

Date Submitted: 11/26/19 1:29 pm

Viewing: **CHEGBS : Chemical Engineering,**
Bachelor of Science in Chemical Engineering

Last approved: 04/26/18 2:56 pm

Last edit: 11/26/19 1:29 pm

Changes proposed by: eclause

Catalog Pages Using
this Program

[Chemical Engineering B.S.Ch.E.](#)

[Chemical Engineering \(CHEG\)](#)

Submitter: 5-5412 User ID: crsleaf1 Phone:

Program Status Active

Academic Level Undergraduate

Type of proposal Major/Field of Study

Select a reason for this modification

Making Minor Changes to an Existing Degree (e.g. changing 15 or fewer hours, changing admission/graduation requirements, adding/changing Focused Study or Track)

Are you adding a concentration?

No

Are you adding or modifying a track?

No

Are you adding or modifying a focused study?

No

Effective Catalog Year Fall 2020

College/School Code

College of Engineering (ENGR)

In Workflow

1. ENGR Dean Initial
2. Director of Program Assessment and Review
3. Registrar Initial
4. Institutional Research
5. CHEG Chair
6. ENGR Curriculum Committee
7. ENGR Faculty
8. ENGR Dean
9. Global Campus
10. Provost Review
11. University Course and Program Committee
12. Faculty Senate
13. Provost Final
14. Provost's Office-- Notification of Approval
15. Registrar Final
16. Catalog Editor Final

Approval Path

1. 12/02/19 1:44 pm
Norman Dennis (ndennis): Approved for ENGR Dean Initial
2. 12/02/19 2:39 pm
Alice Griffin (agriffin): Approved for Director of

Department Code

Program

Assessment and
Review

3. 12/02/19 4:19 pm
Lisa Kulczak
(lkulcza): Approved
for Registrar Initial
4. 12/02/19 4:24 pm
Gary Gunderman
(ggunderm):
Approved for
Institutional
Research
5. 12/04/19 1:01 pm
Dave Ford
(daveford):
Approved for CHEG
Chair
6. 12/05/19 11:51 am
Manuel Rossetti
(rossetti): Approved
for ENGR
Curriculum
Committee
7. 12/05/19 12:08 pm
Norman Dennis
(ndennis): Approved
for ENGR Faculty
8. 12/05/19 12:42 pm
Norman Dennis
(ndennis): Approved
for ENGR Dean
9. 12/05/19 12:48 pm
Suzanne Kenner
(skenner): Approved
for Global Campus
10. 12/11/19 9:27 am
Terry Martin
(tmartin): Approved
for Provost Review

History

1. Aug 15, 2014 by
Leepfrog
Administrator
(clhelp)
2. Mar 11, 2015 by Ed
Clausen (eclause)
3. Aug 14, 2015 by Lisa
Kulczak (lkulcza)
4. Mar 15, 2016 by
Charlie Alison
(calison)
5. Jun 6, 2016 by
Charlie Alison
(calison)
6. Apr 26, 2018 by Ed
Clausen (eclause)

Department of Chemical Engineering (CHEG)

Program Code CHEGBS

Degree Bachelor of Science in Chemical Engineering

CIP Code

14.0701 - Chemical Engineering.

Program Title

Chemical Engineering, Bachelor of Science in Chemical Engineering

Program Delivery

Method

On Campus

Is this program interdisciplinary?

No

Does this proposal impact any courses from another College/School?

No

What are the total 128
hours needed to
complete the

program?

Program Requirements and Description

Requirements

Requirements for B.S. in Chemical Engineering

Each student in chemical engineering is required to complete 128 hours of coursework including the 35-hour University Core. To be eligible for graduation, all students must complete at least 30 hours of Chemical Engineering (CHEG) classes at the University of Arkansas, Fayetteville that are required for the degree. Each student in chemical engineering is also required to complete six semester hours of technical electives, three semester hours of Advanced Science electives, three semester hours of Chemical Engineering electives, and three semester hours of Advanced Science or Chemical Engineering electives. As discussed in the department's Undergraduate Advising Manual, students can select elective courses to better prepare for employment or further study in areas such as:

Biotechnology

Biomedical engineering

Environmental engineering

Food process engineering

Materials engineering

Microelectronics

Nanotechnology

Nuclear engineering

Pre-medicine

Simulation and optimization

Additional opportunities are available to enhance the educational experience of students in these areas.

Students should consult their academic adviser for recommendations.

8-Semester Plan

Chemical Engineering B.S.Ch.E.

Eight-Semester Degree Program

The following section contains the list of courses required for the Bachelor of Science in Chemical Engineering degree. Not all courses are offered every semester, so students who deviate from the suggested sequence must pay careful attention to course scheduling and course prerequisites. Students wishing to follow the eight-semester degree plan should see the [Eight-Semester Degree Policy](#) in the Academic Regulations chapter for university requirements of the program. Entering freshmen will be required to participate in selected Freshman Engineering Student Services.

First Year	Units
	FallSpring
MATH 2554 Calculus I (ACTS Equivalency = MATH 2405)	4
CHEM 1103 University Chemistry I (ACTS Equivalency = CHEM 1414 Lecture)	3
ENGL 1013 Composition I (ACTS Equivalency = ENGL 1013)	3
PHYS 2054 University Physics I (ACTS Equivalency = PHYS 2034)	4
GNEG 1111 Introduction to Engineering I	1
MATH 2564 Calculus II (ACTS Equivalency = MATH 2505)	4
CHEM 1123 University Chemistry II (ACTS Equivalency = CHEM 1424 Lecture)	3
CHEM 1121L University Chemistry II Laboratory (ACTS Equivalency = CHEM 1424 Lab)	1
ENGL 1023 Composition II (ACTS Equivalency = ENGL 1023)	3
PHYS 2074 University Physics II (ACTS Equivalency = PHYS 2044 Lecture)	4
GNEG 1121 Introduction to Engineering II	1
Year Total:	15 16

Second Year	Units
	FallSpring
MATH 2574 Calculus III (ACTS Equivalency = MATH 2603)	4 -
MATH 2584 Elementary Differential Equations	4
CHEM 3603 Organic Chemistry I	3
CHEM 3601L Organic Chemistry I Laboratory	1
CHEG 2113 Introduction to Chemical Engineering I	3
HIST 2003 History of the American People to 1877 (ACTS Equivalency = HIST 2113)	3
or HIST 2133 History of the American People, 1877 to Present (ACTS Equivalency = HIST 2123)	
or PLSC 2003 American National Government (ACTS Equivalency = PLSC 2003)	
Humanities or Social Science Elective	3

Are Similar Programs available in the area?

No

Estimated Student Demand for Program 250

Scheduled Program Review Date 2020

Program Goals and Objectives

Program Goals and Objectives

The educational objectives of the Chemical Engineering undergraduate program are to prepare students for career and professional accomplishments after graduation including:

1. Successfully practice as an engineer or in some other professional pursuit, including traditional or emerging fields of chemical engineering.
2. Enter and successfully participate in a graduate or professional program that continues their career development.

Learning Outcomes

Learning Outcomes

By the time of graduation, our students attain the following student outcomes:

- an ability to apply knowledge of mathematics, science, and engineering
- an ability to design and conduct experiments, as well as to analyze and interpret data
- an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
- an ability to function on multidisciplinary teams
- an ability to identify, formulate, and solve engineering problems
- an understanding of professional and ethical responsibility
- an ability to communicate effectively
- the broad education necessary to understand the impact of engineering solutions in global, economic, environmental, and societal contexts
- a recognition of the need for, and an ability to engage in life-long learning

Learning Outcomes

- a knowledge of contemporary issues
- an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

Description and justification of the request

Description of specific change	Justification for this change
Reversed order of MATH 2574 and 2584 in the second year of the curriculum	The Chemical Engineering faculty voted this change to better reflect the pre- and co-requisite requirements for several courses

Upload attachments

Reviewer Comments

Key: 476