

# ***College and Workforce Ready?***

## ***The post-HB 5 landscape: what's changed, what hasn't.***

Texas Higher Education Coordinating Board

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**TEXAS HIGHER EDUCATION  
COORDINATING BOARD**

# THE CHALLENGE: Texas must create and sustain a workforce that can support a transformational economy

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**4 of 5**

**Jobs lost** during the recession **affected workers with a high school diploma or less.**

Source: Center on Education & the Workforce



**13 of 20**

**Fastest growing careers** with the potential for earnings growth **require postsecondary education.**

Source: Bureau of Labor Statistics



**\$21,000**

**Average annual wage difference** for worker **with a BA degree** compared to high school graduate.

Source: State Higher Education Executive Officers Association



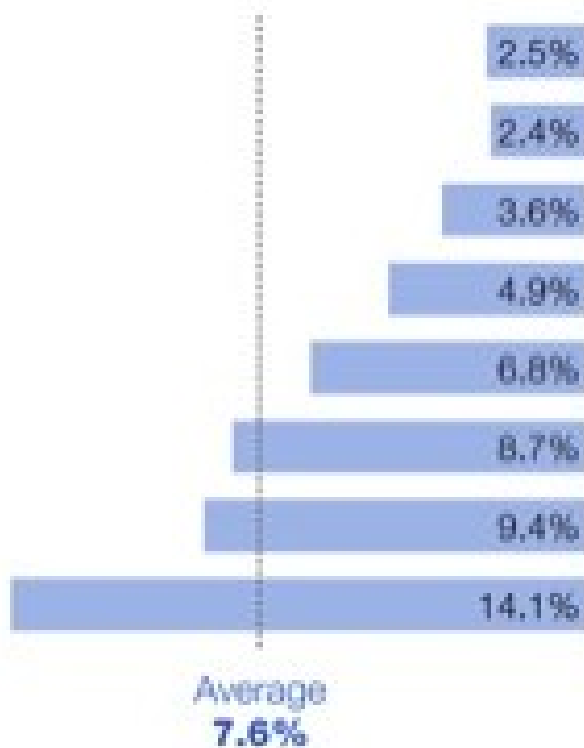
**20%**

**Average annual wage premium** for worker **with a postsecondary workforce certificate** compared to high school graduate.

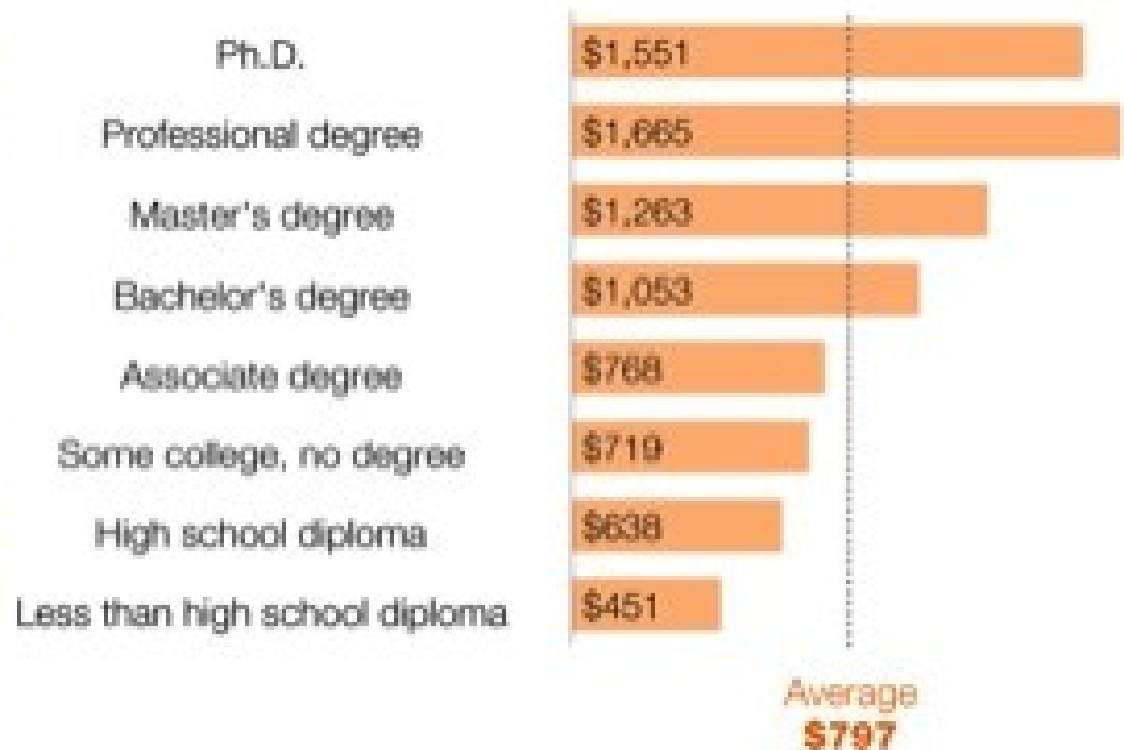
Source: Center on Education & the Workforce

# Postsecondary education of all types leads to better opportunities in the current economic climate

Unemployment rate in 2011



Median weekly earnings in 2011



Source: Bureau of Labor Statistics, 2012

# Even jobs once considered low-skill will require higher levels of training and expertise

Employment in “**high-skill**” manufacturing occupations has **increased 37%** since early 1980s.

--Federal Reserve Bank of NY

“It’s not just what is being made, but to the degree that you make it at all, **you make it differently.**”

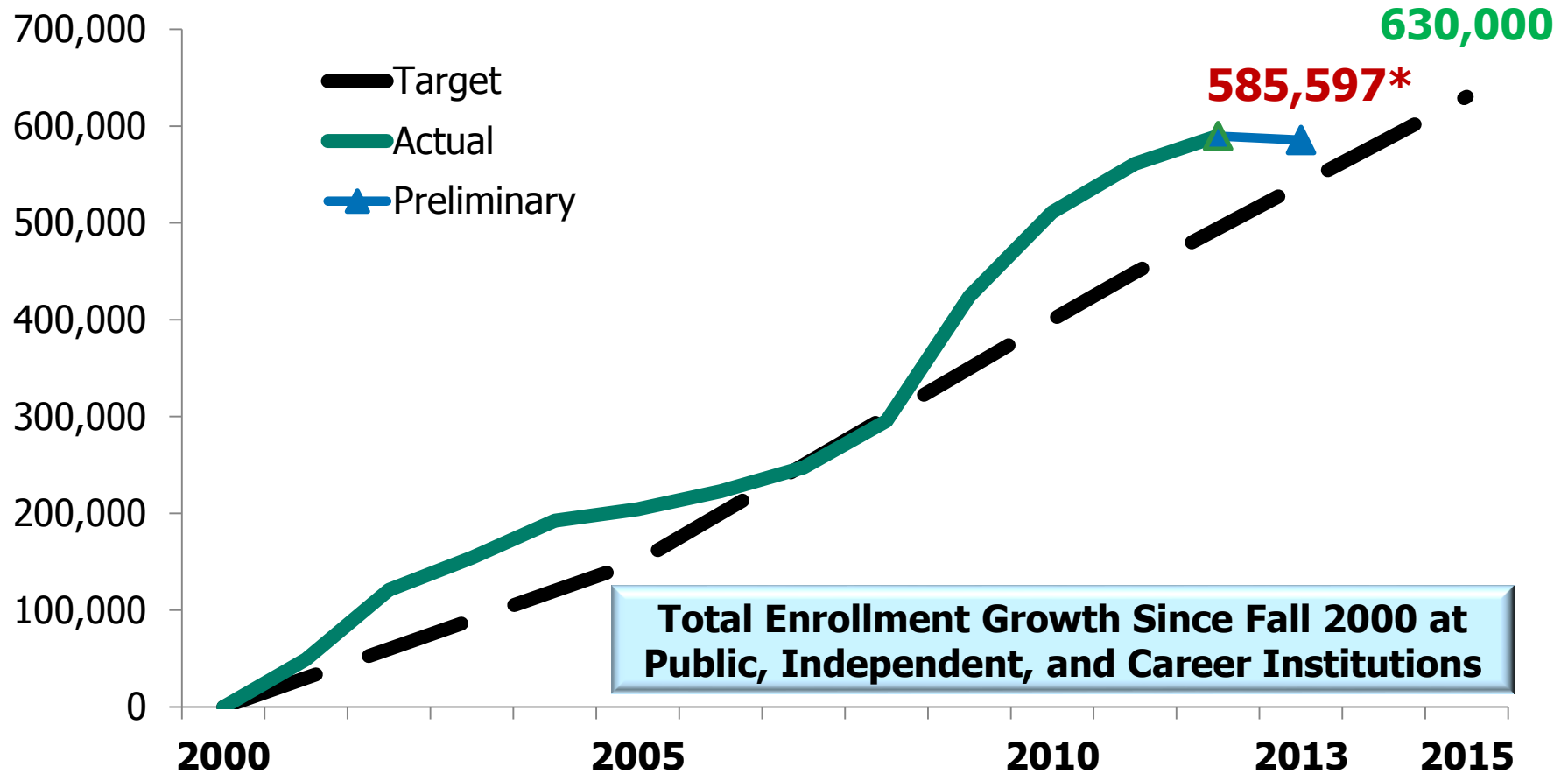
--David Autor, economist,

MIT

“...today’s skilled factory worker is really a **hybrid of an old-school machinist and a computer programmer**....advanced manufacturing requires a basic understanding of metallurgy, physics, chemistry, pneumatics, electrical wiring and computer code.”

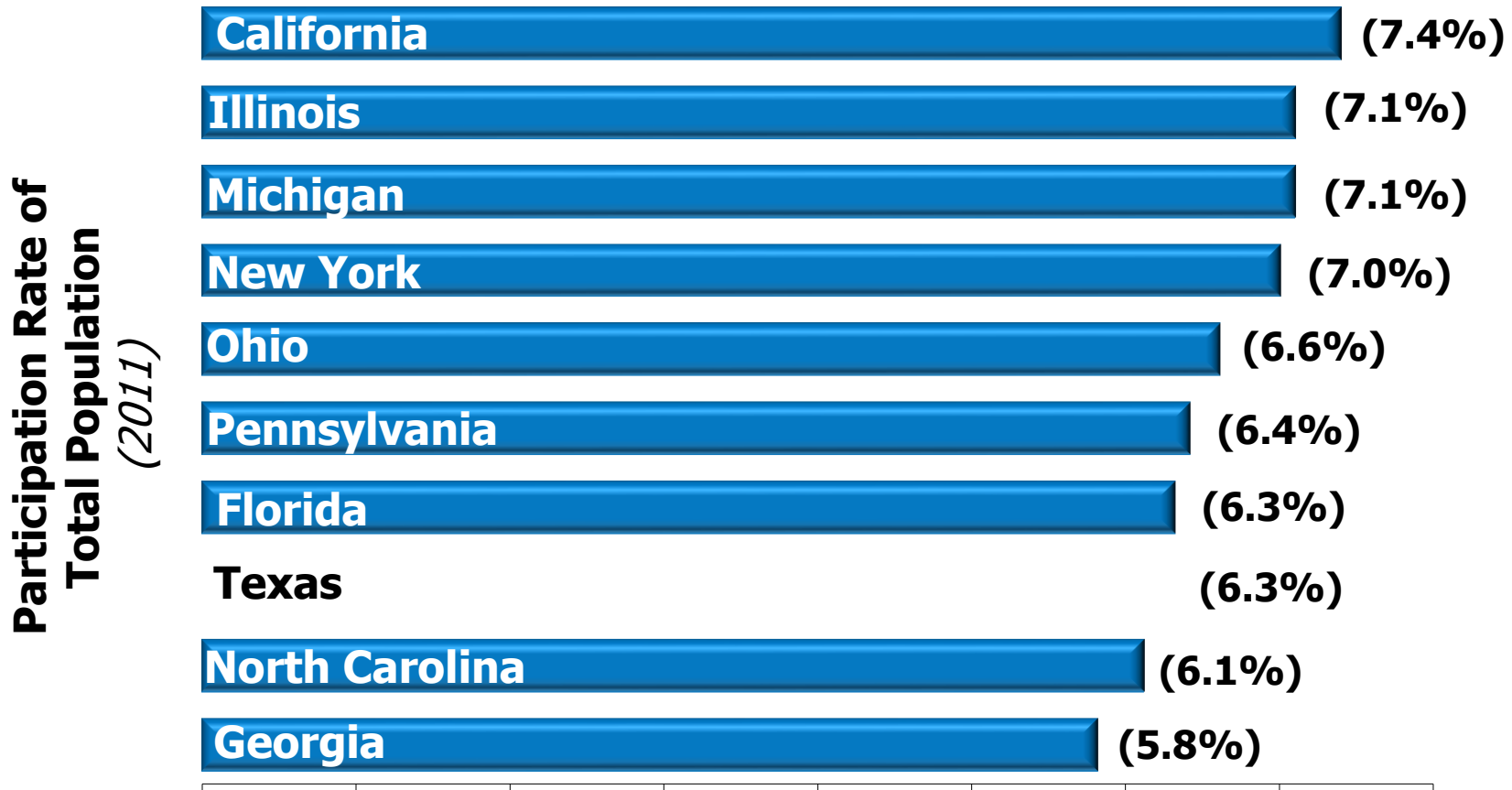
--“Skills don’t pay the bills”, *NY Times Magazine*, 11/20/12

# Texas needs 44,000 additional students to reach 2015 goal for participation



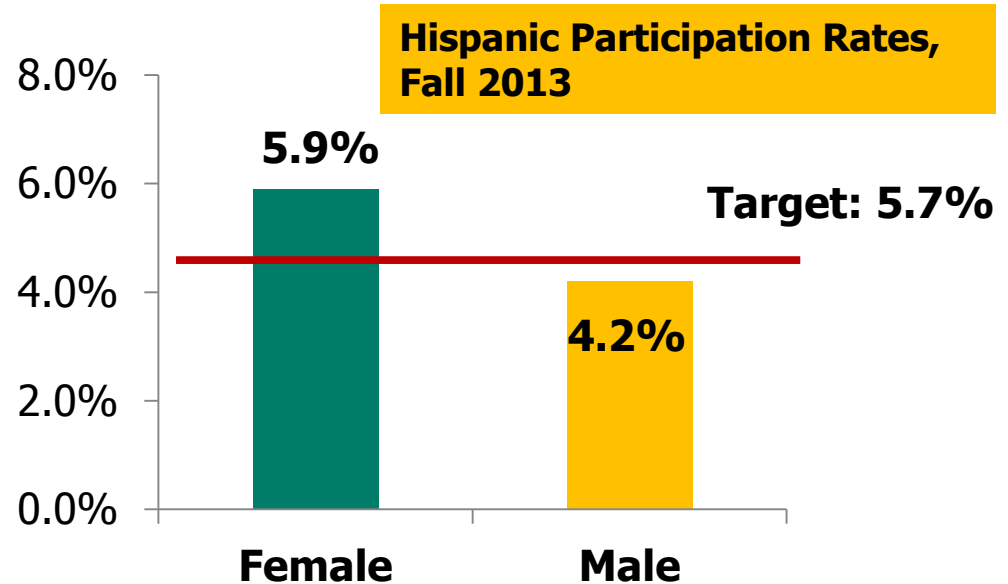
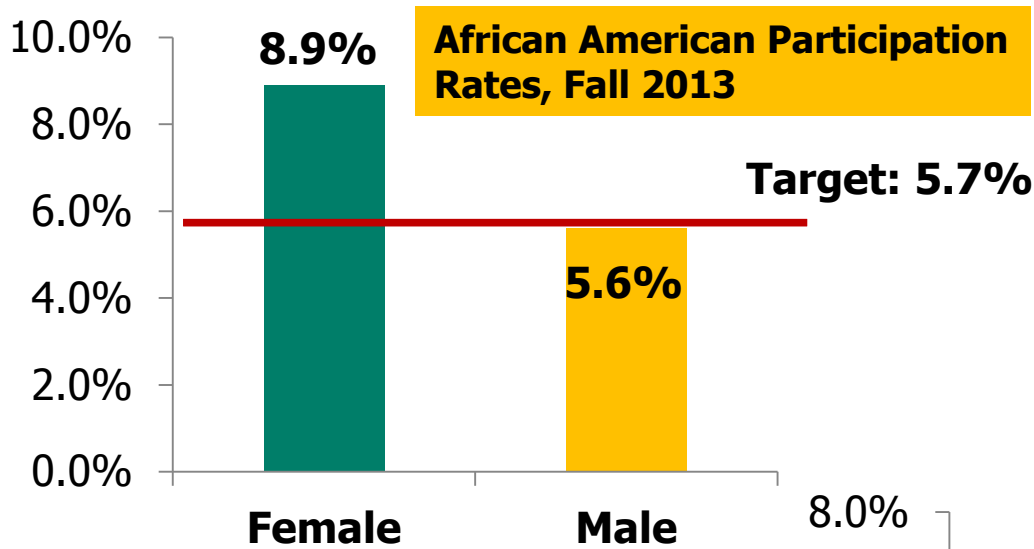
\* 2013 preliminary data include certified fall 2013 data for public and independent institutions. The data are preliminary because prior year data are used as proxies for career institutions and flex entry.

# Texas participation rates have improved but **remain lower than other large states**



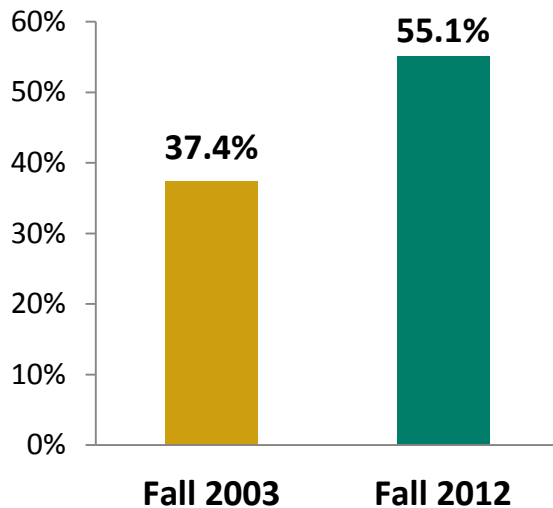
Source: U.S. Dept. of Education and Census Bureau

# Participation rates among African American and Hispanic males **continue to lag** behind goals

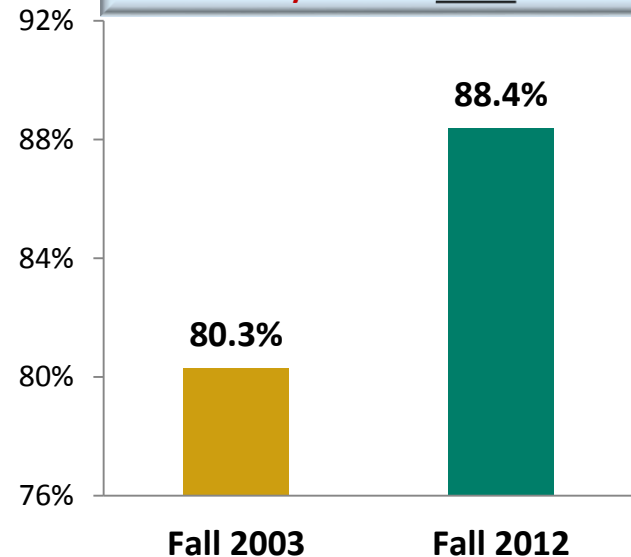


# College readiness rates for all students graduating from Texas high schools **continue to improve**

**Percentage of TSI Ready<sup>1</sup>  
Community and Technical College  
Students Direct from HS**



**Percentage of TSI Ready<sup>1</sup>  
University Students Direct from HS**



**College readiness has increased among all racial and ethnic groups:**

African Americans	↑	20 % points
Hispanics	↑	21 % points
Whites	↑	21 % points

African Americans	↑	27 % points
Hispanics	↑	14 % points
Whites	↑	4 % points

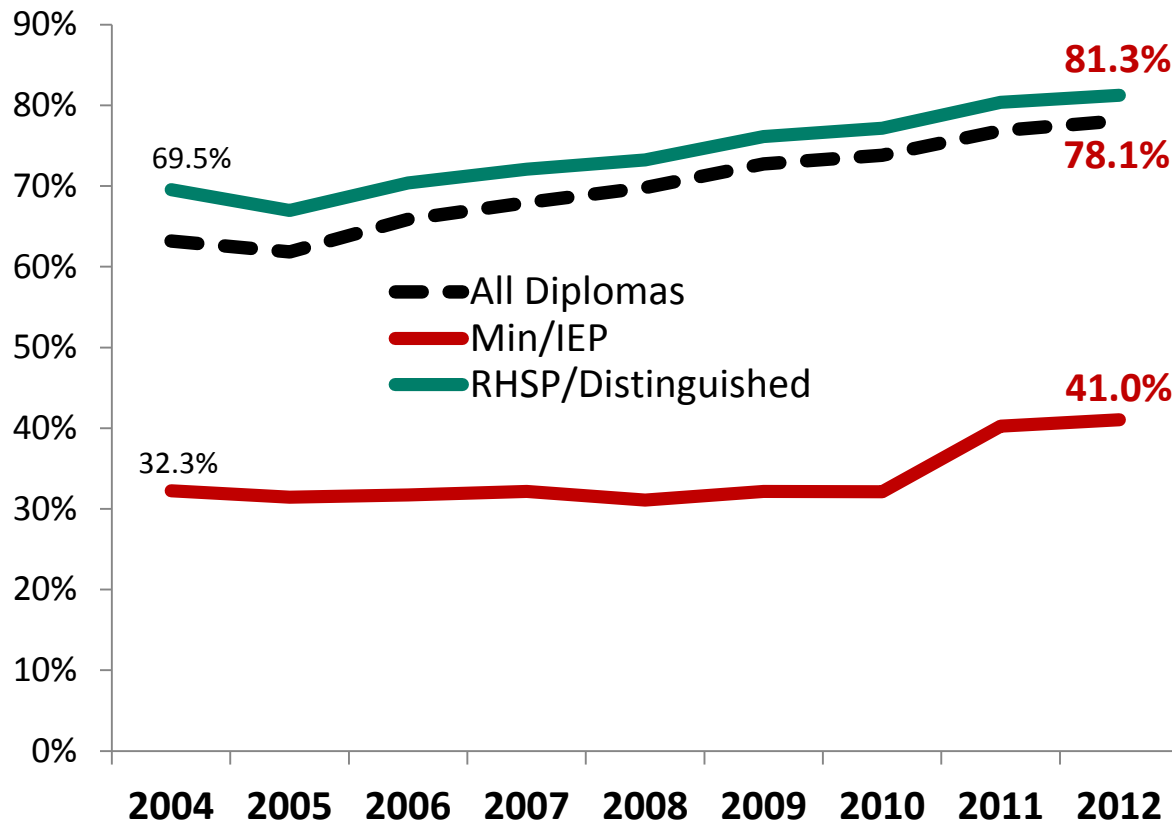
Source: Texas Higher Education Coordinating Board

1. Percentage of TSI ready reflects % of first-time-in-college students who met college readiness standards (or were exempt) in all three areas measured.



# Students with more advanced diploma types achieved readiness at twice the rate of peers with less

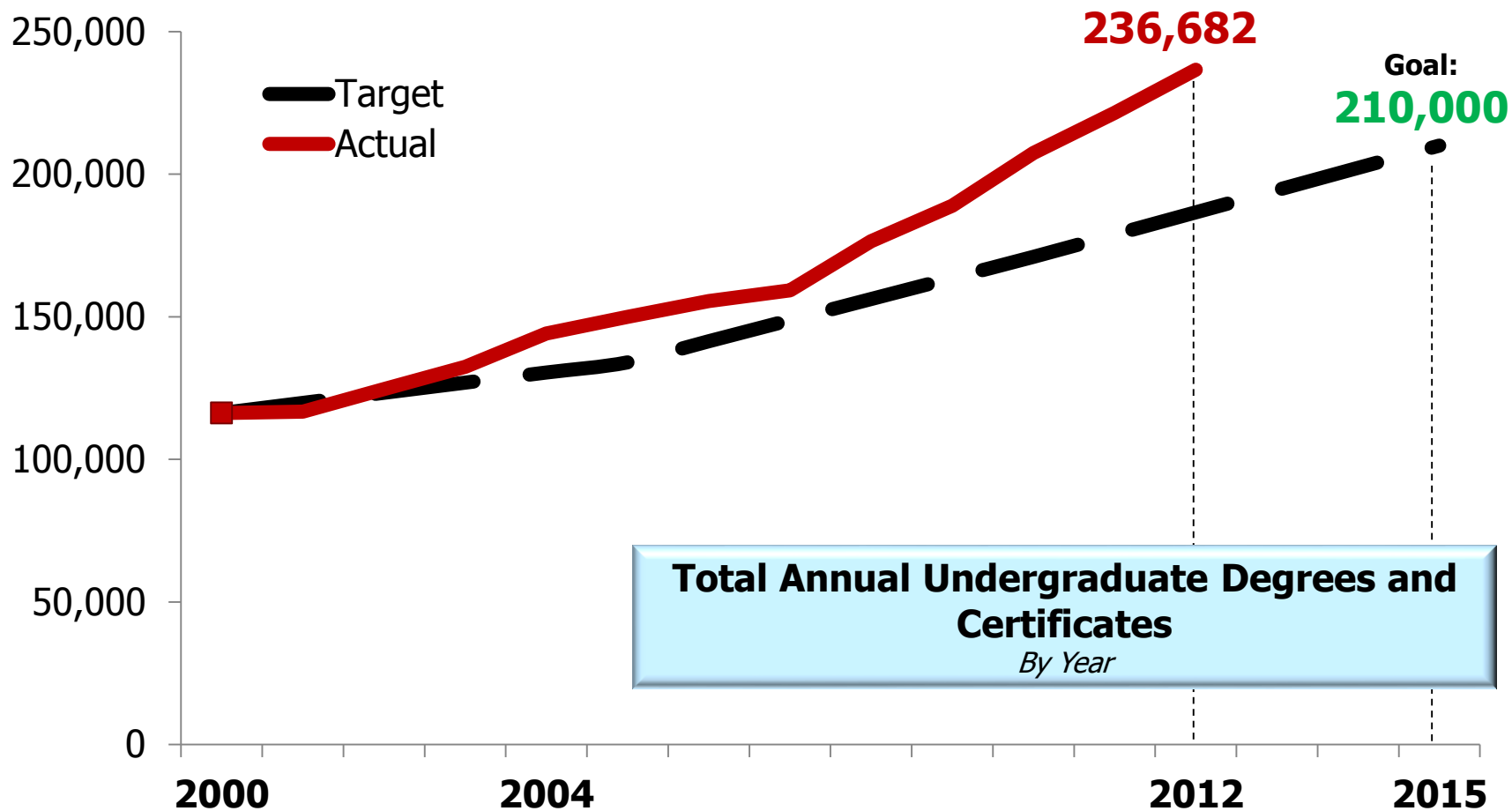
**HS Graduates Enrolled in Higher Education and TSI ready in Math by Diploma Type**  
(Fall 2004-Fall 2012)



2012	RHSP/Dist	Min/IEP
Total Enrolled	127,368	10,941
Total Ready (Math)	103,504	4,490
Total Not Ready/UNK (Math)	23,864	6,451

**NOTE:** Readiness rates include students who met standards on TSI assessment or earned an exemption from assessment; data reflected includes prior TSI approved assessments including COMPASS, ASSET and ACCUPLACER

# In 2012, the state surpassed the 2015 goal for annual undergraduate credentials awarded



NOTE: Collection of career institution data began in 2004

# However, too few Texas students make it through the education pipeline to a postsecondary credential

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19

of every 100 Texas 8<sup>th</sup> Graders complete a postsecondary credential

11

of every 100 Hispanic 8<sup>th</sup> Graders complete a postsecondary credential

9

of every 100 Low SES 8<sup>th</sup> Graders complete a postsecondary credential

11

of every 100 African American 8<sup>th</sup> Graders complete a postsecondary credential

Source: THECB 8<sup>th</sup> Grade Cohort (Enrolled in 2001, Completed Postsecondary by FY 2011).

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*But, hasn't everything  
changed with HB 5?*

# Endorsements

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An endorsement in any one of the following, which includes **Science-4 Credits, Math-4 Credits:**

- **STEM**
- **Business and Industry** (e.g., data base management HVAC)
- **Public Service** (e.g., health sciences, law enforcement, culinary arts)
- **Arts and Humanities** (e.g., poli sci, languages, fine arts, history)
- **\*Multidisciplinary Studies**

***Foundation + Endorsement is the default for incoming HS freshmen***

# Endorsement: Business & Industry

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**(Option A)** a coherent sequence of courses for four or more credits in CTE that consists of at least two courses in the same career cluster including at least one advanced CTE course which includes any course that is the third or higher course in a sequence. The courses may be selected from courses in all CTE career clusters or CTE innovative courses approved by the commissioner of education. The final course in the sequence must be selected from one of the following CTE career clusters:

- Agriculture, Food, & Natural Resources
- Architecture & Construction
- Information Technology
- Arts, Audio/Video Technology, & Communications
- Manufacturing
- Business Management & Administration
- Hospitality & Tourism
- Transportation, Distribution, & Logistics
- Finance
- Marketing

**(Option B)** four English elective credits by selecting three levels in one of the following areas:

- advanced broadcast journalism
- public speaking
- advanced journalism: newspaper
- debate
- advanced journalism: yearbook

# Fourth Mathematics Credit to Earn an Endorsement

Algebra II	IB Mathematical Studies Standard Level (SL)
Precalculus	IB Mathematics SL
Advanced Quantitative Reasoning	IB Mathematics Higher Level (HL)
Independent Study in Math	IB Further Mathematics HL
Discrete Mathematics for Problem Solving	Engineering Mathematics
AP Statistics	Statistics & Risk Management
AP Calculus AB	Discrete Mathematics for Computer Science
AP Calculus BC	Locally developed math course or other activity [pursuant to TEC, §28.002(g-1)]
Math Models (for the 2014-2015 school year only)	College Prep Math [pursuant to TEC, §28.014]
Algebraic Reasoning (in development for implementation in 2015-16)	Statistics (in development for implementation in 2015-2016)

# Fourth Science Credit to Earn an Endorsement

Chemistry	IB Physics
Physics	IB Environmental Systems
Aquatic Science	Advanced Animal Science
Astronomy	Advanced Plant and Soil Science
Earth and Space Science	Anatomy and Physiology
Environmental Systems	Medical Microbiology
AP Biology	Pathophysiology
AP Chemistry	Food Science
AP Physics 1: Algebra-Based	Forensic Science
AP Physics 2: Algebra-Based	Advanced Biotechnology
AP Physics C	Principles of Technology
AP Environmental Science	Scientific Research Design & Problem Solving
IB Chemistry	Principles of Engineering
locally developed science course or other activity [pursuant to TEC, §28.002(g-1)]	science course endorsed by an IHE [pursuant to TEC, §28.025(b-5)]



# Changing workforce demands require postsecondary preparation & education

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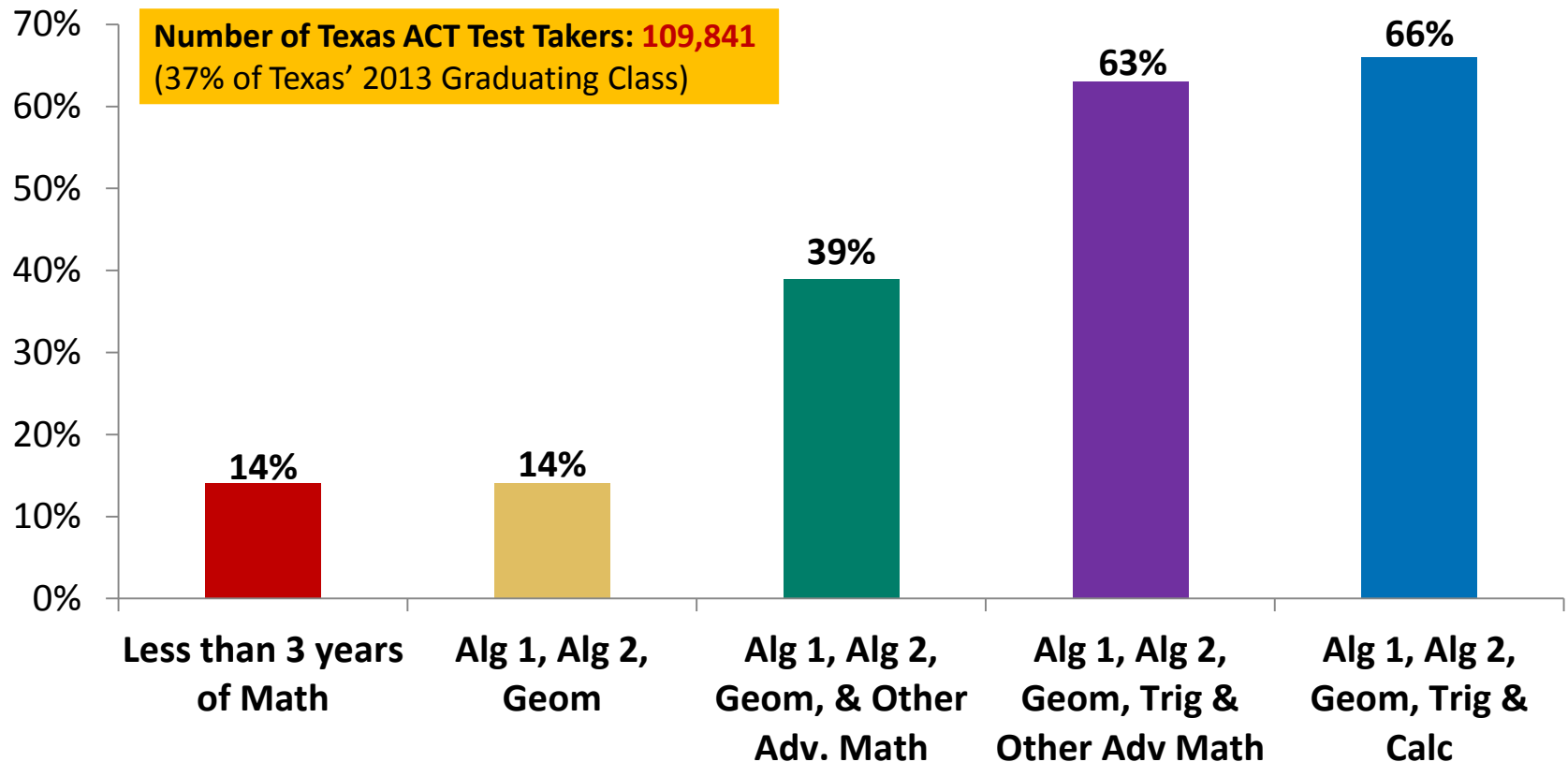
90% fastest growing sector of jobs  
require some postsecondary  
education

For CTE pathways,  
students must have a  
rigorous preparation  
addressing all CCRS

CTE textbooks have a  
level of difficulty at or  
above college ready  
levels

# The most recent data from HS graduates illustrate role of coursework in college readiness

**Percent of HS Students Who Met ACT College Readiness Benchmark for Mathematics Based on Course-taking Pattern in High School (Actual)**  
(Texas HS Graduating Class, 2013)



# Considerations

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- Eligibility for admission vs. admission requirements vs. college readiness
- The importance of transparency, advising, counseling
- Previous graduation plans and HB5 graduation plans (the standard rubric for admissions purposes is gone; transcript-level review)
- Is it possible to be workforce ready without being college ready?
- What do the changing TSI exemptions mean for student success—testing and college preparatory courses