ARCHITECTURE, ENGINEERING, AND CONSTRUCTION TECHNOLOGY (AAS)

(90 credits)

Program Description

Are you interested in being part of a team that creates the built environment – homes, schools, hospitals, roads, bridges, etc.? When you study Architecture, Engineering, and Construction (AEC) Technology at SPSCC, you gain experience to build a better tomorrow. From creating 2D drawings of cabinets to 3D modeling of land, buildings, and construction trades – there are opportunities abound. Join a long history of serving the community with a successful track record of our students finding gainful employment.

The Architecture, Engineering and Construction (AEC) Technology Associate in Applied Science Program, which is from here on referred to as the AEC Program, is designed to prepare students for entry-level employment in various sectors of the AEC Industry.

Program graduates will use industry standard software tools to translate conceptual ideas into 2D plans and 3D models. Experienced workers may advance to project managers, virtual design and construction (VDC) coordinators, plan checkers, detailers and/or Building Information Modeling (BIM) technicians. A typical work week will consist of 40 hours, but overtime may be required to meet deadlines. Graduates can work for engineering and architectural firms, contractors, government agencies, and a wide variety of related industries.

Career Opportunities

Program graduates will use industry standard software tools to translate conceptual ideas into 2D plans and 3D models. Experienced workers may advance to project managers, virtual design and construction (VDC) coordinators, plan checkers, detailers and/or Building Information Modeling (BIM) technicians. A typical work week will consist of 40 hours, but overtime may be required to meet deadlines. Graduates can work for engineering and architectural firms, contractors, government agencies, and a wide variety of related industries.

- Architectural Engineer
- Architectural and Civil Drafter
- Urban and Regional Planner

Program Information

- Students should expect early exposure to a wide range of software applications
- Textbooks and required tools are estimated to range from $300 to $500 for the 2-Year program
- An Autodesk certified personal computer is highly recommended. Estimated cost $1000 to $1500
- Program experiences will include E-Learning and innovative use of technology

ADMISSION: The AEC Technology Program has a limited enrollment policy with program curriculum pathways starting in Fall and Winter quarters only.

Outcomes

South Puget Sound Community College believes that all students need to develop a broad range of abilities that will not only make them more effective in their professional pursuits but will enhance their capacity to relate well to others in their daily lives.

Use industry standard software to:

- Communicate how a building is constructed, Identify conflicts between and among building systems, Design large public works infrastructures, Create virtual building models
- Communicate orally and in writing to diverse team members, colleagues, supervisors, and customers
- Present completed professional resume and portfolio that demonstrates skills, employment history, interests, and accomplishments
- Think critically, ethically, and creatively to solve work-related problems, and initiate professional growth and learning
- Apply general principles of project management to classroom work

The SPSCC college-wide abilities are embedded into each program:

- Effective Communication
- Information Literacy
- Analytical Reasoning
- Multicultural Awareness
- Social Responsibility

Courses by Quarter

Courses by Quarter

Code	Title	Credits
Option 1: FALL Start		
Quarter 1		
Transition Studies		
Quarter 2		
ENGL 090	Integrated Reading and Writing I	5
or ENGL 095	Integrated Reading and Writing II	
Quarter 3		
MATH 101	Technical Mathematics I	5
AEC 101	Fundamentals of Drafting	5
CCS 101	Pathways to Success	3
Quarter 4		
ENGL 098	Transitional English Composition	5
or ENGL& 101	English Composition I	
AEC 102	Introduction to CAD	5
AEC 103	Introduction to 3D Modeling	5
Quarter 5		

AEC 120	Construction Methods and Materials	5
AEC 160	Introduction to Civil Engineering and Survey	5
Select one of the following:		5
BUS 260	Principles of Management: Diversity	
PSYC 116	Psychology of Human Relations: Diversity	
HUM 121	Multicultural America: Diversity	
CMST& 210	Interpersonal Communication: Diversity	
CMST& 230	Small Group Communication: Diversity	
CMST& 240	Intercultural Communication: Diversity	
Quarter 6		
AEC 121	Architectural BIM I	5
AEC 161	Civil CAD I	5
AEC 171	Commercial BIM I	5
Quarter 7		
AEC 122	Architectural BIM II	5
AEC 162	Civil CAD II	5
AEC 172	Commercial BIM II	5
Quarter 8		
AEC 263	Civil CAD III	5
AEC 264	Survey I	3
AEC 273	Building Information Modeling III	5
AEC 274	Building Information Modeling IV	4

Code	Title	Credits
Option 2: WINTER Start		
Quarter 1		
Transition Studies		
Quarter 2		
ENGL 090	Integrated Reading and Writing I	5
or ENGL 095	Integrated Reading and Writing II	
Quarter 3		
AEC 101	Fundamentals of Drafting	5
AEC 103	Introduction to 3D Modeling	5
CCS 101	Pathways to Success	3
Quarter 4		
AEC 102	Introduction to CAD	5
AEC 120	Construction Methods and Materials	5
AEC 160	Introduction to Civil Engineering and Survey	5
Quarter 5		
ENGL 098	Transitional English Composition	5
or ENGL& 101	English Composition I	
MATH 101	Technical Mathematics I	5
Select one of the following:		5
BUS 260	Principles of Management: Diversity	
PSYC 116	Psychology of Human Relations: Diversity	
HUM 121	Multicultural America: Diversity	
CMST& 210	Interpersonal Communication: Diversity	
CMST& 230	Small Group Communication: Diversity	
CMST& 240	Intercultural Communication: Diversity	
Quarter 6		
AEC 121	Architectural BIM I	5
AEC 161	Civil CAD I	5
AEC 171	Commercial BIM I	5
Quarter 7		
AEC 122	Architectural BIM II	5
AEC 162	Civil CAD II	5
AEC 172	Commercial BIM II	5
Quarter 8		
AEC 263	Civil CAD III	5
AEC 264	Survey I	3
AEC 273	Building Information Modeling III	5
AEC 274	Building Information Modeling IV	4

Code	Title	Credits
Option 3: Part Time		
Quarter 1		
Transition Studies		
Quarter 2		
MATH 101	Technical Mathematics I	5
ENGL 090	Integrated Reading and Writing I	5
or ENGL 095	Integrated Reading and Writing II	
CCS 101	Pathways to Success	3
Quarter 3		
AEC 101	Fundamentals of Drafting	5
ENGL 098	Transitional English Composition	5
or ENGL& 101	English Composition I	
Quarter 4		
AEC 102	Introduction to CAD	5
AEC 103	Introduction to 3D Modeling	5
Quarter 5		
AEC 160	Introduction to Civil Engineering and Survey	5
AEC 161	Civil CAD I	5
Quarter 6		
AEC 120	Construction Methods and Materials	5
AEC 162	Civil CAD II	5
Quarter 7		
AEC 263	Civil CAD III	5
AEC 264	Survey I	5
Quarter 8		
Select one of the following:		5
BUS 260	Principles of Management: Diversity	
PSYC 116	Psychology of Human Relations: Diversity	
HUM 121	Multicultural America: Diversity	
CMST& 230	Small Group Communication: Diversity	
CMST& 240	Intercultural Communication: Diversity	
Quarter 9		
AEC 121	Architectural BIM I	5
AEC 171	Commercial BIM I	5
Quarter 10		
AEC 122	Architectural BIM II	5
AEC 172	Commercial BIM II	5
Quarter 11		
AEC 273	Building Information Modeling III	5

AEC 274	Building Information Modeling IV	5
CMST& 210	Interpersonal Communication: Diversity	

Pathway Maps

South Puget Sound Community College has provided pathways and associated recommended courses for ease of student selection based upon a student's career interest. Please review the pathway maps for required and recommended courses.

Architecture, Engineering, and Construction Technology Pathway Map
Associate in Applied Science
90 Credits
Option1 = Fall Start

Qtr. 1	Qtr. 2	Qtr. 3	Qtr. 4	Qtr. 5	Qtr. 6	Qtr. 7	Qtr. 8
Transition Studies	**ENGL 090** (5cr) *Integrated Reading and Writing I* **ENGL 095** (5cr) *Integrated Reading and Writing II*	**MATH 101** (5cr) *Technical Mathematics*	**ENGL 098** (5cr) *Transitional English Composition* **ENGL& 101** (5cr) *English Composition I*	**AEC 120** (5cr) *Construction Methods and Materials* ***Spring***	**AEC 121** (5cr) *Architectural CAD I* ***Fall***	**AEC 122** (5cr) *Architectural CAD II* ***Winter***	**AEC 263** (5cr) *Civil CAD III* ***Spring***
		AEC 101 (5cr) *Fundamentals of Drafting* ***Fall***	**AEC 102** (5cr) *Introduction to CAD* ***Winter***	**AEC 160** (5cr) *Introduction to Civil Engineering and Survey* ***Spring***	**AEC 161** (5cr) *Civil CAD I* ***Fall***	**AEC 162** (5cr) *Civil CAD II* ***Winter***	**AEC 264** (3cr) *Survey I* ***Spring***
		CCS 101 (3cr) *Pathways to Success*	**AEC 103** (5cr) *Introduction to 3-D Modeling* ***Winter***	*Choose One* (5cr): *(Human Relations /Diversity, recommended)* **BUS 260** (5cr) *Principles of Management: Diversity* **PSYC 116** (5cr) *Psychology of Human Relations: Diversity* **HUM121** (5cr) *Multicultural America: Diversity* **CMST& 210** (5cr) *Interpersonal Communication: Diversity* **CMST& 230** (5cr) *Small Group Communication: Diversity* **CMST 240** (5cr) *Intercultural Communication: Diversity*	**AEC 171** (5cr) *Building Information Modeling I* ***Fall***	**AEC 172** (5cr) *Building Information Modeling II* ***Winter***	**AEC 273** (5cr) *Building Information Modeling III* ***Spring***
							AEC 274 (4cr) *Building Information Modeling IV* ***Spring***

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Option2 = Winter Start

Qtr. 1	Qtr. 2	Qtr. 3	Qtr. 4	Qtr. 5	Qtr. 6	Qtr. 7	Qtr. 8
Transition Studies	**ENGL 090** (5cr) *Integrated Reading and Writing I* **ENGL 095** (5cr) *Integrated Reading and Writing II*	**AEC 101** (5cr) *Fundamentals of Drafting* ***Winter***	**AEC 102** (5cr) *Introduction to CAD* ***Spring***	**ENGL 098** (5cr) *Transitional English Composition* **ENGL& 101** (5cr) *English Composition I*	**AEC 121** (5cr) *Architectural CAD I* ***Fall***	**AEC 122** (5cr) *Architectural CAD II* ***Winter***	**AEC 263** (5cr) *Civil CAD III* ***Spring***
		AEC 103 (5cr) *Introduction to 3-D Modeling* ***Winter***	**AEC 120** (5cr) *Construction Methods and Materials* ***Spring***	**MATH 101** (5cr) *Technical Mathematics*	**AEC 161** (5cr) *Civil CAD I* ***Fall***	**AEC 162** (5cr) *Civil CAD II* ***Winter***	**AEC 264** (3cr) *Survey I* ***Spring***
		CCS 101 (3cr) *Pathways to Success*	**AEC 160** (5cr) *Introduction to Civil Engineering and Survey* ***Spring***	*Choose One* (5cr): *(Human Relations /Diversity, recommended)* **BUS 260** (5cr) *Principles of Management: Diversity* **PSYC 116** (5cr) *Psychology of Human Relations: Diversity* **HUM121** (5cr) *Multicultural America: Diversity* **CMST& 210** (5cr) *Interpersonal Communication: Diversity* **CMST& 230** (5cr) *Small Group Communication: Diversity* **CMST 240** (5cr) *Intercultural Communication: Diversity*	**AEC 171** (5cr) *Building Information Modeling I* ***Fall***	**AEC 172** (5cr) *Building Information Modeling II* ***Winter***	**AEC 273** (5cr) *Building Information Modeling III* ***Spring***
							AEC 274 (4cr) *Building Information Modeling IV* ***Spring***

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Architecture, Engineering, and Construction Technology Pathway Map
Associate in Applied Science **[PART_TIME track]**
90 Credits

Qtr. 1	Qtr. 2	Qtr. 3	Qtr. 4	Qtr. 5	Qtr. 6	Qtr. 7	Qtr. 8	Qtr. 9	Qtr. 10	Qtr. 11
Transition Studies	**MATH 101** (5cr) *Technical Mathematics*	**AEC 101** (5cr) *Fundamentals of Drafting* **winter**	**AEC 102** (5cr) *Introduction to CAD* **spring**	**AEC 160** (5cr) *Introduction to Civil Engineering and Survey* **fall**	**AEC 120** (5cr) *Construction Methods and Materials* **winter**	**AEC 263** (5cr) *Civil CAD III* **spring**	*Choose One* (5cr): *(Human Relations /Diversity, recommended)* **BUS 260** (5cr) *Principles of Management: Diversity* **PSYC 116** (5cr) *Psychology of Human Relations: Diversity* **HUM121** (5cr) *Multicultural America: Diversity* **CMST& 210** (5cr) *Interpersonal Communication: Diversity* **CMST& 230** (5cr) *Small Group Communication: Diversity* **CMST 240** (5cr) *Intercultural Communication: Diversity*	**AEC 121** (5cr) *Architectural CAD I* **fall**	**AEC 122** (5cr) *Architectural CAD II* **winter**	**AEC 273** (5cr) *Building Information Modeling III* **spring**
	ENGL 090 (5cr) *Integrated Reading and Writing I* **ENGL 095** (5cr) *Integrated Reading and Writing II*	**ENGL 098** (5cr) *Transitional English Composition* **ENGL& 101** (5cr) *English Composition I*	**AEC 103** (5cr) *Introduction to 3-D Modeling* **spring**	**AEC 161** (5cr) *Civil CAD I* **fall**	**AEC 162** (5cr) *Civil CAD II* **winter**	**AEC 264** (3cr) *Survey I* **spring**		**AEC 171** (5cr) *Building Information Modeling I* **fall**	**AEC 172** (5cr) *Building Information Modeling II* **winter**	**AEC 274** (4cr) *Building Information Modeling IV* **spring**
	CCS 101 (3cr) *Pathways to Success*									