## CHEMICAL ENGINEERING

Advisor:

Name:

## CHEMICAL ENGINEERING-BMBC

Oklahoma State University

2022-2023 Biomedical/Biochemical Option

College of Engineering, Architecture, and Technology

130 Semester Hours

1. If a grade of "C" is earned in Year 1 Year 2 ENGL 1113, then ENGL 1213 **Required Prerequisites** is also required before year 3 in 17 hours 18 hours 16 hours 19 hours (May be satisfied by course the program. ENGL 3323 may be substituted for ENGL 1213 if credit or placement exam) AP Exam credit or a grade of CHEM 1515 CHEM 3053 ENGR 1111 **BIOC 3653** 'A' or 'B' is earned in ENGL1113. Organic General ntroduction to Survey of Chemistry II Chemistry I **Biochemistry** Engineering 2.6 hours designated (H) must include PHIL 3833 (H) and 3 hours designated (S). One ENGR 1412 CHEM 1314 Gen Ed Elective MATH 2233 **BIOC 3723** course designated (D) and One 5 course designated (I). Students Engr Computer H/S/I/D Differential Analytical General are encouraged to meet the Chemistry I Equations Biochemistry Lab Programming requirement for (D) and (I) in their selection of (H) or (S) courses. MATH 1513 MATH 2144 MATH 2153 MATH 2163 CHE 2033 MATH 1813 3 FALL ONLY COURSE College Algebra Calculus I Calculus II Calculus III ntro to Che Preparation for 4. MATH 2233 or 3263 (may be Calculus Process Eng taken concurrently with CHE 2033). PHYS 2114 5. The combination of BIOC 3653 PHYS 2014 CHE 2023 ENGL 1113 and 3723 may be substituted Intro to ChEna Composition I General Physics I General for the combination of CHEM **Thermodynamics** Physics II 3153 and 3112. 6. SPRING ONLY COURSE. 7. STAT 4033 or 4073 (pre-HIST 1103 ENGL 1213 ENSC 2113 ENSC 3233 requisite to CHE 4002). American History Composition II Statics Fluid Mechanics BIOL 1111 & 1113 CHE 2581 **STAT 4033** 3 Introductory Bio CHE Sophomore Engineering and Lab Seminar Statistics NOTE: This flow chart is for planning purposes only. Official degree requirements can be found in the Completion with a grade of "C" or bet-General Education Courses Degree Requirements Upper Level CHE Courses Academic Catalog 2022-2023. (catalog.okstate.edu)

## Requirements for (CHEN) Chemical Engineering

Students must meet the following requirements to take 3000 level CHE courses:

Complete at least 60 college level semester credit hours (SCH).

12 SCH must be from OSU, 9 of which must be STEM courses (ENGR1111 is not considered STEM).

Completion with a "C" or better in all green courses: MATH 2144, 2153, 2163, 2233; PHYS 2014, 2114; CHEM 1515, 3053, and (3153 & 3112) or (BIOC 3653 & 3723); ENSC 3233; CHE 2023, 2033, 2581; ENGR 1412; STAT 4033 or 4073; and ENGL 1113 (if a "C" is earned in ENGL 1113, then ENGL 1213 is also required).

Students must meet the following requirements to advance to the next level of courses:

A "C" or better in CHE 3013, 3113, 3123, 3333, 3473, 4002; ENSC 2613, 3231; ENGR 2421.

Students must meet the following requirements for graduation:

A 2.0 GPA average in all CHE, CHEM, ENGR, and ENSC courses.

- 8. FALL ONLY COURSE and conflicts with fall semester courses in year 4
- 9. BAE 3113, 4413; BIOC 3223, 3653, 3713, 3723, 4113, 5824; BIOL 1604, 3023, 3214; CHE 4283, 4293, 5283, 5293; MICR 2123+2132, 3033, 4003. \*Cannot use both (ANSI 3423+BIOL 3023) or (BIOC 3653+3713).
- 10. Students may choose from the following electives: CHE 3202 + 3211, 4073, 4133, 4283, 4293, 4343, 4323, 4493, 4523, 4603, 4753, 4773.

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Year 4 Year 3 16 hours 14 hours 17 hours 14 hours **Prerequisites** CHE 3013 CHE 4002 CHE 4112 CHE 4843 Rate Operations Chemical Eng Chem Process Chemical Eng ab II Instr/Control Completion of all green courses with a "C" or better. CHE 3473 CHE 4124 CHE 4224 CHE 3113 Chemical Eng Chemical Eng Chemical Eng Rate Operations I **Thermodynamics** Design I Design II CHE 3333 CHE 3123 CHE 4581 Advanced CHE Elective ntro to Transport Chemical CHE Senior (10) Phenomena Reaction Eng Seminar CHE 3581 BIO ELECTIVE **ENGR 2421** Gen Ed Elective CHE Junior Eng Data Acq H/S/I/D Controls Lab Seminar **ENSC 3231 ENSC 3313** ENSC 2613 POLS 1113 Fluids & Materials Science Electrical Science American See Course Catalog Hydraulics Lab Government for specific course prerequisites **CHEM 3433** PHIL 3833 **BIO ELECTIVE** Physical Biomedical Chemistry I Ethics (H) Completion with a grade of "C" or bet-**General Education Courses** Degree Requirements Upper Level CHE Courses

Updated 08.18.2022