

UW System Academic Programs and Wisconsin's Workforce Needs

Jim Henderson

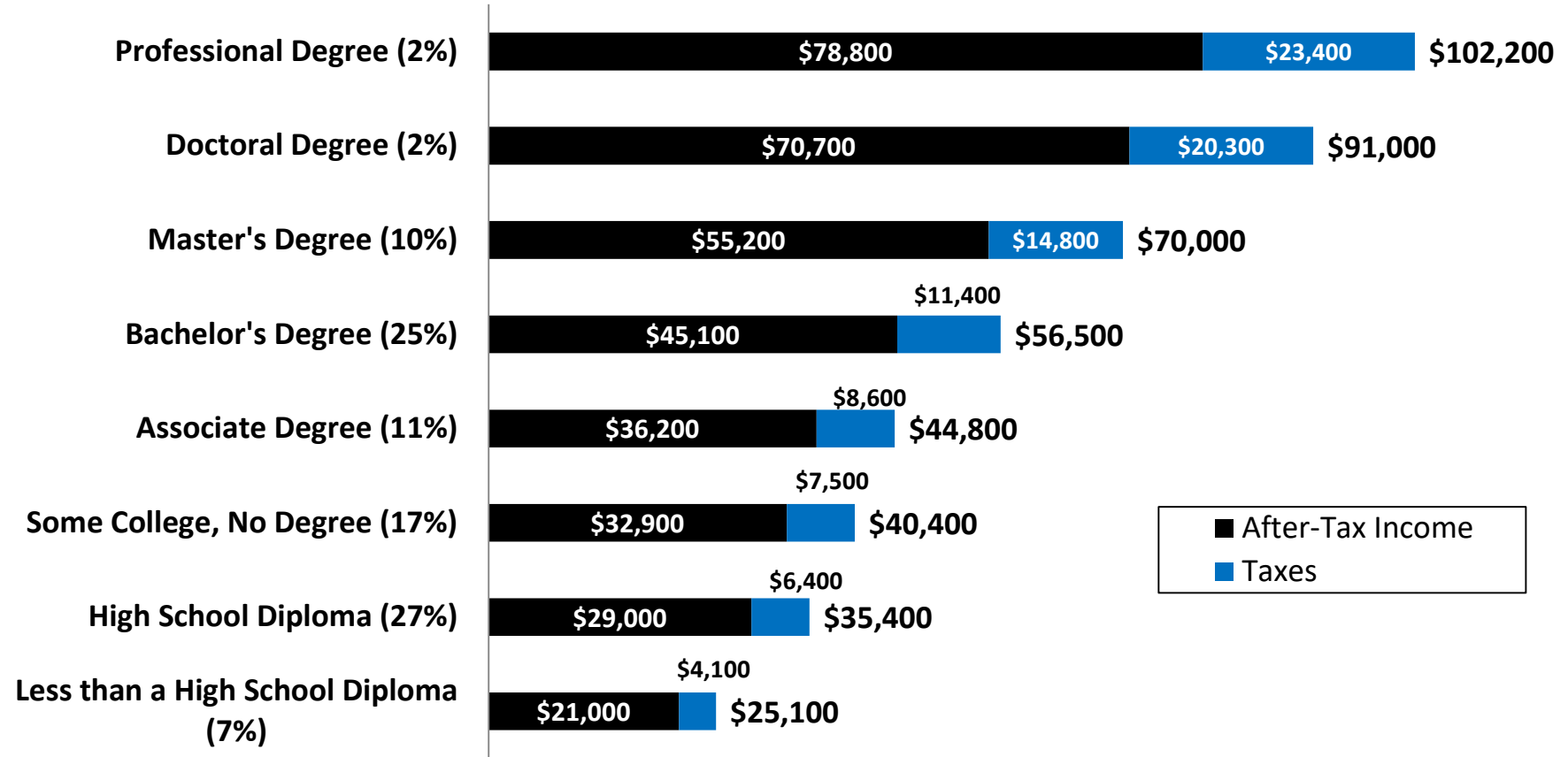
Vice President for Academic and Student Affairs

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National Income Outlook

Higher education degree:

- Higher earnings power
- Higher tax revenues for state



SOURCES: WI DWD; U.S. Census Bureau, 2012, Table PINC-03; Internal Revenue Service, 2010; Davis et al., 2013; calculations by the authors.

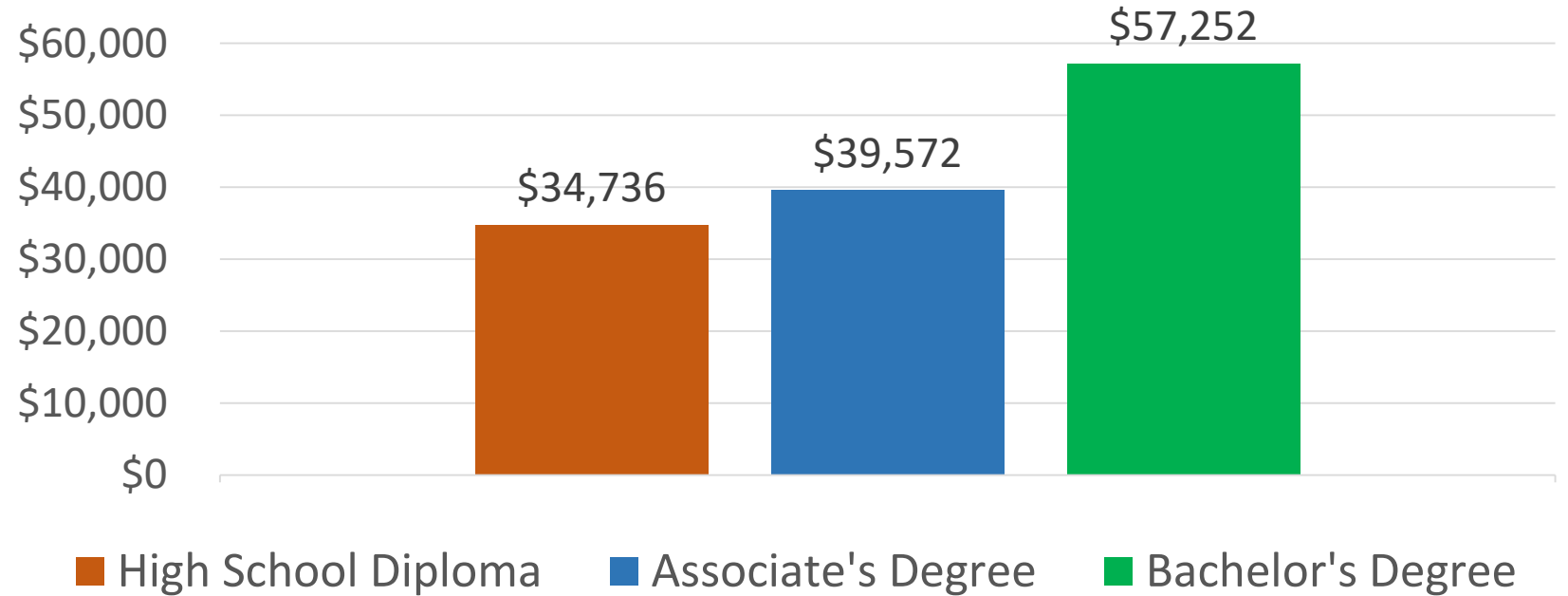
Median Earnings

National Income Outlook

U.S. Department of Education:

On average, a college graduate earns **\$1 million more** over their lifetime than a high school graduate

2014 U.S. Bureau of Labor Statistics Median Annual Income



Higher Education Degrees Are Recession-Proof

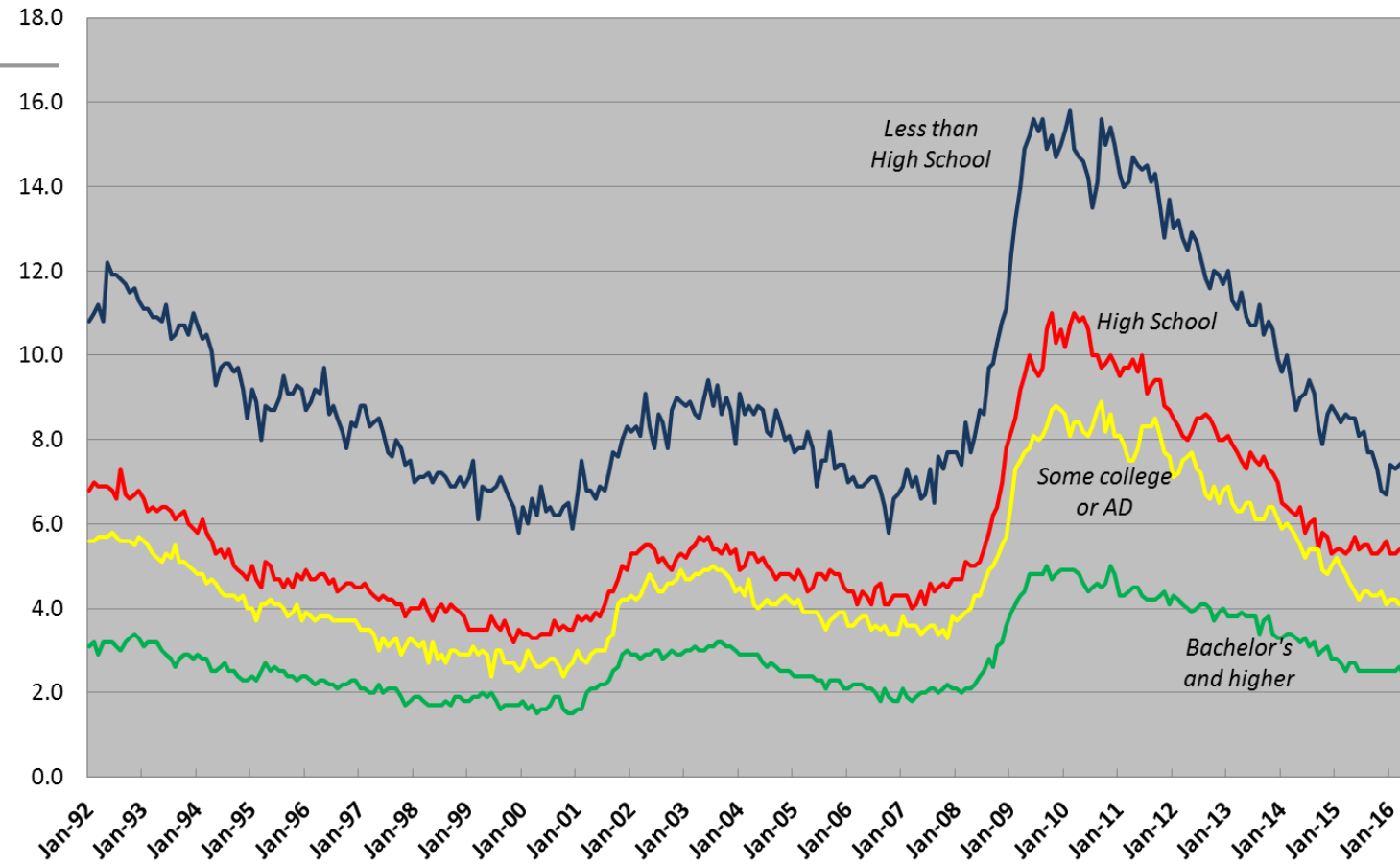
Bachelor's degree during the recession:

- Lost 66,000 jobs
- Gained 4.7 million jobs in recovery
- Virtually all job growth in U.S. since recession has required some postsecondary education

High school degree:

- Lost 6.3 million jobs
- Very few jobs have come back

U.S. Unemployment Rates by Educational Attainment
25 Years and Over (in %)



SOURCE: WI DWD

National Job Growth Forecast

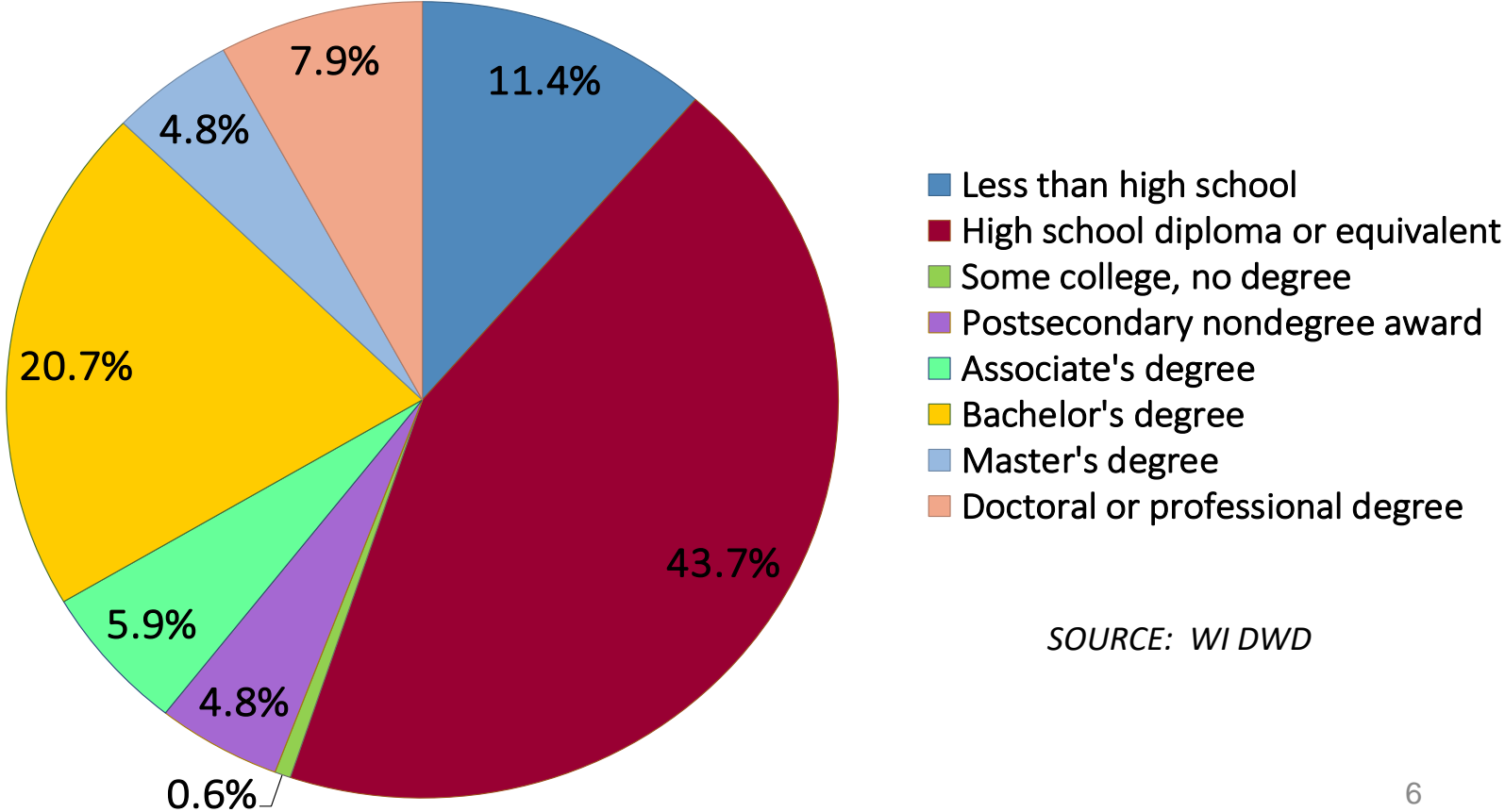
Projected Growth Between 2014-2014 Requires Bachelor's Degree or Higher	
Audiologist	28.6%
Biomedical engineer	23.1%
Forensic science technician	26.6%
Operations research analyst	30.2%
Nurse practitioner	35.2%
Personal financial advisor	29.6%
Physical therapist	34.0%
Physician assistant	30.4%

Source: U.S. Bureau of Labor Statistics, National Occupational Outlook 2014-2024

Wisconsin's Current Landscape

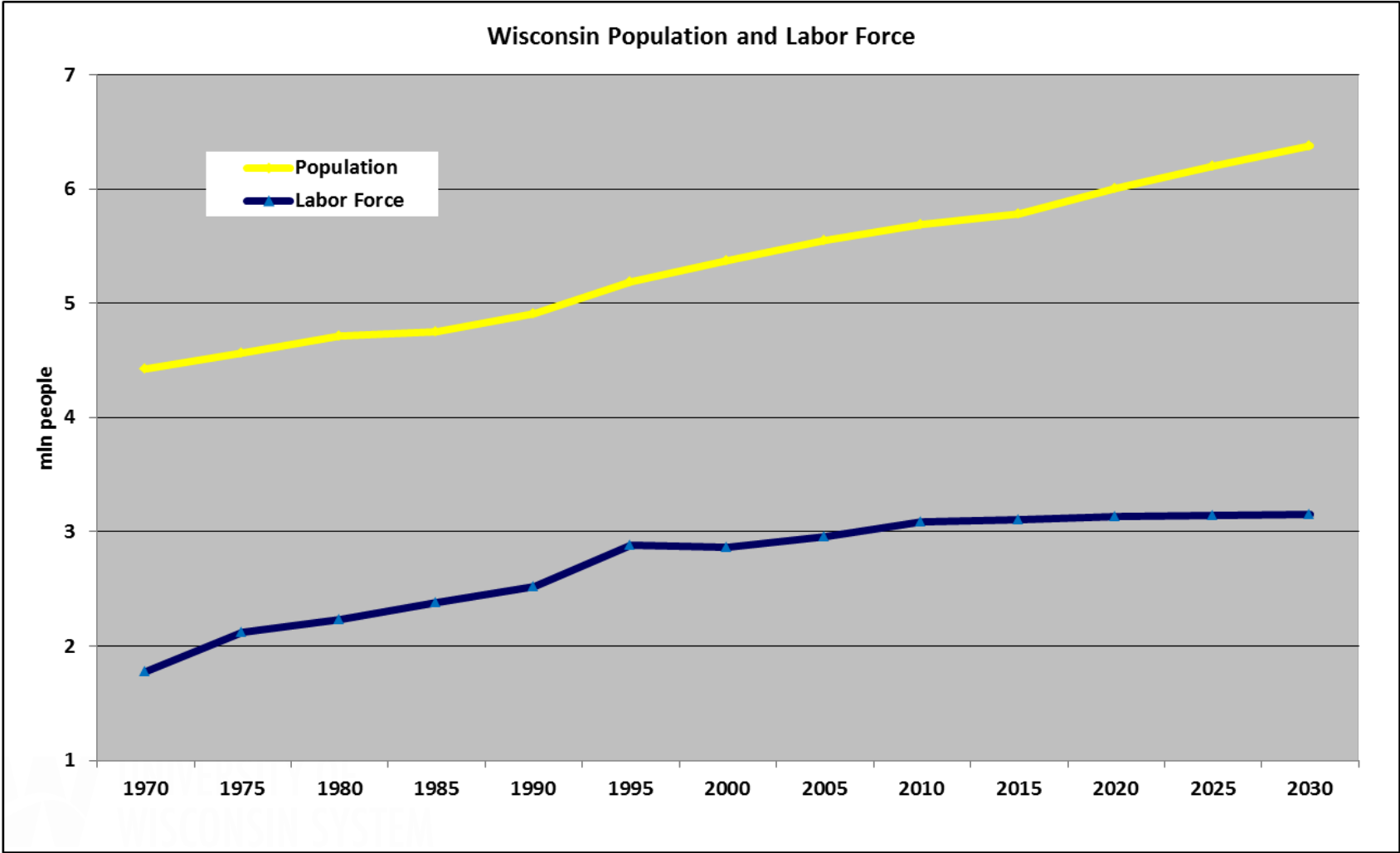
- Wisconsin has large manufacturing base
- Large sector of Wisconsin's economy dependent upon Associate's Degree or higher

Wisconsin Long Term Projections 2012-2022
Jobs by Typical Educational Entry



SOURCE: WI DWD

Wisconsin's Workforce is Shrinking Compared to Growing State Population



Source: WI DWD - includes information from DOA, DWD, LMI and OEA data

Wisconsin's 25 High-Growth Occupations 2014-2024 Requiring Post Secondary Degree

#1 Operations Research Analysts	#17 Market Research Analysts
#4 Computer Systems Analysts	#18 Software Developers
#5 Personal Financial Advisors	#20 Chemist
#9 Web Developers	#21 Nurse Practitioners
#11 Biochemists and Biophysicists	#22 Actuaries
#16 Real Estate Brokers	

Source: WI DWD Wisconsin's WORKnet

UW System Meeting State's Needs

UW System degree programs consistent with projected highest growth occupations in Wisconsin

- Largest expected growth in Operations Research
- 3 other occupations related to information technology
- 4 occupations related to business and entrepreneurship
- 2 occupations in science fields
- 1 occupation in the health care field

Highlighted in development of **2020FWD** Strategic Framework

- STEM fields
- Healthcare
- Entrepreneurship

20 Additional Degree Programs Authorized in 2016

STEM	Health Care	Entrepreneurial/Business
<ul style="list-style-type: none">• Data Analytics• Computer Science• Microbiology• Natural Resources• Information Science and Technology	<ul style="list-style-type: none">• Health and Wellness Management• Nursing (accelerated)• Clinical Nutrition• Athletic Training	<ul style="list-style-type: none">• Flex degree in Business• Sports management

20 Additional Degree Programs Authorized in 2016

Education	Social Sciences	Agriculture
<ul style="list-style-type: none">• Early Childhood• Special Education• Secondary Education• STEM Middle Childhood- Early Adolescence	<ul style="list-style-type: none">• Geospatial Analysis and Technology• Social Work• Urban Studies	<ul style="list-style-type: none">• Dairy Science

Employers Want and Need Critical Thinkers

Example: JAMF

- Employs 600 people around health care and education

“We need people who can think freely and solve problems. The problems we are seeing today aren’t the problems we had a year ago.”

“A liberal arts education taught me how to learn about topics I’m not an expert in. I still find that beneficial on a daily basis.”

Founder of JAMF, UW-Eau Claire music major grad Zach Halmstad

Educational Pipeline Support / Examples

STEM

- WySis
 - Partnership with UW System to promote patent development and intellectual property
 - Encourage entrepreneurship among faculty in the UW System
 - Increases student engagement in discovery
- Internships
 - Great Lakes awarded UW-Eau Claire a 2015-2018 Career Ready Internship Grant totaling \$326,028 to place students in STEM fields

Educational Pipeline Support / Examples

Healthcare

- WEDC grant to UW-Milwaukee Research Foundation
 - Supports development of innovative health care ventures in Wisconsin
- Accelerated Online Bachelor's to Bachelor's of Science in Nursing at UW-Oshkosh
 - Recently approved for UW-Madison
- Community Health Internship Program
 - 66 out of 83 interns were from UW System campuses
 - 11 UW campuses represented

Educational Pipeline Support / Examples

Entrepreneurship

- WEDC grants
 - UW-Madison Law and Entrepreneurship Clinic
 - UW-Stout Center for Innovation and Development
 - WARF for *Upstart* program for minority and women's entrepreneurship
- *Experiments in Entrepreneurship* course at UW-Whitewater
 - Available to students with any major

2020FWD Educational Pipeline Initiatives

System-wide research initiative focused on water issues

- Engage more students with undergraduate research related to a topic related to all three focus areas
 - STEM fields
 - Healthcare
 - Entrepreneurship
- Provide engagement with Wisconsin businesses with a collaborative group of faculty from all of our campuses
- Support more internship opportunities for students

2020FWD Educational Pipeline Initiatives

Internships

- Important educational and workplace opportunities for students
- Student success increases dramatically – as well as possibility of retaining talent in state
- Working closely with DWD, technical colleges, private universities, and business stakeholders
- Win-win-win for student, employer, and Wisconsin's economy

1+3 Program / Dual Enrollment College Options

- 1+3 collaboration underway with Fox Valley corporate partners to increase IT talent
- Complete first year of college while in high school
- Transfer into higher education with more credits = graduate faster, lower cost
- Increase proportion of high school students who see college as feasible

2020FWD Educational Pipeline Initiatives

Seamless Transfer Opportunities

- Increase number and effectiveness of articulation agreements between colleges,
- Should be seamless, smooth, and easily navigable at any step of education

New Adult / Traditional Students

- Expand opportunities to complete degree including competency-based online UW Flexible Option program

360 Advising

- Improve student success / reduce time to degree
- Expand use of predictive analytics and intensive advising for timely support to students
- Increase student access to financial planning and career counseling

Key Take-Aways

- UW System graduates are a source of constant support for Wisconsin's economy
- Changes in program array are closely tied to Wisconsin's workforce needs
- **2020FWD** reinforces our commitment to strengthen Wisconsin's economy