

# Higher Education Labor Market Data

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# Three Organizing Ideas

- **Hot jobs**
- **Hot skills**
- **High Return on Investment**

# BLS Source of much data on jobs

E.g., Occupational employment projections to 2020

**Table 1. Employment and wages of major occupational groups, 2006, 2010, and projected 2020**  
(Numbers in thousands)

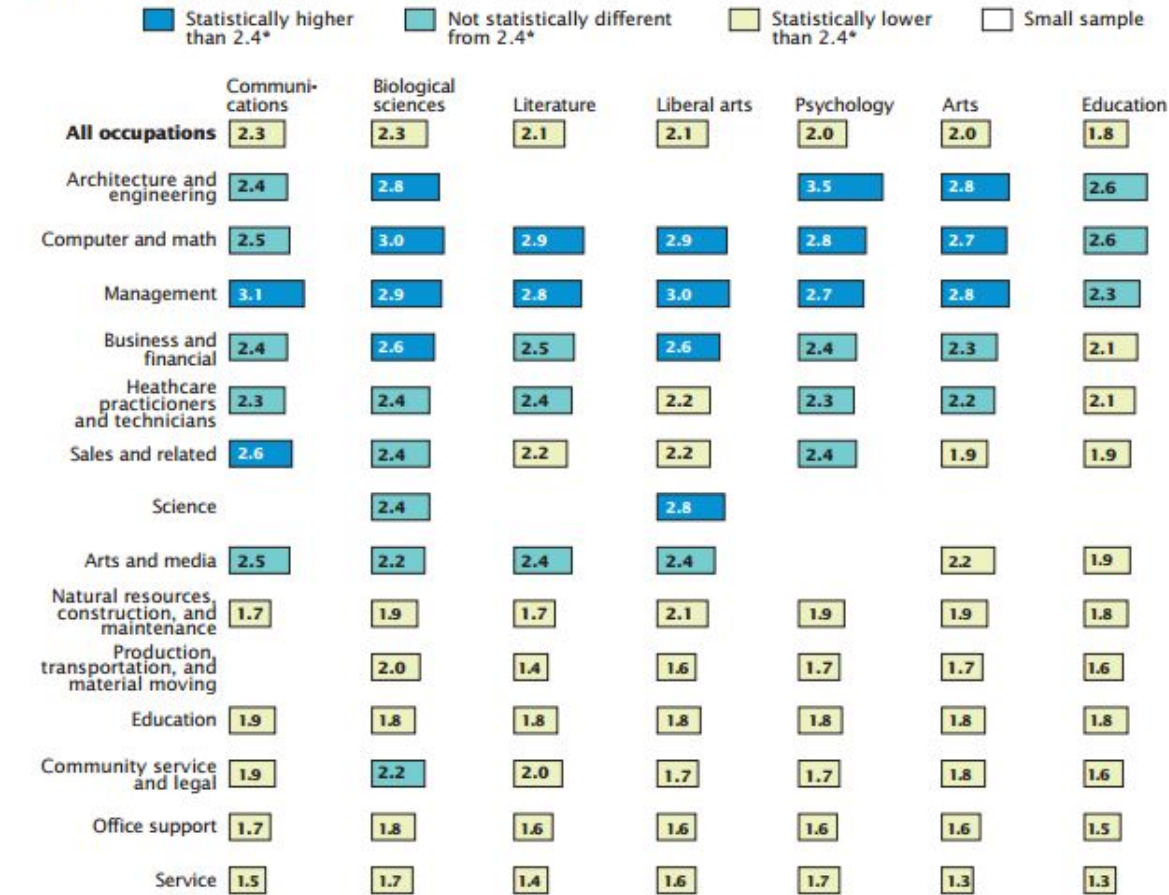
Matrix code	2010 National Employment Matrix title	Employment			Change, 2006–2010		Projected change, 2010–2020		Median annual wage, May 2010 <sup>1</sup>
		2006	2010	2020	Number	Percent	Number	Percent	
00-0000	Total, all occupations	150,620.0	143,068.2	163,537.1	-7,551.8	-5.0	20,468.9	14.3	\$33,840
11-0000	Management occupations	8,771.9	8,776.1	9,391.9	4.2	.0	615.8	7.0	91,440
13-0000	Business and financial operations occupations	6,831.9	6,789.2	7,961.7	-42.7	-6	1,172.5	17.3	60,670
15-0000	Computer and mathematical occupations	3,313.2	3,542.8	4,321.1	229.6	6.9	778.3	22.0	73,720
17-0000	Architecture and engineering occupations	2,583.2	2,433.4	2,686.2	-149.8	-5.8	252.8	10.4	70,610
19-0000	Life, physical, and social science occupations	1,172.6	1,228.8	1,419.6	56.2	4.8	190.8	15.5	58,530
21-0000	Community and social service occupations	2,385.5	2,402.7	2,985.0	17.2	.7	582.3	24.2	39,280
23-0000	Legal occupations	1,222.2	1,211.9	1,342.9	-10.3	-8	131.0	10.8	74,580
25-0000	Education, training, and library occupations	9,033.7	9,193.6	10,597.3	159.9	1.8	1,403.7	15.3	45,690

# ACS: Gotta Love government reports\*

Figure 1.

## Synthetic Work-Life Earnings by Field of Bachelor's Degree and Occupation Group for Full-Time, Year-Round Workers Whose Highest Attainment is a Bachelor's Degree—Con.

(In millions of dollars. Data based on sample. For information on confidentiality protection, sampling error, nonsampling error, and definitions, see [www.census.gov/acs/www/](http://www.census.gov/acs/www/))



\*Colors represent statistical difference from the average for all bachelor's degree holders—2.4 million.

Notes: Synthetic work-life earnings represent expected earnings over a 40-year time period for the population aged 25–64 who maintain full-time, year-round employment the entire time. Calculations are based on median annual earnings from a single point in time for eight 5-year age groups multiplied by five. Not all fields of degree and occupations are shown here. Please see Appendixes A and B at [www.census.gov/prod/2012pubs/acsbr11-04a.pdf](http://www.census.gov/prod/2012pubs/acsbr11-04a.pdf) for more details on the creation of these categories.

Source: U.S. Census Bureau, 2011 American Community Survey.

\*or thank you Tony Carnevale

# States will then issue state reports based mostly on these data

## TWC: Fastest growing Occupations

Occupation	2014	2024	delta
<a href="#">Wind Turbine Service Technicians</a>	1,370	3,140	130%
<a href="#">Statisticians</a>	1,380	2,090	52%
<a href="#">Occupational Therapy Assistants</a>	3,720	5,560	49%
<a href="#">Nurse Practitioners</a>	8,090	11,970	48%
<a href="#">Diagnostic Medical Sonographers</a>	4,570	6,650	46%
<a href="#">Commercial Divers</a>	330	480	45%
<a href="#">Operations Research Analysts</a>	7,980	11,570	45%

## THEC Supply/Demand Analysis

Table 7: Programs of study with largest projected deficit in workforce preparation<sup>9</sup>

Program of Study Code	Program of Study	Projected Annual Openings	Number of Completers, AY 2015	Projected Workforce Deficit	Median Salary
14.2000000	Selling and Sales Management	6,985	2	6,983	\$34,589
04.6000000	Administrative and Information Support	7,335	1,618	5,717	\$33,357
13.1000000	Precision Production Pathway	3,685	502	3,183	\$33,287
04.5000000	Communications Development	2,355	163	2,192	\$29,879
13.2200000	Production Operations & Maintenance	2,635	810	1,825	\$41,107
06.3120000	Banking and Finance Support Services	1,580	6	1,574	\$29,982
06.3110000	Banking and Finance	1,660	630	1,030	\$62,936
04.2120000	Accounting Administrative Support	1,715	792	923	\$33,772
02.2700000	All Other Construction	995	118	877	\$38,769
04.4000000	Business Analysis	860	86	774	\$64,644

[http://www.tn.gov/assets/entities/thec/attachments/Academic\\_Supply\\_\\_Occupational\\_Demand\\_-\\_Final\\_Version.pdf](http://www.tn.gov/assets/entities/thec/attachments/Academic_Supply__Occupational_Demand_-_Final_Version.pdf)

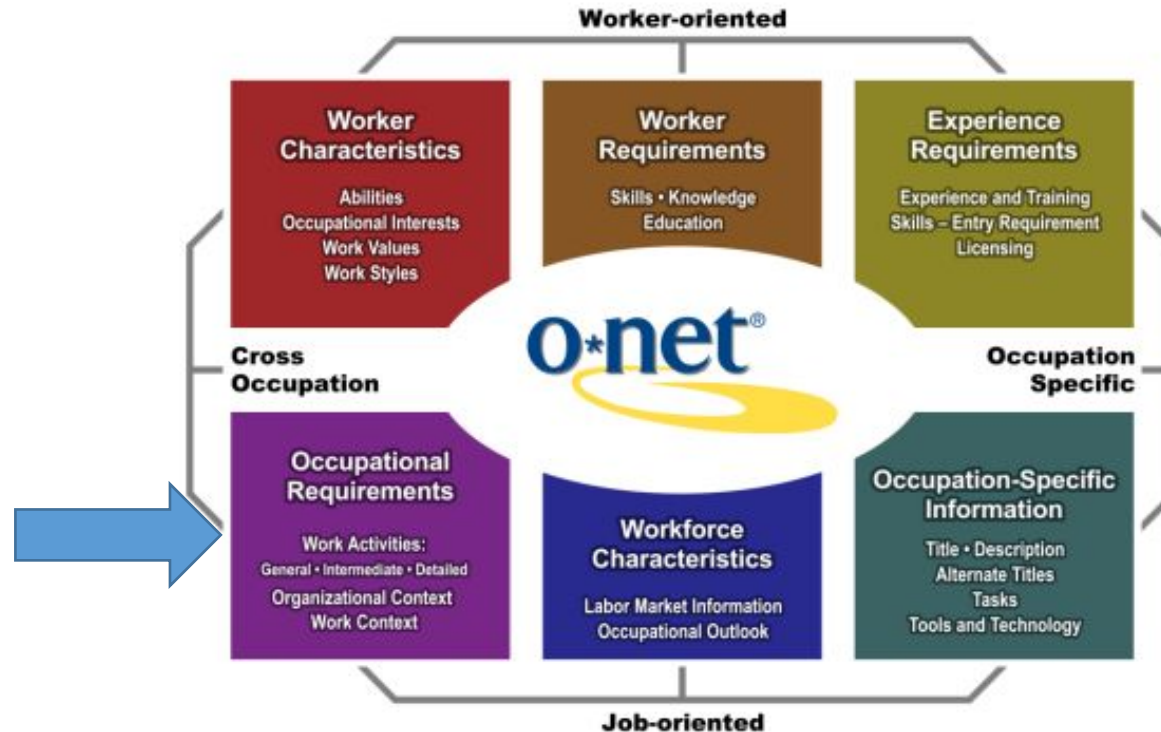
# Hot skills



# The O\*NET® Content Model

## Summary Outline

The Content Model is the conceptual foundation of O\*NET. The Content Model provides a framework that identifies the most important types of information about work and integrates them into a theoretically and empirically sound system.



The Content Model was developed using research on job and organizational analysis. It embodies a view that reflects the character of occupations (via job-oriented descriptors) and people (via worker-oriented descriptors). The Content Model also allows occupational information to be applied across jobs, sectors, or industries (cross-occupational descriptors) and within occupations (occupational-specific descriptors). These descriptors are organized into six major domains, which enable the user to focus on areas of information that specify the key attributes and characteristics of workers and occupations.

**What skills are  
prevalent in **high  
growth, high earning  
occupations?****

**Hot Skills are state/regional specific,  
although common skills include:**

1. Patient care
2. Leading colleagues
3. Analyzing business and finance data
4. Software/app technical support
5. Project management



# Burning Glass: Adding skills to majors Psychology as example.

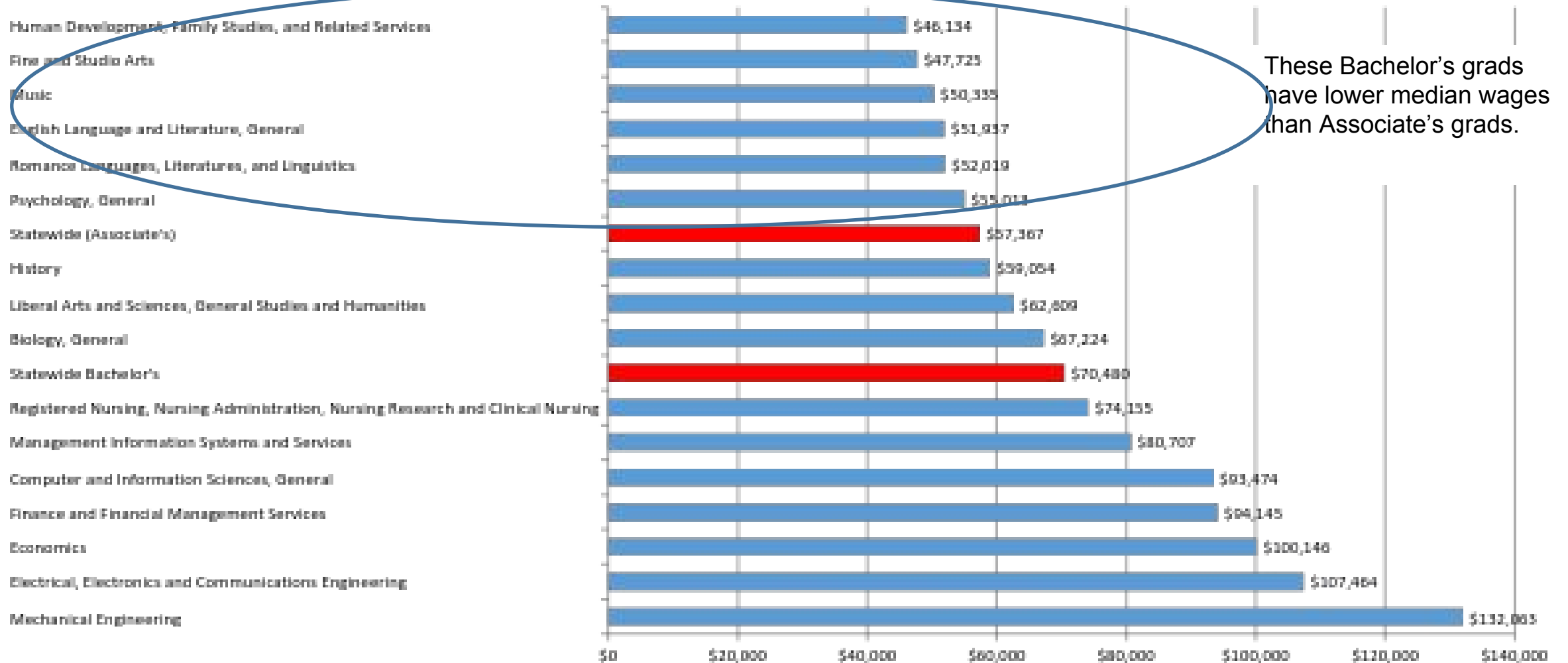
Skills	Number of Entry Level Openings	Sample occupations	Average Entry Level Advertised Salary	Entry Level Wage Premium
Core Psychology	462,528	Admissions Counselor Youth Worker Social Worker	\$42,206	--
Statistics & Data Analysis	51,351	Data Analyst Statistician Business Intelligence Analyst	\$68,788	\$26,582
Medical Research	10,935	Clinical Research Coordinator Clinical Data Manager	\$50,122	\$7,916
Marketing	134,891	Market Research Analyst Marketing Specialist	\$37,691	-\$4,515
Human Resources	178,289	Human Resources Assistant Recruiters	\$44,539	\$2,333



# High Wages/High ROI

# Why This Matters:

## Texas: Median Wages Among Graduates With Bachelor's Degrees in 2014 (10 Years After Completion), by Major



# Certificate in Computer Systems Networking and Telecommunications

*North Lake College*

**\$970,000**  
more over 20 years



# “Standard Sources”

- Federal (great data, often too hard to use)
  - BLS
  - ACS (American Community Survey),
  - PUMS (Public Use Microdata Sample)
  - Scorecard (all enrollees, not just graduates; institution level; “stupid” coding errors)
  - Gainful Employment (mostly for profits; career-oriented programs)
  - NCES: Quick Stats (<https://nces.ed.gov/datalab/quickstats/>)
- State
  - College Measures (by program; UI data)
  - Other states also use UI data (Indiana, Ohio, Georgia)
  - UT system new agreement to use national not state UI data

# The Future

- Far better wage coverage through Census Bureau Center for Administrative Records
  - E.g., Effects of Post 9/11 Veterans Educational Benefits (Just funded by Arnold Foundation)
- Replicating UT/LEHD partnership for all schools in a state
  - E.g., THECB (including UT, A&M, U of Houston systems plus community colleges) rather than just UT