

|                                  |                                                     |  |
|----------------------------------|-----------------------------------------------------|--|
| <b>PROGRAM CODE:</b> UCOESEUCM   | <b>COLLEGE OF EDUCATION   SECONDARY EDUCATION</b>   |  |
| <b>EFFECTIVE DATE:</b> FALL 2018 | <b>BACHELOR OF SCIENCE IN EDUCATION</b>             |  |
| <b>VERSION NUMBER:</b> 2188      | <b>SECONDARY EDUCATION: CHEMISTRY (GRADES 7-12)</b> |  |
| <b>STUDENT NAME:</b>             | <b>STUDENT ID NUMBER:</b>                           |  |

| <b>PROFESSIONAL COURSES   PRE-CANDIDACY</b>  |           |           |
|----------------------------------------------|-----------|-----------|
| <b>COURSE</b>                                | <b>CR</b> | <b>GR</b> |
| CMP 100 LEVEL COURSE ♣ ♦                     | 3         |           |
| ENG LITERATURE ♣ ♦                           | 3         |           |
| EDU 100 PERSPECTIVES ON AMERICAN EDUCATION ♦ | 3         |           |
| SPU 201 COGNITIVE DEV. OF DIVERSE LEARNERS ♦ | 3         |           |
| SPU 314 EFFECTIVE INSTRUCTIONAL STRATEGIES ♦ | 3         |           |
| <b>TOTAL CREDITS</b>                         | <b>15</b> |           |

| <b>PROFESSIONAL COURSES   TEACHER CANDIDACY REQUIRED*</b> |           |           |
|-----------------------------------------------------------|-----------|-----------|
| <b>COURSE</b>                                             | <b>CR</b> | <b>GR</b> |
| SEU 312 PRINCIPLES OF LEARNING #                          | 3         |           |
| SEU 313 PRINCIPLES OF LEARNING LAB #                      | 3         |           |
| SEU 342 PRINCIPLES OF TEACHING #                          | 3         |           |
| SEU 343 PRINCIPLES OF TEACHING LAB #                      | 3         |           |
| SEU 410 SCIENCE METHODS FOR MIDDLE & HIGH SCHOOL #        | 3         |           |
| <b>TOTAL CREDITS</b>                                      | <b>15</b> |           |

| <b>CLINICAL EXPERIENCE COURSES</b> |           |           |
|------------------------------------|-----------|-----------|
| <b>COURSE</b>                      | <b>CR</b> | <b>GR</b> |
| SEU 390 CLINICAL EXPERIENCE I      | 6         |           |
| SEU 391 CLINICAL EXPERIENCE II     | 6         |           |
| <b>TOTAL CREDITS</b>               | <b>12</b> |           |

- ♣ REQUIRE A GRADE OF C OR BETTER
- # REQUIRE A GRADE OF B OR BETTER
- ♦ THESE COURSES ALSO FULFILL GEN ED REQUIREMENTS

| <b>REQUIRED CHEMISTRY COURSES</b>      |           |           |
|----------------------------------------|-----------|-----------|
| <b>COURSE</b>                          | <b>CR</b> | <b>GR</b> |
| CHM 100 GENERAL CHEMISTRY I ♦          | 4         |           |
| CHM 102 GENERAL CHEMISTRY II ♦         | 4         |           |
| CHM 214 ORGANIC CHEMISTRY I            | 4         |           |
| CHM 216 ORGANIC CHEMISTRY II           | 4         |           |
| CHM 230 ANALYTICAL CHEMISTRY I         | 4         |           |
| CHM 310 BIOCHEMISTRY I                 | 4         |           |
| CHM 314 PHYSICAL CHEMISTRY I           | 4         |           |
| CHM 316 PHYSICAL CHEMISTRY II          | 4         |           |
| CHM 320 ADVANCED INORGANIC CHEMISTRY I | 4         |           |
| CHM 340 ANALYTICAL CHEMISTRY II        | 4         |           |
| <b>TOTAL CREDITS</b>                   | <b>40</b> |           |

| <b>REQUIRED SCIENCE COURSES</b>        |              |           |
|----------------------------------------|--------------|-----------|
| <b>COURSE</b>                          | <b>CR</b>    | <b>GR</b> |
| <b>CHOOSE ONE OF THE FOLLOWING:</b>    |              |           |
| AST 140 PLANETARY SCIENCE              | 3/4          |           |
| AST 142 STELLAR AND GALACTIC ASTRONOMY |              |           |
| GEG 204 METEOROLOGY                    |              |           |
| GEL 100 PHYSICAL GEOLOGY               |              |           |
| BIO 104 PRINCIPLES OF BIOLOGY ♦        | 4            |           |
| PHY 100 PHYSICS I ♦                    | 4            |           |
| PHY 102 PHYSICS II                     | 4            |           |
| <b>TOTAL CREDITS</b>                   | <b>15/16</b> |           |

| <b>REQUIRED MATHEMATICS COURSES</b> |           |           |
|-------------------------------------|-----------|-----------|
| <b>COURSE</b>                       | <b>CR</b> | <b>GR</b> |
| MAT 181 CALCULUS I ♣ ♦              | 4         |           |
| MAT 182 CALCULUS II ♣ ♦             | 4         |           |
| <b>TOTAL CREDITS</b>                | <b>8</b>  |           |

| <b>DIRECTED GENERAL EDUCATION REQUIREMENTS</b>                                |           |           |               |           |           |               |           |           |
|-------------------------------------------------------------------------------|-----------|-----------|---------------|-----------|-----------|---------------|-----------|-----------|
| <i>THESE ARE GEN ED COURSES THAT ARE ALSO REQUIRED BY THE SEC ED PROGRAM.</i> |           |           |               |           |           |               |           |           |
| <b>COURSE</b>                                                                 | <b>CR</b> | <b>GE</b> | <b>COURSE</b> | <b>CR</b> | <b>GE</b> | <b>COURSE</b> | <b>CR</b> | <b>GE</b> |
| CMP 100 LEVEL                                                                 | 3         | A1        | SPU 314       | 3         | B         | PHY 100       | 4         | C3        |
| EDU 100                                                                       | 3         | B         | BIO 104       | 4         | C1        | ENG LIT       | 3         | D         |
| SPU 201                                                                       | 3         | B         | MAT 181       | 4         | C2        |               |           |           |
| <b>TOTAL CREDITS</b>                                                          |           |           |               |           |           |               | <b>27</b> |           |

| <b>*TEACHER CANDIDACY REQUIREMENTS</b> |  | ✓ |
|----------------------------------------|--|---|
| PASSING BASIC SKILLS REQUIREMENT       |  |   |
| 3.0 MINIMUM GPA                        |  |   |
| C OR BETTER IN REQUIRED COURSES ♣      |  |   |
| PRE-CANDIDACY FIELD EXPERIENCE HOURS   |  |   |



| <b>GRADUATION REQUIREMENTS</b>  |  | ✓ |
|---------------------------------|--|---|
| 42-45 GENERAL EDUCATION CREDITS |  |   |
| 78 PROGRAM CREDITS              |  |   |
| 123 MINIMUM TOTAL CREDITS       |  |   |

|           |                                   |
|-----------|-----------------------------------|
| NAME      | EFFECTIVE DATE<br>AUGUST 27, 2018 |
| ID NUMBER | VERSION<br>2188                   |

# KUTZTOWN UNIVERSITY

## DEGREE REQUIREMENTS

### GENERAL EDUCATION

#### Student Learning Outcomes (SLO)

Upon completion of the requirements for the General Education Program, students will be able to:

- 1 communicate clearly and effectively orally and in writing.
- 2 apply scientific and quantitative reasoning to solve problems and increase knowledge.
- 3 apply skills in critical analysis and reasoning for the interpretation of data.
- 4 engage critically with creative or artistic works.
- 5 demonstrate the ability to retrieve, interpret, evaluate, and use information.
- 6 analyze the role of values, ethics, diversity, and multiple perspectives in local and global society.
- 7 demonstrate an understanding of various models for the development of the whole person.

Completion of the KU General Education program will give students opportunities to:

- 8 explore concepts, ideas, and methods from a variety of disciplines.

Use this checksheet to plan your degree program. Meet every semester with your academic advisor to be sure that you are taking courses that are required to obtain the degree you are seeking. Discuss your goals and choose courses that will help you to attain them. Get the most out of your education by taking advantage of everything that Kutztown University has to offer.

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TOTAL GENERAL EDUCATION CREDITS 42-45

FIND A FULL EXPLANATION OF THE GENERAL EDUCATION PROGRAM AT [WWW.KUTZTOWN.EDU](http://WWW.KUTZTOWN.EDU)

|                                                |                  |          |
|------------------------------------------------|------------------|----------|
| <b>First Year Seminar: Discovering College</b> | CREDITS REQUIRED | <b>3</b> |
| THIS COURSE MEETS SLO <b>5</b> & <b>7</b>      | CREDITS EARNED:  |          |

| COURSE NUMBER | COURSE NAME        | CR | GR |
|---------------|--------------------|----|----|
| FYS 100       | First Year Seminar |    |    |

TRANSFER STUDENTS TRANSFERRING 15 CREDITS OR MORE AND NOT TRANSFERRING AN FYS OR FYE COURSE MAY SELECT ANY ADDITIONAL COURSE FROM SECTIONS A, B, C, OR D TO MEET THEIR FYS REQUIREMENT.

TRANSFER ELECTIVE:

|          |                                               |                  |           |
|----------|-----------------------------------------------|------------------|-----------|
| <b>A</b> | <b>Communicating With And About the World</b> | CREDITS REQUIRED | <b>12</b> |
|          | THESE COURSES MEET SLO <b>1</b> & <b>5</b>    | CREDITS EARNED:  |           |

| COURSE NUMBER | COURSE NAME                                                        | CR | GR |
|---------------|--------------------------------------------------------------------|----|----|
| <b>1</b>      | COMPOSITION 100 LEVEL<br>CMP 1__                                   |    |    |
| <b>2</b>      | COMPOSITION 200 LEVEL<br>CMP 2__                                   |    |    |
| <b>3</b>      | SPEAKING                                                           |    |    |
| <b>4</b>      | ANY WRITING (A2) OR SPEAKING COURSE (A3) OR FROM THE APPROVED LIST |    |    |

COURSES IN CATEGORIES B, C & D MUST BE TAKEN OUTSIDE THE STUDENT'S MAJOR. THE MAJOR IS DEFINED AS THE PREFIX THAT IDENTIFIES THE MAJOR. CONCOMITANT REQUIREMENTS MAY BE TAKEN TO MEET GENERAL EDUCATION REQUIREMENTS.

|          |                                            |                  |          |
|----------|--------------------------------------------|------------------|----------|
| <b>B</b> | <b>Understanding Self &amp; Others</b>     | CREDITS REQUIRED | <b>9</b> |
|          | THESE COURSES MEET SLO <b>3</b> & <b>6</b> | CREDITS EARNED:  |          |

| COURSE NUMBER | COURSE NAME | CR | GR |
|---------------|-------------|----|----|
| <b>1</b>      |             |    |    |
| <b>2</b>      |             |    |    |
| <b>3</b>      |             |    |    |

|          |                                               |                  |             |
|----------|-----------------------------------------------|------------------|-------------|
| <b>C</b> | <b>Understanding Science &amp; Technology</b> | CREDITS REQUIRED | <b>9-12</b> |
|          | THESE COURSES MEET SLO <b>2</b> & <b>3</b>    | CREDITS EARNED:  |             |

| COURSE NUMBER | COURSE NAME                      | CR | GR |
|---------------|----------------------------------|----|----|
| <b>1</b>      | SCIENTIFIC INQUIRY               |    |    |
| <b>2</b>      | QUANTITATIVE REASONING           |    |    |
| <b>3</b>      | ANY COURSE APPROVED FOR C1 OR C2 |    |    |

|          |                                            |                  |          |
|----------|--------------------------------------------|------------------|----------|
| <b>D</b> | <b>Understanding &amp; Creating Ideas</b>  | CREDITS REQUIRED | <b>9</b> |
|          | THESE COURSES MEET SLO <b>4</b> & <b>6</b> | CREDITS EARNED:  |          |

| COURSE NUMBER | COURSE NAME | CR | GR |
|---------------|-------------|----|----|
| <b>1</b>      |             |    |    |
| <b>2</b>      |             |    |    |
| <b>3</b>      |             |    |    |

PROGRAM CODE: UCOESEUCM  
 EFFECTIVE DATE: FALL 2018  
 VERSION NUMBER: 2188



**BSED SECONDARY EDUCATION: CHEMISTRY  
 8-SEMESTER PLAN**

**1<sup>st</sup> YEAR**

| <b>FALL</b>   |                               |              |
|---------------|-------------------------------|--------------|
| <b>COURSE</b> | <b>TITLE</b>                  | <b>CR</b>    |
| CMP 1__       | CMP 100 LEVEL COURSE          | 3            |
| EDU 100       | PERSPECTIVES ON AMERICAN EDU. | 3            |
| FYS 100       | FIRST YEAR SEMINAR            | 3            |
| MAT ___       | MATH REQUIREMENT              | 3/4          |
| CONTENT       | REQUIRED SCIENCE COURSE       | 3/4          |
| <b>TOTAL</b>  |                               | <b>15-17</b> |

| <b>SPRING</b> |                               |              |
|---------------|-------------------------------|--------------|
| <b>COURSE</b> | <b>TITLE</b>                  | <b>CR</b>    |
| CMP 2__       | CMP 200 LEVEL COURSE          | 3            |
| A3 GEN ED     | ORAL COMMUNICATION COURSE     | 3            |
| MAT ___       | MATH REQUIREMENT              | 3/4          |
| SPU 201       | COG. DEV. OF DIVERSE LEARNERS | 3            |
| CONTENT       | REQUIRED SCIENCE COURSE       | 3/4          |
| <b>TOTAL</b>  |                               | <b>15-17</b> |

**2<sup>nd</sup> YEAR**

| <b>FALL</b>   |                           |              |
|---------------|---------------------------|--------------|
| <b>COURSE</b> | <b>TITLE</b>              | <b>CR</b>    |
| ENG ___       | ENGLISH LITERATURE COURSE | 3            |
| GEN ED        | GENERAL EDUCATION COURSE  | 3            |
| CONTENT       | REQUIRED SCIENCE COURSE   | 3/4          |
| CONTENT       | REQUIRED SCIENCE COURSE   | 3/4          |
| <b>TOTAL</b>  |                           | <b>12-14</b> |

| <b>SPRING</b> |                             |              |
|---------------|-----------------------------|--------------|
| <b>COURSE</b> | <b>TITLE</b>                | <b>CR</b>    |
| SPU 314       | EFFECTIVE INSTR. STRATEGIES | 3            |
| GEN ED        | GENERAL EDUCATION COURSE    | 3            |
| GEN ED        | GENERAL EDUCATION COURSE    | 3            |
| CONTENT       | REQUIRED SCIENCE COURSE     | 3/4          |
| CONTENT       | REQUIRED SCIENCE COURSE     | 3/4          |
| <b>TOTAL</b>  |                             | <b>15-17</b> |

**3<sup>rd</sup> YEAR**

| <b>FALL</b>   |                            |              |
|---------------|----------------------------|--------------|
| <b>COURSE</b> | <b>TITLE</b>               | <b>CR</b>    |
| SEU 312       | PRINCIPLES OF LEARNING     | 3            |
| SEU 313       | PRINCIPLES OF LEARNING LAB | 3            |
| CONTENT       | REQUIRED SCIENCE COURSE    | 3/4          |
| CONTENT       | REQUIRED SCIENCE COURSE    | 3/4          |
| <b>TOTAL</b>  |                            | <b>12-14</b> |

| <b>SPRING</b> |                            |              |
|---------------|----------------------------|--------------|
| <b>COURSE</b> | <b>TITLE</b>               | <b>CR</b>    |
| SEU 342       | PRINCIPLES OF TEACHING     | 3            |
| SEU 343       | PRINCIPLES OF TEACHING LAB | 3            |
| CONTENT       | REQUIRED SCIENCE COURSE    | 3/4          |
| CONTENT       | REQUIRED SCIENCE COURSE    | 3/4          |
| CONTENT       | REQUIRED SCIENCE COURSE    | 3/4          |
| <b>TOTAL</b>  |                            | <b>15-18</b> |

**4<sup>th</sup> YEAR**

| <b>FALL</b>   |                         |              |
|---------------|-------------------------|--------------|
| <b>COURSE</b> | <b>TITLE</b>            | <b>CR</b>    |
| SEU 410       | SCIENCE METHODS         | 3            |
| CONTENT       | REQUIRED SCIENCE COURSE | 3/4          |
| CONTENT       | REQUIRED SCIENCE COURSE | 3/4          |
| CONTENT       | REQUIRED SCIENCE COURSE | 3/4          |
| <b>TOTAL</b>  |                         | <b>12-15</b> |

| <b>SPRING</b> |                        |           |
|---------------|------------------------|-----------|
| <b>COURSE</b> | <b>TITLE</b>           | <b>CR</b> |
| SEU 390       | CLINICAL EXPERIENCE I  | 6         |
| SEU 391       | CLINICAL EXPERIENCE II | 6         |
| <b>TOTAL</b>  |                        | <b>12</b> |