

UFARS Code	CTE Program/Pathway Title	Program Code	Course Code	Recommended Course Titles	Course Description	CTE Licenses	CTE Licenses	Non Trad	CIP Codes	Career Field	Career Cluster	Career Pathway	Minnesota Common Course Number
	<b>AGRICULTURAL, FOOD, AND NATURAL RESOURCES CAREER</b>					For this program, one of the							
301	<b>Agriculture, Food, and Natural Resources Combined Program</b>	019901		<b>Agriculture, Food, &amp; Natural Resources Combined Program</b>		010100	010000						
301	<b>AFNR Introduction and Exploration</b>					010100	010000						
		019901	01	Principles of Ag., Food, & Natural Resources	Introduction to Agriculture and				01.0000	01	01	01.05	18001
		019901	02	Advanced Principles of Ag., Food, & Natural Resources	Advanced Principles of Agricult				01.0000	01	01	01.05	18001
	Course receives Science Credit toward graduation; Life Science	019901	03	Principles of AFNR Biology	Science-Elective Credit. Introdu				01.0000	01	01	01.05	18001
	Course receives Science Credit toward graduation; Life Science	019901	04	Advanced Principles of AFNR Biology	Science-Elective Credit. Advanc				01.0000	01	01	01.05	18001
301	<b>Agribusiness Systems Pathway</b>					010100	010000						
		019901	05	Agribusiness & Farm Business Management	Agribusiness Management cou			F	01.0101	01	01	01.05	18201
		019901	06	Advanced Agribusiness & Farm Business Management	Advanced Agribusiness Manag			F	01.0101	01	01	01.05	18201
		019901	07	Agricultural Economics	A course that focuses on the ag				01.0103	01	01	01.05	18204, 04249
	Course receives Social Studies Credit toward graduation; Economics	019901	08	Agricultural & Applied Economics	Social Studies-Economics Credi				01.0103	01	01	01.05	18204, 04249
		019901	09	Agribusiness Finance & Accounting	Agricultural finance courses pr			F	01.0102	01	01	01.05	18204
		019901	10	Agribusiness Sales	Agricultural sales courses prep			F	01.0102	01	01	01.05	18204
		019901	11	Agribusiness Marketing	Agricultural marketing courses			F	01.0105	01	01	01.05	18204
		019901	12	Agricultural Communications & Journalism	Agricultural communications co			F	01.0802	01	01	01.05	18204
		019901	13	Agricultural Education, Research, & Development	Agricultural teacher education				01.0801	01	01	01.05	18204
		019901	14	Specialty & Emerging Agribusiness Systems Topics	International Agriculture. Othe			F	01.0199	01	01	01.05	18249
301	<b>Animal Systems Pathway</b>					010100	010000						
		019901	15	Animal Science & Small Animal Care	Small Animal Care courses focu			F	01.0901	01	01	01.01	18102
		019901	16	Advanced Animal Science & Large Animal Care	Large Animal Care or Advanced			F	01.0901	01	01	01.01	18103
	Course receives Science Credit toward graduation; Life Science	019901	17	Animal Biology	Science-Elective Credit. Small A			F	01.0901	01	01	01.01	18004, 03099
	Course receives Science Credit toward graduation; Life Science	019901	18	Advanced Animal Biology	Science-Elective Credit. Large A			F	01.0901	01	01	01.01	18004, 03099
		019901	19	Equine Science	Equine Science courses focus o			F	01.0307	01	01	01.01	18104
		019901	20	Livestock & Poultry Production	Animal Production/Science cou			F	01.0302	01	01	01.01	18101
	Course is a school farm; a simulated work-based learning experience	019901	21	Livestock, Poultry, & Equine Operations	Simulated WBL: School Farm. A	160000	019090	F	01.0302	01	01	01.01	18248
	Course is a school farm; a simulated work-based learning experience	019901	22	Aquaculture Operations	Simulated WBL: School Farm. A	160000	019090	F	01.0303	01	01	01.01	18306, 18248
	Course receives Science Credit toward graduation; Chemistry	019901	23	Aquacultural Chemistry	Science-Elective Credit. Simula	160000	019090	F	01.0303	01	01	01.01	18248, 03203
		019901	24	Veterinary Science	Veterinary Science courses imp				01.1302	01	01	01.01	18105
		019901	25	Advanced Veterinary Science	A program that prepares indivi				01.8001	01	01	01.01	18105
	Course receives Science Credit toward graduation; Life Science	019901	26	Veterinary Biology	Science-Elective Credit. Veterin				01.1302	01	01	01.01	18004, 03099
	Course receives Science Credit toward graduation; Life Science	019901	27	Advanced Veterinary Biology	Science-Elective Credit. A prog				01.8001	01	01	01.01	18004, 03099
	Course is a school business; a simulated work-based learning experience	019901	28	Small Animal Care Operations	Simulated WBL: School Busines	160000	019090	M	01.0504	01	01	01.01	18248
		019901	29	Specialty & Emerging Animal Systems Topics	Taxidermy, Apiculture. Other A			F	01.0999	01	01	01.01	18149
301	<b>Plant Systems Pathway</b>					010100	010000						
		019901	30	Plant Science & Horticulture	Horticultural Science courses e			F	01.1101	01	01	01.02	18051
		019901	31	Advanced Plant Science & Horticulture	An advanced program that focu			F	01.1101	01	01	01.02	18052
	Course receives Science Credit toward graduation; Life Science	019901	32	Plant Biology	Science-Elective Credit. Agricul			F	01.1101	01	01	01.02	18004, 03099
	Course receives Science Credit toward graduation; Life Science	019901	33	Advanced Plant Biology	Science-Elective Credit. Advanc			F	01.1101	01	01	01.02	18004, 03099
	Course receives Science Credit toward graduation; Chemistry	019901	34	Soil Chemistry	Science-Chemistry Credit. A pr			F	01.1202	01	01	01.02	18055
		019901	35	Crop Production & Agronomy	Plant Production courses provi			F	01.1102	01	01	01.02	18051
	Course is a school farm; a simulated work-based learning experience	019901	36	Garden & Crop Operations	Simulated WBL: School Farm. A	160000	019090	F	01.0610	01	01	01.02	18098
		019901	37	Pest Management, Entomology, & Plant Pathology	Integrated Pest Management c			F	01.1105	01	01	01.02	18109
		019901	38	Floriculture & Ornamental Horticulture	Ornamental Horticulture cours				01.0608	01	01	01.02	18053
	Course receives Art Credit toward graduation; Visual Arts	019901	39	Floral Design	Art Credit. Floral Design course				01.0608	01	01	01.02	18053, 05199
	Course is a school farm; a simulated work-based learning experience	019901	40	Greenhouse & Nursery Operations	Simulated WBL: School Farm. A	160000	019090	F	01.0604	01	01	01.02	18098
		019901	41	Turf, Landscape, & Parks Management	Turf and Landscape Managem			F	01.0605	01	01	01.02	18054
	Course receives Art Credit toward graduation; Visual Arts	019901	42	Landscape Design	Art Credit. Landscape Design co			F	01.0605	01	01	01.02	18054, 05199
	Course is a school farm; a simulated work-based learning experience	019901	43	Floral & Landscaping Operations	Simulated WBL: School Busines	160000	019090	F	01.0608	01	01	01.02	18098
		019901	44	Specialty & Emerging Plant Systems Topics	Viticulture. Other Plant System			F	01.1199	01	01	01.02	18099
301	<b>Natural Resources, Energy, and Environmental Service Systems Pathway</b>					010100	010000						
		019901	45	Energy & Natural Resources Science	Natural Resources Managemen				03.0101	01	01	01.03	18504
		019901	46	Advanced Energy & Natural Resources Science	Advanced Natural Resources M				03.0104	01	01	01.03	18504
	Course receives Science Credit toward graduation; Life Science	019901	47	Energy & Natural Resources Ecology	Science-Elective Credit. Energy				03.0101	01	01	01.03	18504, 03012
	Course receives Science Credit toward graduation; Life Science	019901	48	Advanced Energy & Natural Resources Ecology	Science-Elective Credit. Advanc				03.0104	01	01	01.03	18504, 03012
		019901	49	Wildlife, Fisheries, & Ecology Management	Wildlife and Recreation Manag				03.0601	01	01	01.03	18501
		019901	50	Advanced Wildlife, Fisheries, & Ecology Management	A program that prepares indivi				03.0601	01	01	01.03	18501
		019901	51	Water Treatment & Environmental Services	Water Treatment courses prov			F	15.0506	01	01	01.03	18406
		019901	52	Forestry Science & Management	Forestry Management courses				03.0502	01	01	01.03	18502
	Course is a school farm; a simulated work-based learning experience	019901	53	Forestry Operations	Simulated WBL: School Farm. A	160000	019090		03.0506	01	01	01.03	18548
		019901	54	Biofuels, Renewable Resources, & Alternative Energy	A program of study that focuse				03.0210	01	01	01.03	18506

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		019901	55	Minerals, Mining, & Fuels	A mining, oil and gas course in			F	15.0901	01	01	01.03	18505
		019901	56	Energy & Environmental Engineering	These courses provide students			F	15.0507	01	01	01.03	18005, 21049
		019901	57	Outdoor Education & Recreation Management	Recreation Management courses			F	03.0207	01	01	01.03	18501
		019901	58	Environmental Science Issues & Policy	Agriculture and Society courses				03.0103	01	01	01.03	18307, 03012
		019901	59	Specialty & Emerging Natural Resource Systems Topics	Lakes and River Ecology. Other				03.0199	01	01	01.03	18549
301	<b>Power, Structural, and Technical Systems Pathway</b>					010100	010000						
		019901	60	Agricultural Power Systems Technology	Agriculture Mechanics/Equipm			F	01.0201	01	01	01.04	18401
	Course receives Science or Math Credit toward graduation;	019901	61	Agricultural Physics	Science-Physics or Math Credit			F	01.0201	01	01	01.04	18401, 02152
		019901	62	Agricultural Manufacturing	Metals, Welding, Fabrication; A			F	01.0201	01	01	01.04	18404
		019901	63	Advanced Agricultural Manufacturing	Advanced Metals, Welding, Fab			F	01.0201	01	01	01.04	18404
		019901	64	Agricultural Construction	Woods, Carpentry, Finishing; A			F	01.0201	01	01	01.04	18403
		019901	65	Advanced Agricultural Construction	Advanced Woods, Carpentry, F			F	01.0201	01	01	01.04	18403
		019901	66	Agricultural Electricity & Plumbing	Agriculture Structures courses			F	01.0201	01	01	01.04	18405
		019901	67	Agricultural Transportation & Operations	Mechanics, Large Engines, Trac			F	01.0205	01	01	01.04	18402
		019901	68	Advanced Agricultural Transportation & Operations	Advanced Mechanics, Large En			F	01.0204	01	01	01.04	18402
		019901	69	Agricultural Small Engines	This courses develops skills in r			F	01.0204	01	01	01.04	18405
		019901	70	Agricultural Engineering	Fundamental engineering conc			F	01.0201	01	01	01.04	18405
	Course receives Science or Math Credit toward graduation;	019901	71	Agricultural Engineering & Physics	Science-Physics or Math Credit			F	01.0201	01	01	01.04	18405, 21049
	Course receives Art Credit toward graduation; Visual Arts S	019901	72	Creative Power Systems Design	Art Credit. Ag Power Design co			F	01.0201	01	01	01.04	18401, 05199
	Course is a school business; a simulated work-based learni	019901	73	Ag. Fabrication & Repair Operations	Simulated WBL: School Busines	160000	019090	F	01.0201	01	01	01.04	18448
		019901	74	Specialty & Emerging Power Systems Topics	CAD, Drones, GIS, Robotics. Ot			F	01.0299	01	01	01.04	18449
301	<b>Food Products and Processing Systems Pathway</b>					010100	010000						
		019901	75	Food Science	Food Science courses offer opp			F	01.1001	01	01	01.06	18305
		019901	76	Advanced Food Science	A program that focuses on the			F	01.1001	01	01	01.06	18305
	Course receives Science Credit toward graduation; Chemist	019901	77	Food Chemistry	Science-Chemistry Credit. Agric			F	01.1001	01	01	01.06	18305, 03149
	Course receives Science Credit toward graduation; Chemist	019901	78	Advanced Food Chemistry	Science-Chemistry Credit. Adva			F	01.1001	01	01	01.06	18305, 03149
		019901	79	Food Nutrition	Agricultural nutrition courses f			F	01.1001	01	01	01.06	18309
		019901	80	Advanced Food Nutrition	Advanced Agricultural nutritior			F	01.1001	01	01	01.06	18309
		019901	81	Food Technology & Safety	A program that focuses on the			F	01.1002	01	01	01.06	18309
		019901	82	Food Processing & Preparation	Food Product Processing cours			F	01.0401	01	01	01.06	18309
	Course is a school farm; a simulated work-based learning e	019901	83	Food Processing Operations	Simulated WBL: School Busines	160000	019090	F	01.0401	01	01	01.06	18309, 18348
		019901	84	Specialty & Emerging Food Systems Topics	Zymology/Fermentation Scienc			F	01.1099	01	01	01.06	18349
301	<b>Biotechnology Systems Pathway</b>					010100	010000						
		019901	85	Animal & Plant Biotechnology	Agricultural Biotechnology cou				01.9999	01	01	01.07	18308
		019901	86	Advanced Animal & Plant Biotechnology	Advanced Agricultural Biotechr				01.9999	01	01	01.07	18308
	Course receives Science Credit toward graduation; Chemist	019901	87	Agricultural Biotechnology & Biology	Science-Elective Credit. Applie				01.9999	01	01	01.07	18308, 03203
	Course receives Science Credit toward graduation; Chemist	019901	88	Advanced Agricultural Biotechnology & Biology	Science-Elective Credit. Advanc				01.9999	01	01	01.07	18308, 03203
		019901	89	Biofuels, Bioproducts, & Bioengineering	A broad fundamental scientific				01.9999	01	01	01.07	18308
		019901	90	Specialty & Emerging Biotechnology Systems Topics	Other Agricultural Biotechnolo				01.9999	01	01	01.07	18999
301	<b>AFNR WBL/SAE and FFA Extended and Summer Program</b>					010100	010000						
		019901	93	Extended or Summer AFNR Work-Based Learning (SAE) & Leadership (FFA)	Courses in Agriculture, Food, a	160000	019090	F	01.0199	01	01	01.05	18997
301	<b>AFNR Leadership Development (Adv. Leadership and FFA)</b>					010100	010000						
		019901	94	Agricultural Leadership Development	Agricultural Leadership cours			F	01.0199	01	01	01.05	18203
301	<b>Teacher-Coord. of AFNR Work-Based Learning (Adv. WBL)</b>					010100	010000						
		019901	95	Agricultural Career Seminar	Career Seminar I allows studen	160000	019090	F	01.0199	01	01	01.05	18990, 22151
		019901	96	Advanced Agricultural Career Seminar	Career Seminar II allows studen	160000	019090	F	01.0199	01	01	01.05	18990, 22151
		019901	97	Agricultural Work Experience: Immersion SAE	Adv. Internship/Placement, En	160000	019090	F	01.0199	01	25	01.05	18998
301	<b>Teacher-Coord. of AFNR WBL: Youth Apprenticeship</b>					010100	010000						
		019095	95	Agricultural Career Seminar	Career Seminar I allows studen	160000	019090	F	01.0101	01	01	01.05	18990
		019095	96	Advanced Agricultural Career Seminar	Career Seminar II allows studen	160000	019090	F	01.0101	01	01	01.05	18990
		019095	97	Agricultural Work Experience	Work experience courses requi	160000	019090	F	01.0101	01	26	01.05	18998