

## CTE Course Description and Standards Crosswalk

### Course Information

Course Name	Process Technology Semester 2
Course Number	86342
Number of High School Credits	.5
Sequence or CTEPS (You must first have the Sequence or CTEPS entered into the EED-CTE system.)	Process Technology,
Date of district Course Revision	November 2014

### Career & Technical Student Organization (CTSO)

CTSO embedded in this sequence	SkillsUSA
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### Occupational Standards

Source of Occupational Standards	SkillsUSA; Alaska Process Industry Careers Consortium (APICC), Center for the Advancement of Process Technology (CAPT)
Names/Numbers of Occupational Standards	SkillsUSA: Employability, APICC, CAPT

### Registration Information

Course Description (brief paragraph – as shown in your student handbook or course list)	This course is an introduction to process operations in the Process Technology industry through an overview of general information, processes, procedures, and equipment. Processing techniques used in oil & gas, chemical, mining, power generation, pulp & paper, waste water, food & beverage, and the pharmaceutical industries will be investigated. In addition, workplace information such as safety, quality, team building is introduced. Finally, basic processing equipment such as piping, valves, pumps, compressors, turbines, motors, etc. will also be introduced.
Instructional Topic Headings (please separate each heading by a semi-colon)	Types of processing used in various industries and associated careers, the basics of physics and chemistry are used in processing industry, Workplace skills used in processing industry, Basic equipment used in processing industry. Safety, health, environmental, and security measures used in processing industry.

### Summative Assessments and Standards

Technical Skills Assessment (TSA)	No
Course addresses:	
New Alaska ELA and Math Standards	Yes
Alaska Cultural Standards	Yes
All Aspects of Industry (AAI)	Yes
Core Technical Standards	Yes
Employability Standards	Yes

### Employability Standards

Source of Employability Standards	State of Alaska
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### Tech Prep

Current Tech Prep Articulation Agreement? (Y/N)	Y
Date of Current Agreement	May 2013

**DISTRICT NAME: Mat-Su Borough School District**

Postsecondary Institution Name	University of Alaska Fairbanks
Postsecondary Course Name	Introduction to Process Technology
Postsecondary Course Number	PRT A101
# of Postsecondary Credits	3

### Additional CTE Course Information

Author	
Course developed by	DePriest, APICC, Revised by: J. Halfacre
Course adapted from	Kenai Peninsula College, KPSD
Date of previous course revision	2005
Course Delivery Model	
Is the course brokered through another institution or agency? (Y/N)	No

Standards Alignment
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Student Performance Standards (Learner Outcomes or Knowledge & Skill Statements)	Specific Occupational Skills Standard	Common Technical Core Standards	New Alaska ENG/LA Standards	New Alaska Math Standards	Alaska Cultural Standards	Employability / Career Readiness Standards	All Aspects of Industry/ Systems	Assessment
Identify types of processing used in various industries (including oil and gas, mining, water and waste water, etc) and associated careers.	CAPT	AG-PST1,2,3,4,5	SL 11-12.2; SL 11-12.5; RH 11-12.7; RST 11-12.2; RST 11-12.7; WHST 11-12.7; WHST 11-12.8	S.IC.3; S.IC.4	B2,3,4	A2,3,5 B2,3,4,5	Technical Skills Planning Technology	Instructor Tests, Demonstration
Identify how basic physics and chemistry are used in the processing industry.	CAPT	AG-PST1,2,3,4,5	SL 11-12.5; RH 11-12.7; RST 11-12.7;	N-Q1; N-Q2; A-SSE.4; A-CED.1; A-RE1.1; A-	B2,4	A2,5	Technical Skills	Instructor Tests, Demonstration

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Student Performance Standards (Learner Outcomes or Knowledge & Skill Statements)	Specific Occupational Skills Standard	Common Technical Core Standards	New Alaska ENG/LA Standards	New Alaska Math Standards	Alaska Cultural Standards	Employability / Career Readiness Standards	All Aspects of Industry/ Systems	Assessment
			RST 11-12.8; RST 11-12.9; WHST 11-12.9	RE1.3; 6-M6.2; S-IC.5				
Demonstrate appropriate safety, health, environmental, and security measures used in the processing industry.	CAPT APICC	AG-PST1,2,3,4,5	SL 11-12.2; SL 11-12.4; SL 11-12.5; L 11-12.6	A-CED.2; A-CED.3; A-RE1.11; F-1F.6; F-13F.1; 6-6MD.1; 6-M6.2; S-1D.1; S-1D.6	B2,4	A2,5	Technical Skills Health & Safety Community	Instructor Tests,
Identify, create and use process drawings, including P and ID's, BFD's and PFD's, etc.	CAPT APICC	AG-PST1,2,3,4,5	L.11-12.6; RST 11-12.2; RST 11-12.4; WHST 11.12.7a-e	NQ.1-3; 6-CO.1; 6-CO.4; 6.CO.12; 6.CO.13; 6.SRT.8; 6-M6.3	B2,4	A2,5	Technical Skills Technology	Test, Project
Be familiar with and use computers and software including: Auto Desk, Office Suite, and Sketch up.	CAPT APICC	AG-PST1,2,3,4,5	WHST 11-12.7	N-VM.12; A-APR.1; N.CA.6; 6-CO.1; 6-CO.2; 6-CO.4; 6.CO.12; 6.CO.13	B2,4	A2,5	Technical Skills Technology	Projects

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<b>Student Performance Standards (Learner Outcomes or Knowledge &amp; Skill Statements)</b>	<b>Specific Occupational Skills Standard</b>	<b>Common Technical Core Standards</b>	<b>New Alaska ENG/LA Standards</b>	<b>New Alaska Math Standards</b>	<b>Alaska Cultural Standards</b>	<b>Employability / Career Readiness Standards</b>	<b>All Aspects of Industry/ Systems</b>	<b>Assessment</b>
Identify and demonstrate how basic workplace skills are used in the processing industry.	CAPT APICC	AG- PST1,2,3, 4,5	RST 11- 12.7; RST 11- 12.4	N-Q.1-3; N-VM3		A2,5	Technical Skills	Instructor Tests, Demonstrat ion
Identify basic “mover” equipment used in the processing industry.	CAPT APICC	AG- PST1,2,3, 4,5	L.11- 12.6; RST 11- 12.3; RST 11- 12.6	S-1D.9; S- 1D.9; N- Q.1-3; N- VM.6; F- 1F.6; F- LE.2; F-T- 4.5; 6- 6MD.1	B2,4	A2,5	Technical Skills Technolog y	Instructor Tests, Lab
Identify basic “power” equipment used in the processing industry.	CAPT APICC	AG- PST1,2,3, 4,5	L.11- 12.6; RST 11- 12.3; RST 11- 12.6	S-1D.7; S- 1D.9; N- Q.1-3; A- CED.4; F- 1F.6; A- RE1.1; A- RE1.3; F- TF.3; F- LE.2; F- TF.5; 6.6MD.1	B2,4	A2,5	Technical Skills Technolog y	Tests, Lab
Identify basic “manipulator” equipment used in the processing industry.	CAPT APICC	AG- PST1,2,3, 4,5	L.11- 12.6; RST 11- 12.3; RST 11- 12.6	S-1D.7; S- 1D.9; N- Q.1-3; F.1F.6; F- LE.2; F- TF.5; 6.6MD.1	B2,4	A2,5	Technical Skills Technolog y	Tests, Lab
Identify basic process systems used in the processing industry.	CAPT APICC	AG- PST1,2,3, 4,5	L.11- 12.6;	S-1D.7; S- 1D.9; N-	B2,4	A2,5	Technical Skills Technolog	Tests, Lab

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		4,5	RST 11- 12.3; RST 11- 12.6	Q.1-3; F.IF.6; F- LE.2; F- TF.5; 6.6MD.7			y	
Identify and use process instrumentation.	CAPT APICC	AG- PST1,2,3, 4,5	L.11- 12.6; RST 11- 12.3; RST 11- 12.6	S-1D.7; S- 1D.9; N- Q.1-3; F.IF.6; F- LE.2; F- TF.5; 6.6MD.7	B2,4	A2,5	Technical Skills Technolog y	Tests, Lab
Participate in discussions with guest speakers/field trips from a variety of career fields within the processing industry.	CAPT APICC	AG- PST1,2,3, 4,5	L.11- 12.6; RST.11- 12.4	S.IC.3; S- MD.7	B2,4	A2,5	Communit y Work Habits	Demonstrat ion

### Instructional Resources

**List the major instructional resources used for this course: (websites, textbooks, essential equipment, reference materials, supplies)**

Introduction to Process Technology  
 CAPT(Center for the Advancement of Process Tech)  
 ISBN-10: 0137004141  
 ISBN-13: 9780137004140  
 Publisher: Prentice Hall  
 Copyright: 2010  
 Format: Cloth; 384 pp  
 Published: 04/21/2009

Alaska Process Industry Careers Consortium (APICC) - <http://www.apicc.org>