

# NEBRASKA CAREER AND TECHNICAL EDUCATION

## PROGRAMS OF STUDY



### NEBRASKA CAREER AND TECHNICAL EDUCATION STATE MODEL PROGRAMS OF STUDY

In July of 2018 the Strengthening Career and Technical Education for the 21st Century Act (Perkins V) was signed into law, which reauthorized the Carl D. Perkins Career and Technical Education Act of 2006 (Perkins IV). Perkins V maintains a focus on Programs of Study as the primary delivery model for CTE. This overview will describe and define the components of the Nebraska Career and Technical Education State Model Programs of Study.

### PROGRAMS OF STUDY

Programs of Study are the primary delivery model for Career and Technical Education (CTE) in Nebraska. They include a sequence of courses which progresses in specificity and rigor and are updated regularly to align with Nebraska's workforce needs and economic development priorities.

- Assist secondary schools in creating meaningful sequences of courses that adequately prepare individuals for seamless transitions to postsecondary education and careers eliminating duplication of coursework;
- Assist students in identifying appropriate courses for high school and postsecondary education that lead to their chosen career;
- Encourage collaboration between secondary and postsecondary education through curricular alignment;
- Offer opportunities for high-quality workplace experiences aligned to students' career interests;
- Promote the advancement of early postsecondary opportunities (including dual-credit courses) for all students; and
- Support postsecondary education options for students to further prepare them for successful transitions to their future careers.

Nebraska's programs of study are organized around Nebraska's CTE Model, which provides a way for students to explore the diversity of career options available to them.

# NEBRASKA CAREER AND TECHNICAL EDUCATION PROGRAMS OF STUDY

## OVERVIEW

### NEBRASKA CAREER AND TECHNICAL EDUCATION MODEL

#### 1 CORE ACADEMICS AND CAREER READINESS

At the center of the NCE Model is the expectation for all students to develop a solid academic core. The next ring identifies specific career readiness standards and practices that prepare students for success in postsecondary education as well as entrepreneurship/employment.

#### 2 CAREER FIELDS

The six career fields represent broad sectors of the job market on which students may choose to focus.

#### 3 CAREER CLUSTERS

Each career field is composed of career clusters radiating out from it. The clusters are more specific segments of the labor market. Each cluster is a grouping of careers that focus on similar subjects or similar skills. A basic understanding and exploration of each of the clusters will provide students with a solid foundation for career decision-making to conceptualize the entire world of work.

#### 4 EMPLOYABILITY AND ENTREPRENEURSHIP

Career education provides the opportunity to gain the knowledge and skills for both employment and entrepreneurship. The reality for Nebraska and the United States is that entrepreneurship will help ensure economic growth and vitality. By infusing entrepreneurship competencies, career education is helping create the next generation of America's innovators and entrepreneurs.



The model is a visual map of “career fields” and “career clusters/pathways” and organizes the 16 National Career Clusters into six broad sectors of entrepreneurship and employment:

- Agriculture, Food and Natural Resources
- Business, Marketing and Management
- Communication and Information Systems
- Health Sciences
- Human Sciences and Education
- Skilled and Technical Sciences

These fields break down into more specific Career Clusters, Pathways and Occupational Specialties. The model provides a way for:

- Students to explore the diversity of career options available to them.
- Students to begin to prepare for their career with plans for secondary and post-secondary education.
- Schools to organize curriculum into Programs of Study that prepare students for opportunities in Nebraska’s economy.

### COURSE SEQUENCING

The courses within the State Model Program of Study are intended to be offered sequentially, to allow learners to build upon foundational knowledge and skills learned in introductory and intermediate courses and applied in more advanced capstone coursework. Non-duplicative sequences of courses ensure students transition to postsecondary education without duplication of classes and content. CTE enrollment data is collected at the course level. Students who participate and concentrate in CTE generally have more positive outcomes such as higher graduation rates along with postsecondary success.

### Introductory Courses

Introductory courses set the foundation for a program of study by introducing students to broad foundational knowledge relative to an occupational area and career field.

### Intermediate Courses

Intermediate courses build on the foundational knowledge of Introductory courses to further develop the academic, technical, and career readiness skills within a particular career field and occupational area.

### Capstone Courses

Capstone courses are occupationally specific and further develop the necessary and required academic, technical, and career readiness skills needed for seamless transitions to postsecondary education and employment. Capstone courses often provide opportunities for students to earn postsecondary credit.

State Model Programs of Study are coordinated, nonduplicative sequences of academic and technical content at the secondary and postsecondary levels that incorporate challenging State academic standards, address both academic and technical knowledge and skills, including Nebraska's Career Readiness Skills, are aligned with the needs of industries in Nebraska's economy, progress in specificity, have multiple entry and exit points that incorporate credentialing, and culminate in the attainment of a recognized postsecondary credential.

### Levels of Participation

#### CTE Participant

A student who has earned one or more credits in any career and technical education program area.

#### CTE Concentrator

A secondary student who, in grades 9 through 12, has earned credit in at least two courses in a single career cluster program at the intermediate or capstone level.



### **COURSE-BASED STANDARDS**

Individual CTE courses, which make up the sequence of courses for Programs of Study, include content area standards and indicators to provide a framework for quality teaching and learning. While not required by state law, districts are encouraged to adopt these State Model Programs of Study and their related course-based standards. CTE State Model Programs of Study and course-based standards are revised on a five-year cycle to remain responsive to the rapid advances and needs of business and industry, help students explore a variety of postsecondary options and corresponding entrance requirements to help identify their next steps, and to align to changes in postsecondary programs.

#### **Standards**

At the highest level of generality, content area standards include a set of broad, overarching content-based statements that describe the basic cognitive, affective, or psychomotor expectations of students. They reflect long-term goals for learning.

#### **Indicators**

Under each standard are indicators, which further describe what a student must know and be able to do to meet the standard. Indicators are performance-based statements that provide educators with a clear understanding of the expected level of student learning and guidance. Indicators provide guidance for an assessment of student learning.

### **EXPANDED LEARNING OPPORTUNITIES**

Expanded learning opportunities build on, support, and enhance learning within and outside of regular school programming. They are a critical component of Nebraska's educational landscape and should be intentionally supported to further develop students' college and career readiness. To signal aligned expanded learning opportunities, each Program of Study identifies additional areas where students may desire to personalize their program and take additional coursework or work-based learning that aligns with their interests. These expanded learning opportunities are not considered part of a Program of Study nor are they required, but rather a meaningful opportunity for students to continue to learn after completing the Program of Study sequence of courses within the context of their career interests. Along with aligned coursework, two prominent expanded learning opportunities include participating in Work-based Learning or a Career and Technical Student Organization.

#### **Work-Based Learning**

Work-Based Learning (WBL) connects learners with employers to prepare them for success in an everchanging workplace. WBL is a planned program of meaningful experiences related to the career interests of learners that enables them to acquire knowledge and skills in a real or simulated work setting. It requires strong partnerships between schools, colleges, and local employers. WBL is learning through work, not simply learning about work. Expanding high-quality WBL opportunities for students is one of Nebraska's CTE strategic priorities and is a program quality accountability indicator. Nebraska CTE affirms WBL as a critical component of career development. Throughout the State Model Programs of Study, courses where WBL is embedded into the class is noted in the course title (e.g., "Architecture & Construction Work-Based Learning Experience"). It is also signaled as an expanded learning opportunity across all programs of study.

### Career And Technical Student Organizations

Career and Technical Student Organizations (CTSOs) are an extension of classroom instruction—applying classroom learning to real-world experiences. CTSOs provide opportunities for all students to develop career readiness skills through activities, competitions, and community service. Nebraska recognizes seven CTSOs aligned with the state’s Programs of Study and career field areas. These include:



AGRICULTURE, FOOD,  
AND NATURAL RESOURCES



BUSINESS, MARKETING, AND MANAGEMENT



COMMUNICATION AND INFORMATION SYSTEMS



HEALTH SCIENCES



HUMAN SCIENCES AND EDUCATION



SKILLED AND TECHNICAL SCIENCES

### CAREER READINESS STANDARDS

Embedded into the State Model Programs of Study and courses are the Nebraska Career Readiness standards. These standards rest on important “practices and proficiencies” with long-standing importance in career education. These standards and related practices are not limited to formal CTE programs nor to the middle school or high school level. Rather, these standards and practices should be used over and over again with increasing complexity and relevance by students as they progress through their educational pathway. The standards themselves do not dictate curriculum, pedagogy or delivery of content. Schools and colleges may handle the teaching and assessing of these standards in many different ways.

### THE CAREER READY INDIVIDUAL...



1. Applies appropriate academic and technical skills



2. Communicates effectively and appropriately



3. Contributes to employer and community success



4. Makes sense of problems and perseveres in solving them



5. Uses critical thinking



6. Demonstrates innovation and creativity



7. Models ethical leadership and effective management



8. Works productively in teams and demonstrates cultural competency



9. Utilizes technology



10. Manages personal career development



11. Attends to personal and financial well-being

# AGRICULTURE, FOOD, AND NATURAL RESOURCES

## PROGRAMS OF STUDY



AGRICULTURE, FOOD, AND  
NATURAL RESOURCES

Program of Study Name	Introductory Course	Intermediate Course	Capstone Course	Expanded Learning Opportunity
<b>AGRICULTURAL POWER, STRUCTURE, &amp; TECHNOLOGY</b>	011000 - Introduction to AFNR, OR 018060 - CASE Introduction to AFNR	016004 - Welding, OR 016000 - Power, Structural, & Technology Systems Fundamentals, OR 018066 - CASE Agriculture Power & Technology	016005 - Metals & Fabrication, OR 011018 - Agricultural Technology, OR 016006 - Precision Agriculture, OR 016003 - Advanced Power, Structural, & Technology Systems	017000 - Agriculture, Food, and Natural Resources Leadership and Career Readiness, with Work-Based Learning 320702 - Agriculture, Food, And Natural Resources Work Based Learning Experience
<b>AGRIBUSINESS</b>	011000 - Introduction to AFNR, OR 018060 - CASE Introduction to AFNR	011009 - Agricultural Business, OR 018067 - CASE Agribusiness	011011 - Agricultural Sales, OR 011017 - Agricultural Communication, OR 011010 - Agricultural Economics, OR 012005 - Agricultural Entrepreneurship	017000 - Agriculture, Food, and Natural Resources Leadership and Career Readiness, with Work-Based Learning 320702 - Agriculture, Food, And Natural Resources Work Based Learning Experience
<b>ANIMAL SCIENCE</b>	011000 - Introduction to AFNR, OR 018060 - CASE Introduction to AFN	011004 - Animal Science, OR 018062 - CASE Animal Science	011006 - Small Animal Management, OR 011005 - Large Animal Management, OR 011015 - Veterinary Science, OR 012004 - Agricultural Biotechnology, OR 018063 - CASE Animal and Plant Biotechnology	017000 - Agriculture, Food, and Natural Resources Leadership and Career Readiness, with Work-Based Learning 320702 - Agriculture, Food, And Natural Resources Work Based Learning Experience
<b>DIVERSIFIED AGRICULTURAL SCIENCE</b>	011000 - Introduction to AFNR, OR 018060 - CASE Introduction to AFNR	011019 - Diversified Agriculture	011020 - Integrated Agricultural Science	017000 - Agriculture, Food, and Natural Resources Leadership and Career Readiness, with Work-Based Learning 320702 - Agriculture, Food, And Natural Resources Work Based Learning Experience





# AGRICULTURE, FOOD, AND NATURAL RESOURCES

## PROGRAMS OF STUDY



AGRICULTURE, FOOD, AND  
NATURAL RESOURCES

Program of Study Name	Introductory Course	Intermediate Course	Capstone Course	Expanded Learning Opportunity
<b>ENVIRONMENTAL &amp; NATURAL RESOURCES</b>	011000 - Introduction to AFNR, OR 018060 - CASE Introduction to AFNR	013000 - Environmental & Natural Resources, OR 018064 - CASE Natural Resources and Ecology	013001 - Wildlife Management, OR 013002 - Environmental & Natural Resources Management	017000 - Agriculture, Food, and Natural Resources Leadership and Career Readiness, with Work-Based Learning 320702 - Agriculture, Food, And Natural Resources Work Based Learning Experience
<b>FOOD PRODUCTS &amp; PROCESSING</b>	011000 - Introduction to AFNR, OR 018060 - CASE Introduction to AFNR	014000 - Food Science & Safety, OR 018065 - CASE Food Science & Safety	014001 - Food Products & Technology	017000 - Agriculture, Food, and Natural Resources Leadership and Career Readiness, with Work-Based Learning 320702 - Agriculture, Food, And Natural Resources Work Based Learning Experience
<b>PLANT SCIENCE</b>	011000 - Introduction to AFNR, OR 018060 - CASE Introduction to AFNR	011007 - Plant Science, OR 018061 - CASE Plant Science	011008 - Crop Management & Agronomy, OR 012001 - Nursery Management, OR 012006 - Landscape Design, OR 012002 - Floriculture, OR 012004 - Agricultural Biotechnology, OR 018063 - CASE Animal and Plant Biotechnology	017000 - Agriculture, Food, and Natural Resources Leadership and Career Readiness, with Work-Based Learning 320702 - Agriculture, Food, And Natural Resources Work Based Learning Experience



# BUSINESS, MARKETING, AND MANAGEMENT

## PROGRAMS OF STUDY



BUSINESS MANAGEMENT  
& ADMINISTRATION CLUSTER

Program of Study Name	Introductory Course	Intermediate Course	Capstone Course	Expanded Learning Opportunity
<b>ACCOUNTING</b>	032300 - Introduction to Business, OR  032400 - College Introduction to Business, OR  033000 - Personal Finance, OR  033002 - Wealth Building Fundamentals	030501 - Accounting 1, AND  030502 - Accounting 2	030503 - Accounting 3, AND  030504 - Accounting 4, OR  030302 - College Principles of Accounting	320705 - Business Management Work-Based Learning Experience
<b>ENTREPRENEURSHIP</b>	032300 - Introduction to Business, OR  032400 - College Introduction to Business, OR  038100 - Marketing	030501 - Accounting 1, OR  038101 - Marketing Management	032370 - Entrepreneurship, OR  032600 - College Introduction to Entrepreneurship	320705 - Business Management Work-Based Learning Experience
<b>MANAGEMENT</b>	032300 - Introduction to Business, OR  032400 - College Introduction to Business	038101 - Marketing Management, OR  030900 - Business Law	032802 - Management & Leadership	320705 - Business Management Work-Based Learning Experience



# BUSINESS, MARKETING, AND MANAGEMENT

## PROGRAMS OF STUDY



### FINANCE CLUSTER

Program of Study Name	Introductory Course	Intermediate Course	Capstone Course	Expanded Learning Opportunity
<b>FINANCE</b>	032300 - Introduction to Business, OR 032400 - College Introduction to Business, OR 033000 - Personal Finance, OR 033002 - Wealth Building Fundamentals	030501 - Accounting 1	038501 - AP Microeconomics, OR 038503 - College Microeconomics, OR 038500 - AP Macroeconomics, OR 038502 - College Macroeconomics, OR 111700 - Statistics/Probability, OR 031800 - Economics, OR 151000 - High School Economics	320708 - Finance Work-Based Learning Experience



### MARKETING CLUSTER

Program of Study Name	Introductory Course	Intermediate Course	Capstone Course	Expanded Learning Opportunity
<b>MARKETING</b>	038100 - Marketing	038101 - Marketing Management	038200 - Advanced Marketing, OR 038201 - College Principles of Marketing	320716 - Marketing Work-Based Learning Experience



# BUSINESS, MARKETING, AND MANAGEMENT

## PROGRAMS OF STUDY



HOSPITALITY &  
TOURISM CLUSTER

Program of Study Name	Introductory Course	Intermediate Course	Capstone Course	Expanded Learning Opportunity
<b>CULINARY ARTS &amp; EVENT PLANNING</b>	090107 - Fundamentals of Nutrition & Culinary Essentials (HSE)	370021 - Culinary Skills 1, OR 370030 - ProStart 1	370022 - Culinary Skills 2, OR 370031 - ProStart 2, OR 370023 - Baking & Pastry, OR 038303 - Event Management with Work-Based Learning Experience	320711 - Hospitality & Tourism Work-Based Learning Experience, OR 032370 - Entrepreneurship, OR 032600 - College Introduction to Entrepreneurship, OR
<b>HOSPITALITY &amp; EVENT PLANNING</b>	038301 - Introduction to Hospitality & Event Planning	038101 - Marketing Management, OR 038302 - Travel & Tourism	032370 - Entrepreneurship, OR 038303 - Event Management with Work-Based Learning Experience	320711 - Hospitality & Tourism Work-Based Learning Experience



# COMMUNICATION AND INFORMATION SYSTEMS

## PROGRAMS OF STUDY



### COMMUNICATION ARTS CLUSTER

Program of Study Name	Introductory Course	Intermediate Course	Capstone Course	Expanded Learning Opportunity
BROADCAST JOURNALISM	270602 - Digital Media	270609 - Video Production	270610 - Media Production, OR 270604 - Foundations of Web Design	320704 - Communication Arts Work-Based Learning Experience
DIGITAL DESIGN	270602 - Digital Media	270611 - Digital Design	270613 - Advanced Digital Design, OR 270604 - Foundations of Web Design	320704 - Communication Arts Work-Based Learning Experience



### INFORMATION TECHNOLOGY CLUSTER

Program of Study Name	Introductory Course	Intermediate Course	Capstone Course	Expanded Learning Opportunity
BUSINESS TECHNOLOGY	270501 - IT Applications 1, AND 270502 - IT Applications 2	270611 - Digital Design	270604 - Foundations of Web Design, OR 030600 - Business Communication (BMM)	320713 - Information Technology Work-Based Learning Experience, OR 320704 - Communication Arts Work-Based Learning Experience
CISCO NETWORKING	270505 - CISCO I: Introduction to Networks	270506 - CISCO II: Routing & Switching Essentials	270507 - CISCO III: Scaling Networks	320713 - Information Technology Work-Based Learning Experience
COMPUTER SCIENCE	270704 - Foundations of Computing, OR 270504 - IT Fundamentals	270703 - Computer Science Principles (1 year), OR 270702 - AP Computer Science Principles, OR 270708 - PLTW Computer Science Principles	270701 - Computer Science A (1 year), OR 270712 - IB Comp Science, OR 270700 - AP Computer Science A, OR 270705 - Software Development, OR 270709 - PLTW Computer Science A	320713 - Information Technology Work-Based Learning Experience





# COMMUNICATION AND INFORMATION SYSTEMS

## PROGRAMS OF STUDY



INFORMATION TECHNOLOGY  
CLUSTER (CONTINUED)

Program of Study Name	Introductory Course	Intermediate Course	Capstone Course	Expanded Learning Opportunity
DATA ANALYTICS AND MANAGEMENT	270502 - IT Applications 2	270414 - Data Literacy & Visualization	270413 - Introduction to Data Science	320713 - Information Technology Work-Based Learning Experience
IT OPERATIONS MANAGEMENT	270504 - IT Fundamentals, OR 270502 - IT Applications 2	270707 - Cybersecurity, OR 270711 - PLTW Cybersecurity	270601 - Networking	320713 - Information Technology Work-Based Learning Experience
WEB DEVELOPMENT	270504 - IT Fundamentals, OR 270502 - IT Applications 2	270706 - Web Design & Development	270604 - Foundations of Web Design	320713 - Information Technology Work-Based Learning Experience, OR 320704 - Communication Arts Work-Based Learning Experience



# HEALTH SCIENCES

## PROGRAMS OF STUDY



HEALTH SCIENCES

Program of Study Name	Introductory Course	Intermediate Course	Capstone Course	Expanded Learning Opportunity
<b>BEHAVIORAL HEALTH</b>	077300 - Health Science I	077801 - Behavioral Health I	077802 - Behavioral Health II	090128 - Careers in Mental Health (HSE), OR 320710 - Health Science Work-Based Learning Experience
<b>BIOTECHNOLOGY RESEARCH</b>	077300 - Health Science I, OR 077803 AND 077804 - PLTW Principles of Biomedical Science I & II	077600 - Medical Terminology, OR 130210 - Anatomy & Physiology, OR 077805 AND 077806 - PLTW Human Body Systems I & II	012004 - Agriculture Biotechnology (AFNR), OR 077304 - Exploring Laboratory Medicine with Work-Based Learning	320710 - Health Science Work-Based Learning Experience
<b>HEALTH INFORMATICS</b>	077300 - Health Science I	077301 - Health Science II, OR 077600 - Medical Terminology	077800 - Health Info Tech, OR 077812 - Health Info Management and Ethics	320710 - Health Science Work-Based Learning Experience
<b>HEALTH SCIENCE</b>	077300 - Health Science I, OR 077803 AND 077804 - PLTW Principles of Biomedical Science I & II	077301 - Health Science II, OR 130210 - Anatomy & Physiology, OR 077805 AND 077806 - PLTW Human Body Systems I & II, OR 077600 - Medical Terminology	077302 - Health Science III, OR 077400 - Nursing Assistant/ CNA Certification, OR 077401 - Medication Aide Certification, OR 077402 - Emergency Medical Technician Certification, OR 077807 AND 077808 - PLTW Medical Interventions I & II, OR 077444 - Pharmacy Technician, OR 077446 - Phlebotomy Technician	077900 - Allied Health & Medicine, OR 077303 - Personal and Community Medical Issues/ Public Health, OR 320710 - Health Science/ HS&E Work-Based Learning Experience 077809 PLTW Biomedical Innovation I, AND 077810 PLTW Biomedical Innovation II
<b>LIFE SPAN PERFORMANCE</b>	077300 - Health Science 1	130210 - Anatomy & Physiology, OR 077600 - Medical Terminology, OR 090124 - Nutrition (HSE)	077500 - Introduction to Sports Medicine, OR 077601 - Exercise Science, OR 077701 - Performance Nutrition, OR 090133 - Lifespan Nutrition & Wellness (HSE)	320710 - Health Science Work-Based Learning Experience, OR 320712 - HS&E Work-Based Learning Experience



# HUMAN SCIENCES AND EDUCATION

## PROGRAMS OF STUDY



### EDUCATION & TRAINING CLUSTER

Program of Study Name	Introductory Course	Intermediate Course	Capstone Course	Expanded Learning Opportunity
<b>EDUCATION &amp; TRAINING</b>	350001 - Teaching as a Profession, AND 090123 - Lifespan Development	350002 - Best Practices in Education & Training with Work-Based Learning	350003 - Education & Training Practicum with Work-Based Learning	090119 - Child Development, OR 090127 - Families in Crisis, OR Introduction to Education Dual Credit, OR 320706 - Education & Training Work-Based Learning Experience



### HUMAN SERVICES CLUSTER

Program of Study Name	Introductory Course	Intermediate Course	Capstone Course	Expanded Learning Opportunity
<b>CHILD, YOUTH, &amp; FAMILY STUDIES</b>	090123 - Lifespan Development, OR 090101 - Introduction to Family & Consumer Sciences	090119 - Child Development, OR 090117 - Parents & Families, OR 090127 - Families in Crisis	090116 - Interpersonal Relationships, OR 090132 - Family & Community Advocacy, OR	090104 - Life & Career Readiness, OR 320712 - Human Services Work-Based Learning Experience
<b>COUNSELING &amp; MENTAL HEALTH</b>	090101 - Introduction to Family & Consumer Sciences, OR 090128 - Careers in Mental Health	090127 - Families in Crisis	090132 - Family & Community Advocacy, OR 151200 - Psychology, OR 151210 - AP Psychology, OR 151300 - Sociology	090116 - Interpersonal Relationships, OR 077801 - Behavioral Health 1, OR 077802 - Behavioral Health 2, OR 320712 - Human Services Work-Based Learning Experience



# HUMAN SCIENCES AND EDUCATION

## PROGRAMS OF STUDY



HUMAN SERVICES CLUSTER (CONTINUED)

Program of Study Name	Introductory Course	Intermediate Course	Capstone Course	Expanded Learning Opportunity
DESIGN	090126 - Introduction to Design	090103 - Apparel Production & Construction, OR 090109 - Home Design and Interiors, OR 090206 - Fashion Design	032370 - Entrepreneurship (BMM), OR 032600 - College Introduction to Entrepreneurship, OR 270613 - Advanced Digital Design (CIS)	038100 - Marketing (BMM), OR 038200 - Advanced Marketing (BMM), OR 320712 - Human Sciences Work-Based Learning Experience
EARLY CHILDHOOD EDUCATION	090101 - Introduction to Family & Consumer Sciences, OR 090123 - Lifespan Development	090119 - Child Development, AND 090134 - Best Practices in Early Childhood Education with WBL	090122 - Early Childhood Education Practicum with Work-Based Learning	Early Childhood Education Dual Credit, OR 090127 - Families in Crisis, OR 090132 - Family & Community Advocacy, OR 320712 - Human Services Work-Based Learning Experience
FOOD SCIENCE	090107 - Fundamentals of Nutrition & Culinary Essentials	090124 - Nutrition	090113 - Food Science	032370 - Entrepreneurship (BMM), OR 320702 - AFNR Work-Based Learning Experience, OR 090133 - Lifespan Nutrition & Wellness, OR 320712 - Human Sciences Work-Based Learning Experience
NUTRITION & WELLNESS	090107 - Fundamentals of Nutrition & Culinary Essentials, OR 090101 - Introduction to Family & Consumer Sciences	090131 - Nutrition	090133 - Lifespan Nutrition & Wellness	090113 - Food Science, OR 077601 - Exercise Science, OR Nutrition Dual Credit, OR 320712 - Human Sciences Work-Based Learning Experience



# HUMAN SCIENCES AND EDUCATION

## PROGRAMS OF STUDY



LAW, PUBLIC SAFETY,  
CORRECTIONS, & SECURITY CLUSTER

Program of Study Name	Introductory Course	Intermediate Course	Capstone Course	Expanded Learning Opportunity
<b>CORRECTIONS &amp; LAW ENFORCEMENT SERVICES</b>	390010 - Foundations of Law, Public Safety, Corrections, & Security	390015 - Introduction to Criminal Justice, OR 390010 - Introduction to Corrections	390025 - Courts & Judicial Processes, OR 390026 - Police & Society, OR	151200 - Psychology, OR 151210 - AP Psychology, OR 151300 - Sociology, OR 090127 - Families in Crisis, OR 320714 - Law, Public Safety, Corrections, & Security Work-Based Learning Experience
<b>EMERGENCY &amp; FIRE MANAGEMENT</b>	390010 - Foundations of Law, Public Safety, Corrections, & Security	390020 - Emergency & Fire Management	077402 - Emergency Medical Technical Certification	077600 - Medical Terminology, OR 320714 - Law, Public Safety Work-Based Learning Experience





# SKILLED AND TECHNICAL SCIENCES

## PROGRAMS OF STUDY



### ARCHITECTURE AND CONSTRUCTION CLUSTER

Program of Study Name	Introductory Course	Intermediate Course	Capstone Course	Expanded Learning Opportunity
<b>ARCHITECTURAL DESIGN</b>	100100 - Introduction to Skilled and Technical Sciences	100140 - Architectural Design 1, OR 090109 - Home Design and Interiors (FCS)	100141 - Architectural Design 2	320703 - Architecture & Construction Work-Based Learning Experience
<b>CONSTRUCTION</b>	100100 - Introduction to Skilled and Technical Sciences, OR 100405 - Residential Electrical Wiring	100110 - Construction Trades 1, OR 016000 - Power, Structural, & Technology Systems Fundamentals (AFNR)	100120 - Construction Trades 2	320703 - Architecture & Construction Work-Based Learning Experience



### ENERGY AND ENGINEERING CLUSTER

Program of Study Name	Introductory Course	Intermediate Course	Capstone Course	Expanded Learning Opportunity
<b>ENERGY</b>	100406 - Fundamentals of Energy	100408 - Sustainable Energy	100407 - Physics & Mathematics of Energy	320707 - Energy & Engineering Work-Based Learning Experience
<b>ENGINEERING</b>	100100 - Introduction to Skilled and Technical Sciences, OR 103191 - Engineering Design & Systems Thinking, OR 100160 - PLTW Principles of Engineering, OR 100161 - PLTW Introduction to Engineering Design	103192 - Engineering Problem Solving, OR 103194 - Robotics, OR 100164 - PLTW Aerospace Engineering, OR 100162 - PLTW Civil Engineering & Architecture, OR 101901 - PLTW Computer Integrated Manufacturing, OR 100403 - PLTW Digital Electronics	103193 - Systems Engineering & Project Management, OR 103195 - Advanced Robotics, OR 100163 - PLTW Engineering Design & Development	320707 - Energy & Engineering Work-Based Learning Experience



# SKILLED AND TECHNICAL SCIENCES

## PROGRAMS OF STUDY



### MANUFACTURING CLUSTER

Program of Study Name	Introductory Course	Intermediate Course	Capstone Course	Expanded Learning Opportunity
<b>MANUFACTURING</b>	100100 - Introduction to Skilled and Technical Sciences, OR 100130 - Drafting & Design	101920 - Manufacturing Processes - Woods, OR 101400 - Manufacturing Processes - Metals, OR 101950 - Manufacturing Processes - Plastics, OR 100401 - Introduction to Electronics	101921 - Manufacturing Production - Woods, OR 101401 - Manufacturing Production - Metals, OR 101951 - Manufacturing Production - Plastics, OR 101900 - Introduction to Mechatronics, OR 100402 - Advanced Electronics, OR	320715 - Manufacturing Work-Based Learning Experience 101922 - Advanced Manufacturing & Fabrication – Woods, OR 101402 - Advanced Manufacturing & Fabrication – Metals, OR 101952 - Advanced Manufacturing & Fabrication – Plastics
<b>WELDING</b>	100100 - Introduction to Skilled and Technical Sciences	101930 - Welding 1, OR 016004 - Welding (AFNR)	101940 - Welding 2, OR 016005 - Metals & Fabrication (AFNR)	101941 - Welding 3, OR 320715 - Manufacturing/ Welding Work-Based Learning Experience



### TRANSPORTATION, DISTRIBUTION, AND LOGISTICS CLUSTER

Program of Study Name	Introductory Course	Intermediate Course	Capstone Course	Expanded Learning Opportunity
<b>TRANSPORTATION, DISTRIBUTION, &amp; LOGISTICS - SUPPLY CHAIN</b>	101601 - Introduction to Transportation, Distribution & Logistics	100610 - Distribution & Logistics	101650 - Business Logistics	320717- Transportation, Distribution & Logistics Work-Based Learning Experience
<b>TRANSPORTATION, DISTRIBUTION, &amp; LOGISTICS - TECHNICIAN</b>	100100 - Introduction to Skilled and Technical Sciences, OR 101651 - Power Equipment, OR 016003 - Power, Structural, and Technical Systems (AFNR)	101600 - Transportation 1	101620 - Transportation_2, OR 101640 - Collision Repair	101630 - Transportation_3, OR 320717 - Transportation, Distribution, & Logistics Work-Based Learning Experience

