ARCHITECTURAL ENGINEERING (ARE)

ARE 301, ARE JUNIOR SEMINAR, 1 Credit
Professional practices of architectural engineering.

ARE 352, DESIGN OF ELECTRICAL AND ILLUMINATION SYSTEMS FOR BUILDINGS, 0-4 Credits
Design of electrical and illumination systems in buildings, including consideration of energy usage.
Prerequisite: CEM 471 with C or better

ARE 353, DESIGN OF HVAC SYSTEMS FOR BUILDINGS, 4 Credits
Design and engineering of heating, ventilating, and air conditioning (HVAC) systems in buildings, including consideration of energy usage and indoor environmental conditions.
Prerequisite: CEM 472 with C or better

ARE 405, READING AND CONFERENCE, 1-16 Credits
This course is repeatable for 16 credits.

ARE 406, PROJECTS, 1-16 Credits
This course is repeatable for 16 credits.

ARE 418, ARCHITECTURAL ENGINEERING PROFESSIONAL PRACTICE, 4 Credits
Principles and methods of solving architectural engineering problems in a studio setting, with considerations of space, form, function, and technology. Lec/rec. (Writing Intensive Course)
Attributes: CWIC – Core, Skills, WIC
Prerequisite: ARE 351 with C or better and ARE 352 [C] and CE 382 [C]

ARE 419, ARCHITECTURAL ENGINEERING DESIGN, 3 Credits
A capstone design project experience exposing students to problems and issues similar to those encountered in the practice of architectural engineering. Use of Building Information Modeling (BIM) in design, construction management, and integration of architectural, structural, mechanical, electrical and lighting systems. Lec/rec. (Writing Intensive Course)
Attributes: CWIC – Core, Skills, WIC
Prerequisite: ARE 418 with C or better

ARE 451, ADVANCED BUILDING CONSTRUCTION METHODS, 4 Credits
Advanced building construction methods, including integration of building components in building envelopes. Lec/rec.
Prerequisite: CEM 442 with C or better

ARE 499, SPECIAL TOPICS, 1-16 Credits
This course is repeatable for 16 credits.