



**Electives and three hours of Advanced Science or Chemical Engineering Electives.** (4) **Renumber CHEG 1113 to CHEG 2113 and CHEG 1212L to CHEG 2212L because these courses are now in the second year of the official eight semester plan.** (5) **Revise the chemistry requirements to CHEM 1113, CHEM 1133, and CHEM 1131L (in place of CHEM 1103, CHEM 1123, and CHEM 1121L).**

**These changes will result in reducing the number of hours in the eight semester plan from 132 to 128 semester hours.**

Check if either of these boxes apply and provide the necessary signature:

- Program change proposal adds courses offered by another academic college, and that college dean's office has been notified. The signature of the dean of that academic college is required here: \_\_\_\_\_
- Program change proposal deletes courses offered by another academic college, and that college dean's office has been notified. The signature of the dean of that academic college is required here: \_\_\_\_\_

Check all the boxes that apply and complete the required sections of the form:

- Change of Name and Code (Complete only sections I, II, V and VII.)
- Change Course Requirements: (Complete all sections of the form except "Proposed Name" in II, section III, and section IV.)
- Change Delivery Site/Method (Complete all sections of the form except "Proposed Name" in II, section III, and section IV.)
- Change Total Hours (Complete all sections of the form except "Proposed Name" in II, section III, and section IV.)
- Change in Program Policies

#### **SECTION VI: Justification**

*Justify this change and state its likely effect on any other degree program (including those outside the school or college). Identify any program or program components (other than courses) to be eliminated if this program is implemented. (Program and course change forms must also be submitted for such related changes.)*

**Items (1) through (4) are proposed to address degree content changes required by ACT 747.**

#### **SECTION VII: Catalog Text and Format**

*In the box below, insert the current catalog text which is to be changed, with changes highlighted with the color yellow. Include all proposed changes identified in Section V. Only changes explicitly stated in Section V will be considered for approval by the University Course and Programs Committee, the Graduate Council and the Faculty Senate. If you are proposing a new program, give proposed text with all of the elements listed below. If you are proposing modified text, include these elements as appropriate.*

**Include the following elements, in order, in the catalog text for proposed undergraduate program(s) or program changes:**

- State complete major/program name
- Briefly define or describe the major/program or discipline.
- Identify typical career goals or paths for graduates. (Optional)
- State admission requirements (if any) for entry or entry into upper/advanced level of major/program.
- Identify location in catalog of university, college/school, and department/program requirements which the student must meet in addition to hours in the major, but do not restate these requirements.
- State course requirements in the major and any allied areas, giving number of hours and specific courses; specify electives or elective areas and give numbers of hours and courses in elective pools or categories; identify any other course requirements.
- State any other requirements (required GPA, internship, exit exam, project, thesis, etc.).
- Identify name and requirements for each concentration (if any).
- Specify whether a minor or other program component is allowed or required and provide details.
- State eight-semester plan requirements

**For minors, state requirements in terms of hours, required courses, electives, etc.**

**For graduate program/units, include elements (as needed) parallel to those listed for undergraduate programs above.**

**For Law School program/units, prepare text consistent with current catalog style.**

**For centers, prepare text consistent with current catalog style.**

**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 page 43 in the Academic Regulations chapter for university requirements of the program.

**Fall Semester Year 1**

4 MATH 2554 Calculus I  
~~3~~ CHEM 1103 University Chemistry I  
3 CHEM 1113 Chemistry for Engineers I  
3 ENGL 1013 Composition I  
4 PHYS 2054 University Physics I  
1 GNEG 1111 Introduction to Engineering I  
15 Semester hours

**Spring Semester Year 1**  
**1**

4 MATH 2564 Calculus II  
~~3~~ CHEM 1123 University Chemistry II  
~~1~~ CHEM 1121L University Chemistry II Lab  
~~3~~ CHEM 1133 Chem for Engineers II  
~~1~~ CHEM 1131L Chem for Engineers II Lab  
3 Freshman Science Elective<sup>1</sup>  
1 Freshman Science Elective Lab  
3 ENGL 1023 Composition II  
~~4~~ PHYS 2074 University Physics II  
~~3~~ Humanities/social science core elective  
3 HIST 2003 or HIST 2013 or PLSC 2003  
1 GNEG 1121 Introduction to Engineering II  
171615 Semester hours

**Fall Semester Year 2**

4 MATH 2574 Calculus III  
3 CHEM 3603 Organic Chemistry I  
1 CHEM 3601L Organic Chemistry I Lab  
3 CHEG ~~1113~~ 2113 Intro. to Chem Engr I  
2 CHEG ~~1212L~~ 2212L Chemical Engr Lab I  
~~3~~ HIST 2003 Hist./American People to 1877 (HIST 2013 or PLSC 2003 may be substituted.)  
~~4~~ PHYS 2074 University Physics II  
4 Sophomore Science Elective<sup>2</sup>  
181617 Semester hours

**Spring Semester Year 2**  
**2**

4 MATH ~~2404~~ 2584 Differential Equations  
3 CHEM 3613 Organic Chemistry II  
1 CHEM 3611L Organic Chemistry II Lab  
3 CHEG 2123 Intro. to Chem Engr II  
3 CHEG 2133 Fluid Mechanics  
3 CHEG 2313 Thermodynamics of Single Component Systems  
1817 Semester hours

**Fall Semester Year 3**

3 CHEM 3813 Biochemistry or CHEM 4813H Honors Biochemistry I  
3 CHEG 3143 Heat Transport  
2 CHEG 3232L Chemical Engr Lab II  
3 CHEG 3253 Chem Engr Computer Methods  
3 CHEG 3323 Thermodynamics of Multicomponent Systems  
~~3~~ Humanities/social science core elective

<b>Spring Semester Year 3</b>	
3 CHEG 3713 Materials Technology 3 CHEG 3333 Chem Engr Reactor Design 3 CHEG 3153 Non-Equil Mass Transfer 3 ECON 2143 Basic Economics (ECON 2013 Principles of Macro-economics may be substituted.) <del>3 Humanities/social science core elective</del> 3 Social Science Elective (from Univ/State Core List) <b>15 Semester hours</b>	
<b>Fall Semester Year 4</b>	
3 CHEG 4163 Equil Stage Mass Transfer 3 CHEG 4413 Chem Engr Design I 3 CHEG 4813 Chemical Process Safety 3 Technical or Advanced Science elective* 3 Advanced Science elective* <b>15 Semester hours</b>	
<b>Spring Semester Year 4</b>	
2 CHEG 4332L Chem Engr Lab III 3 CHEG 4423 Auto Process Control 3 CHEG 4443 Chem Engr Design II 3 Advanced Science or Chemical Engineering Elective* <del>3 Humanities/social science core elective</del> <del>3 Humanities/social science core elective</del> 3 Humanities Elective (from Univ/State Core List) 3 Social Science Elective (from Univ/State Core List) <b>17 Semester hours</b> <del>132</del> <b>128 Total hours</b>	

<sup>1</sup>CHEM 1133 and corresponding laboratory (CHEM 1133L) is preferred, or PHYS 2074. Both courses are required for the degree.

<sup>2</sup>PHYS 2074 is preferred, or CHEM 1133 and corresponding laboratory (CHEM 1133L).

### \* Technical Elective Options in Chemical Engineering

Each student in chemical engineering is required to complete **three** semester hours of technical or **Advanced Science electives**, three semester hours of Advanced Science electives, and three semester hours of Advanced Science or Chemical Engineering electives. **Technical**, Advanced Science, and Chemical Engineering elective courses must be selected from a faculty-approved list of courses found in the department's Undergraduate Advising Manual, which is available on the department's Web site at <http://www.cheg.uark.edu>. An undergraduate education in chemical engineering provides a firm foundation for many areas of expertise. 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
- 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.

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See Page 323 for Chemical Engineering (CHEG) courses.

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PGRM \_\_\_\_\_

SUBJ \_\_\_\_\_

CIP \_\_\_\_\_

CRTS \_\_\_\_\_

DGRE \_\_\_\_\_

PGCT \_\_\_\_\_

OFFC&CRTY VALID \_\_\_\_\_

REPORTING CODES

PROG. DEF. \_\_\_\_\_

REQ. DEF. \_\_\_\_\_

Initials \_\_\_\_\_

Date \_\_\_\_\_

**Distribution**

Notification to:

(1) College  
(7) Treasurer

(2) Department  
(8) Undergraduate Program Committee

(3) Admissions

(4) Institutional Research

(5) Continuing Education

(6) Graduate School

5/12/08