>**3) Demonstrate knowledge of methods of estimating near surface moisture and evapotranspiration fluxes**<br>**4) Demonstrate knowledge of scale issues and modeling of land-surface interactions** |

Content outline

| # | Topic |
|---|---|
| 1 | 🖹 **Energy and mass balance: Radiation and distribution of energy through the earth-atmosphere system; water and water balance**<br>🖹 **Soil heat flux and soil temperature: Thermal properties of soil, diurnal and seasonal variation of soil heat flux and soil temperature**<br>🖹 **Near surface temperature and sensible and latent heat transfer: adiabatic process, thermal stability, near-surface thermal profile, and various approaches to estimate flux**<br>🖹 **Atmospheric and near surface moisture**<br>🖹 **Evapotranspiration flux**<br>🖹 **Soil moisture**<br>🖹 **Land-surface atmospheric interaction, scale issues, and modeling** |

Student expectations and requirements

Tentative texts and course materials

Special equipment, materials, or library resources needed

Additional information

Supporting documentation

Reviewer Comments

Key: 6008

# Program Change Request

Date Submitted: 01/26/22 6:36 pm

## Viewing: **5008 : Geological Sciences, Bachelor of Science**

Last approved: 09/27/21 11:10 am

Last edit: 01/26/22 6:36 pm

Changes proposed by: ryh84947

Catalog Pages
Using this Program

Geological Sciences, Bachelor of Science (5008)

Proposed Action

## In Workflow

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

## Approval Path

1. 01/03/22 2:44 pm Leslie North (leslie.north): Approved for GEOL Approval
2. 01/24/22 2:18 pm Stuart Burris (stuart.burris): Rollback to Initiator
3. 01/26/22 3:03 pm Leslie North (leslie.north): Rollback to Initiator
4. 01/27/22 9:23 am Leslie North (leslie.north): Approved for GEOL Approval
5. 01/27/22 1:38 pm Leslie North (leslie.north): Approved for GEO Approval

## History

1. May 26, 2021 by
   Rheanna Plemons
   (rheanna.plemons)
2. Sep 27, 2021 by
   Jennifer Hammonds
   (jennifer.hammonds)

Active

Contact Person

| Name | Email | Phone |
|---|---|---|
| M. Royhan Gani | royhan.gani@wku.edu | 270-745-5977 |

| | |
|---|---|
| Term of Implementation | 2022-2023 |
| Program Reference Number | 5008 |
| Review Type | Full Review |
| Academic Level | Undergraduate |
| Program Type | Major |
| Degree Types | Bachelor of Science |
| Department | **Geography & Geology** ~~GEOL~~ |
| College | Science and Engineering |
| Program Name (eg. Biology) | Geological Sciences, Bachelor of Science |

Will this program have concentrations?
  Yes

Concentrations

# Concentrations

Geology (GEOL)
Environmental Earth Science (ENES)

| | |
|---|---|
| CIP Code | 40.0601 - Geology/Earth Science, General. |
| 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

**No**

## Catalog Content

Program Overview (Catalog field: Overview tab)

Geological science is often known as the science of the 21st century, as it is ground zero for tackling global challenges like managing land, water, ocean, space, mineral, and energy resources in a sustainable way. Society's interest in the environment and climate change is growing fast. The time has never been better to become a geological scientist. The B.S. degree in Geological Sciences can provide a wide variety of career options, including jobs in the corporate (oil & gas, mining, environmental, engineering), government (surveys, agencies, park service), and academic sectors. Our program takes a holistic approach, as the traditional geology has become increasingly interdisciplinary. With two concentrations (Geology, and Environmental Earth Science), the program has a common core, providing the knowledge base for students to pursue the Professional Geologist licensure. Each concentration has different other requirements, specializing in different subjects. Our classes feature interactive learning, both in the field exploring the earth and in the lab doing simulations and analytical works. Students also enjoy excellent opportunities to work with faculty and other students on a variety of research topics.

Curriculum Requirements (Catalog field: Program Requirements)

# Program Requirements (48 hours)

Approved Shared Content from /shared/undergraduate-major-requirements/
Last Approved: Jul 21, 2021 1:36pm

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 Geological Sciences requires a minimum of 48 semester hours and leads to a Bachelor of Science degree. A minor program is NOT required. Other required courses (e.g., physics, chemistry, biology, mathematics) total an additional **11-17** ~~21-24~~ semester hours. This major provides students with a versatile background in geological sciences for entry-level employment or graduate school.

## Geological Sciences Major - Common Core

| | | |
|---|---|---|
| GEOL 111 | The Earth | 3 |
| GEOL 112 | Earth's Past and Future | 3 |
| GEOL 113 | The Earth Laboratory | 1 |
| GEOL 114 | Earth's Past and Future Lab | 1 |
| ~~GEOL 330~~ | ~~Mineralogy~~ | ~~4~~ |
| GEOL 350 | Petrology | 4 |
| GEOL 360 | Sedimentology and Stratigraphy | 4 |
| GEOL 408 | Structural Geology | 4 |
| GEOL 499 | Professional Preparation in Geology | 2 |

| GISC 316 | Fundamentals of GIS | 4 |
|---|---|---|
| GEOG 300 | Writing in the Geosciences | 3 |
| Total Hours | | 29 |

## Geology Concentration

In addition to the Common Core, take the following courses to fulfill the Geology concentration:
Required Course (3 hours)

| GEOL 380 | Introductory Field Techniques | 3 |
|---|---|---|

Elective Courses (16 hours)

~~Select 19 hours from any 200-level or above GEOL course, and from GEOG 391 and GEOG 452 with advisor approval.~~ ~~19~~

**Select 16 hours from any 200-level or above GEOL course, and from GEOG 391 and GEOG 452 with advisor approval.** **16**

Total Hours 19

## Additional Required Courses Outside of the Major

Take the following required courses towards the Geology concentration:

| MATH 136 | Calculus I | 4 |
|---|---|---|
| MATH 137 | Calculus II | 4 |
| CHEM 120 | College Chemistry I | 5 |
| & CHEM 121 | and College Chemistry I Laboratory | |
| PHYS 231 | Introduction to Physics and Biophysics I | 4 |
| & PHYS 232 | and Laboratory for Physics and Biophysics I | |
| ~~GEOG 300~~ | ~~Writing in the Geosciences~~ | ~~3~~ |
| ~~GISC 316~~ | ~~Fundamentals of GIS~~ | ~~4~~ |
| Total Hours | | 17 |

## Environmental Earth Science concentration

In addition to the Common Core, take the following courses to fulfill the Environmental Earth Science concentration:
Required Course (18 hours)

| GEOL 250 | Environmental Geology | 3 |
|---|---|---|
| GEOL 310 | Global Hydrology | 3 |
| GEOL 415 | Applied Environmental Geology | 3 |
| GEOL 420 | Geomorphology | 3 |

In addition, select two courses from the following: 6

| GEOL 301 | Geology and Climate: Past and Future |
|---|---|
| GEOL 311 | General Oceanography |
| GEOL 315 | Energy, Climate and Carbon |
| GEOL 440 | Hydrogeology |
| GEOL 445 | Aqueous Geochemistry |
| GEOL 465 | Geophysics |

Elective Courses (1 hours)

~~Select 4 hours from any 300-400 level GEOL course, and from any GEOG 400-level and GISC 300-400 level course with advisor approval~~ ~~4~~

| | | |
|---|---|---|
| **Select 1 hours from any 300-400 level GEOL course, and from any GEOG 400-level and GISC 300-400 level course with advisor approval** | | **1** |
| Total Hours | | 19 |
| Additional Required Courses Outside of the Major | | |
| Take the following additional courses towards the Environmental Earth Science concentration: | | |
| MATH 115 | Applied College Algebra (or higher) | 3 |
| MATH 183 | Introductory Statistics | 3 |
| CHEM 105 | Fundamentals of General Chemistry | 4 |
| & CHEM 106 | and Fundamentals of General Chemistry Laboratory (or higher) | |
| BIOL 207 | General Microbiology | 4 |
| & BIOL 208 | and General Microbiology Laboratory | |
| GEOG 300 | Writing in the Geosciences | 3 |
| GISC 316 | Fundamentals of GIS | 4 |
| Total Hours | | 11 |

4-Year Plan

# Geological Sciences - Geology Concentration

| First Year | | | |
|---|---|---|---|
| **Fall** | **Hours** | **Spring** | **Hours** |
| **GEOL 111** | **3** | **GEOL 112** | **3** |
| **GEOL 113** | **1** | **GEOL 114** | **1** |
| **ENG 100** | **3** | **ENG 200** | **3** |
| **COMM 145** | **3** | **CHEM 120** | **5** |
| | | **& CHEM 121** | |
| **HIST 101** or **HIST 102** | **3** | **Geology Concentration Elective 1 - Recommend GEOL 250** | **3** |
| **GEOG 175** | **2** | | |
| | 15 | | 15 |
| Second Year | | | |
| **Fall** | **Hours** | **Spring** | **Hours** |
| **GEOL 350** | **4** | **GEOL 360** | **4** |
| **GEOL 380** | **3** | **Geology Concentration Elective 2** | **3** |
| **MATH 136** | **4** | **MATH 137** | **4** |
| **Colonnade: Explorations (Arts & Humanities)** | **3** | **Colonnade: Connections (Social & Cultural)** | **3** |
| **Colonnade: Explorations (Social & Behavioral)** | **3** | | |
| | 17 | | 14 |
| Third Year | | | |
| **Fall** | **Hours** | **Spring** | **Hours** |
| **PHYS 231** | **4** | **GEOL 408** | **4** |
| **& PHYS 232** | | | |
| **GISC 316** | **4** | **Geology Concentration Elective 4** | **3** |

| | | | |
|---|---|---|---|
| **Colonnade: Connections (Systems) - Recommend GEOL 301/315** | **3** | **Colonnade: Writing in the Disciplines - Recommend GEOG 300** | **3** |
| **Geology Concentration Elective 3** | **3** | **Colonnade: Connections (Local to Global)** | **3** |
| | | **Geology Concentration Elective 5** | **3** |
| | 14 | | 16 |

Fourth Year

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| **GEOL 499** | **2** | **General Elective - Recommend GEOL 399** | **3** |
| **Geology Concentration Elective 6** | **3** | **General Elective** | **3** |
| **General Elective - Recommend GEOL 399** | **3** | **General Elective** | **3** |
| **General Elective** | **3** | **General Elective** | **3** |
| **General Elective** | **3** | **General Elective** | **3** |
| | 14 | | 15 |

Total Hours 120

# Geological Sciences - Environmental Earth Science (EES) Concentration

First Year

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| **GEOL 111** | **3** | **GEOL 112** | **3** |
| **GEOL 113** | **1** | **GEOL 114** | **1** |
| **ENG 100** | **3** | **ENG 200** | **3** |
| **COMM 145** | **3** | **CHEM 105** | **4** |
| | | **& CHEM 106** | |
| **HIST 101** or **HIST 102** | **3** | **GEOL 250** | **3** |
| **GEOG 175** | **2** | | |
| | 15 | | 14 |

Second Year

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| **GEOL 350** | **4** | **GEOL 360** | **4** |
| **GEOL 301**, **GEOL 311**, **GEOL 315**, **GEOL 440**, **GEOL 445**, or **GEOL 465** (EES Choice 1) | **3** | **GEOL 310** | **3** |
| **Colonnade: Explorations (Arts & Humanities)** | **3** | **BIOL 207** **& BIOL 208** | **4** |
| **MATH 183** | **3** | **Colonnade: Connections (Local to Global)** | **3** |
| **Colonnade: Explorations (Social & Behavioral)** | **3** | | |
| | 16 | | 14 |

Third Year

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| **GEOL 420** | **3** | **GEOL 408** | **4** |
| **Colonnade: Connections (Systems) - Recommend GEOL 301/315** | **3** | **GEOL 415** | **3** |

| GISC 316 | 4 | GEOL 301, GEOL 311, GEOL 315, GEOL 440, GEOL 445, or GEOL 465 (EES Choice 2) | 3 |
| EES Elective | 3 | Colonnade: Writing in the Disciplines - Recommend GEOG 300 | 3 |
| Colonnade: Connections (Social & Cultural) | 3 | General Elective - Recommend GEOL 399 | 3 |
| | 16 | | 16 |

Fourth Year

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| GEOL 499 | 2 | General Elective - Recommend GEOL 399 | 3 |
| General Elective - Recommend GEOL 399 | 3 | General Elective | 3 |
| General Elective | 3 | General Elective | 3 |
| General Elective | 3 | General Elective | 3 |
| General Elective | 3 | General Elective | 3 |
| | 14 | | 15 |

Total Hours 120

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 will be able to apply fundamental geological principles in solving problems. | During the final senior semester, all graduating students are required to take the capstone Geology 499 Professional Preparation class, in which students take a comprehensive exam. In this exam, there are 12 questions related to SLO 1, representing key concepts from common-core courses in the Geological Sciences B.S. degree curriculum. |
| SLO 2 | Students will recognize and articulate the integrative nature and deep-time connection of various earth system components, including lithosphere, hydrosphere, atmosphere, and biosphere. | During the final senior semester, all graduating students are required to take the capstone Geology 499 Professional Preparation class, in which students take a comprehensive exam. In this exam, there are 12 questions related to SLO 2, representing key concepts from common-core courses in the Geological Sciences B.S. degree |

| | List all student learning outcomes of the program. | Measurement Plan |
|---|---|---|
| | | curriculum. |
| SLO 3 | Students will be able to demonstrate understanding of current societal issues related to earth science. | During the final senior semester, all graduating students are required to take the capstone Geology 499 Professional Preparation class, in which students take a comprehensive exam. In this exam, there are 6 questions related to SLO 3, representing key concepts from common-core courses in the Geological Sciences B.S. degree curriculum. |

## 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.

50

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

No

If no, enter the percentage of the program that is taught face-to-face

50

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?

Because of the recent loss of two program faculty, streamlining the curriculum is necessary.

Mineralogy and petrology are related field in Geological Sciences. Instead of two sperate courses (GEOL 330 Mineralogy and GEOL 350 Petrology) in the common core, we removed GEOL 330 Mineralogy from the common core, and added part of that content in GEOL 350 Petrology (please see the course revision proposal of GEOL 350). This will eliminate the need for students to take GEOL 330 and GEOL 360 in back-to-back semesters. Rather, students will learn the content of both mineralogy and petrology in an integrated fashion in a single course (revised GEOL 350).

We also moved GISC 316 and GEOG 300 from "Additional Requirements" to "Common Core", and adjusted the hours accordingly. This way, students need less hours to graduate from our program.

To keep consistency between the two concentrations of the program, we removed lower-level math requirement (MATH 115) from the Environmental Earth Science (EES) concentration. Both concentrations already require higher-level math (Calculus or Statistics).

Additional
Attachments

Additional information or attachments

Reviewer Comments

**Stuart Burris (stuart.burris) (01/24/22 2:18 pm):** Rollback: The largest item in need is the 4-year plan, which is completely missing from the proposal. You will also need to provide a bit more in the 'Rationale for program proposal' at the end. Please comment on the reason for removing GEOL 330 from the core. You may also want to include something about parts of that content being moved to GEOL 350. You will also probably get questions about the removal of MATH 115 from the EES concentration if you do not go ahead and comment on that in the rationale.

**Leslie North (leslie.north) (01/26/22 3:03 pm):** Rollback: Please review an edits to the 4 year plan.

Key: 344

# Program Change Request

Date Submitted: 01/03/22 8:34 am

## Viewing: **434 : Neuroscience, Minor**

Last edit: 01/03/22 8:34 am

Changes proposed by: and30774

Catalog Pages
Using this Program
  Neuroscience, Minor (434)

Proposed Action

**In Workflow**

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

**Approval Path**

1. 01/25/22 4:30 pm
   Kelly Madole
   (kelly.madole):
   Approved for PSYS
   Approval

**Active**

Contact Person

| Name | Email | Phone |
|---|---|---|
| Andrew Mienaltowski | andrew.mienaltowski@wku.edu | 270-681-0270 |

| | |
|---|---|
| Term of Implementation | 2022-2023 |
| Program Reference Number | 434 |
| Review Type | Full Review |
| Academic Level | Undergraduate |
| Program Type | Minor |
| Department | Psychological Sciences |
| College | Science and Engineering |
| Program Name (eg. Biology) | Neuroscience, Minor |
| CIP Code | **30.1001** - **Biopsychology.** |

| | | |
|---|---|---|
| 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 | | |
| | **No** | |

## Catalog Content

Curriculum Requirements (Catalog field: Program Requirements)

# Program Requirements (21 hours)

The minor in Neuroscience offers students the opportunity to study the intersection of brain and behavior in a manner that incorporates tools and perspectives from the psychological and biological sciences, and related disciplines. This minor will be an attractive option for students who are:

Planning to pursue advanced study in any of several fields related to neuroscience, including psychology, biology, medicine, counseling, or social work or

Seeking relevant training for jobs related to the assessment, rehabilitation, and treatment of brain damage, brain diseases, and addiction.

| | | |
|---|---|---|
| PSYS 360 | Behavioral Neuroscience | 3 |
| BIOL 335 | Neurobiology | 3 |
| Select 15 credit hours in electives from the following courses: | | 15 |
| PSYS 331 | Principles of Human and Animal Learning | |
| PSYS 333 | Cognitive Psychology | |
| PSYS 363 | Sensory and Perceptual Systems | |
| PSYS 462 | Neuroscience of Learning and Memory | |
| PSYS 463 | Evolutionary Psychology | |
| PSYS 465 | Psychopharmacology | |
| PSYS 482 | Psychology of Sexuality | |
| BIOL 319 | Introduction to Molecular and Cell Biology | |
| BIOL 324 | Histology | |
| BIOL 327 | Genetics | |
| BIOL 334 | Animal Behavior | |
| BIOL/CHEM 446 | Biochemistry I | |
| BIOL 464 | Endocrinology | |
| PHIL 332 | Philosophy of Mind: Minds and Machines | |
| Total Hours | | 21 |

Note: Students must choose at least 1 course from Biology and Psychological Sciences. Students must take PSYS 100 or PSYS 160 and BIOL 120/BIOL 121 prior to beginning their coursework in the minor (some courses available for the minor may have additional prerequisites).

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

**No**

Does this program include courses from outside your department?

**Yes**

Outside Courses
Details

| Who approved including these courses? | When were they approved? |
|---|---|
| **Biology** | **Prior to 2015-2016 undergrad catalog** |
| **Chemistry** | **Prior to 2015-2016 undergrad catalog** |
| **Philosophy** | **Prior to 2015-2016 undergrad catalog** |

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** | **Understand basic concepts in biology and psychology that serve as the foundation of the scientific study of brain, mind, and behavior** | **Plan not needed for minor** |
| **SLO 2** | **Understand the organization of the nervous system and its relation to mind and behavior** | **Plan not needed for minor** |
| **SLO 3** | **Appreciate the interdisciplinary nature of the field of neuroscience** | **Plan not needed for minor** |
| **SLO 4** | **Use critical thinking skills to judge the scientific merit of original neuroscience research and its representation in the media** | **Plan not needed for minor** |
| **SLO 5** | **Communicate effectively about neuroscience in written and oral form** | **Plan not needed for minor** |

## Library Resources

Attach library
resources

Rationale for the program proposal?

PSYS 362 Behavioral Neuroscience with Lab is being removed from the undergraduate programs in the Department of Psychological Sciences. Students interested in Behavioral Neuroscience will complete PSYS 360, and those interested in adding the lab-based content will complete the newly created PSYS 365 Laboratory in Behavioral Neuroscience. This lab is not required for the Neuroscience minor.

Additional
Attachments

Additional information or attachments

Reviewer Comments

Key: 279

# Program Change Request

Date Submitted: 01/03/22 8:33 am

## Viewing: **440 : Psychological Science, Minor**

### Last edit: 01/03/22 8:33 am

Changes proposed by: and30774

Catalog Pages
Using this Program
  Psychological Science, Minor (440)

Proposed Action

**Active**

Contact Person

| Name | Email | Phone |
|------|-------|-------|
| Andrew Mienaltowski | andrew.mienaltowski@wku.edu | 270-681-0270 |

| | |
|---|---|
| Term of Implementation | 2022-2023 |
| Program Reference Number | 440 |
| Review Type | Full Review |
| Academic Level | Undergraduate |
| Program Type | Minor |
| Department | Psychological Sciences |
| College | Science and Engineering |
| Program Name (eg. Biology) | Psychological Science, Minor |
| CIP Code | **42.2799** - **Research and Experimental** |

## In Workflow

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

## Approval Path

1. 01/25/22 4:31 pm Kelly Madole (kelly.madole): Approved for PSYS Approval

**Psychology, Other.**

| 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

**No**

## Catalog Content

Curriculum Requirements (Catalog field: Program Requirements)

# Program Requirements (22 hours)

The minor in Psychological Science provides graduates with a broad overview of the discipline as well as exposure to the foundations of the discipline. The Psychological Science minor focuses students on becoming more engaged and critical consumers of the science underlying psychology through courses informed by current research and practice in the scientific student of individual and collective behavior, the physical and environmental bases of behavior, and the analysis and treatment of behavioral problems. This minor might appeal to students who are in a pre-professional track (e.g., pre-med) or to students majoring in disciplines where psychological science can inform research and practice (e.g., biology, computer science, philosophy, religious studies, nursing, communication disorders, management, etc.).

| Required Courses | | |
|---|---|---|
| PSYS 100 | Introduction to Psychology | 3 |
| or PSYS 160 | Introduction to Biopsychology | |
| PSYS 210 | Research Methods in Psychology | 4 |
| & PSYS 211 | and Research Methods in Psychology Laboratory | |
| Individual Differences and Social Processes (Category A) | | |
| PSYS 350 | Social Psychology | 3 |
| or PSYS 440 | Abnormal Psychology | |
| Learning, Cognition, and Biopsychology (Category B) | | |
| Select one of the following: | | 3 |
| PSYS 331 | Principles of Human and Animal Learning | |
| PSYS 333 | Cognitive Psychology | |
| PSYS 360 | Behavioral Neuroscience | |
| PSYS 362 | Behavioral Neuroscience with Lab | |
| PSYS 363 | Sensory and Perceptual Systems | |
| Developmental Processes (Category C) | | |
| Select one of the following: | | 3 |
| PSYS 220 | Introduction to Lifespan Developmental Psychology | |
| PSYS 321 | Child Developmental Psychology | |
| PSYS 423 | Psychology of Adult Life and Aging | |
| Additional Upper-level Courses 1 | | |

| Select six additional upper-level credit hours of PSYS courses 2 | 6 |
|---|---|
| Total Hours | 22 |

1The six additional upper-level credit hours of PSYS courses can include the above restricted elective courses that were not taken to meet the other requirements or any other upper-level PSYS hours. These hours can include no more than 3 credit hours of PSYS 490.

2PSYS 300 can be taken to satisfy 3 of the 6 credit hours for these upper-level electives.

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** | **Develop and apply a knowledge base in psychology that includes research design and content in the foundational areas of the discipline (i.e., learning and cognition, human development, physiological psychology, and sociocultural influences)** | **Plan not needed for minor** |
| **SLO 2** | **Engage in critical scientific inquiry by using scientific reasoning to interpret data and conclusions drawn from data, by recognizing limitations in research design and implementation, and by discussing the implications that individual differences in sociocultural factors have in measuring psychological constructs** | **Plan not needed for minor** |
| **SLO 3** | **Examine the ethical standards and social consequences of psychological research on the everyday lives of individuals from diverse backgrounds and at different stages of the life span** | **Plan not needed for minor** |
| **SLO 4** | **Communicate the science of the discipline through written and oral forms of expression** | **Plan not needed for minor** |
| **SLO 5** | **Reflect on the roles that the knowledge base and scientific reasoning skills developed in the program play in their professional development as responsible citizens and scholars** | **Plan not needed for minor** |

## Library Resources

Attach library
resources

Rationale for the program proposal?

PSYS 362 Behavioral Neuroscience with Lab is being removed from the undergraduate programs in the Department of Psychological Sciences. Students interested in Behavioral Neuroscience will complete PSYS 360, and those interested in adding the lab-based content will complete the newly created PSYS 365 Laboratory in Behavioral Neuroscience.

Additional
Attachments

Additional information or attachments

Reviewer Comments

Key: 280

# Program Change Request

Date Submitted: 01/03/22 9:02 am

## Viewing: **747E/747 : Psychological Science, Bachelor of Science**

Last approved: 10/13/21 11:42 am

Last edit: 01/19/22 5:32 pm

Changes proposed by: and30774

Catalog Pages
Using this Program

Psychological Science, Bachelor of Science (747)

Proposed Action

Active

Contact Person

| Name | Email | Phone |
|---|---|---|
| Andrew Mienaltowski | andrew.mienaltowski@wku.edu | 270-681-0270 |

Term of Implementation      2022-2023

Program Reference      747E/747

| | |
|---|---|
| Number | |
| Review Type | Full Review |
| Academic Level | Undergraduate |
| Program Type | Major |
| Degree Types | Bachelor of Science |
| Department | Psychological Sciences |
| College | Science and Engineering |
| Program Name (eg. Biology) | Psychological Science, Bachelor of Science |

Will this program have concentrations?
  Yes

Concentrations

## Concentrations

Applied Psychological Science (PAPS)
Biobehavioral Psychology (PBBP)
Clinical Psychological Science (PCPS)
Cognitive Psychology (PCGP)
Developmental Science (PDVS)
Social Psychology (PSOP)
Quantitative Psychology (PSQP)
General (PGEN)

| | |
|---|---|
| CIP Code | 42.2799 - Research and Experimental Psychology, Other. |
| 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

**No**

## Catalog Content

Program Overview (Catalog field: Overview tab)

The Department of Psychological Sciences offers programs designed for students who are interested in a science-oriented degree that will prepare them for graduate study in psychology or a related field (e.g., medical school, pharmacy, physical therapy) or for employment in jobs where strong quantitative and research skills are required.

Curriculum Requirements (Catalog field: Program Requirements)

# Program Requirements (37-49 hours)

The department provides two options for the Bachelor of Science degree. The non-extended option requires a minimum of 37 credit hours and a minor or second major is required. The extended option requires a minimum of 49 unduplicated credit hours and no minor or second major is required. For both options, students will complete a program of study that includes Core and Concentration components as well as a Laboratory Experience component. To complete the Core requirement, students will select a total of 25 to 28 credit hours from the following categories: Foundations of Psychology, Developmental Processes, Learning and Cognition, Individual Differences and Social Processes, Biological Bases of Behavior and Mental Processes, Research Methods and Statistics, and Integrative Science in Psychology. To complete the Concentration requirement, students will select courses from one or two of the six thematic concentrations or they may design a general concentration (subject to approval by their advisor).  To complete the Laboratory Experience component, students will complete one PSYS lab course or one PSYS lecture / lab course at the 300-level or above. Students in the non-extended option will complete 12 credit hours from one thematic concentration, or design a custom concentration by selecting 12-24 hours from PSYS courses not used to satisfy their Core requirement. Students choosing the extended option will complete 24 credit hours from two concentrations or 24 – 25 hours from the quantitative psychology concentration.

Students must maintain a minimum 2.50 GPA both overall and in the major. Either
MATH 116 and MATH 117, or
MATH 118 or higher is required; MATH 183 is recommended.
Students who select the extended option with the quantitative psychology concentration must complete MATH 136.
Students in the non-extended option of the Psychological Science major can count no more than 3 credits of PSYS 490 toward the major. Students in the extended option may count no more than 6 credits of PSYS 490 towards the major, with no more than 3 credits counting toward a single concentration's requirements. PSYS 300 is recommended to meet the Colonnade: Writing in the Disciplines requirement but does not satisfy major requirements.

Approved Shared Content from /shared/undergraduate-major-requirements/
Last Approved: Jul 21, 2021 1:36pm

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.

## Concentrations for the general and extended major:

Applied Psychological Science
Biobehavioral Psychology
Clinical Psychological Science
Cognitive Psychology

Developmental Science
Social Psychology
Quantitative Psychology
General Concentration

# Applied Psychological Science Concentration

This concentration focuses on how psychological science can be used to solve real-world problems in business, sports, or human engineering domains.

Core Courses

| | | |
|---|---|---|
| PSYS 100 | Introduction to Psychology | 3 |
| or PSYS 160 | Introduction to Biopsychology | |
| PSYS 220 | Introduction to Lifespan Developmental Psychology | 3 |
| or PSYS 321 | Child Developmental Psychology | |
| PSYS 333 | Cognitive Psychology | 3 |
| PSYS 350 | Social Psychology | 3 |
| Select one of the following: | | 3 |
| PSYS 360 | Behavioral Neuroscience | |
| PSYS 362 | Behavioral Neuroscience with Lab | |
| PSYS 363 | Sensory and Perceptual Systems | |
| PSYS 210 | Research Methods in Psychology | 3 |
| PSYS 211 | Research Methods in Psychology Laboratory | 1 |
| PSYS 313 | Statistics in Psychology | 3 |
| Select one of the following: | | 3 |
| PSYS 380 | Psychology and Science Fiction | |
| PSYS 481 | History of Psychology | |
| PSYS 490 | Independent Study in Psychological Sciences | |

Concentration Courses

Required Course:

| | | |
|---|---|---|
| PSYS 413 | Psychological Measurement | |
| Select 9 hours from the following: | | 9 |
| PSYS 353 | Psychology of Prejudice and Stereotyping | |
| PSYS 360 | Behavioral Neuroscience | |
| or PSYS 363 | Sensory and Perceptual Systems | |
| PSYS 370 | Industrial / Organizational Psychology | |
| PSYS 433 | Judgment and Decision Making | |
| **PSYS 450** | **Psychology of Personality** | |
| PSYS 473 | Training in Business and Industry | |
| PSYS 481 | History of Psychology | |
| PSYS 490 | Independent Study in Psychological Sciences | |
| PSYS 499 | Senior Seminar in Psychology | |
| PSY 340 | Sport Psychology | |
| PSY 355 | Issues in Cross-Cultural Psychology | |
| PSY 412 | Psychology of Motivation and Emotion | |
| PSY 470 | Psychology and Law | |

Laboratory Experience

| PSYS 413 | Psychological Measurement | 3 |
|---|---|---|
| Total Hours | | 37 |

## Biobehavioral Psychology Concentration

This concentration provides knowledge of the biological bases of behavior and thought.

Core Courses

| | | |
|---|---|---|
| PSYS 100 | Introduction to Psychology | 3 |
| or PSYS 160 | Introduction to Biopsychology | |
| PSYS 220 | Introduction to Lifespan Developmental Psychology | 3 |
| or PSYS 321 | Child Developmental Psychology | |
| PSYS 331 | Principles of Human and Animal Learning | 3 |
| PSYS 350 | Social Psychology | 3 |
| or PSYS 440 | Abnormal Psychology | |
| PSYS 360 | Behavioral Neuroscience | 3 |
| PSYS 210 | Research Methods in Psychology | 3 |
| PSYS 211 | Research Methods in Psychology Laboratory | 1 |
| PSYS 313 | Statistics in Psychology | 3 |
| Select one of the following: | | 3 |
| PSYS 380 | Psychology and Science Fiction | |
| PSYS 481 | History of Psychology | |
| PSYS 490 | Independent Study in Psychological Sciences | |
| Concentration Courses | | |
| PSYS 363 | Sensory and Perceptual Systems | 3 |
| Select 9 hours from the following: | | 9 |
| PSYS 333 | Cognitive Psychology | |
| PSYS 431 | Psychology of Language | |
| PSYS 444 | Psychology of Substance Use Disorders | |
| PSYS 462 | Neuroscience of Learning and Memory | |
| PSYS 463 | Evolutionary Psychology | |
| PSYS 465 | Psychopharmacology | |
| PSYS 482 | Psychology of Sexuality | |
| PSYS 490 | Independent Study in Psychological Sciences | |
| PSYS 499 | Senior Seminar in Psychology | |
| Laboratory Experience | | |
| Select one course from the following: | | 1-3 |
| PSYS 322 | Laboratory in Developmental Psychology | |
| PSYS 334 | Laboratory in Cognition | |
| PSYS 362 | Behavioral Neuroscience with Lab | |
| PSYS 365 LABORATORY IN BEHAVIORAL NEUROSCIENCE | Course PSYS 365 LABORATORY IN BEHAVIORAL NEUROSCIENCE Not Found | |
| PSYS 413 | Psychological Measurement | |
| PSYS 415 PROGRAMMING FOR SOCIAL SCIENCES | Course PSYS 415 PROGRAMMING FOR SOCIAL SCIENCES Not Found | |
| Total Hours | | 38-40 |

# Clinical Psychological Science Concentration

This concentration focuses on mechanisms and etiologies of psychological health and dysfunction.

Core Courses

| | | |
|---|---|---|
| PSYS 100 | Introduction to Psychology | 3 |
| or PSYS 160 | Introduction to Biopsychology | |
| PSYS 220 | Introduction to Lifespan Developmental Psychology | 3 |
| or PSYS 321 | Child Developmental Psychology | |
| PSYS 331 | Principles of Human and Animal Learning | 3 |
| or PSYS 333 | Cognitive Psychology | |
| PSYS 440 | Abnormal Psychology | 3 |
| PSYS 210 | Research Methods in Psychology | 3 |
| PSYS 211 | Research Methods in Psychology Laboratory | 1 |
| PSYS 313 | Statistics in Psychology | 3 |
| Select one of the following: | | 3 |
| PSYS 360 | Behavioral Neuroscience | |
| ~~PSYS 362~~ | ~~Behavioral Neuroscience with Lab~~ | |
| PSYS 363 | Sensory and Perceptual Systems | |
| Select one of the following: | | 3 |
| PSYS 380 | Psychology and Science Fiction | |
| PSYS 481 | History of Psychology | |
| PSYS 490 | Independent Study in Psychological Sciences | |
| Concentration Courses | | |
| Select 12 hours from the following: | | 12 |
| PSYS 350 | Social Psychology | |
| PSYS 353 | Psychology of Prejudice and Stereotyping | |
| PSYS 360 | Behavioral Neuroscience | |
| PSYS 413 | Psychological Measurement | |
| PSYS 423 | Psychology of Adult Life and Aging | |
| PSYS 425 | Developmental Psychopathology | |
| PSYS 442 | Psychology of Suicide and Self-Injury | |
| PSYS 444 | Psychology of Substance Use Disorders | |
| PSYS 450 | Psychology of Personality | |
| PSYS 451 | Psychology of Religion | |
| PSYS 453 | Psychology of Women | |
| PSYS 462 | Neuroscience of Learning and Memory | |
| PSYS 465 | Psychopharmacology | |
| PSYS 481 | History of Psychology | |
| PSYS 482 | Psychology of Sexuality | |
| PSYS 490 | Independent Study in Psychological Sciences | |
| PSYS 499 | Senior Seminar in Psychology | |
| Laboratory Experience | | 1-3 |
| Select one course from the following: | | |
| PSYS 322 | Laboratory in Developmental Psychology | |
| PSYS 334 | Laboratory in Cognition | |

| PSYS 362 | Behavioral Neuroscience with Lab | |
| **PSYS 365 LABORATORY IN BEHAVIORAL NEUROSCIENCE** | **Course PSYS 365 LABORATORY IN BEHAVIORAL NEUROSCIENCE Not Found** | |
| PSYS 413 | Psychological Measurement | |
| **PSYS 415 PROGRAMMING FOR SOCIAL SCIENCES** | **Course PSYS 415 PROGRAMMING FOR SOCIAL SCIENCES Not Found** | |
| Total Hours | | 38-40 |

# Cognitive Psychology Concentration

This concentration emphasizes the scientific study of mental processes such as attention, perception, memory, problem-solving, thinking, and language use.

| Core Courses | | |
| --- | --- | --- |
| PSYS 100 | Introduction to Psychology | 3 |
| or PSYS 160 | Introduction to Biopsychology | |
| PSYS 220 | Introduction to Lifespan Developmental Psychology | 3 |
| or PSYS 321 | Child Developmental Psychology | |
| PSYS 333 | Cognitive Psychology | 3 |
| PSYS 350 | Social Psychology | 3 |
| or PSYS 440 | Abnormal Psychology | |
| Select one of the following: | | 3 |
| PSYS 360 | Behavioral Neuroscience | |
| PSYS 362 | Behavioral Neuroscience with Lab | |
| PSYS 363 | Sensory and Perceptual Systems | |
| PSYS 210 | Research Methods in Psychology | 3 |
| PSYS 211 | Research Methods in Psychology Laboratory | 1 |
| PSYS 313 | Statistics in Psychology | 3 |
| Select one of the following: | | 3 |
| PSYS 380 | Psychology and Science Fiction | |
| PSYS 481 | History of Psychology | |
| PSYS 490 | Independent Study in Psychological Sciences | |
| Concentration Courses | | |
| Select 12 hours from the following: | | 12 |
| PSYS 331 | Principles of Human and Animal Learning | |
| PSYS 363 | Sensory and Perceptual Systems | |
| PSYS 423 | Psychology of Adult Life and Aging | |
| PSYS 431 | Psychology of Language | |
| PSYS 433 | Judgment and Decision Making | |
| PSYS 462 | Neuroscience of Learning and Memory | |
| PSYS 490 | Independent Study in Psychological Sciences | |
| PSYS 499 | Senior Seminar in Psychology | |
| PSY 412 | Psychology of Motivation and Emotion | |
| Laboratory Experience | | |
| Select one of the following courses: | | 1-3 |
| PSYS 322 | Laboratory in Developmental Psychology | |
| PSYS 334 | Laboratory in Cognition | |

| | | |
|---|---|---|
| PSYS 362 | Behavioral Neuroscience with Lab | |
| PSYS 365 LABORATORY IN BEHAVIORAL NEUROSCIENCE | Course PSYS 365 LABORATORY IN BEHAVIORAL NEUROSCIENCE Not Found | |
| PSYS 413 | Psychological Measurement | |
| PSYS 415 PROGRAMMING FOR SOCIAL SCIENCES | Course PSYS 415 PROGRAMMING FOR SOCIAL SCIENCES Not Found | |
| Total Hours | | 38-40 |

# Developmental Science Concentration

This addresses the physical, emotional, intellectual, social, perceptual, and personality growth of humans throughout the lifespan.

Concentration Courses

Core Courses

| | | |
|---|---|---|
| PSYS 100 | Introduction to Psychology | 3 |
| or PSYS 160 | Introduction to Biopsychology | |
| PSYS 220 | Introduction to Lifespan Developmental Psychology | 3 |
| or PSYS 321 | Child Developmental Psychology | |
| PSYS 331 | Principles of Human and Animal Learning | 3 |
| or PSYS 333 | Cognitive Psychology | |
| PSYS 350 | Social Psychology | 3 |
| or PSYS 440 | Abnormal Psychology | |
| Select one of the following: | | 3 |
| PSYS 360 | Behavioral Neuroscience | |
| PSYS 362 | Behavioral Neuroscience with Lab | |
| PSYS 363 | Sensory and Perceptual Systems | |
| PSYS 210 | Research Methods in Psychology | 3 |
| PSYS 211 | Research Methods in Psychology Laboratory | 1 |
| PSYS 313 | Statistics in Psychology | 3 |
| Select one of the following: | | 3 |
| PSYS 380 | Psychology and Science Fiction | |
| PSYS 481 | History of Psychology | |
| PSYS 490 | Independent Study in Psychological Sciences | |
| Select 12 hours from the following: | | 12 |
| PSYS 220 | Introduction to Lifespan Developmental Psychology | |
| PSYS 321 | Child Developmental Psychology | |
| PSYS 423 | Psychology of Adult Life and Aging | |
| PSYS 424 | Topics in Developmental Psychology | |
| PSYS 425 | Developmental Psychopathology | |
| PSYS 431 | Psychology of Language | |
| PSYS 463 | Evolutionary Psychology | |
| PSYS 482 | Psychology of Sexuality | |
| PSYS 490 | Independent Study in Psychological Sciences | |
| PSYS 499 | Senior Seminar in Psychology | |
| Laboratory Experience | | |

| Select one of the following courses: | | 1-3 |
|---|---|---|
| PSYS 322 | Laboratory in Developmental Psychology | |
| PSYS 334 | Laboratory in Cognition | |
| ~~PSYS 362~~ | ~~Behavioral Neuroscience with Lab~~ | |
| **PSYS 365 LABORATORY IN BEHAVIORAL NEUROSCIENCE** | **Course PSYS 365 LABORATORY IN BEHAVIORAL NEUROSCIENCE Not Found** | |
| PSYS 413 | Psychological Measurement | |
| **PSYS 415 PROGRAMMING FOR SOCIAL SCIENCES** | **Course PSYS 415 PROGRAMMING FOR SOCIAL SCIENCES Not Found** | |
| Total Hours | | 38-40 |

# Social Psychology Concentration

This concentration emphasizes the study of how social situations affect behavior.

| Core Courses | | |
|---|---|---|
| PSYS 100 | Introduction to Psychology | 3 |
| or PSYS 160 | Introduction to Biopsychology | |
| PSYS 220 | Introduction to Lifespan Developmental Psychology | 3 |
| or PSYS 321 | Child Developmental Psychology | |
| PSYS 331 | Principles of Human and Animal Learning | 3 |
| or PSYS 333 | Cognitive Psychology | |
| PSYS 350 | Social Psychology | 3 |
| Select one of the following: | | 3 |
| PSYS 360 | Behavioral Neuroscience | |
| ~~PSYS 362~~ | ~~Behavioral Neuroscience with Lab~~ | |
| PSYS 363 | Sensory and Perceptual Systems | |
| PSYS 210 | Research Methods in Psychology | 3 |
| PSYS 211 | Research Methods in Psychology Laboratory | 1 |
| PSYS 313 | Statistics in Psychology | 3 |
| Select one of the following: | | 3 |
| PSYS 380 | Psychology and Science Fiction | |
| PSYS 481 | History of Psychology | |
| PSYS 490 | Independent Study in Psychological Sciences | |
| Concentration Courses | | |
| PSYS 413 | Psychological Measurement | |
| Select 9 hours from the following: | | 9 |
| PSYS 353 | Psychology of Prejudice and Stereotyping | |
| PSYS 433 | Judgment and Decision Making | |
| PSYS 440 | Abnormal Psychology | |
| PSYS 450 | Psychology of Personality | |
| PSYS 451 | Psychology of Religion | |
| PSYS 453 | Psychology of Women | |
| PSYS 463 | Evolutionary Psychology | |
| PSYS 482 | Psychology of Sexuality | |
| PSYS 490 | Independent Study in Psychological Sciences | |
| PSYS 499 | Senior Seminar in Psychology | |
| PSY 412 | Psychology of Motivation and Emotion | |

| Laboratory Experience | | 3 |
|---|---|---|
| ~~PSYS 322~~ | ~~Laboratory in Developmental Psychology~~ | |
| ~~PSYS 334~~ | ~~Laboratory in Cognition~~ | |
| **PSYS 413** | **Psychological Measurement** | |
| Total Hours | | 37 |

# General Concentration

This concentration allows students, with help from their advisor, to design an individualized theme.

Core Courses

| PSYS 100 | Introduction to Psychology | 3 |
|---|---|---|
| or PSYS 160 | Introduction to Biopsychology | |
| PSYS 220 | Introduction to Lifespan Developmental Psychology | 3 |
| or PSYS 321 | Child Developmental Psychology | |
| PSYS 331 | Principles of Human and Animal Learning | 3 |
| or PSYS 333 | Cognitive Psychology | |
| PSYS 350 | Social Psychology | 3 |
| or PSYS 440 | Abnormal Psychology | |
| Select one of the following: | | 3 |
| PSYS 360 | Behavioral Neuroscience | |
| ~~PSYS 362~~ | ~~Behavioral Neuroscience with Lab~~ | |
| PSYS 363 | Sensory and Perceptual Systems | |
| PSYS 210 | Research Methods in Psychology | 3 |
| PSYS 211 | Research Methods in Psychology Laboratory | 1 |
| PSYS 313 | Statistics in Psychology | 3 |
| Select one of the following: | | 3 |
| PSYS 380 | Psychology and Science Fiction | |
| PSYS 481 | History of Psychology | |
| PSYS 490 | Independent Study in Psychological Sciences | |

Concentration Courses

| Select 12-24 hours of electives from PSYS courses not used to satisfy Core requirements | | 12-24 |
|---|---|---|

Laboratory Experience

| Select one of the following courses: | | 1-3 |
|---|---|---|
| PSYS 322 | Laboratory in Developmental Psychology | |
| PSYS 334 | Laboratory in Cognition | |
| ~~PSYS 362~~ | ~~Behavioral Neuroscience with Lab~~ | |
| **PSYS 365 LABORATORY IN BEHAVIORAL NEUROSCIENCE** | **Course PSYS 365 LABORATORY IN BEHAVIORAL NEUROSCIENCE Not Found** | |
| PSYS 413 | Psychological Measurement | |
| **PSYS 415 PROGRAMMING FOR SOCIAL SCIENCES** | **Course PSYS 415 PROGRAMMING FOR SOCIAL SCIENCES Not Found** | |
| Total Hours | | 38-52 |

# Quantitative Psychology Concentration

This concentration focuses on the use of advanced data manipulation and statistical analysis techniques within psychological science to examine discipline-specific research questions. This concentration requires at least 49 hours,

so students do not need a minor or second major. Also, students in this concentration do not select another concentration within the Psychological Science Major.

| Core Courses | | |
|---|---|---|
| PSYS 100 | Introduction to Psychology | 3 |
| or PSYS 160 | Introduction to Biopsychology | |
| PSYS 220 | Introduction to Lifespan Developmental Psychology | 3 |
| or PSYS 321 | Child Developmental Psychology | |
| PSYS 331 | Principles of Human and Animal Learning | 3 |
| or PSYS 333 | Cognitive Psychology | |
| PSYS 350 | Social Psychology | 3 |
| or PSYS 440 | Abnormal Psychology | |
| Select one of the following: | | 3 |
| PSYS 360 | Behavioral Neuroscience | |
| ~~PSYS 362~~ | ~~Behavioral Neuroscience with Lab~~ | |
| PSYS 363 | Sensory and Perceptual Systems | |
| PSYS 210 | Research Methods in Psychology | 3 |
| PSYS 211 | Research Methods in Psychology Laboratory | 1 |
| PSYS 313 | Statistics in Psychology | 3 |
| Select one of the following: | | 3 |
| PSYS 380 | Psychology and Science Fiction | |
| PSYS 481 | History of Psychology | |
| PSYS 490 | Independent Study in Psychological Sciences | |
| Concentration Courses | | |
| Select one of the following: | | 3-4 |
| CS 146 | Introduction to Programming | |
| CS 170 | Problem Solving and Programming | |
| CS 180 | Computer Science I | |
| STAT 301 | Introductory Probability and Applied Statistics | 3 |
| STAT 330 | Introduction to Statistical Software | 3 |
| STAT 401 | Regression Analysis | 3 |
| or STAT 402 | Experimental Design | |
| PSYS 413 | Psychological Measurement | 3 |
| Select 9 PSYS upper-level elective hours selected in consultation with an advisor | | 9 |
| Laboratory Experience | | |
| PSYS 413 | Psychological Measurement | |
| Total Hours | | 49-50 |

4-Year Plan


# Psychological Science, General

| First Year | | | |
|---|---|---|---|
| Fall | Hours | Spring | Hours |
| PSYS 100 | 3 | PSYS Foundation Course | 3 |
| MATH 183 | 3 | PSYS 160 | 3 |
| ENG 100 | 3 | PSYS 210 | 3 |
| COMM 145 | 3 | PSYS 211 | 1 |

| | | | |
|---|---|---|---|
| Elective or Minor Course | 3 | Colonnade | 3 |
| | | Elective or Minor Course | 3 |
| | 15 | | 16 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| PSYS 313 | 3 | PSYS Foundation Course | 3 |
| ENG 200 | 3 | PSYS Foundation Course | 3 |
| Colonnade or Elective Course | 3 | Minor Course | 3 |
| Minor Course | 3 | Colonnade or Elective Course | 3 |
| Colonnade or Elective Course | 3 | Colonnade or Elective Course | 3 |
| | 15 | | 15 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| PSYS Concentration Course | 3 | PSYS Concentration Course | 3 |
| PSYS Foundation Course/Lab Course | 3-4 | ENG 300 | 3 |
| Minor Course | 3 | Minor Course | 3 |
| Minor Course | 3 | Minor Course | 3 |
| Colonnade or Elective Course | 3 | Colonnade or Elective Course | 3 |
| | 15-16 | | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| PSYS Concentration Course | 3 | PSYS Concentration Course | 3 |
| PSYS Integrative Science Course | 3 | Minor or Elective Course | 3 |
| Minor or Elective Course | 3 | Minor or Elective Course | 3 |
| Colonnade or Elective Course | 3 | Colonnade or Elective Course | 3 |
| Colonnade or Elective Course | 3 | Colonnade or Elective Course | 3 |
| | 15 | | 15 |

Total Hours 121-122

## Psychological Science, Extended

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| MATH 183 | 3 | PSYS Foundation Course | 3 |
| PSYS 100 | 3 | PSYS 160 | 3 |
| ENG 100 | 3 | PSYS 210 | 3 |
| COMM 145 | 3 | PSYS 211 | 1 |
| Elective or Colonnade Course | 3 | Colonnade | 3 |
| | | Elective or Colonnade Course | 3 |
| | 15 | | 16 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| PSYS 313 | 3 | PSYS Foundation Course | 3 |
| ENG 200 | 3 | PSYS Foundation or Concentration Course | 3 |
| PSYS Foundation Course | 3 | Minor Course | 3 |
| Colonnade or Elective Course | 3 | Colonnade or Elective Course | 3 |
| Colonnade or Elective Course | 3 | Colonnade or Elective Course | 3 |

|  | 15 |  | 15 |
|---|---|---|---|

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| PSYS Concentration Course | 3 | PSYS Concentration Course | 3 |
| PSYS Foundation Course/Lab Course | 3-4 | PSYS Concentration Course | 3 |
| Colonnade or Elective Course | 3 | ENG 300 | 3 |
| Colonnade or Elective Course | 3 | Colonnade or Elective Course | 3 |
| Colonnade or Elective Course | 3 | Colonnade or Elective Course | 3 |
|  | 15-16 |  | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| PSYS Concentration Course | 3 | PSYS Concentration Course | 3 |
| PSYS Concentration Course | 3 | PSYS Concentration Course | 3 |
| PSYS Integrative Science Course | 3 | Colonnade or Elective Course | 3 |
| Colonnade or Elective Course | 3 | Colonnade or Elective Course | 3 |
| Colonnade or Elective Course | 3 | Colonnade or Elective Course | 3 |
|  | 15 |  | 15 |

Total Hours 121-122

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

No

Does this program include courses from outside your department?

**Yes**

Outside Courses
Details

| Who approved including these courses? | When were they approved? |
|---|---|
| **Psychology** | **Prior to 2020-2021 catalog year** |
| **Computer Science/SEAS** | **Prior to 2020-2021 catalog year** |
| **Mathematics** | **Prior to 2020-2021 catalog year** |

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** | **Develop a working knowledge of psychology's content domains** | **Assess student learning within each foundational category (Developmental Processes, Learning and Cognition, Individual Differences and Social Processes, and Biological Bases of Behavior and Mental Processes) of the major's content core.** |

| | List all student learning outcomes of the program. | Measurement Plan |
|---|---|---|
| | | Student performance on 3-4 items for each of 3-4 learning outcomes (i.e., 9-16 items) for each of the following courses: 220, 321, 331, 333, 350, 360, 363, and 440 |
| SLO 2 | Interpret, design, and conduct basic psychological research | Assess student learning within research methods and statistics courses. Student performance on 3-4 items for each of 3-4 learning outcomes (i.e., 9-16 items) for each of the following courses: 210/211, 313 |
| SLO 3 | Apply ethical standards to evaluate psychological science and practice | Document student training in the appropriate conduct of research with human subjects, including the completion of CITI training in research methods course |
| SLO 4 | Applies learning outcomes of the methods and statistics courses in the lab (for students completing independent study) | Assess the diversity of activities of Psychological Sciences majors who complete Independent Study (e.g., PSYS 490) |
| SLO 5 | Integrate knowledge gained in complementary disciplines of psychology (for students in 747E only) | Students complete open-ended instrument in which they are asked to describe at least two ways that theories or research findings in one discipline/core of psychology impacts or interacts with another (e.g., concentration). Scored with rubric across four levels (unsatisfactory to exceptional) |

## Delivery Mode

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

Yes

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

| Location | Percentage |
|---|---|
| Elizabethtown | 40 |
| Glasgow | 60 |
| Owensboro | 40 |

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?

(1) PSYS 450 Psychology of Personality is being added to the Applied Psychological Science
concentration. (2) PSYS 362 Behavioral Neuroscience with Lab is being removed from all of the
undergraduate programs in the Department of Psychological Sciences. Students interested in a lab
experience in Behavioral Neuroscience will now complete the newly created course PSYS 365
Laboratory in Behavioral Neuroscience. (3) PSYS 415 Programming for Social Sciences is also
being added as an option for students to take to complete the major's lab requirement. (4) PSYS
413 is required in the Social Psychology concentration and meets the lab requirement. As a result,
the other labs listed in this concentration were substituted with PSYS 413 to correct this
redundancy.

Additional
Attachments

Additional information or attachments

**Note that PSYS 365 was approved by UCC on 11/16/21 and the University Senate on
12/9/2021**
**Note that PSYS 415 was approved by the OCSE curriculum committee on 12/2/2021**

Reviewer Comments

Key: 341

# Program Change Request

Date Submitted: 12/26/21 6:24 pm

## Viewing: **629P, 629 : Computer Science, Bachelor of Science**

Last approved: 05/26/21 2:05 pm

Last edit: 12/26/21 6:24 pm

Changes proposed by: gng27220

Catalog Pages
Using this Program
  Computer Science, Bachelor of Science (629P, 629)

Proposed Action

### In Workflow

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

### Approval Path

1. 11/01/21 1:47 pm
   Mark Cambron
   (mark.cambron):
   Rollback to Initiator
2. 11/02/21 11:26 am
   Mark Cambron
   (mark.cambron):
   Rollback to Initiator
3. 11/05/21 3:12 pm
   Mark Cambron
   (mark.cambron):
   Approved for EAS
   Approval
4. 11/29/21 9:24 am
   Stuart Burris
   (stuart.burris):
   Approved for SC
   Dean
5. 12/03/21 9:44 am
   Stuart Burris
   (stuart.burris):
   Rollback to Initiator
6. 01/21/22 2:26 pm
   Mark Cambron
   (mark.cambron):
   Approved for EAS
   Approval

## History

1. Mar 26, 2021 by Rheanna Plemons (rheanna.plemons)
2. May 26, 2021 by Rheanna Plemons (rheanna.plemons)

**Active**

Contact Person

| Name | Email | Phone |
| --- | --- | --- |
| Guangming Xing | guangming.xing@wku.edu | 2707458848 |

| | |
| --- | --- |
| Term of Implementation | 2022-2023 |
| Program Reference Number | 629P, 629 |
| Review Type | Full Review |
| Academic Level | Undergraduate |
| Program Type | Major |
| Degree Types | Bachelor of Science |
| Department | Engineering & Applied Sciences, School of |
| College | Science and Engineering |
| Program Name (eg. Biology) | Computer Science, Bachelor of Science |

Will this program have concentrations?
  Yes

Concentrations

## Concentrations

Systems/Scientific App (CSSA)
General (CGEN)

| | |
| --- | --- |
| CIP Code | 11.0701 - Computer Science. |
| 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

<div align="center">No</div>

## Catalog Content

Program Overview (Catalog field: Overview tab)

**Computer Science Program Educational Objectives**

The program achieves its mission by focusing on specific educational objectives. Within three to five years after graduation, WKU CS graduates are expected to be:

> **Objective 1:** Engage in continuous learning to adapt to innovation and evolving technologies;
>
> **Objective 2:** Design and implement solid solutions for rapidly changing computing & information systems;
>
> **Objective 3:** Be effective team participants;
>
> **Objective 4:** Effectively communicate ideas in verbal and written form at the appropriate level for the audiences;
>
> **Objective 5:** Be ethical and socially responsible computer science professional

The CS student outcomes are listed on the program website at https://www.wku.edu/seas/.

Curriculum Requirements (Catalog field: Program Requirements)

# Admission Requirements

The major in computer science requires a minimum of 53 semester hours. To be admitted to the computer science major, students must complete **CS 290 or CS 221 with** ~~CS 290 and CS 221 with~~ grades of "C" or better. In addition, all CS courses counting toward the CS program major must be completed with a grade of "C" or better. Computer Science electives may include from 0-3 hour of 200-level courses. Students must adhere to all University Policies as indicated in the WKU catalog section, "Academic Information."

# Program Requirements (53 hours)

> Approved Shared Content from /shared/undergraduate-major-requirements/
> Last Approved: Jul 21, 2021 1:36pm
>
> 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.

## Systems/Scientific Applications Concentration

Core Courses

| | | |
|---|---|---|
| CS 180 | Computer Science I | 4 |
| CS 290 | Computer Science II | 4 |
| CS 325 | Computer Organization and Architecture | 3 |

| CS 331 | Data Structures | 3 |
| CS 339 | Discrete Structures | 3 |
| CS 351 | Database Management Systems I | 3 |
| CS 360 | Software Engineering I | 3 |
| CS 382 | Programming Languages | 3 |
| CS 396 | Intermediate Software Project | 3 |
| CS 421 | Data Structures and Algorithm Analysis | 3 |
| CS 425 | Operating Systems I | 3 |
| CS 496 | CS Senior Project and Professional Practice | 3 |
| STAT 301 | Introductory Probability and Applied Statistics | 3 |

Electives

| Select 12 hours from the following courses: | | 12 |
| --- | --- | --- |
| **CS 270** | **Introduction to Web Programming** | |
| **CS 315** | **Introduction to Unix** | |
| **CS 371** | **Advanced Computational Problem Solving** | |
| CS 372 | Mobile App Development | |
| CS 381 | Introduction to Computer Networks | |
| CS 443 | Database Management Systems II | |
| CS 445 | Operating Systems II | |
| CS 446 | Interactive Computer Graphics | |
| CS 450 | Computer Networks | |
| CS 456 | Artificial Intelligence | |

| Total Hours | 53 |
| --- | --- |

Additional Requirements for the Systems/Scientific Applications Concentration

| MATH 136 | Calculus I | 4 |
| --- | --- | --- |
| ~~ENG 307~~ | ~~Technical Writing~~ | ~~3~~ |
| Math Electives | | 6-7 |

Choose two for the following list:

| MATH 137 | Calculus II |
| --- | --- |
| MATH 305 | Introduction to Mathematical Modeling |
| MATH 307 | Introduction to Linear Algebra |
| MATH 331 | Differential Equations |
| MATH 405 | Numerical Analysis I |
| MATH 406 | Numerical Analysis II |
| MATH 470 | Introduction to Operations Research |
| MATH 473 | Introduction to Graph Theory |
| STAT 401 | Regression Analysis |
| STAT 402 | Experimental Design |

| Two natural science courses (at least 6 hours; at least one course must include a lab) designed for Science/Engineering majors | 7 |
| --- | --- |
| Total Hours | 17-18 |

## General Option

Core Courses

| CS 180 | Computer Science I | 4 |
| --- | --- | --- |
| CS 290 | Computer Science II | 4 |

| CS 331 | Data Structures | 3 |
|---|---|---|
| CS 325 | Computer Organization and Architecture | 3 |
| CS 339 | Discrete Structures | 3 |
| CS 351 | Database Management Systems I | 3 |
| CS 360 | Software Engineering I | 3 |
| CS 382 | Programming Languages | 3 |
| CS 396 | Intermediate Software Project | 3 |
| CS 421 | Data Structures and Algorithm Analysis | 3 |
| CS 425 | Operating Systems I | 3 |
| CS 496 | CS Senior Project and Professional Practice | 3 |
| STAT 301 | Introductory Probability and Applied Statistics | 3 |

Electives

Select 12 hours CS electives including: 3 hours at the 200-level or above (excluding CS 226 and CS 257), 6 hours at the 300-level or above and another 3 hours at the 400-level or above 1    12

| Total Hours | 53 |
|---|---|

Additional Requirements for the General Option:

| MATH 136 | Calculus I | 4 |
|---|---|---|
| ~~ENG 307~~ | ~~Technical Writing~~ | ~~3~~ |

| Total Hours | 4 |
|---|---|

1At most 1.5 hours of credit for CS 239 may count towards the major. At most 3 hours of credit for CS 239 and CS 245 (only for languages for which credit is not received through another course) may count towards the major.

4-Year Plan

## Computer Science, General

First Year

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CS 180 | 4 | ~~CS 221~~ | ~~4~~ |
| ENG 100 | 3 | **CS 290** | **4** |
| Colonnade - Arts & Humanities | 3 | MATH 136 | 4 |
| General Elective | 2 | COMM 145 | 3 |
| Colonnade - Natural & Physical Science w/ lab | 4 | General Elective | 3 |
| | 16 | | 14 |

Second Year

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CS 331 | 3 | CS 351 | 3 |
| ~~ENG 307~~ | ~~3~~ | ~~CS 325~~ | ~~3~~ |
| Colonnade - Literary Studies | 3 | HIST 101 or HIST 102 | 3 |
| CS 2XX Elective | 3 | CS 339 | 3 |
| ~~STAT 301~~ | ~~3~~ | General Elective | 3 |
| | | **STAT 301** | **3** |
| **General elective** | **3** | | |
| **CS 325** | **3** | | |
| | 15 | | 15 |

Third Year

| Fall | Hours | Spring | Hours |
|---|---|---|---|

| | | | |
|---|---|---|---|
| Colonnade - Natural & Physical Science w/ no lab | 3 | CS 382 | 3 |
| CS 396 | 3 | CS 3XX Elective | 3 |
| CS 360 | 3 | Colonnade - Social & Behavioral | 3 |
| CS 3XX Elective | 3 | General elective | 3 |
| ENG 300 | 3 | World Language Requirement or General Elective | 3 |
| **Colonnade - System** | **3** | | |
| | 15 | | 15 |

**Fourth Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| **CS 396** | **3** | CS 496 | 3 |
| CS 425 | 3 | CS 4XX Elective | 3 |
| CS 421 | 3 | Colonnade - Local to Global | 3 |
| General Elective | 3 | General Elective | 3 |
| Colonnade - Systems | 3 | General Elective | 3 |
| Colonnade - Social & Cultural | 3 | | |
| | 15 | | 15 |

Total Hours 120

## Computer Science, Systems/Scientific Applications Concentration

**First Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CS 180 | 4 | CS 221 | 4 |
| ENG 100 | 3 | **CS 290** | **4** |
| HIST 101 or HIST 102 | 3 | MATH 136 | 4 |
| General Elective | 3 | COMM 145 | 3 |
| World Language Requirement or General Elective | 3 | Colonnade - Arts & Humanities | 3 |
| | 16 | | 14 |

**Second Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CS 339 | 3 | **CS 339** | **3** |
| CS 360 | 3 | CS 351 | 3 |
| **CS 331** | **3** | CS 325 | 3 |
| **CS 325** | **3** | Math Elective | 3 |
| Colonnade - Literary Studies | 3 | ENG 307 | 3 |
| Colonnade - Natural & Physical Sciences w/ lab | 4 | Colonnade - Natural & Physical Sciences w/ no lab | 3 |
| **General elective** | **3** | **General elective** | **3** |
| | 16 | | 15 |

**Third Year**

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CS 396 | 3 | CS 382 | 3 |
| STAT 301 | 3 | CS Elective (CS 372 or CS 381 or CS 446) | 3 |
| CS 360 | 3 | Colonnade - Social & Behavioral | 3 |

| CS Elective (CS 443, CS 450, or CS 456) | 3 | Math Elective | 3 |
| ENG 300 | 3 | General Elective | 3 |
| **Colonnade - System** | **3** | | |
| | 15 | | 15 |

Fourth Year

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| CS 425 | 3 | CS 496 | 3 |
| CS 421 | 3 | CS Elective (CS 445 or CS 446) | 3 |
| General Elective | 3 | Colonnade - Local to Global | 3 |
| ~~Colonnade - Systems~~ | ~~3~~ | Colonnade - Social & Cultural | 3 |
| CS Elective (CS 443 or CS 456) | 3 | Math/Science Elective | 3 |
| **CS 396** | **3** | | |
| | 15 | | 15 |

Total Hours 121

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** | **Design, implement, and evaluate a computing-based solution to meet a given set of computing requirements in the context of the program's discipline.** | **The students are evaluated in upper divisional courses(CS 360, CS 425 and CS 496) on the design and implementation of a solution for a given problem.** |
| **SLO 2** | **Communicate effectively in a variety of professional contexts.** | **The students are evaluated in CS 360 and CS 496 for their oral presentations.**<br><br>**The project documentation are evaluated to assess the writing skills in CS 360 and CS 496.** |
| **SLO 3** | **Function effectively as a member or leader of a team engaged in activities appropriate to the program's discipline.** | **The students will be evaluated in CS 360 and CS 496 for setting team goals, effectiveness working in a team, and creating deliverables through team efforts.** |

# **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?

ENG 307 is not an additional requirement because it is no longer a required prerequisite for
computer science courses.

After revising the prerequisite for CS 270, it is appropriate for inclusion in the System/Scientific
option. Based on the current ABET CAC accreditation criteria, CS 315 and CS 371 are appropriate
for inclusion in the System/Scientific option. Adding the three courses to the System/Scientific option
will give more choices to the students in that option and streamline their course work for graduation.

Additional
Attachments

Additional information or attachments

SEAS Approval: 10/2/2020
OCSE Approval: 10/22/2020
UCC Approval: 11/17/2020
Senate Approval: 12/3/2020
Provost Approval: 1/5/2021

Reviewer Comments

**Mark Cambron (mark.cambron) (11/01/21 1:47 pm):** Rollback: all changes must be done in course leaf

**Mark Cambron (mark.cambron) (11/02/21 11:26 am):** Rollback: Issue with presentation.

**Stuart Burris (stuart.burris) (12/03/21 9:44 am):** Rollback: The primary question that came up in the meeting that caused the CS/629 to be tabled was whether or not you want to remove the 629P pre-major. The removal of the Admission Requirements section seemed to indicate that was the case, but it was not addressed in the rationale.

Key: 334

# Program Change Request

Date Submitted: 01/21/22 2:28 pm

Viewing: **5007 : Engineering Technology Management, Bachelor of Science**

Last approved: 11/22/21 12:13 pm

Last edit: 01/24/22 2:19 pm

Changes proposed by: grg81142

Catalog Pages
Using this Program
   Engineering Technology Management, Bachelor of Science (5007)

Proposed Action

Active

Contact Person

## Approval Path

1. 01/21/22 2:21 pm
   Mark Cambron (mark.cambron): Rollback to Initiator
2. 01/21/22 4:12 pm
   Mark Cambron (mark.cambron): Approved for EAS Approval

## History

1. May 18, 2021 by Rheanna Plemons (rheanna.plemons)
2. May 26, 2021 by Rheanna Plemons (rheanna.plemons)
3. Nov 22, 2021 by Jessica Dorris (jessica.dorris)
4. Nov 22, 2021 by Jessica Dorris (jessica.dorris)

| Name | Email | Phone |
|---|---|---|
| Gregory K Arbuckle | greg.arbuckle@wku.edu | 2707452403 |

| | |
|---|---|
| Term of Implementation | 2022-2023 |
| Program Reference Number | 5007 |
| Review Type | Full Review |
| Academic Level | Undergraduate |
| Program Type | Major |
| Degree Types | Bachelor of Science |
| Department | Engineering & Applied Sciences, School of |
| College | Science and Engineering |
| Program Name (eg. Biology) | Engineering Technology Management, Bachelor of Science |

Will this program have concentrations?
   No

| | |
|---|---|
| CIP Code | 15.0612 - Industrial Technology/Technician. |
| 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

No

## Catalog Content

Program Overview (Catalog field: Overview tab)

Technology is defined as any tool or operating system designed to improve the efficiency, quality, and competitiveness of an organization. Engineering Technology Management at Western Kentucky University is a 2+2 program designed specifically for students who currently hold a certificate (with at least 24 hours of technical credit) or an associate of applied science degree from a technical school, two-year college, or four-year institution. The Engineering Technology Management program is a capstone program that provides a two-year management emphasis for those working toward a supervisory position in industry. Graduates are empowered to obtain a position of leadership in business, industry, or workforce development in support of innovation and global competitiveness. Students who transfer to WKU with an applied associate degree (e.g., Associate of Applied Science) receive a 12-hour waiver from the overall 42 hour upper-level course requirement.

# Career Opportunities

Graduates obtain employment in a wide variety of positions, some job titles of graduates include: systems integrator, industrial engineer, production manager/specialist, manufacturing engineer, maintenance specialist, quality manager, quality engineer, production engineer, general manager, plant manager, industrial trainer, project manager, systems analyst, shift supervisor, and technology educator.

## Program Description

Western Kentucky University provides upper-division hours both in the major and in general education toward the completion of the degree. Students take 39 hours of major that includes 12 hours of upper-division electives approved by the advisor. Majors then take general education or elective courses to fulfill university requirements regarding the following:

30 hours minimum in WKU courses

42 hours minimum upper-division courses (unless receiving a waiver)

120 hours minimum for graduation

Colonnade Program Requirements

MATH 116 or equivalent

Curriculum Requirements (Catalog field: Program Requirements)

# Program Requirements **(57** (63 hours)

| Approved Shared Content from /shared/undergraduate-major-requirements/ Last Approved: Jul 21, 2021 1:36pm |
|---|
| 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. |

| | | |
|---|---|---|
| Select 24 semester hours of advisor approved courses transferred from a technical school, college or university 100/200 level | | 24 |
| MFGE 271 | Course MFGE 271 Not Found | 3 |
| **SEAS 271** | **Industrial Statistics** | **3** |

| | | |
|---|---|---|
| MFGE 490B | Senior Research for Technology Management | 3 |
| MFGE 342 | Manufacturing Operations | 3 |
| MFGE 310 | Safety and Ergonomics | 3 |
| MFGE 356 | Systems Design and Operation | 3 |
| SEAS 390 | Project Management | 3 |
| ~~MFGE 430~~ | ~~Course MFGE 430 Not Found~~ | ~~3~~ |
| ~~MFGE 371~~ | ~~Course MFGE 371 Not Found~~ | ~~3~~ |
| ~~MFGE 394~~ | ~~Course MFGE 394 Not Found~~ | ~~3~~ |
| ~~Select 12 hours of advisor-approved technical upper-division electives~~ | | ~~12~~ |
| **SEAS 430** | **Technology Management / Supervision / Team Building** | **3** |
| **SEAS 371** | **Quality Assurance** | **3** |
| **SEAS 394** | **Lean Systems** | **3** |
| **Select 6 hours of advisor-approved technical upper-division electives** | | **6** |
| Total Hours | | 57 |

Students should consult with an advisor in planning their four-year degree program in Engineering Technology Management.

4-Year Plan

# Finish in Four Plan

Engineering Technology Management at Western Kentucky University is a 2+2 program designed specifically for students who currently hold a certificate (with at least 24 hours of technical credit) or an associate of applied science degree from a technical school, two-year college or four-year institution. Students should consult with an advisor in planning their four-year degree program in Engineering Technology Management.

Third Year

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| ~~MFGE 271~~ | ~~3~~ | ~~MFGE 371~~ | ~~3~~ |
| **SEAS 271** | **3** | **SEAS 371** | **3** |
| MFGE 342 | 3 | MFGE 356 | 3 |
| ~~Technical upper-division Elective~~ | ~~3~~ | MFGE 310 | 3 |
| | | ~~MFGE 430~~ | ~~3~~ |
| | | **SEAS 430** | **3** |
| | 6 | | 12 |

Fourth Year

| Fall | Hours | Spring | Hours |
|---|---|---|---|
| SEAS 390 | 3 | MFGE 490B | 3 |
| ~~MFGE 394~~ | ~~3~~ | Technical upper-division Elective | 3 |
| ~~Technical upper-division Elective~~ | ~~3~~ | Technical upper-division Elective | 3 |
| **SEAS 394** | **3** | | |
| | 6 | | 9 |

Total Hours 33

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** | **Demonstrate the ability to identify, formulate strategies and solve technical problems.** | **The graduates from the ETM program are required to take the Certified Technology Manager (CTM) exam offered by the Association of Technology, Management, and Applied Engineering (ATMAE) before their final graduation.** |
| **SLO 2** | **Demonstrate the knowledge and capacity to apply managerial/ leadership principles and practices to appropriate situations.** | **The CTM exam offered by ATMAE has both technical and managerial components. The sections on Production Planning (10 questions), Quality (15 questions), and Supervision/Management (20 questions) of the CTM exam test the competency of the students on the managerial and leadership skills.** |

## Delivery Mode

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

**No** ~~Yes~~

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

| Location | Percentage |
|---|---|
| ~~Elizabethtown~~ | ~~25~~ |
| ~~Glasgow~~ | ~~25~~ |
| ~~Owensboro~~ | ~~25~~ |

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

Yes

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

Yes

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

**Yes** ~~No~~

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?

Removing 6 hours of upper division electives from the major dropping the major from 63 hours to 57 hours. This will align the program to 30 hours of upper division to align with the upper division waiver.

Additional
Attachments

Additional information or attachments

Reviewer Comments

**Mark Cambron (mark.cambron) (01/21/22 2:21 pm):** Rollback: Need to fix the courses notfound. Was approved once this is fixed.

Key: 272