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Bachelor of CHEMICAL ENGINEERING (CHE)

4-Year Recommended Course Sequence with *Calculus Entry*

Click on the Course Name to access the course in the Undergraduate Catalog 24-25

Updated April 2025

Fall Semester 1	Spring Semester 2	Fall Semester 3	Spring Semester 4	Fall Semester 5	Spring Semester 6	Fall Semester 7	Spring Semester 8
★INQ 170 [3] Engineering Launch	CHM 262 [3] Gen. Chem. II CHM 267 [1] Gen. Chem. Lab II (CHM 261)	ESC 152 [3] Programmingwith MATLAB (MTH 168)	CHE 300 [4] Chem Eng. Principles (MTH 182, CHM 262, PHY 241, *ESC 250 or *MTH 286, *INQ 170)	CHE 302 [4] Chem Eng. Thermo. (CHE 300, ESC 321, MTH 283 or MTH 281, ESC 250 or MTH 286)	CHE 404 [4] Chemical Reactor Design (CHE 302, CHE 306, CHE 307)	CHE 430 [4] Process Control (ESC 350 or MTH 288, CHE 404)	CHE 420 [4] Senior Chemical Eng. Lab (CHE 306, CHE 404, CHE 408)
MTH 181 [4] Calculus I	PHY 241 [5] Physics I (MTH 181)	Society and Human Behavior Elective [3]	ESC 301 [3] Fluid Mechanics (ESC 250 or MTH 286)	CHE 306 [4] Transport Phenomena (MTH 283 or MTH 281, CHE 300, ESC 301, ESC 250 or MTH 286)	CHE 408 [4] Separation Processes (CHE 302, CHE 306, ESC 350 or MTH 288)	CHE 440 [3] Process Design I (ESC 282, CHE 404, CHE 408)	CHE 441 [3] Process Design II (CHE 440)
CHM 261 [3] Gen. Chem. I CHM 266 [1] Gen. Chem. Lab	MTH 182 [4] Calculus II (MTH 181- C or better)	ESC 321 [3] Thermodynamics (MTH 182)	MTH 283 [2] Multivariable Calculus For Engineers (MTH 182- C or better) OR MTH 281 [4] Multivariable Calculus (MTH 182- C or better)	CHE 307 [3] Chemical Eng. Methods (CHE 300, ESC 350 or MTH 288, ESC 152, *CHE 302, *CHE 306)	Global Human Perspectives Elective [3]	CHE 448 [3] Chemical Process Safety (CHE 404 & CHE 408)	C CHE Technical Elective** [3] 400-500 Level
ENG 100 [3] Intensive Writing or ENG 101 [3] College Writing	ESC 102 [3] Technical Writing (Preferred) (ENG 101) OR ENG 102 [3] College Writing II (ENG 101)	ESC 130 [1] Engineering & CS Career Prep	ESC 350 [3] Linear Algebra for Engineers (MTH 182, ESC 152) OR MTH 288 [3] Linear Algebra (MTH 182- C or Better)	ESC 270 [3] Materials Science (CHM 261)	ESC 282 [3] Engineering Economy (MTH 182)	C CHE Technical Elective** [3] 400-500 Level	C CHE Technical Elective** [2] 400-500 Level
		ESC 250 [3] Diff EQ for Eng. (MTH 182) OR MTH 286 [3] Intro. to Diff EQ (MTH 182- C or better)	CHM 331 [3] Organic Chemistry CHM 336 [1] Organic Chem. Lab (CHM 262)	PHL 215 [3] Technology Ethics (ENG 102 or ESC 102)	ESC 310 [3] Statistics and Probability (MTH 182) OR STA 323 [3] Statistical Methods (MTH 182)	African American History & Culture Elective [3]	Diversity in Society Elective [3]
		PHY 242 [5] Physics II (PHY 241, MTH 182)					
14 Total Credit Hours	16 Total Credit Hours	18 Total Credit Hours	16 Total Credit Hours	17 Total Credit Hours	17 Total Credit Hours	16 Total Credit Hours	15 Total Credit Hours

Total Credits for CHE Degree: 129

(Prerequisites) • (*Pre/co-requisite) • [# of Course Credits] • XXX XXX = Only Offered That Fall/Spring Semester

Required CHE Courses
Required Science Courses
Required English Courses
Required Writing Across the Curriculum (WAC) Courses

Required CHE Electives **3 semesters of co-op can replace 1 elective
Required Math Courses
Core Curriculum Electives

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C Courses that satisfy Undergraduate and Master's degree credits

★**ESC 120** Intro to Engineering Design can replace **INQ 170** for transfer students and students who completed an inquiry launch course other than INQ 170. Neither course is required for transfer students with an Associates of Applied Science degree.

Begin to earn credits toward a Master's Degree while taking undergraduate courses!
CLICK HERE

Bachelor of CHEMICAL ENGINEERING (CHE)

5-Year Recommended Course Sequence with *Precalculus Entry*

Click on the Course Name to access Course Catalog Descriptions

Updated April 2025

Fall2 Semester 1	Spring Semester 2	Fall Semester 3	Spring Semester 4	Fall Semester 5	Spring Semester 6	Fall Semester 7	Spring Semester 8	Fall Semester 9	Spring Semester 10
★ INQ 170 [3] Engineering Launch	MTH 168 [3] Precalculus II (MTH 165 or MTH 167- C or better)	ESC 152 [3] Programming with MATLAB (MTH 168)	Global Human Perspectives Elective [3]	ESC 270 [3] Materials Science (CHM 261, MTH 168)	CHE 300 [4] Chem Eng. Principles (MTH 182, CHM 262, PHY 241, *ESC 250 or *MTH 286, *INQ 170)	CHE 302 [4] Chem Eng. Thermo. (CHE 300, ESC 321, MTH 283 or MTH 281, ESC 250 or MTH 286)	CHE 404 [4] Chemical Reactor Design (CHE 302, CHE 306, CHE 307)	CHE 430 [4] Process Control (ESC 350 or MTH 288, CHE 404)	CHE 420 [4] Chem. Eng. Capstone Lab (CHE 306, CHE 404, CHE 408)
Society and Human Behavior Elective [3]	ESC 102 [3] Technical Writing (Preferred) (ENG 101) OR ENG 102 [3] College Writing II (ENG 101)	CHM 261 [3] Gen. Chem. I CHM 266 [1] Gen. Chem. Lab (MTH 168)	PHY 241 [5] Physics I (MTH 181)	CHM 262 [3] Gen. Chem. II CHM 267 [1] Gen. Chem. Lab II OR CHM 278 [1] REEL Lab II (CHM 261)	ESC 301 [3] Fluid Mechanics (ESC 250 or MTH 286)	CHE 306 [4] Transport Phenomena (MTH 283 or MTH 288, CHE 300, ESC 301, ESC 250 or MTH 286)	CHE 408 [4] Separation Processes (CHE 302, CHE 306, ESC 350 or MTH 288)	CHE 440 [3] Process Design I (ESC 282, CHE 404, CHE 408)	CHE 441 [3] Process Design II (CHE 440)
MTH 165 [3] Intensive Precalc I OR MTH 167 [3] Precalculus I	African American History & Culture Elective [3]	MTH 181 [4] Calculus I (MTH 168- C or better)	MTH 182 [4] Calculus II (MTH 181- C or better)	ESC 250 [3] Diff EQ for Eng. (MTH 182) OR MTH 286 [3] Intro. to Diff EQ (MTH 182- C or better)	ESC 350 [3] Linear Algebra for Engineers (MTH 182, ESC 152) OR MTH 288 [3] Linear Algebra (MTH 182- C or Better)	CHE 307 [3] Chemical Eng. Methods (CHE 300, ESC 350 or MTH 288, ESC 152, *CHE 302, *CHE 306)	ESC 310 [3] Statistics and Probability (MTH 182) OR STA 323 [3] Statistical Methods (MTH 182)	**CHE Technical Elective [3] 400-500 Level	**CHE Technical Elective [3] 400-500 Level
ENG 100 [3] Intensive Writing or ENG 101 [3] College Writing I	Diversity in Society Elective [3]	PHL 215 [3] Technology Ethics (ENG 102 or ESC 102)		PHY 242 [5] Physics II (PHY 241, MTH 182)	MTH 283 [2] Multivariable Calculus For Engineers (MTH 182 – C or better) OR MTH 281 [4]	CHM 331 [3] Organic Chemistry CHM 336 [1] Organic Chem. Lab (CHM 262)	ESC 282 [3] Engineering Economy (MTH 182	CHE 448 [3] Chemical Process Safety (CHE 404 & CHE 408)	**CHE Technical Elective [3] 400-500 Level
		ESC 130 [1] Engineering & CS Career Prep			ESC 321 [3] Thermodynamics (MTH 182)				
12 Total Credit Hours	12 Total Credit Hours	15 Total Credit Hours	12 Total Credit Hours	15 Total Credit Hours	15 Total Credit Hours	15 Total Credit Hours	14 Total Credit Hours	13 Total Credit Hours	13 Total Credit Hours

Total Credits for CHE Degree: 136

(Prerequisites) • (*Pre/co-requisite) • [# of Course Credits] • CHE XXX = Only Offered That Fall/Spring Semester •

- Required CHE Courses.
- Required Science Courses
- Required English Courses
- Required Writing Across the Curriculum (WAC) Courses
- Required CHE Electives **3 semesters of co-op can replace one elective
- Required Math Courses
- Core Curriculum

★ **ESC 120** Intro to Engineering Design can replace **INQ 170** for transfer students and students who completed an inquiry launch course other than INQ 170. Neither course is required for transfer students with an Associates of Applied Science degree.

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Courses that satisfy Undergraduate and Master's degree credits

List of CHE undergraduate courses that satisfy Master's Degree credits

Course Number & Name
CHE 448/CHE 548 : Chemical Process Safety
CHE 494/CHE 594 : Selected Topics in Chemical Egr.

Access CampusNet to check when courses are offered each semester.