Department: Civil and Architectural Engineering
Program: Architectural Engineering BS Program

Skill Set	Professional Application	Delivery of Skill Set Courses, extracurricular activities, etc. in which the skill set is introduced (I), reinforced (R), or mastered (M)
Core Skill: Critical Thinking & Problem-Solving Skills	(1) an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics. *Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems. *Analyzing information and evaluating results to choose the best solution and solve problems. *Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.	CEEN 2301: Mechanics I (I) CEEN 3311: Strength of Materials (R) AEEN 3303: Structural Analysis (R) AEEN 3304: Reinforced Concrete Design (R) AEEN 3335: Environmental Systems for Buildings (R) AEEN 3337: Electrical Systems in Buildings (R)
Core Skills: Oral / Written Communications	(3) an ability to communicate effectively with a range of audiences. *Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person. *Communicating effectively in writing as appropriate for the needs of the audience. *The ability to communicate information and ideas in speaking so others will understand	AEEN 3316: Architectural Design (I) AEEN 4316: Structural Steel Design (WI) (R) AEEN 4326: Construction Engineering (R)
Core Skill: Professionalism / Work ethic	(4) an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.	CEEN 3317: Engineering Economy (I) CEEN 3342: Geotechnical Engineering (I) AEEN 4326: Construction Engineering (I) AEEN 4316: Structural Steel Design (WI) (R) AEEN 4289: Senior Design Project II (WI) (R)

Skill Set	Professional Application	Delivery of Skill Set Courses, extracurricular activities, etc. in which the skill set is introduced (I), reinforced (R), or mastered (M)
Core Skill: Teamwork / Collaboration / Leadership	(5) an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives. *Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.	AEEN 4326: Construction Engineering (I) CEEN 3317: Engineering Economy (I) AEEN 4289: Senior Design Project II (WI) (R)
Core Skill: Lifelong Learning	(7) an ability to acquire and apply new knowledge as needed, using appropriate learning strategies.	AEEN 3303: Structural Analysis (I) AEEN 4316: Structural Steel Design (WI) (R) AEEN 4289: Senior Design Project II (WI) (R)
Discipline-based Skill: Architectural Engineering Design	(2) an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors. *Knowledge of design techniques, tools, and principals involved in production of precision technical plans, blueprints, drawings, and models. * Knowledge of materials, methods, and the tools involved in the construction or repair of houses, buildings, or other structures such as highways and roads.	CEEN 3311: Strength of Materials (I) CEEN 3392: Hydraulic and Fluid Mechanics (I) AEEN 3304: Reinforced Concrete Design (I) AEEN 3325: Design Codes and Ordinances (I) AEEN 4316: Structural Steel Design (WI) (I) AEEN 4320: Building Services Engineering (I) AEEN 4289: Senior Design Project II (WI) (R) AEEN 4346: Building System Management (R)

Skill Set	Professional Application	Delivery of Skill Set Courses, extracurricular activities, etc. in which the skill set is introduced (I), reinforced (R), or mastered (M)
Discipline-based Skill: Social, Cultural, and Global Competence	*In-demand software skills: Microsoft Office, Autodesk AutoCAD, Autodesk Revit, Trane Trace 700, Bentley MicroStation, The MathWorks Matlab, etc. *In-demand specialized skills: Computer Aided Drafting/Design, Project Management, Mechanical Design, HVAC, Energy Audit, Scheduling, Budgeting, etc. The individual demonstrates openness, inclusiveness, sensitivity, and the ability to interact respectfully with all people and understand individuals' differences.	AEEN 1310: Computer Graphics and Application (I) AEEN 4310: 3D Computer Modeling (R) AEEN 4320: Building Services Engineering (R) AEEN 4346: Building System Management (R)