

B.S. CIVIL ENGINEERING

Plan of Study – Aerospace Minor

Year 1	Fall		Spring
	FYEX Foundation for College Success		
	ENGR 100 (FYE) Introduction to Engineering Design (2 Cr.)		
	ENGR 160 + ENGR 162 (3 Cr.) ^{Note 2}		DASC 120 Statistics I (Lab)
	MATH 113 Calculus I		MATH 114 Calculus II
	GEOL 163 Applied Geology (Lab)		PHYS 211 Classical Physics I
	CORE requirement		CORE requirement
	January-term		Summer
Year 2	CORE requirement	↔	
	Fall		Spring
	ENGR 220 Statics		ENGR 221 Mechanics of Materials (Lab)
	MATH 210 Introduction to Differential Equations & Systems		ENGR 381 Thermodynamics (CE Elective)
	CHEM 109 General Chemistry for Engineers (Lab)		ENGR 368 Fluids Mechanics for Civil Engineering (Lab)
	CORE requirement		CORE requirement
	ENGR 226 Introduction to Aerospace Engineering (2 Cr.) (PHYS 211, MATH 114 prereq)		
	January-term		Summer
Year 3	CORE requirement	↔	SCI/MATH Elective (4 Cr.)
	Fall		Spring
	ENGR 362* Construction & Engineering Economic Analysis (Lab)		ENGR 413 – Introduction to Aerodynamics (2 Cr.) ENGR 414 – Applied Thermodynamics (2 Cr.)
	ENGR 364 Structural Analysis		ENGR 464 Design of Steel and Concrete Structures (Lab)
	ENGR 363 Construction Materials (Lab)		ENGR 467* Water Resources
	CORE requirement		CORE requirement
	January-term		Summer
	CORE requirement	↔	
Year 4	Fall		Spring
	Aerospace Minor Elective		ENGR 466* Transportation Engineering
	ENGR 412 Composite Materials (2 Cr.) (363 prereq)		Aerospace Minor Elective
	ENGR 480 Design Clinic I		ENGR 481 Design Clinic II
	ENGR 468* Environmental Engineering (Lab)		CORE requirement
	ENGR 366 Soil Mechanics (Lab)		
	January-term		Summer
	CORE requirement		

Note 1: See Complete Course Listing for list of CIVIL Major and Elective classes, and Science/Math Electives

B.S. CIVIL ENGINEERING

Plan of Study – Aerospace Minor

Note 2: Some CIVIL Major Courses (including ENGR 160/162) are only offered once per year – see below for details and suggested Year 3 and Year 4 course sequences
 Note 3: CIVIL Elective courses are announced during the Spring semester (prior to Registration) for the following year

Complete Curriculum

Engineering Major Requirements (61 credits): <u>Core Engineering Courses (29 credits):</u> ENGR 100 Introduction to Engineering Design (2 credits) ENGR 160 Surveying (2 credit) ENGR 162 Introduction to Engineering Graphics (1 credit) ENGR 220 Statics (4 credits) ENGR 221 Mechanics of Materials (4 credits) ENGR 362 Construction and Engineering Economic Analysis (4 credits) ENGR 368 Fluid Mechanics for Civil Engineering (4 credits) ENGR 480 Engineering Design Clinic 1 (4 credits) ENGR 481 Engineering Design Clinic II (4 credits) [WID] <u>Civil Major Courses (28 Credits):</u> ENGR 363 Construction Materials (4 credits) ENGR 364 Structural Analysis (4 credits) ENGR 366 Soil Mechanics (4 credits) ENGR 464 Design of Steel and Concrete Structures (4 credits) ENGR 466 Transportation Engineering (4 credits) ENGR 467 Water Resources (4 credits) ENGR 468 Environmental Engineering (4 credits) [SUST, WTL] <u>Civil Elective Courses (4 Credits):</u> ENGR 381 Thermodynamics** ENGR 458 Transportation Facilities ENGR 457 Applied Soil Mechanics ENGR 461 Timber Design ENGR 462 Prestressed Concrete Design ENGR 471 Design of Steel Structures II ENGR 472 Design of RC Structures II ENGR 473 Water Treatment (2 credits) ENGR 479 Wastewater Treatment (2 credits) Minor Requirements: (minimum 18 credits) ENGR 226 – Intro. to Aero. Engineering (2 cr.), Fall semester ENGR 383 or ENGR 368 – Fluid mechanics (4 cr.) ENGR 412 – Composite Materials (2 cr.), Fall of odd years ENGR 413 – Intro. to Aerodynamics (2 cr.), Spring of odd years ENGR 414 – Applied Thermo. (2 cr.), Spring of odd years <u>Plus a minimum of 6 credits of aerospace electives:</u> ETLS 664 – Propulsion Systems & Compressible Flow (3 cr.), Spring of even years ETLS 591 – Advance Thermal Systems (3 cr.), Fall semesters PHYS 331 – Theoretical Mechanics (4 cr.), Fall of even years PHYS 325 – Meth. of Comp. Physics (4 cr.), Spring of odd years PHYS 354 – Astrophysics (4 cr.) Fall of odd years ENGR 415 – Smart Materials (2 cr.), Fall of odd years	Allied Requirements (32 credits): <u>Core Allied Courses (28 credits):</u> MATH 113 Calculus I (4 credits) MATH 114 Calculus II (4 credits) MATH 210 Introduction to Differential Eqns. and Systems (4 credits) PHYS 211 Classical Physics I (4 credits) GEOL 163 Applied Geology (4 credits) DASC 120 Statistics I (4 credits) <i>One of:</i> CHEM 109 General Chemistry for Engineers (4 credits) CHEM 111 General Chemistry I (4 credits) <u>Science/Math Elective Courses (4 credits):</u> MATH 200 Multi-Variable Calculus MATH 230 Intro to Applied Math DASC 240 Applied Regression Analysis CHEM 112 General Chemistry II GEOL 211 Environmental Earth Materials BIOL 209 Biology of Sustainability PHYS 212 Classical Physics II GEOL 410 Hydrogeology University of St. Thomas Core Curriculum (45 credits): FYEX Foundation for College Success (1 credit) Language and Culture (0-8 credits) Literature and Writing (4 credits) Philosophy and Theology (12 credits) Social Analysis (4 credits) Fine Arts (4 credits) Historical Studies (4 credits) Integrations in the Humanities (8 credits) <i>Some of these courses must satisfy the flagged requirements; check your degree evaluation</i>
--	---