

# AS in Chemistry & Pre-Chemical Engineering

AS in Chemistry & Pre-Chemical Engineering program at Neosho County Community College provide students with the general education courses normally taken in the first two years at a four years college or university, with major in chemistry or chemical engineering.

Study in college chemistry, calculus and physics will prepare you for the junior level at four years universities. Further more, it will equip you with the basic chemistry techniques and technology used in chemistry labs.

## PREREQUISITES

You will need to demonstrate proficiencies in reading, English, and mathematics based on the COMPASS assessment test, ACT or SAT scores, or by taking the recommended/required classes. Some of the courses in this curriculum have specific prerequisites. Prerequisites can be found on the reverse side (Guide to Completing Program Requirements) or in the college catalog.

## GENERAL EDUCATION (GE) COURSES

In order to graduate with a college degree, all students are required to take certain general education courses. These include English composition, speech, wellness, art & humanities, mathematics, computer systems, and social & behavioral sciences.

## PROGRAM CORE COURSES

The major core courses are outlined in the recommended sequence of course section.

## PROGRAM ELECTIVE COURSES

If you are interested in biochemistry, then you could take : BIOL 125 Biology I, BIOL 126 Biology I Lab, BIOL 140 Biology II, BIOL 141 Biology II Lab

If you are interested in chemical engineering then you could take MATH 253 Analytic Geometry and Calculus III

## COURSE SEQUENCE

The listing that follows is a suggested sequence of courses for full-time students majoring in Chemistry and Pre-Chemical Engineering. Consult your advisor for information specific to your academic situation.

|                |  |           |
|----------------|--|-----------|
| ENGL 101       | English Composition I                  | 3         |
| MATH 150       | Analytic Geometry & Calculus I         | 5         |
| CSIS 100       | Intro to Microcomputer Applications or |           |
| CSIS 130       | Intro Computer Information Systems     | 3         |
| <b>Total -</b> |  | <b>18</b> |

## (Spring) Semester II

|               |                                 |           |
|---------------|---------------------------------|-----------|
| CHEM 135      | **College Chemistry II          | 3         |
| CHEM 136      | College Chemistry II lab        | 2         |
| MATH 155      | Analytic Geometry & Calculus II | 5         |
| ENGL 289/299  | English Composition II          | 3         |
| PSYC 155      | General Psychology              | 3         |
| <b>Total-</b> |                                 | <b>16</b> |

## (Fall) Semester III

|               |                                    |           |
|---------------|------------------------------------|-----------|
| PHYS 104      | **Engineering Physics I            | 3         |
| PHYS 140      | Engineering Physics I Lab          | 2         |
| COMM 207      | Fundamentals of Speech             | 3         |
|               | Social/Behavioral Science Elective | 3         |
|               | Arts/Humanities Elective           | 3         |
| HPER 150      | Lifetime Fitness                   | 1         |
|               | Arts/Humanities Elective           | 3         |
| <b>Total-</b> |                                    | <b>18</b> |

## (SPRING) SEMESTER IV

|               |                                    |           |
|---------------|------------------------------------|-----------|
| PHYS 105      | Engineering Physics II             | 3         |
| PHYS 145      | Engineering Physics II Lab         | 2         |
|               | Program Elective                   | 5         |
|               | Social/Behavioral Science Elective | 3         |
|               | Arts/Humanities Elective           | 3         |
| <b>Total-</b> |                                    | <b>16</b> |

**Total Program Credits** **65**

\*: Assuming the student has passed the equivalent of college algebra, if not, enroll in MATH 125 (5cr), or MATH 122 (3cr) instead.

\*\* You could enroll in PHYS 100 & 13 instead. However, PHYS 104 & 140 are strongly recommended.

For more information contact:  
Program advisors  
(620) 431-2820, ext. 241

## Associate of Science

### RECOMMENDED SEQUENCE OF COURSES

#### (Fall) Semester I

|          |                         |   |
|----------|-------------------------|---|
| CHEM 125 | College Chemistry I     | 3 |
| CHEM 126 | College Chemistry I lab | 2 |
| PSYC 100 | College Orientation     | 1 |



## Neosho County Community College

800 West 14<sup>th</sup> Street  
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www.neosho.edu

*In accordance with the 2006-2008 catalog Effective 9/01/2006*

**NEOSHO COUNTY COMMUNITY COLLEGE**  
**ASSOCIATE OF SCIENCE IN Chemistry & Pre-Chemical Engineering**  
**Guide to Completing Program Requirements**

**Directions:** As you complete each course, indicate the semester taken (or transferred) and the grade received. The overall GPA must be no less than 2.0 to qualify for graduation. When you have completed 47 credits of the courses listed, start the graduation audit process by contacting your program faculty advisor. You should complete a graduation application in your last semester of courses.

| <b>CORE REQUIREMENTS</b> (14 cr)                          | Course Prerequisite                            | Credits Hrs Completed/ Transferred | Semester Completed | Grade Earned |
|---|--|------------------------------------|--------------------|--------------|
| ENGL 101 (3 cr) Composition I                             | ENGL 021 or assessment test score              |                                    |                    |              |
| ENGL 289 or 299 (3 cr) Composition II                     | ENGL 101                                       |                                    |                    |              |
| COMM 207 (3 cr) Fundamentals of Speech                    |  |                                    |                    |              |
| CSIS 100 or 130 (3 cr) Intro MicroComp Apps/ Intro to CIS |  |                                    |                    |              |
| PSYC 100 (1 cr) College Orientation                       | For first time, full time freshmen             |                                    |                    |              |
| HPER 150 (1 cr) Lifetime Fitness                          |  |                                    |                    |              |
| <b>NATURAL/PHYSICAL SCIENCE &amp; MATHEMATICS</b> (8 cr)  | 1 science and 1 math required                  |                                    |                    |              |
| Math 122 Plane Trigonometry (3 cr)                        |  |                                    |                    |              |
| CHEM 125 College Chemistry I (3 Cr)                       | Concurrent with CHEM 126                       |                                    |                    |              |
| CHEM 126 College Chemistry I lab (2 Cr)                   | Concurrent with CHEM 125                       |                                    |                    |              |
| <b>SOCIAL &amp; BEHAVIORAL SCIENCES</b> (9 cr)            | PSYC 155 + 2 different areas required          |                                    |                    |              |
| PSYC 155 (3 cr) General Psychology                        |  |                                    |                    |              |
| Elective (3 cr)   |  |                                    |                    |              |
| Elective (3 cr)   |  |                                    |                    |              |
| <b>ARTS &amp; HUMANITIES</b> (9 cr)                       | 3 different areas required                     |                                    |                    |              |
| Elective (3 cr)   |  |                                    |                    |              |
| Elective (3 cr)   |  |                                    |                    |              |
| Elective (3 cr)   |  |                                    |                    |              |
| <b>PROGRAM REQUIREMENTS (24-26 CR)</b>                    |  |                                    |                    |              |
| <b>PROGRAM CORE COURSES (25 CR)</b>                       |  |                                    |                    |              |
| CHEM 135 College Chemistry II (3 cr)                      | Concurrent with CHEM 136                       |                                    |                    |              |
| CHEM 136 College Chemistry II lab (2 cr)                  | Concurrent with CHEM 135                       |                                    |                    |              |
| PHYS 104 Engineering Physics I (or PHYS 100) (3 cr)       | Concurrent with PHYS 140                       |                                    |                    |              |
| PHYS 140 Engineering Physics I Lab (or PHYS 130) (2 cr)   | Concurrent with PHYS 104                       |                                    |                    |              |
| CHEM 165 Organic Chemistry (3 cr)                         | Concurrent with CHEM 166                       |                                    |                    |              |
| CHEM 166 Organic Chemistry lab (2 cr)                     | Concurrent with CHEM 165                       |                                    |                    |              |
| PHYS 105 Engineering Physics II (3 cr)                    | Concurrent with PHYS 145                       |                                    |                    |              |
| PHYS 145 Engineering Physics II Lab (2 cr)                | Concurrent with PHYS 105                       |                                    |                    |              |
| Math 150 Analytic Geometry & Calculus (5 cr)              | Math 122, equivalent, or concurrent enrollment |                                    |                    |              |
|   |  |                                    |                    |              |
| <b>DEVELOPMENTAL COURSES</b> (*AS NEEDED BY TEST SCORE)   |  |                                    |                    |              |
|   |  |                                    |                    |              |
|   |  |                                    |                    |              |
| <b>TOTAL PROGRAM CREDIT HOURS (64 CR MINIMUM)</b>         | <b>65 CR</b>                                   |                                    |                    |              |

COMMENTS: (INCLUDING CURRICULUM VARIANCES)