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Bachelor of CIVIL ENGINEERING (CVE)

4-Year Recommended Course Sequence with *Calculus Entry*

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

Updated July 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	ESC 151 [3] C Programming or ESC 152 [3] Program with MATLAB	ESC 201 [3] Statics (MTH 181, PHY 241)	CVE 360 [4] Mechanics of Fluids and Basic Thermal Systems for Civil Engineers (ESC 250 or MTH 286, ESC 201)	CVE 312 [3] Structural Analysis (ESC 211)	CVE 322 [3] Structural Steel Design (CVE 312)	CVE 429 [3] Foundation Engineering (CVE 331, CVE 332, CVE 422)	CVE 427 [2] Capstone Design (CVE 426)
MTH 181 [4] Calculus I	MTH 182 [4] Calculus II (MTH 181, C or better)	CVE 211 [2] Surveying (MTH 181, CVE 170)	ESC 211 [3] Strength of Materials (ESC 201)	CVE 361 [3] Hydraulic Engineering (ESC 301 or CVE 360)	CVE 331 [3] Intro to GeoTech Eng. (ESC 211)	CVE 446 or CVE 546 [3] Transportation Eng. (Senior Standing)	American Civic Literacy Elective [3]
ENG 100 [3] Intensive Writing or ENG 101 [3] College Writing I	ENG 108 [3] AI & Writing (Preferred) (ENG 101) OR ENG 102 [3] College Writing II (ENG 101)	CVE 212 [1] Surveying Lab (*CVE 211)	CVE 310 [2] Strength of Materials Laboratory (*ESC 211)	CVE 362 [2] Hydraulics Lab (*CVE 361) OR CVE 363 [2] Hydraulics Lab (*CVE 361)	CVE 332 [2] Geotechnical Enr. Lab (*CVE 331) OR CVE 333 [2] Geotechnical Engineering Lab (*CVE 331)	CVE 426 [2] Preliminary Design (ESC 102 or ENG 102, CVE 211, 3/4 of CVE 322, CVE 331, CVE 361, CVE 371)	STA 323 [3] Statistical Methods (MTH 182) or ESC 310 [3] Statistics and Probability (MTH 182)
CHM 261 [3] Gen. Chem. I CHM 266 [1] Gen. Chem. Lab	PHY 241 [5] Physics I (MTH 181)	ESC 250 [3] Diff EQ for Eng. (MTH 182) OR MTH 286 [3] Intro. to Diff EQ (MTH 182- C or better)	GEO 100 [3] Intro to Geology GEO 101 [1] Intro to Geology Lab	CVE 371 [3] Environmental Engineering 1 (CHM 261, CHM 266, CVE 360)	CVE 461 or CVE 561 [3] Hydrologic Analysis (CVE 361)	**CVE Tech Elective [3] 300-400 Level	**CVE Tech Elective [3] 300-400 Level
	CVE 170 [2] Civil Engineering Graphics	MTH 283 [2] Multivariable Calculus For Engineers (MTH 182- C or better) OR MTH 281 [4] Multivariable Calculus (MTH 182- C or better)	ESC 282 [3] Engineering Economy (MTH 182)	CVE 374 [2] Environmental Engineering Lab (*CVE 371)	CVE 422 [3] Reinforced Concrete Design (CVE 312)	PHL 215 [3] Technology Ethics HCC Elective	Complexities of Pluralistic Society Elective [3]
	**ESC 130 [1] Engineering Co-op Orientation	PHY 242 [5] Physics II (PHY 241, MTH 182)		ESC 202 [3] Dynamics (ESC 201)	CVE 403 [3] Construction Planning (Junior Standing)	Global Human Perspectives Elective [3]	Society & Human Behavior Elective [3]
14 Total Credit Hours	17 Total Credit Hours	16 Total Credit Hours	16 Total Credit Hours	16 Total Credit Hours	17 Total Credit Hours	17 Total Credit Hours	17 Total Credit Hours

Degree Total: 130 or 131 including ESC 130 Engineering Co-op Orientation

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

- Required CVE Courses **ESC 130 is highly recommended, yet optional.
- Required Science Courses
- Required English Courses
- Required Writing Across the Curriculum (WAC) Courses
- Required CVE Electives **3 semesters of co-op can replace one elective
- Required Math Courses
- Core Curriculum Electives

★**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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500 Level Courses that satisfy Undergraduate and Master's degree credits

↓ Scroll Down to View the Precalculus Entry 5-Year Degree Chart ↓

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Bachelor of CIVIL ENGINEERING (CVE)

Updated July 2025

5-Year Recommended Course Sequence with *Precalculus Entry*

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

Fall 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	GEO 100 [3] Intro to Geology (*GEO 101)	CVE 211 [3] Surveying (MTH 181, CVE 170)	PHL 215 [3] Technology Ethics	PHY 242 [5] Physics II (PHY 241, MTH 182)	CVE 360 [4] Mechanics of Fluids & Therm. (ESC 250 or MTH 286, ESC 201)	CVE 312 [3] Structural Analysis (ESC 211)	CVE 322 [3] Structural Steel Design (CVE 312)	CVE 429 [3] Foundation Eng. (CVE 331, CVE 332, CVE 422)	CVE 427 [2] Capstone Design (CVE 426)
Society and Human Behavior Elective [3]	GEO 101 [1] Intro to Geology Lab (*GEO 100)	CVE 212 [2] Surveying Lab (*CVE 211)	PHY 241 [5] Physics I (MTH 181)	ESC 201 [3] Statics (PHY 241)	ESC 202 [3] Dynamics (ESC 201)	CVE 361 [3] Hydraulic Analysis (CVE 360 or ESC 301)	CVE 331 [3] Intro to Geotechnical Engineering (ESC 211)	CVE 446 [3] Transportation Engineering (Senior Standing)	CVE 403 [3] Construction Planning (Junior Standing)
MTH 165 [3] Intensive Precalc I OR MTH 167 [3] Precalculus I	MTH 168 [3] Precalculus II (MTH 165 or MTH 167- C or better)	MTH 181 [4] Calculus I (MTH 168- C or better)	MTH 182 [4] Calculus II (MTH 181- C or better)	MTH 286 [3] Intro. to Diff EQ (MTH 182 –C or better) or ESC 250 [3] Diff EQ for Eng. (MTH 182 –C or better)	STA 323 [3] Statistical Methods (MTH 182) or ESC 310 [3] Statistics and Probability (MTH 182- C or better)	CVE 362 [2] Hydraulics Lab (*CVE 361) OR CVE 363 [2] Hydraulics Lab (*CVE 361)	CVE 332 [2] Geotechnical Enr. Lab (*CVE 331) OR CVE 333 [2] Geotechnical Engineering Lab (*CVE 331)	CVE 426 [2] Preliminary Design (ESC 102 or ENG 102, CVE 211, 3/4 of CVE 322, CVE 331, CVE 361, CVE 371)	ESC 282 [3] Engineering Economy (MTH 182)
ENG 100 [3] Intensive Writing or ENG 101 [3] College Writing I	ENG 108 [3] AI & Writing (Preferred) (ENG 101) OR ENG 102 [3] College Writ. II (ENG 101)	*CHM 261 [3] Gen. Chem. I CHM 266 [1] Gen. Chem I Lab (MTH 168)	ESC 151 [3] C Programming or ESC 152 [3] Program w/ MATLAB (MTH 168)	MTH 283 [2] Multivariable Calculus For Engineers (MTH 182- C or better)	ESC 211 [3] Strength of Materials (ESC 201)	CVE 371 [3] Environmental Engineering (CVE 360 or ESC 301, CHM 261, CHM 266)	CVE 461 [3] Hydrologic Analysis (CVE 361)	CVE Tech Elective ** [3] 300-400 Level	CVE Tech Elective ** [3] 300-400 Level
Global Human Perspectives Elective [3]	CVE 170 [2] Civil Engineering Graphics	**ESC 130 [1] Engineering Co-op Orientation			CVE 310 [2] Strength of Materials Lab (*ESC 211)	CVE 374 [2] Environmental Engineering Lab (*CVE 371)	CVE 422 [3] Reinforced Concrete Design (CVE 312)	American Civic Literacy Elective [3]	Complexities of Pluralistic Society Elective [3]
12 Total Credit Hours	12 Total Credit Hours	15 Total Credit Hours	15 Total Credit Hours	14 Total Credit Hours	14 Total Credit Hours	13 Total Credit Hours	12 Total Credit Hours	15 Total Credit Hours	14 Total Credit Hours

Total Credits for CVE Degree: 136 or 137 including ESC 130 Engineering Co-op Orientation

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

Required CVE Courses ****ESC 130** is highly recommended, yet optional.
Required Science Courses
Required English Courses
Required Writing Across the Curriculum (WAC) Courses

★**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.

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

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