



Fairbanks North Star Borough School District

**Fairbanks North Star Borough School District**

# **Career & Technical Education Curriculum**

# **Agriculture**

**Adopted April 15, 2025**

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**We would also like to recognize** the Board Curriculum Committee and the many teachers, administrators, parents, and community members for their contributions to this document.

# Acronyms

ACC	Alaska Core Competencies
AKCIS	Alaska Career Information System
CTC	Community and Technical College
CTE	Career Technical Education
CTEPS	Career and Technical Education Program of Study
CTSO	Career Technical Student Organization
FNSBSD	Fairbanks North Star Borough School District
PLCP	Personal Learning and Career Plan
RPC	Recognized Post-secondary Credential
UAS	University of Alaska Southeast

# Explanation of Terms

## General Terms and Definitions

**Career Cluster:** A career cluster is a structure for organizing and delivering quality CTE programs around occupations and broad industries.

**Career Pathway:** A career pathway is a strand of a career cluster that centers on a common set of academic, technical, and workplace skills and knowledge. It is a sector from the broader career cluster.

**CTEPS:** CTEPS stands for “Career and Technical Education Program of Study” which is also called Program of Study or POS. It is a coherent and aligned sequence of educational elements that begins at secondary school and continues without duplication or remediation into postsecondary education/training, and that leads to an industry recognized credential or certificate, or an associate or baccalaureate degree. (See Program of Study)

**Program of Study (POS):** A program of study is designed to provide successful student transitions between secondary and postsecondary education. A program of study is a comprehensive, structured approach for delivering academic and career and technical education to prepare students for postsecondary education and career success. (See CTEPS)

**Sequence:** A sequence is a group of courses that a student may take within a cluster, usually in a progression of foundational skills to more focused and higher level skills.

## CTE Specific Terms

**Career and Technical Student Organization (CTSO):** A CTSO is an organization for students enrolled in a CTE program that engages in CTE activities as an integral part of the instructional program. Alaska has six (6) recognized CTSOs: Business Professionals of America (BPA); Family, Career, and Community Leaders of America (FCCLA); Health Occupations Students of America (HOSA)- Future Health Professionals; DECA – an Association of Marketing Students; FFA – Agricultural Education; and SkillsUSA.

**Concentrator:** A secondary student who has earned two (2) courses in a single CTE pathway within those career clusters where 2 credit sequences are recognized by the State and its local eligible recipients, or where the student has documented proficiencies that are equivalent to this criteria.

**Concurrent Enrollment:** A written agreement between a secondary and a postsecondary program that allows a high school course taught by a high school teacher to qualify for postsecondary credit.

**Participant:** A secondary student who has earned credit in one (1) or more approved course(s) in any career and technical education (CTE) program area.

## Curriculum Terms

**Alaska Content Standards:** Content standards are broad statements, adopted by the State Board of Education and Early Development, indicating what students should know and be able to do as a result of their public school experience.

**Alaska Cultural Standards:** The Alaska Cultural Standards for Students were developed by the Alaska Native Knowledge Network and adopted by the State Board of Education & Early Development in 1998. Cultural Standards are meant to enrich the Content Standards and provide guidelines for nurturing and building in students the rich and varied cultural traditions that continue to be practiced in communities throughout Alaska. The

standards are broad statements of what students should know and be able to do as a result of their experience in a school that is aware of and sensitive to the surrounding physical and cultural environment.

**Alaska Employability Standards:** Alaska’s Employability standards are to be used in conjunction with Alaska’s academic content and performance standards to ensure Alaska’s student have the skills and knowledge necessary to be good citizens, effective parents, productive workers, and most of all, life-long learners. Alaska’s students are expected to learn how to learn and apply their skills and knowledge in a variety of settings to create a satisfying and productive life. These standards are designed to promote successful student transition from school to work.

**Alaska Performance Standards:** Performance standards are measureable statements of learning expectations, adopted by the State Board of Education and Early Development, indicating what students should know and be able to do as a result of their public school experience. Alaska has adopted Performance Standards in reading, writing, mathematics, and science.

**All Aspects of Industry:** All Aspects of Industry essentially provides a set of standards for all CTE courses. All Aspects of Industry defines nine aspects common to any business or enterprise: planning; management; finance; technical and production skills; principles of technology; labor issues; community issues; health, safety and environment; personal work habits.

**Personal Learning Plan:** A personal learning plan is developed by students – typically in collaboration with teachers, counselors, and parents – as a way to help them achieve short- and long-term goals, most commonly at the middle and high school levels. Students can chart a personal educational program that will allow them to achieve their educational and aspirational goals, while also fulfilling school requirements such as particular credit or course requirements for graduation. A personal learning plan also documents major learning accomplishments or milestones.

**Student Performance Standards:** Student performance standards are statements of the essential skills, knowledge, and tasks that FNSBSD students are expected to master in the course. These are developed at the district level.

# Middle School Courses

## Grades 6 – 8

# Plants and Animals

COURSE INFORMATION	
<b>Course Name:</b>	Plants and Animals
<b>Course Number:</b>	TBA
<b>Grade(s):</b>	6-8
<b>Length (# of semesters):</b>	One semester
<b>Credit:</b>	0.5
<b>Foundational Course:</b>	<input type="checkbox"/> This is a foundational CTE course (foundational courses are not technical)
<b>Prerequisites:</b>	None
<b>Sequence or CTEPS:</b>	Agriculture
<b>Date of District Course Revision:</b>	Spring 2025
CAREER & TECHNICAL STUDENT ORGANIZATION (CTSO)	
<b>CTSO Embedded in this Sequence:</b>	Future Farmers of America
TECHNICAL/OCCUPATIONAL STANDARDS	
<b>Source(s) of Technical Standards:</b>	Agricultural, Food, and Natural Resources
<b>Names/Numbers of Technical Standards:</b>	Agricultural Career Pathways, Agricultural Practices, Plant Science, Animal Science, Animal Welfare and Sustainability, Sustainability of Agriculture, Agricultural Economics and Business, Agricultural Policy and Impact, Technology in Agriculture.
REGISTRATION INFORMATION	
<b>Course Description:</b> (Brief paragraph - as will be shown in the student course catalog)	This introductory course is designed to give students a foundational understanding of plants and animals, particularly in the context of agriculture, farming, and natural sciences. Students will explore how plants grow, the importance of agriculture in daily life, and the role of animals in farming and ecosystems. The course will also connect to the National FFA Organization, highlighting leadership, service, and career development in the agricultural field. This course aims to foster a comprehensive understanding of agriculture, plants, animals, and their interconnectedness with both the environment and society. It integrates essential core subjects and emphasizes Alaska's unique agricultural context, while promoting sustainable practices and community involvement.
<b>Instructional Topic Headings:</b> (Separate each heading with a semi-colon.)	Introduction to Agriculture; The Science of Plants; The Science of Animals and Their Role in Agriculture; Sustainable Farming Practices; Agriculture and the Economy.
POSTSECONDARY CREDENTIAL	
<b>Recognized Postsecondary Credential (RPC):</b> <i>(Replaces Technical Skills Assessment (TSA) - not all TSAs will qualify as an RPC, and RPC is not required for all courses)</i>	
STANDARDS	
<b>This course addresses (enter yes/no):</b>	
<b>Alaska English Language Arts and Math Standards:</b>	Yes ( <a href="#">ELA &amp; Math Standards</a> )
<b>Alaska Cultural Standards:</b>	Yes ( <a href="#">Alaska Cultural Standards</a> )

<b>All Aspects of Industry (AAI):</b>	
<b>Core Technical Standards:</b>	
<b>Employability Standards:</b>	Yes ( <a href="#">Alaska Employability Standards</a> )
<b>EMPLOYABILITY STANDARDS</b>	
<b>Employability Standards source:</b>	Alaska ( <a href="#">Alaska Employability Standards</a> )
<b>DUAL CREDIT AGREEMENT</b>	
<b>CTSO participation is included:</b>	No
<b>Current Dual Credit Agreement:</b> <i>(Agreements should be reviewed and updated annually)</i>	<input type="checkbox"/> <i>(If checked, complete the Dual Credit section below.)</i>
<b>Date of Current Agreement:</b>	N/A
<b>Postsecondary Institution Name:</b>	N/A
<b>Postsecondary Course Name:</b>	N/A
<b>Postsecondary Course Number:</b>	N/A
<b>Postsecondary Course Credits:</b>	N/A
<b>AUTHOR</b>	
<b>Course Developed By:</b>	Andrea Wade
<b>Course Adapted From:</b>	
<b>Date of Previous Course Revision:</b>	N/A
<b>COURSE DELIVERY MODEL</b>	
<b>Is this course brokered through another institution or agency?</b> <i>(yes/no)</i>	No

Standards Alignment								
Student Performance Standards (Instructional Topic Headings)	Specific Technical Skill Standards	Alaska English/ Language Arts Standards	Alaska Math Standards	Alaska Science Standards	Alaska Cultural Standards	Employability/ Career Readiness Standards	Formative Assessments	
Introduction to Agriculture	1.1, 1.2, 1.3, 2.1, 2.2, 2.3, 9.1, 9.2	RI.6.1, RI.6.3., W.6.2	6.RP.A.3, 6.SP.B.5	MS-ESS3-1, MS-ESS3-3	A, B	A, B	Research project on agriculture career. Reflective essay on FFA's impact on communities. Group Discussion.	
The Science of Plants	3.1, 3.2, 3.3, 3.4, 3.5	RI.6.7, W.6.1	6.RP.A.3, 6.SP.B.5	MS-LS1-1, MS-LS1-5	C		Plant growth experiment and data collection. Plant growth chart and analysis. Presentation on the role of photosynthesis and plant care in farming.	

The Science of Animals and Their Role in Agriculture	4.1, 4.2, 4.3, 4.4, 5.1, 5.2	W.6.2, RI.6.9	6.RP.A.3, 6.SP.B.5	MS-LS2-4, MS-LS1-2	D		Animal care plans. Oral presentation on the importance of animals in farming. Farm animal diagram and classification
Sustainable Farming Practices	6.1, 6.2, 6.3, 6.4	W.6.7, W.6.1	6.RP.A.3, 6.SP.B.5	MS-ESS3-3, MS-LS2-5	C	A	Sustainable farming research project. Group presentation of local farms or sustainable practices.
Agriculture and the Economy	7.1, 7.2, 7.3, 7.4, 8.1, 8.2	RI.6.10, W.6.2	6.SP.B.5, 6.RP.A.3	MS-ESS3-3	A	A, B	Mock farm to market simulation. Class debate on the importance of local vs. global agriculture. Research report on Alaska's agricultural exports

**INSTRUCTIONAL RESOURCES**

List the major instructional resources used for this course:

<b>Websites:</b>	<a href="https://thecouncil.ffa.org/afnr/">https://thecouncil.ffa.org/afnr/</a>
<b>Textbooks:</b>	
<b>Essential Equipment:</b>	
<b>Reference Materials:</b>	
<b>Supplies:</b>	

# High School Courses

## Grades 9-12

# Introduction to Agriculture

COURSE INFORMATION	
<b>Course Name:</b>	Introduction to Agriculture
<b>Course Number:</b>	TBA
<b>Grade(s):</b>	9-12
<b>Length (# of semesters):</b>	One semester
<b>Credit:</b>	0.5
<b>Foundational Course:</b>	<input type="checkbox"/> This is a foundational CTE course (foundational courses are not technical)
<b>Prerequisites:</b>	N/A
<b>Sequence or CTEPS:</b>	Agriculture
<b>Date of District Course Revision:</b>	Spring 2025
CAREER & TECHNICAL STUDENT ORGANIZATION (CTSO)	
<b>CTSO Embedded in this Sequence:</b>	Future Farmers of America
TECHNICAL/OCCUPATIONAL STANDARDS	
<b>Source(s) of Technical Standards:</b>	Agriculture, Food, & Natural Resources
<b>Names/Numbers of Technical Standards:</b>	CRP; CS; AG-ANI; BS; NR; AG-FD; PS; PST
REGISTRATION INFORMATION	
<b>Course Description:</b> (Brief paragraph - as will be shown in the student course catalog)	This class will provide students with the opportunity to analyze the importance of agricultural education in a real-world context, integrating CTE and Science content standards. Students will have the opportunity to develop their own supervised agricultural pathways, as well as compete in state and national FFA leadership and career proficiency events. Students will have the opportunity to interact with industry professionals in horticulture, vet science, and natural resource management, business and marketing, and climatology. Class time will be divided equally between the classroom and greenhouse.
<b>Instructional Topic Headings:</b> (Separate each heading with a semi-colon.)	Food Systems; Farmers, Factories, & Food Chains; Consumers & Communities
POSTSECONDARY CREDENTIAL	
<b>Recognized Postsecondary Credential (RPC):</b> <i>(Replaces Technical Skills Assessment (TSA) - not all TSAs will qualify as an RPC, and RPC is not required for all courses)</i>	
STANDARDS	
<b>This course addresses (enter yes/no):</b>	
<b>Alaska English Language Arts and Math Standards:</b>	Yes ( <a href="#">ELA &amp; Math Standards</a> )
<b>Alaska Cultural Standards:</b>	Yes ( <a href="#">Alaska Cultural Standards</a> )
<b>All Aspects of Industry (AAI):</b>	
<b>Core Technical Standards:</b>	Yes ( <a href="#">The Council - FFA</a> )
<b>Employability Standards:</b>	Yes ( <a href="#">Alaska Employability Standards</a> )
EMPLOYABILITY STANDARDS	
<b>Employability Standards source:</b>	Alaska ( <a href="#">Alaska Employability Standards</a> )

<b>DUAL CREDIT AGREEMENT</b>	
<b>CTSO participation is included:</b>	No
<b>Current Dual Credit Agreement:</b> <i>(Agreements should be reviewed and updated annually)</i>	<input type="checkbox"/> <i>(If checked, complete the Dual Credit section below.)</i>
<b>Date of Current Agreement:</b>	N/A
<b>Postsecondary Institution Name:</b>	N/A
<b>Postsecondary Course Name:</b>	N/A
<b>Postsecondary Course Number:</b>	N/A
<b>Postsecondary Course Credits:</b>	N/A
<b>AUTHOR</b>	
<b>Course Developed By:</b>	Heather Bogardus
<b>Course Adapted From:</b>	
<b>Date of Previous Course Revision:</b>	N/A
<b>COURSE DELIVERY MODEL</b>	
<b>Is this course brokered through another institution or agency?</b> <i>(yes/no)</i>	No

## Standards Alignment

Student Performance Standards (Instructional Topic Headings)	Specific Technical Skill Standards	Alaska English/ Language Arts Standards	Alaska Math Standards	Alaska Science Standards	Alaska Cultural Standards	Employability/ Career Readiness Standards	Formative Assessments
<b>Food Systems</b>	<p>CRP 1; CRP 2; CRP 4; CRP 9; CRP 10; CRP12CS&gt;2; CS.5; CS.6</p>	<p>R1.9-10.1 &amp; R1.11-12.1; R1.9-10.2; R1.11-12.2; R1.9-10.7; R1.11-12.7; W.9-10.1; W.11-12.1; W.9-10.2; W.11-12.2; W.9-10.7; W.11-12.7; W.9-10.9; W.11-12.9; SL.9-10.4; SL.11-12.4; SL.9-10.4; SL.11-12.4; SL.9-10.5; SL.11-12.5; L.9-10.4; L.11-12.4; L.9-10.6 &amp; L.11-12.6</p>		<p>PS3.3;LS1-3 LS1.5; LS2.4;LS2-5; LS2-1; LS2-7; LS3-2; ESS2-2; ESS2-5; ESS2-6; ESS3-1; ESS3-2; ESS3-3; ESS3-4; ESS3-5; ESS3-6; ETS1-1-3</p>	<p>A.1; A.3; D.2; D.3;</p>		<p>Group Projects and Summative Assessments</p>
<b>Farmers, Factories, and Food Chains</b>	<p>CRP 2; CRP 3; CRP 4; CRP 5; CRP 6; CRP 7; CRP 8; CRP 11; CS.01; CS.02; CS.03; CS.04; CS.06; AG- ANI.01; AG- ANI.03; AG- ANI.04; AG- ANI.05; AG- ANI.06; BS.02; NR.01; NR.02; AG- FD.04; PS.01;</p>	<p>R1.9-10.1 &amp; R1.11-12.1; R1.9-10.2; R1.11-12.2; R1.9-10.3; R1.11-12.3; R1.11-12.7; W.9-10.9; W.11-12.7; W.9-10.1; W.11-12.1; W.9-10.2; W.11-12.2; W.11-12.2; W.9-10.7; W.11-12.7; W.9-10.9; W.11-12.9; SL.11-12.1; SL.9-10.4; SL.11-12.4; SL.11-12.5; L.9-10.4; L.11-12.4; L.9-10.6 &amp; L.11-12.6</p>		<p>PS3.3;LS1-3 LS1.5; LS2.4;LS2-5; LS2-1; LS2-7; LS3-2; ESS2-2; ESS2-5; ESS2-6; ESS3-1; ESS3-2; ESS3-3; ESS3-4; ESS3-5; ESS3-6; ETS1-1-3</p>	<p>A.1; B.1; B.3; C.3; D.2; E.1; E.3</p>	<p>A; B</p>	<p>Group Projects and Summative Assessments</p>
<b>Consumers and Communities</b>	<p>CRP .02; CRP .04; CRP .05; CRP .06; CRP .08; CRP .10; CRP .12; CS.01; CS.02; CS.04; CS.05;</p>	<p>R1.9-10.1 &amp; R1.11-12.1; R1.9-10.2; R1.11-12.2; R1.9-10.3; R1.11-12.3; R1.11-12.7; W.9-10.1; W.11-12.1; W.9-10.2; W.11-12.2; W.9-10.7; W.11-12.7; W.9-10.9; W.11-12.9; SL.11-12.1; L.9-10.4; L.11-12.4; L.9-10.6 &amp; L.11-12.6</p>		<p>PS3.3;LS1-3 LS1.5; LS2.4;LS2-5; LS2-1; LS2-7; LS3-2; ESS2-2; ESS2-5; ESS2-6; ESS3-1; ESS3-2; ESS3-3; ESS3-4; ESS3-5; ESS3-6; ETS1-1-3</p>	<p>A.3; B.1; B.3; D.2; D.3; E.1; E.3</p>	<p>A; B</p>	<p>Group Projects and Summative Assessments</p>

	NR.01; PST.01; PST.04; PST.05	SL.11-12.1; SL.9-10.4; SL.11-12.4; SL.9-10.5; SL.11-12.5; L.9-10.4; L.11-12.4; L.9-10.6 & L.11-12.6.1					
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## INSTRUCTIONAL RESOURCES

List the major instructional resources used for this course:

<b>Websites:</b>	<p><a href="https://thecouncil.ffa.org/afnr/">https://thecouncil.ffa.org/afnr/</a></p> <ol style="list-style-type: none"><li>1. Curriculum for Agricultural Science Education (CASE 4 Learning) Principles of Agricultural Science: Animal Science (ASA) <a href="https://www.case4learning.org/">https://www.case4learning.org/</a></li><li>2. National Agriculture in the Classroom <a href="https://agclassroom.org//">https://agclassroom.org//</a></li><li>3. Johns Hopkins Center for a Livable Future <a href="https://www.foodspan.org/">https://www.foodspan.org/</a></li></ol>
<b>Textbooks:</b>	
<b>Essential Equipment:</b>	
<b>Reference Materials:</b>	
<b>Supplies:</b>	

# Agriculture Plant Science

COURSE INFORMATION	
<b>Course Name:</b>	Agriculture Plant Science
<b>Course Number:</b>	TBA
<b>Grade(s):</b>	10 -12
<b>Length (# of semesters):</b>	One semester
<b>Credit:</b>	0.5
<b>Foundational Course:</b>	<input type="checkbox"/> This is a foundational CTE course (foundational courses are not technical)
<b>Prerequisites:</b>	Introduction to Agriculture
<b>Sequence or CTEPS:</b>	Agriculture
<b>Date of District Course Revision:</b>	Spring 2025
CAREER & TECHNICAL STUDENT ORGANIZATION (CTSO)	
<b>CTSO Embedded in this Sequence:</b>	Future Farmers of America
TECHNICAL/OCCUPATIONAL STANDARDS	
<b>Source(s) of Technical Standards:</b>	Agriculture, Food, and Natural Resources
<b>Names/Numbers of Technical Standards:</b>	CS; PS: NRS; ABS
REGISTRATION INFORMATION	
<b>Course Description:</b> (Brief paragraph - as will be shown in the student course catalog)	Agriculture: Plant Science emphasizes the exploration of plant anatomy, classification, and the essential practices of production and harvesting. Students will apply scientific concepts to real-world agricultural challenges while learning about career opportunities in plant industries, including horticulture, agronomy, nursery or greenhouse management, and commercial and subsistence farming. They will gain insights into the significance of plant production and its effects on individuals, local communities, and the global economy. Students will have the opportunity to participate in FFA through a Supervised Agricultural Experience (SAE) and the Floriculture CDE.
<b>Instructional Topic Headings:</b> (Separate each heading with a semi-colon.)	Worlds of Opportunity; Mineral Soils; Soilless Systems; Anatomy and Physiology; Taxonomy; The Growing Environment; Plant Reproduction; Surviving a Harsh Environment: Growing in Alaska; Crop Production and Marketing.
POSTSECONDARY CREDENTIAL	
<b>Recognized Postsecondary Credential (RPC):</b> <i>(Replaces Technical Skills Assessment (TSA) - not all TSAs will qualify as an RPC, and RPC is not required for all courses)</i>	
STANDARDS	
<b>This course addresses (enter yes/no):</b>	
<b>Alaska English Language Arts and Math Standards:</b>	Yes ( <a href="#">ELA &amp; Math Standards</a> )
<b>Alaska Cultural Standards:</b>	Yes ( <a href="#">Alaska Cultural Standards</a> )
<b>All Aspects of Industry (AAI):</b>	
<b>Core Technical Standards:</b>	Yes ( <a href="#">Educators Rising Standards</a> )

<b>Employability Standards:</b>	Yes ( <a href="#">Alaska Employability Standards</a> )
<b>EMPLOYABILITY STANDARDS</b>	
<b>Employability Standards source:</b>	Alaska ( <a href="#">Alaska Employability Standards</a> )

<b>DUAL CREDIT AGREEMENT</b>	
<b>CTSO participation is included:</b>	No
<b>Current Dual Credit Agreement:</b> <i>(Agreements should be reviewed and updated annually)</i>	<input type="checkbox"/> <i>(If checked, complete the Dual Credit section below.)</i>
<b>Date of Current Agreement:</b>	N/A
<b>Postsecondary Institution Name:</b>	N/A
<b>Postsecondary Course Name:</b>	N/A
<b>Postsecondary Course Number:</b>	N/A
<b>Postsecondary Course Credits:</b>	N/A
<b>AUTHOR</b>	
<b>Course Developed By:</b>	Heather Bogardus and Andrea Wade
<b>Course Adapted From:</b>	Curriculum for Agricultural Science Education (CASE4Learning) Principles of Agricultural Science: Plant (ASP)
<b>Date of Previous Course Revision:</b>	New course
<b>COURSE DELIVERY MODEL</b>	
<b>Is this course brokered through another institution or agency?</b> <i>(yes/no)</i>	No

## Standards Alignment

Student Performance Standards (Instructional Topic Headings)	Specific Technical Skill Standards	Alaska English/ Language Arts Standards	Alaska Math Standards	Alaska Science Standards	Alaska Cultural Standards	Employability/ Career Readiness Standards	Formative Assessments
Worlds of Opportunity	CS.03; CS.05; PS.01	RI.9-10.9		LS4.D; ESS3.A	A1; A4; A7; B4; C2; D5; E2; E4	A, B	Reflection journal; group discussion; self-check.
Mineral Soils	CS.03; CS.08; CS.11; PS.02	RI.9-10.1; W.9-10.2; W.9-10.4; W.9-10.9; W.9-10.10	N-Q.1-3; S- ID.5-9; S- IC.3-6; S- MD.1-4; S- MD.5-7	LS2.A; ESS3.C; PS1.B	A1; A4; A7; B4; C2; D5; E2; E4		Pre- and post- assessments; maintain lab notebook; self and peer checks
Soilless Systems	CS.03; CS.05;CS.08; CS.09; PS.02; PS.03	RI.9-10.1; RI.9-10.2; RI.9-10.3; RI.11-12.7; RI.9-10.8; RI.9-10.9	N-Q.1-3; A- REI.1-2; A- REI.3-4; A- REI.5-9; G- GMD.1; S- ID.1-4; S- IC.3-6; S- MD.1-4	LS2.A; ESS3.A; ESS3.C	A1; A4; A7; B4; C2; D5; E2; E4		Pre- and post- assessments; maintain lab notebook; self and peer checks
Anatomy and Physiology	CS.05; CS.11; PS.01; PS.02	RI.9-10.1; RI.9-10.2; RI.9-10.3; RI.9-10.10; W.9-10.1; W.9-10.2; W.9-10.6; W.9-10.7; W.9-10.9	N-Q.1-3; A- SSE.1-3; A- SSE.2; A- CED.1-2; A-REI.10-12; S-ID.1-4; S-IC.3-6; S-MD.1-4	LS1.A; LS1.B; LS1.C; LS4.B; LS4.C; PS1.B	A1; A4; A7; B4; C2; D5; E2; E4		Pre- and post- assessments; maintain lab notebook; self and peer checks
Taxonomy	CS.03; CS.11; PS.01	RI.9-10.1; RI.9-10.2; RI.9-10.3 RI.11-12.4; RI.11-12.7; RI.9-10.9; RI.9-10.10		LS1.B	A1; A4; A7; B4; C2; D5; E2; E4		Pre- and post- assessments; maintain lab notebook; self and peer

								checks Assessment (weekly)
The Growing Environment								
Plant Reproduction								
Surviving a Harsh Environment: Growing in Alaska								
Crop Production and Marketing								

	PS.01; PS.02; PS.03; PS.04	W.9-10.8; W.9-10.9; W.9-10.10						self-check; continuous loop feedback
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### INSTRUCTIONAL RESOURCES

<b>List the major instructional resources used for this course:</b>								
<b>Websites:</b>	<ol style="list-style-type: none"> <li>Curriculum for Agricultural Science Education (CASE 4 Learning) Principles of Agricultural Science: Plant Science (ASP) <a href="https://www.case4learning.org/">https://www.case4learning.org/</a></li> <li>National Agriculture in the Classroom <a href="https://agclassroom.org/">https://agclassroom.org/</a></li> </ol>							
<b>Textbooks:</b>								
<b>Essential Equipment:</b>								
<b>Reference Materials:</b>								
<b>Supplies:</b>								

# Agriculture Animal Health and Veterinary Science

COURSE INFORMATION	
<b>Course Name:</b>	Agriculture Animal Health and Veterinary Science
<b>Course Number:</b>	TBA
<b>Grade(s):</b>	10-12
<b>Length (# of semesters):</b>	One semester
<b>Credit:</b>	0.5
<b>Foundational Course:</b>	<input type="checkbox"/> This is a foundational CTE course (foundational courses are not technical)
<b>Prerequisites:</b>	Intro to Agriculture; Medical Terminology IB or Teacher Recommendation
<b>Sequence or CTEPS:</b>	Agriculture
<b>Date of District Course Revision:</b>	Spring 2025
CAREER & TECHNICAL STUDENT ORGANIZATION (CTSO)	
<b>CTSO Embedded in this Sequence:</b>	Future Farmers of America
TECHNICAL/OCCUPATIONAL STANDARDS	
<b>Source(s) of Technical Standards:</b>	Agriculture, Food, and Natural Resources
<b>Names/Numbers of Technical Standards:</b>	AS
REGISTRATION INFORMATION	
<b>Course Description:</b> (Brief paragraph - as will be shown in the student course catalog)	Animal Health & Veterinary Science focuses on the development of essential knowledge and technical skills required for entry into careers within the veterinary science and veterinary medicine fields. Students will engage in hands-on practice to learn to identify unhealthy animals, will learn about disease prevention and treatment, and will learn when to contact a veterinary professional about an unwell animal. By working on real-life case studies, they further enhance their critical thinking skills and gain a deeper understanding of the complex relationships in the animal healthcare industry. Additionally, the course emphasizes the importance of professional ethics, business management, decision-making, and interpersonal communication. Students will have opportunities for experiential learning and leadership through Supervised Agricultural Experience and FFA involvement, including participation in the Alaska FFA Veterinary Science CDE competition, which aims to enhance college and career readiness by offering students chances to build technical knowledge and showcase practical skills within the veterinary science field.
<b>Instructional Topic Headings:</b> (Separate each heading with a semi-colon.)	Biosecurity; Terms and Techniques; Physiology and Profession; Basic Prevention; Genetics and Parasites; Health Records; Prescribed Medicine; Needles & Bandages; Skill Assessment.
POSTSECONDARY CREDENTIAL	
<b>Recognized Postsecondary Credential (RPC):</b>	

<i>(Replaces Technical Skills Assessment (TSA) - not all TSAs will qualify as an RPC, and RPC is not required for all courses)</i>	
<b>STANDARDS</b>	
<b>This course addresses (enter yes/no):</b>	
<b>Alaska English Language Arts and Math Standards:</b>	Yes ( <a href="#">ELA &amp; Math Standards</a> )
<b>Alaska Cultural Standards:</b>	Yes ( <a href="#">Alaska Cultural Standards</a> )
<b>All Aspects of Industry (AAI):</b>	
<b>Core Technical Standards:</b>	Yes ( <a href="#">Educators Rising Standards</a> )
<b>Employability Standards:</b>	Yes ( <a href="#">Alaska Employability Standards</a> )
<b>EMPLOYABILITY STANDARDS</b>	
<b>Employability Standards source:</b>	Alaska ( <a href="#">Alaska Employability Standards</a> )
<b>DUAL CREDIT AGREEMENT</b>	
<b>CTSO participation is included:</b>	No
<b>Current Dual Credit Agreement:</b> <i>(Agreements should be reviewed and updated annually)</i>	<input type="checkbox"/> <i>(If checked, complete the Dual Credit section below.)</i>
<b>Date of Current Agreement:</b>	N/A
<b>Postsecondary Institution Name:</b>	N/A
<b>Postsecondary Course Name:</b>	N/A
<b>Postsecondary Course Number:</b>	N/A
<b>Postsecondary Course Credits:</b>	N/A
<b>AUTHOR</b>	
<b>Course Developed By:</b>	Heather Bogardus and Andrea Wade
<b>Course Adapted From:</b>	Curriculum for Agricultural Science Education (CASE 4 Learning) Animal Health & Veterinary Science (AHVS)
<b>Date of Previous Course Revision:</b>	New course
<b>COURSE DELIVERY MODEL</b>	
<b>Is this course brokered through another institution or agency?</b> <i>(yes/no)</i>	No

## Standards Alignment

Student Performance Standards (Instructional Topic Headings)	Specific Technical Skill Standards	Alaska English/ Language Arts Standards	Alaska Math Standards	Alaska Science Standards	Alaska Cultural Standards	Employability/ Career Readiness Standards	Formative Assessments
Biosecurity	AS.07.02.01; AS.07.02.02	RI.11-12.3			A1; A4; A7; B4; C2; D5; E2; E4		Pre- and post-assessment; interactive lab notebook with rubric; peer and self-checks; continuous feedback
Terms and Techniques	AS.01.02.01; AS.01.02.02; AS.07.01.01	RI.11-12.2; RI.11-12.3; RI.11-12.4;			A1; A4; A7; B4; C2; D5; E2; E4		Pre- and post-assessment; interactive lab notebook with rubric; peer and self-checks; continuous feedback
Physiology and Profession	AS.01.01.01; AS.01.01.02; AS.01.03.01; AS.04.02.01; AS.06.02.03	RI.11-12.3; RI.11-12.4; W.11-12.1; W.11-12.2			A1; A4; A7; B4; C2; D5; E2; E4	A, B	Pre- and post-assessment; interactive lab notebook with rubric; peer and self-checks; continuous feedback
Basic Prevention	AS.02.01.01; AS.02.01.02; AS.03.01.01; AS.07.01.02	RI.11-12.2; RI.11-12.3; RI.11-12.4;			A1; A4; A7; B4; C2; D5; E2; E4		Pre- and post-assessment; interactive lab notebook with rubric; peer and self-checks;

								continuous feedback
Genetics and Parasites			R.I.11-12.7; R.I.11-12.8; R.I.11-12.9; R.I.11-12.10					
		AS.06.02.01; AS.07.01.02; AS.07.01.03; AS.07.01.04			LS3.A  A1; A4; A7; B4; C2; D5; E2; E4			Pre- and post-assessment; interactive lab notebook with rubric; peer and self-checks; continuous feedback
Health Records		AS.01.02.03	R.I.11-12.3; R.I.11-12.4; R.I.11-12.7; R.I.11-12.9; W.11-12.1; W.11-12.4; W.11-12.5; W.11-12.6			A1; A4; A7; B4; C2; D5; E2; E4	A	Pre- and post-assessment; interactive lab notebook with rubric; peer and self-checks; continuous feedback

Student Performance Standards (Instructional Topic Headings)	Specific Technical Skill Standards	Alaska English/ Language Arts Standards	Alaska Math Standards	Alaska Science Standards	Alaska Cultural Standards	Employability/ Career Readiness Standards	Formative Assessments
Prescribed Medicine	AS.07.01.01; AS.07.01.05	R1.11- 12.3; R1.11- 12.4; R1.11- 12.7; R1.11- 12.9; R1.11- 12.10	A-SSE.1; A-SSE.2; A-SSE.3; A-SSE.4; A-REI.1; A-REI.2; A-REI.3; A-REI.4; A-REI.5; A-REI.6; A-REI.7; A-REI.8; A-REI.9; A-REI.10; A-REI.11; A-REI.12		A1; A4; A7; B4; C2; D5; E2; E4		Pre- and post- assessment; interactive lab notebook with rubric; peer and self-checks; continuous feedback
Needles and Bandages	AS.07.01.03; AS.07.01.02; AS.07.01.05;	R1.11- 12.3; R1.11- 12.4; R1.11- 12.7; R1.11- 12.9; R1.11- 12.10	A-SSE.1; A-SSE.2; A-SSE.3; A-SSE.4; A-REI.1; A-REI.2; A-REI.3; A-REI.4; A-REI.5; A-REI.6; A-REI.7; A-REI.8; A-REI.9; A-REI.10; A-REI.11; A-REI.12		A1; A4; A7; B4; C2; D5; E2; E4		Pre- and post- assessment; interactive la b notebook with rubric; peer and self- checks; Student demonstratio ns with feedback
Skill Assessment	AS.07.01.01; AS.07.01.03; AS.07.01.02; AS.07.01.04; AS.07.01.05	R1.11- 12.3; R1.11-12.4			A1; A4; A7; B4; C2; D5; E2; E4	A.B	Student portfolio with rubric checklist; student demonstratio ns with

									feedback; self and peer checks
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### INSTRUCTIONAL RESOURCES

List the major instructional resources used for this course:

<b>Websites:</b>	<ol style="list-style-type: none"> <li>1. Curriculum for Agricultural Science Education (CASE 4 Learning) Food Science and Safety (FSS) <a href="https://www.case4learning.org/">https://www.case4learning.org/</a></li> <li>2. National Agriculture in the Classroom <a href="https://agclassroom.org//">https://agclassroom.org//</a></li> <li>3. iCEV Veterinary Medical Applications <a href="https://www.icevonline.com/curriculum/agricultural-science/courses/veterinary-medical-applications">https://www.icevonline.com/curriculum/agricultural-science/courses/veterinary-medical-applications</a></li> <li>4. Aligns with content for the Elanco Veterinary Medical Applications Certification exam</li> </ol>
<b>Textbooks:</b>	
<b>Essential Equipment:</b>	
<b>Reference Materials:</b>	
<b>Supplies:</b>	

# Agriculture Production Management

COURSE INFORMATION	
<b>Course Name:</b>	Agriculture Production Management
<b>Course Number:</b>	TBA
<b>Grade(s):</b>	10-12
<b>Length (# of semesters):</b>	One semester
<b>Credit:</b>	0.5
<b>Foundational Course:</b>	<input type="checkbox"/> This is a foundational CTE course (foundational courses are not technical)
<b>Prerequisites:</b>	Introduction to Agriculture; Agriculture: Plant Science; Agriculture: Animal Health and Veterinary Science
<b>Sequence or CTEPS:</b>	Agriculture
<b>Date of District Course Revision:</b>	Spring 2025
CAREER & TECHNICAL STUDENT ORGANIZATION (CTSO)	
<b>CTSO Embedded in this Sequence:</b>	Future Farmers of America
TECHNICAL/OCCUPATIONAL STANDARDS	
<b>Source(s) of Technical Standards:</b>	The National Council on Agriculture and Natural Resources
<b>Names/Numbers of Technical Standards:</b>	CPR, CS, AG-BIZ
REGISTRATION INFORMATION	
<b>Course Description:</b> (Brief paragraph - as will be shown in the student course catalog)	Agriculture: Production Management introduces students to the business management aspects of agriculture. Students will explore topics such as starting a business, financial documents, risk management, and planning. This course integrates math, reading, writing and language, and helps students to apply professional standards to each of these content areas. Students will engage in hands-on activities and real-world scenarios that assist them in developing and improving business and employability skills. Students will investigate local challenges relating to agribusiness and develop individual business plans that address these problems. Additionally, students discover the links between their agribusiness lessons and opportunities for experiential learning and leadership through Supervised Agricultural Experience and FFA involvement.
<b>Instructional Topic Headings:</b> (Separate each heading with a semi-colon.)	Start-Up (organizing a business, starting a business); Managing Finances (categorizing transactions, the cost of doing business, measuring success, business decisions); Covering the Bases (taking risk seriously, employment opportunity, risk and opportunity); Planning
POSTSECONDARY CREDENTIAL	
<b>Recognized Postsecondary Credential (RPC):</b> <i>(Replaces Technical Skills Assessment (TSA) - not all TSAs will qualify as an RPC, and RPC is not required for all courses)</i>	
STANDARDS	
<b>This course addresses (enter yes/no):</b>	

<b>Alaska English Language Arts and Math Standards:</b>	Yes ( <a href="#">ELA &amp; Math Standards</a> )
<b>Alaska Cultural Standards:</b>	Yes ( <a href="#">Alaska Cultural Standards</a> )
<b>All Aspects of Industry (AAI):</b>	
<b>Core Technical Standards:</b>	Yes ( <a href="#">Educators Rising Standards</a> )
<b>Employability Standards:</b>	Yes ( <a href="#">Alaska Employability Standards</a> )
<b>EMPLOYABILITY STANDARDS</b>	
<b>Employability Standards source:</b>	Alaska ( <a href="#">Alaska Employability Standards</a> )
<b>DUAL CREDIT AGREEMENT</b>	
<b>CTSO participation is included:</b>	Yes, in process
<b>Current Dual Credit Agreement:</b> <i>(Agreements should be reviewed and updated annually)</i>	<input type="checkbox"/> <i>(If checked, complete the Dual Credit section below.)</i>
<b>Date of Current Agreement:</b>	N/A
<b>Postsecondary Institution Name:</b>	N/A
<b>Postsecondary Course Name:</b>	N/A
<b>Postsecondary Course Number:</b>	N/A
<b>Postsecondary Course Credits:</b>	N/A
<b>AUTHOR</b>	
<b>Course Developed By:</b>	Heather Bogardus and Andrea Wade
<b>Course Adapted From:</b>	Curriculum for Agricultural Science Education (CASE 4 Learning) Agricultural Business Foundations (ABF)
<b>Date of Previous Course Revision:</b>	New course
<b>COURSE DELIVERY MODEL</b>	
<b>Is this course brokered through another institution or agency?</b> <i>(yes/no)</i>	No

Standards Alignment							
Student Performance Standards (Instructional Topic Headings)	Specific Technical Skill Standards	Alaska English/ Language Arts Standards	Alaska Math Standards	Alaska Science Standards	Alaska Cultural Standards	Employability/ Career Readiness Standards	Formative Assessments
The Start-Up: Organizing a Business	CPR.7; CPR.12; CS.1; CS.2; AG-BIZ.4	RI.9-10.1; RI.9-10.2; RI.9-10.7; W.9-10.1; W.9-10.2; W.9-10.3; W.9-10.7; W.9-10.9	N-Q.1-3; S-ID.1-4; S-ID.5-6; S-IC.3-6		A1; A4; A7; B4; C2; D5; E2; E4	A	Pre- and post-assessments; maintain lab notebook; self and peer checks; reflection journals
The Start-Up: Starting a Business	CPR.7; CPR.12; CS.1; CS.2; AG-BIZ.2	RI.9-10.1; RI.9-10.2; RI.9-10.7; W.9-10.1; W.9-10.2; W.9-10.3; W.9-10.7; W.9-10.9	N-Q.1-3; S-ID.1-4; S-ID.5-6; S-IC.3-6		A1; A4; A7; B4; C2; D5; E2; E4	A	Pre- and post-assessments; maintain lab notebook; self and peer checks; reflection journals
Managing Finances: Categorizing Transactions	CRP.4; CRP.6; CRP.8; CRP.12; CS.2; AG-BIZ.1; AG-BIZ.2; AG-BIZ.3; AG-BIZ.4	RI.9-10.7; RI.9-10.10	N-Q.1-3; A-REI.1-2; A-REI.3-4; A-REI.5-9; S-MD.1-4		A1; A4; A7; B4; C2; D5; E2; E4	A	Pre- and post-assessments; maintain lab notebook; self and peer checks; reflection journals
Managing Finances: The Cost of Doing Business	CRP.4; CRP.6; CRP.8; CRP.12; CS.2; AG-BIZ.1; AG-BIZ.2; AG-BIZ.3; AG-BIZ.4	RI.9-10.7; RI.9-10.10	N-Q.1-3; A-REI.1-2; A-REI.3-4; A-REI.5-9; S-MD.1-4		A1; A4; A7; B4; C2; D5; E2; E4	A	Pre- and post-assessments; maintain lab notebook; self and peer checks; reflection journals

Managing Finances: Measuring Success	CRP.4; CRP.6; CRP.8; CRP.12; CS.2; AG-BIZ.1; AG-BIZ.2; AG-BIZ.3; AG-BIZ.4	RI.9-10.7; RI.9-10.10	N-Q.1-3; A- REI.1-2; A- REI.3-4; A- REI.5-9; S- MD.1.4		A1; A4; A7; B4; C2; D5; E2; E4		Pre- and post- assessments; maintain lab notebook; self and peer checks; reflection journals
Managing Finances: Business Decisions	CRP.4; CRP.6; CRP.8; CRP.12; CS.2; AG-BIZ.1; AG-BIZ.2; AG-BIZ.3; AG-BIZ.4	RI.9-10.7; RI.9-10.10	N-Q.1-3; A- REI.1-2; A- REI.3-4; A- REI.5-9; S- MD.1.4		A1; A4; A7; B4; C2; D5; E2; E4		Pre- and post- assessments; maintain lab notebook; self and peer checks; reflection journals
Covering the Bases: Taking Risk Seriously	CRP.7; CRP.10; CRP.12; CS.1; CS.2; AG- BIZ.1; AG- BIZ.2; AG- BIZ.3; AG- BIZ.4	RI.9-10.7; RI.9-10.8; RI.9-10.9; W.9-10.2; W.9-10.3	N-Q.1-3; A- REI.5-9; S- MD.1.4; S- MD.5-6		A1; A4; A7; B4; C2; D5; E2; E4		Pre- and post- assessments; maintain lab notebook; self and peer checks; reflection journals
Covering the Bases: Employment Opportunity	CRP.7; CRP.10; CRP.12; CS.1; CS.2; AG- BIZ.1; AG- BIZ.2; AG- BIZ.3; AG- BIZ.4	RI.9-10.7; RI.9-10.8; RI.9-10.9; W.9-10.2; W.9-10.3	N-Q.1-3; A- REI.5-9; S- MD.1.4; S- MD.5-6		A1; A4; A7; B4; C2; D5; E2; E4	B	Pre- and post- assessments; maintain lab notebook; self and peer checks; reflection journals
Covering the Bases: Risk and Opportunity	CRP.7; CRP.10; CRP.12; CS.1; CS.2; AG- BIZ.1; AG- BIZ.2; AG- BIZ.3; AG- BIZ.4	RI.9-10.7; RI.9-10.8; RI.9-10.9; W.9-10.2; W.9-10.3	N-Q.1-3; A- REI.5-9; S- MD.1.4; S- MD.5-6		A1; A4; A7; B4; C2; D5; E2; E4		Pre- and post- assessments; maintain lab notebook; self and peer checks; reflection journals
Planning: Finalizing the Plan	CPR.4; CPR.6; CPR.12; CS.2; AG-BIZ.1;	W.9-10.1; W.9-10.2; W.9-10.3;	N-Q.1-3; S- ID.1-4; S-		A1; A4; A7; B4;	A; B	Student portfolio with rubric

	AG-BIZ.4; AG-BIZ.5	W.9-10.4; W.9-10.8; W.9-10.9	IC.3-6; S- MD.5-6		C2; D5; E2; E4		checklist; self and peer checks; continuous loop feedback; reflection journals
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### INSTRUCTIONAL RESOURCES

<b>List the major instructional resources used for this course:</b>	
<b>Websites:</b>	<ol style="list-style-type: none"> <li>1. Curriculum for Agricultural Science Education (CASE 4 Learning) Agricultural Business Foundations (ABF) <a href="https://www.case4learning.org/">https://www.case4learning.org/</a></li> <li>2. National Agriculture in the Classroom <a href="https://agclassroom.org/">https://agclassroom.org/</a></li> <li>3. iCEV Introduction to Agribusiness <a href="https://www.icevonline.com/curriculum/agricultural-science/courses/introduction-agribusiness">https://www.icevonline.com/curriculum/agricultural-science/courses/introduction-agribusiness</a></li> </ol>
<b>Textbooks:</b>	
<b>Essential Equipment:</b>	
<b>Reference Materials:</b>	
<b>Supplies:</b>	

# Agriculture Food Processing, Safety, and Marketing

COURSE INFORMATION	
<b>Course Name:</b>	Agriculture Food Processing, Safety, and Marketing
<b>Course Number:</b>	TBA
<b>Grade(s):</b>	10-12
<b>Length (# of semesters):</b>	One semester
<b>Credit:</b>	0.5
<b>Foundational Course:</b>	<input type="checkbox"/> This is a foundational CTE course (foundational courses are not technical)
<b>Prerequisites:</b>	Introduction to Agriculture; Agriculture: Plant Science; Agriculture: Animal Health and Veterinary Science
<b>Sequence or CTEPS:</b>	Agriculture
<b>Date of District Course Revision:</b>	Spring 2025
CAREER & TECHNICAL STUDENT ORGANIZATION (CTSO)	
<b>CTSO Embedded in this Sequence:</b>	Future Farmers of America
TECHNICAL/OCCUPATIONAL STANDARDS	
<b>Source(s) of Technical Standards:</b>	Agriculture, Food, and Natural Resources
<b>Names/Numbers of Technical Standards:</b>	CRP; CS; FPP; FRP
REGISTRATION INFORMATION	
<b>Course Description:</b> (Brief paragraph - as will be shown in the student course catalog)	Agriculture: Food Processing, Safety, and Marketing is designed to allow students to build content knowledge and technical skills about the food science industry. Students will explore areas such as food safety, food processing, product development, and marketing. Students will participate in problem-solving activities that simulate real-world scenarios. At the end of the semester students will complete a final project that includes developing and marketing an agricultural product. Students will receive food safety training certifications that can be utilized in future careers. Additionally, students will discover the links between their food science lessons and opportunities for experiential learning and leadership through Supervised Agricultural Experience and FFA involvement.
<b>Instructional Topic Headings:</b> (Separate each heading with a semi-colon.)	Introduction to Food Science; Chemistry of Food; Safety of Our Food; Food Processing and Preservation; Food Health and Security; Product, Preference and Product Availability; Food Product Development
POSTSECONDARY CREDENTIAL	
<b>Recognized Postsecondary Credential (RPC):</b> <i>(Replaces Technical Skills Assessment (TSA) - not all TSAs will qualify as an RPC, and RPC is not required for all courses)</i>	
STANDARDS	
<b>This course addresses (enter yes/no):</b>	

<b>Alaska English Language Arts and Math Standards:</b>	Yes ( <a href="#">ELA &amp; Math Standards</a> )
<b>Alaska Cultural Standards:</b>	Yes ( <a href="#">Alaska Cultural Standards</a> )
<b>All Aspects of Industry (AAI):</b>	
<b>Core Technical Standards:</b>	Yes ( <a href="#">Educators Rising Standards</a> )
<b>Employability Standards:</b>	Yes ( <a href="#">Alaska Employability Standards</a> )
<b>EMPLOYABILITY STANDARDS</b>	
<b>Employability Standards source:</b>	Alaska ( <a href="#">Alaska Employability Standards</a> )
<b>DUAL CREDIT AGREEMENT</b>	
<b>CTSO participation is included:</b>	
<b>Current Dual Credit Agreement:</b> <i>(Agreements should be reviewed and updated annually)</i>	<input type="checkbox"/> <i>(If checked, complete the Dual Credit section below.)</i>
<b>Date of Current Agreement:</b>	N/A
<b>Postsecondary Institution Name:</b>	N/A
<b>Postsecondary Course Name:</b>	N/A
<b>Postsecondary Course Number:</b>	N/A
<b>Postsecondary Course Credits:</b>	N/A
<b>AUTHOR</b>	
<b>Course Developed By:</b>	Heather Bogardus and Andrea Wade
<b>Course Adapted From:</b>	Curriculum for Agricultural Science Education (CASE 4 Learning) Food Science and Safety
<b>Date of Previous Course Revision:</b>	New course
<b>COURSE DELIVERY MODEL</b>	
<b>Is this course brokered through another institution or agency?</b> <i>(yes/no)</i>	No

<b>INSTRUCTIONAL RESOURCES</b>	
<b>List the major instructional resources used for this course:</b>	
<b>Websites:</b>	<ol style="list-style-type: none"> <li>Curriculum for Agricultural Science Education (CASE 4 Learning) Food Science and Safety (FSS) <a href="https://www.case4learning.org/">https://www.case4learning.org/</a></li> <li>National Agriculture in the Classroom <a href="https://agclassroom.org//">https://agclassroom.org//</a></li> <li>iCEV Food Science <a href="https://www.icevonline.com/curriculum/courses/food-science">https://www.icevonline.com/curriculum/courses/food-science</a></li> </ol>
<b>Textbooks:</b>	
<b>Essential Equipment:</b>	
<b>Reference Materials:</b>	
<b>Supplies:</b>	

Student Performance Standards (Learner Outcomes or Knowledge & Skill Statements)	Specific Technical Skills Standards	Alaska ELA Standards	Alaska Math Standards	Alaska Science Standards	Alaska Cultural Standards	Employability Standards	Formative Assessments
Introduction to Food Science	CRP.07, CS.03, FPP.02, FPP.04	RI.9-10.1; RI.11-12.1; RI.0-10.7; RI.11-12.7; W.9-10.2; W.11-12.2	N-Q.1-3		A1; A4; A7; B4; C2; D5; E2; E4	A:B	Reflection journal; group discussion; self-check
Food Chemistry	CRP.02, CRP.04, CRP.07, CRP.12, CS.02, FPP.02,	RI.9-10.2; RI.11-12.2; RI.9-10.3; RI.11-12.3;; W.9-10.2; W.11-12.2; W.9-10.8; W.11-12.8	N-Q.1-3; S-ID.1-4		A1; A4; A7; B4; C2; D5; E2; E4		Pre- and post-assessments; maintain lab notebook; self and peer checks
The Safety of Our Food	CRP.02, CRP.04, CRP.07, CRP.08, CRP.12, CS.02, BS.02, BS.03, FPP.01, FPP.02, FPP.03, FPP.04	RI.9-10.1; RI.11-12.1; RI.9-10.8; RI.11-12.8; W.9-1.4; W.11-12.4; W.9-10.2; W.11-12.2	N-Q.1-3; S-ID.1-4		A1; A4; A7; B4; C2; D5; E2; E4		Pre- and post-assessments; maintain lab notebook; self and peer checks
Food Processing, Preservation, and Packaging	CRP.02, CRP.06, CRP.07, CRP.08, CRP.11, CS.01, CS.03, FPP.01, FPP.02, FPP.03, FPP.04	RI.9-10.4; RI.11-12.4, RI.9-10.9; RI.11-12.9; W.9-10.7; W.11-12.7; W.9-10.2; W11-12.2	N-Q.1-3; G-GMD.1-3; G-GMD.4; S-ID.1-4, S-IC.1-2; S-IC.3-6		A1; A4; A7; B4; C2; D5; E2; E4		Pre- and post-assessments; maintain lab notebook; self and peer checks
Food Health and Security	CRP.02, CRP.04, CRP.05, CRP.08, CRP.11, CS.01, CS.03, FPP.01, FPP.02, FPP.04	RI.9-10.9; RI-11-12.9; RI.9-10.6; RI.11-12.6; W.9-10.2; W.11-12.2	N-Q.1-3; A-SSE.3-4; A-REI.1-2; A-REI.3-4; G-GMD.4; G-MG.1-3; S-ID.1-4; S-IC.3-6		A1; A4; A7; B4; C2; D5; E2; E4		Pre- and post-assessments; maintain lab notebook; self and peer checks
Preference and Product Availability	CRP.02, CRP.04, CRP.06, CRP.08, CRP.12, CS.01, FPP.02, FPP.03, FPP.04	RI.9-10.7; RI.11-12.7; W.9-10.9; W.11-12.9	N-Q.1-3; S-IC.3-6		A1; A4; A7; B4; C2; D5; E2; E4		Pre- and post-assessments; maintain lab notebook; self and peer checks
Food Product Development	CRP.02, CRP.04, CRP.06, CRP.07, CRP.08, CRP.09, CS.03,	RI.9-10.2; RI.11-12.2;; W.9-10.3; W.11-12.3			A1; A4; A7; B4; C2; D5; E2; E4	A	Reflection journal group discussion; student portfolio with rubric checklist; self-

	FRP.01, FRP.02, FRP.03						check; continuous loop feedback
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Fairbanks North Star Borough School District

The Fairbanks North Star Borough School District is an equal employment and educational opportunity institution, as well as a tobacco and nicotine-free learning and work environment.

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