



DEPARTMENT OF
HIGHER EDUCATION &
WORKFORCE DEVELOPMENT

New Program Report

Date Submitted:

09/16/2019

Institution

College of The Ozarks

Site Information

Implementation Date:

9/16/2019 12:00:00 AM

Added Site(s):

Selected Site(s):

College of The Ozarks, P.O. Box 17, Point Lookout, MO, 65726-0017

CIP Information

CIP Code:

131319

CIP Description:

A program that prepares individuals to teach specific vocational technical education programs at various educational levels.

CIP Program Title:

Technical Teacher Education

Institution Program Title:

Engineering/Secondary Education

Degree Level/Type

Degree Level:

Bachelor's Degree

Degree Type:

Bachelor of Science

Options Added:

Collaborative Program:

N

Mode of Delivery

Current Mode of Delivery

Classroom

Student Preparation

Special Admissions Procedure or Student Qualifications required:

Acceptance to program.

Specific Population Characteristics to be served:

n/a

Faculty Characteristics



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Special Requirements for Assignment of Teaching for this Degree/Certificate:
Masters degree or experience.

Estimate Percentage of Credit Hours that will be assigned to full time faculty:
90%

Expectations for professional activities, special student contact, teaching/learning innovation:
Professional development

Student Enrollment Projections Year One-Five

Year	Full Time	Part Time	Number of Graduates
Year 1	0	0	
Year 2	0	0	
Year 3	1	0	0
Year 4	2	0	
Year 5	2	0	2

Percentage Statement:
n/a

Program Accreditation

Institutional Plans for Accreditation:
Currently working on additional accreditation.

Program Structure

Total Credits:
125

Residency Requirements:
30 credit hours

General Education Total Credits:
55

Major Requirements Total Credits:
123

Course(s) Added

COURSE NUMBER	CREDITS	COURSE TITLE
ENR 1103	3	Introduction to Engineering

Free Elective Credits:
0

Internship or other Capstone Experience:
Capstone I and II

Assurances

I certify that the program will not unnecessarily duplicate an existing program within the geographically applicable area.

I certify that the program will build upon existing programs and faculty expertise.



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I certify that the institution has conducted research on the feasibility of the proposal and it is likely the program will be successful. Institutions' decision to implement a program shall be based upon demand and/or need for the program in terms of meeting present and future needs of the locale, state, and nation based upon societal needs, and/or student needs.

Contact Information

First and Last Name:

Email:

Phone:

Engineering/Secondary Education, B.S.

General Information

Bachelor of Science

As a multidisciplinary program, students receive instruction in essential engineering topics and applications covering the major branches of engineering. Within the core program, two electives provide an opportunity to further explore an area of interest. Students desiring additional depth in a particular engineering discipline may apply to pursue a concentration, which requires additional work beyond that required for the core B.S. program. The B.S. program prepares graduates to take the Fundamentals of Engineering exam and work in industry or pursue graduate studies in engineering or in complementary fields such as business, law and medicine.

College of the Ozarks Engineering Program Student Outcomes:

In order for alumni in the workforce to attain the College of the Ozarks engineering program objectives, the program seeks to produce graduates who possess the following:

1. an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
2. an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
3. an ability to communicate effectively with a range of audiences
4. an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
5. an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
6. an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
7. an ability to acquire and apply new knowledge as needed, using appropriate learning strategies
8. an understanding of the fundamentals of creating and sustaining business and mission opportunities

Engineering/Secondary Education Major Requirements: 123 credit hours

General Education Courses Specified by Major:

- [CHE 114 - General Chemistry I](#)
- [ENR 1123 - Engineering Computer Modeling](#) (CSC 113 proficiency is not allowed) (course content)
- [PSY 273 - Educational Psychology](#)

Required Content Courses: 51 credit hours

- [ENR 1103 - Introduction to Engineering *](#)
- [ENR 2173 - Mechanics I - Statics *](#)
- [ENR 2183 - Mechanics II - Dynamics](#)
- [ENR 2354 - Circuits and Systems](#)
- [ENR 2413 - Mechanics of Materials](#)
- [ENR 2903 - Engineering Project Management](#)
- [ENR 3113 - Measurement and Control](#)
- [ENR 3203 - Civil Infrastructure](#)
- [ENR 3343 - Communication Systems](#)
- [ENR 3423 - Materials and Processes](#)
- [ENR 3433 - Thermodynamics and Fluid Systems](#)
- [ENR 3502 - Industrial Engineering Concepts](#)
- [ENR 3513 - Lean and Six Sigma Concepts](#)
- [ENR 3604 - Agricultural Engineering Fundamentals](#)
- [ENR 3703 - Chemical Engineering Fundamentals](#)
- [ENR 4102 - Capstone Design I](#)
- [ENR 4103 - Capstone Design II](#)

Required Professional Courses: 40 credit hours

- [EDU 201 - Classroom Observation](#)
- [EDU 203 - Psychological Development of the Child and Adolescent](#)
- [EDU 211 - Classroom Participation](#)
- [EDU 219 - The Call to Teach, An Introduction to Teaching](#)
- [EDU 303 - Education of the Exceptional Learner](#)
- [EDU 333 - Analysis in Curriculum & Methods of Teaching](#)
- [EDU 353 - Instructional Interventions](#)
- [EDU 393 - Methods of Teaching Literacy in the Secondary School](#)
- [EDU 4202 - Implementation of Secondary School Best Practices](#)
- [EDU 4273 - Best Practices in Teaching Technology & Engineering](#)
- [EDU 423 - Educational Assessment & Data Based Decision Making](#)
- [EDU 441 - Classroom Leadership](#)
- [EDU 45V - Student Teaching](#)

Required Collateral Courses: 32 credit hours

- [MAT 175 - Calculus I](#) *
- [MAT 205 - Calculus II](#) *
- [MAT 305 - Calculus III](#)
- [MAT 313 - Differential Equations](#)
- [MAT 333 - Linear Algebra](#)
- [MAT 343 - Probability and Statistics](#)
- [PHY 234 - Physics I: Calculus-based](#)
- [PHY 244 - Physics II: Calculus-based](#)

Note:

* Course requires a grade of C (2.0) or better.

All prerequisite courses require a C- or better.

Note:

Engineering Majors should apply for admission by the end of their fourth semester.

To apply for admission to the engineering program at College of the Ozarks, students must meet the following general requirements. Note these are minimum requirements and do not guarantee admission to the program.

- Be currently enrolled at College of the Ozarks
- Have and maintain a minimum cumulative GPA of 2.50
- Have completed at least one semester at C of O
- Have successfully completed a minimum of 30 credit hours including:

- ENR 1103 - Introduction to Engineering
- ENR 1123 - Engineering Computer Modeling with a C (2.0 gpa) or better
- ENR 2173 - Mechanics I - Statics with a C (2.0 gpa) or better
- MAT 175 - Calculus I and MAT 205 - Calculus II with a C (2.0 gpa) or better.
Note: application may be made prior to the completion of these courses, but successful completion is required prior to admission.

-Submit a completed application form to the engineering department office.

Note:

All Elementary and Secondary Majors should apply for admission to the Teacher Education program by the end of their fourth semester. Minimum standards for admission include: 1) Minimum cumulative GPA of 2.75 and passing all sections of the MoGEA (Missouri General Education Assessment); 2) 30 semester hours course work completed and at least one (1) consecutive semester at College of the Ozarks; 3) ACT score on file.

Students must apply for permission to enroll in student teaching the semester preceding the student teaching semester. Minimum standards for permission to enroll include: 1) minimum cumulative GPA of 2.75 with minimum 3.0 in content and professional courses; 2) successful completion of teaching certification course requirements in one or more teaching fields; 3) **minimum grade of "C-"** in all professional education and content field courses required; 4) Successful completion of Missouri Department of Elementary and Secondary Education Missouri Content Assessment (MoCA) is required prior to student teaching.

NOTE: College of the Ozarks Teacher Education Program and Missouri Department of Elementary and Secondary Education Certification Standards that are in effect at the time of program completion must be met in order to be recommended for teaching certification.

College of the Ozarks students who completed the professional educational programs for teacher certification had a **100% pass rate** on the prescribed state licensure tests for 2017-2018.