



NEBRASKA CAREER EDUCATION



PROGRAMS OF STUDY



12-13



NEBRASKA DEPARTMENT OF EDUCATION



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Nebraska Career Education Standards Revision Process

The 3R's of Nebraska Career Education Standards Revision



1. Right Content
2. Right Rigor
3. Right Sequence

Visioning Session	Standards Development	Standards Review Panels
<ul style="list-style-type: none"> Secondary Instructors Postsecondary Instructors (2- & 4-year) Business and Industry 	<ul style="list-style-type: none"> Secondary Instructors Postsecondary Instructors (2- & 4-year) 	<ul style="list-style-type: none"> Academic Standards Experts Business and Industry Stakeholders
<p>Outcomes</p> <p>Determine appropriate programs of study in each career field for Nebraska schools</p> <p>Develop partnerships between secondary and postsecondary education in each career field</p> <p>Identify state and national industry certifications</p> <p>Explore college credit with Nebraska two- and four-year postsecondary institutions</p>	<p>Outcomes</p> <p>Develop an appropriate sequence of courses for each program of study in the career field</p> <p>Identify standards, benchmarks and performance indicators for each course in the program of study</p> <p>Determine professional skill development training options</p>	<p>Outcomes</p> <p>Crosswalk to Nebraska academic standards, common core standards and CTE national knowledge and skill statements</p> <p>Validate standards with industry expectations and requirements</p>





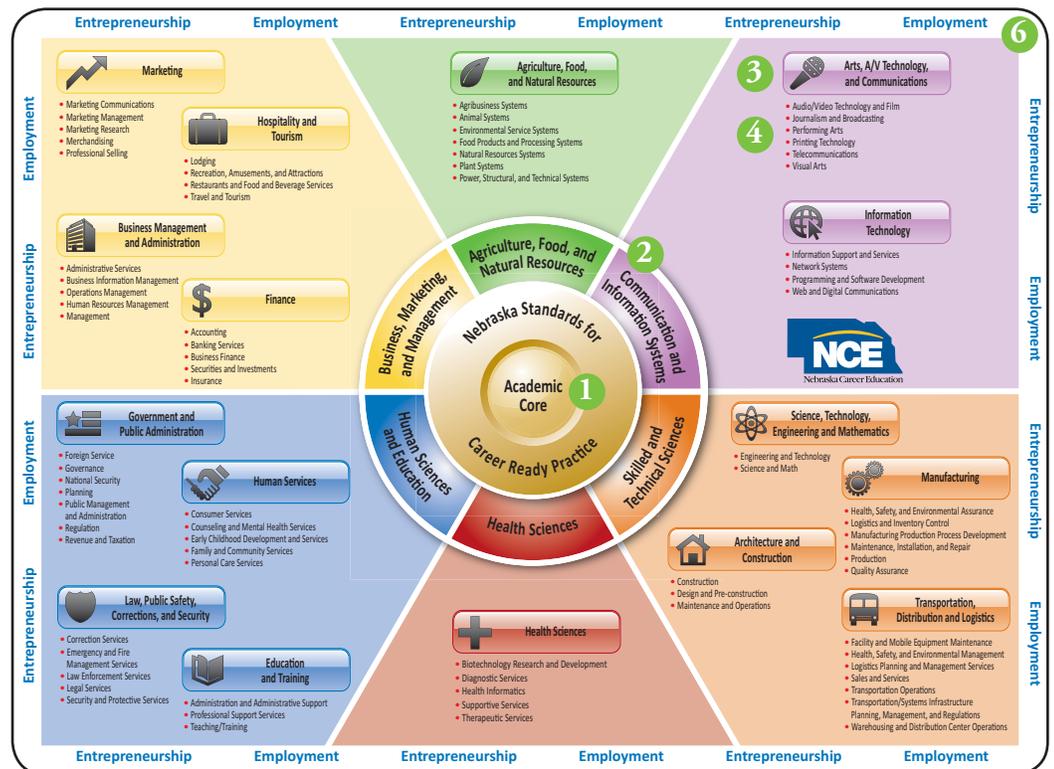
Understanding the Nebraska Career Education Model

The core of Nebraska Career Education is the NCE model; a visual map of “career fields” and “career clusters/pathways.” The model organizes the 16 National Career Clusters into six broad sectors of entrepreneurship/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 their preparation for their career choice with appropriate education plans for secondary and postsecondary education
- Schools to organize curriculum into programs of study that prepare students for opportunities in Nebraska’s economy
- Align to programs at Nebraska two- and four-year postsecondary institutions



{1} Academic Core/College 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 college and 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 job market. Each cluster is comprised of groups of careers that focus on similar subjects or call for similar skills. Collectively, the clusters provide a framework for understanding the entire world of work. 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} Career Pathways

Listed below each cluster, career pathways (indicated with red bullets) further define the specific types of career opportunities within the cluster. Each career pathway within a cluster requires mastery of a more specific set of knowledge and skills related to that pathway.

{5} Career Specialties (not shown)

Career Specialties (not shown on the model) are the specific occupation/job titles within a cluster and pathway. As the career development process becomes more specific and defined within a chosen cluster, awareness of the current employment opportunities helps students pick a specific career pathway. With changes in technology, the labor market, and international economy, new job titles will be created while others decline or disappear.

{6} 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, not just working in a job for others, will determine our economic growth and vitality. Career technical education classes can infuse entrepreneurship competencies into curricula, enhancing financial literacy and tapping into students' talents, interests and creativity. By infusing entrepreneurship competencies, career education is helping to create the next generation of America's innovators and entrepreneurs. These same competencies can also enhance the productivity of the workforce as they are applied to creative problem-solving.





Programs of Study

The Federal Carl D. Perkins Career and Technical Education Act of 2006 (Perkins IV) requires eligible recipients of Perkins Funds to have at least one approved program of study in career education.

A program of study includes the CTE, core, and other required/supportive courses that prepare a student for their career area. It should also identify extended learning opportunities such as career student organizations, work-based learning, and other school and community activities.

In addition to qualifying for Perkins funds, Nebraska Career Education has identified the following advantages of identifying programs of study:

- Create logical sequences of CTE courses.
- Promote alignment between secondary and postsecondary education.
- Promote options for postsecondary education.
- Promote advancement of dual credit courses.
- Provide rigorous and relevant curriculum.
- Provide a tool for career guidance to help students prepare their Personal Learning Plan.

The United States Department of Education has defined the following components of an effective Program of Study

1. Legislation and Policies

Legislation or administrative policies promote POS development and implementation. Effective legislation and policies should:

- Provide funding, professional development, and dedicated staff time for POS development and sustainability.
- Ensure opportunities for any secondary student to participate in a POS.
- Require secondary students to develop an individual learning plans.

2. Partnerships

Ongoing relationships among education, business, and other community stakeholders are central to POS success. Collaborative partnerships should:

- Conduct analyses of economic and workforce trends to identify statewide (or regional) POS to be created, expanded, or discontinued.
- Link into existing initiatives that promote workforce and economic development.
- Identify, validate, and keep current the technical and career readiness skills that should be taught within a POS.

3. Professional Development

Sustained, intensive, and focused opportunities for administrators, teachers, and faculty foster POS design, implementation, and maintenance. Effective professional development should:

- Support the alignment of curriculum from grade to grade and from secondary to postsecondary education (vertical curriculum alignment).
- Support the development of integrated academic and CTE curriculum and instruction (horizontal curriculum alignment).
- Ensure that teachers have the content knowledge to align and integrate curriculum and instruction.

4. Accountability and Evaluation Systems

Systems and strategies to gather quantitative and qualitative data on both POS components and student outcomes are crucial for ongoing efforts to develop and implement POS.

Well-designed accountability and evaluation systems should:

- Yield valid and reliable data on key student outcomes (indicators) referenced in Perkins and other relevant federal and state legislation.
- Provide timely data to evaluate and improve the effectiveness of POS.

5. Nebraska Standards for Career Ready Practice

Content standards that define what students are expected to know and be able to do to enter and advance in college and/or their careers comprise the foundation of a POS. Rigorous career ready practice standards should:

- Be continually validated in collaboration with secondary, postsecondary, and industry partners.
- Incorporate Nebraska career readiness and core/CTE standards, which students must master regardless of their chosen career area or POS.
- Provide the same rigorous knowledge and skills in English and mathematics that employers and colleges expect of high school graduates.
- Incorporate industry-recognized technical standards that are valued in the workplace.

6. Course Sequences

Non-duplicative sequences of secondary and postsecondary courses within a POS ensure that students transition to postsecondary education without duplicating classes or requiring remedial coursework. Well-developed course sequences should:

- Map out the recommended academic and CTE courses in each POS.
- Begin with introductory courses at the secondary level that teach broad foundational knowledge and skills and progress to more occupational-specific courses at the postsecondary level.
- Offer opportunities for students to earn postsecondary credit for coursework taken during high school.





7. Credit Transfer Agreements

Credit transfer agreements provide opportunities for secondary students to be awarded transcribed postsecondary credit, supported with formal agreements among secondary and postsecondary education systems. Well developed agreements:

- Provide a systematic, seamless process for students to earn college credit for postsecondary courses taken in high school, transfer credit to any two- and four-year institution in the state that offers the POS, and transfer credit earned at a two-year college to any other two- or four-year institution in the state that offers the POS.
- College credit should be automatically transcribed at the college for high school students.
- Describe the expectations and requirements for, at a minimum, teacher and faculty qualifications, course prerequisites, postsecondary entry requirements, location of courses, tuition reimbursement, and credit transfer process.

8. Career Counseling and Academic Advisement

Career counseling and academic advisement help students to make informed decisions about which POS to pursue. Comprehensive career counseling and academic advisement systems:

- Are based on state and/or local counseling standards.
- Ensure that counseling professionals have access to up-to-date information about POS offerings.
- Offer information to help students learn about postsecondary education and career options, including prerequisites for particular POS.
- Offer resources for students to identify their career interests and aptitudes and to select appropriate POS.
- Provide information and resources for parents to help their children prepare for college and careers, including workshops on college and financial aid applications.

9. Teaching and Learning Strategies

Innovative and creative instructional approaches enable teachers to integrate academic and technical instruction and students to apply academic and technical learning in their POS coursework. Effective teaching and learning strategies should:

- Be jointly led by interdisciplinary teaching teams of academic and CTE teachers or faculty.
- Employ contextualized work-based, project-based, and problem-based learning approaches.
- Incorporate team-building, critical thinking, problem-solving, and communication skills, such as through the use of career student organization (CSO) activities.

10. Technicals Skills Assessments

National, state, and/or local assessments provide ongoing information on the extent to which students are attaining the necessary knowledge and skills for entry into and advancement in postsecondary education and careers in their chosen POS. Well-developed technical skills assessments:

- Measure student attainment of technical skill proficiencies at multiple points during a POS.
- Employ industry-approved technical skill assessments based on industry standards, where available and appropriate.
- Incorporate performance-based assessment items, to the greatest extent possible, where students must demonstrate the application of their knowledge and skills.

Sample Program of Study: Health Science

Program of Study: Health Science I							Sample
Cluster: Health Science							
Level	Grade	English/ Language Arts	Math	Science	Social Studies	CTE Sequence of Courses within Program of Study	Requirements and Electives
Middle School	7	English 7	Math 7	Science 7	Social Studies 7	NCE C4C Curriculum for Careers Keyboarding Applications Computer Applications	World Languages & Cultures Physical Education Health Education Exploration of Entrepreneurship
	8	English 8	Math 8	Science 8	Social Studies 8		
Secondary	9	English/ Language Arts I	Algebra I	Biology	Geography	Introduction to Health Sciences Health Science II Medical Terminology Other Capstone Courses: Emergency Medical Technician - Basic (EMT-B) Nursing Assistant Certification (CNA) Medication Aid Personal and Community Health Issues Advanced Health Sciences Health Information Technology	World Languages & Cultures Physical Education Health Education Information Technology Applications I Entrepreneurship Human Development Nutrition & Food Safety and First Aid/CPR Strength Training
	10	English/ Language Arts II	Geometry	Chemistry	World History		
	11	English/ Language Arts III	Algebra II	Physics	American History		
	12	English/ Language Arts IV	Intro to Statis- tics/Discrete/ Finite Math Pre-Calc	Anatomy or Physiology	American Govt. Economics		
Postsecondary	Visit Nebraska Career Connections for postsecondary options. Postsecondary institutions that offer this Program of Study:						
	Central Community College Mid-Plains Community College Southeast Community College	Metropolitan Community College Northeast Community College Western Nebraska Community College					

Work-Based Learning	School Activities	Community Activities
Job shadow professionals Participate in internships Secure part-time employment Volunteer in this career area	Athletics SkillsUSA FCCLA HOSA Medical Explorers Science Club Service Learning Wellness Club	Take First Aid Courses Health Science camps Volunteer with Red Cross Certified CPR classes EMT certification NE Safety Patrol-Mock Disasters





Sequences of CTE Courses

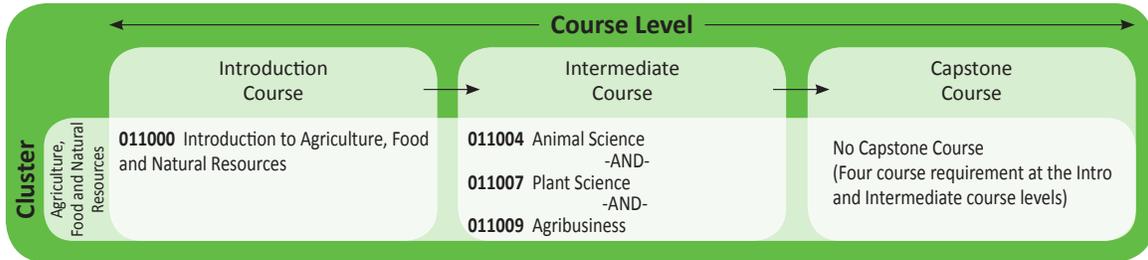
Approved State Model Programs of Study



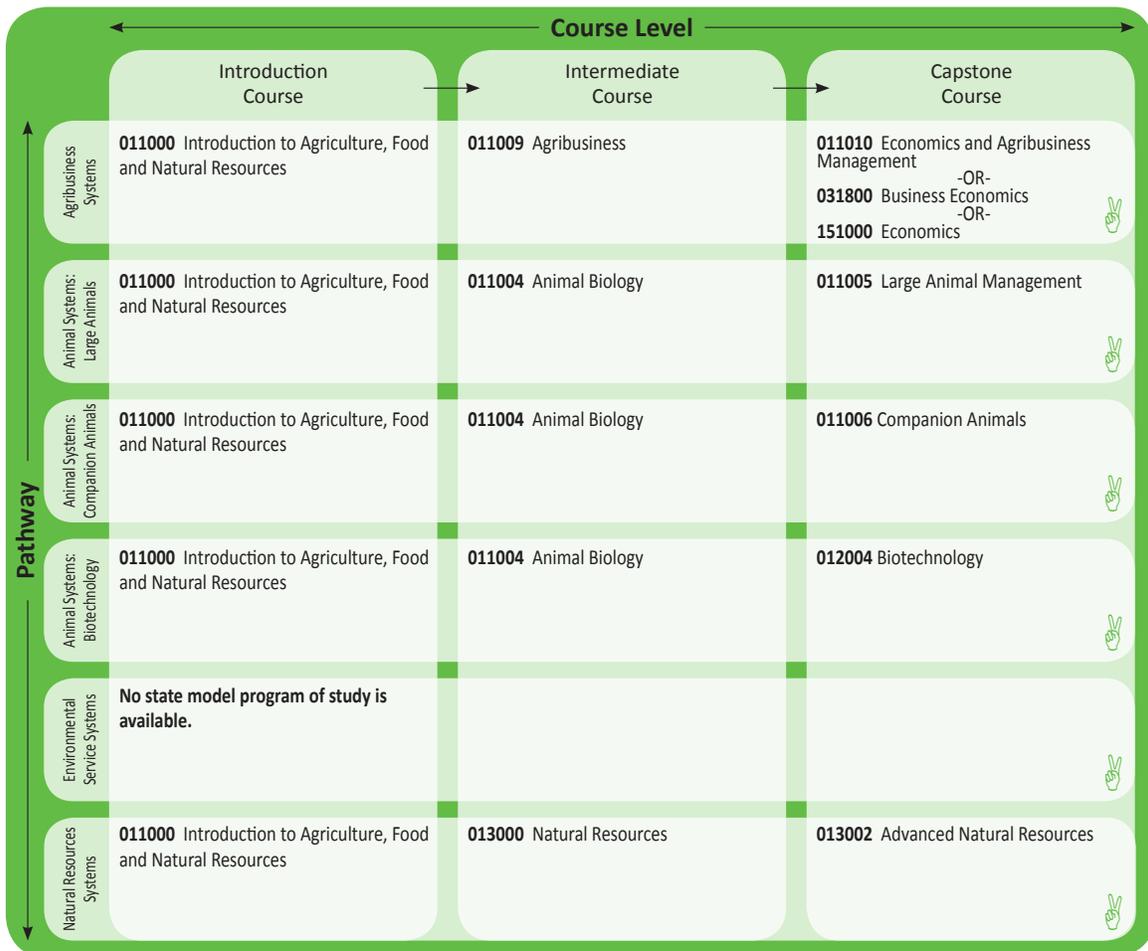
Agriculture, Food and Natural Resources

Cluster Level

Dual Credit



Pathway Level



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Sequences of CTE Courses

Approved State Model Programs of Study

Pathway Level (cont.)

Dual Credit

Pathway	Course Level		
	Introduction Course	Intermediate Course	Capstone Course
Plant Systems: Plant Science Biotech	011000 Introduction to Agriculture, Food and Natural Resources	011007 Plant Science	012004 Biotechnology
Plant Systems: Plant Science Agron	011000 Introduction to Agriculture, Food and Natural Resources	011007 Plant Science	011008 Agronomic Science
Plant Systems: Plant Science Biology	011000 Introduction to Agriculture, Food and Natural Resources	011007 Plant Science	011016 Plant Biology
Plant Systems: Horticulture Nursery	011000 Introduction to Agriculture, Food and Natural Resources	012000 Horticulture	012001 Nursery and Landscape
Plant Systems: Horticulture Floriculture	011000 Introduction to Agriculture, Food and Natural Resources	012000 Horticulture	012002 Floriculture
Power, Structural, and Technical Systems: Power and Tech	011000 Introduction to Agriculture, Food and Natural Resources	016000 Power, Structure and Technical Systems Fundamentals	016003 Power and Technology
Power, Structural and Technical Systems: Structure Systems	011000 Introduction to Agriculture, Food and Natural Resources	016000 Power, Structure and Technical Systems Fundamentals	016002 Structural Systems
Power, Structural and Technical Systems: Metals & Fab	011000 Introduction to Agriculture, Food and Natural Resources	016000 Power, Structure and Technical Systems Fundamentals	016005 Metals and Fabrication
Food Products and Processing Systems	No state model program of study is available.		
Food & Nutritional Science	090107 Food, Nutrition and Wellness -OR- 011000 Introduction to Agriculture, Food and Natural Resources	014000 Food Science	014001 Advanced Food Science



Sequences of CTE Courses

Approved State Model Programs of Study



Business Management and Administration

Cluster Level

Dual Credit Full Year Course

Cluster	Course Level		
	Introduction Course	Intermediate Course	Capstone Course
BMA C Accounting	032300 Introduction to Business, Marketing and Management	032802 Management and Leadership	030300 Accounting -OR- 030301 Advanced Accounting -OR- 030302 College Principles of Accounting
BMA C Law	032300 Introduction to Business, Marketing and Management	030300 Accounting	030900 Business Law
BMA C Management	032300 Introduction to Business, Marketing and Management	032802 Management and Leadership	032370 Entrepreneurship -OR- 032600 College Introduction to Entrepreneurship
BMA C Entrepreneurship	032300 Introduction to Business, Marketing and Management	030300 Accounting	032370 Entrepreneurship -OR- 032600 College Introduction to Entrepreneurship
BMA C Academy	032400 College Introduction to Business	<i>Note: A Program of Study must include a minimum of three semesters.</i>	030302 College Principles of Accounting -OR- 032600 College Introduction to Entrepreneurship

Pathway Level

Pathway	Course Level		
	Introduction Course	Intermediate Course	Capstone Course
BMA P Accounting	032802 Management and Leadership	032370 Entrepreneurship	030300 Accounting -OR- 032400 College Introduction to Business -OR- 030302 College Principles of Accounting
BMA P Academy	032802 Management and Leadership	030300 Accounting	032400 College Introduction to Business

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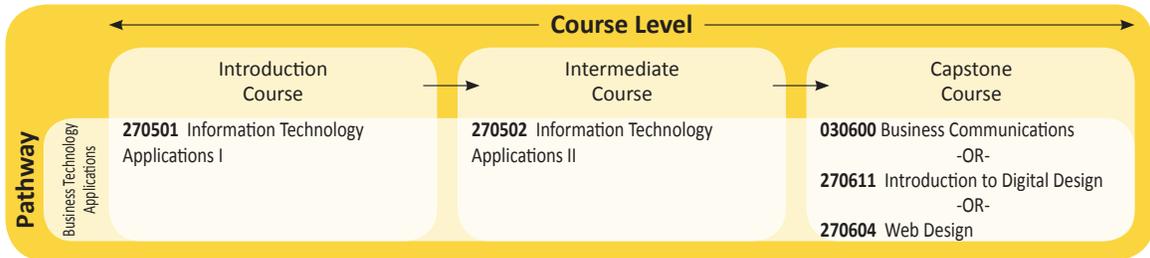


Sequences of CTE Courses

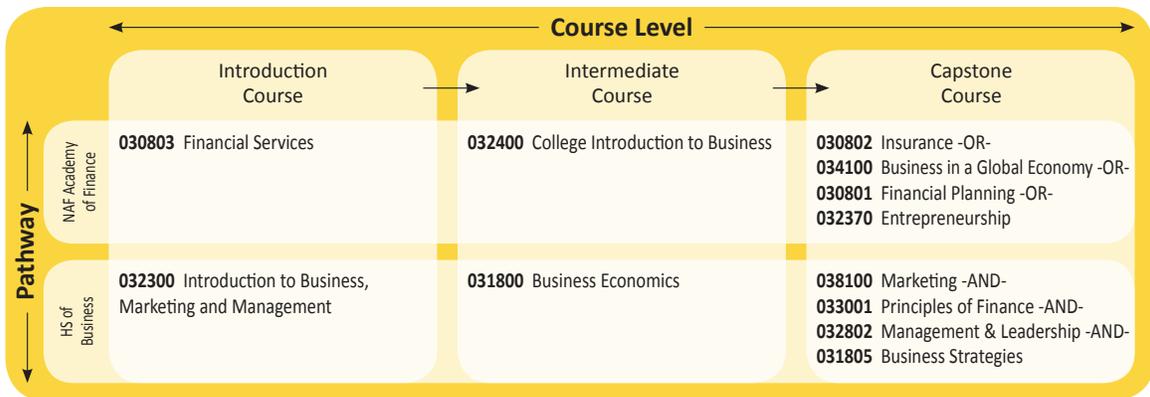
Approved State Model Programs of Study

Pathway Level

 Dual Credit
 Full Year Course



Approved National Models





Sequences of CTE Courses

Approved State Model Programs of Study



Finance

Cluster Level

Dual Credit Full Year Course

		Course Level		
		Introduction Course	Intermediate Course	Capstone Course
Cluster	FIN C Financial Management	030300 Accounting		030302 College Principles of Accounting -OR- 030301 Advanced Accounting -OR- 033002 College Wealth Building and Financial Management
	FIN C Accounting	033000 Personal Finance		030300 Accounting -OR- 030302 College Principles of Accounting
	FIN C Academy	033002 College Wealth Building and Financial Management		030302 College Principles of Accounting
	FIN C Economics	031800 Business Economics -OR- 151000 Economics		030300 Accounting -OR- 030302 College Principles of Accounting

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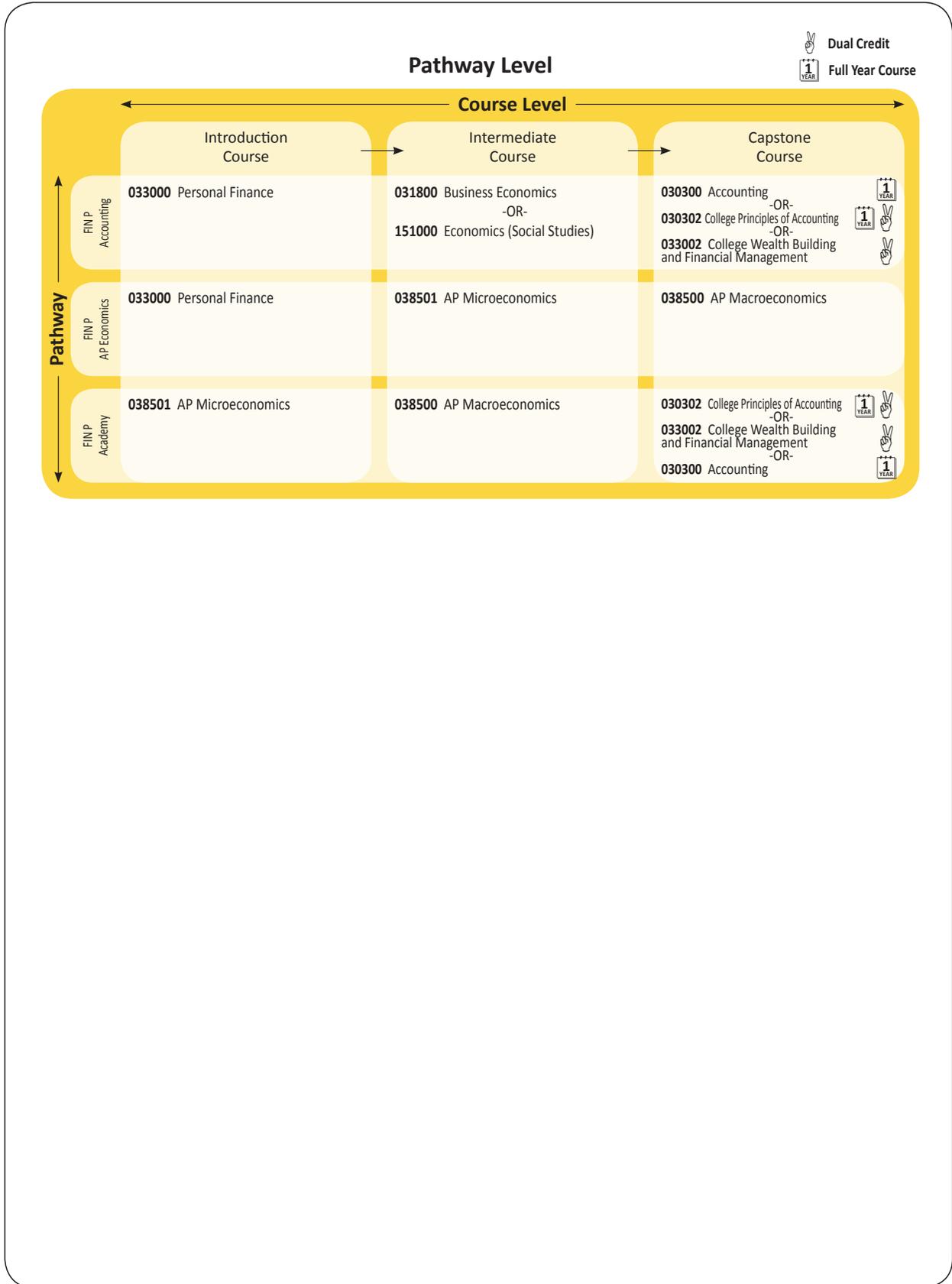
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Sequences of CTE Courses

Approved State Model Programs of Study





Sequences of CTE Courses

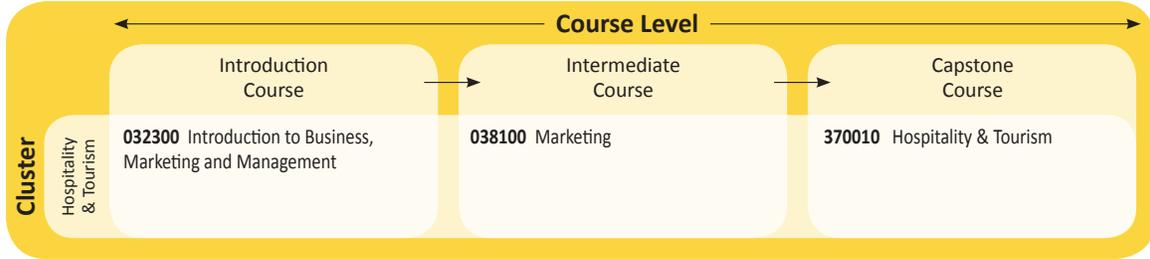
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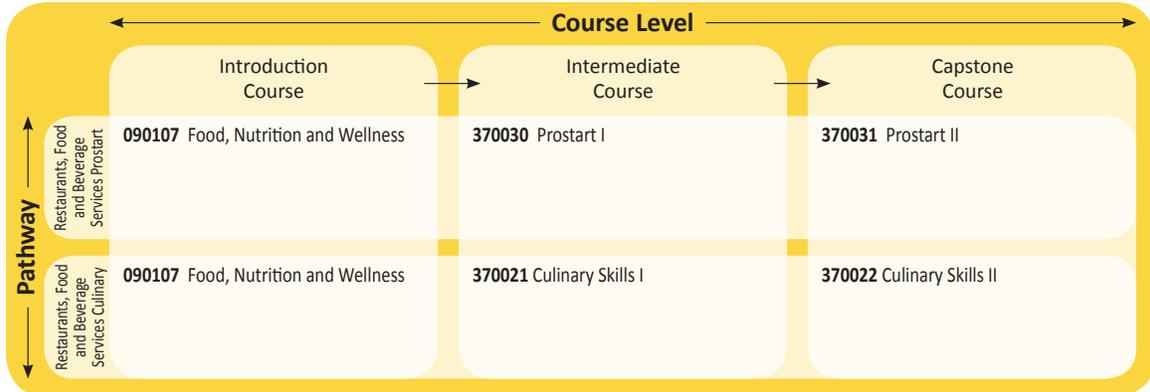
Hospitality and Tourism

Cluster Level

Dual Credit Full Year Course



Pathway Level



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Sequences of CTE Courses

Approved State Model Programs of Study



Marketing

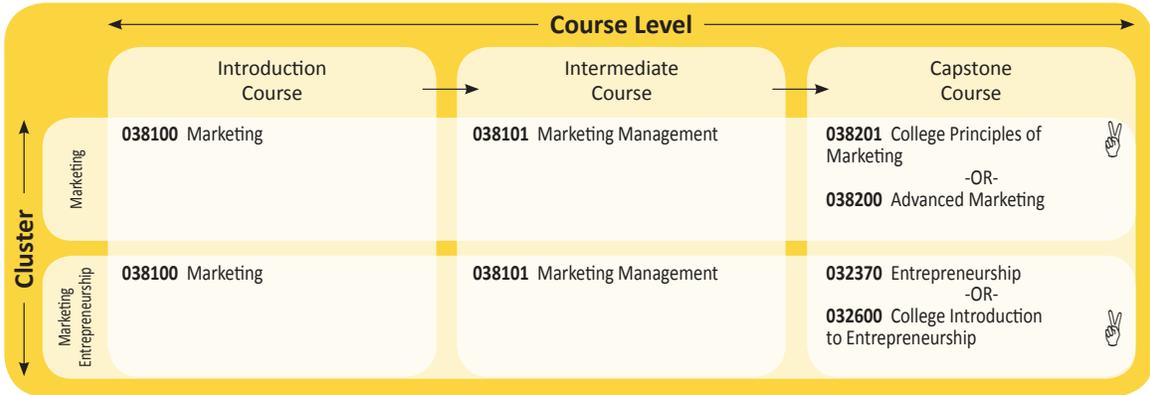
Cluster Level



Dual Credit



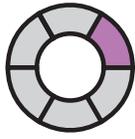
Full Year Course



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Sequences of CTE Courses

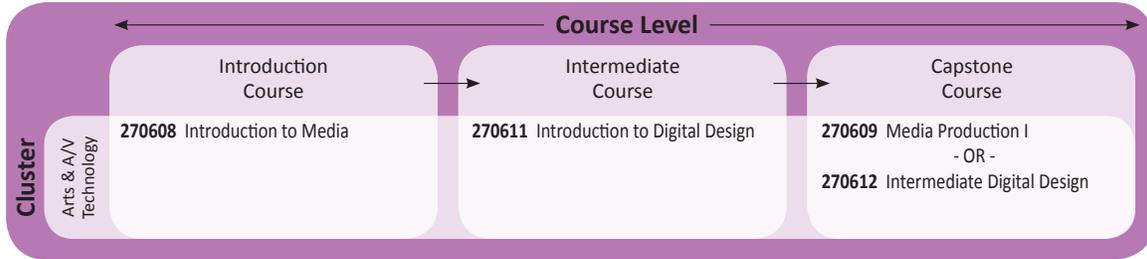
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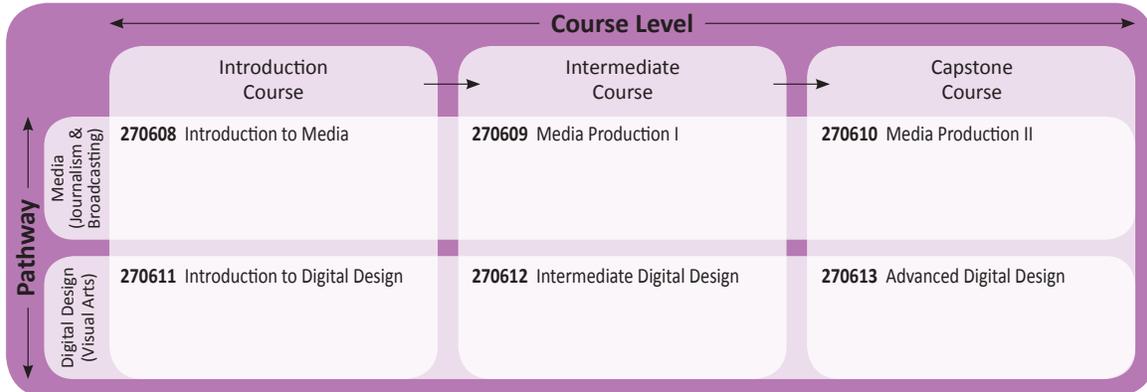
Arts, A/V Technology and Communications

Cluster Level

Dual Credit



Pathway Level



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Sequences of CTE Courses

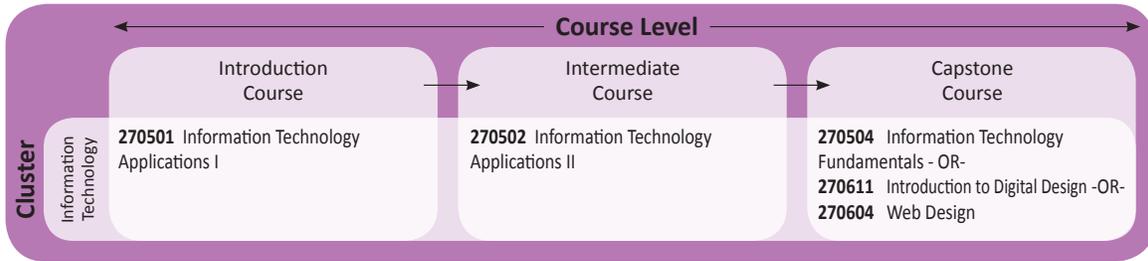
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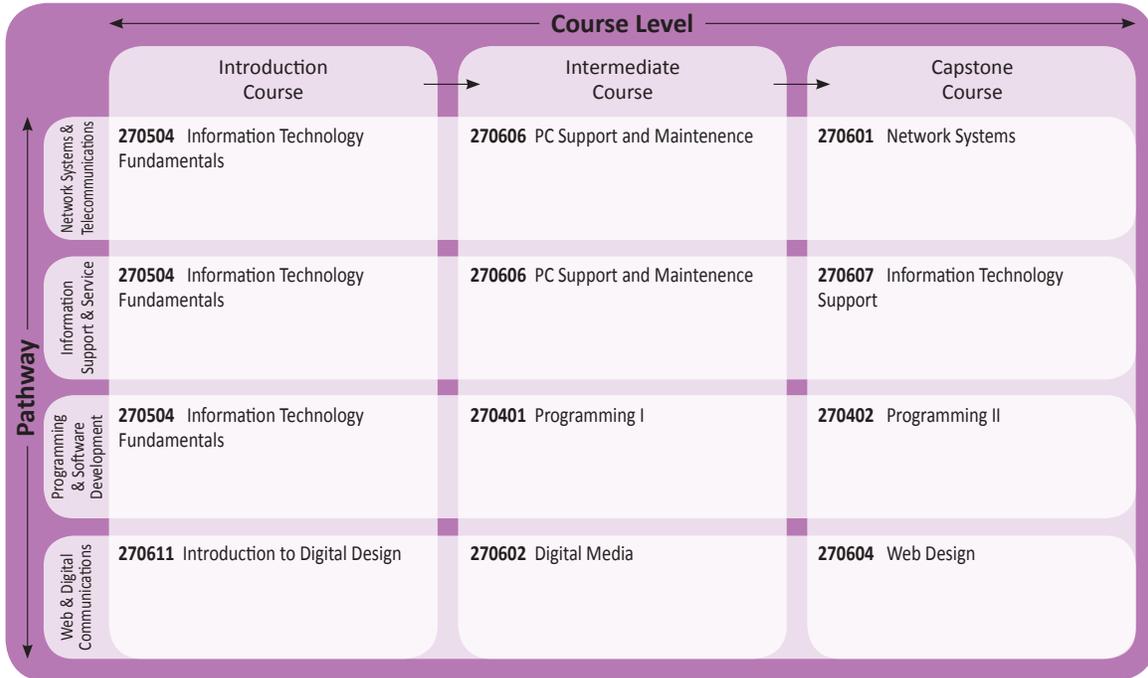
Information Technology

Cluster Level

Dual Credit



Pathway Level



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Sequences of CTE Courses

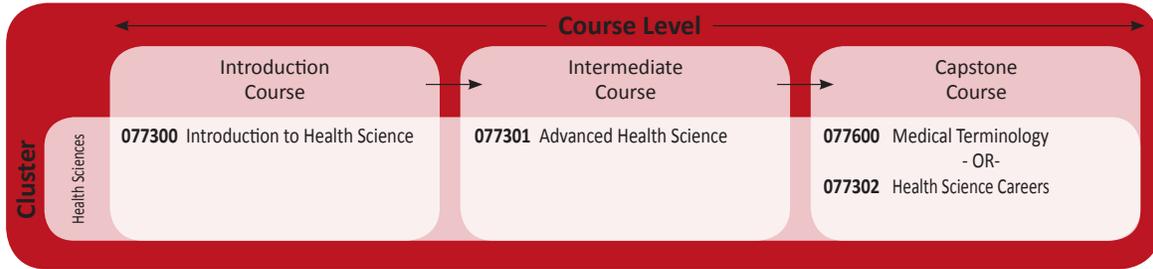
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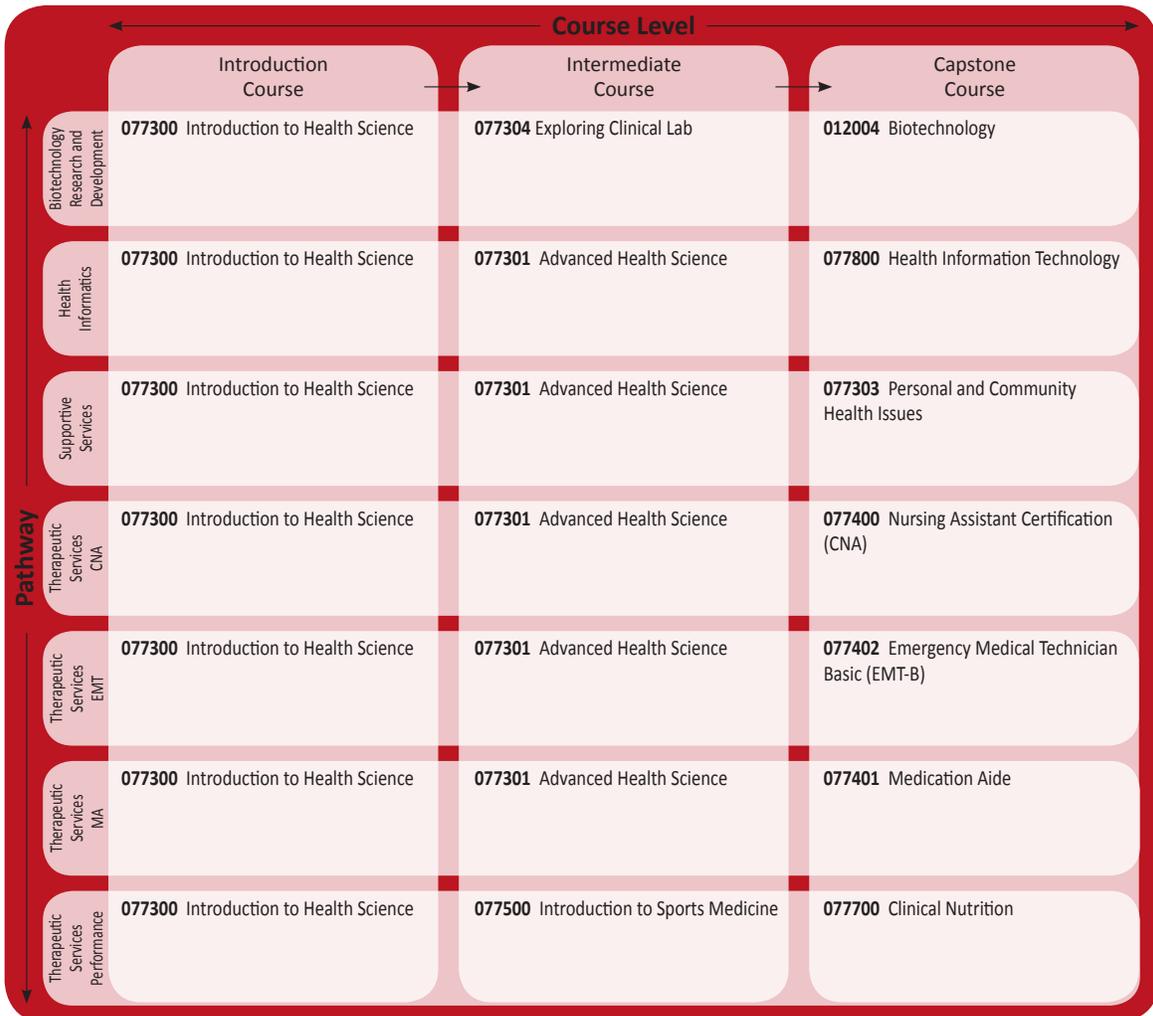
Health Sciences

Cluster Level

Dual Credit



Pathway Level



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Sequences of CTE Courses

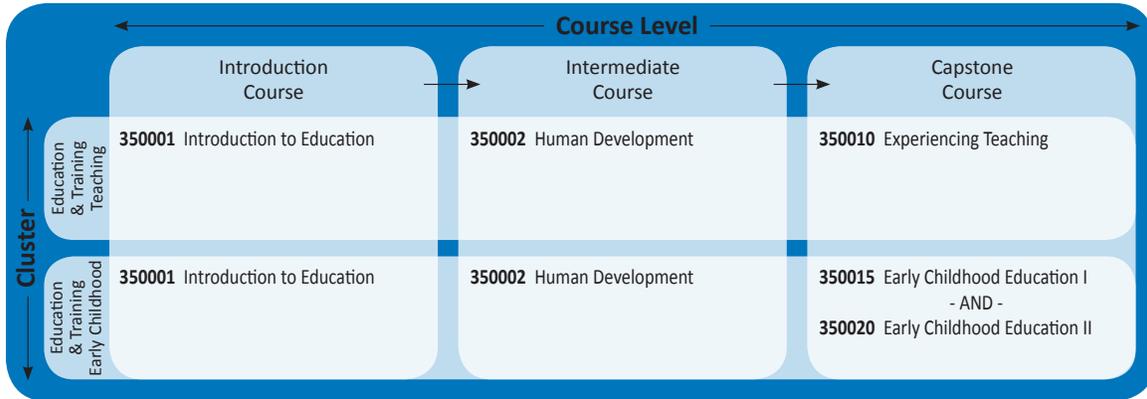
Approved State Model Programs of Study



Education and Training

Cluster Level

Dual Credit



Pathway Level

No state model program of study is available at the pathway level.

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Sequences of CTE Courses

Approved State Model Programs of Study



Government and Public Administration

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No state model program of study is available at the cluster or pathway level.

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Sequences of CTE Courses

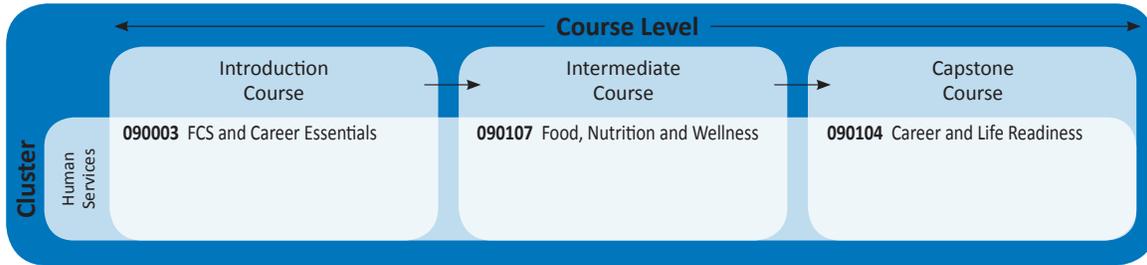
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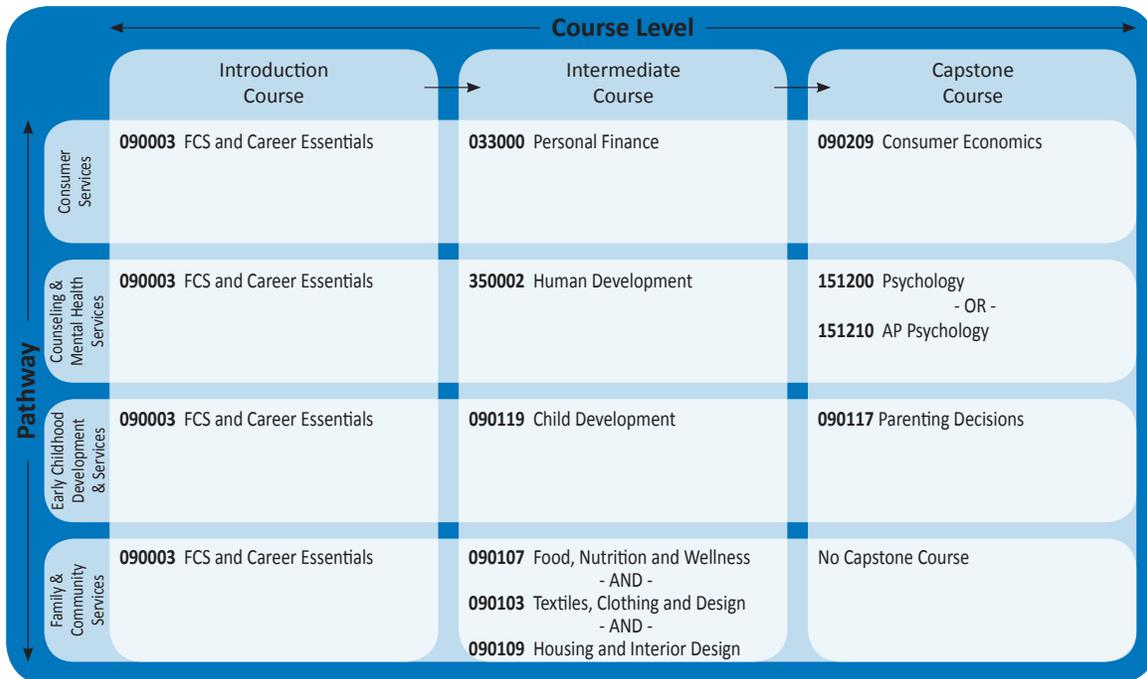
Human Services

Cluster Level

Dual Credit



Pathway Level



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Sequences of CTE Courses

Approved State Model Programs of Study



Law, Public Safety, Corrections and Security

Cluster Level

No state model program of study is available at the cluster level.

Pathway Level

Dual Credit

		Course Level		
		Introduction Course	Intermediate Course	Capstone Course
Cluster	Correction Services	390010 Foundations of Law, Public Safety, Corrections and Security	390015 Introduction to Criminal Justice	390025 Courts and Judicial Process
	Law Enforcement Services	390010 Foundations of Law, Public Safety, Corrections and Security	390015 Introduction to Criminal Justice	390026 Police and Society
	Emergency and Fire Management	390010 Foundations of Law, Public Safety, Corrections and Security	390015 Introduction to Criminal Justice	077402 Emergency Medical Tech

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Sequences of CTE Courses

Approved State Model Programs of Study



Architecture and Construction

Cluster Level

Dual Credit Full Year Course

		Course Level		
		Introduction Course	Intermediate Course	Capstone Course
Cluster	Architecture and Construction I	100100 Introduction to the Built Environment	100110 Principles of Construction -AND- 100140 Computer Aided Drafting	No Capstone Course
	Architecture and Construction II	100100 Introduction to the Built Environment	100161 PLTW Introduction to Engineering Design	

Pathway Level

		Course Level		
		Introduction Course	Intermediate Course	Capstone Course
Pathway	Design and Pre-Construction I	100100 Introduction to the Built Environment	100140 Computer Aided Drafting - OR - 103192 Engineering Concepts	100141 Applications in Design and Pre-Construction
	Design and Pre-Construction II	100161 PLTW Introduction to Engineering Design	100140 Computer Aided Drafting - OR - 103192 Engineering Concepts	100141 Applications in Design and Pre-Construction
	Design and Pre-Construction III	100100 Introduction to the Built Environment	100140 Computer Aided Drafting - OR - 103192 Engineering Concepts	100162 PLTW Civil Engineering and Architecture
	Design and Pre-Construction IV	100161 PLTW Introduction to Engineering Design	100140 Computer Aided Drafting - OR - 103192 Engineering Concepts	100162 PLTW Civil Engineering and Architecture
	Construction I	100100 Introduction to the Built Environment	100110 Principles of Construction	100120 Advanced Construction

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Sequences of CTE Courses

Approved State Model Programs of Study

Pathway Level (cont.)

Dual Credit Full Year Course

		Course Level		
		Introduction Course	Intermediate Course	Capstone Course
Pathway	Construction II	100161 PLTW Introduction to Engineering Design	100110 Principles of Construction	100120 Advanced Construction
	Construction III	100100 Introduction to the Built Environment	100405 Electricity - Comprehensive	100120 Advanced Construction
	Construction IV	100161 PLTW Introduction to Engineering Design	100405 Electricity - Comprehensive	100120 Advanced Construction
	Maintenance and Operation I	100100 Introduction to the Built Environment	100800 Principles of Maintenance and Operations	100120 Advanced Construction
	Maintenance and Operation II	100161 PLTW Introduction to Engineering Design	100800 Principles of Maintenance and Operations	100120 Advanced Construction



Sequences of CTE Courses

Approved State Model Programs of Study



Manufacturing

Cluster Level

Dual Credit Full Year Course

Cluster	Course Level		
	Introduction Course	Intermediate Course	Capstone Course
Manufacturing I	100100 Introduction to the Built Environment	101920 Manufacturing -AND- 100140 Computer Aided Drafting	
Manufacturing II	100100 Introduction to the Built Environment	101920 Manufacturing -AND- 100162 PLTW Civil Engineering and Architecture	
Manufacturing III	100100 Introduction to the Built Environment	101920 Manufacturing -AND- 100110 Principles of Construction	
Manufacturing IV	100161 PLTW Introduction to Engineering Design	101920 Manufacturing -AND- 100140 Computer Aided Drafting	
Manufacturing V	100161 PLTW Introduction to Engineering Design	101920 Manufacturing -AND- 100162 PLTW Civil Engineering and Architecture	
Manufacturing VI	100161 PLTW Introduction to Engineering Design	101920 Manufacturing -AND- 100110 Principles of Construction	

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Sequences of CTE Courses

Approved State Model Programs of Study

		Pathway Level		
		Course Level		
		Introduction Course	Intermediate Course	Capstone Course
Pathway	Production I	100100 Introduction to the Built Environment	101920 Manufacturing	101921 Advanced Fabrication and Manufacturing
	Production II	100161 PLTW Introduction to Engineering Design	101920 Manufacturing	101921 Advanced Fabrication and Manufacturing
	Manufacturing Production Process Development I	101900 Introduction to Mechatronics	101920 Manufacturing	101910 Advanced Mechatronics
	Manufacturing Production Process Development II	100161 PLTW Introduction to Engineering Design	101920 Manufacturing	101910 Advanced Mechatronics
	Manufacturing Production Process Development III	101900 Introduction to Mechatronics	101901 PLTW Computer Integrated Manufacturing	101910 Advanced Mechatronics
	Manufacturing Production Process Development IV	100161 PLTW Introduction to Engineering Design	101901 PLTW Computer Integrated Manufacturing	101910 Advanced Mechatronics
	Health, Safety, and Environmental Assurance	No state model program of study is available.		
	Quality Assurance	No state model program of study is available.		



Sequences of CTE Courses

Approved State Model Programs of Study



Science, Technology, Engineering, and Mathematics

Cluster Level

Dual Credit Full Year Course

		Course Level		
		Introduction Course	Intermediate Course	Capstone Course
Cluster	Science, Technology, Engineering, and Math	100503 Principles of Technology -AND- 100160 PLTW Principles of Engineering -AND- 100161 PLTW Introduction to Engineering Design		
	Engineering and Technology: Non-PLTW	103191 Introduction to Engineering	103192 Engineering Concepts	103193 Engineering Applications - OR - 103194 Robotics

Pathway Level

		Course Level		
		Introduction Course	Intermediate Course	Capstone Course
Pathway	Engineering and Technology: Civil I	100160 PLTW Principles of Engineering	100162 PLTW Civil Engineering and Architecture	100163 PLTW Engineering Design and Development
	Engineering and Technology: Civil II	100161 PLTW Introduction to Engineering Design	100162 PLTW Civil Engineering and Architecture	100163 PLTW Engineering Design and Development
	Engineering and Technology: Civil III	100160 PLTW Principles of Engineering		100162 PLTW Civil Engineering and Architecture
	Engineering and Technology: Civil IV	100161 PLTW Introduction to Engineering Design		100162 PLTW Civil Engineering and Architecture
	Engineering and Technology: Biotech I	100160 PLTW Principles of Engineering	100165 PLTW Biotechnical Engineering	100163 PLTW Engineering Design and Development

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Sequences of CTE Courses

Approved State Model Programs of Study

Pathway Level (cont.)

Dual Credit

Pathway	Course Level		
	Introduction Course	Intermediate Course	Capstone Course
Engineering and Technology: Biotech II	100161 PLTW Introduction to Engineering Design	100165 PLTW Biotechnical Engineering	100163 PLTW Engineering Design and Development
Engineering and Technology: Biotech III	100160 PLTW Principles of Engineering		100165 PLTW Biotechnical Engineering
Engineering and Technology: Biotech IV	100161 PLTW Introduction to Engineering Design		100165 PLTW Biotechnical Engineering
Engineering and Technology: Computer I	100160 PLTW Principles of Engineering	101901 PLTW Computer Integrated Manufacturing	100163 PLTW Engineering Design and Development
Engineering and Technology: Computer II	100161 PLTW Introduction to Engineering Design	101901 PLTW Computer Integrated Manufacturing	100163 PLTW Engineering Design and Development
Engineering and Technology: Computer III	100160 PLTW Principles of Engineering		101901 PLTW Computer Integrated Manufacturing
Engineering and Technology: Computer IV	100161 PLTW Introduction to Engineering Design		101901 PLTW Computer Integrated Manufacturing
Engineering and Technology: Electronics I	100160 PLTW Principles of Engineering		100403 Electronics - Digital
Engineering and Technology: Electronics II	100161 PLTW Introduction to Engineering Design		100403 Electronics - Digital
Engineering and Technology: Design I	100160 PLTW Principles of Engineering		100163 PLTW Engineering Design and Development





Sequences of CTE Courses

Approved State Model Programs of Study

Pathway Level (cont.)

Dual Credit

Pathway	Course Level		
	Introduction Course	Intermediate Course	Capstone Course
Engineering and Technology: Design II	100161 PLTW Introduction to Engineering Design		100163 PLTW Engineering Design and Development
Engineering and Technology: Aerospace I	100160 PLTW Principles of Engineering	100164 PLTW Aerospace Engineering	100163 PLTW Engineering Design and Development
Engineering and Technology: Aerospace II	100161 PLTW Introduction to Engineering Design	100164 PLTW Aerospace Engineering	100163 PLTW Engineering Design and Development
Engineering and Technology: Aerospace III	100160 PLTW Principles of Engineering		100164 PLTW Aerospace Engineering
Engineering and Technology: Aerospace IV	100161 PLTW Introduction to Engineering Design		100164 PLTW Aerospace Engineering
Energy I	100160 PLTW Principles of Engineering	100406 Energy Exploration	100407 Energy Generation and Distribution
Energy II	100161 PLTW Introduction to Engineering Design	100406 Energy Exploration	100407 Energy Generation and Distribution
Energy III	100406 Energy Exploration	100408 Green Energy	100407 Energy Generation and Distribution
Science and Math	No state model program of study is available.		



Sequences of CTE Courses

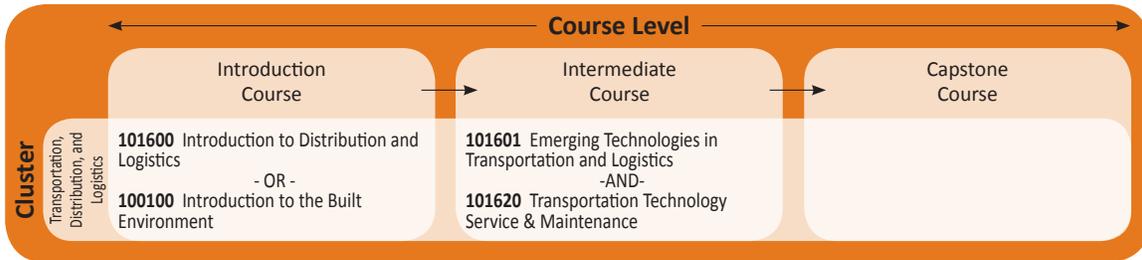
Approved State Model Programs of Study



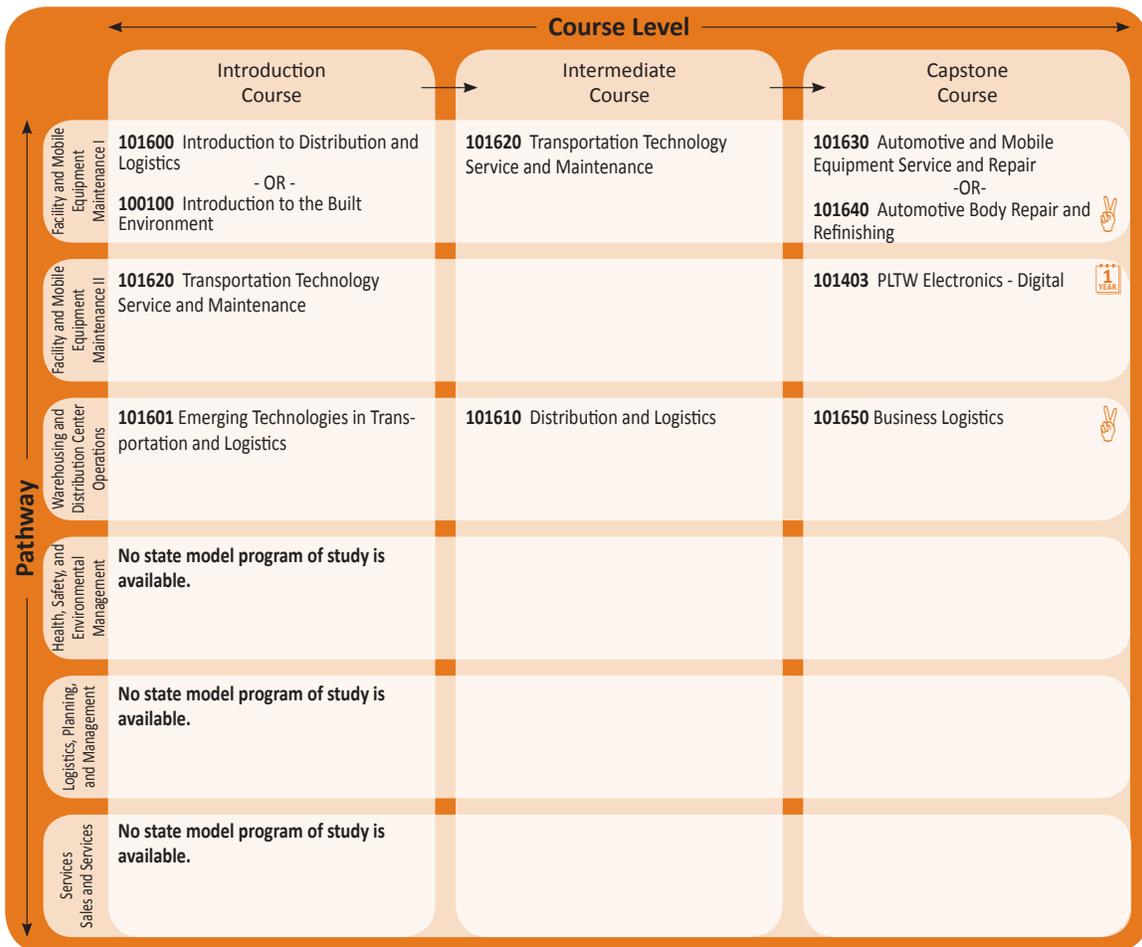
Transportation, Distribution, and Logistics

Cluster Level

Dual Credit Full Year Course



Pathway Level



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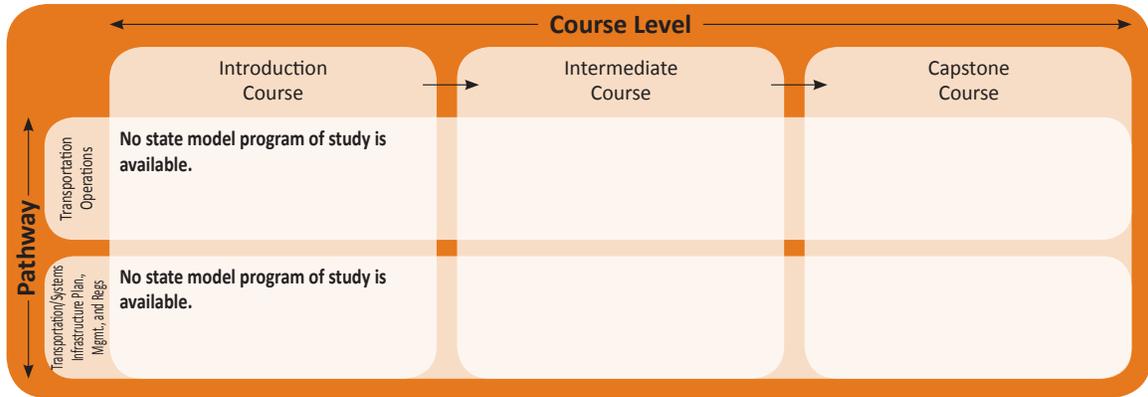


Sequences of CTE Courses

Approved State Model Programs of Study

Pathway Level (cont.)

 Dual Credit  Full Year Course





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