

courses). The chart below is an example of the way that visualizing the program can be helpful to the planning group. A complete Scope & Sequence is included as an additional resource.

Example:

	9 th Grade	10 th Grade	11 th Grade	12 th Grade	13 th Year	14 th Year
English						
Math	Algebra	Geometry	Trig/Alg. 2	Pre-Calculus	Calculus	Calculus 2
Science						
History						
Workplace Learning						
Arts						
Technology						

Horizontal alignment

The goal of the Scope & Sequence is to create a seamless academic sequence for students through the program. After the initial map is created that includes both high school and college degree coursework, the next step is to examine each *content area strand* horizontally (across the six years) to ensure that the high school coursework and college courses together form a logical and supported academic sequence. For example, an English sequence would include all of the necessary content to bridge successfully into the first college English course and beyond.

Vertical alignment

This refers to the “load” students bear per semester and year in the sequence, as well as the holistic “feel” of the combination of courses and experiences per year. Each year should consider how many courses (both high school and college) it is reasonable to expect students to take and be successful, time for academic supports and extracurricular activities, as well as the fundamental skills students are building that year as they move to the next. When planning, it is important to imagine being a student in the program to anticipate what students should be learning and experiencing.

Creating a plan to support the logistics of the program.

Due to the nature of the P-TECH 9-14 model, students and staff will likely need to travel between different settings. Once an initial draft of the Scope & Sequence has been developed, the planning team should consider the following questions:

- Which courses should be taken at the college and which at the high school?

- How convenient is travel between the campuses, and when are students mature enough to travel on their own? Note, this may dictate when those courses can be in the Scope & Sequence if the younger students cannot get to the college campus.
- Which college courses require special equipment or facilities that are not available at the high school?
- Who will teach these courses? High school teachers who have adjunct status, or professors from the college?

Factors to consider as the Scope & Sequence is refined**Crucial decision points for students in the Scope & Sequence**

The Scope & Sequence document needs to include a summary of high school and college credits earned every year so that students and families understand where the important transitions and decision points are throughout the 6-year experience. Those decision points include when a student

- chooses a college degree pathway (if more than one degree is offered),
- continues her/his degree path OR graduates from the school with a high school diploma and a significant number of transferable college credits,
- chooses to earn industry certifications, and
- knows that she/he is prepared for the entry level position in the targeted field(s).

Addressing the needs of diverse learners

Because P-TECH 9-14 schools are designed to serve an unscreened population, students will enter the school with different levels of readiness, and not all students will be able to move at the same pace. The partners who develop the scope and sequence must foresee the needs of incoming students and provide sufficient time to master the content before moving on. Some students will need additional resources and supports to successfully complete both a high school diploma and an associate degree in six years. Efforts to bring students up to grade level should be front-loaded — especially in English and mathematics, as these skills provide the foundation for success in other courses. Other Scope & Sequence pathways should provide opportunities for students who are able to move more quickly through the content. These students may be able to complete the associate degree in fewer than six years, or may accumulate additional college credits.

Understanding “readiness” for college courses and work experiences

Understanding the relationship between college course eligibility and state high school assessments will be critical here. If your district does not require exams as part of earning a high school diploma, then the college’s requirements will prevail and courses and assessments will need to be defined accordingly. If exams are part of the high school diploma, then it may be important to give them at nontraditional times to ensure students meet the college eligibility requirements. For example, if a high school content exam like English is usually administered to students at the end of the 11th grade, but students will need to have taken it before the 10th grade in order to take the first college course in the English sequence, the district must accommodate moving the exam to an earlier grade. This change has obvious implications for teaching and learning for students.

Who needs to approve the Scope & Sequence?

All partners should review and approve the Scope & Sequence, likely in the context of the Steering Committee. The school and school district need to ensure that the curriculum meets high school graduation

requirements. The superintendent may need to review dual credit offerings and other curricular choices to confirm that it is aligned to district and state requirements. The college partner ensures that college courses meet specified degree requirements, as well as clarifies eligibility requirements for college courses. The college provost and/or college departments may need to approve when a particular course can be offered to high school students. The employer defines workplace-learning experiences throughout the program and ensures that internships will help students gain appropriate skills for entry-level jobs. While each partner has their individual responsibilities in approving the scope and sequence, it is important that they also have whole group discussions to ensure that all partners are in agreement and have a common understanding of the document.

Once the courses and workplace experiences are sequenced, what's next?

Once the initial scope and sequence has been developed and approved, it can be used to plan additional elements of collaboration, including curriculum development, professional development, student supports, assessments and academic and other benchmarks, that will ensure that students move through the Scope & Sequence successfully.

Curriculum Development:

- High school and college faculty should work together to develop curriculum that is aligned throughout their content area sequence so that teachers and professors are always preparing students for the next step in the sequence of courses and workplace experiences.
- Teachers within the same grade level can develop cross-disciplinary projects that align to the core skill areas developed by industry.
- Industry professionals should work with teachers and professors to develop projects aligned with real world tasks.

Professional Development:

- High school faculty, college faculty and industry professionals can all learn about the norms and requirements of each partner's organization through site visits, discussions, and common learning experiences, leading to authentic curriculum for students.

Student Advising System:

- The school, with input and support from the partners, should create an advising system for students that ensures that each student's academic and personal progress through the program is monitored, informed, and supported with appropriate interventions and checkpoints. Because the program is so multifaceted and students have many experiences to pull together, advisors must be particularly vigilant about tracking student progress and engagement, including student high school and college GPA and performance in internship settings. Families should be engaged and informed at all times.

Student Supports:

- Partners should regularly review data from the school and identify successes, challenges, and strategies and mechanisms for support.
- Partners should work together to identify transition points that may be challenging for students, and then develop support plans to ensure greater success.
- Partners can identify expected challenges and regularly assess students to uncover new challenges faced by students in order to concentrate attention and resources to address needs.

- How often will high school faculty engage in monitoring student progress and reviewing student outcomes in college classes?
- How will high school faculty support students in college courses (e.g. tutoring, recitation sections)?

Assessments/benchmarks:

- High school teachers should work with all partners to identify appropriate assessments that can serve as milestones or benchmarks for student progress through the program.

How often do you revisit the Scope & Sequence?

The Scope & Sequence is a living document and should be reviewed together with data from the school program at least twice in the school year. It is never finished, but it should always be *complete*. A Scope & Sequence should always be in place for students, families, partners, and the entire school community so that everyone understands the pathways to the goals established by the Steering Committee. That plan, although always adjusting to changing needs (e.g. student performance, changes in degree requirements), should always be current and available for all the stakeholders. The Scope & Sequence should be revised by the Steering Committee, in collaboration with school and college staff as teachers and professors are closest to students and offer critical perspective of the work on the ground. In addition, as the school grows and lessons are learned, pacing may change to better support students. As the students begin internship placements, those experiences may demand skills be taught at different times. It is important that all involved in the P-TECH 9-14 school model have an understanding that the scope and sequence is not something that is developed in the first year and then stands as is, but instead grows with the school.

For more information about the P-TECH 9-14 model, please visit ptech.com