



**2014  
Applications  
Forms  
Grant Management**

**Carl D. Perkins  
Career and Technical Education  
Improvement Act of 2006**

### Nebraska Career Education State Model Programs of Study

The Nebraska Department of Education in cooperation with the Partnerships for Innovation has completed the development of State Approved Model Programs of Study for Nebraska Career Education. The concept of programs of study was first required in the Carl D. Perkins Career and Technical Education Act of 2006. .

Programs of study (POS), simply described, create a pathway from secondary to postsecondary education and/or work through a sequence of academic and technical courses, extended learning opportunities and support activities. For students to be adequately prepared and ultimately succeed in tomorrow's workforce, they require:

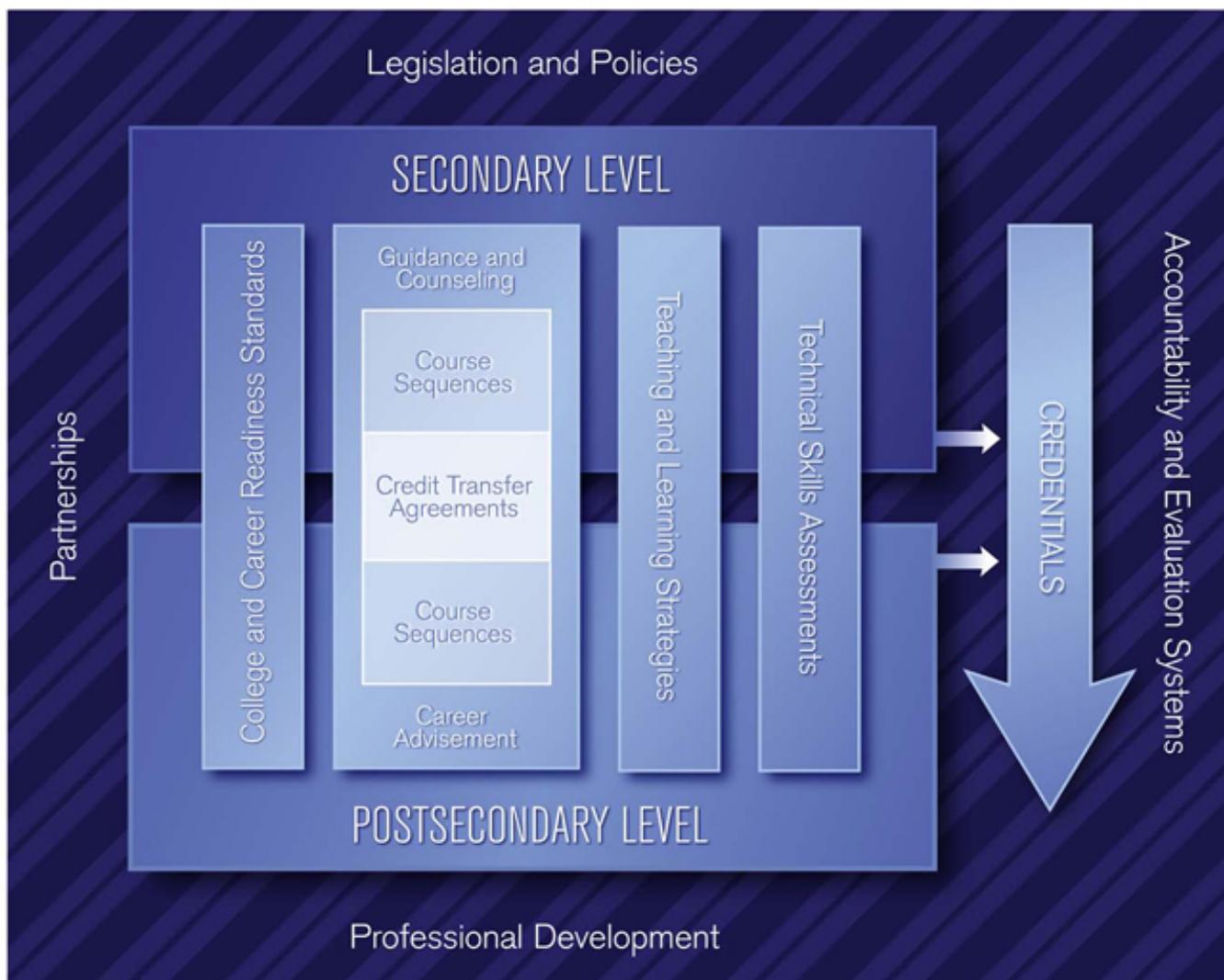
- A sound academic foundation that provides the required knowledge and skills and contextual application to continue to build America's competitive economic base.
- A broad understanding of work, including career readiness skills that complement the specific technical skills required in their area of specialization.
- Effective transition from secondary to postsecondary education and continuation of life-long learning.

**It is important to remember that a program of study is not simply the sequence of three or four identified career technical education courses.** These sequences represent only part of an effective program of study. A viable secondary program of study, just like in postsecondary education, includes academic and other related courses in addition to effective policy and support to prepare students for the next phase of their career development process.

**Nebraska's CTE Standards and CTE Sequences of courses that are a part of a program of study are found at <http://cestandards.education.ne.gov/>**

The United States Department of Education has adopted a framework that defines the ten essential components of a Program of Study. This framework should be used to evaluate programs of study and their impact on students.

# PROGRAM OF STUDY DESIGN FRAMEWORK



## 1. LEGISLATION AND POLICIES

Federal, state, and local legislation or administrative policies promote POS development and implementation. Effective legislation and policies should:

- Provide for state and/or local funding and other resources, such as professional development and dedicated staff time, for POS development.
- Establish formal procedures for the design, implementation, and continuous improvement of POS.
- Ensure opportunities for any secondary student to participate in a POS.
- Require secondary students to develop an individual graduation or career plan.
- Provide resources for long term sustainability of POS.

### 2. PARTNERSHIPS

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

- Create written memoranda of understanding that elaborate the roles and responsibilities of partnership members.
- Conduct ongoing 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, such as sector strategies and other activities supported by the Workforce Investment Act.
- Identify, validate, and keep current the technical and workforce 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 (9-12) and from secondary to postsecondary education (vertical curriculum alignment).
- Support the development of integrated academic and career and technical curriculum and instruction (horizontal curriculum alignment).
- Ensure that teachers and faculty have the content knowledge to align and integrate curriculum and instruction.
- Foster innovative teaching and learning strategies (see #9 below).

### 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 development and implement POS.

Well-designed accountability and evaluation systems should:

- Include the “10 Essential Elements of A State Longitudinal Data System” identified by the Data Quality Campaign.
- Provide for administrative record matching of student education and employment data (i.e., Unemployment Insurance (UI) wage records).
- 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. COLLEGE AND CAREER READINESS STANDARDS

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 college and career readiness standards should:

- Be developed and continually validated in collaboration with secondary, postsecondary, and industry partners.
- Incorporate essential knowledge and skills (i.e., academic skills, communication, and problem solving), 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.
- To the extent practicable, be internationally benchmarked so that all students are prepared to succeed in a global economy.

## 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 career and technical courses in each POS.
- Begin with introductory courses at the secondary level that teach broad foundational knowledge and skills that are common across all POS.
- Progress to more occupationally-specific courses at the postsecondary level that provide knowledge and skills required for entry into and advancement in a chosen POS.
- 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-development agreements:

- Provide a systematic, seamless process for students to earn college credit for postsecondary courses taken in high school, transfer high school 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 so that they can transfer seamlessly into the postsecondary portion of a POS without the need for additional paperwork or petitioning for credit.
- 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. GUIDANCE COUNSELING AND ACADEMIC ADVISEMENT

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

- Are based on state and/or local guidance and counseling standards, such as the National Career Development Guidelines.
- Ensure that guidance, counseling, and advisement professionals have access to up-to-date information about POS offerings to aid students in their decision making.
- Offer information and tools 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.
- Offer Web-based resources and tools for obtaining student financial assistance.

### 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 career and technical teachers or faculty.
- Employ contextualized work-based, project-based, and problem-based learning approaches.
- Incorporate team-building, critical thinking, problem-solving, communication skills, such as through the use of career and technical student organization (CTSO) activities.

### 10. TECHNICAL 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:

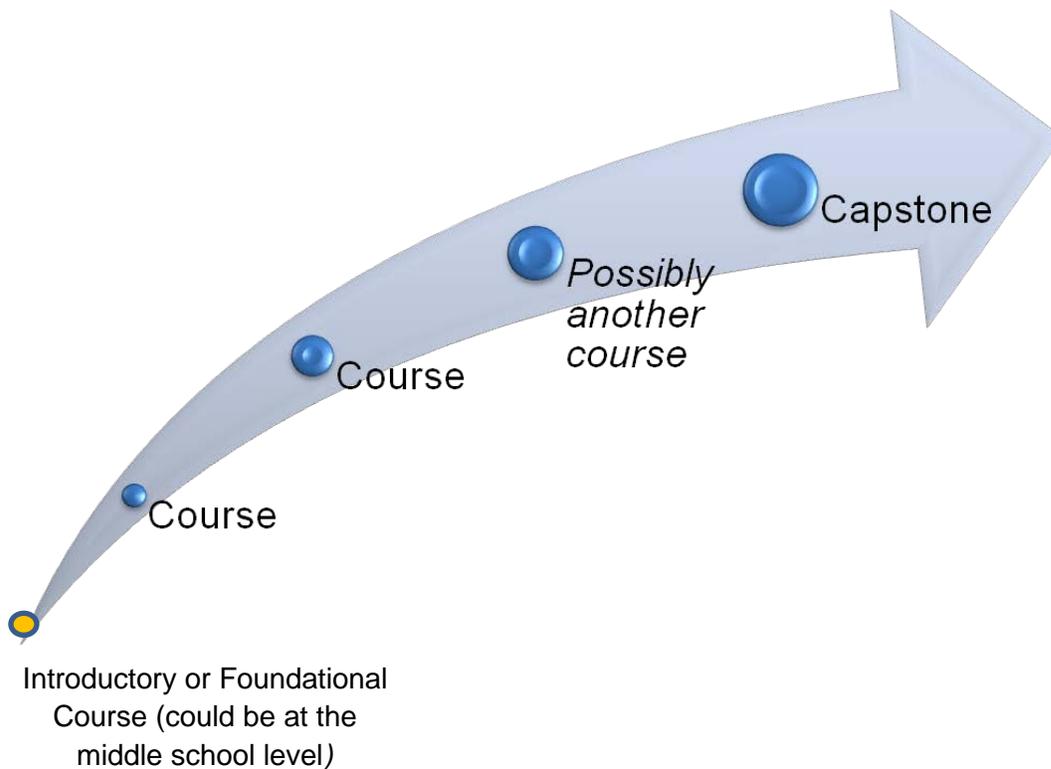
- Measure student attainment of technical skill proficiencies at multiple points during a POS.
- Employ industry-approved technical skill assessments based on industry standards, where available and appropriate.
- Employ State-developed and/or approved assessments where industry-approved assessments do not exist.
- Incorporate performance-based assessment items, to the greatest extent possible, where students must demonstrate the application of their knowledge and skills.

## Design Framework Implications for Nebraska CTE

While Nebraska's sequencing of career technical education courses is a vital and important component of a program of study, it is only a part of the total picture. As schools implement the State Approved Model Programs of Study, consideration should also be given to:

- Career Readiness Standards
  - Infused throughout the school and program of study, not just in CTE courses
  - Consider ways to recognize and document student performance on the career readiness standards
- Meaningful Technical Skill Attainment Assessment
  - Look ways to validate technical skill other than just formative and summative tests. Consider portfolios, documentation of projects, completed work or other ways to document knowledge and skill.
- Extended Learning Opportunities
  - Involvement in Career Education Student Organizations
  - Meaningful work-based learning tied to the content of the program of study
  - Learning opportunities outside the normal classroom/laboratory

## CTE Sequence of Courses as a part of a Program of Study



### Design Criteria for CTE Sequences of Courses

#### Number of Courses

At a minimum, a CTE sequence of courses must identify a minimum of two courses and a capstone course (three total). More than three courses are required in some sequences. Remember that introductory/foundational courses at the middle school level are not a part of the sequence, and are not required to complete a CTE sequence. An introductory course at the high school level may be included in the CTE sequence. Most courses are semester long courses. Where year-long courses are included, they count as two courses in the CTE sequence.

#### Capstone Courses

The capstone course should, when feasible, be a dual-credit course. In cases where a dual-credit course is available, the course title and course requirements from the offering college(s) will be used.

In cases, where a dual-credit course is not available or feasible, the capstone course should include:

- Unique learning opportunities and experiences
- Culminating projects
- Internships
- Available certifications/credentials