



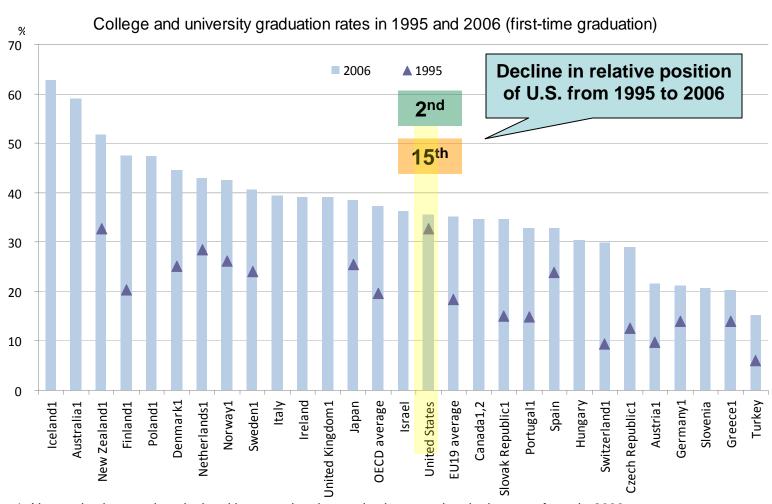
## RTTT Will Help Achieve Regents Goals

### Investing in 4 critical reforms

- Adopting internationally-benchmarked standards and assessments that prepare students for success in college and the workplace
- Building instructional data systems that measure student success and inform teachers and principals how they can improve their practice
- Recruiting, developing, retaining, and rewarding effective teachers and principals
- Turning around the lowest-achieving schools



U.S. college graduation rates have stagnated relative to the rest of the developed world



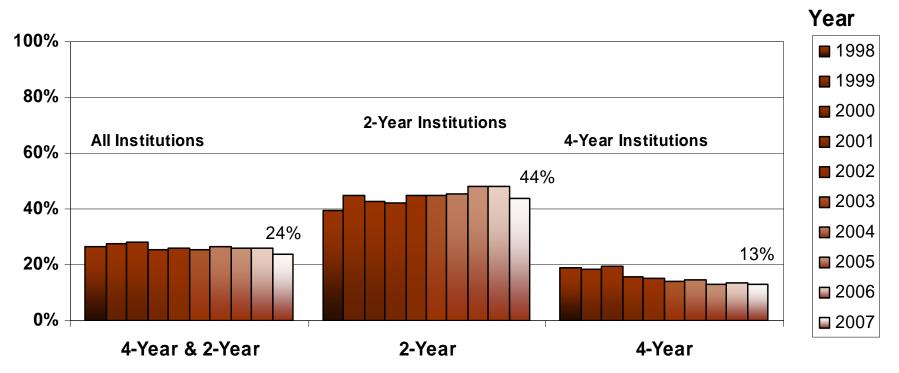
- 1. Net graduation rate is calculated by summing the graduation rates by single year of age in 2006.
- 2. Year of reference 2005.

Countries are ranked in descending order of the graduation rates for tertiary-type A education in 2006. Source: OECD. Table A3.2 See Annex 3 for notes (www.oecd.org/edu/eag2008)



Nearly a quarter of students in all NYS two- and four-year institutions of higher education take remedial coursework

New York State
First-Time Students Taking Remedial Coursework
By Type of Institution, 1998-2007



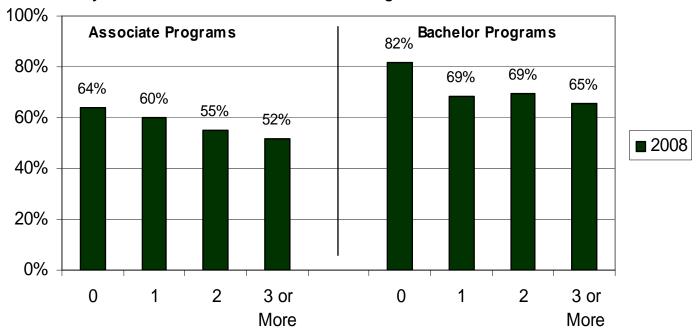
Source: NYSED Administrative Data, CUNY Office of Institutional Research and Assessment



## Students taking more remedial courses in their first year of college are less likely to persist in higher education

## New York State Fall 2007 to Fall 2008 Persistence of Full-time, First-time Students





**Number of Remedial Courses Taken** 

Source: NYSED Administrative Data



## Graduation Rates for Full-Time, First-Time Students Earning a Baccalaureate Degree after 4, 5, and 6 Years

Entry Year: 2003

	Graduated after 4 years (2007)	Graduated after 5 years (2008)	Graduated after 6 years (2009)
All Students	49.2%	61.3%	64.4%
Black	28.7%	42.9%	46.9%
Hispanic	32.4%	46.4%	50.6%
White	54.2%	65.8%	68.4%
Asian	48.3%	62.2%	67.2%



## Graduation Rates for Full-Time, First-Time Students Earning an Associate Degree after 2 and 3 Years

Entry Year: 2003

	Graduated after 2 years Graduated after 3 years (2005) (2006)	
All Students	13.4%	23.5%
Black	8.3%	15.1%
Hispanic	9.4%	16.4%
White	16.1%	28.4%
Asian	11.1%	19.9%



7 of the Top 10 Fastest-Growing Occupations Require a Post-Secondary Degree

Education or training level for fastest growing occupations, 2008 to 2018				
Rank	Title	Education or training level		
1	Biomedical engineers	Bachelor's degree		
2	Network systems analysts	Bachelor's degree		
3	Home health aides	Short-term on-the-job training		
4	Personal and home care aides	Short-term on-the-job training		
5	Financial examiners	Bachelor's degree		
6	Medical scientists	Doctoral degree		
7	Physician assistants	Master's degree		
8	Skin care specialists	Postsecondary vocational award		
9	Biochemists and biophysicists	Doctoral degree		
10	Athletic trainers	Bachelor's degree		
Source: Employment Projections Program, U.S. Department of Labor, U.S. Bureau of Labor Statistics				



## **International Comparison**

### **Graduation Requirements in Select High-achieving Countries**

Milli	Compulsory Ed Ages	Secondary Structure Summary
Canada	5 or 6 - 16 or 18 (varies)	Two differentiated streams: The first prepares students for university, the second for post-secondary education at a community college or institute of technology, or for the workplace
England	5-16 (Compulsory age will rise to 17 in '13 and 18 in '15.)	Note that as the compulsory age of education rises, students will be able to choose between 1) full time education 2) work-based learning 3) part-time education or training.  In "Key Stage 4" for 14-16 year olds, the <b>General Certificate of Secondary Education</b> ( <b>GCSE</b> ) is a national academic qualification awarded in a specified subject, generally taken in a number of subjects. Students may also earn the new two-year "diploma" qualification for 14-19 year olds which is offered alongside GCSEs and A-levels.  Students may then leave secondary schooling; earn a diploma at vocational or technical colleges; or they may take a higher level of secondary school examinations known as AS-Levels after an additional year of study. Following two years of study, students may take A-Level (Advanced Level) examinations, which are required for university entrance in the UK. Diplomas are designed to be flexible and can be combined with GCSEs and A-levels.
Finland	7-16	Students can choose between general and vocational upper secondary school. 45% of students choose vocational qualification.  At the end of upper secondary school, students take a national matriculation exam that tests the native language, plus three subjects chosen from their second national language – Swedish or Finnish – a foreign language, math, or general studies (history, geography, religion, chemistry, biology, physics, psychology, philosophy).
Germany	6-19	The German secondary school system has a lower secondary level and an upper secondary level. The lower secondary level (compulsory full-time ages 10-15) leads to a general qualification, which is the entry requirement for vocational education and training. The upper secondary level (ages 16-19) allows for higher education and includes general education levels and vocational education and training levels (at least par-time attendance is compulsory).
Japan	6-15	Most upper secondary schools have complicated admissions procedures, similar to university admissions in other countries. Examination results largely determine school entrance. The most common type of upper-secondary schools has a full-time, general program that offers academic courses for students preparing for higher education and also technical and vocational courses for students expecting to find employment after graduation.
Singapore	6 – 15	Students apply to the Singapore Ministry of Education (MOE) for seats in up to six different specific secondary schools based on elementary scores. Includes academic and vocational options.
South Korea	6 – 15	High schools are divided into general academic, vocational, and specialized (Arts, science, languages) schools. There are no qualifying exams for entry into high schools. In 2007, 72% of students were enrolled in academic high schools and 28% in vocational high schools.
	•	c.ca/; http://www.dcsf.gov.uk/; http://www.oph.fi/; http://www.eduserver.de/; http://english.mest.go.kr/;

http://educationjapan.org/; http://www.moe.gov.sg/



## **College Readiness = Career Readiness**

Research by Achieve, ACT, and others found a high degree of convergence.

The knowledge and skills that high school graduates will need to be successful in college are the same as those they will need to be successful in a job that:

- pays enough to support a family well above the poverty level,
- provides benefits, and
- offers clear pathways for career advancement through further education and training.



## Reform is Underway

Increasing College and Career Readiness of All Students Measurable, substantial progress toward student success

### **All Students**

College Readiness	Current	2013 Target	Points Gain
ELA Regents Exam score 75 or above	56%	69%	13
Math Regents Exam score 80 or above	42%	59%	17
Graduation Rate	72%	80%	8
College Persistence	72%	76%	4

Close the gaps in achievement for Black students, Hispanic students, English language learners, students with disabilities, and economically disadvantaged students



## Increase Graduation Requirements\*

#### **Recommendations:**

- Require additional credits in mathematics and science
- Increase the passing score on key Regents exams
- Require passing additional exams
- Require a College and Career Ready experience
- Extend the school day/school year
- Strengthen the Regents exam sequence in English Language Arts and Social Studies consistent with the new NYS Common Core Standards

<sup>\*</sup> While the local diploma is being phased out for general education students, it remains available to students with disabilities through the "Safety Net" provisions of State regulations. The Safety Net could be extended to apply to new requirements.



### Require Additional Credits in Mathematics and Science

- Option: Require four years of math and science or equivalent beginning in 2011-12.
- Currently: 22 credits are required:
  - Three units of credit in math and three units of credit in science
  - Students must take and pass one Regents exam in each content area

#### Benefits:

- Closes the "gap" of time from when students last took a course
- Increases the likelihood of persistence in college
- Increases the likelihood of engagement by allowing an interest-based course in the fourth year

- Additional district resources will be required
- A national shortage in certified math and science teachers currently exists
- Additional course requirements may prevent students from pursuing higher level coursework in their intended area of post secondary study
- Schools may have to reduce the number of electives available to students



### Require Additional Credits in Mathematics and Science

Research shows that a fourth year of math improves students' college readiness.

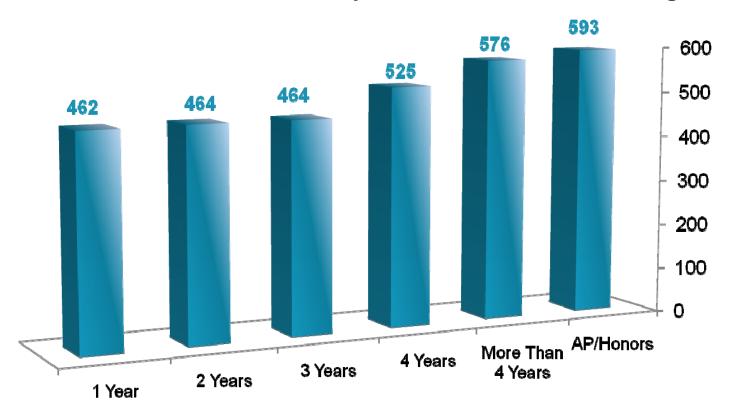
- Only 16% of students who took 3 years of high school math met the ACT readiness benchmarks, while 62% of students who took 4 years of high school math met the benchmarks.
- In a study of students from three states who had taken the ACT, 17% of students who took 4 years of math in high school needed remediation when they entered college, compared to 26% of students who only took 3 years of math in high school.
- Students with 4 years of high school math score 63 points higher on the SAT-I
  quantitative section than students with only 3 years of high school math.

Sources: ACT, Inc. (2007). Rigor At Risk: Reaffirming Quality in the High School Core Curriculum.



### Require Additional Credits in Mathematics and Science

### Mean SAT Mathematics Score, by Years of Math Taken in High School



Source: College Board. (2010). 2010 College-Bound Seniors Total Group Profile Report.



### Require Additional Credits in Mathematics and Science

### **Program for International Student Assessment (PISA) 2009 Results**

- 12 of the 33 other industrialized countries had higher average science literacy scores than the U.S.
- Only 29 percent of U.S. students scored at or above level 4 on the science literacy scale ranging from level 1 to level 6
- The U.S. average score in science literacy in 2009 was average compared to the scores of the other member countries of the Organization for Economic Cooperation and Development



### Require Additional Credits in Mathematics and Science

### **Project Lead the Way (PLTW)**

- Created in 1997 to address the shortage of college engineering students at the college level and the nation's shortage of STEM professionals
- New York was the first state to participate
- PLTW students are more likely to persist in engineering and related fields in college
- In 2005, 80 percent of PLTW graduates went on to college; of these, 68 percent majored in engineering
- Students apply math and science to real-life engineering situations
- Developed a series of standardized end-of-course examinations that can result in early college credit

Source: NGA Center for Best Practices. 2007. Retooling Career Technical Education.



# Policy Directions for Consideration Increase the Passing Score on Key Regents Exams

- Option A: Increase the required score on the ELA Regents to 75 and the Algebra Regents to 80 beginning with the 2012 cohort
- Option B: Beginning in 2011-12, replace the 0-100 scoring system with a 1-4 cut score system, where a score of 3 indicates "College Readiness."
- Currently: As of June 2012, students must achieve a passing score of 65 on all required Regents exams with the exception of the "safety net" option for students with disabilities

#### Benefits:

- Research indicates the "proficiency" scores better predict college and career readiness
- Students must demonstrate greater knowledge and skills to achieve "proficiency"
- Shifting to 1-4 performance levels is consistent with 3-8 tests and raising of 3-8 cut scores
- The use of "basic," "proficient," and "advanced" will support a more nuanced handling of the labeling of students scoring between a 65 and a 75 or 80

- Initial decrease in graduation rates
- Increases the likelihood of additional Academic Intervention Services (AIS), therefore restricting a student's schedule and imposing additional costs on districts



### Increase the Passing Score on Key Regents Exams

Students who score below an 80 on their Math Regents have a much greater likelihood of being placed in a remedial college course

	Arithmetic	Elementary Algebra		ediate bra**	College Algebra	Pre- Calculus	Calculus
Less than 55	68.3%	29.7%	0.0%	1.4%	0.7%	0.0%	0.0%
55 to 64.9	61.4%	33.7%	0.6%	3.2%	0.8%	0.3%	0.0%
65 to 69.9	38.9%	44.7%	1.8%	8.0%	4.8%	1.8%	0.7%
70 to 79.9	14.7%	24.6%	5.9%	23.5 %	21.3%	8.1%	1.8%
80 to 89.9	0.8%	2.8%	4.3%	17.3 %	30.6%	32.3%	12.0%
Above 90	0.0%	0.2%	0.5%	3.4%	12.7%	39.2%	44.2%

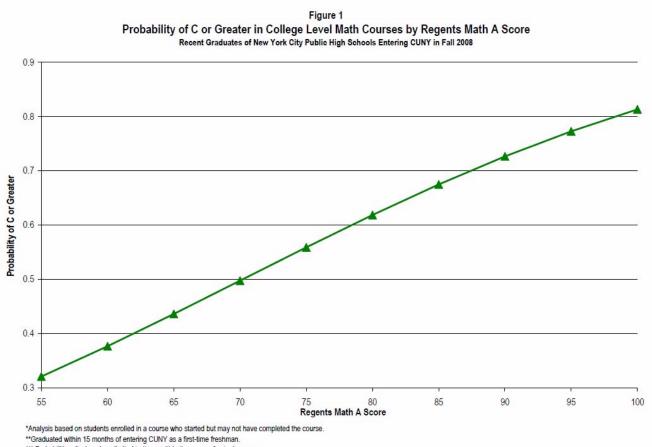
<sup>\*\*</sup>Intermediate Algebra is considered a remedial course in some schools in the CUNY system and a credit-bearing course in others.

Totals sum to 100 percent along rows, but not down columns.



### Increase the Passing Score on Key Regents Exams

Students who score above an 80 on their Regents exam have a good chance of earning at least a C in college-level math



<sup>\*\*\*</sup> Probabilities displayed are limited to those within the range of actual scores.

Totals sum to 100 percent along rows, but not down columns.

Source: CUNY Office of Institutional Research and Assessment, Math A Regents; all CUNY 2- and 4-year institutions 20

<sup>\*\*</sup>Intermediate Algebra is considered a remedial course in some schools in the CUNY system and a credit-bearing course in others.



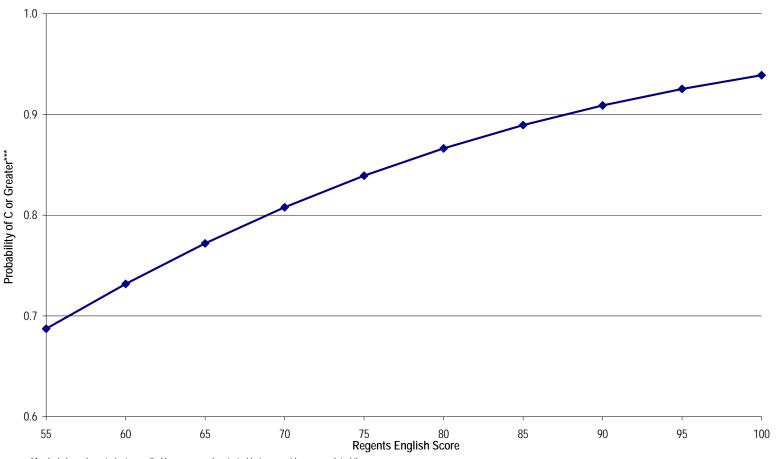
### Increase the Passing Score on Key Regents Exams

Students who score at least a 75 on their ELA Regents have a good chance of earning at least a C in Freshman Composition

Figure 3

Probability of C or Greater in Freshman Composition by Regents English Score\*

Recent Graduates of New York City Public High Schools Entering CUNY in Fall 2008\*\*



<sup>\*</sup>Analysis based on students enrolled in a course who started but may not have completed the course.

<sup>\*\*</sup>Graduated within 15 months of entering CUNY as a first-time freshman.

<sup>\*\*\*</sup> Probabilities displayed are limited to those within the range of actual scores.



### Increase the Passing Score on Key Regents Exams

Institutions of Higher Education around the state consider a score of 75 to 85 to be a bare minimum for college readiness

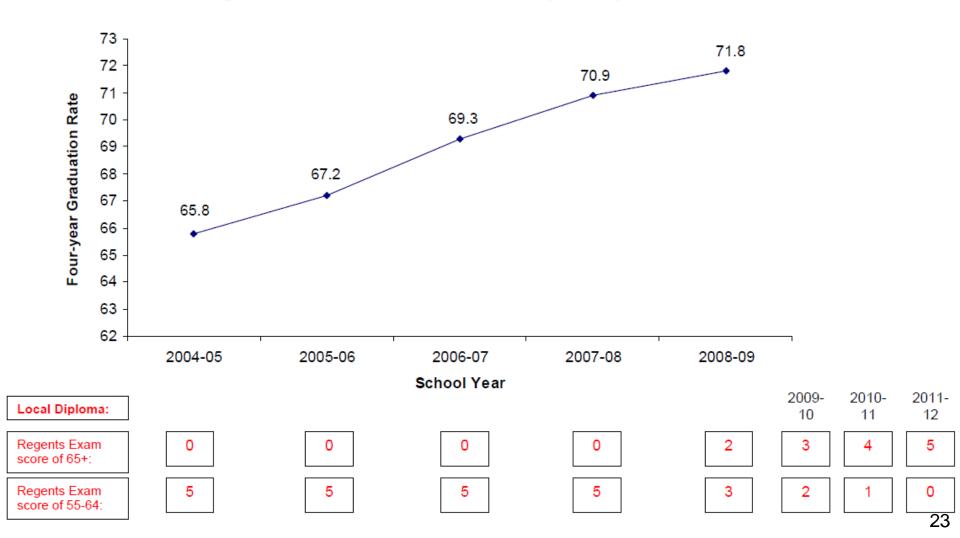
Conversations with admissions directors of two- and four-year public and private colleges in the Western NY, Central NY, Hudson River, and New York City regions indicate that:

- 75 to 85 on the Regents is considered by selective schools (as part of their holistic review of applicants) the lower threshold for admissions;
- SUNY campuses use 85 as a mark of solid competence, below 75 is a mark of "inadequately prepared";
- 75 on Regents is a threshold for placement in remediation for CUNY; and
- 75 on Regents is considered roughly equivalent to a 500 on the SAT and serves as a threshold for remediation.



### Increase the Passing Score on Key Regents Exams

High School Graduation Rate and Local Diploma Option





### Require Passing Additional Exams

- Option: Require students to pass a second Regents exam in mathematics phased in for 2011 cohort
- Currently: Students need to complete three units of credit and pass one commencement-level math Regents exam in order to meet the diploma requirements

#### Benefits:

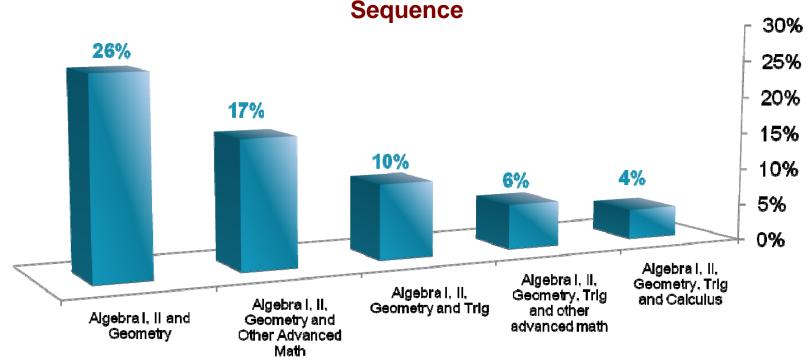
- Students will complete additional commencement-level coursework that is aligned with the Common Core State Standards
- The ability to pass a second Regents exam is a better indicator of college- and career-readiness

- May result in a greater number of students not meeting graduation requirements
- May result in students with interests in other subjects being unable to concentrate to the extent desired
- Need to backmap alignment of expectations and content from high school to pre-K



### Require Passing Additional Exams

Percentage of ACT-Tested Graduates in Three States Enrolled in Remedial Math During Their First Year of College, by High School Math Course



Source: ACT. (2007) Rigor At Risk: Reaffirming Quality in the High School Core Curriculum.



### Require a College and Career Ready Experience

- Option: Require all students to take an AP, IB, or college-level course to prepare them for college levels of rigor
- **Currently:** There is no such requirement
- Benefits:
  - Research suggests that exposure to these curricula increase the level of students' college and career readiness
- Challenges:
  - Equity in access to such courses by all districts
  - Awarding of credit for students who do not get a passing score (but for whom the research suggests there is still a readiness value)



### Require a College and Career Ready Experience

Students taking more AP exams in high school are more likely to persist in college

High School Graduation Cohort Year	Number of AP Exams	4-year College Graduation Rate
	0	12.2%
	1	29.4%
2000	2	34.9%
	3	39.3%
	4+	51.3%
	0	11.5%
	1	28.7%
2001	2	34.9%
	3	37.3%
	4+	47.8%

Source: College Board. (2008). College Outcomes: Comparisons by AP and Non-AP High School Experiences



### Extend the School Day/School Year

- Option: 200 days per year and 8 hours per day for all students
- **Currently:** 180 school days per year and a minimum of 5 hours for students in K-6 and 5 ½ hours for students in 7-12

#### Benefits:

- Research indicates that additional instructional time leads to increased academic achievement
- Opportunity for greater depth in subject matter
- Opportunity for greater flexibility in school schedules

- Effectively structuring the additional time to engage students
- Greater personnel and facilities costs to districts
- Current level of school funding is decreasing



# Strengthen Regents Exam Sequence in ELA and Social Studies consistent with NYS Common Core Standards

- Option A: Beginning in 2011-12, implement Grade 9 and Grade 10 ELA exams as census exams (exams taken by all students in the grade level) parallel to Grades 3-8.
   The Grade 11 Regents would remain the graduation requirement.
- Option B: Break Global History and Geography into two sequenced courses with separate Regents exams in grades 9 and 10

#### Currently:

- The Global Studies course is offered as a one and one half to two year course with a Regents exam administered at end of course
- ELA exams are administered only in Grades 3-8 and Grade 11

#### Benefits:

- More depth in instruction and learning
- Greater opportunities in Social Studies for integration with ELA

- The State would have to redesign the Global Studies Regents exam
- School districts would be administering additional examinations



## **Increase Flexibility**

#### **Recommendations:**

- Allow students choice in one or more Regents exams
- Allow students to earn credits through demonstration of competency rather than seat time
- Increase the maximum number of credits earned through integrated/specialized CTE programs/courses
- Allow flexibility in middle school opportunities
- As resources allow, expand the Regents assessment program



### Allow Students Choice in Required Regents Exams\*

- Option: Multiple paths to graduation with a Regents diploma
  - ELA, Math + any 3\*\*, or
  - ELA, Math + 2 Science + 1 other\*\*, or
  - ELA, Math + 2 History + 1 other\*\*, or
  - ELA, Math + 1 History + 1 Science + 1 other\*\*

#### Benefits:

- Additional courses in a field of interest can fulfill additional diploma endorsements
- Better student engagement should increase likelihood for graduation
- Recognition of student skill achievement and the opportunity to use multiple measures of student growth

#### Challenges:

 Greater flexibility means students may be able to graduate without demonstrating proficiency in key areas through Regents exams

<sup>\*</sup> NCLB requires annual testing in ELA and math in grades 3-8 and once at the high school level, and once in science at the elementary, middle, and high school levels.

<sup>\*\*</sup> including a CTE assessment



### Allow Students Choice in Required Regents Exams

### Which Regents Exams are Students not Passing at 65 or Better?\*

Examination	# of Gen Ed Students who scored 55-64 on only this Regents exam	% of Gen Ed Students who Earned a Local Diploma with score of 55- 64 on only 1 Regents Exam
Global History	3,254	33%
Science	1,804	19%
US History	1,706	18%
Mathematics	1,575	16%
ELA	1,378	14%
Total	9,717	100%

<sup>\*</sup> Students in 2003 Cohort who earned Local Diplomas after 5 years because they scored 55-64 on **only one** Regents exam



### Earn Credit Through Demonstration of Competency

- Option: Students earn credit through competency-based activities in lieu of seat time requirements
- Currently: Students must complete units of study equivalent to 180 minutes of instruction per week (seat time) in order to earn units of credit for high school graduation

#### Benefits:

- Students progress at own pace through a course utilizing online/blended/alternative course models
- Students can more deeply engage a subject area and potentially receive course credit for related outside activities
- Values demonstration of knowledge and skill acquisition, not just the amount of time spent in a classroom

- Lack of district experience scheduling, capacity, and staffing in a competency-based model
- Providing support for lower-achieving students in a less structured setting



### Increase Flexibility for CTE Programs

## Increase the maximum number of credits that students can earn through integrated CTE programs and specialized CTE courses

- Option: Beginning in 2011-12, increase the availability of CTE integrated courses from 4 to 10, including all ELA, Math, and Science
- Currently: Only four academic credits can be earned through approved integrated CTE programs

#### Benefits:

- Allows students the opportunity to pursue an interest-based education
- Increases opportunities to learn by application
- Earlier access to CTE program (9th grade) may increase engagement and high school completion

- Equity and access of all options to all students
- Limited number of approved CTE programs
- Establishing a common level of rigor across all CTE programs



### Increase Flexibility for CTE Programs

### **Current Rules for Integrated CTE Programs**

Core Course Requirements	Current Graduation Requirements (Students Entering Grade 9 in 2001)	Fully Integrated Approach	Specialized Course Approach (Maximum 4)	Combined Integrated and Specialized Course Approach
English	4	3	3	3
Social Studies	4	3	3	3
Mathematics	3	2	2	2
Science	3	2	2	2
Physical Education (PE)	2	2	2	2
Art / Music	1	1	1	1
Health	0.5	0.5	0.5	0.5
LOTE	1	1	1	1
Units of Credit	18.5	14.5	14.5	14.5
Additional Units of		CTE Sequence: 3.5	CTE Sequence: 3.5	CTE Sequence: 3.5
Credit: (Sequence / Electives)	3.5	CTE /Integrated Academic: 4.0	CTE /Specialized Courses: 4.0	CTE /Combined Integrated and Specialized Courses: 4.0
Total Units of Credit	22	22	22	22



### Allow Flexibility in Middle School Opportunities

• Option A: Beginning in 2011-12, expand Middle School Integration Options:

English/History/Art	Health/Science	English/CTE	Math/CTE	Science/CTE
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- Option B: Beginning in 2011-12, extend the regulation allowing students in eighth grade to fulfill high school assessment requirements to 7th grade students
- Option C: Beginning in 2011-12, allow implementation of Response to Intervention in place of AIS in the middle grades
- Benefits:
  - Increased learning opportunities for students to advance in their studies at an earlier age
  - More individualized strategy for meeting student needs
- Challenges:
  - Appropriately certified teachers
  - Development of more online/blended/alternative course models for local implementation
  - Scheduling



### Allow Flexibility in Middle School Opportunities

#### **Current Rules for Middle School Courses**

#### Grades 5 and 6:

All students receive instruction in the seven general curriculum areas

#### Grades 7 and 8:

 All students receive instruction designed to enable them to achieve, by the end of grade eight, State intermediate learning standards through the following units of study:

English language arts two units	Social studies two units	Science two units	Mathematics two units
Technology education one unit	Home and career skills  3/4 unit	Physical education every other day	Health education ½ unit
The arts ½ unit in visual arts ½ unit in music	Library and information skills one period per week	Languages other than English two units by the end of grade 9	Career development and occupational studies (integrated across disciplines



### **Expand the Regents Assessment Program**

- Option A: Add a Regents exam in Economics in 2013-14 (available for Class of 2014)
- Option B: Add Regents exams in the Arts (Dance, Theater, Music, Visual Arts) in 2013-14 (available for Class of 2014)
- Option C: Add a Regents exam in Technology in 2014-15 (available for Class of 2015)
- Benefits:
  - Expanded opportunities for students to demonstrate proficiency in fields beyond the core academic subjects
- Challenges:
  - Cost
  - Appropriately certified teachers.



### Rethink the "Safety Net" for Students with Disabilities

#### Options:

- Phase out the RCT safety net, which sunsets for the 2011 grade 9 cohort
- Continue the 55-64 pass score option to earn a local diploma; or propose a specified period of time for the 55-64 pass score option to be in effect
- Allow students with disabilities to obtain a local diploma based on a composite Regents test score

#### Benefits:

- Cost savings to the State with elimination of the RCTs
- Decreases the number and types of State assessments required at the school district
- Coursework for students would be more aligned with the State assessments needed to reach the graduation standards

- Training for Committees on Special Education and Guidance Counselors on course credit flexibility options
- Ensuring that students with disabilities have equal opportunities to participate in courses and pathways available to all students that would lead to a Regents diploma



### Continue Development of a Career Skills Credential

#### Options:

- Phase I, develop an alternate credential to replace the IEP diploma for students with disabilities who take the New York State Alternate Assessment (NYSAA) only
- Phase II, develop a Career Skills Credential to supplement a regular diploma for all students

#### Benefits:

- Strengthens existing requirements and policy relating to career planning, transition planning and annual guidance meetings
- Could motivate students with disabilities to stay in school longer to work toward a regular diploma, knowing that they could also exit with this credential
- Could enable students' community- and work-based learning and experience to be valued and documented

- Design and implementation timing
- Training for teachers and administrators