

**Bachelor of Science/Master of Science in Chemical Engineering**  
**CURRICULUM OUTLINE - Class of 2023**

*Sample Only – Actual Curriculum Sequence May Deviate from Sample*

	FALL	SPRING	SUMMER 1	SUMMER 2
<b>Year 1</b>	<a href="#">MATH1341</a> Calculus 1 for Engrs. 4 <a href="#">CHEM1151</a> General Chem for Engrs. 4 <a href="#">CHEM1153</a> Recitation for CHEM1151 0 <a href="#">GE1000</a> Intro. to Eng'g. 1 <a href="#">GE1501</a> Cornerstone Eng'g 1 4 <a href="#">ENGW1111</a> College Writing 4	<a href="#">MATH1342</a> Calculus 2 for Engrs. 4 <a href="#">PHYS1151</a> Physics 1 for Engrs. 4 <a href="#">PHYS1152</a> Physics 1 Lab 1 <a href="#">PHYS1153</a> ILS for PHYS1151 1 <a href="#">GE1502</a> Cornerstone Eng'g 2 4 Elective UG General Elective 1 4	Vacation	Vacation
<b>Year 2 AA</b>	<a href="#">CHEM2311</a> Organic Chemistry 1 4 <a href="#">CHEM2312</a> Lab for CHEM2311 1 <a href="#">CHEM2319</a> Recitation for CHEM2311 0 <a href="#">CHME2308</a> ChE Conservation Princ. 4 <a href="#">MATH2321</a> Calculus 3 for Engrs. 4 <a href="#">BIOL 1115 or</a> [General Biology 1 for Engrs. OR 4/5 <a href="#">PHYS 1155</a> Physics for Engrs. 2, <a href="#">PHYS 1156</a> Lab for PHYS1155, and <a href="#">PHYS 1157</a> Interactive Learn Sem. for PHYS1155]	<a href="#">CHEM2313</a> Organic Chem. 2 4 <a href="#">CHEM2314</a> Lab for CHEM2313 1 <a href="#">CHEM2320</a> Recitation for CHEM2313 0 <a href="#">CHME2000</a> Intro. to Eng'g. Co-op 1 <a href="#">CHME2310</a> Transport Processes 1 4 <a href="#">CHEM2320</a> ChE Thermodynamics 1 4 <a href="#">MATH2341</a> Diff. Eq./Lin. Alg. 4	Vacation	Co-op
<b>Year 2 BA</b>	<a href="#">CHEM2311</a> Organic Chemistry 1 4 <a href="#">CHEM2312</a> Lab for CHEM2311 1 <a href="#">CHEM2319</a> Recitation for CHEM2311 0 <a href="#">CHME2000</a> Intro. to Eng'g. Co-op 1 <a href="#">CHME2308</a> ChE Conservation Princ. 4 <a href="#">MATH2321</a> Calculus 3 for Engrs. 4 <a href="#">BIOL 1115 or</a> [General Biology 1 for Engrs. OR 4/5 <a href="#">PHYS 1155</a> Physics for Engrs. 2, <a href="#">PHYS 1156</a> Lab for PHYS1155, and <a href="#">PHYS 1157</a> Interactive Learn Sem. for PHYS1155]	Co-op	Co-op	<a href="#">CHEM2313</a> Organic Chem. 2 4 <a href="#">CHEM2314</a> Lab for CHEM2313 1 <a href="#">CHEM2320</a> Recitation CHEM2313 0 <a href="#">CHME2320</a> ChE Thermo. 1 4
<b>Year 3 AA</b>	Co-op	<a href="#">CHME3312</a> Transport Processes 2 4 <a href="#">CHME3315</a> ChE Eng'g Exp. Design 1 4 <a href="#">CHEM3322</a> ChE Thermodynamics 2 4 <a href="#">ENGW3302*</a> Adv. Writing for Prof. 4	Elective UG General Elective 2 4 Elective UG General Elective 3 4	Co-op
<b>Year 3 BA</b>	<a href="#">CHME2310</a> Transport Processes 1 4 <a href="#">CHME3322</a> ChE Thermodynamics 2 4 <a href="#">MATH2341</a> Diff. Eq./Lin. Alg. 4 Elective General Elective 2 4	Co-op	Co-op	Elective General Elective 3 4 <a href="#">ENGW3302*</a> Adv. Writing for Prof. 4
<b>Year 4 AA</b>	Co-op	<a href="#">CHME3000</a> Prof. Issues in Eng'g. 1 <a href="#">CHME4315</a> ChE Eng'g Exp. Design 2 4 <a href="#">CHME4510</a> ChE Kinetics 4 Advanced Science Elective 4 <a href="#">CHME7350</a> Transport Phenomena 4	<a href="#">CHME5xxx</a> Grad. Elective 1 4 Grad. Elect Grad. Elective 2 4	Co-op
<b>Year 4 BA</b>	<a href="#">CHME3000</a> Prof. Issues in Eng'g. 1 <a href="#">CHME3312</a> Transport Processes 2 4 <a href="#">CHME3315</a> ChE Eng'g Exp. Design 1 4 Advanced Science Elective 4 <a href="#">CHME7320</a> ChE Math 4	<a href="#">CHME5xxx</a> Grad. Elective 1 4 Grad. Elect Grad. Elective 2 4 <a href="#">CHME7350</a> Transport Phenomena 4 <a href="#">CHME4510</a> ChE Kinetics 4		
<b>Year 5 AA</b>	<a href="#">CHME4701</a> Cpstn 1: Sep. & Proc. Anlys. 4 <a href="#">CHME7320</a> ChE Math 4 <a href="#">CHME7330</a> ChE Thermodynamics 4 Grad. Elect Grad. Elective 3 4	<a href="#">CHME4512</a> ChE Process Control 4 <a href="#">CHME4703</a> Cpstn 2: Chem. Proc. Design 4 <a href="#">CHME7340</a> ChE Kinetics 4 <a href="#">CHMExxxx</a> Grad. Special Topics 4		
<b>Year 5 BA</b>	<a href="#">CHME4315</a> ChE Eng'g Exp. Design 2 4 <a href="#">CHME4701</a> Cpstn 1: Sep. & Proc. Anlys. 4 <a href="#">CHME7330</a> ChE Thermodynamics 4 Grad. Elect Grad. Elective 3 4	<a href="#">CHME4512</a> ChE Process Control 4 <a href="#">CHME4703</a> Cpstn 2: Chem. Proc. Design 4 <a href="#">CHME7340</a> ChE Kinetics 4 <a href="#">CHMExxxx</a> Grad. Special Topics 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.