

# 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
<b>Option 1: FALL Start</b>		
<b>Quarter 1</b>		
Transition Studies		
<b>Quarter 2</b>		
ENGL 090	Integrated Reading and Writing I	5
or ENGL 095	Integrated Reading and Writing II	
<b>Quarter 3</b>		
MATH 101	Technical Mathematics I	5
AEC 101	Fundamentals of Drafting	5
CCS 101	Pathways to Success	3
<b>Quarter 4</b>		
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
<b>Quarter 5</b>		

AEC 120	Construction Methods and Materials	5	AEC 161	Civil CAD I	5
AEC 160	Introduction to Civil Engineering and Survey	5	AEC 171	Commercial BIM I	5
Select one of the following:		5	<b>Quarter 7</b>		
BUS 260	Principles of Management: Diversity		AEC 122	Architectural BIM II	5
PSYC 116	Psychology of Human Relations: Diversity		AEC 162	Civil CAD II	5
HUM 121	Multicultural America: Diversity		AEC 172	Commercial BIM II	5
CMST& 210	Interpersonal Communication: Diversity		<b>Quarter 8</b>		
CMST& 230	Small Group Communication: Diversity		AEC 263	Civil CAD III	5
CMST& 240	Intercultural Communication: Diversity		AEC 264	Survey I	3
<b>Quarter 6</b>			AEC 273	Building Information Modeling III	5
AEC 121	Architectural BIM I	5	AEC 274	Building Information Modeling IV	4
AEC 161	Civil CAD I	5	<b>Code Title Credits</b>		
AEC 171	Commercial BIM I	5	<b>Option 3: Part Time</b>		
<b>Quarter 7</b>			<b>Quarter 1</b>		
AEC 122	Architectural BIM II	5	Transition Studies		
AEC 162	Civil CAD II	5	<b>Quarter 2</b>		
AEC 172	Commercial BIM II	5	MATH 101	Technical Mathematics I	5
<b>Quarter 8</b>			ENGL 090	Integrated Reading and Writing I	5
AEC 263	Civil CAD III	5	or ENGL 095	Integrated Reading and Writing II	
AEC 264	Survey I	3	CCS 101	Pathways to Success	3
AEC 273	Building Information Modeling III	5	<b>Quarter 3</b>		
AEC 274	Building Information Modeling IV	4	AEC 101	Fundamentals of Drafting	5
<b>Code Title Credits</b>			ENGL 098	Transitional English Composition	5
<b>Option 2: WINTER Start</b>			or ENGL& 101	English Composition I	
<b>Quarter 1</b>			<b>Quarter 4</b>		
Transition Studies			AEC 102	Introduction to CAD	5
<b>Quarter 2</b>			AEC 103	Introduction to 3D Modeling	5
ENGL 090	Integrated Reading and Writing I	5	<b>Quarter 5</b>		
or ENGL 095	Integrated Reading and Writing II		AEC 160	Introduction to Civil Engineering and Survey	5
<b>Quarter 3</b>			AEC 161	Civil CAD I	5
AEC 101	Fundamentals of Drafting	5	<b>Quarter 6</b>		
AEC 103	Introduction to 3D Modeling	5	AEC 120	Construction Methods and Materials	5
CCS 101	Pathways to Success	3	AEC 162	Civil CAD II	5
<b>Quarter 4</b>			<b>Quarter 7</b>		
AEC 102	Introduction to CAD	5	AEC 263	Civil CAD III	5
AEC 120	Construction Methods and Materials	5	AEC 264	Survey I	5
AEC 160	Introduction to Civil Engineering and Survey	5	<b>Quarter 8</b>		
<b>Quarter 5</b>			Select one of the following:		
ENGL 098	Transitional English Composition	5	BUS 260	Principles of Management: Diversity	
or ENGL& 101	English Composition I		PSYC 116	Psychology of Human Relations: Diversity	
MATH 101	Technical Mathematics I	5	HUM 121	Multicultural America: Diversity	
Select one of the following:		5	CMST& 230	Small Group Communication: Diversity	
BUS 260	Principles of Management: Diversity		CMST& 240	Intercultural Communication: Diversity	
PSYC 116	Psychology of Human Relations: Diversity		<b>Quarter 9</b>		
HUM 121	Multicultural America: Diversity		AEC 121	Architectural BIM I	5
CMST& 210	Interpersonal Communication: Diversity		AEC 171	Commercial BIM I	5
CMST& 230	Small Group Communication: Diversity		<b>Quarter 10</b>		
CMST& 240	Intercultural Communication: Diversity		AEC 122	Architectural BIM II	5
<b>Quarter 6</b>			AEC 172	Commercial BIM II	5
AEC 121	Architectural BIM I	5	<b>Quarter 11</b>		
			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 [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 (3cr) Technical Mathematics	AEC 101 (3cr) Fundamentals of Drafting winter	AEC 102 (3cr) Introduction to CAD spring	AEC 160 (3cr) Introduction to Civil Engineering and Survey fall	AEC 161 (3cr) Civil CAD I fall	AEC 162 (3cr) Civil CAD II winter	AEC 263 (3cr) Civil CAD III spring	Choose One (3cr) Human Relations /Diversity, (recommended)	AEC 121 (3cr) Architectural CAD I fall	AEC 122 (3cr) Architectural CAD II winter	AEC 273 (3cr) Building Information Modeling III spring
	ENGL 090 (3cr) Integrated Reading and Writing I ENGL 095 (3cr) Integrated Reading and Writing II	ENGL 098 (3cr) Transitional English Composition ENGL 101 (3cr) English Composition I	AEC 103 (3cr) Introduction to 3-D Modeling spring	AEC 163 (3cr) Civil CAD I fall	AEC 164 (3cr) Civil CAD II winter	AEC 165 (3cr) Survey I spring	BUS 260 (3cr) Principles of Management PSYC 116 (3cr) Psychology of Human Relations Diversity HUM121 (3cr) Multicultural America: Diversity	AEC 171 (3cr) Building Information Modeling I fall	AEC 172 (3cr) Building Information Modeling II winter	AEC 274 (3cr) Building Information Modeling IV spring	
	CCS 108 (3cr) Pathways to Success	AEC 105 (3cr) Introduction to 3-D Modeling winter	Choose One (3cr) Human Relations /Diversity, (recommended) BUS 260 (3cr) Principles of Management: Diversity PSYC 116 (3cr) Psychology of Human Relations: Diversity HUM121 (3cr) Multicultural America: Diversity CMST& 210 (3cr) Interpersonal Communication: Diversity CMST& 230 (3cr) Small Group Communication: Diversity CMST 240 (3cr) Intercultural Communication: Diversity	AEC 173 (3cr) Building Information Modeling I fall	AEC 174 (3cr) Building Information Modeling II winter	AEC 275 (3cr) Building Information Modeling III spring	CMST 240 (3cr) Intercultural Communication: Diversity CMST& 230 (3cr) Small Group Communication: Diversity AEC 274 (3cr) Building Information Modeling IV spring				

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 (3cr) Integrated Reading and Writing I ENGL 095 (3cr) Integrated Reading and Writing II	MATH 101 (3cr) Technical Mathematics	ENGL 098 (3cr) Transitional English Composition ENGL 101 (3cr) English Composition I	AEC 120 (3cr) Construction Methods and Materials Spring	AEC 121 (3cr) Architectural CAD I fall	AEC 122 (3cr) Architectural CAD II winter	AEC 263 (3cr) Civil CAD III Spring
	AEC 101 (3cr) Fundamentals of Drafting fall	AEC 102 (3cr) Introduction to CAD winter	AEC 160 (3cr) Introduction to Civil Engineering and Survey Spring	AEC 161 (3cr) Civil CAD I fall	AEC 162 (3cr) Civil CAD II winter	AEC 164 (3cr) Survey I Spring	
	CCS 108 (3cr) Pathways to Success	AEC 105 (3cr) Introduction to 3-D Modeling winter	Choose One (3cr) Human Relations /Diversity, (recommended) BUS 260 (3cr) Principles of Management: Diversity PSYC 116 (3cr) Psychology of Human Relations: Diversity HUM121 (3cr) Multicultural America: Diversity CMST& 210 (3cr) Interpersonal Communication: Diversity CMST& 230 (3cr) Small Group Communication: Diversity CMST 240 (3cr) Intercultural Communication: Diversity	AEC 173 (3cr) Building Information Modeling I fall	AEC 174 (3cr) Building Information Modeling II winter	AEC 275 (3cr) Building Information Modeling III Spring	AEC 274 (3cr) 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 (3cr) Integrated Reading and Writing I ENGL 095 (3cr) Integrated Reading and Writing II	AEC 101 (3cr) Fundamentals of Drafting winter	AEC 102 (3cr) Introduction to CAD Spring	ENGL 098 (3cr) Transitional English Composition ENGL 101 (3cr) English Composition I	AEC 121 (3cr) Architectural CAD I fall	AEC 122 (3cr) Architectural CAD II winter	AEC 263 (3cr) Civil CAD III Spring
	AEC 105 (3cr) Introduction to 3-D Modeling winter	AEC 120 (3cr) Construction Methods and Materials Spring	MATH 101 (3cr) Technical Mathematics	AEC 161 (3cr) Civil CAD I fall	AEC 162 (3cr) Civil CAD II winter	AEC 164 (3cr) Survey I Spring	
	CCS 108 (3cr) Pathways to Success	AEC 160 (3cr) Introduction to Civil Engineering and Survey Spring	Choose One (3cr) Human Relations /Diversity, (recommended) BUS 260 (3cr) Principles of Management: Diversity PSYC 116 (3cr) Psychology of Human Relations: Diversity HUM121 (3cr) Multicultural America: Diversity CMST& 210 (3cr) Interpersonal Communication: Diversity CMST& 230 (3cr) Small Group Communication: Diversity CMST 240 (3cr) Intercultural Communication: Diversity	AEC 173 (3cr) Building Information Modeling I fall	AEC 174 (3cr) Building Information Modeling II winter	AEC 275 (3cr) Building Information Modeling III Spring	AEC 274 (3cr) Building Information Modeling IV Spring

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