

Dual Degree Program

| | | Semester | F1 | W1 | F2 | W2 | F3 | W3 | F4 | W4 | F5 | W5 |
|--|---------------------|------------|----|----|----|----|----|----|----|----|----|----|
| Subjects required by engineering programs (53 hrs.) | | | | | | | | | | | | |
| Mathematics 115+, 116+, 215+, 216+ | | 16 | 4 | 4 | 4 | 4 | | | | | | |
| Engineering 100 or English 125+ (Engr 100 if Engr is home school) | | 4 | 4 | | | | | | | | | |
| Engineering 101 + | | 4 | 4 | | | | | | | | | |
| Chemistry 130 + | | 3 | 3 | | | | | | | | | |
| Physics 140 with Lab 141+; 240 with Lab 241+ | | 10 | | 5 | 5 | | | | | | | |
| Intellectual Breadth ** | | 16 | | | | | | 4 | | | 4 | 8 |
| (to include a micro or macro economics course to meet ChE req's. | | | | | | | | | | | | |
| and courses to fulfill LSA's race and ethnicity req's) | | | | | | | | | | | | |
| LS&A requirements (16 hrs.) | | | | | | | | | | | | |
| Language (German recommended, some 200 level and higher | | 16 | | | | | 4 | 4 | 4 | 4 | | |
| courses might satisfy engineering HU or IB requirements) | | | | | | | | | | | | |
| Advanced Chemistry (ChE) | | | | | | | | | | | | |
| Chemistry 210, 211, Structure and Reactivity and Lab I + | | 5 | | 5 | | | | | | | | |
| Chemistry 215, 216, Structure and Reactivity and Lab II + | | 5 | | | 5 | | | | | | | |
| Chemistry 261, Introduction to Quantum Chemistry**** | | 1 | | | | 1 | | | | | | |
| Additional chemistry courses (28 hrs.) | Term Offered | | | | | | | | | | | |
| Chemistry 125,126, General Chemistry Lab | F,W | 2 | 2 | | | | | | | | | |
| Chemistry 241, 242 Intro. Chemical Analysis and Lab | F, W | 4 | | | 4 | | | | | | | |
| <i>Elect 1 of the following 2 courses:</i> | | 3 | | | | 3 | | | | | | |
| Chemistry 302, Inorg. Chem.: Struct., Reactiv., and Funcn. | W | | | | | | | | | | | |
| Chemistry 303, Intro. Bioinorganic Chem: Role of Metals in Life | F, W | | | | | | | | | | | |
| Chemistry 461, Physical Chemistry I | (F only) | 3 | | | | | 3 | | | | | |
| Chemistry 462, Computational Chemistry Laboratory | (F only) | 1 | | | | | 1 | | | | | |
| Advanced Chemistry Lecture (351 F/W 4cr, 402 F 3cr, or 447 F 3cr) | F, W | 3 or 4 | | | | | | 3 | | | | |
| Chemistry 482, Synthesis (satisfies ULWR) | (F only) | 3 | | | | | | | 3 | | | |
| <i>Select Chemistry Elective Courses totaling 9 credits:</i> | | | | | | | | | | | | |
| Chemistry Elective Course (see back) | F, W | 3 | | | | | | | | 3 | | |
| Chemistry Elective Course (see back) | F, W | 3 | | | | | | | | | 3 | |
| Chemistry Elective Course (see back) | F, W | 3 | | | | | | | | | | 3 |
| Chemical Engin. Program Subjects (33 hrs.) | Term Offered | | | | | | | | | | | |
| ChE 230, Material & Energy Balances + | (F only) | 4 | | | | | 4 | | | | | |
| ChE 330, Chemical and Engin Thermodynamics + | W | 4 | | | | | | 4 | | | | |
| ChE 341, Fluid Mechanics + | W | 4 | | | | | | 4 | | | | |
| ChE 342, Heat and Mass Transfer + | F | 4 | | | | | | | 4 | | | |
| ChE 343, Separation Processes + | F | 4 | | | | | | | 4 | | | |
| ChE 344, Reaction Eng and Design + | W | 4 | | | | | | | | 4 | | |
| ChE 360, ChE Laboratory I <see Chem 462 and 482> | | | | | | | | | | | | |
| ChE 460, ChE Laboratory II | F,W | 4 | | | | | | | | | 4 | |
| ChE 466, Process Control and Dynamics I | F | 3 | | | | | | | | | 3 | |
| ChE 485, Chemical Engineering Process Econ. + | W | 1 | | | | | | | | 1 | | |
| <i>Elect 1 of the following (ChE 487 shown here)</i> | | 5 | | | | | | | | | | 5 |
| ChE 487, Chem Proc. Sim. and Design | F, W | | | | | | | | | | | |
| ChE 488, 489 Chemical Product Design I & II | F (2) & W(3) | | | | | | | | | | | |
| Related Technical Subjects | Term Offered | | | | | | | | | | | |
| Biology 172 or 174 | F,W | 4 | | 4 | | | | | | | | |
| Materials Elective (MSE 250 or MSE 220)+ | F,W | 4 | | | | 4 | | | | | | |
| Engineering Elective | F,W | 3 | | | | | | | | 3 | | |
| B.S.E. (ChE/Chem) Total | | 156 | 17 | 18 | 18 | 12 | 12 | 19 | 15 | 15 | 14 | 16 |
| (+) must earn a C- or better in this class | | | | | | | | | | | | |
| (*) An Honors Chemistry degree can be earned by meeting the requirements of the Chemistry Honors Program | | | | | | | | | | | | |
| (**) Make sure to satisfy the LS&A distribution requirements, and natural science requirement can not be satisfied by CHEM or COE Courses. | | | | | | | | | | | | |
| (***)(Submit writing sample and petition to Sweetland Writing Center to waive lower level writing requirement.) ULWR cannot be waived. | | | | | | | | | | | | |
| (****) Either Physics 390 or Materials Science 242 can be taken to fulfill the Chemistry 261 requirement | | | | | | | | | | | | |
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| NOTES: | | | | | | | | | | | | |
| If choosing Chem 351, Bio 172 is a pre-req. | | | | | | | | | | | | |
| Physics 240 is a pre-req for Chem 461. | | | | | | | | | | | | |
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| August 2023 | | | | | | | | | | | | |

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