

Board of Higher Education Meeting | March 22, 2011

# Vision Project Preview: Workforce Alignment





# Introduction

Richard M. Freeland, Commissioner

# Our Vision: Bid for National Leadership

We will produce the best-educated citizenry and workforce in the nation.

We will be a national leader in research that drives economic development.



#### Introduction

# Key Outcomes

## National Leadership in Education

- COLLEGE PARTICIPATION
   College-going rates of high school graduates
- COLLEGE COMPLETION
   Graduation and student success rates
- STUDENT LEARNING
   Academic achievements on campus-level and national assessments of learning
- WORKFORCE ALIGNMENT
   Alignment of degree production with key areas of workforce need
- ELIMINATION OF DISPARITIES
   Comparable learning outcomes among different ethnic/racial, economic and gender groups

## National Leadership in Research

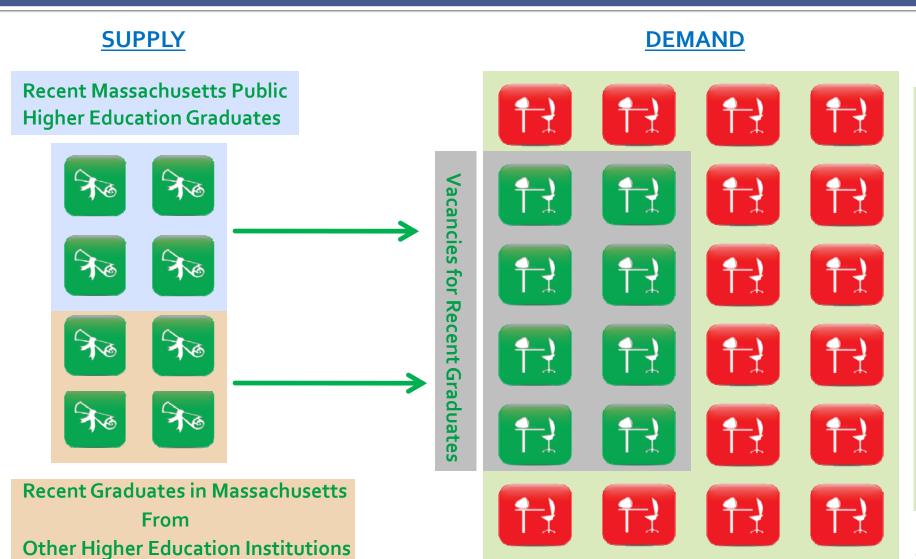
- Level of research expenditures
- Level of licensing income



# Preview of Workforce Alignment Metrics: Analytic Approach

Jonathan Keller, Associate Commissioner for Research, Planning, and Information Systems

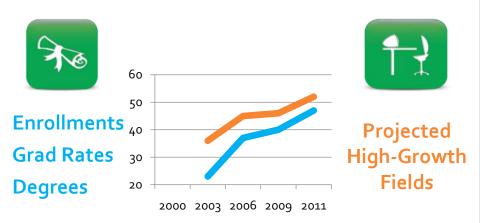
# Assessing Workforce Alignment (Ideal Analysis)



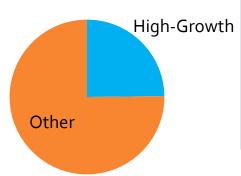
# Assessing Workforce Alignment (Current Analyses)

#### Two Approaches to Assessing Alignment of Workforce Supply and Demand

Alignment with Predicted
<a href="High-Growth">High-Growth</a> Occupational Fields



Share of Enrollments/Grad Rates/Degrees in High-Growth Fields



Alignment with Persistent Occupational Vacancies





**Enrollments Degrees** 

1) \_\_\_\_\_

2) \_\_\_\_\_

3) \_\_\_\_\_

4) \_\_\_\_\_

5) \_\_\_\_\_

**Critical Vacancies\*** 

1)

2)

3)

4) \_\_\_\_\_

### Vision Preview: Workforce Alignment

# Assessing Workforce Alignment (Next Steps)

Tracking the Employment of Graduates from Massachusetts Public Higher Education\*



**Higher Education Segment** 

**Employment Status** 

**Graduation Year** 

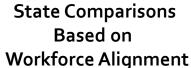
**Industry Field** 

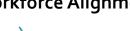
**Degree Field** 

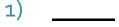
**Earnings** 

\*Based on a merge of graduating student data with state employment data

National Comparisons of
Degree Production Contrasted
with Workforce Need







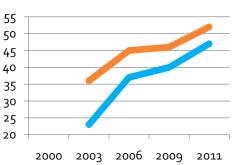
- 2)
- 3) \_\_\_\_\_
- 4)
- 5)





Degree Production





# Workforce Alignment: The Metrics

- Degrees and certificates produced in key occupational areas, with national comparisons.
- Degrees and certificates conferred in key occupational areas, compared to forecasted growth in Massachusetts.
- Student persistence and degree completion in key occupational areas, with disaggregation by student population groups.
- Employment and/or continuing education of graduates from Massachusetts public higher education.
- STEM degrees and certificates produced in key occupational areas, with national comparisons.
- Retention and graduation rates in STEM majors.
- Number and percent of undergraduate and graduate students pursuing STEM fields.



# Preview of Workforce Alignment Metrics: Summary of Findings

# Summary of Findings

- Market Research and Analysis
  - A variety of measures are required to assess the degree to which our institutions are meeting the Commonwealth's workforce needs. No single existing measure can provide us with a clear and comprehensive picture.
  - Additional labor market research would be required to more precisely capture workforce supply and demand.
  - The following occupational fields have exhibited both persistent vacancies and projected growth within the Commonwealth\*:
    - Health and Health Care Support
    - Computer and Mathematical
    - Business/Financial
    - Community /Social Services
    - Life, Physical, and Social Sciences
    - Education/Training and Library
    - Arts, Sports, and Media

\*These broad occupational titles reflect the nationally utilized Standard Occupational Classification (SOC) codes

- Enrollment and Degrees Conferred
  - Over the last five years, enrollments in most of the academic majors
     associated with high-growth occupational fields have increased across
     our public higher education system. This is particularly true in Computer
     and Mathematics and in the Health care fields.
  - During this same period of time, enrollment in STEM fields also increased across all three segments of Massachusetts public higher education.
  - Over the last five years Massachusetts public higher education has increased the production of undergraduate degrees and certificates in areas associated with high growth.
  - The exception to this increase in degree production has been in Computer and Mathematics. This is likely attributable to the declining enrollment in computer fields in the mid-2000's.

- Enrollment and Degrees Conferred (continued)
  - Undergraduate degree and certificate production in STEM fields has increased over the last five years.
  - Between 2005 and 2009, UMass had the second highest increase in share of degree and certificates in high-growth areas (compared with all Leading Technology States).
  - Black and Hispanics earn a similar share of degrees and certificates in high-growth fields as they do of other degrees and certificates.
  - Blacks and Hispanics earn a similar share of STEM field degrees and certificates as they do of non-STEM field degrees and certificates.
  - UMass had the highest increase in share of STEM/high-growth degrees conferred to African Americans. The state universities and community colleges also had relatively high increases compared with peers in leading technology states.

- Retention within STEM and high-growth programs
  - Students who choose majors associated with high-growth fields have a tendency to graduate from fields other than their initial major choice.
     This is especially true for the field of computers and mathematics.
  - Students who choose majors associated with STEM also have a tendency to graduate from fields other than their initial major choice. This is true for all gender and racial/ethnic subgroups.
  - Students who enroll in Computers/Mathematics generally have lower graduation rates (even if graduating from any field), than students who enroll in any field taken as an aggregate.
  - For all fields, it is not uncommon for students to graduate in an area other than the one in which they initially majored. However, it may be particularly concerning with regard to fields that have high workforce need.

- Graduation Rate Gaps in STEM/High-Growth Fields
  - There are substantial gender and racial/ethnic gaps in graduation rates associated with high-growth occupational fields. In most fields, females graduate at higher rates than males and in all fields whites graduate at higher rates than Blacks and Hispanics.
  - In most cases, the above gaps are greatest for students who begin in a specific high-growth field but graduate from another field.
  - There are also noticeable gaps associated with graduation rates in STEM fields by race/ethnicity.
  - STEM graduation gaps between males and females are less significant than the gaps in other fields.
  - At the community colleges, males enrolling in STEM fields are more likely to graduate (both overall and within their initial field of study).



# Preview of Workforce Alignment Metrics: Alignment with Critical Workforce Vacancies

# Occupational Vacancies in Massachusetts

#### **Critical Vacancies/Projections/Enrollments**

#### Occupations with the Most Critical Vacancies in Massachusetts, 4th Quarter 2009

(Only including occupational fields for which most employment requires a degree)

Top Critical Vacancy Occupations	Projections Rank	UMass Enrollment Rank	State Univ. Enrollment Rank	Comm. Coll. Enrollment Rank
Health and Health Support	4	5	8	4
Management	11	4	4	2
Computer and Mathematical	1	8	10	6
Business/Financial	6	4	4	2
Community /Social Services	3	***	***	***
Life, Physical, and Social Sciences	2	2	6	9
Education,/Training and Library	5	17	3	8
Arts, Sports, and Media	8	6	2	7

<sup>\*\*\*</sup>Difficult to construct distinct academic program classification

# Occupational Vacancies in Massachusetts

#### Critical Vacancies/Projections/Degrees

#### Occupations with the Most Critical Vacancies in Massachusetts, 4th Quarter 2009

(Only including occupational fields for which most employment requires a degree)

Top Critical Vacancy Occupation s	Projections Rank	UMass Degree Rank	State Univ. Degree Rank	Comm. Coll. Degree Rank
Health and Health Support	4	3	7	1
Management	11	1	1	3
Computer and Mathematical	1	7	10	6
Business/Financial	6	1	1	3
Community /Social Services	3	***	***	***
Life, Physical, and Social Sciences	2	2	4	12
Education,/Training and Library	5	19	3	7
Arts, Sports, and Media	8	5	2	8

<sup>\*\*\*</sup>Difficult to construct distinct academic program classification



# Preview of Workforce Alignment Metrics: Alignment with High-Growth Occupations

# High-Growth Fields in Massachusetts

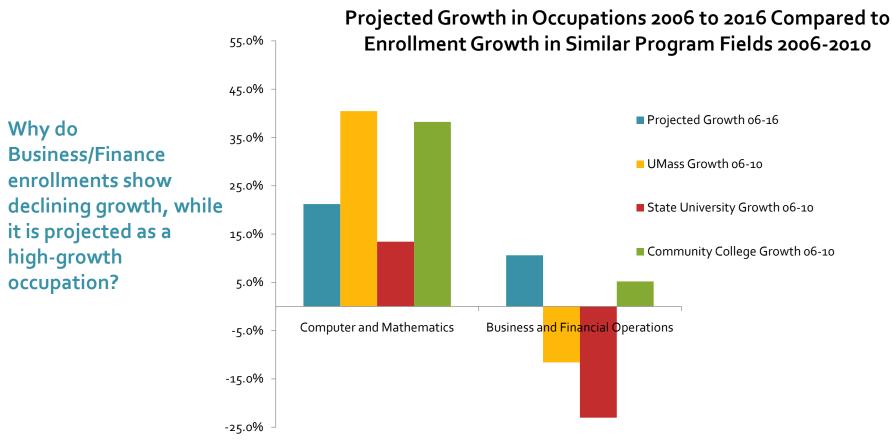
# Occupations Expected to Grow the Fastest by 2016 (Massachusetts Dept Workforce Development)

High Growth Occupations (SOC Title)	College Required	Projected Growth 2006 to 2016	Associated Academic Programs (CIP Title)
Computer and Mathematical (15)	Yes	21.2%	Computer (11) and Information Sciences, Mathematics (27)
Life, Physical, and Social Sciences (19)	Yes	17.6%	Biological (26), Physical (40), Science Technologies (41) and Social Sciences (45)
Community and Social Services *	Yes	17.6%	NA
Personal Care and Services *	No	17.0%	NA
Health Care and Health Care Support (31,29)	Yes	16.4%	Health Professions (51)
Education, Training, and Library Occupations (25)	Yes	11.0%	Education (13), Library Science (25)
Business and Financial Operations (13)	Yes	10.6%	Business (52)

\* Not included in further analysis

# High-Growth Fields in Massachusetts

Example of Enrollment Increases Compared with Projected High Growth Occupations

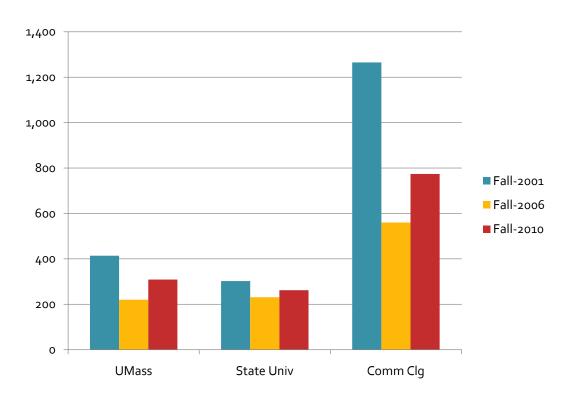


# High-Growth Fields in Massachusetts

#### Example of Enrollment Sensitivity to Perceptions of Employment Landscape

#### **Undergraduate Enrollment in Computer/Mathematics**

Choice of major reflects sensitivity to the students' perceptions of workforce needs.

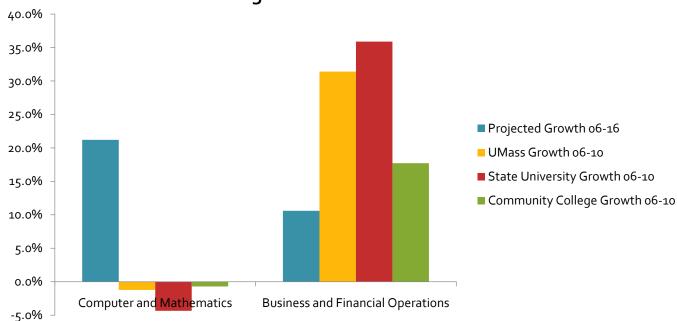


# High-Growth Fields in Massachusetts

#### Example of Degree Increases Compared with Projected High-Growth Occupations

Possible temporary impact of perceived "tech bust".

Projected Growth in Occupations 2006 to 2016 Compared to Undergraduate Degrees and Certificates Granted in Similar Program Fields 2006-2010



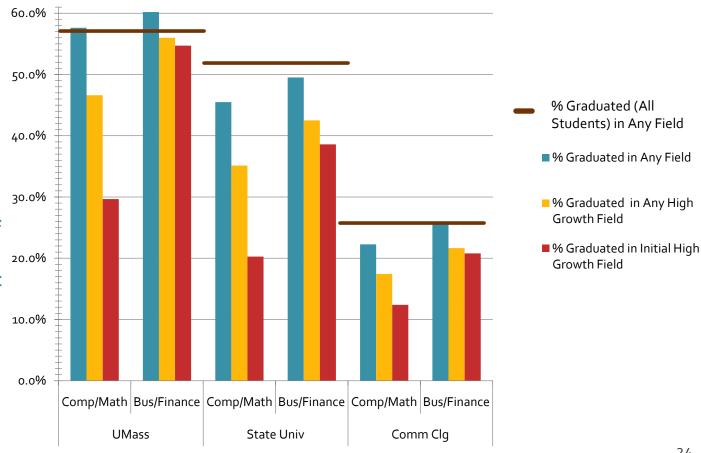
# High-Growth Fields in Massachusetts

#### **Example of Graduations in Projected High-Growth Occupations**

Graduation Rates (within Six Years) in High-Growth Fields

Tendency of students to graduate from fields 40.0% other than their initial chosen major.

Possibility that some of the lower high-growth graduation rates reflect differential transfer rates

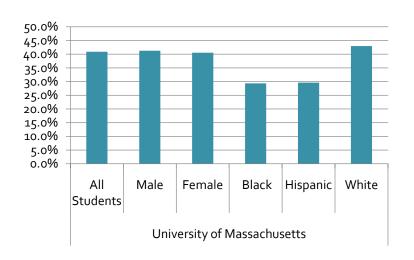


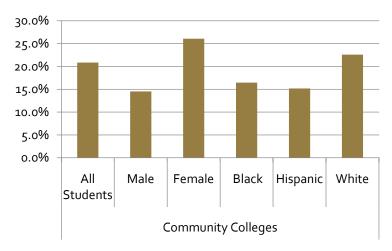
# High-Growth Fields in Massachusetts

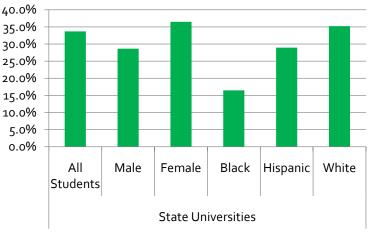
# Combined Six Year Graduation Rates of Students Entering in Fall 2003 Graduating in the same field in which they started

Significant gaps in graduation rates gender/race/ethnicity.

UMass is unique in having a slightly higher male graduation rate in high-growth fields.







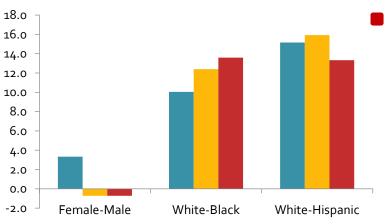
# High-Growth Fields in Massachusetts

Six Year Graduation Rate Gaps of Students Entering High-Growth Occupational Fields in Fall 2003: Gender/Race-Athnicity

"Within major" graduation gaps are generally smaller than overall graduation gaps.

Exception for White/Black graduation rate gaps at the UMass and the State Universities.

#### **University of Massachusetts**

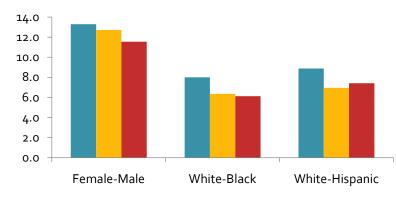


Graduated in Any Field

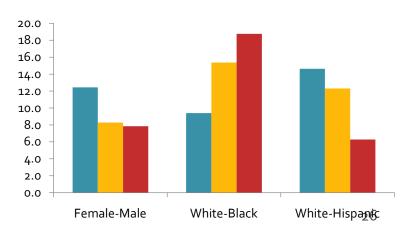
Graduated in Any High Growth Field

Graduated in Initial High Growth Field

#### **Community Colleges**



#### **State Universities**



# High-Growth Fields in Massachusetts

#### Share of High-Growth Degrees by Race/Ethnicity, 2010 \*

Black and Hispanics earn a similar share of degrees and certificates in high-growth fields as they do in all degrees and certificate fields.

	University of Massachusetts		State Ui	niversity	Community Colleges	
			% High Growth	% All	% High Growth	
Black	6.7%	7.8%	4.7%	5.3%	9.2%	10.4%
Hispanic	5.1%	5.2%	4.0%	3.8%	8.9%	8.5%
White, Non- Hispanic	74.5%	70.2%	84.7%	83.7%	72.3%	69.7%

<sup>\*</sup> Percents do not sum to 100% due to the fact that not all racial/ethnic categories are shown.

# High-Growth Fields in Massachusetts

#### Share of High-Growth Field Enrollment by Race/Ethnicity, 2010 \*

Black and Hispanic enrollment share of high growth fields is similar to their share of overall enrollment.

	University of Massachusetts		State Ui	State University		Community Colleges	
	% All % High Growth		% All	% High Growth	% All	% High Growth	
Black	7.2%	6.7%	4.4%	5.2%	12.9%	14.8%	
Hispanic	7.5%	6.9%	6.9%	7.1%	18.2%	18.9%	
White, Non- Hispanic	72.2%	70.3%	84.3%	83.2%	61.5%	58.2%	

<sup>\*</sup> Percents do not sum to 100% due to the fact that not all racial/ethnic categories are shown.

# STEM Occupations in Massachusetts

# STEM-Related Occupations Expected to Grow the Fastest by 2016 \* (Massachusetts Dept. Workforce Development)

Occupation (SOC Title)	College Required	Projected Growth 2006 to 2016	Associated Academic Programs (CIP Title)
Computer and Mathematical (15)	Yes	21.2%	Computer (11) and Information Sciences, Mathematics (27)
Life (19-1) and Physical Science (19-2), Life and Physical Science Technicians (19-4)	Yes	20.6%	Biological (26), Physical (40), and Science Technologies (41)
Engineering Occupations	Yes	6%	Engineering (14), Engineering Technologies(15)
Total **		16%	

<sup>\*</sup>Derived from the occupational growth projections (including only those areas that included STEM)

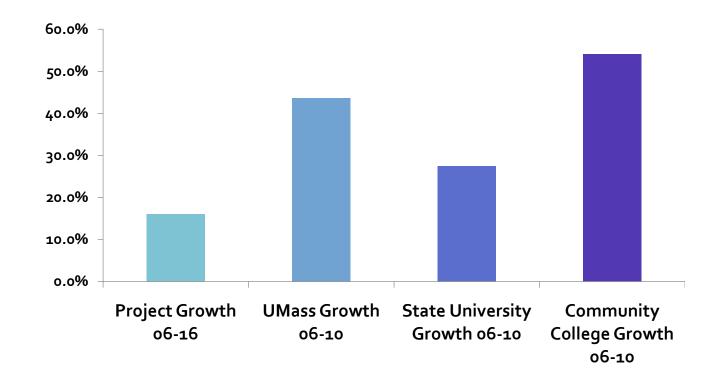
<sup>\*\*</sup> In further analyses, STEM is assessed as an aggregate occupational and academic area.

# STEM Fields in Massachusetts

#### Growth in STEM Enrollments and Projected Growth in STEM Occupations

Projected Growth in STEM Occupations 2006 to 2016 Compared to Enrollment Growth in STEM Fields 2006-2010

Increases in projected growth of STEM occupations aligned with increases in STEM enrollment.



# STEM Fields in Massachusetts

#### Growth in STEM Degrees and Projected Growth in STEM Occupations

Undergraduate Degree and Certificate production in STEM fields have also increased over the last five years

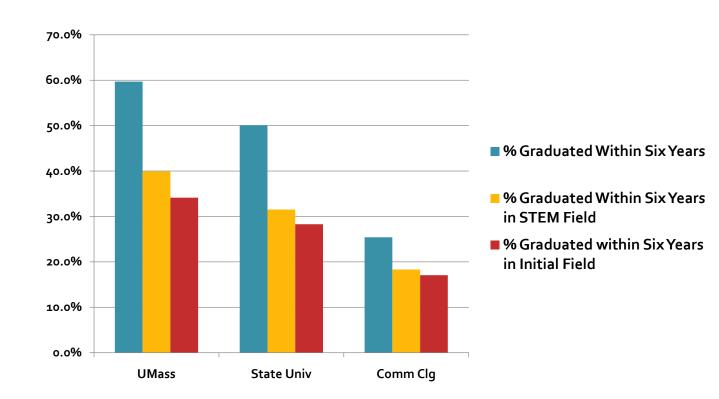
Undergraduate Degrees and Certificates Granted in STEM Fields 2006-2010 20.0% 18.0% 16.0% 14.0% 12.0% 10.0% 8.0% 6.0% 4.0% 2.0% 0.0% Project Growth o6-16 UMass Growth o6-10 Community College State University Growth Growth o6-10 06-10

Projected Growth in STEM Occupations 2006 to 2016 Compared to

# STEM Fields in Massachusetts

#### Six-Year Graduation Rates of Students Entering STEM Fields in Fall 2003

Many STEM majors graduate from a field other than initial field. Overall, the majority of STEM majors who graduate, do so in their initial field.

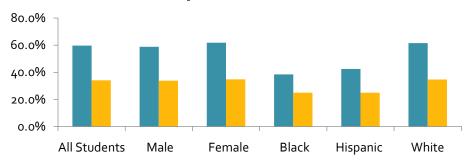


# STEM Fields in Massachusetts

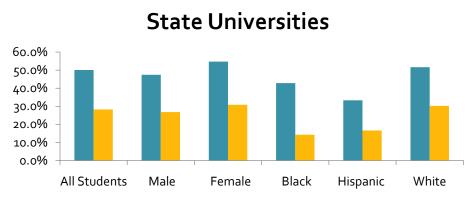
#### Six-Year Graduation Rates of Students Entering STEM Fields in Fall 2003

The differentials between "graduated in any" and graduated in initial" hold true for all gender and racial/ethnic subgroups.

#### **University of Massachusetts**



■ % Graduated Within Six Years ■ % Graduated within Six Years in Initial Field



% Graduated Within Six Years Within Six Years in Initial Field

# Community Colleges 30.0% 25.0% 20.0% 15.0% 10.0% 5.0% All Students Male Female Black Hispanic White

# STEM Fields in Massachusetts

#### Six-Year Graduation Rate Gaps of Students Entering STEM Fields in Fall 2003

There are noticeable gaps in STEM graduation rates.

Gaps between males and females are smaller than in other fields. At the community colleges, males enrolling in STEM are more likely to graduate.

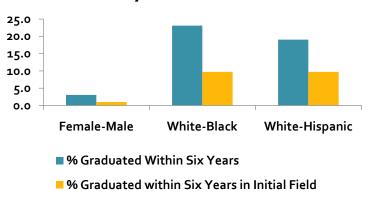
#### 20.00 15.00 10.00 5.00 0.00 White-Hispanic Female-Male White-Black

**State University** 

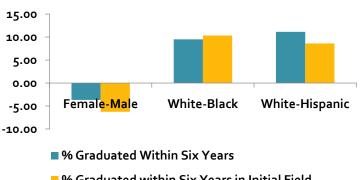
% Graduated Within Six Years

% Graduated within Six Years in Initial Field

#### University of Massachusetts



#### **Community Colleges**



% Graduated within Six Years in Initial Field

# STEM Fields in Massachusetts

#### Share of STEM Degrees by Race/Ethnicity, 2010 \*

Black and Hispanics earn a similar share of degrees and certificates in highgrowth fields as they do in all degrees and certificate fields.

		rsity of husetts	State University		Community Colleges	
	% All	% STEM	% All	% STEM	% All	% STEM
Black	6.7%	5.8%	4.7%	4.0%	9.2%	8.2%
Hispanic	5.1%	4.5%	4.0%	4.2%	8.9%	7.7%
White, Non- Hispanic	74.5%	71.1%	84.7%	83.9%	72.3%	69.6%

<sup>\*</sup> Percents do not sum to 100% due to the fact that not all racial/ethnic categories are shown.

# STEM Fields in Massachusetts

#### Share of STEM Enrollment by Race/Ethnicity, 2010 \*

Black and Hispanic enrollment share of STEM fields is similar to their share of overall enrollment.

	University of Massachusetts		State Uı	State University		Community Colleges	
	% AII % STEM		% All	% STEM	% All	% STEM	
Black							
	7.2%	5.4%	4.4%	7.5%	12.9%	14.8%	
Hispanic							
	7.5%	7.4%	6.9%	10.3%	18.2%	17.1%	
White, Non-							
Hispanic	72.2%	73.0%	84.3%	75.7%	61.5%	59.0%	

<sup>\*</sup> Percents do not sum to 100% due to the fact that not all racial/ethnic categories are shown.

### Vision Project Preview: Workforce Alignment

### State Comparisons: Key Occupations

#### Share of Undergraduate Degrees and Certificates Awarded in High-Growth Fields

<b>3</b>				
University of Massachusetts				
				2005-
		2005	2009	2009
Rank	State	Share	Share	Change
1	SC	54.3%	57.4%	3.1
2	MA	50.5%	<b>52.0</b> %	1.5
3	CA	46.8%	47.9%	1.1
4	NY	56.6%	<b>57.3</b> %	0.7
5	ОН	53.0%	53.5%	0.5
6	FL	54.0%	54.5%	0.5
7	IN	51.2%	51.5%	0.3
8	VA	48.3%	48.4%	0.1
9	NC	52.4%	52.4%	0.0
10	ID	51.5%	51.2%	-0.3
11	MI	52.8%	52.5%	-0.3
12	KS	49.6%	49.3%	-0.3
13	TN	44.1%	43.8%	-0.3
14	OR	44.5%	44.0%	-0.5

Note: Only includes states with at least on	е
research extensive, one research intensive	e,
and one master one institution (public only	/
for all classifications)	

State Universities					
		2005	2009	2005- 2009	
Rank	State	Share	Share	Change	
1	NH	52.2%	57.4%	5.2	
2	ME	54.5%	59.1%	4.6	
3	FL	48.5%	52.5%	4.1	
4	SC	57.9%	61.1%	3.3	
5	MT	53.4%	56.7%	3.2	
6	CA	45.9%	47.0%	1.1	
7	VA	48.1%	49.1%	1.0	
8	IL	48.6%	49.2%	0.6	
9	WA	53.5%	54.1%	0.6	
10	МО	55.9%	56.4%	0.5	
NY, CT, MD, PA					
23	WV	62.3%	61.1%	-1.3	
24	MA	47.1%	45.8%	-1.3	
25	MN	60.4%	59.0%	-1.3	

Note: Includes states with at least one public master institution.

				2005-	
		2005	2009	2009	
Rank	State	Share	Share	Change	
1	VT	32.3%	41.5%	9.2	
2	OK	52.9%	59.9%	6.9	
3	WA	40.1%	45.3%	5.1	
4	RI	53.5%	58.1%	4.6	
5	CA	27.4%	31.3%	3.9	
6	KS	46.5%	49.8%	3.3	
7	NV	40.6%	43.9%	3.2	
8	IN	61.7%	64.8%	3.1	
9	DE	64.7%	67.4%	2.7	
10	NM	43.2%	45.3%	2.2	
PA, MN, IL, NY					
29	NE	43.1%	42.7%	-0.4	
30	MA	<b>52.6</b> %	<b>52.2</b> %	-0.4	
31	OR	34.3%	33.3%	-1.0	

**Community Colleges** 

Note: Includes states with at least one public associate institution.

### Vision Project Preview: Workforce Alignment

## State Comparisons: STEM Fields

#### Share of Undergraduate Degrees and Certificates Awarded in STEM Fields

University of Massachusetts					
Dank	Ctoto	2005 Share	2009 Share	2005- 2009	
Rank	State	Share	Share	Change	
1	AZ	15.2%	16.2%	1.0	
2	FL	14.0%	14.8%	0.8	
3	OR	19.4%	20.2%	0.8	
4	CO	19.2%	19.9%	0.7	
5	МО	17.7%	18.3%	0.6	
6	MI	19.8%	20.4%	0.6	
7	AL	16.4%	16.7%	0.3	
8	PA	17.0%	17.2%	0.2	
9	TN	14.1%	14.3%	0.1	
10	VA	19.7%	19.5%	-0.1	
CA, NY					
16	NJ	19.3%	18.7%	-0.6	
17	MA	19.4%	18.8%	-0.6	
18	TX	17.7%	16.8%	-0.8	

Note: Only includes states with at least one
research extensive, one research intensive,
and one master one institution (public only
for all classifications)

State Universities				
Rank	State	2005 Share	2009 Share	2005- 2009 Change
1	SD	15.9%	18.8%	3.0
2	SC	13.7%	15.9%	2.2
3	MS	11.3%	13.3%	2.0
4	WV	9.5%	11.4%	1.9
5	IA	10.6%	12.4%	1.8
6	NE	11.1%	12.7%	1.7
7	AK	14.1%	15.5%	1.3
8	NH	6.7%	7.6%	0.9
9	OR	10.4%	11.2%	0.8
10	WA	11.8%	12.6%	0.7
NJ, CA, IL, MN, PA, VA, CT, NY				
40	RI	5.0%	3.1%	-1.9
41	MA	11.3%	9.3%	-2.0
42	KS	11.7%	9.7%	-2.1

Note: Includes states with at least one public master institution.

Community Colleges				
Rank	State	2005 Share	2009 Share	2005- 2009 Change
1	AZ	6.1%	10.9%	4.8
2	WV	3.9%	8.3%	4.4
3	NV	8.1%	11.1%	3.0
4	ND	15.9%	17.9%	1.9
5	NM	8.5%	9.5%	1.0
6	CA	6.6%	7.6%	1.0
7	СТ	8.8%	9.7%	0.8
8	AL	17.7%	18.5%	0.8
9	KY	7.3%	7.9%	0.6
10	CO	4.7%	5.2%	0.6
19	VA	10.6%	9.7%	-0.9
20	MA	11.4%	10.3%	-1.1
21	IL	14.4%	13.1%	-1.2

Note: Includes states with at least one public associate institution.



David Cedrone, Associate Commissioner for Economic and Workforce Development

### Workforce Pipeline

- Promotion of STEM Education
  - Priming the future workforce pipeline
    - PreK-12
    - Higher Education
- Statewide Workforce Planning
  - Industry specific workforce plans all students/workers
    - Healthcare
    - Life Sciences
    - Information Technology
  - Community College Collaboration and Alignment
    - Adult students incumbent and displaced workers, immigrants
    - Traditional students industry certificates, degrees, 2-4 year transfer

### Working Groups

- STEM Education
  - Governor's STEM Advisory Council
  - Robert H. Goddard Council
- Statewide Workforce Planning
  - Industry specific
    - Growth sectors Executive Office of Education; Labor and Workforce Development; Housing and Economic Development
    - Nursing and Allied Health Statewide Advisory Council
    - Boston Region Higher Education/Hospital Partnership
  - Community College Collaboration and Alignment
    - Community College Business and Industry Directors
    - Community College Chief Academic Officers
    - DOL Grant Advisory Group

### Working Group Charge

#### STEM Education

- Goals
  - Goal 1: Increase student interest in STEM
  - Goal 2: Increase STEM achievement among PreK-12 students
  - Goal 3: Increase the percentage of students who demonstrate readiness for college-level study in STEM fields
  - Goal 4: Increase the number of students who graduate from a postsecondary institution with a degree in a STEM field
  - Goal 5: Increase the number/percentage of STEM classes led by effective educators
- - Theory of Action
  - @Scale Initiatives
  - Alignment Regional Networks & State Agencies

### Working Group Charge

- Statewide Workforce Planning
  - Growth Industries Workforce Development Plan
    - Create a streamlined education and workforce development system that prepares a diverse population of potential employees for successful entrance or redeployment into the labor market, and which cultivates the core skills that are prerequisites for a broad range of occupations.
      - A plan for community colleges that addresses the policy and systems barriers that impede the implementation of an aligned, coherent education and workforce development system
        - Biotechnology endorsements and portability
    - Sector workforce development plans for Healthcare, Life Sciences,
       Information Technology and Advanced Manufacturing
      - DOL Planning Grant \$150K for Healthcare (EOLWFD)

### Working Group Charge

- Statewide Workforce Planning (cont.)
  - Nursing and Allied Health, Statewide Advisory Council
    - Structural shortage of nurses and nursing faculty
    - Increased demand for allied health professionals
    - Nurse of the Future (IOM)
      - Curriculum and learning models align to industry competencies and practices
      - Increased education guidelines improve patient outcomes and reduce total healthcare costs
    - Data-driven decisions
  - Boston Region Higher Education/Hospital Partnership
    - Industry/education partnerships for allied health workforce development
      - Industry competencies
      - Core curriculum across community colleges

### Working Group Charge

- Community College Collaboration and Alignment
  - Fifteen campus consortium US DOL Grant
    - Trade Adjustment Assistance Community College and Career Training
      - Increase attainment of degrees, certificates and other industry recognized credentials
      - Better prepare target population for high-skill, high wage jobs
      - Accelerate progress for low skilled workers
      - Improve retention and achievements rates, reduce time-tocompletion
      - Bridge non-credit to credit certificate and degree programs
      - Build programs that meet industry need, provide career pathways
      - Strengthen online and technology enables learning

# Upcoming Opportunities for Campus and DHE Collaboration

#### STEM

- Project Engage, Massachusetts Academy of Sciences June 7
  - Recruitment, Retention, Graduation of STEM Students
  - Enhancing K-12 teacher preparation for STEM
  - Connecting K-12 teachers and students to STEM research

### Statewide Workforce Planning

- Industry specific
  - Industry/Education Leadership Councils STEM, Healthcare
  - Data collection and analysis
- Community College Collaboration and Alignment
  - Systemic institutional improvement proposals

### Deliverables 2010-11

- STEM Education
  - Statewide Plan Released



- Governance Model Implemented
- @Scale criteria V1.o, initial project recommendations, Q42011
- Higher Ed. leadership strategy Project Engage, Q4 2011
- Statewide Workforce planning
  - Actionable recommendations Community Colleges:
    - Developmental education new models and expanded capacity
    - Acceleration to outcomes portable credits and vertical articulation
      - Complete College America grant proposal (statewide transfer system)
    - Student supports rationalize across workforce, Higher Education and ABE
    - Alignment with industry workforce needs

### Deliverables 2010-11

- Statewide Workforce planning (cont.)
  - Nursing and Allied Health
    - NOF Core Competencies
    - Allied Health Core competencies 

       and core curriculum spring
    - \$250K grants to accelerate curriculum & partnership models Q4 '11
  - Community College Collaboration and Alignment
    - Submit proposal for DOL grant program \$20 million 4 year April 21



**Questions and Comments**