

Bachelor of Science Chemical Engineering/Master of Science in Engineering Management

CURRICULUM OUTLINE - Class of 2023

Sample Only – Actual Curriculum Sequence May Deviate from Sample

| | FALL | SPRING | SUMMER 1 | SUMMER 2 |
|--------------|---|---|--|---|
| Year 1 | MATH1341 Calculus 1 for Engrs. 4 CHEM1151 General Chem for Engrs. 4 CHEM1153 Recitation for CHEM1151 0 GE1000 Intro. to Eng'g. 1 GE1501 Cornerstone Eng'g 1 4 ENGW1111 College Writing 4 | MATH1342 Calculus 2 for Engrs. 4 PHYS1151 Physics 1 for Engrs. 4 PHYS1152 Physics 1 Lab 1 PHYS1153 ILS for PHYS1151 1 GE1502 Cornerstone Eng'g 2 4 Elective UG General Elective 1 4 | Vacation | Vacation |
| Year 2 AA | CHEM2311 Organic Chemistry 1 4 CHEM2312 Lab for CHEM2311 1 CHEM2319 Recitation for CHEM2311 0 CHME2308 ChE Conservation Princ. 4 MATH2321 Calculus 3 for Engrs. 4 [BIOL 1115 or [General Biology 1 for Engrs. OR 4/5 PHYS 1155 Physics for Engrs. 2, PHYS 1156 Lab for PHYS1155, and PHYS 1157] Interactive Learn Sem. for PHYS1155] | CHEM2313 Organic Chem. 2 4 CHEM2314 Lab for CHEM2313 1 CHEM2320 Recitation for CHEM2313 0 CHME2000 Intro. to Eng'g. Co-op 1 CHME2310 Transport Processes 1 4 CHME2320 ChE Thermodynamics 1 4 MATH2341 Diff. Eq./Lin. Alg. 4 | Vacation | Co-op |
| Year 2 BA | CHEM2311 Organic Chemistry 1 4 CHEM2312 Lab for CHEM2311 1 CHEM2319 Recitation for CHEM2311 0 CHME2000 Intro. to Eng'g. Co-op 1 CHME2308 ChE Conservation Princ. 4 MATH2321 Calculus 3 for Engrs. 4 [BIOL 1115 or [General Biology 1 for Engrs. OR 4/5 PHYS 1155 Physics for Engrs. 2, PHYS 1156 Lab for PHYS1155, and PHYS 1157] Interactive Learn Sem. for PHYS1155] | Co-op | Co-op | CHEM2313 Organic Chem. 2 4 CHEM2314 Lab for CHEM2313 1 CHEM2320 Recitation CHEM2313 0 CHME2320 ChE Thermo. 1 4 |
| Year 3 AA | Co-op | CHME3312 Transport Processes 2 4 CHME3315 ChE Eng'g. Exp. Design 1 4 CHME3322 ChE Thermodynamics 2 4 ENGW3302* Adv. Writing for Prof. 4 | Elective UG General Elective 2 4 Elective UG General Elective 3 4 | Co-op |
| Year 3 BA | CHME2310 Transport Processes 1 4 CHME3322 ChE Thermodynamics 2 4 MATH2341 Diff. Eq./Lin. Alg. 4 Elective General Elective 2 4 | Co-op | Co-op | Elective General Elective 3 4 ENGW3302* Adv. Writing for Prof. 4 |
| Year 4 AA | Co-op | CHME3000 Prof. Issues in Eng'g. 1 CHME4315 ChE Eng'g. Exp. Design 2 4 CHME4510 ChE Kinetics 4 CHME4701 Cpstn 1: Sep. & Proc. Anlys. 4 Grad. Elect Grad. Elective 1 4 | Grad. Elect Grad. Elective 2 4 Grad. Elect Grad. Elective 3 4 | Co-op |
| Year 4 BA | CHME3000 Prof. Issues in Eng'g. 1 CHME3312 Transport Processes 2 4 CHME3315 ChE Eng'g. Exp. Design 1 4 Advanced Science Elective Grad. Elective 1 4 | CHME4510 ChE Kinetics 4 Grad. Elect Grad. Elective 2 4 Grad. Elect Grad. Elective 3 4 Grad. Elect Grad. Elective 4 4 | | |
| Year 5 AA | Advanced Science Elective Grad. Elect Grad. Elective 4 4 Grad. Elect Grad. Elective 5 4 Grad. Elect Grad. Elective 6 4 | CHME4512 ChE Process Control 4 CHME4703 Cpstn 2: Chem. Proc. Design 4 Grad. Elect Grad. Elective 7 4 Grad. Elect Grad. Elective 8 4 | | |
| Year 5 BA | CHME4315 ChE Eng'g. Exp. Design 2 4 CHME4701 Cpstn 1: Sep. & Proc. Anlys. 4 Grad. Elect Grad. Elective 5 4 Grad. Elect Grad. Elective 6 4 | CHME4512 ChE Process Control 4 CHME4703 Cpstn 2: Chem. Proc. Design 4 Grad. Elect Grad. Elective 7 4 Grad. Elect Grad. Elective 8 4 | | |

Revised 3/19/18

Students will be required to meet with an undergraduate advisor to petition to enter the program.

Students are encouraged to meet with their financial aid counselor to review any financial questions.

4 semesters of coursework at Northeastern University must be completed with a minimum GPA of 3.2 to join the BS/MS program.

16SH (4 Courses) from Graduate Program are used towards requirements in Undergraduate Program as general or major requirements.

Graduate electives outside the department curriculum may be applied to the degree requirements by petitioning the department's graduate committee.

* [ENGW3315](#) is an acceptable substitution for engineering majors.

Electives may be interchanged. Please consult with your advisor in 220SN, 617-373-2154

NUpath Requirements: Interpreting Culture (IC), Societies and Institutions (SI) and Differences and Diversity (DD) are not explicitly satisfied by required engineering courses.

Students are responsible for satisfying these requirements, and if these are not fulfilled in engineering courses, should use General Electives to do so.

General Electives are academic, non-remedial, non-repetitive courses.

Advanced Science Elective Requirements: Students can choose between BIOL2301, BIOL2321/22, BIOL2327, BIOL3603, BIOL 3611/12, CHEM2321/22, CHEM 2331/2332, CHEM2341/42, CHEM3403/04, CHEM 3501, CHEM4621/4622, CHEM4628/29, EEMB 2302/2303, EEMB 2610/2611, PHYS2303, PHYS3601. Students must meet all prerequisite requirements to enroll in these courses and enroll in co-requisite labs if applicable.

Advanced Engineering Elective Requirements: Must be 4000-5999 level engineering course; may be within BIOE, CHME, CIVE, EECE, ME, IE, MEIE, ENGR. A faculty approved undergraduate research project can be substituted for this requirement. Research must be 4 Semester Hours and the Chemical Engineering Undergraduate Education Committee must approve project prior to registration.

Proper registration form will be required; please see advisor for more details.

The registrar's website provides a listing of degree requirements and DARS provides a degree audit utility for students.