



# Connecting preservice teachers, K12 classrooms & twenty-first century workplaces

The Study Council at Syracuse University

June 2015



## The Study Council at Syracuse University Career-pathways agenda

### **Developing a model teacher preparation course**

- Teams of preservice secondary teachers each develop and conduct a lesson (and unit materials) for a 7-12 classroom
- Lesson structured around authentic problems confronted in an actual workplace, based on team members' worksite visit(s)
- Each team works closely with a 7-12 teacher and an industry advisor
- Partners for Education & Business facilitates recruitment of industry partners
- Lesson must be aligned with the teacher's curriculum and Common Core/other inter-disciplinary standards
- Team members prepare "learner profiles" of students with diverse needs & abilities, and use Universal Design principles to ensure that their lesson addresses all students
- Experience documented in videos of individual lessons, and in a report on course design and student outcomes
- Traditional course material presented in "flipped" format, to allow students maximum time for working with field partners

## Career-pathways agenda (cont'd)

### The first set of teams (Fall 2014):

- Science (Project Lead the Way) classroom & Lockheed Martin: illustrating the "lean engineering" process
- Social Studies classroom & FAA Air Traffic Control Tower: rapidly analyzing & communicating about complex situations
- Social Studies classroom & Stickle Furniture: building collaborative teams of workers with different ethnicities and national origins
- Math classroom & O'Brien & Geer Engineering: using math as a language for analyzing & explaining situations
- Art (painting & photography) classrooms & King & King Architects: finding visual ways of representing one's interests & skills
- Kindergarten classroom & Liberty POST: developing children's awareness of how families differ and engaging their parents in their children's learning

## Career-pathways agenda

### The second set of teams (Summer 2015):

- Science (Project Lead the Way) classroom & C&S Engineering: group collaboration in applying engineering principles to design & build a tower to meet specifications & constraints
- English classroom & C&S Engineering: Developing English language learners' confidence communicating their own ideas
- Social Studies classroom & King & King Architects: Groups analyzing ethical dilemmas workers face in different kinds of jobs
- Social Studies classroom & King & King Architects: Groups collaborating to identify ways governments promote or violate principles of fairness
- Social studies classroom & Bristol-Meyers Squibb: Promoting teamwork by overcoming cultural and ethnic stereotypes
- Health classroom & Bristol-Meyers Squibb: Working in groups to distinguish communicable and non-communicable diseases
- Kindergarten classroom & Liberty POST: groups identifying ways of communicating respectfully with students with disabilities



## Preliminary observations:

- Teacher candidates deeply engaged, unlike previous "observation" assignments in traditional introductory course
- Candidates paid close attention to teachers' agendas
- Candidates noted employers' emphasis on "soft skills," reflected them in all lessons
- Emphasis on developing P12 students' collaboration & communication skills complemented emphasis on actively engaging all students
- Identifying real workplace problems and reflecting them in lessons was more challenging than anticipated, requires closer collaboration with industry & teacher advisors
- Concentrated (May-June) format was challenging but workable