ARCHITECTURAL ENGINEERING TECHNOLOGY

Programs

- Architectural CAD Drafting Certificate in Applied Science (https://catalog.gvltec.edu/school-engineering-technology-professional-studies/architectural-engineering-technology/architectural-cad-drafting-certificate/)
- Architectural Engineering Technology Associate in Applied Science (https://catalog.gvltec.edu/school-engineering-technology-professional-studies/architectural-engineering-technology/architectural-engineering-technology-aas/)

Courses

AET 101 Building Systems I (2-3-3)
Offered Spring and Summer Semesters
Prerequisite: AET 110
Pre- or Co-requisite: AET 103 (prerequisite preferred)
This course is a study of fundamental concepts of design and construction techniques in residential, commercial and industrial building.

AET 103 International Building and Residential Codes (2-3-3)
Offered Spring and Summer Semesters
Prerequisite: AET 110
Co-requisite: AET 101 (recommended)
This course is an introduction to the international building codes and the international residential codes, as well as local code requirements.

AET 105 Construction Documents (2-3-3)
Offered Fall and Spring Semesters
This course covers the interpretation of residential, commercial and industrial building construction documents, including construction specifications, general conditions and construction industry symbols. Building construction terminology, contracts and the bidding process are also covered.

AET 110 Architectural Graphics I (2-3-3)
Offered Fall and Spring Semesters
This course is an introduction to the skills of architectural manual drafting. This course also includes development of drawing/visualization skills.

AET 111 Architectural Computer Graphics I (2-3-3)
Offered Fall and Spring Semesters
This course includes architectural/construction, basic computer-aided design commands and creation of construction industry symbols and standards.

AET 122 Basic Design Theory (1-6-3)
Offered Fall Semester
Prerequisites: AET 110
Co-requisite: ARV 110
This course will research the elements of design and incorporate ideas into simple design projects. Topics include developing written programs, diagrams and flow-charts, 2-D manual and CAD drawings, as well as 3-D models. Students will analyze and synthesize information to develop design skills.

AET 127 Building Information Modeling (2-3-3)
Offered Fall, Spring and Summer Semesters
This course is the study of Building Information Modeling (BIM) using industry-leading software. AutoDesk Revit and Navisworks software will be utilized.

AET 150 Preliminary Project Estimating (1-3-2)
Offered Summer Semester
This course covers basic construction estimating concepts with the main focus on square footage costs and preliminary budget estimating procedures.

AET 201 Building Systems II (2-5-3)
Offered Spring Semester
Prerequisite: AET 101
This course covers mechanical systems, electrical systems and code requirements for residential, commercial and industrial buildings. Included in the course are structural concepts, cladding systems, concrete, masonry, roofing and steel systems.

AET 221 Architectural Computer Graphics II (2-6-4)
Offered Fall Semester
Prerequisite: AET 127
This course includes a study of CAD commands with architectural applications and routines. A complete set of working drawings of a residential or commercial building using the computer as the drafting tool will be produced.

AET 225 Architectural Design Senior Project (2-6-4)
Offered Spring Semester
Prerequisite: AET 122
This course introduces architectural design problems that focus on different architectural contexts, as well as structural principles and construction processes. Instruction will continue to develop students' communication skills via oral presentation and 2-D and 3-D visualization.

AET 231 Architectural Computer Graphics III (2-6-4)
Offered Spring Semester.
Prerequisite: AET 127
This course covers advanced CAD applications. A complete set of construction documents for a residential or commercial building, including a specification outline, is produced and presented.

AET 299 Applied Research in Architecture (0-12-4)
Offered Fall, Spring and Summer Semesters
Prerequisite: Permission of instructor
This course provides an opportunity for students to investigate a faculty-approved topic in the architecture discipline using the application of practical research methods and is an independent study. This course is designed for students in the Architecture Engineering Technology program to explore part of their major in more depth by working one-on-one or in small groups on faculty-or student-designed research projects.