

# Developing a Scope & Sequence for a P-TECH school

Overview  
May 17, 2016

# What is a Scope & Sequence Plan?

A **scope-and-sequence** is a document which provides:

- a year-by-year **overview** of the school's program, covering the full range of grade levels and content areas
- the **specific order** and **thoughtful arrangement** of high school and college courses, and work-base learning experiences
- the “big picture” of **high school and college credits** potentially earned by year, and an understanding of the interplay between academic courses and work experiences

# Developing a Scope & Sequence is part of the Backwards Planning Process

What specific jobs will graduates be eligible for? What skills will they need to succeed?



Which associate degrees are best suited to prepare students for those jobs?



What types of workplace experiences will students need as part of the school program?



What is the most appropriate sequence of courses and workplace experiences?



What type of support structures will be needed to help students succeed?

# All Partners must work together to develop the Scope & Sequence

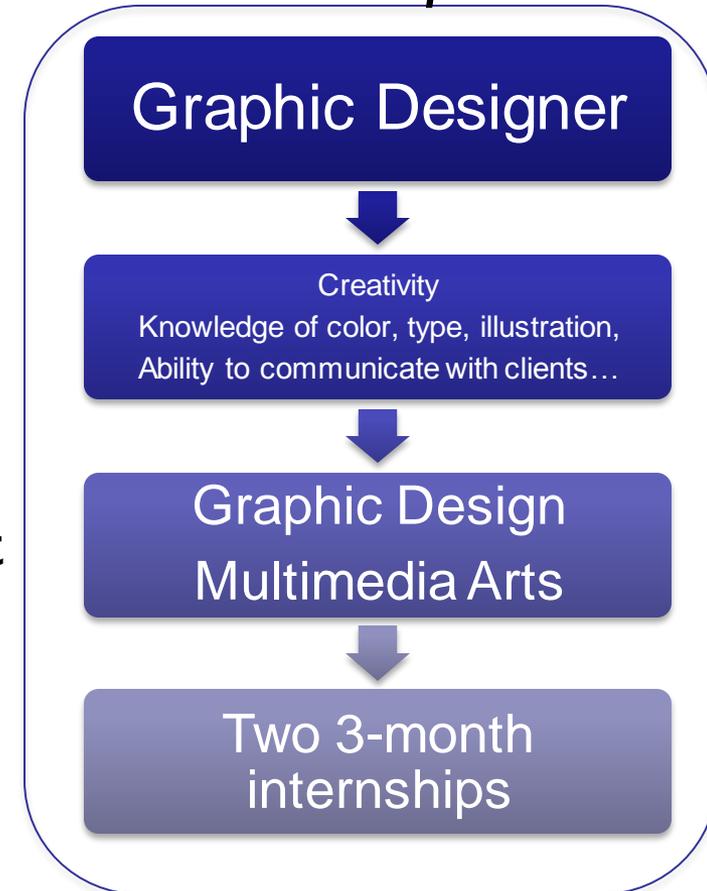


- **School District:** Ensures that curriculum meets high school graduation requirements
- **College:** Ensures that college courses meet specified degree requirements; clarifies eligibility requirements for college courses
- **Employer:** Identifies key skills that entry-level employees need to be successful and helps shape curriculum to meet those needs; defines workplace learning experiences throughout the program

# Before creating a Scope & Sequence plan, several decisions must be made

- Identify the **entry-level jobs** that students will be working toward
- Work with the employers to create a **skills map** for the most likely jobs
- Work with the college partner to identify which **associate degrees** best align with the skills map
- Determine the number and length of **internships**

## Example



# Thinking about time available to learn

- Developing a Scope & Sequence is like planning a vacation. You must decide all the sites you want to see, and the amount of time you have to see them.
- With a school's Scope & Sequence, you must first determine all the learning experiences (courses, internships, etc.), and then the amount of time available to offer them.
- The daily, weekly and yearly schedule for the school will determine the amount of time available for different activities.
- Many schools will choose to extend the day or the year (or both) in order to provide more opportunities to learn.

# What is the process for developing the Scope & Sequence?

Begin by gathering the components:

- List all the courses required to graduate from high school, including courses that are part of the CTE sequence
- List all the courses required for the desired associate degree(s)
- Note all the entry requirements and/or prerequisites for the college courses (e.g. scoring above an 80 on the English Regents exam)
- Identify possible areas of overlap—they may offer opportunities for dual credit (e.g. replacing 12<sup>th</sup> grade English with English 101)
- List all the internship/apprenticeship experiences

# What is the process for developing the Scope & Sequence?

Next, place courses & experiences in each year

- To appropriately sequence the courses, the team may need to work backwards from the final years
- Pay particular attention to pre-requisites (for courses and internships)
- Highlight courses that may be options for dual credit (both high school & college credit)
- Use internships as “anchors” for the sequence. For example, if the goal is for students to participate in a three month internship during the 13<sup>th</sup> year, then make sure that few or no college courses are scheduled simultaneously. And, be sure that students have gained the skills necessary to succeed prior to beginning the internship
- If the program will offer more than one college major, create a sequence in the early grades that offers exposure to each field of study and identify the point at which students will need to make the decision—think of a common “trunk” with different branches in the upper grades

# Visualizing the Scope & Sequence as it is developed

- It is often helpful to use chart paper or white boards to visualize the Scope & Sequence as it is being developed.
- The team can use post-it notes to denote specific courses/activities. These post-its can be moved from one year to the next as the team discusses the appropriate sequence.
- Use colors and symbols to identify important features (e.g., high school versus college courses)

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

# Workplace Learning Sequence

*Where are we going?*

## P-TECH CAPSTONE EXPERIENCE

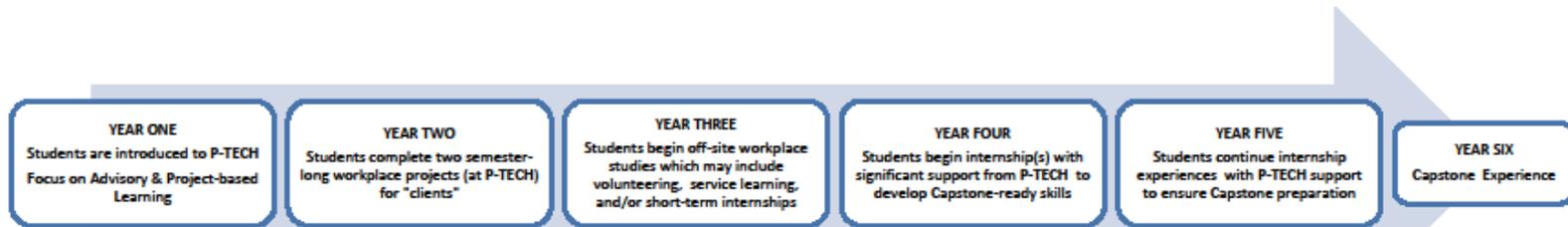
QUALIFYING EXPERIENCES may include:  
Portfolio cumulative performance, GPA, Number of college courses, Regents, Degree selected, Resume, etc.

### CAPSTONE EXPERIENCE:

- ✓ Apprenticeship
  - Emphasis is placed on matching the academic and technical strengths of the students with the needs of the employers
  - Students apply to projects proposed by employers and placements vary depending upon skills of students
  - Students complete a project of value for the employer
- ✓ P-TECH seminar course supports workplace skill development
- ✓ Culminating project includes a presentation and defense of an original project developed during apprenticeship and exhibits mastery of workplace learning and technical skills.

*How will we get there?*

## WORKPLACE LEARNING STRAND



**GATEWAYS TO ADVANCEMENT:** Students will present a portfolio at the completion of each year in order to advance to the next. Portfolios will be cumulative and will provide students with opportunities to assess their development in workplace learning. The gateway to the Capstone Experience will include the qualifying experiences noted above.

# A Complete Scope & Sequence captures the full plan for the school

## Early College Initiative at CUNY Sample Course Scope & Sequence

Grade 9		Grade 10		Grade 11		Grade 12		Grade 13	
Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring
Advisory	Advisory	Advisory	Advisory	Advisory	Advisory	Advisory	Advisory	Advisory	Advisory
English	English	English	English ®	*Eng 110: College Writing		*Comp Lit 102: Great Books or *Eng 152: Works of American Lit	*Eng 210: Journalism, It's Scope and Use	SSN 187: Urban Sociology	
Geometry	Geometry ®	Trigonometry/Algebra 2				Pre-calculus	Math 201: Calculus I	Math 202: Calculus II	Math 203: Calculus III
Hands-On/Minds On Physics	Hands-On/Minds On Physics	Chemistry	Chemistry ®	Physics	Physics ®	SCC 201: General Chemistry I	SCP 231: General Physics I	SCP 231: General Physics II	
American History	American History ®	Global Studies		Global Studies ®		Economics	Participation in Government		
Introduction to Engineering		Co-op Prep for Engineering Science (0 credit)		Engineering Lab i			Engineering Lab II	MAC 125: C++ Programming	MAE 213: Electrical Circuits
PE/Health	PE/Health	PE/Health	PE/Health	PE/Health	PE/Health	PE/Health	PE/Health	PE/Health	PE/Health
Fitness/Art/Math/or Music		*Arts 151: Drawing 1 or Drama		Summer after 11th grade: 4 week internship					
<b>Credits Earned (9th Grade):</b> HS Credits 12 College Credits 4		<b>Credits Earned (10th Grade):</b> HS Credits 12 College Credits 13		<b>Credits Earned (11th Grade):</b> HS Credits 14 College Credits 24		<b>Credits Earned (12th Grade):</b> HS Credits 10 College Credits 21		<b>Credits Earned (13th Year):</b> HS Credits 0 College Credits 21	
		<b>Total HS Credits 48</b> <b>Total College Credits 62</b>							

# Who needs to approve the Scope & Sequence?

All partners should review and agree to the Scope & Sequence, likely in the context of the Steering Committee

- **School District:** Ensures that curriculum meets high school graduation requirements. Superintendent may need to review dual credit offerings and other curricular choices.
- **College:** Ensures that college courses meet specified degree requirements; clarifies eligibility requirements for college courses. Provost and/or college departments may need to approve when course can be offered to high school students.
- **Employer:** Defines workplace learning experiences throughout the program. Ensures that internships will meet help students gain appropriate skills for entry-level jobs.

# What happens next?

Once the initial Scope & Sequence has been developed and approved, it can be used to plan additional elements of collaboration:

- **Curriculum Development:**
  - High school and college faculty can work together to develop curriculum that is aligned throughout the sequence
  - Teachers within the same grade level can develop cross-disciplinary projects
  - Industry professionals can 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 milieu
- **Student Supports:**
  - Partners can work together to identify transition points that may be challenging for students, and then develop support plans to ensure greater success
- **Assessments/benchmarks:**
  - High school teachers can work with 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 frequently

- Course selections may change due to student performance or changes in degree requirements
- Pacing may change to better support students
- Internship opportunities may demand skills be taught at different times