Strengthening the K-12 to Higher Education Pipeline

Presentation to the University of North Carolina Board of Governors

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UNC System Strategic Plan

- STEM: “While maintaining excellence in the delivery of a foundational liberal arts education, increase the number of high quality credentials awarded in health sciences, STEM…”
- Graduation rates: “Increase the proportion of first-time, full-time freshman who graduate with a bachelor’s degree from any accredited institution within five years by 5.1 percentage points to reach a target of 70%”
- Overall: “Improve student transitions from high school to college…”

Current NC STEM landscape

- National STEM leader—particularly in the Research Triangle
  - Second highest IT cluster in US, 26% growth since 2010
- North Carolina needs 200,000+ trained STEM employees—30,000 more than 2008
  - 9 out of 10 require postsecondary training
  - 100,000 in computing occupations
  - Only 1,224 NC computer science majors graduated in 2014

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Filling the STEM gap

- First step: graduate more STEM-ready students from high school
- North Carolina already supports expanding advanced STEM courses:
  - $1.6M: North Carolina AP Partnership (NCAPP)
  - $10.8M: students' AP/IB exams
- Expanded AP Potential use would help even more STEM-ready students into advanced courses
  - AP Potential: A tool to identify students likely to be successful in AP through their PSAT results

AP Potential: Strengthening the K-12 STEM pipeline

- NC class of 2015:
  - 70,000—about half the class—took the PSAT.
  - 13,000 students showed AP STEM Potential
  - 8,500 took a matched AP STEM exam
  - 7,200 earned a score of 3 or higher
- PSAT + AP Potential for all students would identify more AP STEM-ready students

AP: Strengthening the pipeline to higher education

- AP courses address the K-12-to higher education transition and the STEM workforce pipeline at the same time
- Research shows: taking and passing an AP STEM course in high school means a student is 3-6x more likely to major in STEM in college
- Research shows: students who take AP and score a 3+ on the exam are more likely to earn higher college GPAs and graduate from college on time in 4 years—that's how you get to 70% graduation rates statewide

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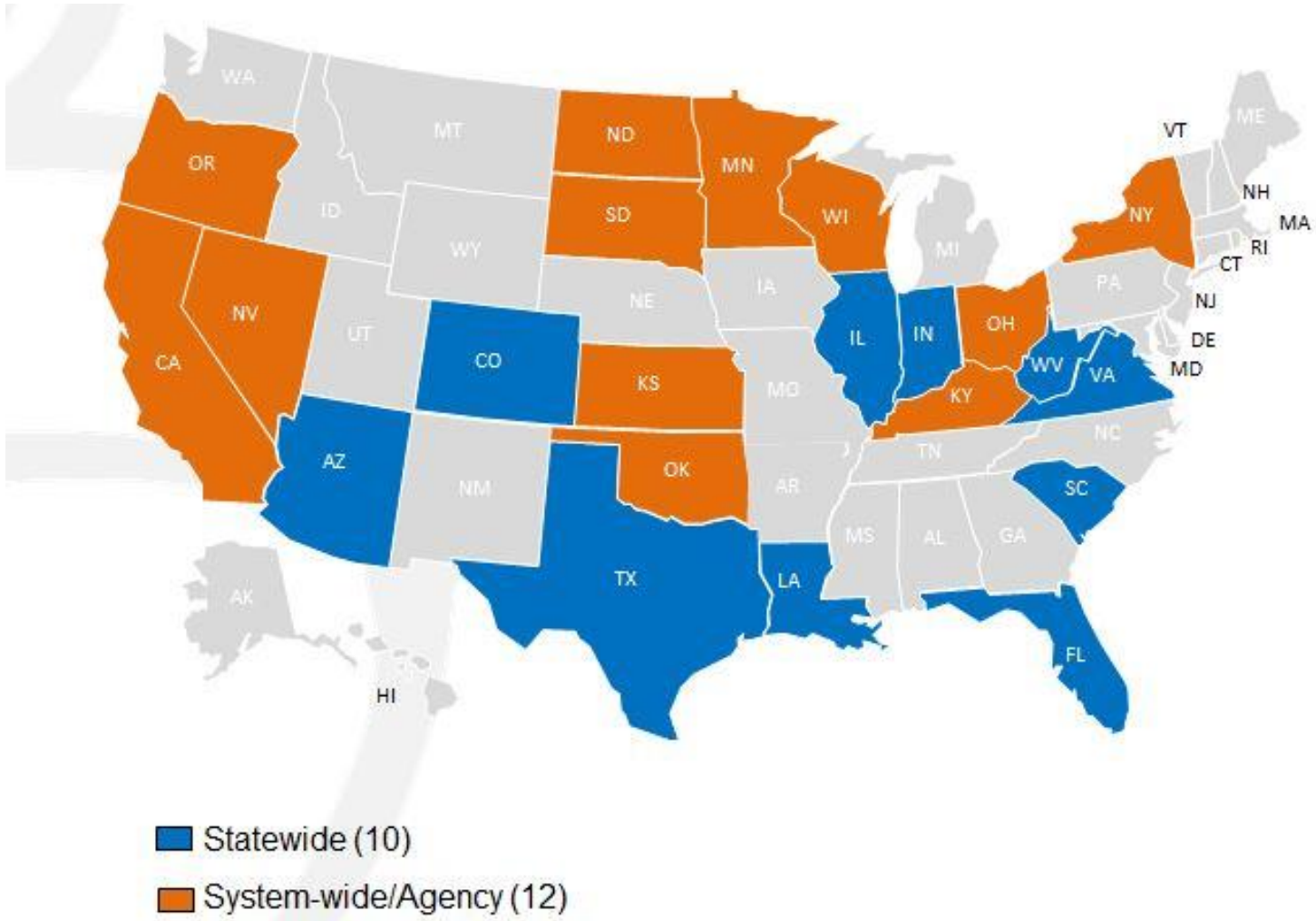
AP Credit Policies: Rewarding Earned Credit



Case Study: Florida

- One of the first states to adopt a uniform statewide AP credit policy
- 2003: first state to make the PSAT and AP Potential data available statewide
- Florida Partnership: professional development; educator incentives; funding for student AP exam fees
- 2015: #1 in student access to AP courses in the nation

	AP Participation		AP Performance	
	2005	2015	2005	2015
Florida	30.2%	**57.2%**	17.3%	30.7%
North Carolina	26.5%	38.7%	15.5%	21.7%
Nation	21.2%	37.3%	13.3%	22.4%

- 11,214 students in the class of 2015 earned AP STEM exam scores of 3+

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Clearing a path for all students to own their future

Assessment without opportunity is dead