



# CHEMICAL ENGINEERING, BSCH

**FALL****SPRING**

| Course Number | Course Title | USP | CR | Min Grade | Grade | Course Number | Course Title | USP | CR | Min Grade | Grade |
|---------------|--------------|-----|----|-----------|-------|---------------|--------------|-----|----|-----------|-------|
|---------------|--------------|-----|----|-----------|-------|---------------|--------------|-----|----|-----------|-------|

**FRESHMAN YEAR**

|                                                                               |                                  |    |    |   |  |                                              |                              |    |    |   |  |
|-------------------------------------------------------------------------------|----------------------------------|----|----|---|--|----------------------------------------------|------------------------------|----|----|---|--|
| <b>CHE 1005</b>                                                               | <b>Intro to Chem Engineering</b> |    | 1  | C |  | <b>COSC 1010</b>                             | <b>Intro to Computing</b>    | 3  | C  |   |  |
| <i>Prerequisite: Concurrent in Math 2200</i>                                  |                                  |    |    |   |  | <i>Prerequisite:</i>                         |                              |    |    |   |  |
| <b>MATH 2200</b>                                                              | <b>Calculus I</b>                | Q  | 4  | C |  | <b>MATH 2205</b>                             | <b>Calculus II</b>           | Q  | 4  | C |  |
| <i>Prerequisite: C in Math 1405 or 1450, MPE 5, Math ACT 27, Math SAT 640</i> |                                  |    |    |   |  | <i>Prerequisite: C in MATH 2200</i>          |                              |    |    |   |  |
| <b>CHEM 1020</b>                                                              | <b>Gen. Chemistry I</b>          | PN | 4  | C |  | <b>CHEM 1030</b>                             | <b>Adv. Gen Chemistry II</b> | PN | 4  | C |  |
| <i>Prerequisite: ACT Math 23 or concurrent MATH 1400, 1405 or 1450</i>        |                                  |    |    |   |  | <i>Prerequisite: CHEM 1020</i>               |                              |    |    |   |  |
| <b>LIFE 1010</b>                                                              | <b>General Biology I</b>         | PN | 4  | D |  | <b>PHYS 1210</b>                             | <b>Engr Physics I</b>        | PN | 4  | C |  |
| <i>Prerequisite: ACT Math 23 or concurrent MATH 1400, 1405 or 1450</i>        |                                  |    |    |   |  | <i>Prerequisite: Concurrent in Math 2205</i> |                              |    |    |   |  |
|                                                                               | <b>USP: Communications I</b>     | C1 | 3  | C |  |                                              |                              |    |    |   |  |
| <b>Total</b>                                                                  |                                  |    | 16 |   |  | <b>Total</b>                                 |                              |    | 15 |   |  |

**SOPHOMORE YEAR**

|                                                              |                              |  |    |   |  |                                                                              |                                    |   |    |  |  |
|--------------------------------------------------------------|------------------------------|--|----|---|--|------------------------------------------------------------------------------|------------------------------------|---|----|--|--|
| <b>MATH 2210</b>                                             | <b>Calculus III</b>          |  | 4  | C |  | <b>MATH 2310</b>                                                             | <b>Applied Differential Eqns I</b> | 3 | C  |  |  |
| <i>Prerequisite: C in MATH 2205</i>                          |                              |  |    |   |  | <i>Prerequisite: C in Math 2205</i>                                          |                                    |   |    |  |  |
| <b>CHEM 2420</b>                                             | <b>Organic Chemistry I</b>   |  | 4  | D |  | <b>CHEM 2440</b>                                                             | <b>Organic Chemistry II</b>        | 4 | D  |  |  |
| <i>Prerequisite: CHEM 1030</i>                               |                              |  |    |   |  | <i>Prerequisite: CHEM 1030 and CHEM 2420</i>                                 |                                    |   |    |  |  |
| <b>CHE 2005</b>                                              | <b>Chem Process Analysis</b> |  | 3  | C |  | <b>CHE 2060</b>                                                              | <b>Chemical Eng Computing</b>      | 3 | C  |  |  |
| <i>Prerequisite: C in CHEM 1020, Concurrent in MATH 2205</i> |                              |  |    |   |  | <i>Prerequisite: C in CHE 1005 and CHE 2005, and Concurrent in MATH 2310</i> |                                    |   |    |  |  |
| <b>PHYS 1220</b>                                             | <b>Eng. Physics II</b>       |  | 4  | D |  | <b>CHE 2070</b>                                                              | <b>Chemical Thermodynamics</b>     | 3 | C  |  |  |
| <i>Prerequisite: Concurrent in Math 2210</i>                 |                              |  |    |   |  | <i>Prerequisite: C in CHE 2005, PHYS 1210, and MATH 2210</i>                 |                                    |   |    |  |  |
|                                                              |                              |  |    |   |  | <b>CHE 2080</b>                                                              | <b>CHE Fluid Mechanics</b>         | 3 | C  |  |  |
|                                                              |                              |  |    |   |  | <i>Prerequisite: C in CHE 2005, PHYS 1210, and MATH 2210</i>                 |                                    |   |    |  |  |
| <b>Total</b>                                                 |                              |  | 15 |   |  | <b>Total</b>                                                                 |                                    |   | 16 |  |  |

**JUNIOR YEAR**

|                                                               |                                   |    |    |   |  |                                                                         |                                      |   |    |   |  |
|---------------------------------------------------------------|-----------------------------------|----|----|---|--|-------------------------------------------------------------------------|--------------------------------------|---|----|---|--|
| <b>CHE 3015</b>                                               | <b>Chemical Thermodynamics II</b> |    | 3  | C |  | <b>CHE 3028</b>                                                         | <b>Mass Transfer</b>                 | 3 | C  |   |  |
| <i>Prerequisite: C in CHE 2060 and CHE 2070</i>               |                                   |    |    |   |  | <i>Prerequisite: C in CHE 2005, CHE 3015 and CHE 3026</i>               |                                      |   |    |   |  |
| <b>CHE 3026</b>                                               | <b>Heat Transfer</b>              |    | 3  | C |  | <b>CHE 3072</b>                                                         | <b>Techo-econ Analysis Chem Proc</b> | 3 | C  |   |  |
| <i>Prerequisite: C in CHE 2005 and CHE 2080</i>               |                                   |    |    |   |  | <i>Prerequisite: C in CHE 2005 and CHE 2060</i>                         |                                      |   |    |   |  |
| <b>CHEM 4507</b>                                              | <b>Intro to Quantum Mechanics</b> |    | 3  | D |  | <b>CHE 4060</b>                                                         | <b>Reaction Engineering</b>          | 3 | C  |   |  |
| <i>Prerequisite: C in MATH 2210, PHYS 1220, and CHEM 1030</i> |                                   |    |    |   |  | <i>Prerequisite: C in CHE 3015 and CHE 3026, Concurrent in CHE 3028</i> |                                      |   |    |   |  |
|                                                               | <b>USP: Communications II</b>     | C2 | 3  | C |  | <b>CHE</b>                                                              | <b>Technical Elective</b>            | 3 | D  |   |  |
| <i>Prerequisite: C in C1</i>                                  |                                   |    |    |   |  |                                                                         |                                      |   |    |   |  |
| <b>CHE</b>                                                    | <b>Technical Elective</b>         |    | 3  | D |  |                                                                         | <b>USP: Human Culture</b>            | H | 3  | D |  |
| <b>Total</b>                                                  |                                   |    | 15 |   |  | <b>Total</b>                                                            |                                      |   | 15 |   |  |

**SENIOR YEAR**

|                                                              |                                           |   |    |   |  |                                                  |                                 |      |    |   |  |
|--------------------------------------------------------------|-------------------------------------------|---|----|---|--|--------------------------------------------------|---------------------------------|------|----|---|--|
| <b>CHE 3040</b>                                              | <b>Unit Ops Lab I</b>                     |   | 3  | C |  | <b>CHE 4050</b>                                  | <b>Unit Ops Lab II</b>          | 3    | D  |   |  |
| <i>Prerequisite: C in CHE 3026, CHE 3028, and CHE 4060</i>   |                                           |   |    |   |  | <i>Prerequisite: C in CHE 3040</i>               |                                 |      |    |   |  |
| <b>CHE 4070</b>                                              | <b>Process Sim, Economics, and Design</b> |   | 4  | C |  | <b>CHE 4080</b>                                  | <b>Senior Design (COM3)</b>     | Com3 | 4  | C |  |
| <i>Prerequisite: C in CHE 3028 and CHE 3072 and CHE 4060</i> |                                           |   |    |   |  | <i>Prerequisite: C in CHE 4070 and C in COM2</i> |                                 |      |    |   |  |
| <b>CHE 4090</b>                                              | <b>Process Dynamic and Control</b>        |   | 3  | D |  |                                                  | <b>Technical Elective</b>       |      | 3  | D |  |
| <i>Prerequisite: C in CHE 3028 and CHE 4060</i>              |                                           |   |    |   |  |                                                  |                                 |      |    |   |  |
| <b>CHE</b>                                                   | <b>Technical Elective</b>                 |   | 3  | D |  |                                                  | <b>Technical Elective</b>       |      | 3  | D |  |
|                                                              |                                           |   |    |   |  |                                                  |                                 |      |    |   |  |
|                                                              | <b>USP: Human Culture</b>                 | H | 3  | D |  |                                                  | <b>USP: US &amp; Wyo Const.</b> | V    | 3  |   |  |
| <b>Total</b>                                                 |                                           |   | 16 |   |  | <b>Total</b>                                     |                                 |      | 16 |   |  |

**Fall only or spring only course**

Total Program Credits: 124

• A minimum of 124 hours is required. • A minimum of 48 hours must be upper division. • 30 hours of upper division must be from UW.

• 15 credits of Technical Electives required. • A minimum of 9 credits of Technical Electives must be CHE Coursework • Technical Electives must be selected with advisor's approval from Department list or Department's documented approval.

• No more than (2) upper division CHE transfer courses can be applied to the CHE degree. CHE 4070 and CHE 4080 cannot be transferred to UW. All CHE transfer courses must be completed with a grade of C or better.

• Degree candidates must meet the academic requirements of the university, and must have a minimum GPA of 2.0 in all engineering courses, and a minimum GPA of 2.0 in all CHE courses attempted at UW.

• Students may not take a course for S/U credit to satisfy any requirement for a degree from the College of Engineering and Applied Science, unless the course is offered for S/U credit only.