Course Name	Faculty Qualifications Needed	Related Disciplines	Acceptable Alternative Qualifications
AGSC 5010 Foundations of Agricultural and Extension Education	Earned Doctorate degree in Agriculture and/or Environmental	Animal Science, Agronomy, Food science, Biotechnology	Acceptable alternative qualifications in Agriculture Sciences include substantial professional experience as a
	Sciences in the teaching discipline or a closely related discipline.		veterinarian, farm manager, livestock nutritionist, food safety specialist, agricultural sales representative, or related field. Relevant professional licensure or certifications, and notable scholarly work such as published articles or conference presentations in Agriculture Sciences.
AGSC 5012 Food Supply and Value Chain Management	Earned Doctorate degree in Agriculture and/or Environmental Sciences in the teaching discipline or a closely related discipline.	Animal Science, Agronomy, Food science, Biotechnology, Agribusiness	Acceptable alternative qualifications in Agriculture Sciences include substantial professional experience as a veterinarian, farm manager, livestock nutritionist, food safety specialist, agricultural sales representative, or related field. Relevant professional licensure or certifications, and notable scholarly work such as published articles or conference presentations in Agriculture Sciences.
AGSC 5014 Food Marketing and Retail Management	Earned Doctorate degree in Agriculture and/or Environmental Sciences in the teaching discipline or a closely related discipline.	Food Science, Agribusiness	Acceptable alternative qualifications in Agriculture Sciences include substantial professional experience as a veterinarian, farm manager, livestock nutritionist, food safety specialist, agricultural sales representative, or related field. Relevant professional licensure or certifications, and notable scholarly work such as published articles or conference presentations in Agriculture Sciences.
AGSC 5020 Teaching and Learning Methods in Agricultural and Extension Education	Earned Doctorate degree in Agriculture and/or Environmental Sciences in the teaching discipline or a closely related discipline.	Animal Science, Agronomy, Food Science, Biotechnology	Acceptable alternative qualifications in Agriculture Sciences include substantial professional experience as a veterinarian, farm manager, livestock nutritionist, food safety specialist, agricultural sales representative, or related field. Relevant professional licensure or certifications, and notable scholarly work such as published articles or conference presentations in Agriculture Sciences.
AGSC 5030 Curriculum Development and Program Leadership in Agricultural and Extensio Education	n Earned Doctorate degree in Agriculture and/or Environmental Sciences in the teaching discipline or a closely related discipline.	Agribusiness, Curriculum Instruction/Design	Acceptable alternative qualifications in Agriculture Sciences include substantial professional experience as a veterinarian, farm manager, livestock nutritionist, food safety specialist, agricultural sales representative, or related field. Relevant professional licensure or certifications, and notable scholarly work such as published articles or conference presentations in Agriculture Sciences.
AGSC 5040 Program Planning, Development and Evaluation	Earned Doctorate degree in Agriculture and/or Environmental Sciences in the teaching discipline or a closely related discipline.	Agribusiness, Curriculum Instruction/Design	Acceptable alternative qualifications in Agriculture Sciences include substantial professional experience as a veterinarian, farm manager, livestock nutritionist, food safety specialist, agricultural sales representative, or related field. Relevant professional licensure or certifications, and notable scholarly work such as published articles or conference presentations in Agriculture Sciences.
AGSC 5050 Methods of Teaching Agricultural and Environmental Stem	Earned Doctorate degree in Agriculture and/or Environmental Sciences in the teaching discipline or a closely related discipline.	Curriculum Instruction/Design	Acceptable alternative qualifications in Agriculture Sciences include substantial professional experience as a veterinarian, farm manager, livestock nutritionist, food safety specialist, agricultural sales representative, or related field. Relevant professional licensure or certifications, and notable scholarly work such as published articles or conference presentations in Agriculture Sciences.
AGSC 5060 Statistics for Research	Earned Doctorate degree in Agriculture and/or Environmental Sciences in the teaching discipline or a closely related discipline.	Biostatistics, Agricultural Economics, Statistics	Acceptable alternative qualifications in Agriculture Sciences include substantial professional experience as a agricultural policy analyst, agricultural research scientist, agricultural economist, crop consultant, or related field. Relevant professional licensure or certifications, and notable scholarly work such as published articles or conference presentations in Agriculture Sciences.
AGSC 5080 Agribusiness Management and Market Analysis	Earned Doctorate degree in Agriculture and/or Environmental Sciences in the teaching discipline or a closely related discipline.	Agribusiness, Economics, Finance,	Acceptable alternative qualifications in Agriculture Sciences include substantial professional experience as a veterinarian, farm manager, livestock nutritionist, food safety specialist, agricultural sales representative, or related field. Relevant professional licensure or certifications, and notable scholarly work such as published articles or conference presentations in Agriculture Sciences.
AGSC 5090 Food and Fiber Industry	Earned Doctorate degree in Agriculture and/or Environmental Sciences in the teaching discipline or a closely related discipline.	Agribusiness, Biotechnology	Acceptable alternative qualifications in Agriculture Sciences include substantial professional experience as a veterinarian, farm manager, livestock nutritionist, food safety specialist, agricultural sales representative, or related field. Relevant professional licensure or certifications, and notable scholarly work such as published articles or conference presentations in Agriculture Sciences.
AGSC 5100 Environmental, Resource Economics and Management	Earned Doctorate degree in Agriculture and/or Environmental Sciences in the teaching discipline or a closely related discipline.	Agribusiness, Economics, Fiance	Acceptable alternative qualifications in Agriculture Sciences include substantial professional experience as a veterinarian, farm manager, livestock nutritionist, food safety specialist, agricultural sales representative, or related field. Relevant professional licensure or certifications, and notable scholarly work such as published articles or conference presentations in Agriculture Sciences.
AGSC 5110 Research Methods	Earned Doctorate degree in Agriculture and/or Environmental Sciences in the teaching discipline or a closely related discipline.	Animal Science, Agronomy, Food Science, Biotechnology, Agribusiness business, Food Industry, Soil Science, Agricultural Engineering	Acceptable atternative qualifications in Agriculture Sciences include substantial professional experience as a veterinarian, farm manager, livestock nutritionist, food safety specialist, agricultural sales representative, or related field. Relevant professional licensure or certifications, and notable scholarly work such as published articles or conference presentations in Agriculture Sciences.
AGSC 5120 Thesis Writing (Thesis Option)	Earned Doctorate degree in Agriculture and/or Environmental Sciences in the teaching discipline or a closely related discipline.	Animal Science, Agronomy, Food Science, Biotechnology, Agribusiness business, Food Industry, Soil Science, Agricultural Engineering	Acceptable alternative qualifications in Agriculture Sciences include substantial professional experience as a veterinarian, farm manager, livestock nutritionist, food safety specialist, agricultural sales representative, or related field. Relevant professional licensure or certifications, and notable scholarly work such as published articles or conference presentations in Agriculture Sciences.
AGSC 5130 Advanced Animal Nutrition	Earned Doctorate degree in Agriculture and/or Environmental Sciences in the teaching discipline or a closely related discipline.	Animal Science, Food Science, Nutrition	Acceptable alternative qualifications in Agriculture Sciences include substantial professional experience as a veterinarian, farm manager, livestock nutritionist, food safety specialist, agricultural sales representative, or related field. Relevant professional licensure or certifications, and notable scholarly work such as published articles or conference presentations in Agriculture Sciences.

AGSC 5140 Contemporary Issues in Animal Science	Earned Doctorate degree in Agriculture and/or Environmental Sciences in the teaching discipline or a closely related discipline.	Animal Science, Biology, Livestock Management	Acceptable alternative qualifications in Agriculture Sciences include substantial professional experience as a veterinarian, farm manager, livestock nutritionist, food safety specialist, agricultural sales representative, or related field. Relevant professional licensure or certifications, and notable scholarly work such as published articles or conference presentations in Agriculture Sciences.
AGSC 5150 Livestock Production and Management	Earned Doctorate degree in Agriculture and/or Environmental Sciences in the teaching discipline or a closely related discipline.	Animal Science, Biology, Livestock Management	Acceptable alternative qualifications in Agriculture Sciences include substantial professional experience as a veterinarian, farm manager, livestock nutritionist, food safety specialist, agricultural sales representative, or related field. Relevant professional licensure or certifications, and notable scholarly work such as published articles or conference presentations in Agriculture Sciences.
AGSC 5160 Animal Genetics and Breeding	Earned Doctorate degree in Agriculture and/or Environmental Sciences in the teaching discipline or a closely related discipline.	Animal Science, Agricultural Engineering, Genetics	Acceptable alternative qualifications in Agriculture Sciences include substantial professional experience as a veterinarian, farm manager, livestock nutritionist, food safety specialist, agricultural sales representative, or related field. Relevant professional licensure or certifications, and notable scholarly work such as published articles or conference presentations in Agriculture Sciences.
AGSC 5170 Advanced Poultry Production and Management	Earned Doctorate degree in Agriculture and/or Environmental Sciences in the teaching discipline or a closely related discipline.	Animal Science, Livestock Management, Agribusiness	Acceptable alternative qualifications in Agriculture Sciences include substantial professional experience as a veterinarian, farm manager, livestock nutritionist, food safety specialist, agricultural sales representative, or related field. Relevant professional licensure or certifications, and notable scholarly work such as published articles or conference presentations in Agriculture Sciences.
AGSC 5180 Soil Classification	Earned Doctorate degree in Agriculture and/or Environmental Sciences in the teaching discipline or a closely related discipline.	Agronomy, Soil Science	Acceptable alternative qualifications in Agriculture Sciences include substantial professional experience as a veterinarian, farm manager, livestock nutritionist, food safety specialist, agricultural sales representative, or related field. Relevant professional licensure or certifications, and notable scholarly work such as published articles or conference presentations in Agriculture Sciences.
AGSC 5190 Plant Breeding	Earned Doctorate degree in Agriculture and/or Environmental Sciences in the teaching discipline or a closely related discipline.	Agronomy, Horticultural Science, Biotechnology, Soil Science, Botany	Acceptable alternative qualifications in Agriculture Sciences include substantial professional experience as a veterinarian, farm manager, livestock nutritionist, food safety specialist, agricultural sales representative, or related field. Relevant professional licensure or certifications, and notable scholarly work such as published articles or conference presentations in Agriculture Sciences.
AGSC 5220 Plant Growth Substances	Earned Doctorate degree in Agriculture and/or Environmental Sciences in the teaching discipline or a closely related discipline.	Agronomy, Horticultural Science, Biotechnology, Soil Science, Botany	Acceptable alternative qualifications in Agriculture Sciences include substantial professional experience as a veterinarian, farm manager, livestock nutritionist, food safety specialist, agricultural sales representative, or related field. Relevant professional licensure or certifications, and notable scholarly work such as published articles or conference presentations in Agriculture Sciences.
AGSC 5230 Advanced Propagation of Horticultural Plants	Earned Doctorate degree in Agriculture and/or Environmental Sciences in the teaching discipline or a closely related discipline.	Agronomy, Horticultural Science, Biotechnology, Soil Science, Botany	Acceptable alternative qualifications in Agriculture Sciences include substantial professional experience as a veterinarian, farm manager, livestock nutritionist, food safety specialist, agricultural sales representative, or related field. Relevant professional licensure or certifications, and notable scholarly work such as published articles or conference presentations in Agriculture Sciences.
AGSC 5240 Plant Protection	Earned Doctorate degree in Agriculture and/or Environmental Sciences in the teaching discipline or a closely related discipline.	Agronomy, Horticultural Science, Biotechnology, Soil Science, Botany	Acceptable alternative qualifications in Agriculture Sciences include substantial professional experience as a veterinarian, farm manager, livestock nutritionist, food safety specialist, agricultural sales representative, or related field. Relevant professional licensure or certifications, and notable scholarly work such as published articles or conference presentations in Agriculture Sciences.
AGSC 5260 Environmental Analysis	Earned Doctorate degree in Agriculture and/or Environmental Sciences in the teaching discipline or a closely related discipline.	Agronomy, Horticultural science	Acceptable alternative qualifications in Agriculture Sciences include substantial professional experience as a veterinarian, farm manager, livestock nutritionist, food safety specialist, agricultural sales representative, or related field. Relevant professional licensure or certifications, and notable scholarly work such as published articles or conference presentations in Agriculture Sciences.
AGSC 5280 Advanced Poultry Nutrition and Biotechnology	Earned Doctorate degree in Agriculture and/or Environmental Sciences in the teaching discipline or a closely related discipline.	Animal Science, Food Science, Nutrition, Livestock Management, Biotechnolgoy	Acceptable alternative qualifications in Agriculture Sciences include substantial professional experience as a veterinarian, farm manager, livestock nutritionist, food safety specialist, agricultural sales representative, or related field. Relevant professional licensure or certifications, and notable scholarly work such as published articles or conference presentations in Agriculture Sciences.
AGSC 5300 Applied Microeconomics in Agribusiness	Earned Doctorate degree in Agriculture and/or Environmental Sciences in the teaching discipline or a closely related discipline.	Agribusiness, Economics	Acceptable alternative qualifications in Agriculture Sciences include substantial professional experience as a veterinarian, farm manager, livestock nutritionist, food safety specialist, agricultural sales representative, or related field. Relevant professional licensure or certifications, and notable scholarly work such as published articles or conference presentations in Agriculture Sciences.
AGSC 5310 International Agricultural Trade and Marketing	Earned Doctorate degree in Agriculture and/or Environmental Sciences in the teaching discipline or a closely related discipline.	Agribusiness, Economics	Acceptable atternative qualifications in Agriculture Sciences include substantial professional experience as a veterinarian, farm manager, livestock nutritionist, food safety specialist, agricultural sales representative, or related field. Relevant professional licensure or certifications, and notable scholarly work such as published articles or conference presentations in Agriculture Sciences.
AGSC 5330 Agribusiness Strategy	Earned Doctorate degree in Agriculture and/or Environmental Sciences in the teaching discipline or a closely related discipline.	Agribusiness, Economics	Acceptable alternative qualifications in Agriculture Sciences include substantial professional experience as a veterinarian, farm manager, livestock nutritionist, food safety specialist, agricultural sales representative, or related field. Relevant professional licensure or certifications, and notable scholarly work such as published articles or conference presentations in Agriculture Sciences.
AGSC 5350 Independent Study of Contemporary Issues and Problems	Earned Doctorate degree in Agriculture and/or Environmental Sciences in the teaching discipline or a closely related discipline.	Animal Science, Agronomy, Food Science, Biotechnology, Agribusiness business, Food Industry, Soil Science, Agricultural Engineering	Acceptable alternative qualifications in Agriculture Sciences include substantial professional experience as a veterinarian, farm manager, livestock nutritionist, food safety specialist, agricultural sales representative, or related field. Relevant professional licensure or certifications, and notable scholarly work such as published articles or conference presentations in Agriculture Sciences.

AGSC 5610-5620 Graduate Seminar in Agricultural Sciences	Earned Doctorate degree in Agriculture and/or Environmental	Animal Science, Agronomy, Food Science, Biotechnology, Agribusiness business,	Acceptable alternative qualifications in Agriculture Sciences include substantial professional experience as a
	Sciences in the teaching discipline or a closely related discipline.	Food Industry, Soil Science, Agricultural Engineering	veterinarian, farm manager, livestock nutritionist, food safety specialist, agricultural sales representative, or related field. Relevant professional licensure or certifications, and notable scholarly work such as published articles or conference presentations in Agriculture Sciences.
PSMA 6510 Geospatial Information Systems	Earned Doctorate degree in Agriculture and/or Environmental Sciences in the teaching discipline or a closely related discipline.	Agriculute Engineering, Environmental Engineering, GIS-Computer Science, Geography, and/or Data Analsyis	Acceptable alternative qualifications in Agriculture Sciences include substantial professional experience as a precision agriculture specialist, GIS specialist/technician, remote sensing analyst, agricultural research scientist, agricultural engineer, crop consultant, or related field. Relevant professional licensure or certifications, and notable scholarly work such as published articles or conference presentations in Agriculture Sciences.
AGSC 6520 Advanced Spatial Analysis	Earned Doctorate degree in Agriculture and/or Environmental Sciences in the teaching discipline or a closely related discipline.	Agriculute Engineering, Environmental Engineering, GIS-Computer Science, Geography, and/or Data Analsyis	Acceptable alternative qualifications in Agriculture Sciences include substantial professional experience as a precision agriculture specialist, GIS specialist/technician, remote sensing analyst, agricultural research scientist, agricultural engineer, crop consultant, or related field. Relevant professional licensure or certifications, and notable scholarly work such as published articles or conference presentations in Agriculture Sciences.
PSMA 6525 Remote Sensing and Image Analysis	Earned Doctorate degree in Agriculture and/or Environmental Sciences in the teaching discipline or a closely related discipline.	Agriculute Engineering, Environmental Engineering, GIS-Computer Science, Geography, and/or Data Analsyis	Acceptable alternative qualifications in Agriculture Sciences include substantial professional experience as a precision agriculture specialist, GIS specialist/technician, remote sensing analyst, agricultural research scientist, agricultural engineer, crop consultant, or related field. Relevant professional licensure or certifications, and notable scholarly work such as published articles or conference presentations in Agriculture Sciences.
PSMA 6530 Advanced Geospatial Metadata	Earned Doctorate degree in Agriculture and/or Environmental Sciences in the teaching discipline or a closely related discipline.	Agriculute Engineering, Environmental Engineering, GIS-Computer Science, Geography, and/or Data Analsyis	Acceptable alternative qualifications in Agriculture Sciences include substantial professional experience as a precision agriculture specialist, GIS specialist/technician, remote sensing analyst, agricultural research scientist, agricultural engineer, crop consultant, or related field. Relevant professional licensure or certifications, and notable scholarly work such as published articles or conference presentations in Agriculture Sciences.
PSMA 6540 Advanced Spatial Database Design and Management	Earned Doctorate degree in Agriculture and/or Environmental Sciences in the teaching discipline or a closely related discipline.	Agriculute Engineering, Environmental Engineering, GIS-Computer Science, Geography, and/or Data Analsyis	Acceptable alternative qualifications in Agriculture Sciences include substantial professional experience as a precision agriculture specialist, GIS specialist/technician, remote sensing analyst, agricultural research scientist, agricultural engineer, crop consultant, or related field. Relevant professional licensure or certifications, and notable scholarly work such as published articles or conference presentations in Agriculture Sciences.
PSMA 6550 Advanced Geospatial Information Systems Application and Design	Earned Doctorate degree in Agriculture and/or Environmental Sciences in the teaching discipline or a closely related discipline.	Agriculute Engineering, Environmental Engineering, GIS-Computer Science, Geography, and/or Data Analsyis	Acceptable alternative qualifications in Agriculture Sciences include substantial professional experience as a precision agriculture specialist, GIS specialist/technician, remote sensing analyst, agricultural research scientist, agricultural engineer, crop consultant, or related field. Relevant professional licensure or certifications, and notable scholarly work such as published articles or conference presentations in Agriculture Sciences.
PSMA 6560 Advanced Global Positioning Systems	Earned Doctorate degree in Agriculture and/or Environmental Sciences in the teaching discipline or a closely related discipline.	Agriculute Engineering, Environmental Engineering, GIS-Computer Science, Geography, and/or Data Analsyis	Acceptable alternative qualifications in Agriculture Sciences include substantial professional experience as a precision agriculture specialist, GIS specialist/technician, remote sensing analyst, agricultural research scientist, agricultural engineer, crop consultant, or related field. Relevant professional licensure or certifications, and notable scholarly work such as published articles or conference presentations in Agriculture Sciences.
AGSC 7010 Advancement in Agricultural Biotechnology	Earned Doctorate degree in Agriculture and/or Environmental Sciences in the teaching discipline or a closely related discipline.	Biotechnology	Acceptable alternative qualifications in Agriculture Sciences include substantial professional experience as a veterinarian, farm manager, livestock nutritionist, food safety specialist, agricultural sales representative, or related field. Relevant professional licensure or certifications, and notable scholarly work such as published articles or conference presentations in Agriculture Sciences.
AGSC 7020 Economic, Regulatory and Ethical Issues in Biotechnology	Earned Doctorate degree in Agriculture and/or Environmental Sciences in the teaching discipline or a closely related discipline.	Biotechnology	Acceptable alternative qualifications in Agriculture Sciences include substantial professional experience as a veterinarian, farm manager, livestock nutritionist, food safety specialist, agricultural sales representative, or related field. Relevant professional licensure or certifications, and notable scholarly work such as published articles or conference presentations in Agriculture Sciences.
AGSC 7030 Gene Expression and Regulation in Eukaryotes	Earned Doctorate degree in Agriculture and/or Environmental Sciences in the teaching discipline or a closely related discipline.	Animal Science, Agricultural Engineering, Genetics	Acceptable alternative qualifications in Agriculture Sciences include substantial professional experience as a veterinarian, farm manager, livestock nutritionist, food safety specialist, agricultural sales representative, or related field. Relevant professional licensure or certifications, and notable scholarly work such as published articles or conference presentations in Agriculture Sciences.
AGSC 7040 Plant Tissue Culture Methods and Applications	Earned Doctorate degree in Agriculture and/or Environmental Sciences in the teaching discipline or a closely related discipline.	Agronomy, Horticultural Science, Biotechnology, Soil Science, Botany	Acceptable alternative qualifications in Agriculture Sciences include substantial professional experience as a veterinarian, farm manager, livestock nutritionist, food safety specialist, agricultural sales representative, or related field. Relevant professional licensure or certifications, and notable scholarly work such as published articles or conference presentations in Agriculture Sciences.
AGSC 7050 Biotechnology in Animal Reproduction	Earned Doctorate degree in Agriculture and/or Environmental Sciences in the teaching discipline or a closely related discipline.	Agronomy, Horticultural Science, Biotechnology, Soil Science, Botany	Acceptable alternative qualifications in Agriculture Sciences include substantial professional experience as a veterinarian, farm manager, livestock nutritionist, food safety specialist, agricultural sales representative, or related field. Relevant professional licensure or certifications, and notable scholarly work such as published articles or conference presentations in Agriculture Sciences.
AGSC 7060 Soil Technology	Earned Doctorate degree in Agriculture and/or Environmental Sciences in the teaching discipline or a closely related discipline.	Agronomy, Horticultural Science, Biotechnology, Soil Science, Botany	Acceptable alternative qualifications in Agriculture Sciences include substantial professional experience as a veterinarian, farm manager, livestock nutritionist, food safety specialist, agricultural sales representative, or related field. Relevant professional licensure or certifications, and notable scholarly work such as published articles or conference presentations in Agriculture Sciences.

AGSC 7070 Applied Genomics	Earned Doctorate degree in Agriculture and/or Environmental Sciences in the teaching discipline or a closely related discipline.	Animat Science, Agricultural Engineering, Genetics	Acceptable atternative qualifications in Agriculture Sciences include substantial professional experience as a veterinarian, farm manager, livestock nutritionist, food safety specialist, agricultural sales representative, or related field. Relevant professional licensure or certifications, and notable scholarly work such as published articles or conference presentations in Agriculture Sciences.
AGSC 5015 Principles of Organic Agriculture	Earned Doctorate degree in Agriculture and/or Environmental Sciences in the teaching discipline or a closely related discipline.	Animal Science, Agricultural Engineering, Organic Science	Acceptable alternative qualifications in Agriculture Sciences include substantial professional experience as a veterinarian, farm manager, livestock nutritionist, food safety specialist, agricultural sales representative, or related field. Relevant professional licensure or certifications, and notable scholarly work such as published articles or conference presentations in Agriculture Sciences.
AGSC 5270 Biosecurity and Bioforensics	Earned Doctorate degree in Agriculture and/or Environmental Sciences in the teaching discipline or a closely related discipline.	Biosecurity, Forensics, Bioforensics	Acceptable alternative qualifications in Agriculture Sciences include substantial professional experience as a veterinarian, farm manager, livestock nutritionist, food safety specialist, agricultural sales representative, or related field. Relevant professional licensure or certifications, and notable scholarly work such as published articles or conference presentations in Agriculture Sciences.
AGSC 5290 Omics	Earned Doctorate degree in Agriculture and/or Environmental Sciences in the teaching discipline or a closely related discipline.	Agricultural Engineering, Biotechnology, Genomics	Acceptable alternative qualifications in Agriculture Sciences include substantial professional experience as a veterinarian, farm manager, livestock nutritionist, food safety specialist, agricultural sales representative, or related field. Relevant professional licensure or certifications, and notable scholarly work such as published articles or conference presentations in Agriculture Sciences.
AGSC 5320 Wetlands Ecology and Management	Earned Doctorate degree in Agriculture and/or Environmental Sciences in the teaching discipline or a closely related discipline.	Agronomy, Ecology, Soil Science, Botany	Acceptable alternative qualifications in Agriculture Sciences include substantial professional experience as a precision agriculture specialist, GIS specialist/technician, remote sensing analyst, agricultural research scientist, agricultural engineer, crop consultant, or related field. Relevant professional licensure or certifications, and notable scholarly work such as published articles or conference presentations in Agriculture Sciences.
AGSC 5340 Cell and Issue Culture	Earned Doctorate degree in Agriculture and/or Environmental Sciences in the teaching discipline or a closely related discipline.	Animal Science, Cell Biology	Acceptable alternative qualifications in Agriculture Sciences include substantial professional experience as a veterinarian, farm manager, livestock nutritionist, food safety specialist, agricultural sales representative, or related field. Relevant professional licensure or certifications, and notable scholarly work such as published articles or conference presentations in Agriculture Sciences.
AGSC 6585 Internship in Applied Geospatial Sciences	Earned Doctorate degree in Agriculture and/or Environmental Sciences in the teaching discipline or a closely related discipline.	Agriculute Engineering, Environmental Engineering, GIS-Computer Science, Geography, and/or Data Analsyis	Acceptable alternative qualifications in Agriculture Sciences include substantial professional experience as a veterinarian, farm manager, livestock nutritionist, food safety specialist, agricultural sales representative, or related field. Relevant professional licensure or certifications, and notable scholarly work such as published articles or conference presentations in Agriculture Sciences.
PSMA 6560 Advanced Global Positioning System	Earned Doctorate degree in Agriculture and/or Environmental Sciences in the teaching discipline or a closely related discipline.	Agriculute Engineering, Environmental Engineering, GIS-Computer Science, Geography, and/or Data Analsyis	Acceptable alternative qualifications in Agriculture Sciences include substantial professional experience as a precision agriculture specialist, GIS specialist/technician, remote sensing analyst, agricultural research scientist, agricultural engineer, crop consultant, or related field. Relevant professional licensure or certifications, and notable scholarly work such as published articles or conference presentations in Agriculture Sciences.
AGSC 5380 Industrial and Environmental Biotechnology	Earned Doctorate degree in Agriculture and/or Environmental Sciences in the teaching discipline or a closely related discipline.	Biotechnology, Agricultural Engineering	Acceptable alternative qualifications in Agriculture Sciences include substantial professional experience as a veterinarian, farm manager, livestock nutritionist, food safety specialist, agricultural sales representative, or related field. Relevant professional licensure or certifications, and notable scholarly work such as published articles or conference presentations in Agriculture Sciences.
AGSC 5400 Animal Reproductive Physiology	Earned Doctorate degree in Agriculture and/or Environmental Sciences in the teaching discipline or a closely related discipline.	Animat Science, Livestock Management,Zoology	Acceptable alternative qualifications in Agriculture Sciences include substantial professional experience as a veterinarian, farm manager, livestock nutritionist, food safety specialist, agricultural sales representative, or related field. Relevant professional licensure or certifications, and notable scholarly work such as published articles or conference presentations in Agriculture Sciences.
AGSC 5470 Immunochemistry in Biotechnology	Earned Doctorate degree in Agriculture and/or Environmental Sciences in the teaching discipline or a closely related discipline.	Biochemistry, Biotechnology, Immochemistry	Acceptable alternative qualifications in Agriculture Sciences include substantial professional experience as a veterinarian, farm manager, livestock nutritionist, food safety specialist, agricultural sales representative, or related field. Relevant professional licensure or certifications, and notable scholarly work such as published articles or conference presentations in Agriculture Sciences.
AGSC 7500 Environmental Issues and Sustainability	Earned Doctorate degree in Agriculture and/or Environmental Sciences in the teaching discipline or a closely related discipline.	Biotechnology, Ecology	Acceptable alternative qualifications in Agriculture Sciences include substantial professional experience as a veterinarian, farm manager, livestock nutritionist, food safety specialist, agricultural sales representative, or related field. Relevant professional licensure or certifications, and notable scholarly work such as published articles or conference presentations in Agriculture Sciences.
AGSC 5510 Ecosystem Science and Management	Earned Doctorate degree in Agriculture and/or Environmental Sciences in the teaching discipline or a closely related discipline.	Ecology, Agronomy	Acceptable atternative qualifications in Agriculture Sciences include substantial professional experience as a veterinarian, farm manager, livestock nutritionist, food safety specialist, agricultural sales representative, or related field. Relevant professional licensure or certifications, and notable scholarly work such as published articles or conference presentations in Agriculture Sciences.
AGSC 5520 Advanced Food Processing and Engineering	Earned Doctorate degree in Agriculture and/or Environmental Sciences in the teaching discipline or a closely related discipline.	Food Science, Agricultural Engineering	Acceptable alternative qualifications in Agriculture Sciences include substantial professional experience as a veterinarian, farm manager, livestock nutritionist, food safety specialist, agricultural sales representative, or related field. Relevant professional licensure or certifications, and notable scholarly work such as published articles or conference presentations in Agriculture Sciences.
AGSC 5530 Forest Ecology and Management	Earned Doctorate degree in Agriculture and/or Environmental Sciences in the teaching discipline or a closely related discipline.	Agronomy, Ecology	Acceptable alternative qualifications in Agriculture Sciences include substantial professional experience as a veterinarian, farm manager, livestock nutritionist, food safety specialist, agricultural sales representative, or related field. Relevant professional licensure or certifications, and notable scholarly work such as published articles or conference presentations in Agriculture Sciences.

AGSC 5540 Food Policies and Regulations	Earned Doctorate degree in Agriculture and/or Environmental Sciences in the teaching discipline or a closely related discipline.	Food Science, Agribusiness	Acceptable attemative qualifications in Agriculture Sciences include substantial professional experience as a veterinarian, farm manager, livestock nutritionist, food safety specialist, agricultural sales representative, or related field. Relevant professional licensure or certifications, and notable scholarly work such as published articles or conference presentations in Agriculture Sciences.
AGSC 5550 Food Safety and Sanitation	Earned Doctorate degree in Agriculture and/or Environmental Sciences in the teaching discipline or a closely related discipline.	Food Science	Acceptable alternative qualifications in Agriculture Sciences include substantial professional experience as a veterinarian, farm manager, livestock nutritionist, food safety specialist, agricultural sales representative, or related field. Relevant professional licensure or certifications, and notable scholarly work such as published articles or conference presentations in Agriculture Sciences.
AGSC 5560 Food Product Development and Sensory Science	Earned Doctorate degree in Agriculture and/or Environmental Sciences in the teaching discipline or a closely related discipline.	Food Science	Acceptable alternative qualifications in Agriculture Sciences include substantial professional experience as a veterinarian, farm manager, livestock nutritionist, food safety specialist, agricultural sales representative, or related field. Relevant professional licensure or certifications, and notable scholarly work such as published articles or conference presentations in Agriculture Sciences.
AGSC 5570 Climate Change	Earned Doctorate degree in Agriculture and/or Environmental Sciences in the teaching discipline or a closely related discipline.	Ecology, Climatology	Acceptable alternative qualifications in Agriculture Sciences include substantial professional experience as a veterinarian, farm manager, livestock nutritionist, food safety specialist, agricultural sales representative, or related field. Relevant professional licensure or certifications, and notable scholarly work such as published articles or conference presentations in Agriculture Sciences.
AGSC 5900 Applied Entomology	Earned Doctorate degree in Agriculture and/or Environmental Sciences in the teaching discipline or a closely related discipline.	Ecology, Entomology	Acceptable alternative qualifications in Agriculture Sciences include substantial professional experience as a veterinarian, farm manager, livestock nutritionist, food safety specialist, agricultural sales representative, or related field. Relevant professional licensure or certifications, and notable scholarly work such as published articles or conference presentations in Agriculture Sciences.
AGSC 6010 Gene Structure and Function	Earned Doctorate degree in Agriculture and/or Environmental Sciences in the teaching discipline or a closely related discipline.	Genetics, Genomics, Molecular Biology	Acceptable atternative qualifications in Agriculture Sciences include substantial professional experience as a veterinarian, farm manager, livestock nutritionist, food safety specialist, agricultural sales representative, or related field. Relevant professional licensure or certifications, and notable scholarly work such as published articles or conference presentations in Agriculture Sciences.
AGSC 6510 Advanced Geospatial Information System	Earned Doctorate degree in Agriculture and/or Environmental Sciences in the teaching discipline or a closely related discipline.	Agriculute Engineering, Environmental Engineering, GIS-Computer Science, Geography, and/or Data Anatsyis	Acceptable alternative qualifications in Agriculture Sciences include substantial professional experience as a precision agriculture specialist, GIS specialist/technician, remote sensing analyst, agricultural research scientist, agricultural engineer, crop consultant, or related field. Relevant professional licensure or certifications, and notable scholarly work such as published articles or conference presentations in Agriculture Sciences.
AGSC 7590 Applied Multivariate Statistics	Earned Doctorate degree in Agriculture and/or Environmental Sciences in the teaching discipline or a closely related discipline.	Biostatistics, Statistics, Advanced Mathematics	Acceptable alternative qualifications in Agriculture Sciences include substantial professional experience as a agricultural policy analyst, agricultural research scientist, agricultural economist, crop consultant, or related field. Relevant professional licensure or certifications, and notable scholarly work such as published articles or conference presentations in Agriculture Sciences.
AGSC 7080 Host-Microbe Interactions	Earned Doctorate degree in Agriculture and/or Environmental Sciences in the teaching discipline or a closely related discipline.	Microbiology, Immunology	Acceptable alternative qualifications in Agriculture Sciences include substantial professional experience as a veterinarian, farm manager, livestock nutritionist, food safety specialist, agricultural sales representative, or related field. Relevant professional licensure or certifications, and notable scholarly work such as published articles or conference presentations in Agriculture Sciences.
PSMA 6560 Advanced Global Positioning Systems	Earned Doctorate degree in Agriculture and/or Environmental Sciences in the teaching discipline or a closely related discipline.	Agriculute Engineering, Environmental Engineering, GIS-Computer Science, Geography, and/or Data Analsyis	Acceptable alternative qualifications in Agriculture Sciences include substantial professional experience as a precision agriculture specialist, GIS specialist/technician, remote sensing analyst, agricultural research scientist, agricultural engineer, crop consultant, or related field. Relevant professional licensure or certifications, and notable scholarly work such as published articles or conference presentations in Agriculture Sciences.
AGSC 6550 Advanced Spatial Information Systems Application and Design	Earned Doctorate degree in Agriculture and/or Environmental Sciences in the teaching discipline or a closely related discipline.	Agriculute Engineering, Environmental Engineering, GIS-Computer Science, Geography, and/or Data Analsyis	Acceptable alternative qualifications in Agriculture Sciences include substantial professional experience as a precision agriculture specialist, GIS specialist/technician, remote sensing analyst, agricultural research scientist, agricultural engineer, crop consultant, or related field. Relevant professional licensure or certifications, and notable scholarly work such as published articles or conference presentations in Agriculture Sciences.
AGSC 6525 Remote Sensing and Image Analysis	Earned Doctorate degree in Agriculture and/or Environmental Sciences in the teaching discipline or a closely related discipline.	Agriculute Engineering, Environmental Engineering, GIS-Computer Science, Geography, and/or Data Analsyis	Acceptable alternative qualifications in Agriculture Sciences include substantial professional experience as a precision agriculture specialist, GIS specialist/technician, remote sensing analyst, agricultural research scientist, agricultural engineer, crop consultant, or related field. Relevant professional licensure or certifications, and notable scholarly work such as published articles or conference presentations in Agriculture Sciences.
AGSC 6530 Advanced Geospatial Metadata	Earned Doctorate degree in Agriculture and/or Environmental Sciences in the teaching discipline or a closely related discipline.	Agriculute Engineering, Environmental Engineering, GIS-Computer Science, Geography, and/or Data Analsyis	Acceptable alternative qualifications in Agriculture Sciences include substantial professional experience as a precision agriculture specialist, GIS specialist/technician, remote sensing analyst, agricultural research scientist, agricultural engineer, crop consultant, or related field. Relevant professional licensure or certifications, and notable scholarly work such as published articles or conference presentations in Agriculture Sciences.
AGSC 6540 Advanced Spatial Database Design and Management	Earned Doctorate degree in Agriculture and/or Environmental Sciences in the teaching discipline or a closely related discipline.	Agriculute Engineering, Environmental Engineering, GIS-Computer Science, Geography, and/or Data Analsyis	Acceptable atternative qualifications in Agriculture Sciences include substantial professional experience as a precision agriculture specialist, GIS specialist/technician, remote sensing analyst, agricultural research scientist, agricultural engineer, crop consultant, or related field. Relevant professional licensure or certifications, and notable scholarly work such as published articles or conference presentations in Agriculture Sciences.
AGSC 5440 Reproductive Physiology	Earned Doctorate degree in Agriculture and/or Environmental Sciences in the teaching discipline or a closely related discipline.	Animal Science, Livestock Management, Zoology	Acceptable alternative qualifications in Agriculture Sciences include substantial professional experience as a veterinarian, farm manager, livestock nutritionist, food safety specialist, agricultural sales representative, or related field. Relevant professional licensure or certifications, and notable scholarly work such as published articles or conference presentations in Agriculture Sciences.

AGSC 7510 Ecosystem Science and Management	Earned Doctorate degree in Agriculture and/or Environmental Sciences in the teaching discipline or a closely related discipline.	Ecology	Acceptable alternative qualifications in Agriculture Sciences include substantial professional experience as a veterinarian, farm manager, livestock nutritionist, food safety specialist, agricultural sales representative, or related field. Relevant professional licensure or certifications, and notable scholarly work such as published articles or conference presentations in Agriculture Sciences.
AGSC 7900 Applied Entomology	Earned Doctorate degree in Agriculture and/or Environmental Sciences in the teaching discipline or a closely related discipline.	Ecology, Entomology	Acceptable alternative qualifications in Agriculture Sciences include substantial professional experience as a veterinarian, farm manager, livestock nutritionist, food safety specialist, agricultural sales representative, or related field. Relevant professional licensure or certifications, and notable scholarty work such as published articles or conference presentations in Agriculture Sciences.
NUFS 5560 Functional Foods for Health	Earned Doctorate degree in Agriculture and/or Environmental Sciences in the teaching discipline or a closely related discipline.	Food Science, Nutrition	Acceptable alternative qualifications in Agriculture Sciences include substantial professional experience as a veterinarian, farm manager, livestock nutritionist, food safety specialist, agricultural sales representative, or related field. Relevant professional licensure or certifications, and notable scholarty work such as published articles or conference presentations in Agriculture Sciences.
AGSC 5500 Environmental Issues and Sustainability	Earned Doctorate degree in Agriculture and/or Environmental Sciences in the teaching discipline or a closely related discipline.	Biotechnology, Ecology	Acceptable alternative qualifications in Agriculture Sciences include substantial professional experience as a veterinarian, farm manager, livestock nutritionist, food safety specialist, agricultural sales representative, or related field. Relevant professional licensure or certifications, and notable scholarty work such as published articles or conference presentations in Agriculture Sciences.
AGSC 6560 Advanced Global Positioning Systems	Earned Doctorate degree in Agriculture and/or Environmental Sciences in the teaching discipline or a closely related discipline.	Agriculute Engineering, Environmental Engineering, GIS-Computer Science, Geography, and/or Data Analsyis	Acceptable alternative qualifications in Agriculture Sciences include substantial professional experience as a precision agriculture specialist, GIS specialist/technician, remote sensing analyst, agricultural research scientist, agricultural engineer, crop consultant, or related field. Relevant professional licensure or certifications, and notable scholarly work such as published articles or conference presentations in Agriculture Sciences.
AGSC 5590 Advanced Technologies in Detection and Food Analysis	Earned Doctorate degree in Agriculture and/or Environmental Sciences in the teaching discipline or a closely related discipline.	Agriculute Engineering, Biotechnology, Food Science	Acceptable alternative qualifications in Agriculture Sciences include substantial professional experience as a veterinarian, farm manager, livestock nutritionist, food safety specialist, agricultural sales representative, or related field. Relevant professional licensure or certifications, and notable scholarly work such as published articles or conference presentations in Agriculture Sciences.
AGSC 6350 Topics in Agricultural Sciences	Earned Doctorate degree in Agriculture and/or Environmental Sciences in the teaching discipline or a closely related discipline.	Agricultural Engineering	Acceptable alternative qualifications in Agriculture Sciences include substantial professional experience as a veterinarian, farm manager, livestock nutritionist, food safety specialist, agricultural sales representative, or related field. Relevant professional licensure or certifications, and notable scholarly work such as published articles or conference presentations in Agriculture Sciences.
AGSC 6620 Research Ethics in Agricultural Sciences	Earned Doctorate degree in Agriculture and/or Environmental Sciences in the teaching discipline or a closely related discipline.	Agricultural Engineering, Agribusiness	Acceptable alternative qualifications in Agriculture Sciences include substantial professional experience as a agricultural policy analyst, agricultural research scientist, agricultural economist, crop consultant, or related field. Relevant professional licensure or certifications, and notable scholarly work such as published articles or conference presentations in Agriculture Sciences.
AGSC 7200 Experimental AgriScience Teaching in Higher Education	Earned Doctorate degree in Agriculture and/or Environmental Sciences in the teaching discipline or a closely related discipline.	Agricultural Engineering, Agribusiness	Acceptable alternative qualifications in Agriculture Sciences include substantial professional experience as a veterinarian, farm manager, livestock nutritionist, food safety specialist, agricultural sales representative, or related field. Relevant professional licensure or certifications, and notable scholarty work such as published articles or conference presentations in Agriculture Sciences.
AGSC 7610 Doctoral Seminar in Agricultural Sciences I	Earned Doctorate degree in Agriculture and/or Environmental Sciences in the teaching discipline or a closely related discipline.	Agricultural Engineering, Agribusiness	Acceptable alternative qualifications in Agriculture Sciences include substantial professional experience as a veterinarian, farm manager, livestock nutritionist, food safety specialist, agricultural sales representative, or related field. Relevant professional licensure or certifications, and notable scholarty work such as published articles or conference presentations in Agriculture Sciences.
AGSC 7620 Doctoral Seminar in Agricultural Sciences II	Earned Doctorate degree in Agriculture and/or Environmental Sciences in the teaching discipline or a closely related discipline.	Agricultural Engineering, Agribusiness	Acceptable alternative qualifications in Agriculture Sciences include substantial professional experience as a veterinarian, farm manager, livestock nutritionist, food safety specialist, agricultural sales representative, or related field. Relevant professional licensure or certifications, and notable scholarly work such as published articles or conference presentations in Agriculture Sciences.
AGSC 8120 Doctoral Dissertation Research	Earned Doctorate degree in Agriculture and/or Environmental Sciences in the teaching discipline or a closely related discipline.	Agricultural Engineering, Agribusiness	Acceptable alternative qualifications in Agriculture Sciences include substantial professional experience as a veterinarian, farm manager, livestock nutritionist, food safety specialist, agricultural sales representative, or related field. Relevant professional licensure or certifications, and notable scholarty work such as published articles or conference presentations in Agriculture Sciences.
AGSC 6170 Advanced Poultry Production and Management	Earned Doctorate degree in Agriculture and/or Environmental Sciences in the teaching discipline or a closely related discipline.	Animal Science, Livestock Management, Agribusiness	Acceptable atternative qualifications in Agriculture Sciences include substantial professional experience as a veterinarian, farm manager, livestock nutritionist, food safety specialist, agricultural sales representative, or related field. Relevant professional licensure or certifications, and notable scholarty work such as published articles or conference presentations in Agriculture Sciences.
AGSC 7900 Applied Entomology	Earned Doctorate degree in Agriculture and/or Environmental Sciences in the teaching discipline or a closely related discipline.	Ecology, Entomology	Acceptable alternative qualifications in Agriculture Sciences include substantial professional experience as a veterinarian, farm manager, livestock nutritionist, food safety specialist, agricultural sales representative, or related field. Relevant professional licensure or certifications, and notable scholarty work such as published articles or conference presentations in Agriculture Sciences.
AGSC 6270 Advanced Agricultural Biosecurity	Earned Doctorate degree in Agriculture and/or Environmental Sciences in the teaching discipline or a closely related discipline.	Biosecurity, Forensics, Bioforensics	Acceptable alternative qualifications in Agriculture Sciences include substantial professional experience as a veterinarian, farm manager, livestock nutritionist, food safety specialist, agricultural sales representative, or related field. Relevant professional licensure or certifications, and notable scholarly work such as published articles or conference presentations in Agriculture Sciences.

AGSC 7260 Advanced Environmental Analysis	Earned Doctorate degree in Agriculture and/or Environmental Sciences in the teaching discipline or a closely related discipline.		Acceptable alternative qualifications in Agriculture Sciences include substantial professional experience as a veterinarian, farm manager, livestock nutritionist, food safety specialist, agricultural sales representative, or related field. Relevant professional licensure or certifications, and notable scholarly work such as published articles or conference presentations in Agriculture Sciences.
AGSC 4630/5630 Gene Editing Technologies	Earned Doctorate degree in Agriculture and/or Environmental Sciences in the teaching discipline or a closely related discipline.	· · · · · · · · · · · · · · · · · · ·	Acceptable alternative qualifications in Agriculture Sciences include substantial professional experience as a veterinarian, farm manager, livestock nutritionist, food safety specialist, agricultural sales representative, or related field. Relevant professional licensure or certifications, and notable scholarly work such as published articles or conference presentations in Agriculture Sciences.
AGSC 5115 Statistical Methds in Agricultural Education	Earned Doctorate degree in Agriculture and/or Environmental Sciences in the teaching discipline or a closely related discipline.		Acceptable alternative qualifications in Agriculture Sciences include substantial professional experience as a veterinarian, farm manager, livestock nutritionist, food safety specialist, agricultural sales representative, or related field. Relevant professional licensure or certifications, and notable scholarly work such as published articles or conference presentations in Agriculture Sciences.