

Architectural and Civil Engineering Technology

Associate of Applied Science

Specializations:

- Architectural/Industrial Design
- Building Construction Management
- Civil Engineering Technology

Purpose: The Architectural and Civil Engineering Technology degree program is designed to develop qualified technicians for the field of engineering. The technician serves as an important link between the engineering professional and the skilled trades person in the design, construction, and operation of engineering projects.

Occupational Objectives: This program will provide graduates with the skills and specialized knowledge for employment as highly-trained architectural drafts persons; managers for the construction industry; technicians for construction projects such as highway, bridge, dam, commercial and residential construction; and other related occupations in a highly active industry. Employment opportunities are numerous from the planning stage through project completion and inspection in the following areas: construction industry in private enterprise, government-related business, consulting, and other engineering-related activities.

Admission Requirements: General college curricular admission

Program Notes: In addition to general college admission, applicants shall (a) have completed placement testing and (b) have met with their advisor to establish a planned course of study prior to being allowed to register for courses.

Satisfactory completion of the following high school units or their equivalent, at a minimum, is strongly recommended: four units of English, one unit of laboratory science (preferably physical science), one unit of social studies, and two units of mathematics (one unit of algebra and one unit of geometry).

Computer Competency Requirement: Students in this program will meet the college's computer competency requirement by passing the computer competency exam, administered in the testing centers on each campus, or by completing ITE 115, Introduction to Computer Applications and Concepts, or CSC 155, Computer Concepts and Applications, or equivalent. Students not passing the computer competency exam may retake the exam only once.

CURRICULUM				
COURSE	TITLE	LEC. HRS.	LAB. HRS.	CRS. CRE.

SDV 100	College Success Skills	1	0	1
ENG 111	College Composition I	3	0	3
MTH 115	Technical Mathematics I	3	0	3
ARC 121	Architectural Drafting I	2	3	3
ARC 131	Materials and Methods of Construction I	3	0	3
DRF 231	Computer-Aided Drafting I	2	2	3
____ ¹	Personal Wellness Elective	0-1	0-2	1
TOTAL		14-15	5-7	17
ENG 112	College Composition II	3	0	3
MTH 116	Technical Mathematics II	3	0	3
ARC 122	Architectural Drafting II	2	3	3
ARC 132	Materials and Methods of Construction II	3	0	3
PHY 201 ²	General College Physics I	3	3	4
____ ¹	Personal Wellness Elective	0-1	0-2	1
TOTAL		14-15	6-8	17

CURRICULUM

Architectural/Industrial Design Specialization

COURSE	TITLE	LEC. HRS.	LAB. HRS.	CRS. CRE.
BLD 210 or EGR 135	Building Structures or Statics for Engineering Technology	3	0	3
CIV 171	Surveying I	2	3	3
EGR 216 or DRF 232	Computer Methods in Engineering and Technology or Computer-Aided Drafting II	2	2	3
ARC 212	Architectural Drafting III	2	3	3
ARC 241	Building Mechanical Systems	3	0	3
____ ¹	Social/Behavioral Science Elective	3	0	3
TOTAL		15	8	18

BLD 231	Construction Estimating	3	0	3
ARC 213	Architectural Drafting IV	2	3	3
ARC 242	Building Electrical Systems	3	0	3
___ ___ ¹	Humanities/Fine Arts Elective	3	0	3
___ ___ ³	Approved ARC or DRF Technical Elective	2-3	0-3	3
TOTAL		13-14	3-6	15
Total Minimum Credits for AAS Degree in Architectural and Civil Engineering Technology, Architectural/Industrial Design Specialization				67

CURRICULUM

Building Construction Management Specialization

COURSE	TITLE	LEC. HRS.	LAB. HRS.	CRS. CRE.
BLD 210 or EGR 135	Building Structures or Statics for Engineering Technology	3	0	3
CIV 171	Surveying I	2	3	3
EGR 216	Computer Methods in Engineering and Technology	2	2	3
___ ___ ¹	Social/Behavioral Science Elective	3	0	3
BUS 100 or BLD 101	Introduction to Business or Construction Management I	3	0	3
ARC 241	Building Mechanical Systems	3	0	3
TOTAL		16	5	18
BLD 103	Principles of Residential Building Construction Inspection	3	0	3
BLD 231	Construction Estimating	3	0	3
BLD 247	Construction Planning and Scheduling	3	0	3
___ ___ ¹	Humanities/Fine Arts Elective	3	0	3
___ ___ ³	Approved ARC or DRF Technical Elective	2-3	0-3	3

TOTAL	14-15	0-3	15
Total Minimum Credits for AAS Degree in Architectural and Civil Engineering Technology, Building Construction Management Specialization			67

CURRICULUM				
Civil Engineering Technology Specialization				
COURSE	TITLE	LEC. HRS.	LAB. HRS.	CRS. CRE.
BLD 210 or EGR 135	Building Structures or Statics for Engineering Technology	3	0	3
CIV 171	Surveying I	2	3	3
EGR 216	Computer Methods in Engineering and Technology	2	2	3
CIV 160 or CIV ____ ³	Transportation Engineering or Approved CIV Elective	3	0	3
CIV 241	Applied Hydraulics and Drainage I	3	0	3
____ ¹	Social/Behavioral Science Elective	3	0	3
TOTAL		16	5	18
CIV 135 or BLD 231	Construction Management and Estimating or Construction Estimating	3	0	3
CIV 225 and CIV 226 or CIV ____ ³	Soil Mechanics and Soil Mechanics Laboratory or Approved CIV Elective	2-3	0-2	3
CIV 265 or CIV ____ ³	Curves and Earthwork or Approved CIV Elective	3	0	3
____ ¹	Humanities/Fine Arts Elective	3	0	3
CIV 270	Utilizing Surveying Software	2	2	3
TOTAL		13-14	2-4	15
Total Minimum Credits for AAS Degree in Architectural and Civil Engineering Technology, Civil Engineering Technology			67	

Specialization	
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¹A list of approved general education electives (humanities/fine arts, social/behavioral sciences, mathematics, science, and personal wellness) is provided in the General Education section of the catalog under Curriculum Planning and Design.

²Students considering transfer to a four-year college offering a BS degree in Engineering Technology should also consider completing PHY 202.

³A list of approved electives is available in the school office.

⁴Approved CIV electives are CIV 172, CIV 270, CIV 295, CIV 242, CIV 245, CIV 260, CIV 297, DRF 232, EGR 136, EGR 206, and GOL 105.

Note: Students seeking more complete job skills preparation should also consider taking ENG 115, Technical Writing.