

Curriculum for Dual Degree Program, B.A. in Chemistry and B.S. in Chemical Engineering

Courses to be taken at the University of Massachusetts are indicated in **bold**.

Year	Fall	Spring
1 <sup>st</sup>	Chem 101 General Chemistry I Math 101 Calculus I Language Phys 115 Force, Motion, and Energy <b>Engin 110 Intro to Chem. Eng.</b>	Chem 201 General Chemistry II Math 202 Calculus II Language <b>ChE 120 Chem. Eng. Fundamentals</b>
2 <sup>nd</sup>	Chem 202 Organic Chemistry I Math 203 Calculus III Distribution <b>Bio 100</b> (or MHC Bio/Biochem course) <sup>a</sup>	Chem 302 Organic Chemistry II Chem 306 Analytical Chemistry Phys 216 Electromagnetism Math 333 Differential Equations <b>ChE 226 Thermo I</b>
3 <sup>rd</sup>	<b>Engin 351 Technical Writing</b> <b>ChE 330 Fluid Mechanics</b> <b>ChE 325 Thermo II</b> <b>ChE 320 Kinetics and Reactor Design</b> <b>ChE 291A/391A Professional Seminar</b>	<b>ChE 333 Heat and Mass Transfer</b> <b>ChE 338 Separations</b> <b>ChE 361 Math Modeling</b> Distribution
4 <sup>th</sup>	Chem elective Chem 399 Comprehensive Seminar Distribution Distribution	Chem 325 Quantum Mechanics Chem elective Chem 399 Comprehensive Seminar Distribution
5 <sup>th</sup>	<b>ChE 401 Chem. Engineering Lab I</b> <b>ChE 444 Chemical Process Design</b> <b>ChE 446 Chemical Process Control</b> <b>ChE 491A Professional Seminar</b>	<b>ChE 402 Chemical Engineering Lab II</b> <b>Engineering technical elective<sup>b</sup></b> <b>Engineering technical elective<sup>b</sup></b>

Comments:

Freshman/Sophomore Math and Chem sequence parallels that at UMass.

<sup>a</sup>May be substituted with an appropriate biology or biochemistry course taken at Mt. Holyoke approved by the UMass ChE undergraduate program director.

<sup>b</sup>One semester of independent study, performed at either UMass or Mt. Holyoke, can substitute for one UMass ChE Engineering Science elective (ChE 496). Approved UMass engineering technical electives include SOM 593, SOM 597, any 3 or 4 credit course at the 200 level or above in ChE, ECE, MIE, CEE, or PSE with the EXCEPTION of CEE 357, MIE 230, MIE 340, and MIE 354. Courses other than those listed must be approved by the UMass ChE undergraduate program director.