

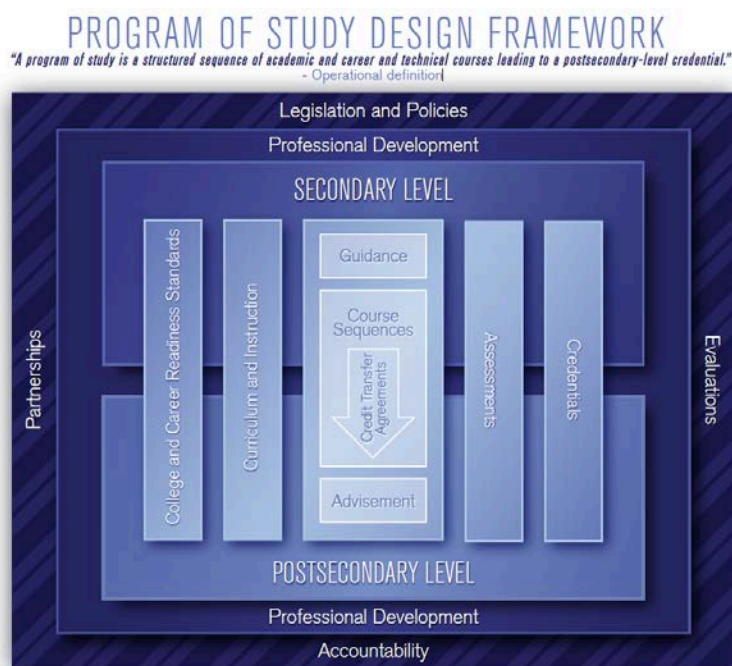
Program of Study Expectations for Race to the Top Districts

(Developed by Pathways Resource Center in partnership with Illinois State Board of Education)

Each participating Race to the Top (RttT) district with one or more high schools is required to implement a minimum of two programs of study (POS), with each POS developed and fully implemented by June 30, 2015. Districts may select one POS within each of two STEM Career Cluster areas or two POS within one STEM Career Cluster area and also may elect to develop additional POS. According to Perkins IV legislation the POS must, at a minimum:

- Incorporate secondary education and postsecondary elements
- Include coherent and rigorous content aligned with challenging academic standards and relevant career and technical content in a coordinated, non-duplicative progression of courses that align secondary education to adequately prepare students to succeed in postsecondary education
- Include the opportunities for secondary students to participate in dual or concurrent enrollment programs or other ways to acquire postsecondary education credits
- Lead to an industry-recognized credential or certificate at the postsecondary level, or an associate degree (or successful transfer to a four-year institution).

The Office of Career, Technical, and Adult Education (OCTAE) has developed a Program of Study Design Framework that includes 10 recommended components to support POS development and implementation. The components are not of equal priority, so school district officials are encouraged to review these elements when developing the POS based upon their specific educational context and student needs. The POS Design Framework is illustrated below, and the OCTAE descriptions of POS components and subcomponents are included at the end of this document. Information on the framework is available from the OCTAE website (<http://cte.ed.gov/nationalinitiatives/rposdesignframework.cfm>).



Source: Office of Career, Technical, and Adult Education. (n.d.). *Program of study design framework*. Retrieved from <http://cte.ed.gov/nationalinitiatives/rposdesignframework.cfm>

Elements to be Incorporated into POS Development and Implementation for RttT Districts

In fulfilling RttT expectations for POS implementation, districts should incorporate the following elements:

- Develop **course sequences and learning experiences** in two or more programs of study, selected from within the nine STEM cluster/RttT application areas, that include orientation coursework commencing in middle school/early high school grades and pathway-specific curriculum in high school that is articulated with postsecondary education. Suggestions about these courses include:
 - Sequences of courses that incorporate a non-duplicative progression of secondary and postsecondary elements which include both academic and career and technical education content, curriculum alignment to challenging standards, rigorous content, and lead to the attainment of an industry recognized credential, certificate, or degree.
 - The course sequence matrices for each content area are available at <http://isbe.net/career/default.htm>. Similar resources with other important POS connections can be found at www.illinoisworknet.com/ilpathways.
- **Partnerships with postsecondary education** to increase dual credit and develop structured programs, which align with the ISBE course sequence matrices and that transition college- and career-ready students to postsecondary education.
- **Identification of credentials**, certifications, and/or degrees to the POS such as industry or skill certificates and/or college degrees.
- **Education and career guidance systems**, such as a support system to help guide students in making choices and developing an Individualized Learning Plan.
- **Real-world connections in related POS careers** which could include implementing such connecting activities as adult mentors, program advisory councils or similar partnerships, state recognized career and technical student organizations, student challenges, etc.
- **Professional development** opportunities for administrators, teachers, and faculty to further POS design, implementation, and maintenance.

Full implementation of the program of study involves more than simply the identification of courses. Although coursework is a foundational requirement of the program of study, the course identification and development represents the minimum target for POS implementation. The Curriculum Template included with this document provides a mechanism for the district to note academic and CTE coursework for each POS, work-based learning experiences, and assessments/certifications that, taken together, are designed to promote students' college and career readiness within the POS. This template is designed so that the student's program of study extends into postsecondary education; depending on the POS identified by the school district, the curriculum template will represent coursework and learning experiences for grades 9-14 or 9-16. Additional elements and activities that districts should consider including when engaging in POS development are the following:

- **Partnerships and Advisory Committees:** These partnership groups should include representatives from business and industry, community colleges and/or colleges, feeder middle schools, high schools, and the school district central office staff, STEM Learning Exchanges, the EFE System Director, as well as other community stakeholders who have specialized knowledge that can support the district with POS implementation. Partnership members should be selected for their expertise and/or leadership roles. For example, content experts should include both secondary and postsecondary teachers, so that they can engage in curriculum conversations and discuss mechanisms to align the curriculum from middle school through postsecondary. School counselors should be involved, to facilitate conversations about student advising. Secondary, district-level, and postsecondary administrators should be involved to facilitate articulation agreements and assist with any needed modifications to policies and procedures to support POS

implementation. The Education for Employment (EFE) System Director will need to be involved, so that CTE course assignments and course content within the POS are approved and entered into the state system.

- **Dual Credit and Articulation Agreements:** The intent is to develop 9-14 or 9-16 Programs of Study that provide students with the essential knowledge and skills to be successful in college and careers. Working in partnership, school district and postsecondary partners should develop articulation agreements that include dual-credit and dual-enrollment course opportunities offered to students within the POS and ensure that students can transition from high school to postsecondary without unnecessary course duplication and also without the need for the student to complete remedial coursework upon entry into the postsecondary setting. Ideally, the student's progression from high school into postsecondary education is a seamless transition.
- **Career and Technical Student Organizations:** High schools should sponsor co-curricular organizations and activities within the career cluster areas for students, to provide them opportunities to participate in experiences outside the classroom. Some examples of Illinois recognized career and technical student organizations related to career interests include, but are not limited to, BPA, DECA, FBLA, FCCLA, FFA, HOSA, SkillsUSA, and TSA. Many student organizations have local, regional, state, and national competitions, which can motivate students to deepen their knowledge and understanding of the curriculum and career opportunities, as they represent their schools in these contests. Additionally, student organizations can help expose students to varied occupations within their identified career pathways as well as develop workplace and leadership skills desperately needed by today's employers.
- **Career Counseling and Student Advising:** Through school counseling services and effective Teacher Advisory programs, students can access information on career options and POS offerings. The school also should develop processes to support Individualized Learning Plans (ILPs) for students, so they have clearly delineated understandings of necessary coursework and learning experiences that will prepare them for college and careers. Ideally, the ILP process will begin in the middle school, continuing through high school and into postsecondary.
- **Work-Based Learning Experiences:** Students are better prepared for college and careers when they are provided with opportunities to apply skills learned in the classroom to actual work experiences. Students are more likely to understand the relevance of their coursework and engage more fully in classroom activities when they understand the importance of mastering skills that they subsequently will apply during their paid and/or unpaid work-based learning experiences. Initial work-based experiences may involve career awareness and career exploration activities, including students' participation in career fairs and job shadowing, and then become more intensive as students learn about work responsibilities within their Program of study, through such activities as projects with business/industry partners, service learning, summer employment, and paid or unpaid internship experiences and apprenticeships that may assist the student in obtaining industry-recognized credentials.

The suggested activities and tasks for developing and implementing the programs of study are included in the chart contained on the following pages. District personnel are encouraged to work closely with their PRC Coach and Learning Exchange(s) throughout the POS development and implementation process. The identified programs of study are to be implemented in each district by June 30, 2015, which is the conclusion of the RttT project. Please feel free to contact the Pathways Resource Center staff any time that you have questions or concerns.

Program of Study Development and Implementation: Activities and Tasks

This chart contains activities and tasks that district personnel should complete when implementing programs of study. Suggested resources (with hyperlinks to relevant information), products, and responsible parties are included, to offer guidance throughout the process of POS development and implementation. The final column provides an opportunity for districts to indicate timeframes during which each activity will occur, to assist district personnel in monitoring their progress toward robust POS implementation. All programs of study are to be implemented in each district by June 30, 2015, which is the conclusion of the RttT project.

Activity	Tasks	Selected Resources	Product	Person(s)	Timeframe
1. Identify a minimum of two programs of study (POS).	a. Review labor market information and student interest data, keeping in mind high demand, high wage careers as well as those who are core and critical. b. Identify the related program of study CIP Code(s)	<ul style="list-style-type: none"> • Labor Market Information (Illinois Department of Employment Security) • Agriculture, Food & Natural Resources Industry Profile • School Data/SIS/School Report Card • Pathways To Results Data • ISBE CIP Code Listing • Illinois Career Clusters, Pathways, and Programs of Study Guide • PRC Staff and Coaches 	Programs of Study	POS District Team	<i>January 31, 2014</i>
2. Identify partners (high school faculty, counselors, special support personnel, community college, 4-year college, business/industry, etc.), and engage with STEM Learning Exchange(s) and EFE Director.	a. Review labor market information and student data with partners. b. Set partnership goals and outcomes. c. Identify partners. d. Define the governance structure for the partnership. e. Identify an effective operating strategy. f. Evaluate the partnership. g. Determine how the partnership can/should be sustained.	<ul style="list-style-type: none"> • See above • Pathways to Results • PTR Engagement & Commitment Module • PTR Strengthening Partnerships Workbook • Learning Exchange(s) • PRC Staff and Coaches 	List of POS Partner Names and Representing Entities	POS District Team	

Activity	Tasks	Selected Resources	Product	Person(s)	Timeframe
3. Examine current curriculum and enrollment trends within each POS.	a. Identify courses, work-based learning experiences, and certifications that are available through the completion of POS (stackable credentials) b. Assess the alignment of the current essential knowledge and skills with relevant standards that are reflected in the current courses and identify gaps and unnecessary duplication. c. Gather and review enrollment trends for courses in the POS (where applicable). d. Identify elements to incorporate into the POS and develop a plan for implementation.	<ul style="list-style-type: none"> • High School Supplement to PTR • PRC Curriculum Alignment Module (Step 3) • Illinois Pathways Initiative • Learning Exchange(s) • PRC Staff and Coaches 	Documented enrollment trends	POS District Team	
4. Create, implement and review Individualized Learning Plans (ILPs) beginning in Grade 7 for all students. (NOTE: Generally, ILPs are not required for POS implementation but are strongly encouraged as a part of a robust POS. However, some RttT districts are required to develop ILPs.)	a. Create ILP template b. Create ILP development process c. Implement ILPs with students. d. Evaluate ILP process and instrumentation annually	<ul style="list-style-type: none"> • PRC Achieving Their Goals: Implementing an Individualized Learning Plan Process to Build Student Success Guide • NCWD ILP “How to” Guide • PRC Staff and Coaches 	ILP	POS District Team	
5. Develop the grades 9-14 or 9-16 curriculum template for each POS and begin working on	a. Utilize the curriculum template developed and disseminated by PRC. b. Conduct a gap analysis to identify	<ul style="list-style-type: none"> • PRC Curriculum Alignment Module (Step 4) and Templates • Learning Exchange(s) 	Completed Curriculum Template	POS District Team	

Activity	Tasks	Selected Resources	Product	Person(s)	Timeframe
curriculum alignment/ revision beginning with a gap analysis.	<p>the new curriculum template that reflects the desired course sequence, course credits, and student learning experiences to be made available at each level of the POS.</p> <p>c. Obtain approval of new CTE course(s).</p>	<ul style="list-style-type: none"> • PRC Staff and Coaches • EFE Director 			
6. Complete and implement alignment of curriculum for each POS.	<p>a. Align prerequisite knowledge and skills with course requirements, assessments, certifications and credentials to be attained at the completion of each secondary and/or postsecondary course and identify, develop and/or adapt assessments to produce valid and reliable results for all students.</p> <p>b. Develop lesson plans and identify instructional strategies, emphasizing contextualized, work-based and problem-based learning opportunities as well as student organizations.</p> <p>c. Identify resources necessary to adapt existing and adopt new curriculum, access instructional resources, and develop written articulation agreements including dual-credit opportunities.</p> <p>d. Identify and develop student support services and offer individualized strategies to assist students who demonstrate the need for high-level support and assistance.</p>	<ul style="list-style-type: none"> • <u>PRC Curriculum Alignment Module</u> (Steps 5-8) • Postsecondary partners • Learning Exchange(s) • PRC Staff and Coaches 	Documented course alignment, content and STEM curriculum. Written articulation agreements with postsecondary partner(s).	POS District Team	

Activity	Tasks	Selected Resources	Product	Person(s)	Timeframe
7. Deliver faculty professional development.	a. Identify professional development needs of faculty, to deepen curriculum content knowledge and facilitate mastery of new instructional strategies. b. Identify sources of professional development (in-district or outside district). c. Provide professional development.	<ul style="list-style-type: none"> • Postsecondary partners • Learning Exchange(s) • PRC Staff and Coaches 	Documentation of professional development experiences	POS District Team	
8. Implement the programs of study and conduct process improvement and evaluation.	a. Develop evaluation method and tools. b. Assess curriculum alignment processes as part of the continuous improvement process.	<ul style="list-style-type: none"> • <u>Pathways to Results Process Improvement and Evaluation Module</u> • <u>PRC Curriculum Alignment Module</u> (Step 9) • <u>PTR High School Supplement</u> • PRC Staff and Coaches 	Evaluation Strategy and Data Report	POS District Team	

CURRICULUM TEMPLATE

Name of District _____

Name of Cluster _____ Name of Pathway _____ Program of Study _____

Education Levels	Grade	English	Math	Science	Social Studies/ Sciences	Other Required Courses, Recommended Electives, and Learner Activities	Career and Technical Courses and/or Degree Major Courses	Work-based Learning Experiences	Assessments/ Certifications	SAMPLE Occupations Relating to this Pathway
Interest Inventory Administered										
Secondary	9					All plans of study need to meet local and state high school graduation requirements as well as college entrance requirements.				
	10									
	11									
	12									
Articulation/Dual Credit Transcribed										
Postsecondary	Year 13					All plans of study need to meet learners' career goals with regard to required degrees, licenses, certifications or journey worker status.				
	Year 14									
	Year 15									
	Year 16									

Source: Adapted from the Illinois Community College Board

Career and Technical Programs of Study: A Design Framework

Source: Office of Career, Technical, and Adult Education
<http://cte.ed.gov/nationalinitiatives/rposdesignframework.cfm>

The Carl D. Perkins Career and Technical Education Act of 2006 (Perkins IV) calls for states to offer “career and technical programs of study,” which may be adopted by local educational agencies and postsecondary institutions, as an option to students (and their parents as appropriate) when planning for and completing future coursework. These programs, at a minimum, must:

- Incorporate and align secondary and postsecondary education elements,
- Include academic and CTE content in a coordinated, non-duplicative progression of courses,
- Offer the opportunity, where appropriate, for secondary students to acquire postsecondary credits, and
- Lead to an industry-recognized credential or certificate at the postsecondary level, or an associate or baccalaureate degree.

Each local recipient of Perkins funds must offer at least one career and technical program of study.

To help states and local recipients meet these requirements, the Office of Career, Technical, and Adult Education (OCTAE), in collaboration with major national associations, organizations, and states, have formulated a “career and technical programs of study design framework (framework).” The framework identifies a system of 10 components that, taken together, support the development and implementation of effective programs of study. Although all 10 components are important, they are neither independent nor of equal priority: State and local program developers must identify the most pressing components for state or local adoption, taking into consideration their relative need within their educational context.

PROGRAM OF STUDY (POS) COMPONENTS AND SUBCOMPONENTS

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.¹
- 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:

¹ The 10 elements are: (1) statewide student identifier; (2) student-level enrollment data; (3) student-level test data; (4) information on untested students; (5) statewide teacher identifier with a teacher-student match; (6) student-level course completion (transcript) data; (7) student-level SAT, ACT, and Advanced Placement exam data; (8) student-level graduation and dropout data; (9) ability to match student-level P-12 and higher education data; and (10) a state data audit system.

- 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.²
- 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, particularly where industry-approved assessments do not exist.
- Result in the awarding of secondary credit, postsecondary credit, or a special designation on a student's high school diploma.
- Incorporate performance-based assessment items, to the greatest extent possible, where students must demonstrate the application of their knowledge and skills.

² See http://cte.ed.gov/acrn/ncdg/ncdg_what.htm.