



Office of
Transfer Relations

Catalog: 2026-2027 University of Wyoming Catalog
Program: Architectural Engineering, B. S.

Wyoming Transfer Alignment Guide (WyoTAG)

Architectural Engineering, B. S.

Architectural Engineers create structural and mechanical-electrical-plumbing systems for buildings. The B.S. in Architectural Engineering is accredited by ABET and provides a path to P.E. licensure. Note: This is not an Architecture degree. This degree program requires (120) credits, (42) of which are upper division credits.

Accreditation

This B.S. program is accredited by the EAC Accreditation Commission of ABET, under the commission's General Criteria and Program Criteria for Architectural and Similarly Named Engineering Programs.

Degree Requirements

The degree requires 120 credits, 42 of which must be upper-division.

University Studies Program

This degree requires that The University Studies Program 2015 requirements are met before graduation. Some of the courses required for this major fulfill USP requirements, but not all. Students should check their degree evaluations and consult with their assigned academic advisor to discuss their specific course plan.

Course Name	Credits	UW Course in Major	AA/AS/AB/ADN satisfies this USP
C 1-Communication 1 (U5C1) (COM1)	3		X
C 2-Communication 2 (U5C2) (COM2)	3		X
C 3-Communication 3 (U5C3) (COM3)	3	(Must be completed at UW)	
Q-Quantitative Reasoning (U5Q)	3		X
PN-Physical and Natural World (1) (U5PN)	3		X
PN-Physical and Natural World (2) (U5PN)	3		X
H-Human Culture (1) (U5H)	3		X
H-Human Culture (2) (U5H)	3		X
V-US & WY Constitution (U5V)	3		X
FYS or USP Elective-Any 3-credit hour of FYS or 3-credit hours of USP electives	3		X

Note: FYS courses have been paused. 3 hours from any additional USP designated courses is still required.

USP Elective: 3 Credit Hours - Must Take one additional USP course, advisor approved.

Core Courses – 73 hours

Course Name	Credits	Casper	CWC	EWC	LCCC	NWCCD	Northwest	Western
ARE 1000 - Exploring CAECM	1							
ARE 1060 - Architectural Design Studio I	3							
ARE 2410 - Fundamentals of Building Performance	3							
ARE 2060 - Architectural Design Studio II	3							
ARE 3110 - Professional Practice	3							
ARE 3200 - Structural Analysis I	3							
ARE 3210 - Civil Engineering Materials (C3)	4							
ARE 3300 - Building Electrical and Plumbing Systems	3							
ARE 3400 - Heating, Ventilating and Air Conditioning of Buildings	3							
ARE 3600 - Architectural Design Studio III	3							
ARE 4600 - Architectural Design Studio IV	3							
ART 3030 - History of Architecture (H)	3							
CHEM 1020 - General Chemistry I (PN)	4	X	X	X	X	X	X	X

Core Courses Continued – 73 hours

Course Name	Credits	Casper	CWC	EWC	LCCC	NWCCD	Northwest	Western
ES 2110 - Statics	3	X	X		X	X	X	X
ES 2120 - Dynamics	3	X	X		X	X	X	X
ES 2310 - Thermodynamics I	3	X			X	X	X	X
ES 2330 - Fluid Dynamics	3	X				X	X	X
ES 2410 - Mechanics of Material I	3	X	X		X	X	X	X
MATH 2200 - Calculus I (Q)	4	X	X	X	X	X	X	X
MATH 2205 - Calculus II (Q)	4	X	X	X	X	X	X	X
MATH 2210 - Calculus III	4	X	X	X	X	X	X	X
MATH 2310 - Applied Differential Equations I	3	X	X		X	X	X	X
STAT 2050 - Fundamentals of Statistics (Q)	4	X	X	X	X	X	X	X

Geology Course: 4 Credit Hours - Must take one of the following.

Course Name	Credits	Casper	CWC	EWC	LCCC	NWCCD	Northwest	Western
GEOL 1100 - Physical Geology (PN)	4	X	X	X	X	X	X	X
GEOL 1330 - Water, Dirt, and Earth's Environment (PN)	4	Note 1						
GEOL 1320 - Global Sustainability: Managing Earth's Resources	4							

Physics Course: 4 Credit Hours Must take one of the following.

Course Name	Credits	Casper	CWC	EWC	LCCC	NWCCD	Northwest	Western
PHYS 1210 - Engineering Physics I (PN)	4							
PHYS 1220 - Engineering Physics II (PN)	4							

ARE Professional Development Courses: 18 Credit Hours Required

Must take six of the following:

Course Name	Credits	Casper	CWC	EWC	LCCC	NWCCD	Northwest	Western
ARE 3360 - Fundamentals of Transport Phenomena	3							
ARE 4200 - Structural Analysis II	3							
ARE 4250 - Structural Steel Design	3							
ARE 4260 - Structural Concrete Design	3							
ARE 4285 - Masonry Design	3							
ARE 4295 - Structural Timber Design	3							
ARE 4330 - Building Electrical Systems	3							
ARE 4390 - Building Safety and Fire Protection	3							
ARE 4430 - HVAC Systems Analysis and Design	3							
ARE 4490 - Modeling and Optimization of Energy Systems	3							
CE 3600 - Soil Mechanics I	4							
CE 4610 - Foundation Engineering	3							
CE 4620 - Soil and Rock Slope Engineering	3							
CE 4630 - Ground Improvement, Reinforcement and Treatment	3							
CE 5010 - Advanced Mechanics of Materials	3							
CE 5200 - Advanced Structural Analysis	3							
CE 5220 - Structural Dynamics	3							
CE 5255 - Advanced Steel Design	3							
CE 5270 - Highway Bridge Engineering	3							
ME 3040 - Thermodynamics II	3							
ME 3170 - Machine Design	3							
ME 4460 - Solar and Geothermal Engineering	3							
ME 4470 - Wind and Ocean Energy Engineering	3							

ARE Capstone: 3 Credit Hours Must take one of the following.

Course Name	Credits	Casper	CWC	EWC	LCCC	NWCCD	Northwest	Western
ARE 4720 - Structural Systems Design Project	4							
ARE 4740 - Mechanical Systems Design Project	4							

ARE Math/Sci/Tech/Prof Courses: 3 credit hours

Must take 3 additional credit hours in Math/Science/Technical/Professional courses.

Additional Requirements/Program Information

- Advanced Standing/Gateway: Prior to enrolling in upper division ARE/CE courses, students must earn 57 quality points in the following courses: CHEM 1020, PHYS 1210 or PHYS 1220, MATH 2200, MATH 2205, ES 2110, ES 2120, and ES 2410.
- Degree candidates must meet the academic requirements of the university, and must have a minimum GPA of 2.0 in all engineering courses, and all courses required for the major. *Grades of C or better are required for all prerequisite courses.
- Students choose an area of emphasis in either structural or mechanical systems, and select Optional Electives and the Capstone Design for their emphasis area. Care should be taken to ensure prerequisites are completed.
- Students may have a maximum of 6 credits in courses with a grade of D in upper division ARE courses that apply towards their degree.
- Students may not take a course for S/U credit to satisfy any requirement, unless the course is offered for S/U credit only.
- No more than two upper division courses may be transferred and applied to the ARE degree. ARE 4720 and ARE 4740 cannot be transferred to UW.
- All undergraduate engineering students are required to take the Fundamentals of Engineering Exam with a good faith effort within one year prior to their expected graduation for program assessment purposes.

ARE Outcomes

Three to six years after graduation, graduates of the University of Wyoming Civil Engineering Program will:

- ARE-OB1. Be able to successfully practice the profession of Architectural Engineering.
- ARE-OB2. Be prepared and motivated to accept challenging assignments and responsibilities.
- ARE-OB3. Demonstrate successful professional growth through leadership development and career progression.
- ARE-OB4. Be able to acquire and apply new knowledge in Architectural Engineering

Notes

Note 1 ENR/GEOL 1330 at UW = ENR/GEOL 1330 at Casper College (You can only take 1 of these courses)

COURSE SUBSTITUTIONS: WyoTAGs reflect published equivalencies. UW academic departments occasionally arrange for course substitutions when indirect equivalencies exist. Please contact your UW Academic Advisor for details.

EFFECTIVE DATE: This document is in effect as of the 2026-2027 catalog year; it reflects the published UW curriculum as of that date. Any changes to the UW curriculum or the WYCC course equivalents will require this document to be updated. To request an updated document, faculty should contact transfer@uwyo.edu via email.