Report of the Higher Education Subcommittee
of the
Arkansas Legislative Council

October 20, 2011

Co-Chairs:

Your Higher Education Subcommittee met on October 20, 2011, and reports the consideration of the following presentations and items by the noted speakers:

A. Bureau of Legislative Research, Policy Analysis and Research Section staff review of national research on "Worth of a Degree"

B. Shane Broadway, Interim Director of the Department of Higher Education, provided a presentation on "The Worth of Degree Programs Across the State"

C. Dr. Karen Cushman, Assistant Commissioner, Division of Human Resources, Arkansas Department of Education, provided information on teacher shortages in Arkansas.

Respectfully submitted,

_____ _____

Senator Sue Madison, Co-Chair Representative Johnnie Roebuck, Co-Chair

STATE OF ARKANSAS

ALC – HIGHER EDUCATION SUBCOMMITTEE (038)
PER DIEM AND MILEAGE REQUEST

TO: Director of the Bureau of Legislative Research

SUBJECT: Request for Per Diem and Mileage for attending Meeting Held on **Oct. 20, 2011 in Room B, MAC.**

We, the undersigned members of the above-referenced committee, hereby certify that we attended the meeting designated above and do hereby request payment of per diem and mileage at the rates set by law in accordance with Arkansas Code §10-2-217.

Senator Name	Representative Name
Senator Sue Madison, Co-Chair	Representative Johnnie J. Roebuck, Co-Chair
Senator Jimmy Jeffress, Vice Chair	Representative Ann V. Clemmer, Vice Chair
Senator Gilbert Baker	Representative John Burris
Senator Joyce Elliott	Representative Les "Skip" Carnine
Senator Kim Hendren	Representative Eddie L. Cheatham
Senator Bruce Holland	Representative Robert E. Dale
Senator Gene Jeffress	Representative Tiffany Rogers
Senator Johnny Key	Representative James L. Word
Senator Mary Anne Salmon, ex officio	Representative Tommy Lee Baker, ex officio
Senator Robert Thompson, ex officio	Representative Terry Rice, ex officio

STATE OF ARKANSAS

HIGHER EDUCATION SUBCOMMITTEE (038)

OF THE ARKANSAS LEGISLATIVE COUNCIL

PER DIEM AND MILEAGE REQUEST FOR NON COMMITTEE MEMBERS

TO: Director of the Bureau of Legislative Research

SUBJECT: Request for Per Diem and Mileage for attending Meeting Held on **OCT. 20, 2011, in Room A, MAC.**

We the undersigned, hereby certify that we attended the meeting designated above and do hereby request payment of per diem and mileage at the rates set by law in accordance with A.C.A. § 10-2-217.

	(signature)	(print name)	(Chair approval)
☐ Sen. ☐ Rep.		Tim Summers	
☐ Sen. ☐ Rep.		Andrea Lea	
☐ Sen. ☐ Rep.		David Wyatt	
☐ Sen. ☐ Rep.		James McLean	
☐ Sen. ☐ Rep.		Butch Wilkins	
☐ Sen. ☐ Rep.		Jim Nichols	
☐ Sen. ☐ Rep.		Tommy Wyatt	
☐ Sen. ☐ Rep.		Larry R Teague	
☐ Sen. ☐ Rep.		Randy Laverty	
☐ Sen. ☐ Rep.			
☐ Sen. ☐ Rep.			
☐ Sen. ☐ Rep.			

STATE OF ARKANSAS

HIGHER EDUCATION SUBCOMMITTEE (038)

OF THE ARKANSAS LEGISLATIVE COUNCIL

PER DIEM AND MILEAGE REQUEST FOR NON COMMITTEE MEMBERS

TO: Director of the Bureau of Legislative Research

SUBJECT: Request for Per Diem and Mileage for attending Meeting Held on OCT. 20, 2011, in Room A, MAC.

We the undersigned, hereby certify that we attended the meeting designated above and do hereby request payment of per diem and mileage at the rates set by law in accordance with A.C.A. § 10-2-217.

	(signature)	(print name)	(Chair approval)
☐ Sen. ☐ Rep.		Jeff Wardlaw	
☐ Sen. ☐ Rep.		DAVID C. BRANSCUM	
☐ Sen. ☐ Rep.		Kelley J Linck	
☐ Sen. ☐ Rep.		Buddy Lovell	
☐ Sen. ☐ Rep.		Sheilla Lampkin	
☐ Sen. ☐ Rep.			
☐ Sen. ☐ Rep.		LORI BENEDICT	
☐ Sen. ☐ Rep.		Karen Hopper	
☐ Sen. ☐ Rep.			
☐ Sen. ☐ Rep.		John Cathey	
☐ Sen. ☐ Rep.		David Fielding	
☐ Sen. ☐ Rep.		Jody Dickinson	

AGENDA
Higher Education Subcommittee
of the
Arkansas Legislative Council

Thursday, October 20, 2011
01:00 PM
Room B, MAC
Little Rock, Arkansas

Sen. Sue Madison, Chair
Sen. Jimmy Jeffress, Vice Chair
Sen. Gilbert Baker
Sen. Kim Hendren
Sen. Gene Jeffress
Sen. Johnny Key
Sen. Joyce Elliott
Sen. Bruce Holland
Sen. Mary Anne Salmon, ex-officio
Sen. Robert Thompson, ex-officio

Rep. Johnnie J. Roebuck, Chair
Rep. Ann V. Clemmer, Vice Chair
Rep. Eddie L. Cheatham
Rep. James L. Word
Rep. Les "Skip" Carnine
Rep. Robert E. Dale
Rep. Tiffany Rogers
Rep. John Burris
Rep. Tommy Lee Baker, ex-officio
Rep. Terry Rice, ex-officio

A. Call to Order

B. Worth of a Degree [**Exhibit B**]
Jerri Derlikowski, Administrator, Policy Analysis and Research Section, Research Division, BLR

C. The Worth of Degree Programs Across the State
Mr. Shane Broadway, Interim Director, Ark. Dept. of Higher Education

D. Teacher Shortage Areas
Dr. Karen Cushman, Assistant Commissioner, Div. of Human Resources, Ark. Dept. of Education

E. Other Business

F. Adjournment

Notice: Silence your cell phones. Keep your personal conversations to a minimum. Observe restrictions designating areas as "*Members and Staff Only*"

Bureau of Legislative Research

Policy Analysis & Research Section

ECONOMIC VALUE OF A COLLEGE DEGREE

October 2011

One Capitol Mall, 5TH Floor ~ Little Rock, AR, 72201
(501) 682-1937 Fax: 682-3072
www.blr.arkansas.gov

Summary of Reports Used

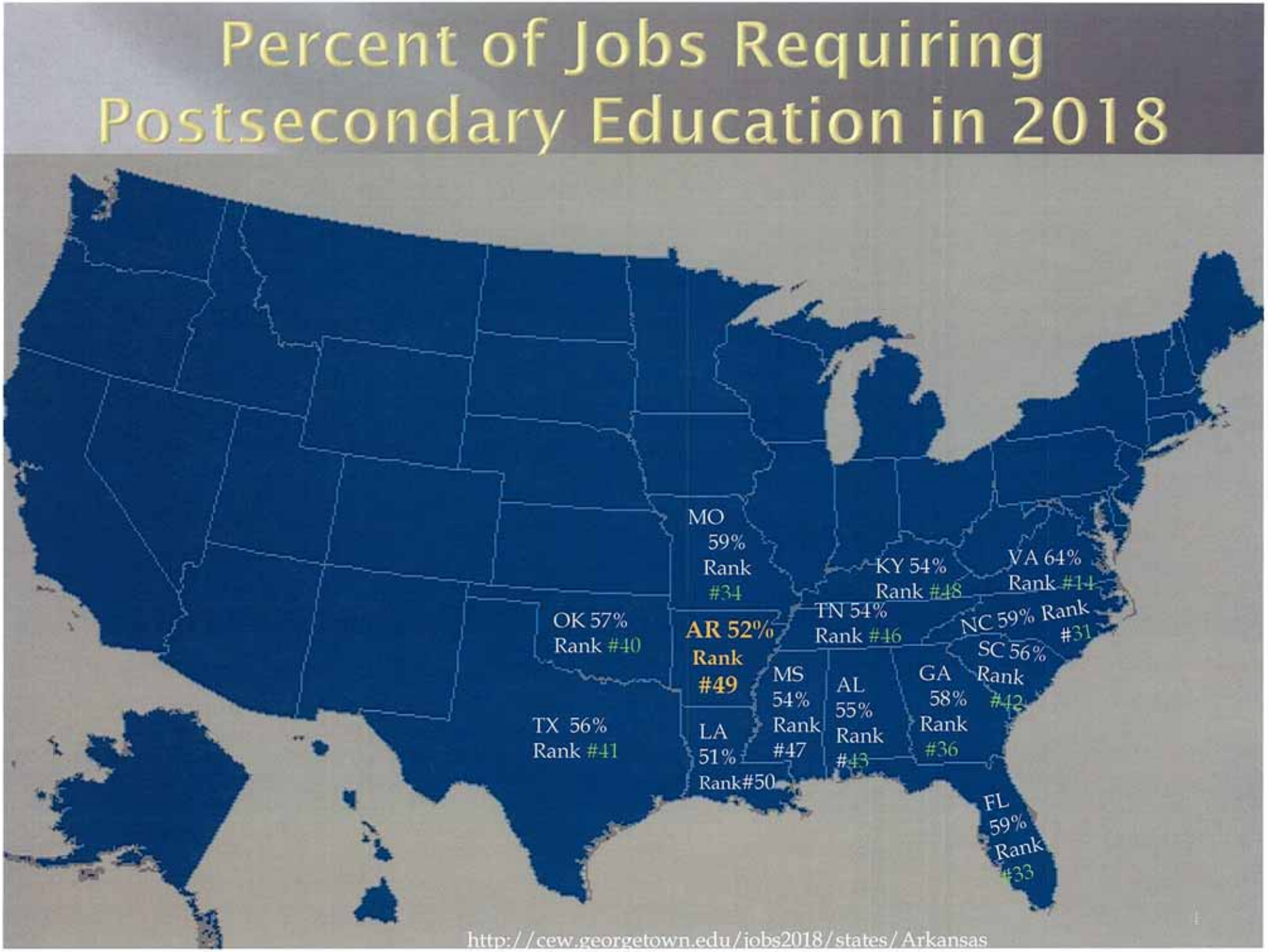
- "The College Payoff" Georgetown University Center on Education and the Workforce
- "What's it Worth? The Economic Value of College Majors" Georgetown University Center on Education and the Workforce
- "Degrees" SREB Fact Book 2009
- "Arkansas" Georgetown University Center on Education and the Workforce
- "Median Earnings by Major and Subject Area" The Chronicle of Higher Education
- "The dreaded "P" word Delta Cost Project
- "Valuing Certificates: Defining the Value of Certificates" Georgetown University Center on Education and the Workforce

Different Majors Have Different Economic Value

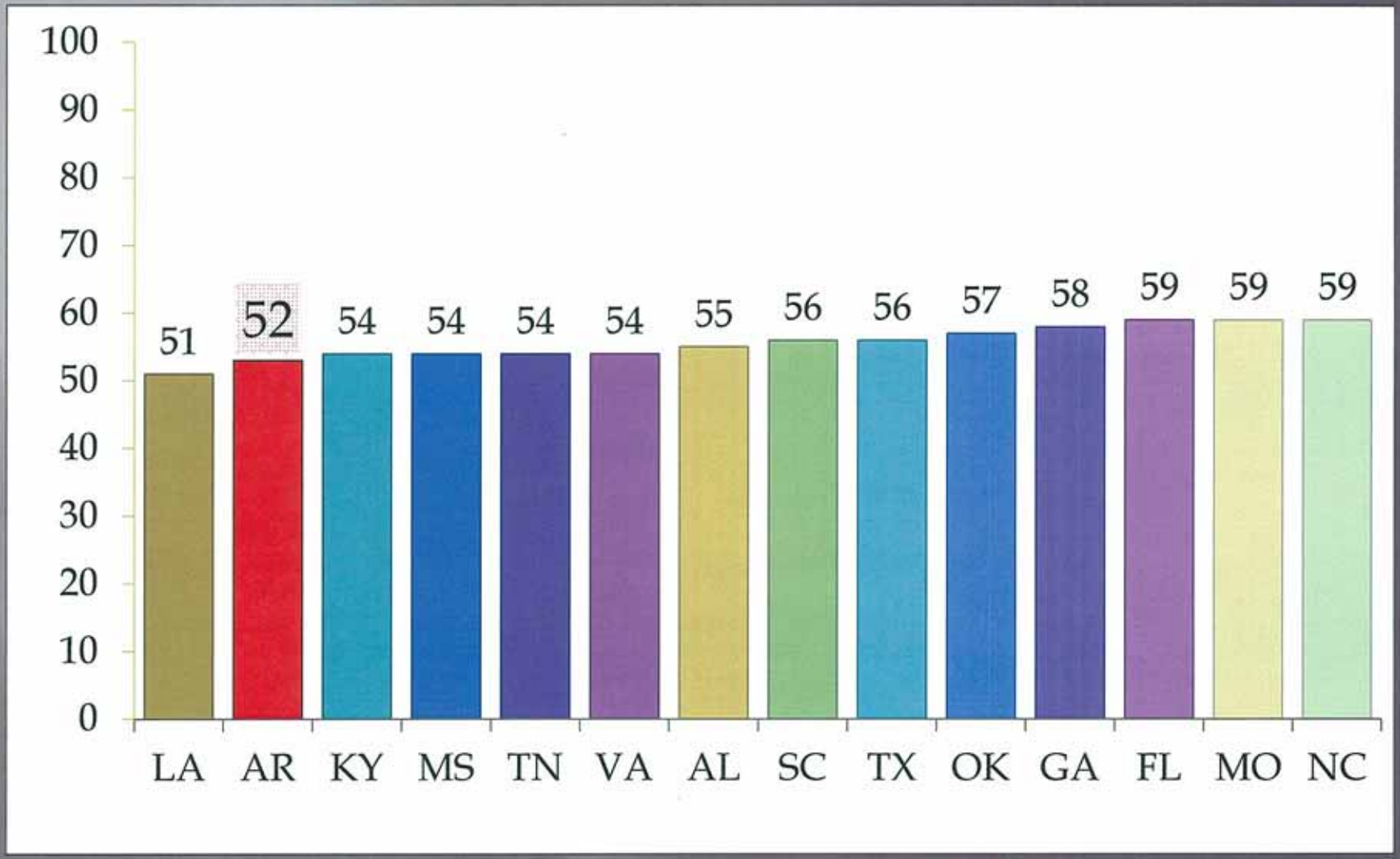
- Any Degree is better than no degree, there are significant differences in degrees.
- Over a lifetime, a Bachelor's degree is worth $2.8 million on average, 75% more than that earned by a high school graduate.

Sources: "What's it Worth? The Economic Value of College Majors" Georgetown University Center on Education and the Workforce
"The College Payoff; Education, Occupations, Lifetime Earnings"

Percent of Jobs Requiring Postsecondary Education in 2018



SREB STATES - Percent of Jobs Requiring Postsecondary Education

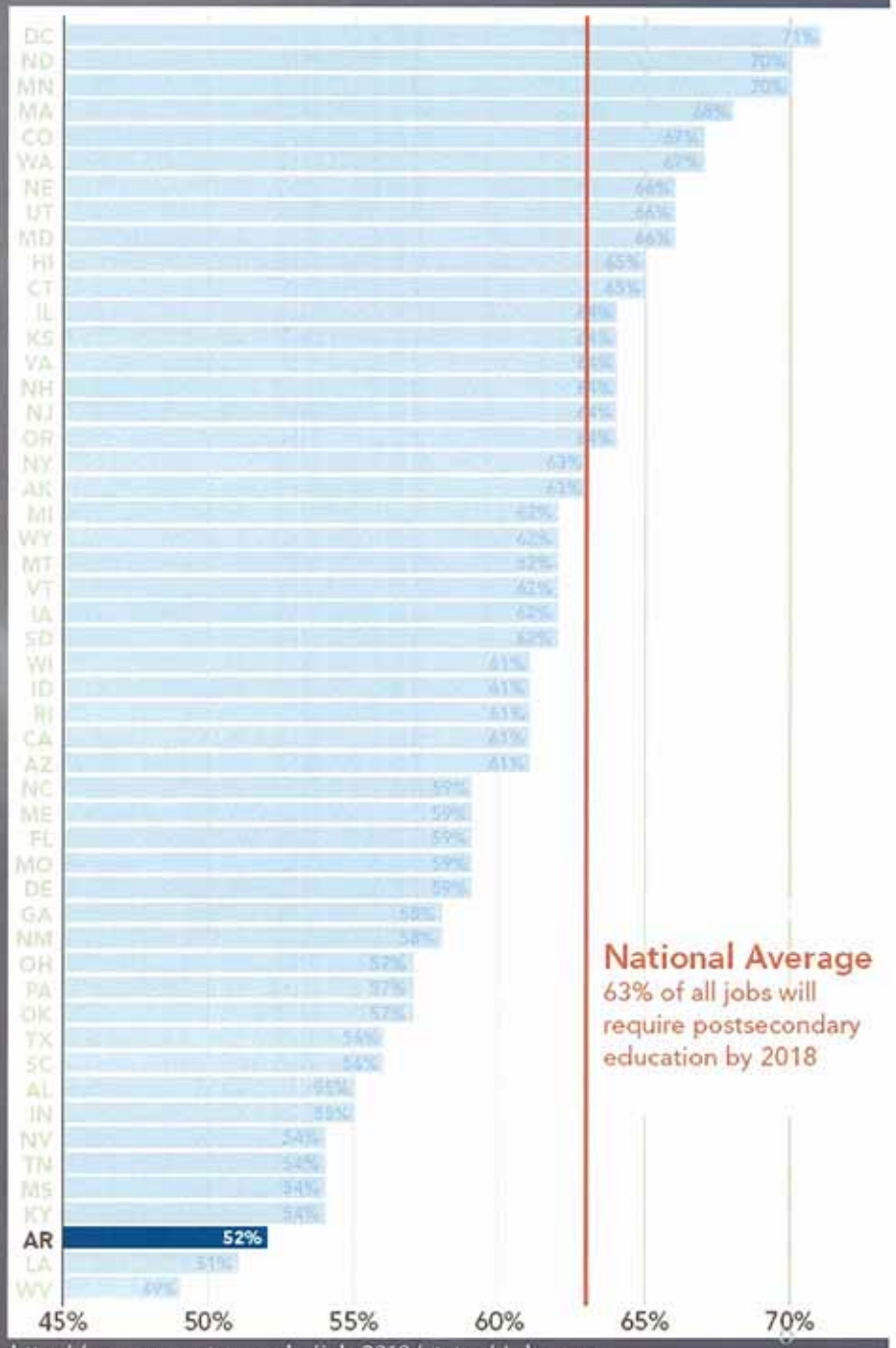


http://cew.georgetown.edu/jobs2018/states/Arkansas

Arkansas

- Between 2008 and 2018, new jobs in Arkansas requiring postsecondary education and training will grow by 86,000 while jobs for high school graduates and dropouts will grow by 63,000.• Between 2008 and 2018, Arkansas will create 419,000 job vacancies both from new jobs and from job openings due to retirement.
- 217,000 of these job vacancies will be for those with postsecondary credentials, 150,000 for high school graduates and 52,000 for high school dropouts.
- Arkansas ranks 47th in terms of the proportion of its 2018 jobs that will require a Bachelor's degree, and is 9th in jobs for high school dropouts.
- 52% of all jobs in Arkansas (750,000 jobs) will require some postsecondary training beyond high school in 2018.

Job vacancies arise from two sources: There are brand new positions created as an occupation grows, and there are pre-existing jobs that people leave behind when they retire, or move into other occupations.



http://cew.georgetown.edu/jobs2018/states/Arkansas

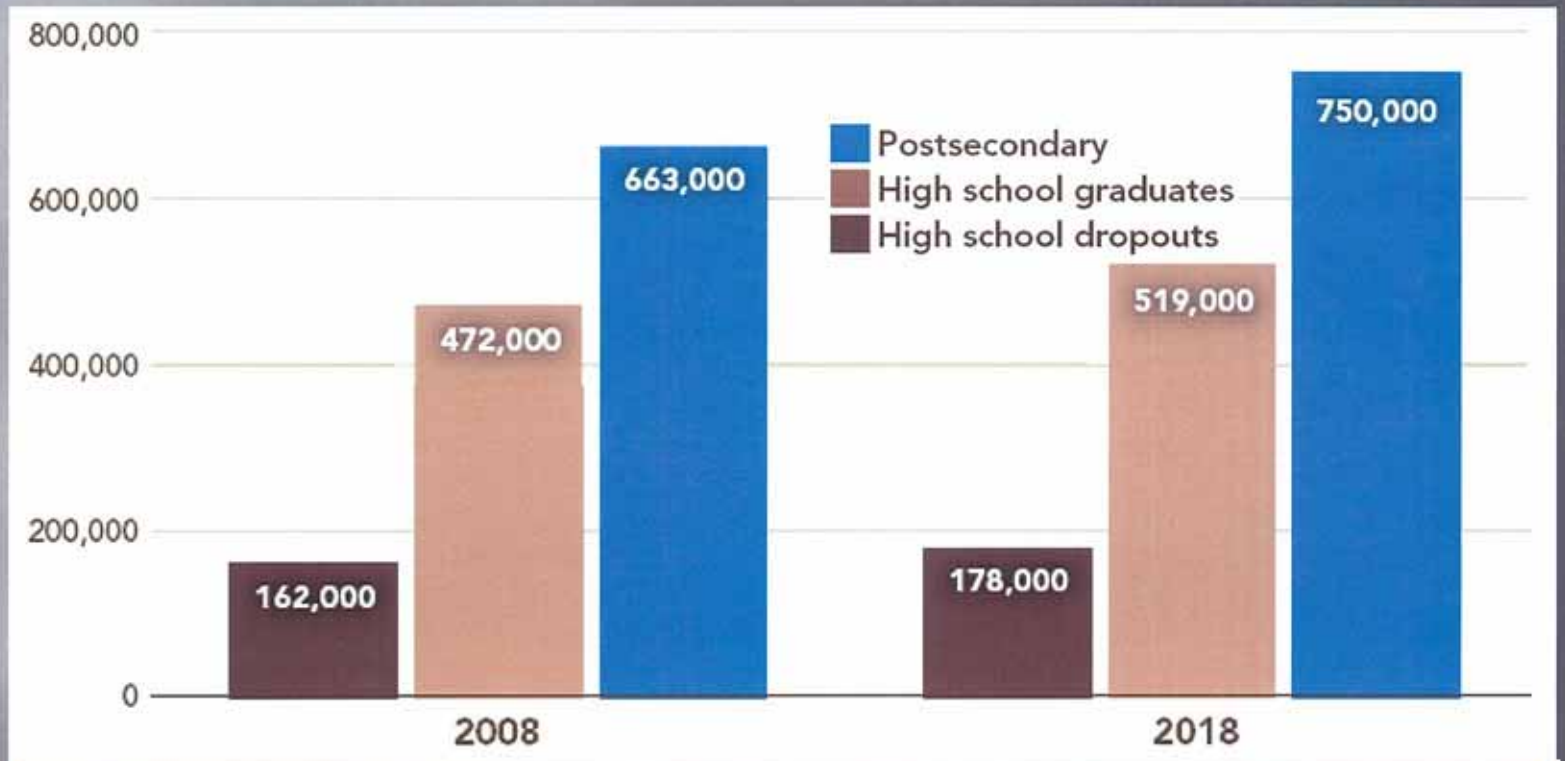
ARKANSAS (continued)

ARKANSAS'S RANK IN JOBS FORECASTED FOR 2018, BY EDUCATION LEVEL

Education level	2018 Jobs	Rank
High school dropouts	178,000	9
High school graduates	519,000	2
Some college, no degree	334,000	17
Associate's degree	108,000	47
Bachelor's degree	217,000	47
Graduate degree	92,000	51

http://cew.georgetown.edu/jobs2018/states/Arkansas

ARKANSAS (continued)



CHANGE IN JOBS BY EDUCATION LEVEL: 2008 AND 2018.

Education level	2008 Jobs	2018 Jobs	Difference
High school dropouts	162,000	178,000	16,000
High school graduates	472,000	519,000	47,000
Postsecondary	663,000	750,000	86,000

http://cew.georgetown.edu/jobs2018/states/Arkansas

ARKANSAS

WHERE THE JOBS WILL BE IN 2018, BY OCCUPATION AND EDUCATION LEVEL (in thousands of jobs)*								
OCCUPATIONS		High school dropouts	High school graduates	Some college	Associate's degree	Bachelor's degree	Graduate degree	Total
Managerial and Professional Office	Management	3	21	19	6	21	9	79
	Business operations specialty	1	5	9	3	10	2	29
	Financial specialists	0	2	3	1	12	2	20
	Legal	0	1	2	0	1	4	8
STEM	Computer and mathematical science	0	2	6	2	11	2	24
	Architects and technicians	0	0	1	1	2	0	4
	Engineers and technicians	0	2	2	2	6	1	13
	Life and physical scientists	-	1	1	0	2	2	7
	Social scientists	-	0	1	0	1	2	4
Community Services and Arts	Community and social services	0	2	3	1	8	5	20
	Arts, design, entertainment, sports, and media	0	3	4	1	6	1	15
Education	Education	1	8	10	4	40	27	90
Healthcare	Healthcare practitioners	0	7	16	23	19	20	85
	Healthcare support	6	17	12	4	1	1	41
Food and Personal Services	Food preparation and serving	26	55	21	6	5	0	113
	Building and grounds cleaning and maintenance	15	25	9	2	2	0	52
	Personal care	4	15	10	2	2	1	35
	Protective services	1	10	12	3	3	0	29
Sales and Office Support	Sales	15	54	42	10	26	4	151
	Office and administrative support	11	79	66	20	27	3	206
Blue Collar	Farming, fishing and forestry	6	7	2	0	0	-	16
	Construction and extraction	18	34	13	2	2	1	70
	Installation, maintenance, and equipment repair	10	27	17	5	2	0	62
	Production	31	73	31	6	5	1	146
	Transportation and material moving	30	68	23	4	4	0	129
TOTAL**		178	519	334	108	217	92	1,447

* *Zero does not necessarily mean no jobs. Since jobs are rounded to the nearest thousand, zero means less than 500 jobs.*

***Total jobs are a snapshot of the economy that shows where jobs are located by education type. They differ from job vacancies because total jobs are filled by people currently working in these positions who may not be leaving in the short-term to create a job opening.*

Earnings For The Top 10 Most Popular Majors

	Percent of All Majors	Median	Earnings at 25th Percentile	Earnings at 75th Percentile
Business Management and Administration	8	58,000	40,000	85,000
General Business	5	60,000	40,000	90,000
Accounting	5	63,000	43,000	95,000
Nursing	4	60,000	48,000	80,000
Psychology	3	45,000	31,000	65,000
Marketing and Marketing Research	3	58,000	40,000	88,000
Communications	3	50,000	35,000	77,000
Elementary Education	3	40,000	31,000	50,000
Computer Science	3	75,000	50,000	100,000
Finance	3	65,000	43,000	100,000

*Full-time, full-year workers with a terminal Bachelor's

Source: "What's it Worth? The Economic Value of College Majors" Georgetown University Center on Education and the Workforce

Earnings For The Top 10 Least Popular Majors

	Percent of All Majors	Median	Earnings at 25th Percentile	Earnings at 75th Percentile
Actuarial Science	<.01	68,000	53,000	126,000
Electrical and Mechanic Repairs and Technologies	<.01	57,000	39,000	70,000
Metallurgical Engineering	<.01	80,000	50,000	106,000
Naval Architecture and Marine Engineering	<.01	82,000	44,000	120,000
Botany	<.01	42,000	29,000	56,000
Mining and Mineral Engineering	<.01	80,000	52,000	125,000
Oceanography	<.01	70,000	42,000	110,000
Physical Sciences	<.01	69,000	50,000	92,000
Mathematics and Computer Science	<.01	98,000	75,000	134,000
Miscellaneous Agriculture	<.01	47,000	30,000	54,000

*Full-time, full-year workers with a terminal Bachelor's

Source: "What's it Worth? The Economic Value of College Majors" Georgetown University Center on Education and the Workforce

Top 10 Majors With The Highest Unemployment Rates

	Unemployment Rate
Social Psychology	16
Nuclear Engineering	11
Educational Administration and Supervision	11
Biomedical Engineering	11
Linguistics and Comparative Language and Literature	10
Mathematics and Computer Science	10
United States History	10
Court Reporting	10
Counseling Psychology	10
Studio Arts	9

Source: "What's it Worth? The Economic Value of College Majors" Georgetown University Center on Education and the Workforce

MEDIAN EARNINGS BY MAJOR AND SUBJECT AREA

http://chronicle.com/article/Median-Earnings-by-Major-and/127604/

Source: "What's it Worth? The Economic Value of College Majors" Georgetown University Center on Education and the Workforce

Arkansas Summary by Degree Level Fiscal Year 2009-2010

	FTE Enrollment	No. of Majors	Degrees Granted	Average Cost of Degree	Total Cost to the State
Certificates	7,526	13,600	7,046	$12,950	36%
Associate Degrees	35,222	65,676	6,583	$22,750	31%
Bachelors Degrees	47,325	64,330	9,622	$57,760	30%
Masters Degrees	6,968	12,803	3,154	$21,650	44%
First Professional (Law)	1,033	889	269	$66,770	14%
Educational Specialist	155	328	48	$33,780	53%
Doctorate Degrees	1,286	1,936	247	$72,470	65%
Statewide Total			26,969		

Source: ADHE 2009-2010 Arkansas Academic Cost Accounting; Uniform Reporting of General Revenues, Expenditures, and Academic Productivity

Loan Default Rates

4 Year Universities	2006	2007	2008	2009
Arkansas State University- Jonesboro*	7.7%	8.2%	10.1%	13.3%
Arkansas Tech University	8.9%	9.3%	9.8%	13.7%
Henderson State University	6.2%	6.8%	9.8%	11.9%
Southern Arkansas University	10.4%	11.5%	11.6%	10.8%
University of Arkansas Fayetteville	2.3%	3.4%	4.3%	4.7%
University of Arkansas Fort Smith	9.6%	11.2%	10.8%	12.3%
University of Arkansas Little Rock	6.9%	8.9%	9.1%	9.7%
University of Arkansas Monticello	11.5%	13.4%	14.7%	20.1%
University of Arkansas Medical Science	0.2%	1.2%	1.6%	1.4%
University of Arkansas Pine Bluff	15.4%	15.9%	17.3%	21.1%
University of Central Arkansas	6.9%	6.4%	9.4%	8.6%

* Arkansas State Mountain Home and Arkansas State Newport are included in Arkansas State University- Jonesboro

Source: Arkansas Department of Higher Education

Loan Default Rates

2 Year	2006	2007	2008	2009	2 Year	2006	2007	2008	2009
ANC	10.8%	9.7%	12.8%	19.8%	COTO	15.4%	11.2%	9.9%	12.2%
ASUB	9.2%	8.9%	11.8%	14.8%	OZC	16.5%	7.5%	13.9%	26.3%
ASUMH					PCCUA	9.8%	8.6%	21.2%	17.2%
ASUN					PTC	10.3%	12.3%	14.9%	14.7%
BRTC	12.7%	14.4%	12.1%	16.1%	RMCC	0.0%	0.0%	0.0%	0.0%
CCCUA	0.0%	0.0%	0.0%	0.0%	SACC	10.5%	9.8%	9.0%	12.8%
EACC	10.2%	11.7%	21.4%	13.5%	SAUT	13.2%	15.8%	10.7%	12.3%
MSCC	0.0%	0.0%	0.0%	0.0%	SEAC	20.8%	13.6%	12.3%	16.3%
NAC	11.1%	16.0%	9.2%	13.1%	UACCB	13.8%	19.1%	18.5%	26.5%
NPCC	13.0%	18.5%	16.1%	18.8%	UACCH	12.9%	12.5%	11.7%	14.1%
NWACC	6.8%	7.8%	8.9%	13.6%	UACCM	11.1%	11.5%	7.5%	11.8%

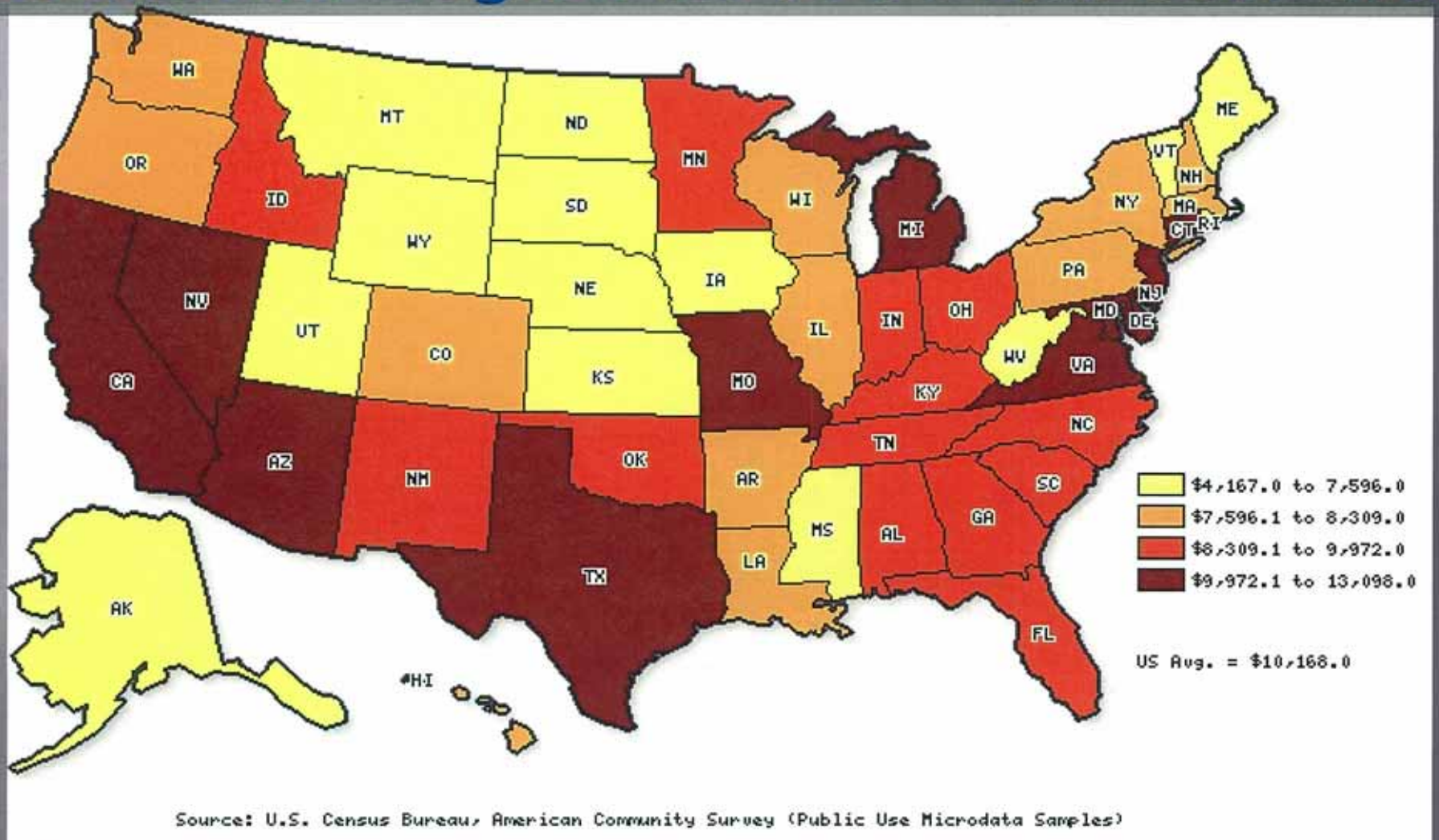
* Arkansas State Mountain Home and Arkansas State Newport are included in Arkansas State University- Jonesboro

Source: Arkansas Department of Higher Education

Median Lifetime Earnings by Highest Educational Attainment, 2009 Dollars

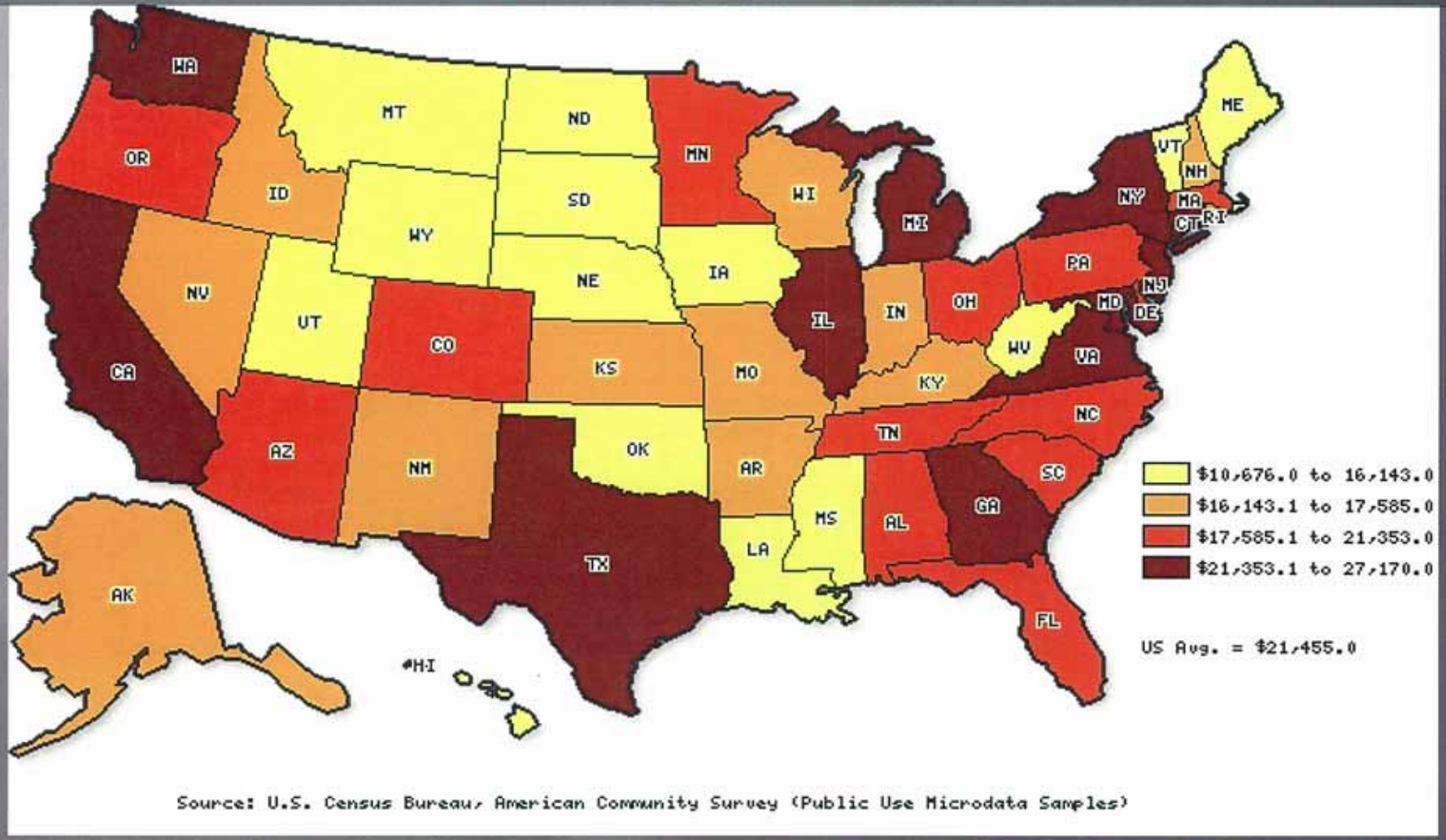
Source: "The College Payoff; Education, Occupations, Lifetime Earnings;" Georgetown University Center on Education and the Workforce

Difference in Median Earnings Between a High School Diploma and an Associates Degree 25 to 64 Year Olds-2007



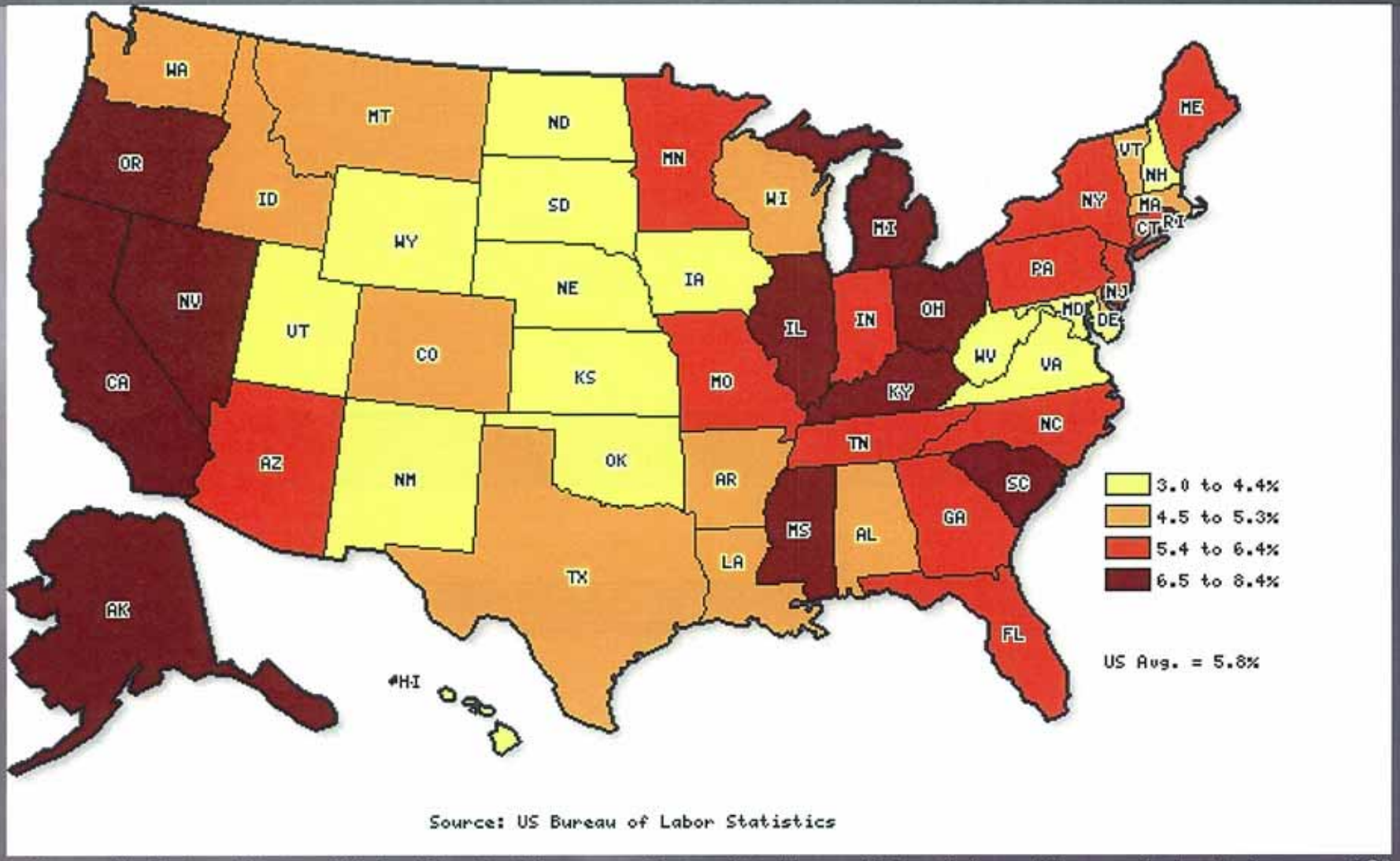
Source: The National Center of Higher Education Management System http://www.higheredinfo.org/dbrowser/index.php?measure=50

Difference in Median Earnings Between a High School Diploma and a Bachelors Degree 25 to 64 Year Olds-2007



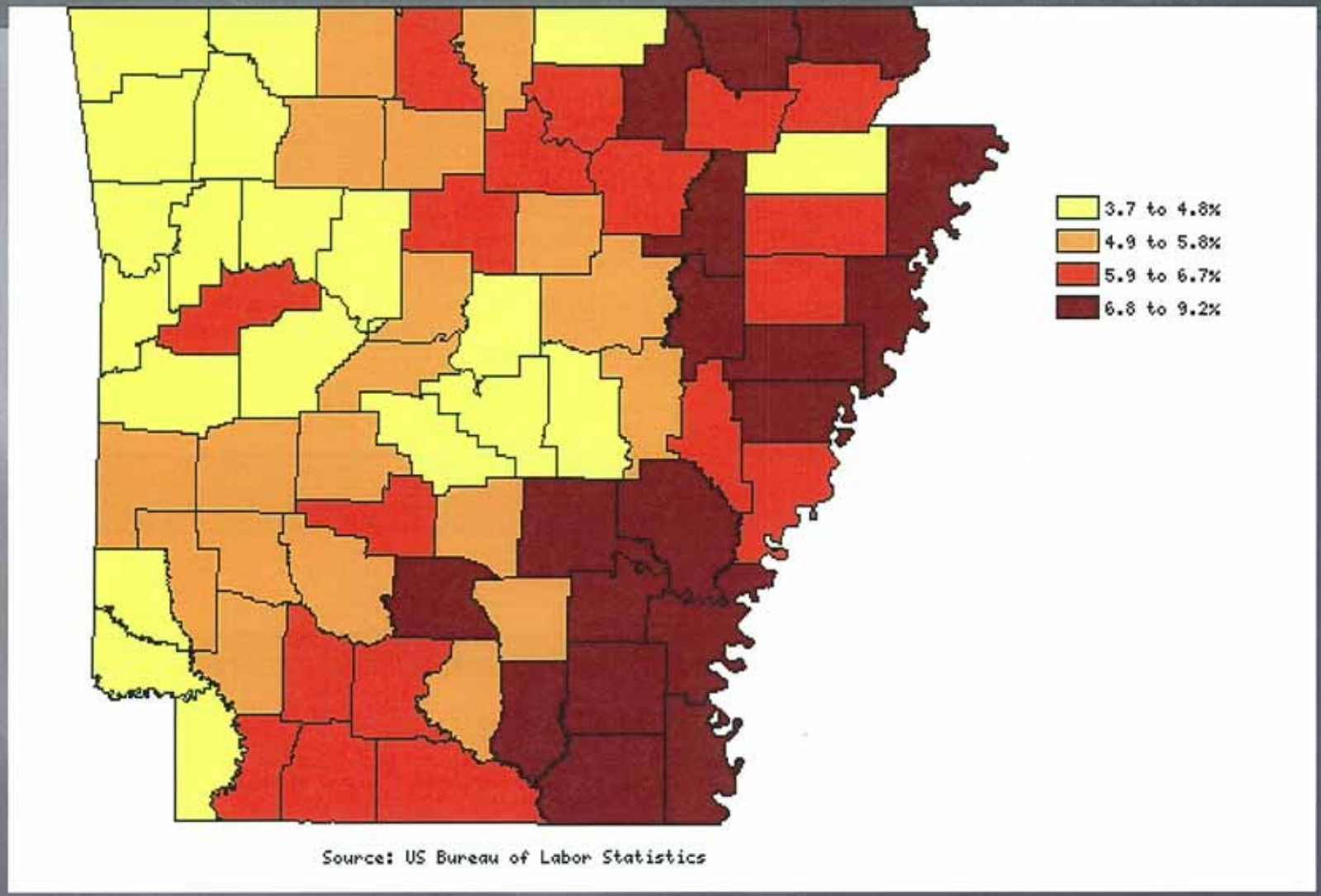
Source: The National Center of Higher Education Management System http://www.higheredinfo.org/dbrowser/index.php?measure=50

Unemployment Rates- 2008



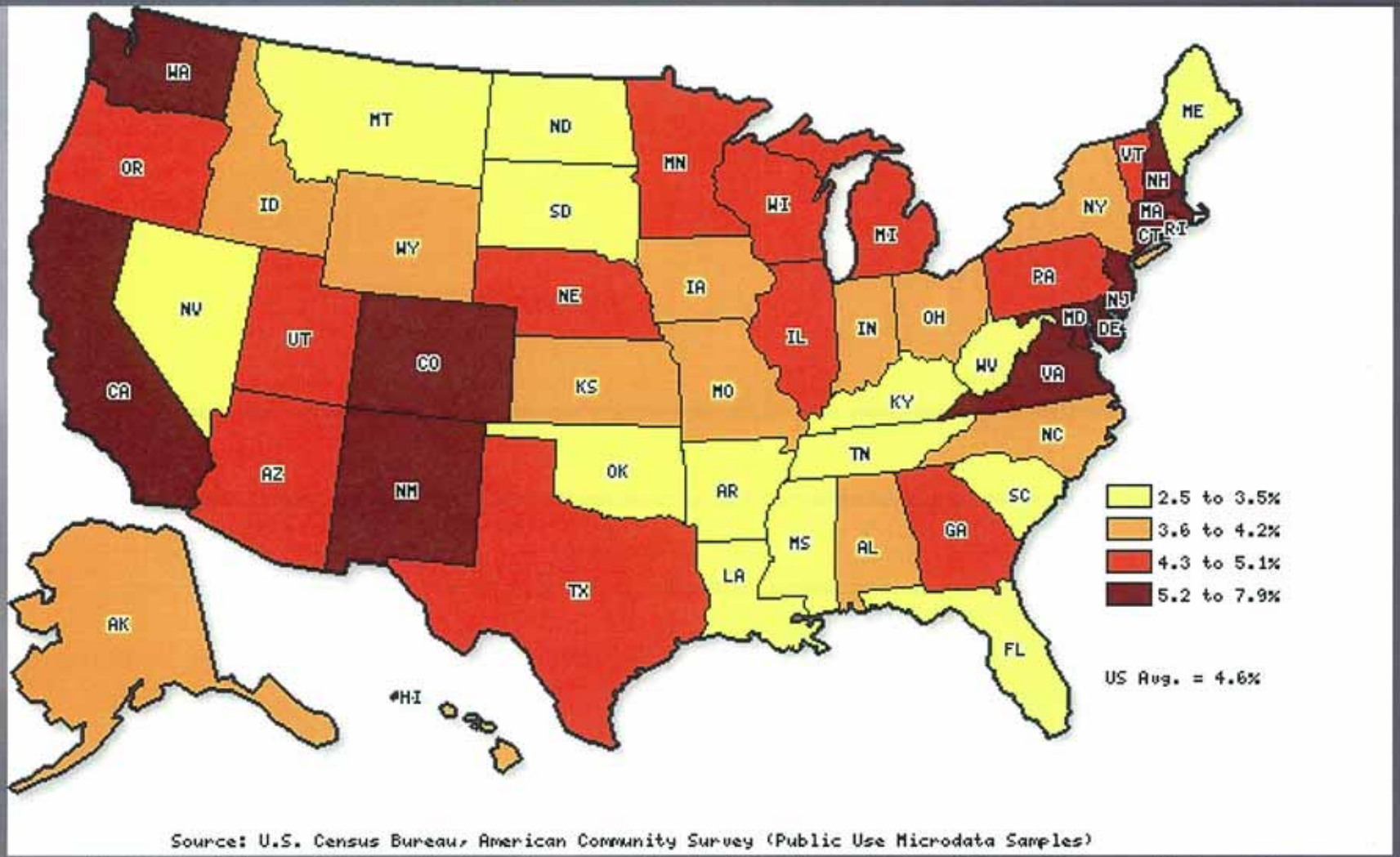
Source: The National Center of Higher Education Management System http://www.higheredinfo.org/dbrowser/index.php?measure=520

Unemployment Rates- 2008



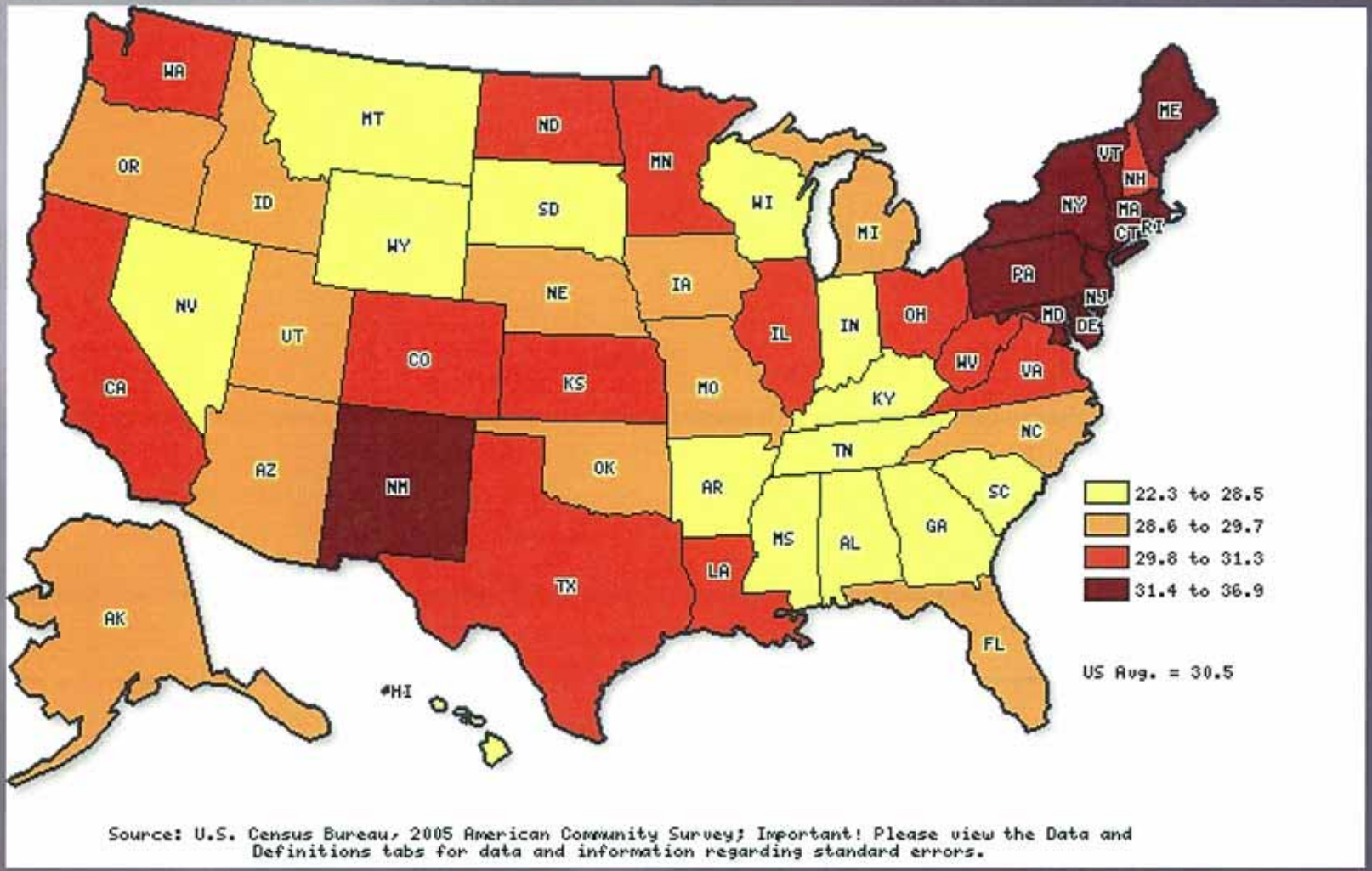
Source: The National Center of Higher Education Management System http://www.higheredinfo.org/dbrowser/index.php?measure=50

Percent Employment in Science, Technology, Engineering, and Mathematics Occupations - 2006



Source: The National Center of Higher Education Management System http://www.higheredinfo.org/dbrowser/index.php?measure=50

Percent Employment in Professional, Education, Health, and Social Service Industries - 2005



Source: The National Center of Higher Education Management System http://www.higheredinfo.org/dbrowser/index.php?measure=50

"When considering the question of whether earning a college degree is worth the investment in these uncertain economic times, here is a number to keep in mind"

84 Percent

Source: What's it Worth? The Economic Value of College Majors; Georgetown University Center on Education and the Workforce

Examples of Debt Issues

Arkansas Democrat-Gazette & Arkansas Times

- A 21 year old International relations major from the U of A has been looking for a job for 4 months, and hasn't had a single interview.
- A 22 year old computer science major from the U of A secured a job in October before his spring graduation date.
- 2009 Central High graduate attends the University of Arkansas on a Bodenhamer Fellowship, which pays for tuition and fees and a stipend of $1,000 a semester. Worth $50,000 over 5 years, pays for study abroad, also.

Source: Arkansas Democrat- Gazette, 2009 April 20; Section: Arkansas; Page: 1
Arkansas Times, 2011 August 17; Free ride or pay the fare?

Debt of College Graduates

USA Today

- The average college senior graduated this year with more than $19, 000 in debt.
- A 25 old graduate from Rutgers University with a master's degree in public policy has student loans exceeding $116,000.
  - His payments will average about $ 800 a month
  - His final year of graduate school his tuition was paid
- Nearly a quarter of four-year public school graduates and 38% of private-school graduates who become teachers can't afford to repay their debts on a starting teacher's salary.
- For social workers, the statistics were worse: 37% of public and 55% of private school graduates start their careers with unmanageable debt.

Source: USA Today; 2006 June 12; College Debts pilling higher than ever

Debt, Debt and more Debt

The Wall Street Journal

- The U.S. Education Department in 2008-2009 academic year show that the total amount borrowed by students grew about 25% over the previous year, to 75.1 billion.
- The new numbers highlight how debt has become commonplace in paying for higher education.
- Two-thirds of college students borrow to pay for college, and their average debt load is $23,186 by the time they graduate.

Source: The Wall Street Journal; 2009 September 3; Students Borrow more than ever for College

South Lacking in "Middle-Skills" Workers

News from Clark County

- The National Skills Coalition released information that show 51% of all jobs in the American South fall into "middle-skills" category, requiring education and training beyond high school but less than a four-year degree.
- A study done also indicates that the shortage will continue to rise unless efforts are made to promote more training and education programs at the two-year technical schools.
- A report last fall indicated that student debt had reached $850 billion, nearly $25 billion more than the nation's consumer credit card debt loan.

Source: News for Clark County; 2011 August 22; Study: South lacking in 'middle-skills' workers

Governor Mike Bebee

- "There is something to be said for learning for learning's sake, without regard to how it relates specifically to a job. We have heard that what companies want is not necessarily someone with a specific skill, but somebody who can think and change directions from job to job and year to year."

Source: News for Clark County; 2011 August 22; Study: South lacking in 'middle-skills' workers

Questions Please Contact

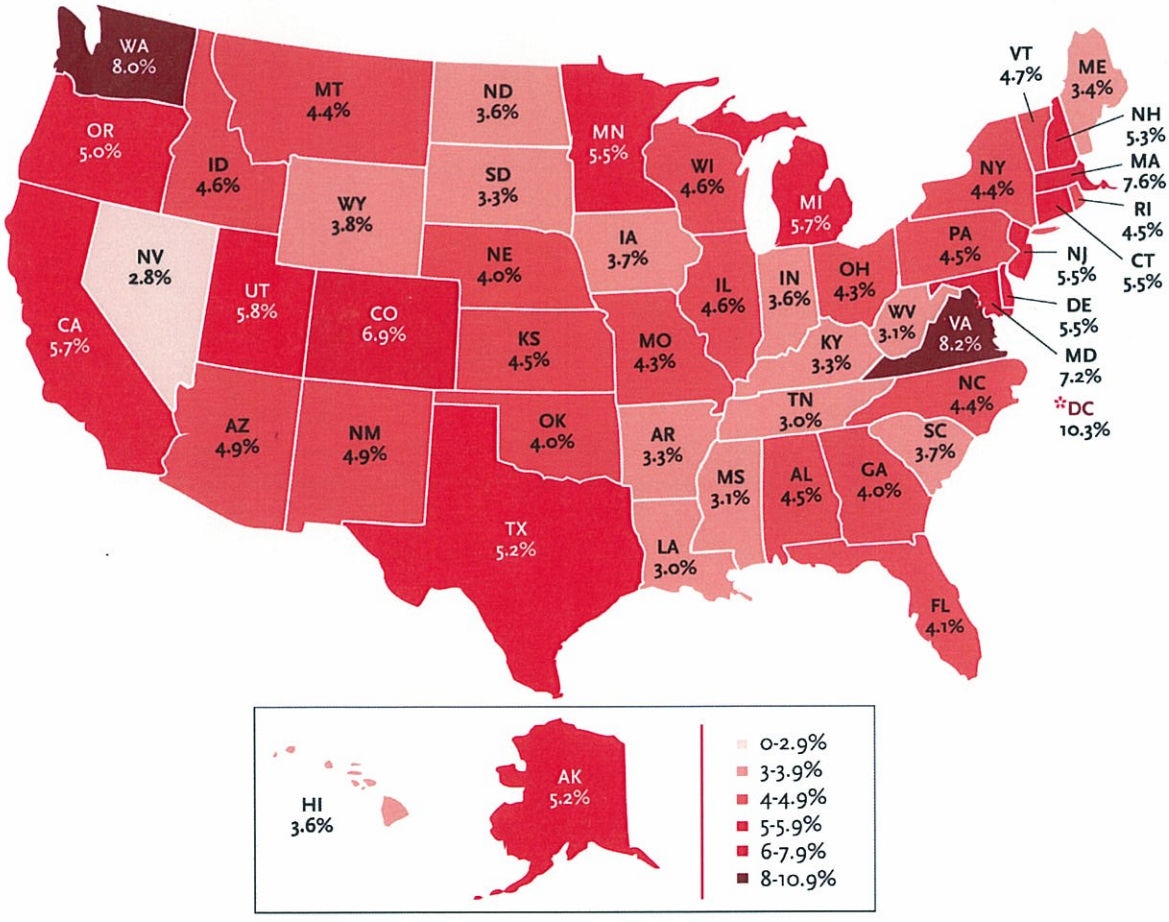
Rebeca Whorton, Bureau of Legislative Research

E-mail: whortonr@blr.arkansas.gov

STATE-LEVEL ANALYSIS

COMPLETE STATE REPORT → STATE PAGES → REPORT HOME-PAGE

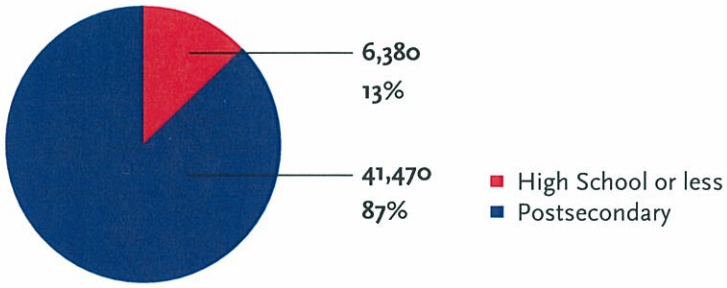
THE DISTRICT OF COLUMBIA, VIRGINIA, AND WASHINGTON WILL LEAD THE NATION IN THEIR SHARE OF ALL JOBS THAT WILL BE STEM JOBS.



THE MAJORITY OF STEM JOBS IN ARKANSAS WILL REQUIRE POSTSECONDARY EDUCATION OR TRAINING BY 2018

High school or less	6,380	13%
Some College/No Degree	10,380	10%
Associate's degrees	4,890	22%
Bachelor's degrees	20,750	43%
Master's degrees	4,610	10%
Doctoral degrees	840	2%
TOTAL[Δ]	47,850	100%

[Δ] Totals may differ slightly due to rounding



Occupational Distribution of STEM Jobs through 2018

	COMPUTER OCCUPATIONS*	ENGINEERS & ENGINEERING TECHNICIANS	LIFE & PHYSICAL SCIENCE OCCUPATIONS	ARCHITECTS, SURVEYORS & TECHNICIANS	MATHEMATICAL SCIENCE OCCUPATIONS	TOTAL[Δ]
Number of Jobs	22,720	12,680	6,970	4,290	1,200	47,860
% of all STEM Jobs	47%	26%	15%	9%	2%	100%

*Computer Technicians, Programmers, and Scientists
[Δ] Totals may differ slightly due to rounding

Percent of Arkansas's jobs that will be in STEM, by educational attainment

HIGH SCHOOL OR LESS	SOME COLLEGE/ NO DEGREE	ASSOCIATE'S DEGREES	BACHELOR'S DEGREES	MASTER'S DEGREES	DOCTORAL DEGREES
1%	5%	3%	10%	6%	8%

- Arkansas will demand a total of 47,850 STEM jobs by 2018, up from 38,650 in 2008.
- 87 percent of these jobs will require postsecondary education and training by 2018.
- STEM jobs will be 3 percent of all jobs in Arkansas in 2018.
- This represents a 24 percent increase in STEM jobs, 7 percent points above the national average.
- 47 percent of STEM jobs in Arkansas will be in Computer Occupations by 2018.
- 6 percent of all jobs for Master's degree-holders and 8 percent of all jobs for PhD holders in Arkansas will be in a STEM field by 2018.

GEORGETOWN UNIVERSITY
Center
on Education
and the Workforce

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NEW REPORT FINDS THAT 63 PERCENT OF ASSOCIATE'S DEGREES IN STEM EARN MORE THAN BACHELOR'S DEGREES IN NON-STEM OCCUPATIONS

Study also finds that STEM jobs are among the nation's most highly-paid and fastest-growing

(Washington, D.C., Oct. 20, 2011) – A new report from the Georgetown University Center on Education and the Workforce shows that 65 percent of Bachelor's degrees in STEM (science, engineering, technology and mathematics) occupations earn more than Master's degrees in non-STEM occupations. Similarly, 47 percent of Bachelor's degrees in STEM occupations earn more than PhDs in non-STEM occupations. Furthermore, even people with only STEM certificates can earn more than people with non STEM degrees; for instance certificate holders in engineering earn more than Associate's degree-holders in business and more than Bachelor's degree-holders in education.

STEM will grow to only 5 percent of all jobs by 2018 and demand for STEM talent is growing even faster outside of traditional STEM occupations. This increasing demand for STEM knowledge, skills and abilities allows many individuals with STEM talent to leave STEM occupations. Students and workers ***divert*** from STEM jobs because, while STEM is high-paying, STEM students have access to higher-paying career options.

The report finds that of out of every 100 students with a Bachelor's degree, 19 graduate with a STEM degree but only eight are working in STEM occupations ten years after graduation.

But it's not only about money—a major conclusion of the report is that STEM talent winds up outside of STEM occupations because STEM jobs often do not fully satisfy individual social and entrepreneurial interests.

"STEM provides choice for people both immediately after school and at mid-career, allowing people to transition to different and oftentimes more lucrative career pathways, including management and healthcare that provide long-term stability and excellent wages." says Anthony P. Carnevale, the Center's director and the report's lead author.

The report details STEM earnings by occupation, race, sex, and education level, and finds:

For women and minorities, STEM is the best equal opportunity employer.

- For women and minorities, STEM is a good news/bad news story. Women and minorities are underrepresented in STEM.
- But for those who do persist, the pay gap in STEM between women and minorities and White men is smaller in STEM than in any other occupation.

STEM pays more than most jobs at each level of education, and at the graduate level is exceeded only by a small sliver of managerial and healthcare occupations.

- Over 70 percent of STEM workers at the high school or some college level make more than the average for workers in all other occupations at the same education level. More than two-thirds of Associate's degree-holders in STEM make more than the average for all Associate's degree-holders.

STEM training pays more even if you don't work in a STEM occupation.

- Workers majoring in STEM in college earn more than all other majors over their lifetimes, even if they work in non-STEM occupations.

Apart from the full national report, STEM contains a state-level analysis of STEM jobs. STEM is available online at *http://cew.georgetown.edu/STEM*. Hard copies can be obtained by contacting the Center at *cewgeorgetown@georgetown.edu*.

The Georgetown University Center on Education and the Workforce is an independent, nonprofit research and policy institute that studies the link between individual goals, education and training curricula, and career pathways.

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GEORGETOWN UNIVERSITY
Center
on Education
and the Workforce

EXECUTIVE SUMMARY

STEM

SCIENCE
TECHNOLOGY
ENGINEERING
MATHEMATICS

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NICOLE SMITH
MICHELLE MELTON

STEM
is comprised of a full report, a state report
and an executive summary. All can be accessed at
cew.georgetown.edu/STEM

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Executive Summary

Science, Technology, Engineering, and Mathematics (STEM) occupations are critical to our continued economic competitiveness because of their direct ties to innovation, economic growth, and productivity, even though they will only be 5 percent of all jobs in the U.S. economy by 2018.[1] The disproportionate influence of STEM raises a persistent concern that we are not producing enough STEM workers to compete successfully in the global economy. We find that this concern is warranted—but not for the reasons traditionally claimed.

High and rising wage premiums are being paid to STEM workers in spite of the increasing global supply. This suggests that the demand for these workers is not being met.[2] Indeed, with the exception of some PhD-level researchers in academia, the demand for workers in STEM occupations is increasing at every education level. The STEM supply problem goes beyond the need for more professional scientists, engineers, and mathematicians. We also need more qualified technicians and skilled STEM workers in Advanced Manufacturing, Utilities and Transportation, Mining, and other technology-driven industries.

Innovation and technology change have led to demand for STEM competencies beyond traditional STEM occupations.[3] Previously, STEM work had been concentrated among an elite few workers. Today, competencies necessary for innovation are scattered across a wider swath of the economy. STEM competencies are needed in a broader reach of occupations, and their use is growing outside of STEM. What's more, people within these occupations that use STEM competencies most intensely are earning significantly more than those who are not.

The concern for STEM shortages tends to focus on the possibility of an insufficient supply of STEM workers, but the deeper problem is a broader scarcity of workers with basic STEM competencies across the entire economy. Demand for the core competencies is far greater than the 5 percent traditional STEM employment share suggests, and stretches across the entire U.S. job market, touching virtually every industry. Since 1980, the number of workers with high levels of core STEM competencies has increased by almost 60 percent. Further, in all but two occupational clusters, the rate of growth in demand for these core STEM competencies has increased at far greater rates than the growth in employment.[4]

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[1] STEM includes Computer occupations (computer technicians, computer programmers, and computer scientists), Mathematical Science occupations, Engineers and Engineering Technicians, Life and Physical Science occupations, and Architects, Surveyors, and Technicians. We do not include social scientists and we do include sub-baccalaureate technical workers as STEM workers.

[2] When discussing supply and demand for STEM workers, we use "supply" and "demand" as shorthand for relative supply and relative demand.

[3] We define STEM competencies as the set of cognitive knowledge, skills, and abilities that are associated with STEM occupations. We also include and analyze noncognitive work interests and work values associated with motivation and high performance in STEM occupations.

[4] Sales and Office Support and Community and Arts are the exceptions. The U.S. labor force grew by 44 percent, while high-level core STEM employment in Managerial and Professional, STEM, and Healthcare Professionals increased by 73 percent, 175 percent, and 79 percent respectively between 1980 and 2008.

Growth of demand for STEM competencies is especially strong in occupations in fast-growing industries like Professional and Business Services and Healthcare Services. At the same time, technology change in industries like Manufacturing, Mining, and Utilities and Transportation is reducing overall employment but increasing demand for STEM competencies among the more highly skilled workers who remain.

As a result, we find that the demand for traditional STEM workers will only grow. In our projections, STEM is second only to Healthcare as the fastest-growing occupational category in the economy.[5] But we also find that the occupations competing for STEM workers are growing rapidly, too. In fact, the occupations that poach top STEM talent are also among the fastest-growing and highest-paid in the economy. The intensifying demand for STEM competencies contributes to a process that we call diversion. We define diversion as a process through which both students and workers steer away from STEM degrees and STEM careers for numerous reasons. Diversion is both voluntary and involuntary and students and workers divert at various points throughout K-12 and postsecondary education as well as in the workforce.

The diversion of native-born STEM talent into non-STEM educational and career pathways will continue and likely accelerate in the future. This diversion of native-born STEM talent may contribute to an increasing reliance on foreign-born STEM talent among American employers.[6]

THE GROWING DEMAND FOR STEM TALENT ALLOWS AND ENCOURAGES THE DIVERSION OF STUDENTS AND WORKERS WITH STEM COMPETENCIES.

- Some of the voluntary diversion we describe occurs in the K-12 education system. Our K-12 education system produces enough talent in math and science to fill our need for traditional STEM workers, but more than 75 percent of these students do not enter STEM majors in college.[7]
- Students also fall out of the STEM pipeline while in college (38% of those students who start with a STEM major do not graduate with one).[8, 9]
- Immediately after graduation, 43 percent of STEM graduates do not work in STEM occupations.[10]

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[5] There is some discrepancy in how we rank the fastest-growing occupations, and this is related to how we rank Healthcare. We can split Healthcare into two separate occupational categories: Healthcare Support occupations and Healthcare Professional occupations. If we keep Healthcare as one broad group, STEM is the second-fastest growing occupational cluster. However, if we list Healthcare Support and Healthcare Professional occupations separately, then STEM is the third-fastest growing cluster.

[6] Without sufficient reform of the rules regarding the selection of prevailing wages for H-1B visas, the likelihood of added downward pressure on wages within these occupations remains high.

[7] The ability of U.S. students to transition outside of their initial field of study, and later at several points in their career, is a mark of the immense flexibility of opportunities in the U.S. labor market. In Europe, for example, the connection between education and training is far more rigid, as many of their apprenticeship programs link education and career training with occupations at a much earlier age, and are more difficult to transition out of.

[8] Compared with other fields of study, STEM majors are "middle-of-the-road" in terms of attrition of its graduates into other fields (if we remove the sub-baccalaureate STEM workers). For example, the comparable rate for teachers is substantially higher at the beginning of their career, while those in the computing fields have the highest retention rates later in their career (defined as 10 years into the workforce).

[9] Many students drop out of the STEM pipeline between high school and college, or in college. These students either do not enroll in college or do not complete a degree—any degree. Thirty percent of students who score in the top quartile on a math skills test in high school, clearly demonstrating abilities in STEM, do not have any college degree eight years after graduating high school. This represents an enormous pool of talent from which we could potentially draw to get more workers with STEM competencies. Almost half of students in the second quartile on the same test do not have a college degree eight years after graduating high school.

[10] These numbers only include students with Bachelor's degrees. Our diversion analysis details only Bachelor's degrees.

- STEM attrition continues 10 years into the workforce, as 46 percent of workers with a Bachelor's degree in STEM have left the field, oftentimes for higher paying managerial roles.[11]

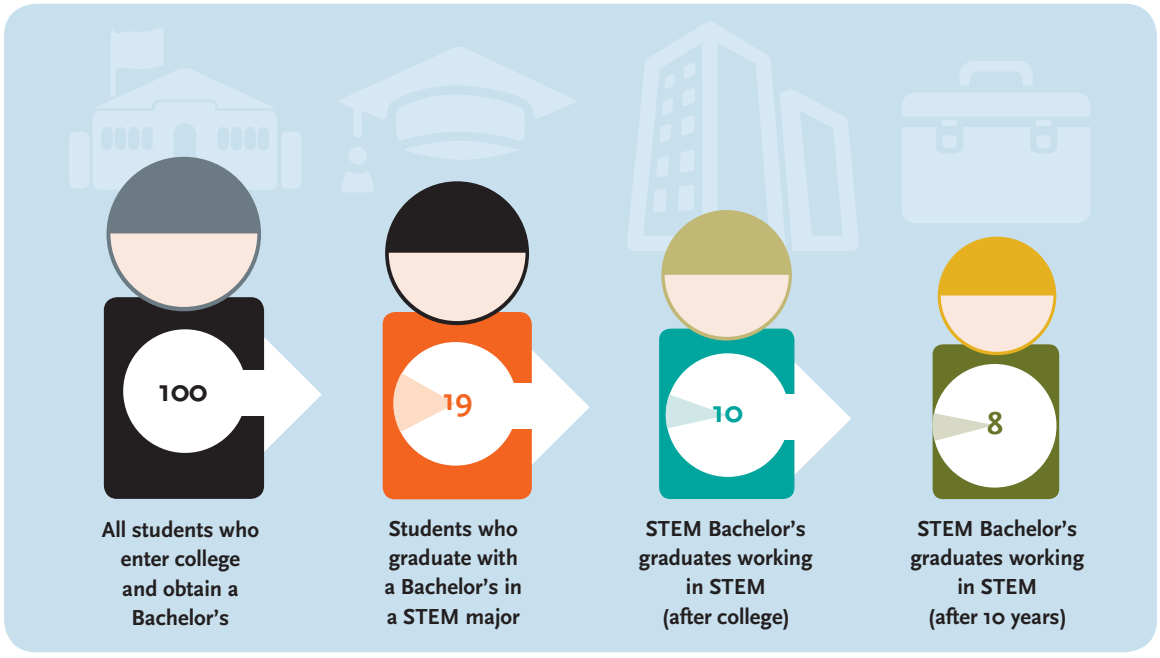
Diversion of domestic STEM talent away from STEM occupations is driven by three interconnected factors:

1. There is a set of core cognitive competencies (knowledge, skills, and abilities) associated with STEM.[12] These core cognitive STEM competencies exist in an increasing share of highly-paid and prestigious non-STEM occupations.[13]

2. Many potential STEM workers never work in STEM occupations, or leave them, because they have *work interests* and *work values* that are more compatible with other careers.[14]

The core work interests associated with STEM occupations are Realistic and Investigative interests. People with these work interests enjoy practical, hands-on problem-solving (Realistic) and working with ideas and solving problems (Investigative), but there are other work interests that compete for STEM talent, including Artistic interests (focused on self-expression); Social interests (focused on the well-being of others); Enterprising interests (associated with selling and leading); and Conventional interests (associated with highly ordered work environments).

Similarly, the work values associated with STEM are Achievement, Independence, and Recognition, but there are other work values that compete for STEM talent such as Relationships (valuing friendly, noncompetitive work environments),



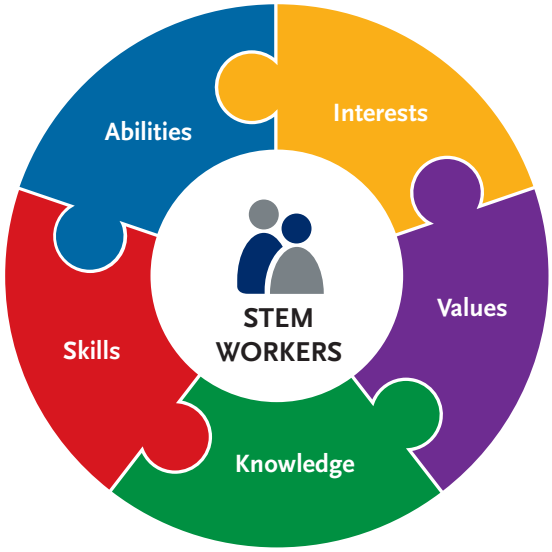
[11] Oftentimes, managers are still working in field, but these workers are counted as managerial workers. However, in most cases, an individual would not have had an opportunity to perform this job without previous STEM training.

[12] Our analysis of STEM competencies relies on the Occupational Information Network (O*NET) administered and updated by the Department of Labor/Employment and Training Administration, Version 14.0.

[13] This is not to suggest, of course, that all STEM competencies are transferable across the economy. Indeed, we are at this point referring to the subset of knowledge, skills, and abilities (defined later) traditionally associated with STEM occupations that are increasingly demanded by many other types of employers outside of STEM occupations.

[14] We identify STEM work values and STEM work interests as noncognitive competencies required for success in the occupation. This is a point of contention with many of our reviewers. While interests and values are usually characteristics of an individual, we extend this notion as a personal characteristic required for an individual to be successful in an occupation.

Support (valuing supportive management), and Working Conditions (valuing job security and good working conditions).



3. While STEM earnings are high relative to most other occupations, students and workers with STEM cognitive competencies have access to superior earnings and career choices, especially in Managerial and Professional and Healthcare Professional occupations.

OUR ANALYSIS SHOWS THAT TRADITIONAL STEM JOBS HAVE GROWN FASTER THAN JOB GROWTH OVERALL FOR DECADES, AND THE FUTURE PROMISES MORE OF THE SAME.

Through 2018, the share of STEM occupations in the economy will grow to 5 percent, up from 4.4 percent in 2005—a growth in the number of STEM jobs from 6.8 million in 2008 to 8 million by 2018.[15]

STEM occupations will grow far more quickly than the economy as a whole (17% versus 10%), and will be the second-fastest growing occupational cluster, after Healthcare occupations.[16]

We find that over the same period, there will be 2.4 million job openings in STEM: 1.1 million net new STEM jobs and 1.3 million STEM job openings to replace STEM workers who permanently leave the workforce.[17]

STEM workers are employed in highest concentrations in the Professional and Business Services industry, while the bulk of Engineers and Engineering Technicians are in Manufacturing.

THE VAST MAJORITY OF STEM JOBS REQUIRE SOME FORM OF POSTSECONDARY EDUCATION OR TRAINING.

- By 2018, 92 percent of traditional STEM jobs will be for those with at least some postsecondary education and training, the third-highest educational concentration among all the occupational clusters after Education and Healthcare Professionals.
- Close to two-thirds of STEM job openings will be for those with Bachelor's degrees and above (65%).
- By 2018, roughly 35 percent of the STEM workforce will be comprised of those with sub-baccalaureate training,[18] including:
  - 1 million Associate's degrees,
  - 745,000 certificates, and
  - 760,000 industry-based certifications.

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[15] It is difficult to pinpoint exactly how many STEM workers are ideal for increasing innovation economy-wide. In theory, we should continue to add STEM workers and STEM jobs as long as each additional worker produces added value. We limit our measure of STEM demand to the more prosaic standard of projected job growth in industries and occupations that employ traditional STEM workers.

[16] Please see footnote 5.

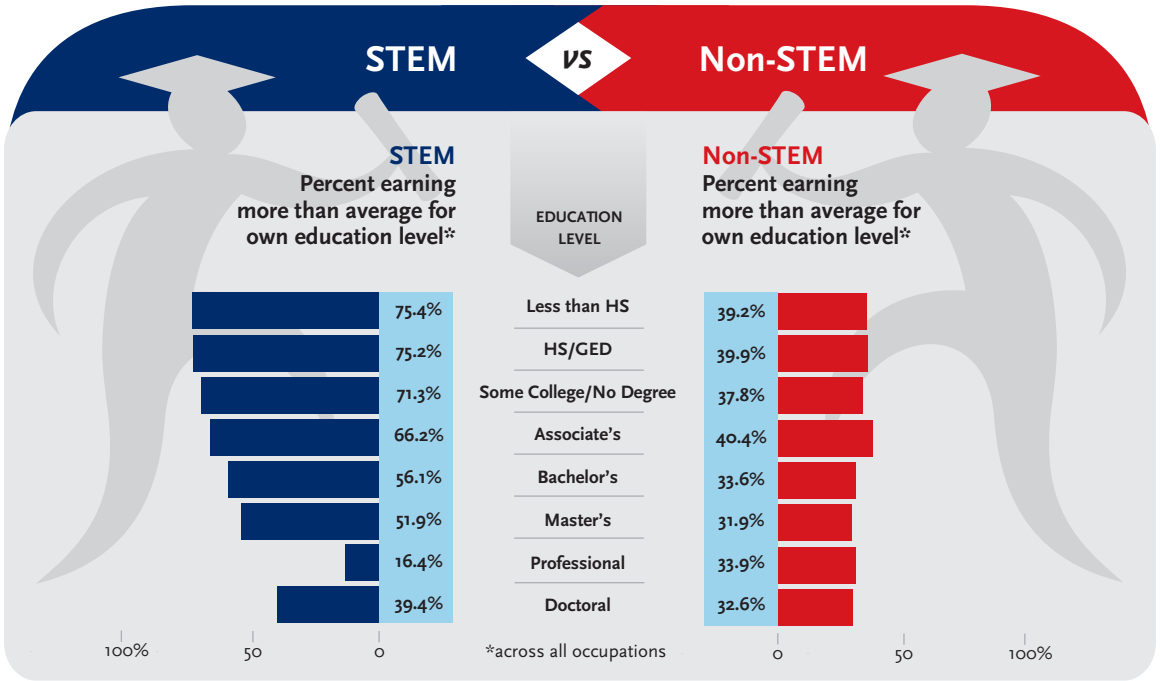
[17] In the Georgetown University Center on Education and the Workforce's 2010 report, *Help Wanted: Projections of Jobs and Education Requirements Through 2018,* we project 2.8 million STEM jobs by 2018. The *Help Wanted* report includes social science workers in STEM, while this STEM report excludes social scientists from our definition of STEM.

[18] Including those with a high school diploma and high school dropouts.

- Many STEM occupations also require industry-based certifications, especially Computer and Engineering and Engineering Technician occupations.
- Undergraduate STEM majors, especially Life and Physical Science majors, have extremely high rates of graduate degree attainment. Fifty-four percent of Biology and Life Science majors go on to graduate school, as do 48 percent of Physical Sciences majors.[19]

WE FIND THAT STEM WAGES ARE HIGH AND HAVE KEPT UP WITH WAGES AS A WHOLE OVER THE LAST 30 YEARS.

- Although some STEM jobs, such as PhD jobs in academia, face oversupply, rising relative wage advantages of STEM sub-baccalaureate, STEM Bachelor's, and STEM graduate degrees suggest increases in the relative demand for STEM competencies.
- STEM workers have earnings advantages at nearly every level of educational attainment. In fact:
  - Over 75 percent of STEM workers with less than a high school education make more than the average for workers with less than a high school education;
  - Over 75 percent of STEM workers with a high school diploma make more than the average for workers with a high school diploma;
  - Over 71 percent of STEM workers with some college but no degree make more than the average for workers with some college but no degree;
  - Two-thirds (66%) of STEM workers with an Associate's degree make more than the average for workers an Associate's degree;
  - Over 56 percent of STEM workers with a Bachelor's degree make more than the average for workers a Bachelor's degree;
  - Over half (52%) of STEM workers with a Master's degree make more than the average for workers with a Master's degree.
- People with an undergraduate major in STEM make substantially more over their lifetimes than non-STEM majors, by about $500,000 ($1.7 million versus $2.2 million).



[19] For those with a terminal Bachelor's degree working full-time, full-year.

- Wages for Engineers and Engineering Technicians have grown at 18 percent since the early 1980s. This wage growth is slow relative to that of all other workers, yet the average salary for Engineers and Engineering Technicians ($78,000) is higher than all other STEM occupations.

BUT AT THE SAME TIME, WAGES IN HEALTHCARE PROFESSIONAL AND MANAGERIAL AND PROFESSIONAL OCCUPATIONS HAVE GROWN FASTER THAN STEM WAGES, ESPECIALLY AT THE GRADUATE LEVEL.

- STEM majors can earn more over their lifetimes in some non-STEM occupations than in STEM occupations.
- At the Bachelor's and graduate degree level, while STEM workers start out with high wages after college, midcareer earnings for many Managerial and Professional occupations surpass those for STEM. By age 35, STEM workers with a graduate degree make about $50,000 less than Healthcare Professional workers with a graduate degree. For Bachelor's degree-holders, Managerial and Professional workers make about $10,000 more than STEM workers by midcareer (but STEM workers at the Bachelor's degree level still do better than Healthcare Professionals at the Bachelor's degree level).

IN SPITE OF THE GLOBALIZATION OF THE STEM ENTERPRISE, OUR STEM WORKFORCE STILL OVERWHELMINGLY DRAWS FROM WHITES AND MALES, ESPECIALLY AT THE MOST SENIOR LEVELS.

Women and minorities continue to be underrepresented in STEM occupations relative to their position in the labor market as a whole. Only 23 percent of workers in STEM are women, compared with 48 percent of workers in all occupations. African-Americans and Latinos are underrepresented relative to their share of workers in all occupations, while Asians are a larger share of STEM workers than they are in the labor force in general.[20]

Women and minorities are also paid less than their White male counterparts in STEM, even when they work the same number of hours. However, the earnings gaps are smaller in STEM than in other occupations, and compared with other occupations, women and minorities are better compensated in STEM.

Racial/ethnic and gender diversity in STEM is still lacking, although Asians are a notable exception. In fact, Asians outearn their White male counterparts in all STEM occupations.

Recently, women have become the majority in certain STEM majors, including Biology and Statistics and Decision Science (they are also a large portion of all Mathematics majors). However, they have yet to translate their gains in school into good-paying jobs. Women are strong in majors

[20] See George, Yolanda S., et al. "In Pursuit of a Diverse Science, Technology, Engineering, and Mathematics Workforce: Recommended Research Priorities to Enhance Participation by Underrepresented Minorities." *American Association for the Advancement of Science, and National Science Foundation* (2001). Web.; and Malcom, Shirley M., Yolanda S. George, and Virginia V. Van Horne, Eds. *The Effect of the Changing Policy Climate On Science, Mathematics, and Engineering Diversity*. Washington, DC: American Association for the Advancement of Science, 1996. Print. Mason, Mary Anne. "Better Educating Our New Breadwinners: Creating Opportunities for All Women to Succeed in the Workforce." The Shriver Report: A Woman's Nation Changes Everything. Ed. Heather Boushey and Ann O'Leary. Washington, DC: Center for American Progress, October 2009. 160-194. http://www.americanprogress.org/issues/2009/10/pdf/awn/a_womans_nation.pdf (accessed August 2, 2011).

that lead to careers in Healthcare occupations but are less-represented in the occupations of Engineering and Physical Sciences.

Powerful demographic shifts in American society will have a significant impact on STEM employment going forward. The continued underrepresentation of women and minorities in STEM poses a serious challenge to both economic efficiency and democratic and social equity.

WE HAVE BEEN USING A STRATEGY OF RELYING ON FOREIGN-BORN WORKERS TO PLUG THE LEAKS IN OUR STEM PIPELINE.

Foreign-born workers account for 17 percent of all STEM workers, compared with 12 percent in labor force as a whole.[21] In some STEM occupations, foreign-born workers make up even more of the STEM labor force—for example, 25 percent of all Physical Scientists are foreign-born. Foreign-born workers often start as foreign-born students, who then stay in the United States to work.

- 44 percent of students on F-1 student visas were here to study STEM in 2008.
- 63 percent of foreign-born students in STEM fields are in graduate programs.
- 59 percent of PhD recipients in engineering fields in 2009 were foreign-born.
- The share of the foreign-born workforce in STEM has more than doubled in the last 60 years, from 7 percent in 1950 to 16 percent in 2000 to 17 percent in 2008.
- Increasingly, foreign-born STEM workers are from Asia. Fifty-nine percent of foreign-born workers in STEM occupations were from Asia in 2000.
- Foreign-born STEM workers are more likely than other foreign-born workers to become naturalized citizens.

We are relying heavily on the foreign-born workforce to fill our STEM jobs. Whether we can continue to employ this strategy as wages become more competitive in other countries remains an open question. It is unlikely that we will continue to be able to successfully compete for the top international talent.

GOING FORWARD, WE WILL NEED MORE WORKERS WITH STEM COMPETENCIES—BUT NOT NECESSARILY TRADITIONAL STEM WORKERS IN TRADITIONAL STEM JOBS.

As the nature of innovation changes, the cognitive competencies traditionally associated with STEM are intensifying in a host of non-STEM occupations. The dispersion of cognitive competencies outside of STEM has resulted in an artificial shortage—not of workers, but of workers with STEM competencies. In school and in the labor market, the pull of wages, personal interests, work interests and work values has allowed STEM talent to divert away from STEM occupations and into other occupations, such as Healthcare Professional and Managerial and Professional, which demand similar cognitive competencies. This diversion has put a significant strain on the STEM workforce at the most elite levels.

Concern for the supply of the highest-performing STEM workers tends to point toward strategies targeted at relatively small portions of American students among our top science and math performers. However, these elite workers are not the

[21] Although it would be ideal to compare domestic STEM workers with guest workers, foreign-born students on work visas, and foreign-born workers, it is almost impossible for independent researchers to determine the exact number of guest or student workers on various types of F-1, H-1B visas, and other visas that permit work. Throughout the report we use data on foreign-born workers. We believe that there is a positive correlation between foreign-born workers and guest-workers who eventually go through the legal permanent resident (green card) and citizenship process.

entirety of the STEM workforce. The growing demand for STEM competencies outside traditional STEM occupations requires a more broad-reaching strategy in the American K-16 education system. The dialogue on the adequacy of our STEM workforce ultimately leads to the more comprehensive conversation about American education.

While many remain focused on a small cadre of elite STEM workers, more than a third of all jobs in STEM through 2018 will be for those with less than a Bachelor's degree. There is increasing demand for STEM talent at the sub-baccalaureate level and our education system has, thus far, not adequately produced these workers. Going forward, our Career and Technical Education system will need a stronger STEM curriculum at the high school and sub-baccalaureate level that is more tightly linked with competencies necessary for STEM jobs.

The STEM workforce will remain central to our economic vitality well into the future, contributing to innovation, technological growth, and economic development. Capable STEM students, from K-12 all the way through the postgraduate level, will be needed in the pipeline for careers that utilize STEM competencies and increase our innovative capacities.

We cannot win the future without recognizing the growing need for STEM competencies across the economy. We need more STEM talent—but not only for traditional STEM workers in traditional STEM occupations.

Our STEM analysis also includes state-by-state data. By state, we find that Washington, D.C., has the highest proportion of STEM jobs nationwide, while California has the highest number of STEM jobs. The states with the fastest rates of STEM growth are Virginia, Nevada, and Utah.

For more information, please see the STEM State-Level Analysis available at cew.georgetown.edu/STEM.

STEM COMPETENCIES

KNOWLEDGE CLASSIFICATIONS are content domains familiar to educators. Examples include mathematics, chemistry, biology, engineering and technology, English language, economics and accounting, clerical and food production.

SKILLS are competencies that allow continued learning in a knowledge domain. They are divided into content, processing, and problem-solving skills. *Content skills* are fundamental skills needed to acquire more specific skills in an occupation. These include reading comprehension, active listening, speaking, writing, mathematics, and science. *Processing skills* are procedures that contribute to the more-rapid acquisition of knowledge and skills. These include critical thinking, active learning, learning strategies, and monitoring self-awareness. *Problem-solving skills* involve the identification of complex problems and related information required to develop and evaluate options and implement solutions.

ABILITIES are defined as enduring and developed personal attributes that influence performance at work. In the parlance of education psychology, these closely approximate "aptitudes." O*NET divides abilities broadly into categories such as creativity, innovation, mathematical reasoning, and oral and written expression. Each of these broad abilities is subdivided into component elements. For example, innovative abilities include fluency of ideas, problem sensitivity, deductive reasoning, and inductive reasoning. Other abilities include oral expression, spatial orientation, and arm-hand steadiness.

WORK VALUES are individual preferences for work outcomes. Important outcomes for individuals include recognition, achievement, working conditions, security, advancement, authority, social status, responsibility, and compensation.

WORK INTEREST is defined as individual preferences for work environment. Interests are classified as realistic, artistic, investigative, social, enterprising, and conventional. Individuals who have particular interests—artistic interest, for example—are more likely to find satisfaction in occupations that fit with those interests. Of course, an incumbent can have an artistic interest and not be in an occupation where s/he is able to exercise that interest (for example, accounting is an occupation that is not the best outlet for artistic interest). However, O*NET allows us to identify which interests can be fulfilled in which occupations—for example, that an incumbent with artistic interest might like a job as a designer.

KNOWLEDGE ASSOCIATED WITH STEM OCCUPATIONS

Production and Processing: Knowledge of raw materials, production processes, quality control, costs, and other techniques for maximizing the effective manufacture and distribution of goods.
Computers and Electronics: Knowledge of circuit boards, processors, chips, electronic equipment, and computer hardware and software, including applications and programming.
Engineering and Technology: Knowledge of the practical application of engineering science and technology. This includes applying principles, techniques, procedures, and equipment to the design and production of various goods and services.
Design: Knowledge of design techniques, tools, and principles involved in production of precision technical plans, blueprints, drawings, and models.
Building and Construction: Knowledge of materials, methods, and the tools involved in the construction or repair of houses, buildings, or other structures such as highways and roads.
Mechanical: Knowledge of machines and tools, including their designs, uses, repair, and maintenance.

STEM COMPETENCIES *(continued)*

Mathematics: Knowledge of arithmetic, algebra, geometry, calculus, statistics, and their applications.
Physics: Knowledge and prediction of physical principles, laws, their interrelationships, and applications to understanding fluid, material, and atmospheric dynamics, and mechanical, electrical, atomic and sub-atomic structures and processes.
Chemistry: Knowledge of the chemical composition, structure, and properties of substances and of the chemical processes and transformations that they undergo. This includes uses of chemicals and their interactions, danger signs, production techniques, and disposal methods.
Biology: Knowledge of plant and animal organisms and their tissues, cells, functions, interdependencies, and interactions with each other and the environment.

SKILLS ASSOCIATED WITH STEM OCCUPATIONS

Mathematics: Using mathematics to solve problems.
Science: Using scientific rules and methods to solve problems.
Critical Thinking: Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions, or approaches to problems.
Active Learning: Understanding the implications of new information for both current and future problem-solving and decision-making.
Complex Problem Solving: Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.
Operations Analysis: Analyzing needs and product requirements to create a design.
Technology Design: Generating or adapting equipment and technology to serve user needs.
Equipment Selection: Determining the kind of tools and equipment needed to do a job.
Programming: Writing computer programs for various purposes.
Quality Control Analysis: Conducting tests and inspections of products, services, or processes to evaluate quality or performance.
Operations Monitoring: Watching gauges, dials, or other indicators to make sure a machine is working properly.
Operation and Control: Controlling operations of equipment or systems.
Equipment Maintenance: Performing routine maintenance on equipment and determining when and what kind of maintenance is needed.
Troubleshooting: Determining causes of operating errors and deciding what to do about it.
Repairing: Repairing machines or systems using the needed tools.
Systems Analysis: Determining how a system should work and how changes in conditions, operations, and the environment will affect outcomes.
Systems Evaluation: Identifying measures or indicators of system performance and the actions needed to improve or correct performance, relative to the goals of the system.

ABILITIES ASSOCIATED WITH STEM OCCUPATIONS

Problem Sensitivity: The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing that there is a problem.
Deductive Reasoning: The ability to apply general rules to specific problems.
Inductive Reasoning: The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
Mathematical Reasoning: The ability to choose the right mathematical methods or formulas to solve a problem.

STEM COMPETENCIES *(continued)*

Number Facility: The ability to add, subtract, multiply, or divide quickly and correctly.
Perceptual Speed: The ability to quickly and accurately compare similarities and differences among sets of letters, numbers, objects, pictures, or patterns. The things to be compared may be presented at the same time or one after the other. This ability also includes comparing a presented object with a remembered object.
Control Precision: The ability to quickly and repeatedly adjust the controls of a machine or a vehicle to exact positions.

WORK INTERESTS AND WORK VALUES ASSOCIATED WITH STEM OCCUPATIONS

Work Values

Achievement: These jobs let you use your best abilities, see the results of your efforts and get the feeling of accomplishment.
Independence: These jobs allow you to do things on your own initiative, and make decisions on your own.
Recognition: These jobs offer good possibilities for advancement, and offer prestige or with potential for leadership.

Work Interests

Realistic: Realistic occupations frequently involve work activities that include practical, hands-on problems and solutions. They often deal with plants, animals, and real-world materials like wood, tools, and machinery. Many of the occupations require working outside, and do not involve a lot of paperwork or working closely with others.
Investigative: Investigative occupations frequently involve working with ideas, and require an extensive amount of thinking. These occupations can involve searching for facts and figuring out problems mentally.

Link to Video played in ALC-Higher Education Meeting on Oct. 20, 2011

Bankruptcy no option for student loans

July 31, 2011 4:03 PM

With recent college graduates entering one of the worst job markets in history, Bill Whitaker reports on how student loans are preventing grads from filing for bankruptcy.

http://www.cbsnews.com/video/watch/?id=7375144n

ARKANSAS DEPARTMENT OF HIGHER EDUCATION

The Worth of A Degree UPDATE

ALC-Higher Education Subcommittee, October 20, 2011

www.adhe.edu

Overview

A. The Worth of Degree Programs Across the State

B. College Default Rate, Possible Federal Consequences of Default Increases, and Total Loans by Institution

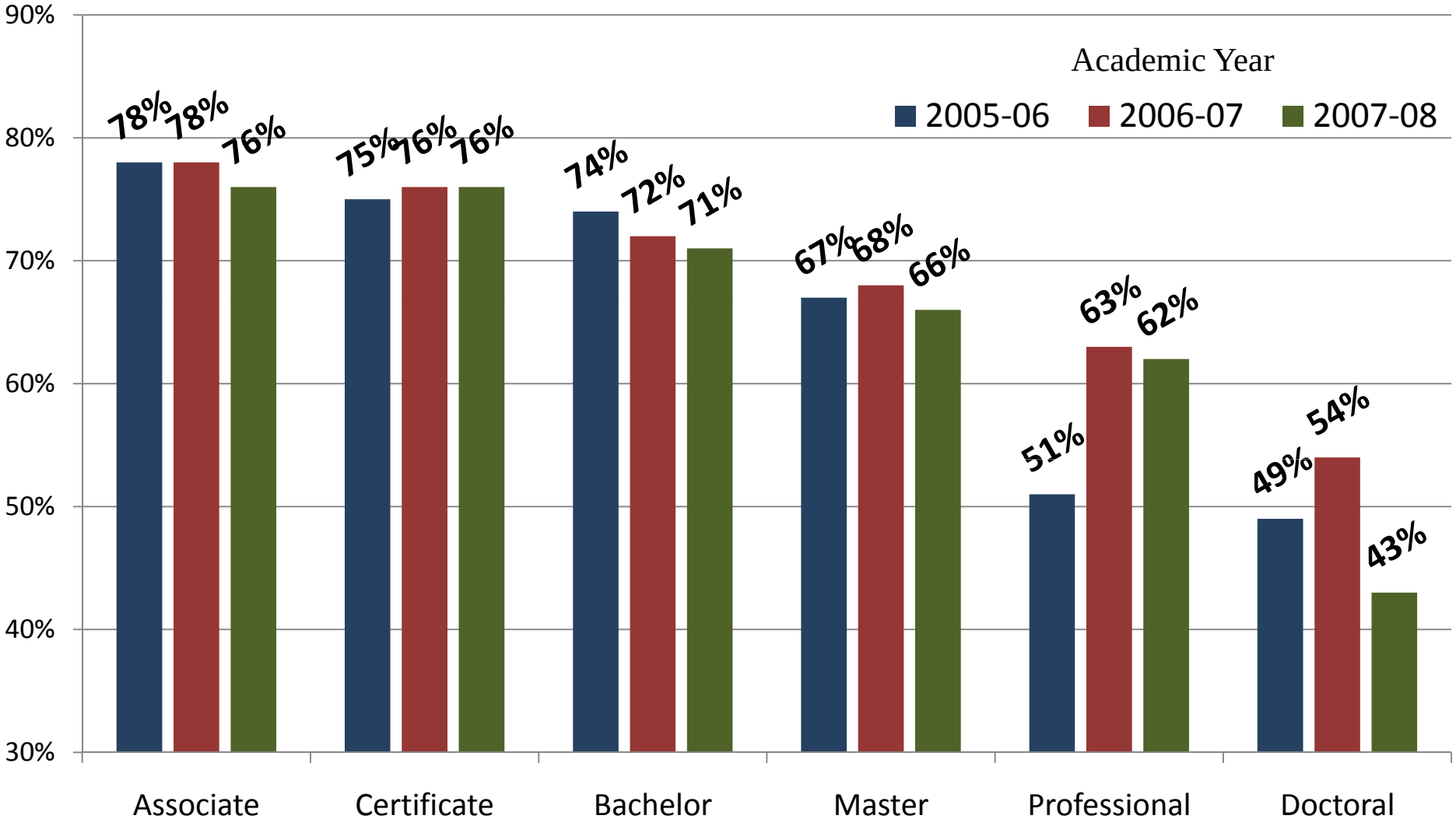
C. Statewide Statistics

D. Amounts Credited Due to the State Scholarship Stacking Policy

ARKANSAS DEPARTMENT OF HIGHER EDUCATION

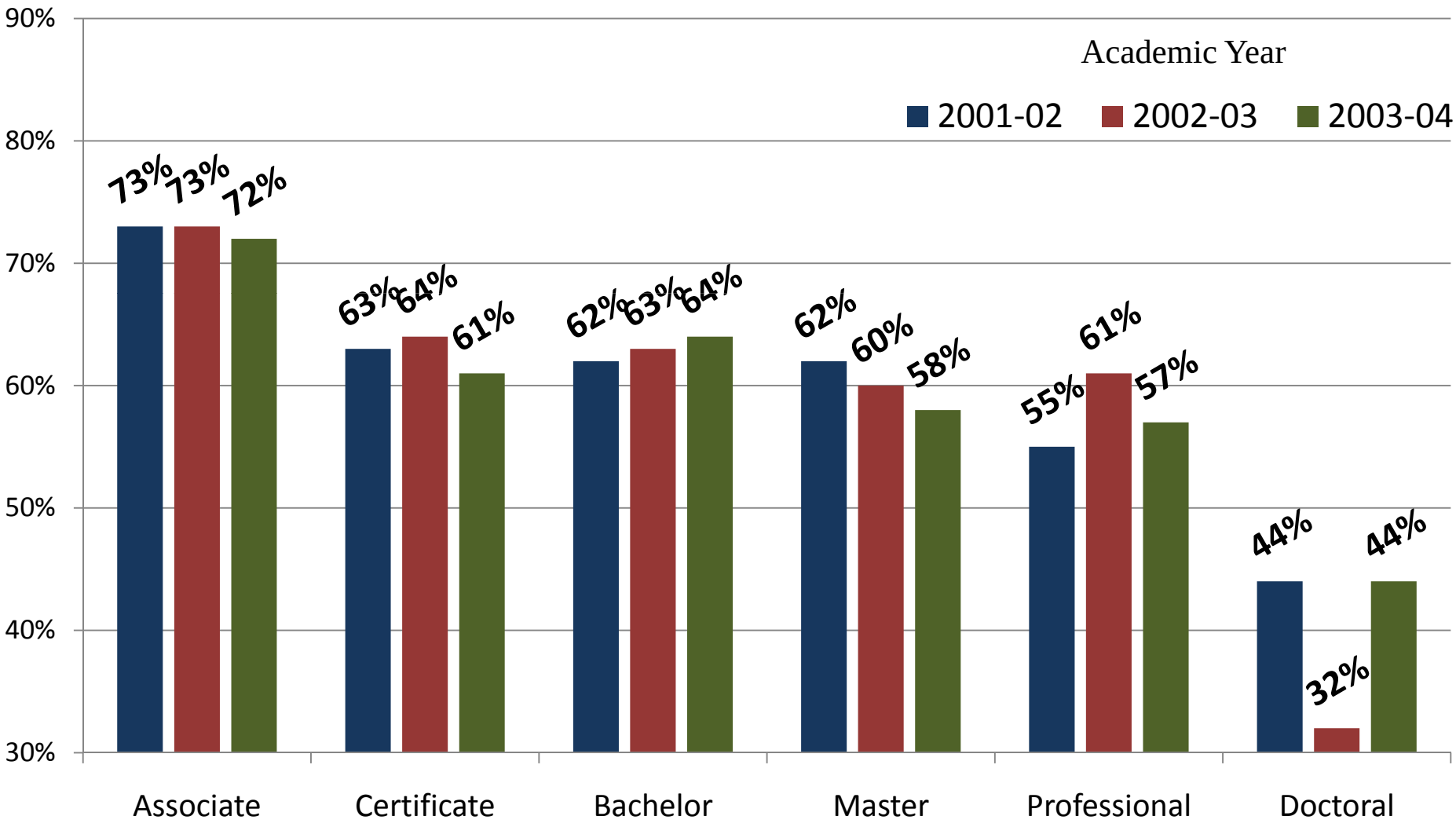
Worth of A Degree In Arkansas

Arkansas Employment After One Year by Degree Level for All Graduates (resident & non-resident)



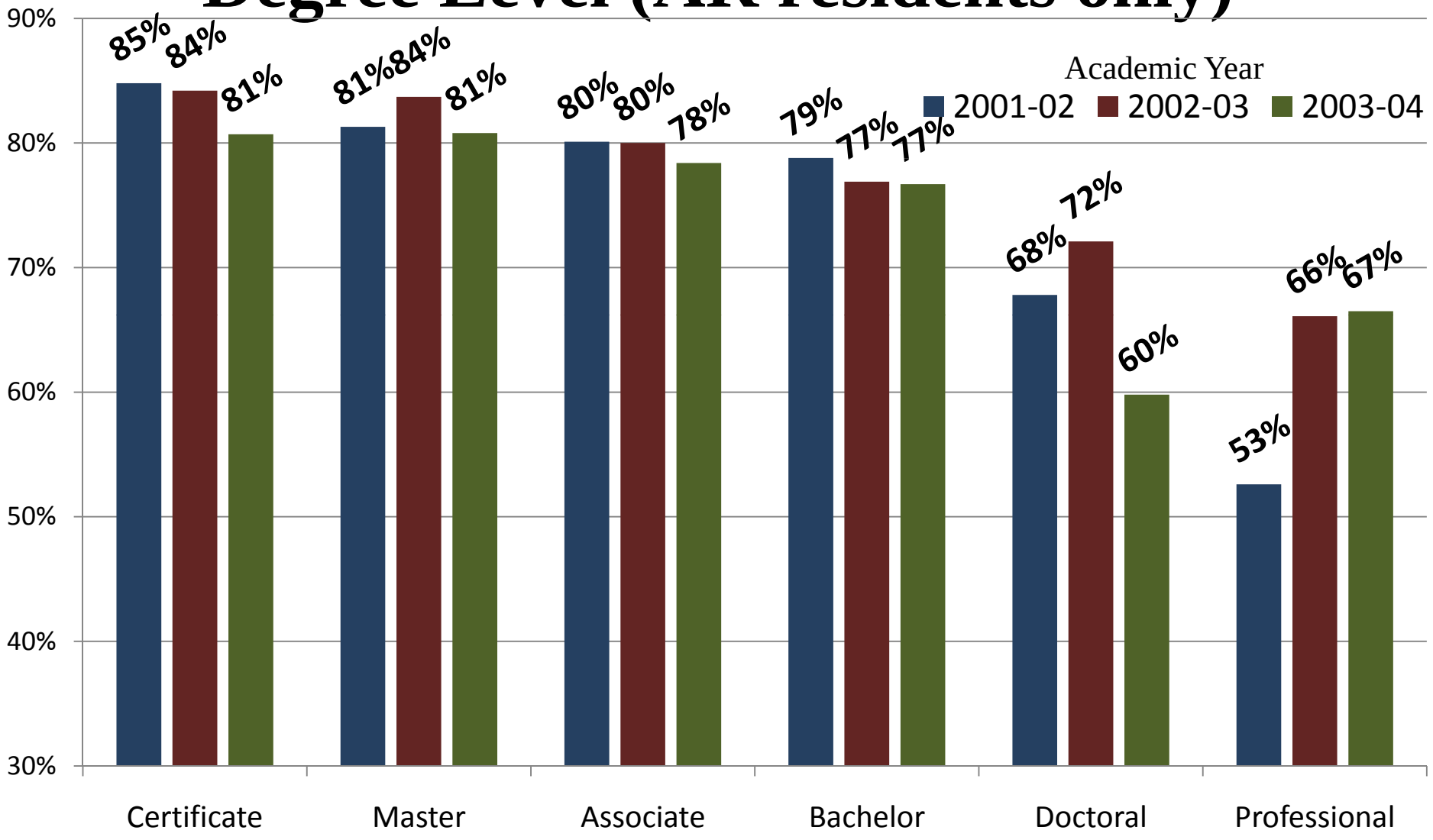
Source: Arkansas Departments of Information Systems, Workforce Services, & Higher Education, 2010 Arkansas Employment Outcomes Report, Figure 2.

Arkansas Employment After Five Years by Degree Level for All Graduates (resident & non-resident)



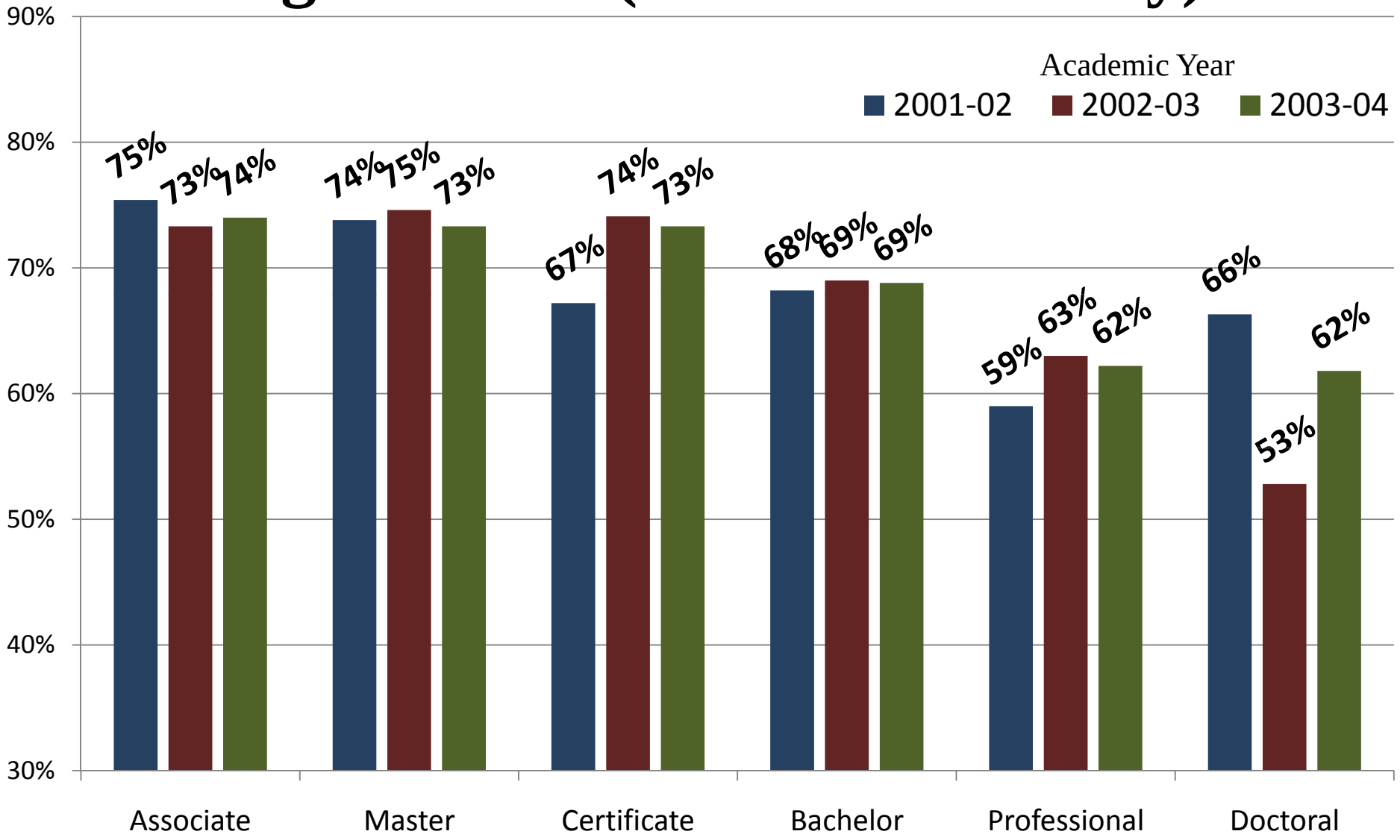
Source: Arkansas Departments of Information Systems, Workforce Services, & Higher Education, 2010 Arkansas Employment Outcomes Report, Figure 1.

Arkansas Employment After One Year by Degree Level (AR residents only)



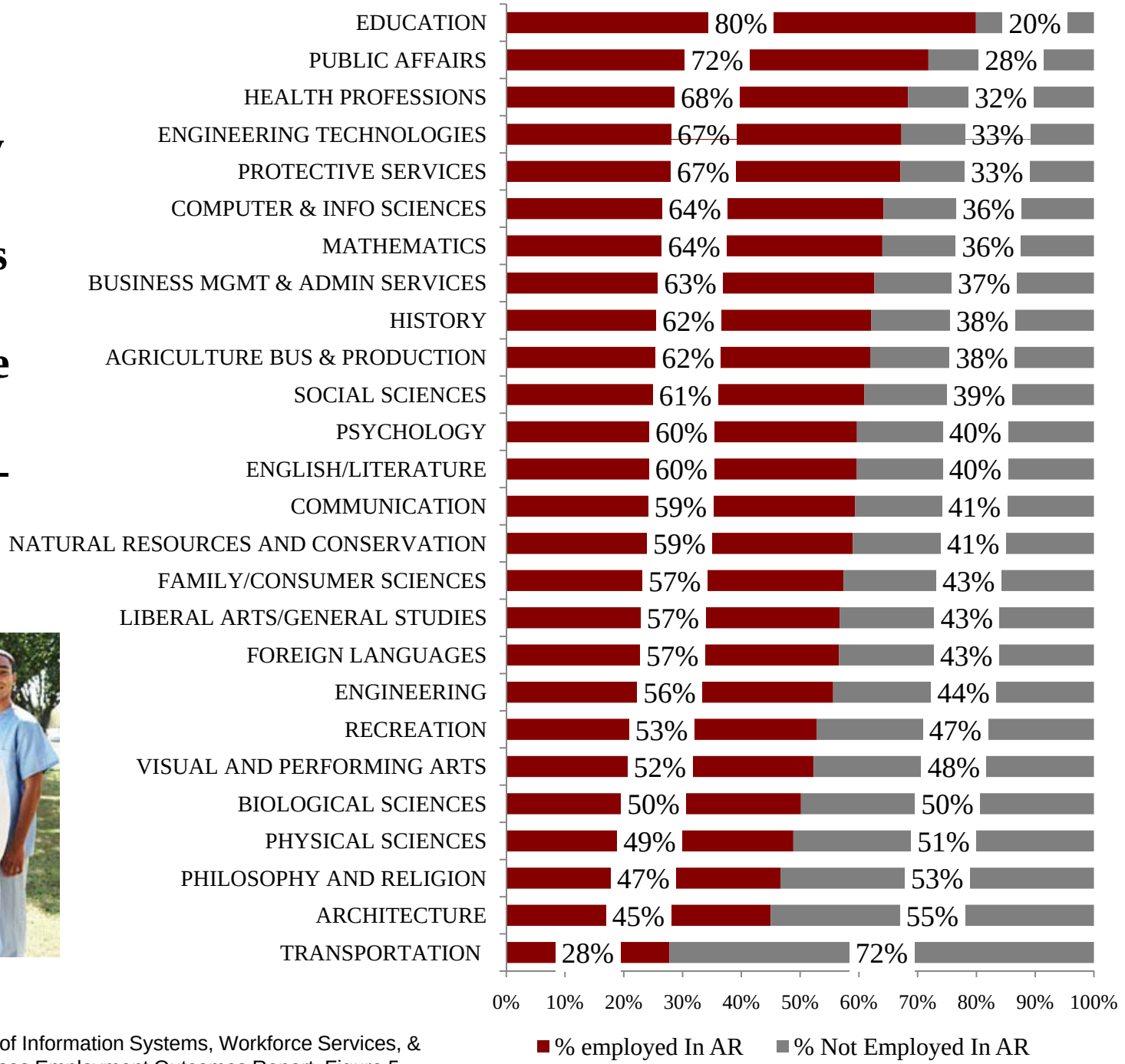
Source: Arkansas Departments of Information Systems, Workforce Services, & Higher Education, 2010 Arkansas Employment Outcomes Report, Figure 12.

Arkansas Employment After Five Years by Degree Level (AR residents only)



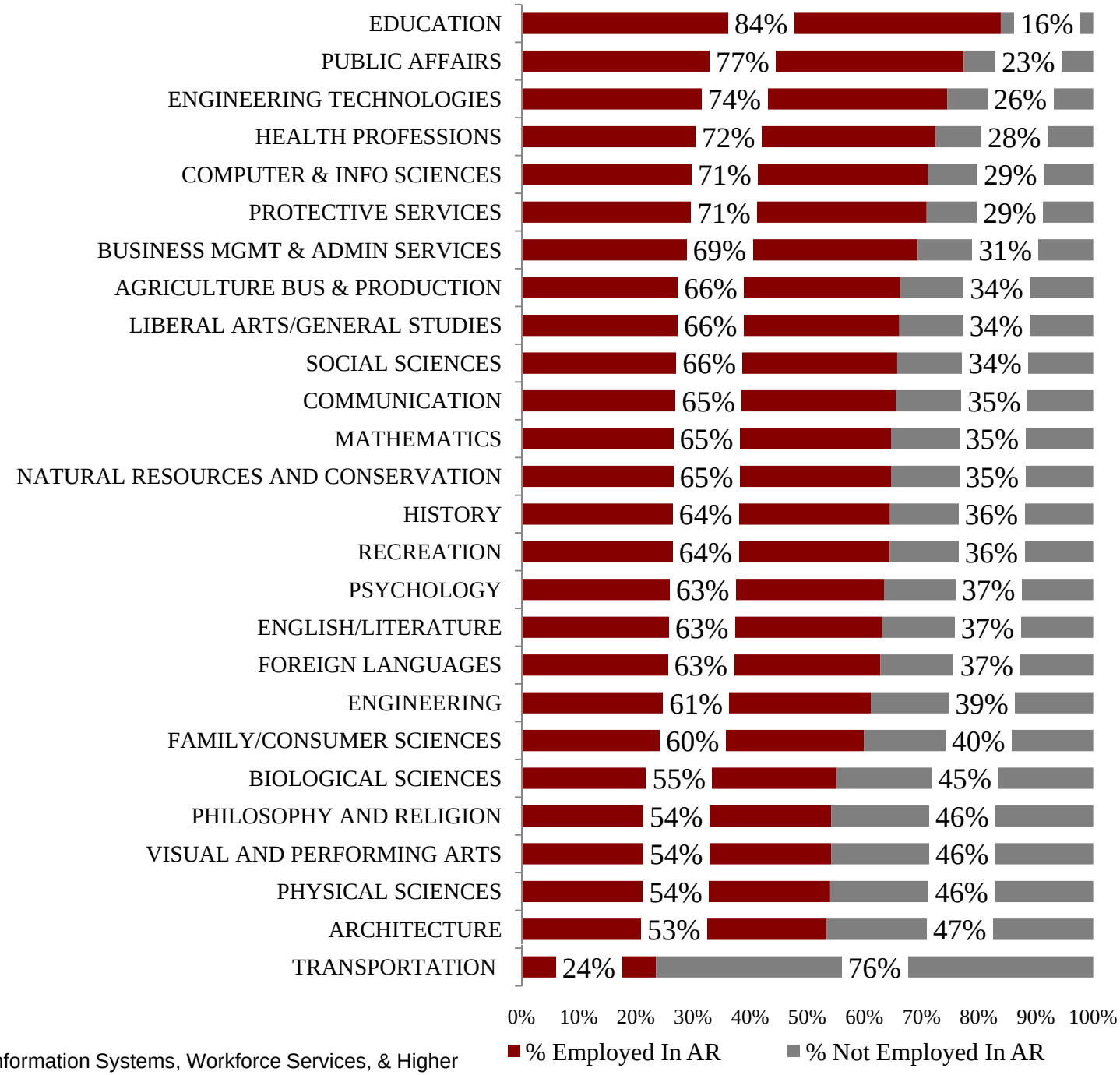
Source: Arkansas Departments of Information Systems, Workforce Services, & Higher Education, 2010 Arkansas Employment Outcomes Report, Figure 12.

Arkansas Employment by Field of Study After Five Years for All 2003-04 Bachelor Degree Recipients (resident & non-resident)



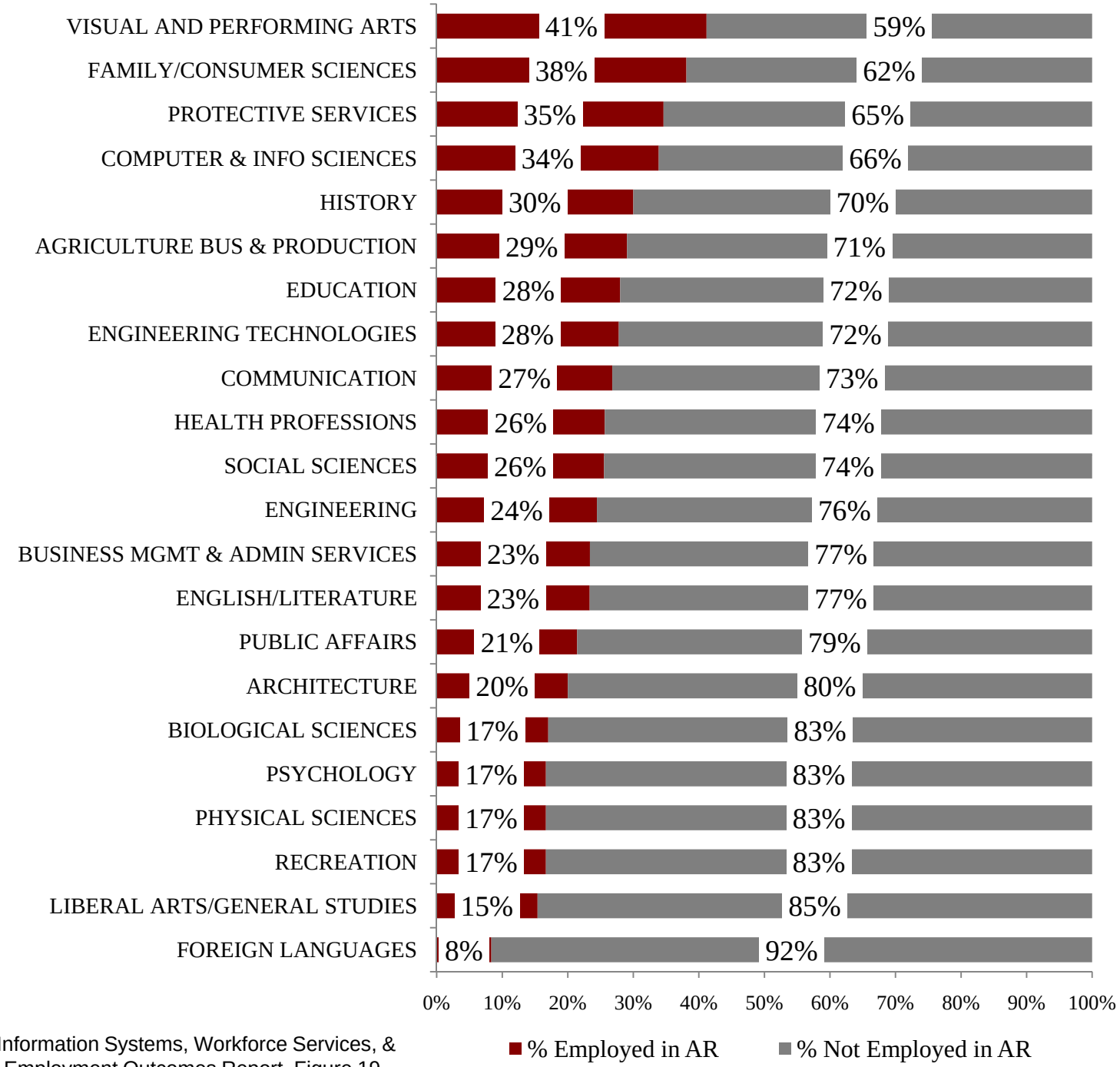
Source: Arkansas Departments of Information Systems, Workforce Services, & Higher Education, 2010 Arkansas Employment Outcomes Report, Figure 5.

Arkansas Employment by Field of Study After Five Years for 2003-04 Bachelor Degree Recipients (AR residents only)



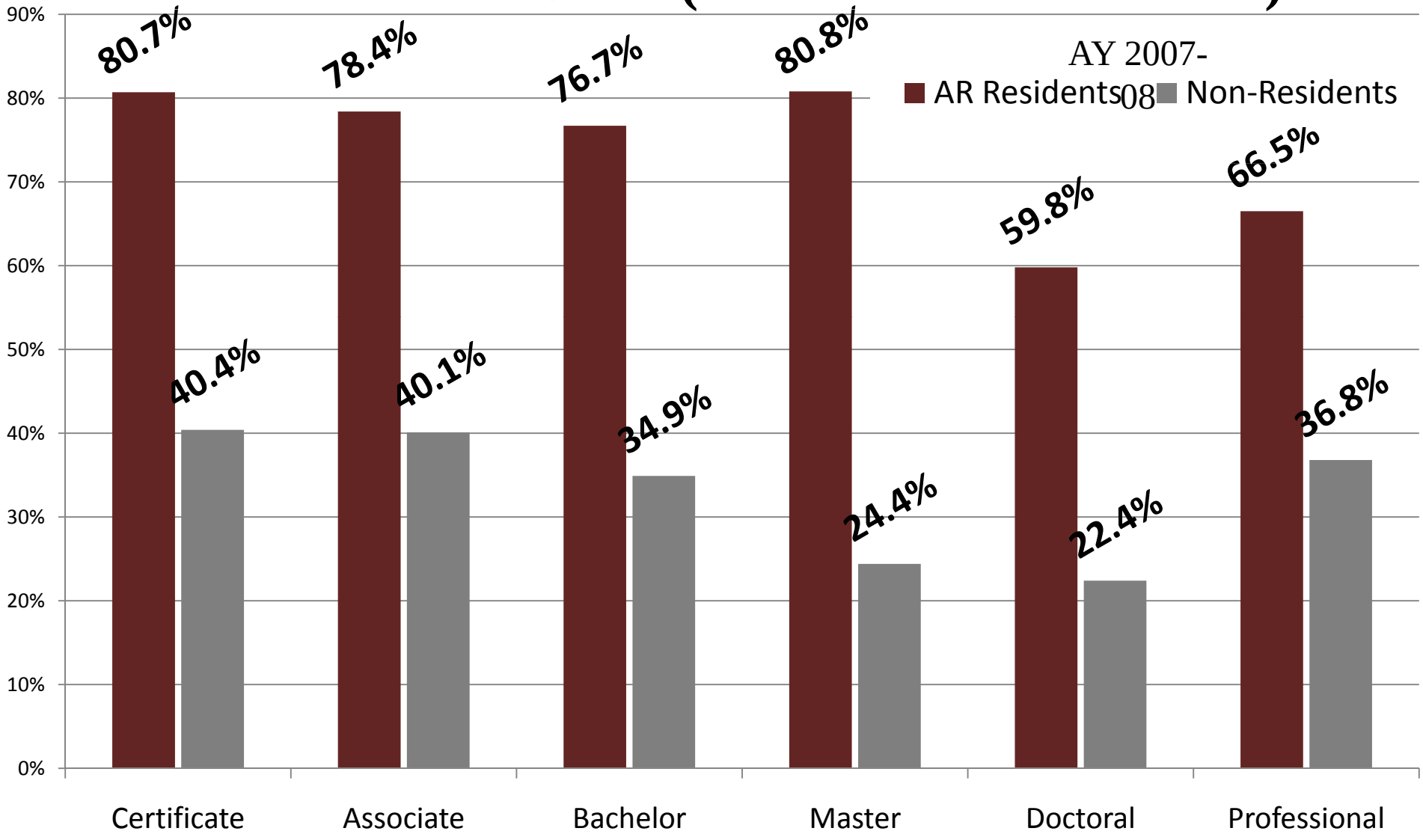
Source: Arkansas Departments of Information Systems, Workforce Services, & Higher Education, 2010 Arkansas Employment Outcomes Report, Figure 16.

Arkansas Employment by Field of Study After Five Years for 2003-04 Bachelor Degree Recipients (non- residents only)



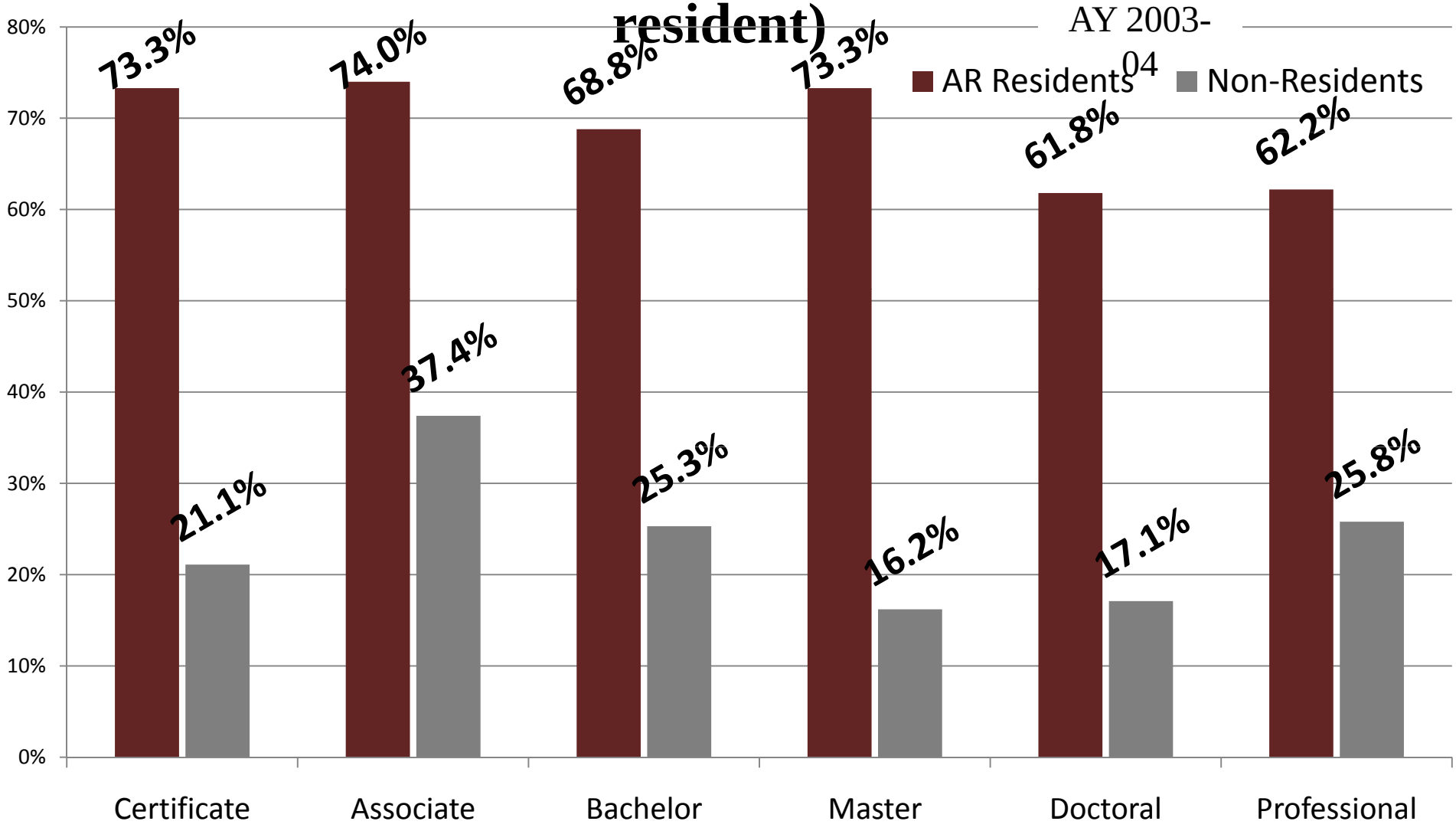
Source: Arkansas Departments of Information Systems, Workforce Services, & Higher Education, 2010 Arkansas Employment Outcomes Report, Figure 19.

Arkansas Employment by Residency Status After One Year for All Graduates (resident & non-resident)



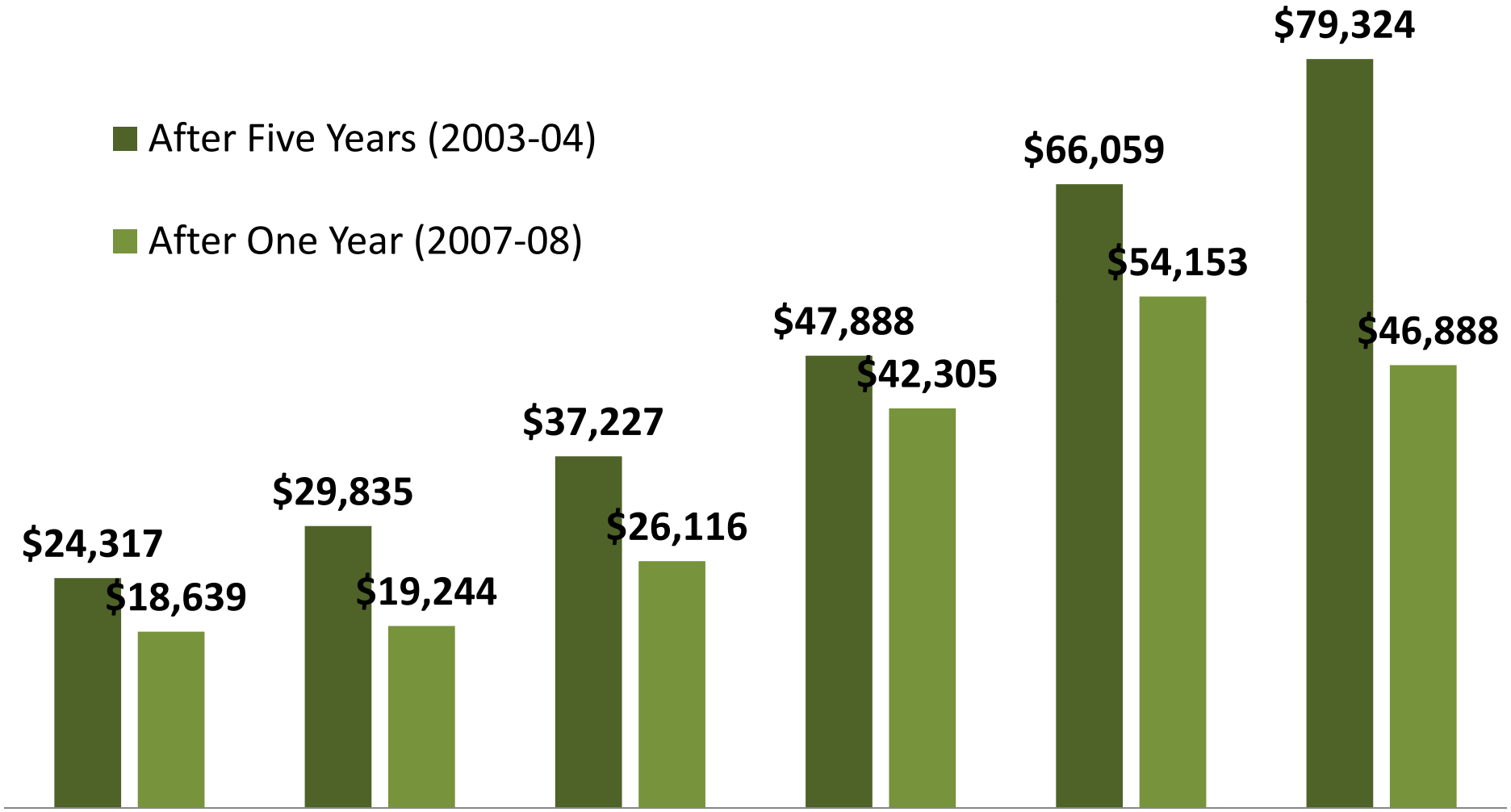
Source: Arkansas Departments of Information Systems, Workforce Services, & Higher Education, 2010 Arkansas Employment Outcomes Report, Figure 7.

Arkansas Employment by Residency Status After Five Years for All Graduates (resident & non-resident)



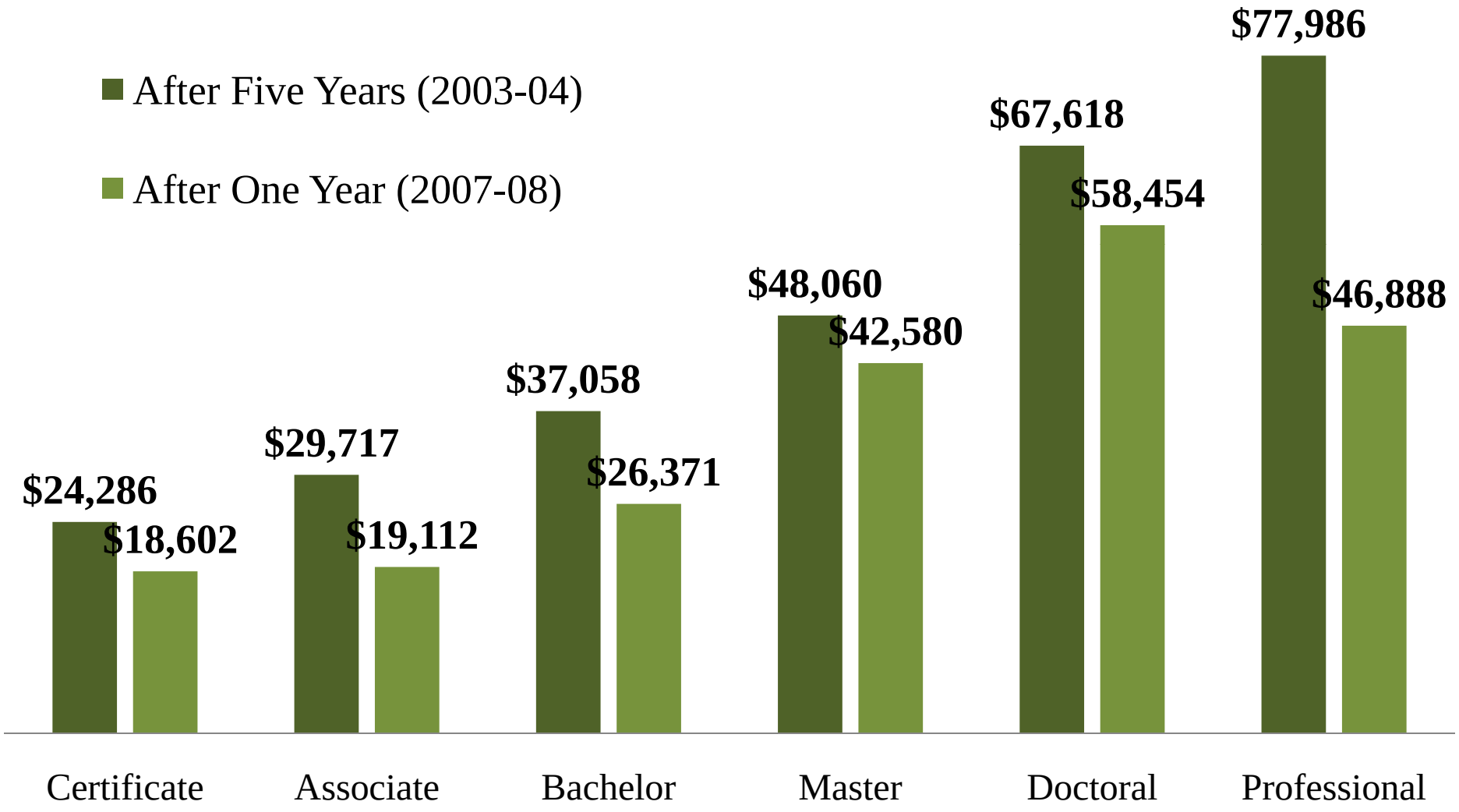
Source: Arkansas Departments of Information Systems, Workforce Services, & Higher Education, 2010 Arkansas Employment Outcomes Report, Figure 6.

Average Annual Arkansas Salaries by Degree Level for All Graduates (resident & non-resident)



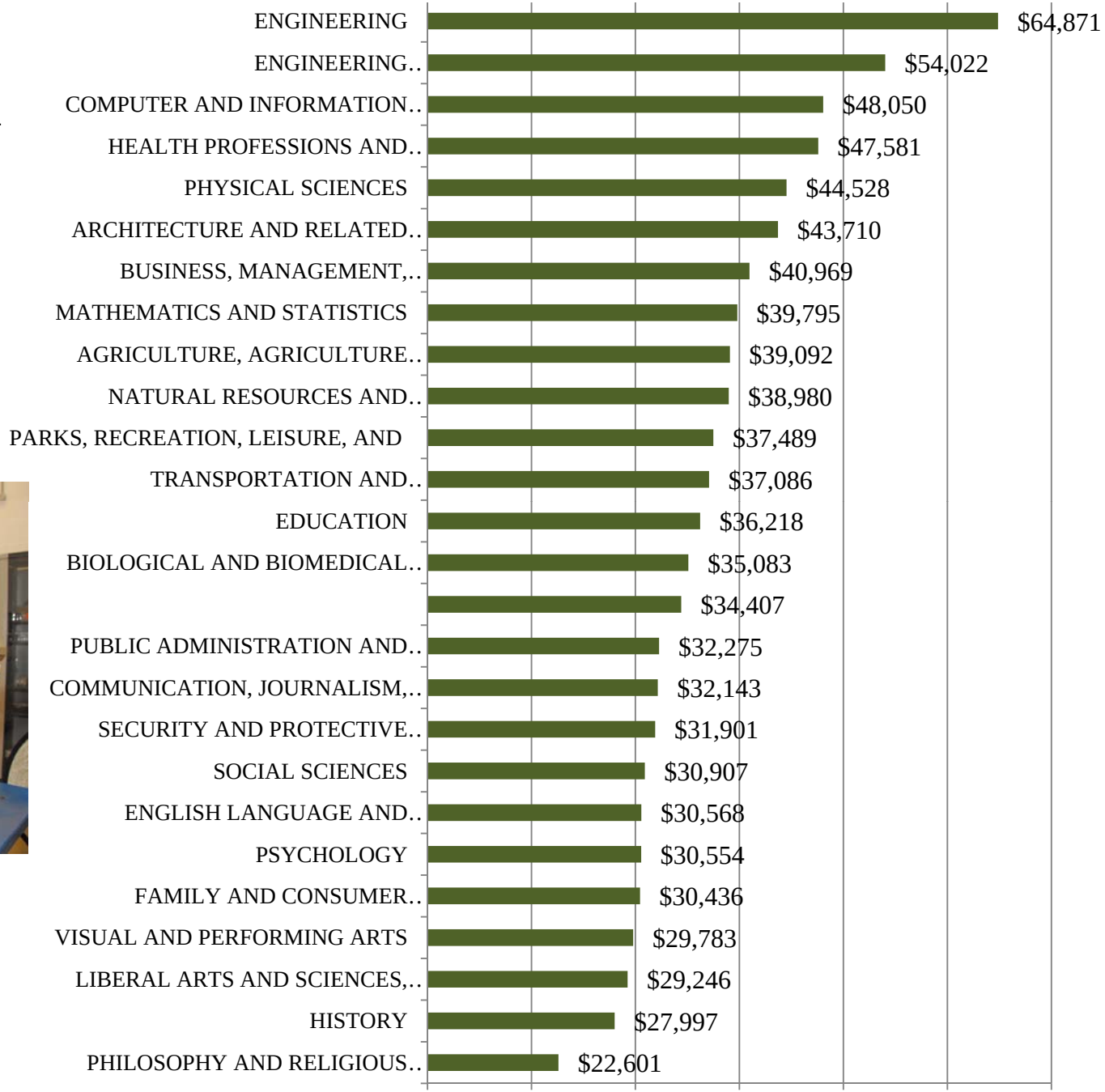
Source: Arkansas Departments of Information Systems, Workforce Services, & Higher Education, 2010 Arkansas Employment Outcomes Report, Figure 8.

Average Annual Arkansas Salaries by Degree Level (AR residents only)



Source: Arkansas Departments of Information Systems, Workforce Services, & Higher Education, 2010 Arkansas Employment Outcomes Report, based on Table 9.

Average Annual Arkansas Salaries by Field of Study After Five Years for All Graduates (resident & non-resident) AY 2003-04



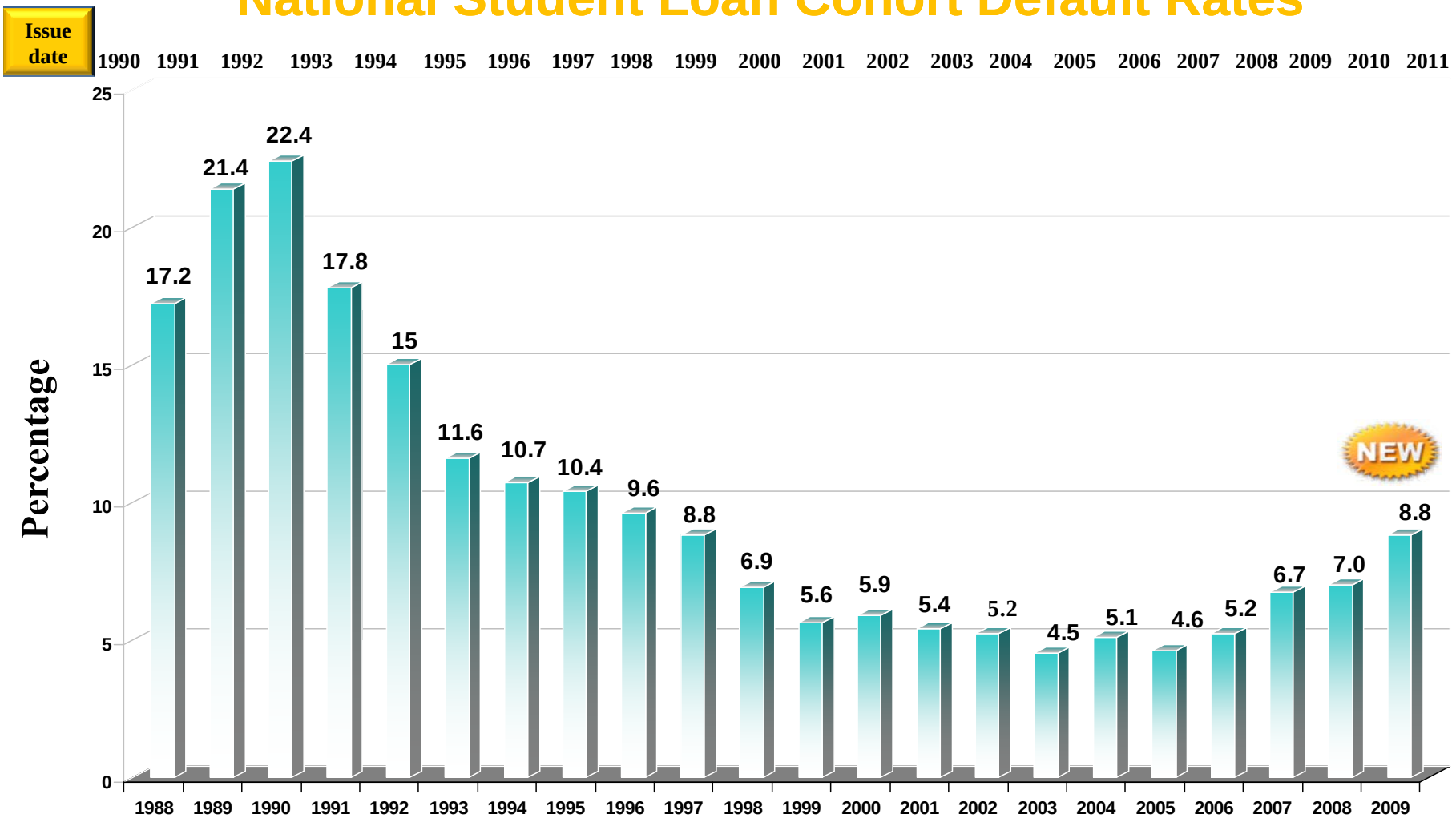
Source: Arkansas Departments of Information Systems, Workforce Services, & Higher Education, 2010 Arkansas Employment Outcomes Report, Figure 11.

College Default Rate, Possible Federal Consequences of Default Increases, and Total Loans by Institution

How college is paid for has changed

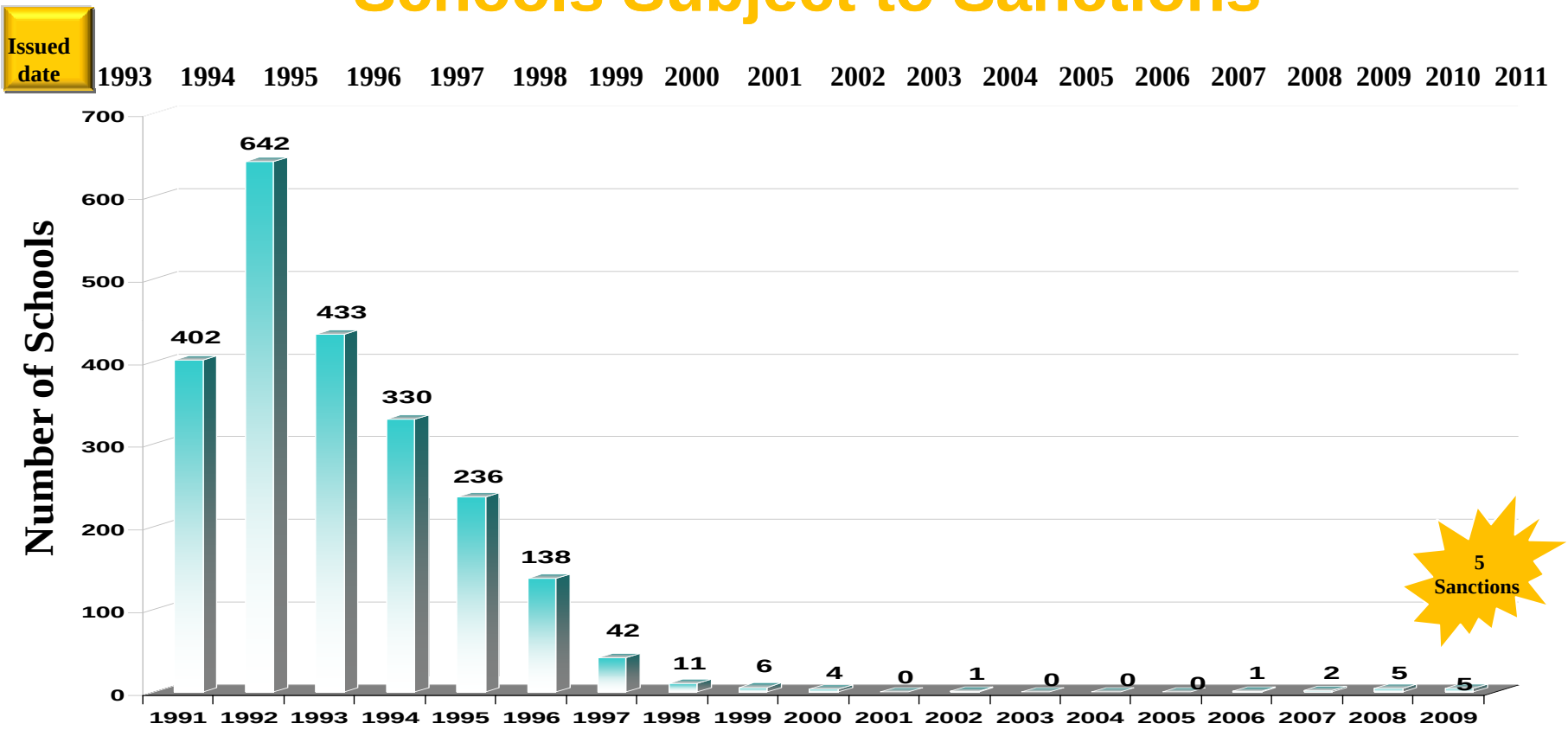
- In 1970's: 80% of the cost of attendance could be covered by a Pell grant
- Today, less than 40%

National Student Loan Cohort Default Rates



Source: 2011, U.S. Department of Education.

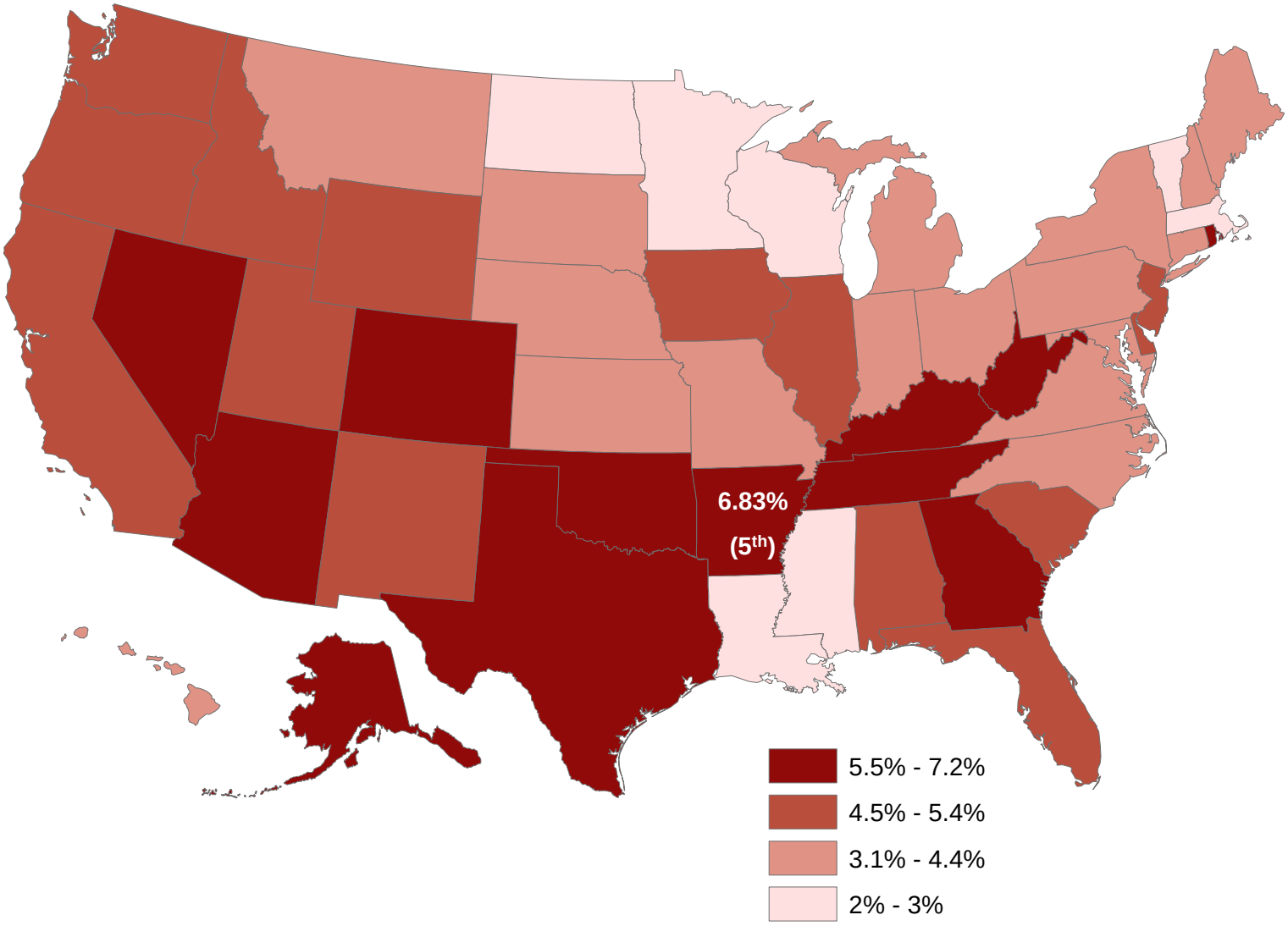
Schools Subject to Sanctions



The school numbers are pre-appeal and include only schools impacted by the three years of 25% or greater sanction. A school can be on extended sanction and is therefore reflected in multiple year counts.

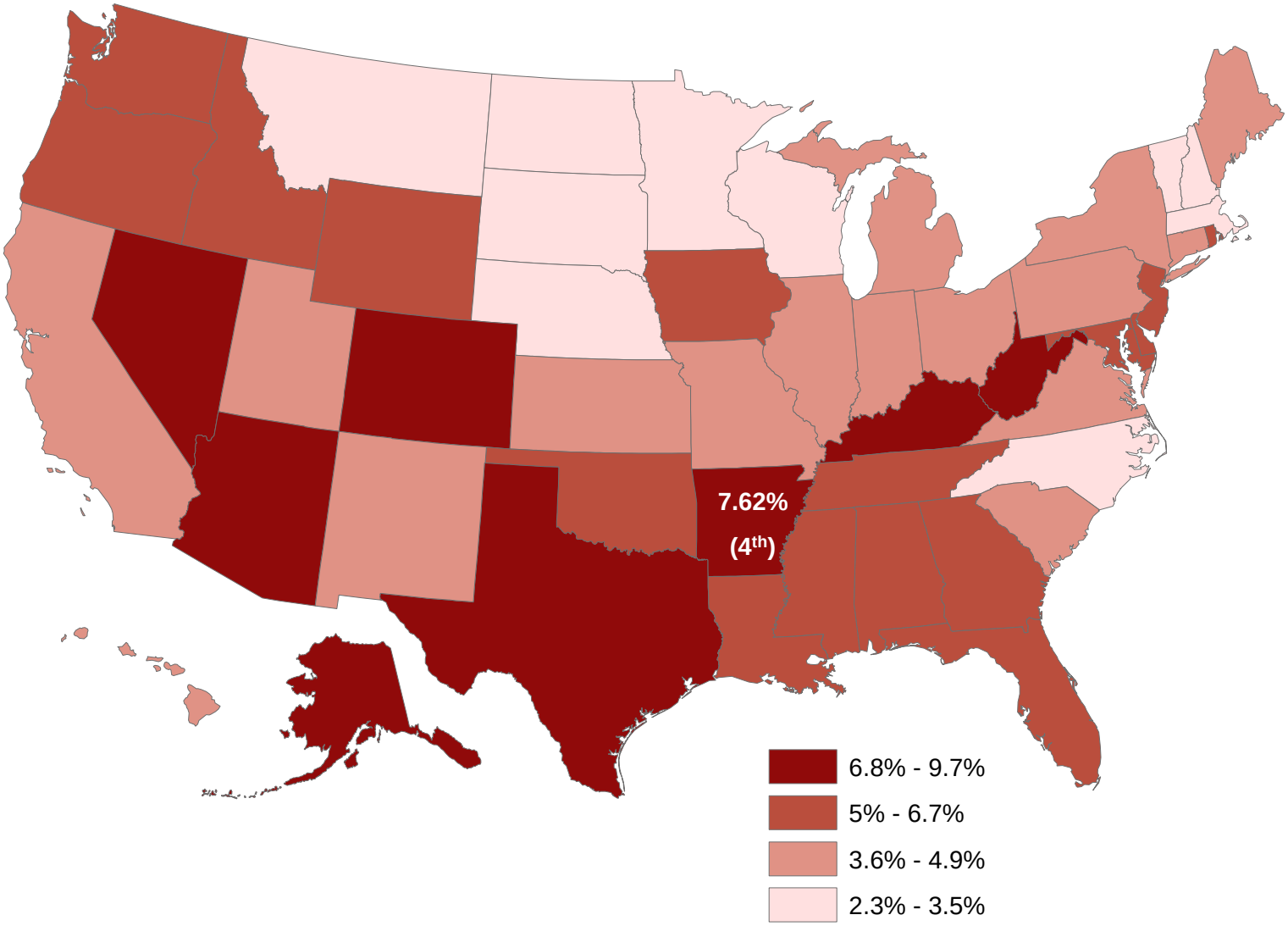
Source: 2011, U.S. Department of Education.

FY2005 Loan Default Rates



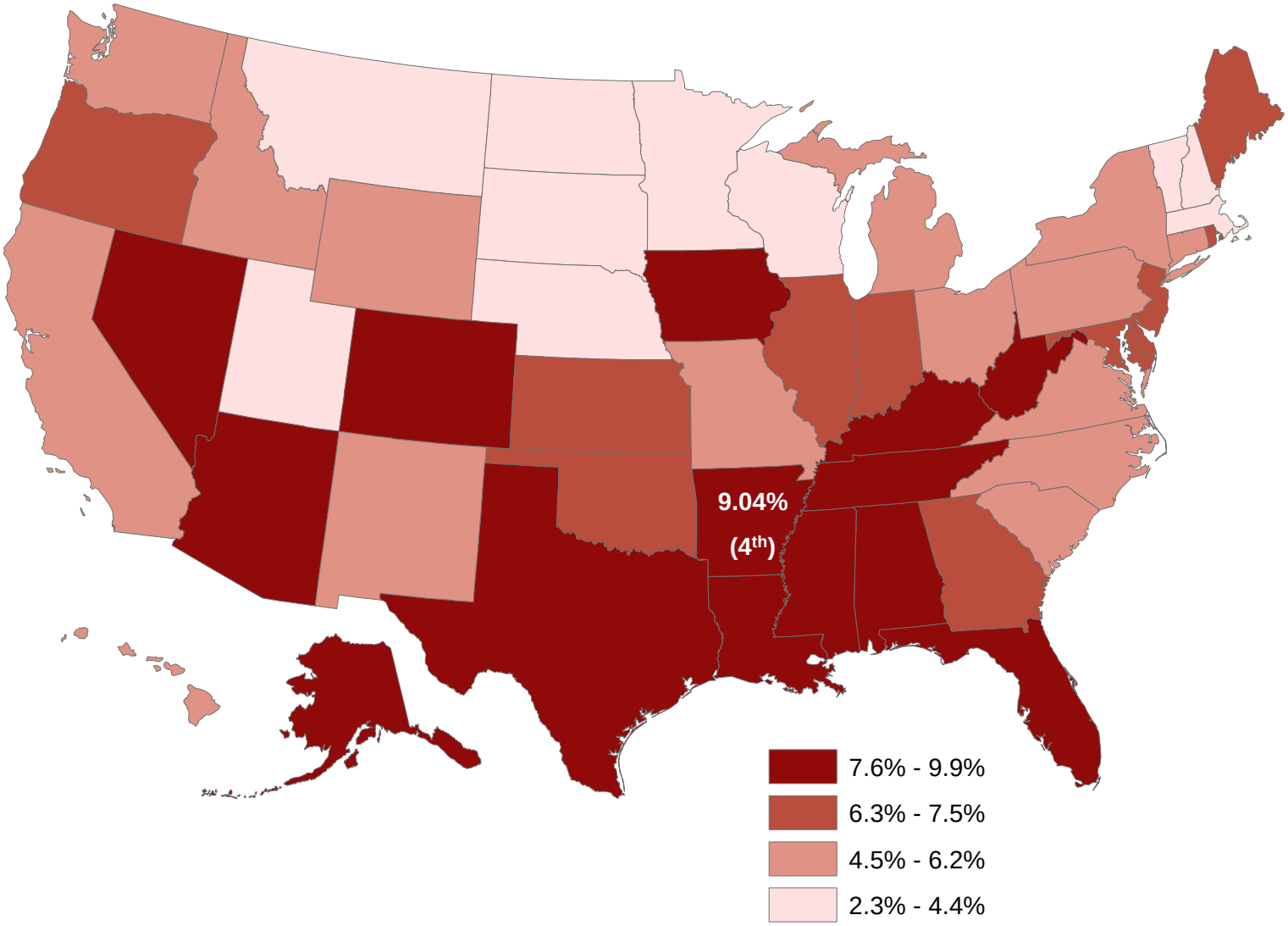
Source: 2007, U.S. Department of Education, via http://www2.ed.gov/offices/OSFAP/defaultmanagement/cdr.html.

FY2006 Loan Default Rates



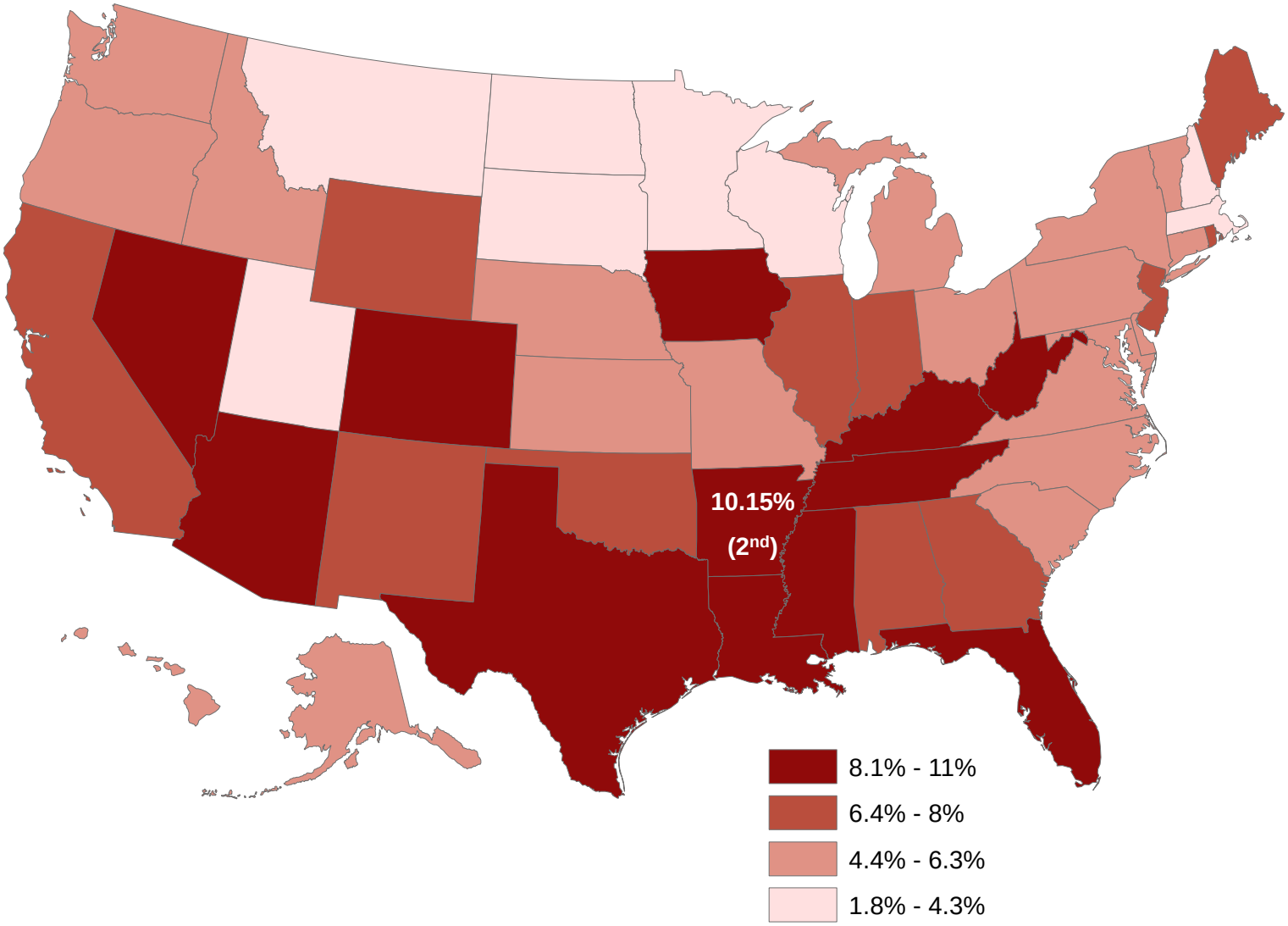
Source: 2008, U.S. Department of Education, via http://www2.ed.gov/offices/OSFAP/defaultmanagement/cdr.html.

FY2007 Loan Default Rates



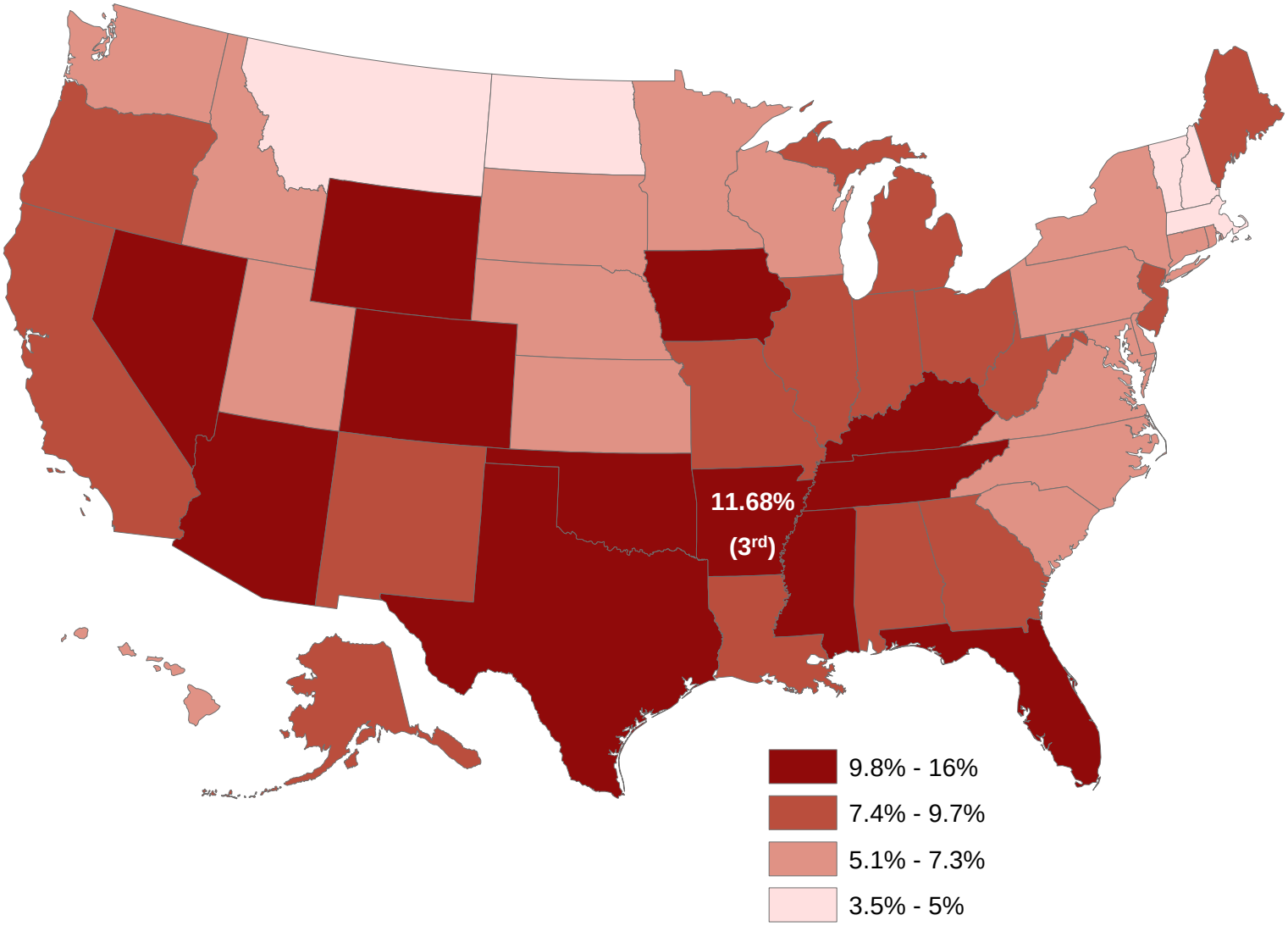
Source: 2009, U.S. Department of Education, via http://www2.ed.gov/offices/OSFAP/defaultmanagement/cdr.html.

FY2008 Loan Default Rates



Source: 2010, U.S. Department of Education, via http://www2.ed.gov/offices/OSFAP/defaultmanagement/cdr.html.

FY2009 Loan Default Rates



Source: 2011, U.S. Department of Education, via http://www2.ed.gov/offices/OSFAP/defaultmanagement/cdr.html.

Comparison of FY 2009 Official Cohort Default Rates to Prior Two Official Calculations

Institutional Default Rate Reduction Initiative Comparison of FY 2007, FY 2008, and FY 2009 Cohort Default Rates

	Fiscal Year 2007 Official				Fiscal Year 2008 Official				New Fiscal Year 2009 Official			
	# of Schools	Borrower Default Rate (%)	# of Borrowers Defaulted	# of Borrowers Entered Repayment	# of Schools	Borrower Default Rate (%)	# of Borrowers Defaulted	# of Borrowers Entered Repayment	# of Schools	Borrower Default Rate (%)	# of Borrowers Defaulted	# of Borrowers Entered Repayment
Public	**1,614**	**5.9%**	**102,919**	**1,721,629**	**1,618**	**6.0%**	**104,292**	**1,720,664**	**1,627**	**7.2%**	**128,121**	**1,778,903**
Less than 2 yrs	144	7.5%	595	7,832	145	6.7%	523	7,736	142	9.9%	749	7,548
2-3 yrs	846	9.9%	48,287	483,721	848	10.1%	49,331	487,436	855	11.9%	62,234	520,256
4yrs(+)	624	4.3%	54,037	1,230,076	625	4.4%	54,438	1,225,492	630	5.2%	65,138	1,251,099
Private	**1,718**	**3.7%**	**29,558**	**778,296**	**1,702**	**4.0%**	**30,620**	**761,129**	**1,706**	**4.6%**	**38,718**	**825,221**
Less than 2 yrs	46	12.6%	449	3,538	45	14.1%	537	3,794	43	14.5%	605	4,148
2-3 yrs	188	8.1%	1,204	14,798	180	8.2%	1,167	14,157	172	10.0%	1,507	15,039
4yrs(+)	1,484	3.6%	27,905	759,960	1,477	3.8%	28,916	743,178	1,491	4.5%	36,606	806,034
Proprietary	**2,008**	**11.0%**	**92,731**	**838,328**	**2,118**	**11.6%**	**103,764**	**889,034**	**2,147**	**15.0%**	**152,862**	**1,015,855**
Less than 2 yrs	1,039	12.0%	15,603	129,627	1,105	12.4%	15,418	123,454	1,110	13.7%	18,031	130,936
2-3 yrs	702	12.5%	33,030	262,640	723	12.6%	34,538	272,215	732	14.8%	42,893	289,546
4 yrs(+)	267	9.8%	44,098	446,061	290	10.9%	53,808	493,365	305	15.4%	91,938	595,373
Foreign	**435**	**2.2%**	**163**	**7,276**	**421**	**2.2%**	**176**	**7,902**	**425**	**5.5%**	**493**	**8,862**
Unclassified	**1**	**0.0%**	**0**	**5**	**1**	**0.0%**	**0**	**5**	**1**	**0.0%**	**0**	**5**
Total	**5,776**	**6.7%**	**225,371**	**3,345,534**	**5,860**	**7.0%**	**238,852**	**3,378,734**	**5,906**	**8.8%**	**320,194**	**3,628,846**

Loan Default Rates by Institution

	Fiscal Year		
	2007	**2008**	**2009**
ASUJ*	8.2	10.7	13.3
ATU	9.3	9.8	13.7
HSU	6.8	9.8	11.9
SAUM	11.5	11.6	10.8
UAF	3.4	4.3	4.7
UAFS	11.2	10.8	12.3
UALR	8.9	9.1	9.7
UAM	13.4	14.7	20.1
UAMS	1.2	1.6	1.4
UAPB	15.9	17.3	21.1
UCA	6.4	9.4	8.6

Source: 2011, U.S. Department of Education. (* Includes ASUN & ASUMH)

Loan Default Rates by Institution

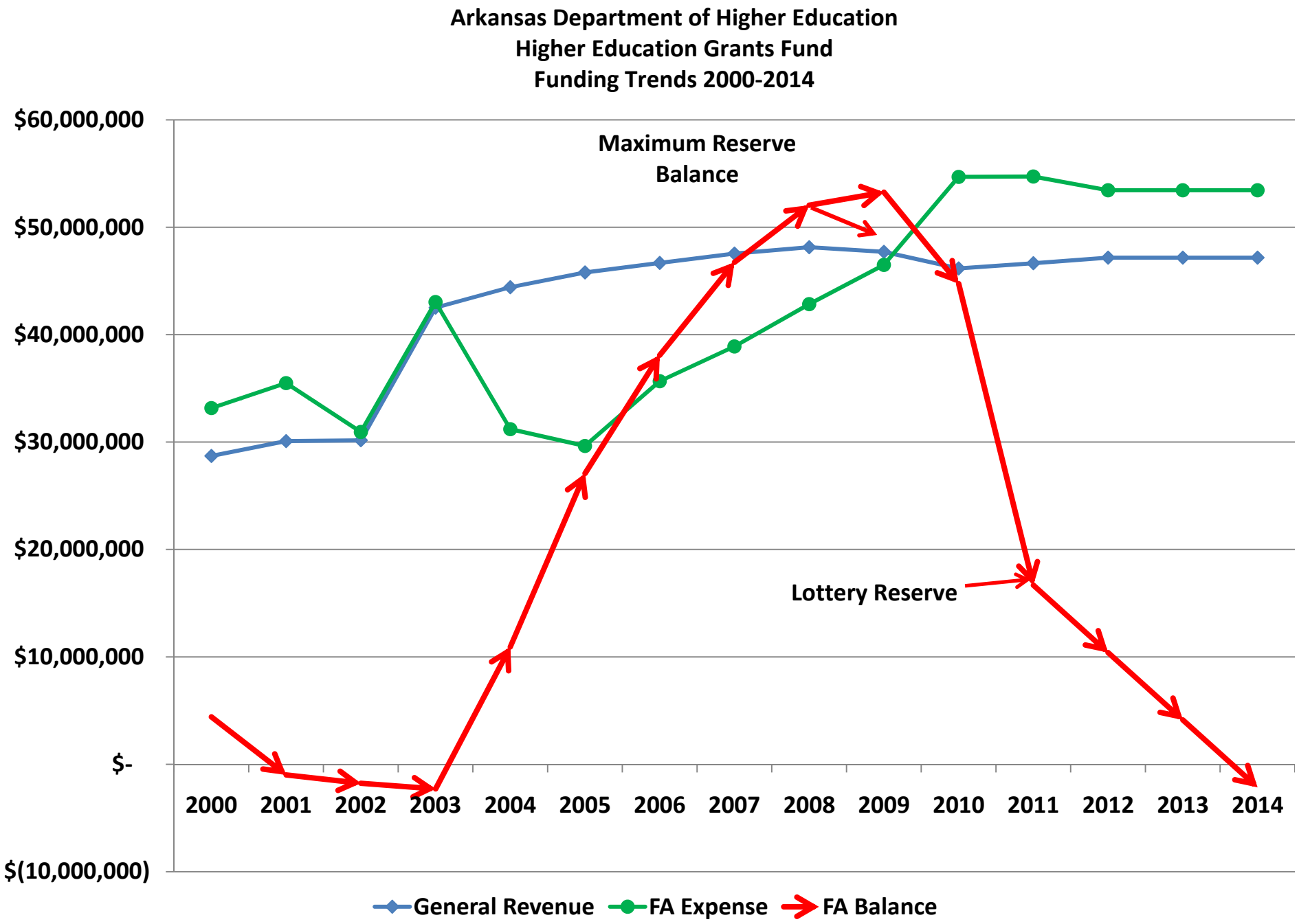
	Fiscal Year				Fiscal Year		
	2007	**2008**	**2009**		**2007**	**2008**	**2009**
ANC	9.7	12.8	19.8	NWACC	7.8	8.9	13.6
ASUB	8.9	11.8	14.8	OZC	7.5	13.9	26.3
ASUMH	(included in ASUJ)			PCCUA	8.6	21.2	17.2
ASUN	(included in ASUJ)			PTC	12.3	14.9	14.7
BRTC	14.4	12.1	16.1	RMCC	0	0	0
CCCUA	0	0	0	SACC	9.8	9	12.8
COO	11.2	9.9	12.2	SAUT	15.8	10.7	12.3
EACC	11.7	21.4	13.5	SEAC	13.6	12.3	16.3
MSCC	0	0	0	UACCB	19.1	18.5	26.5
NAC	16	9.2	13.1	UACCH	12.5	11.7	14.1
NPCC	18.5	16.1	18.8	UACCM	11.5	7.5	11.8

Source: 2011, U.S. Department of Education.

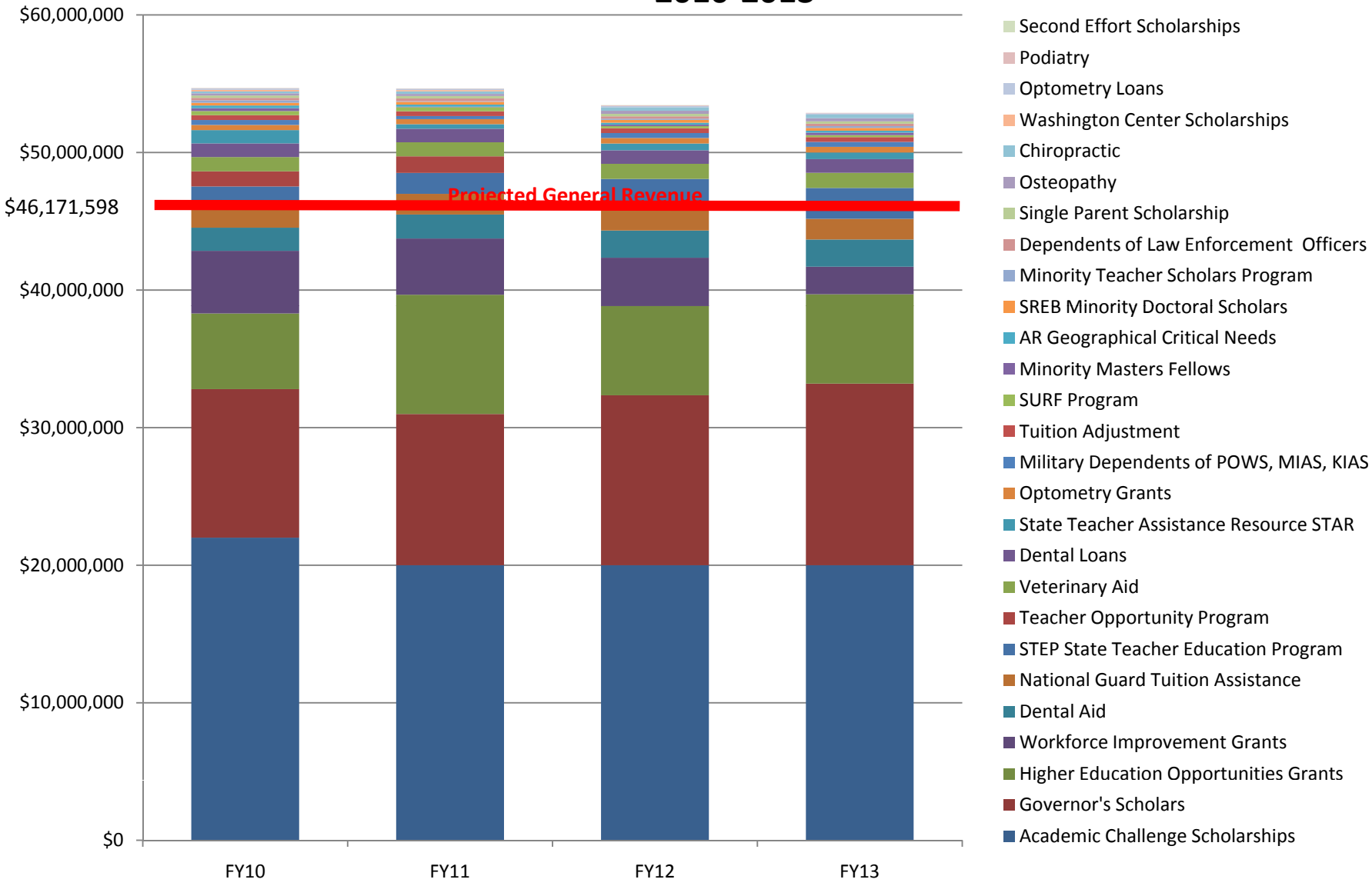
Schools subject to loss of FFEL/FDSLP/Pell eligibility, 3 years of rates >=25.0%

A school subject to loss of eligibility to participate in the Federal Family Education Loan (FFEL) Program, William D. Ford Federal Direct Loan (Direct Loan) Program, and/or Federal Pell Grant Program has FY 2008, FY 2007, and FY 2006 official cohort ` rates that are 25.0% or greater. If a school fails to successfully appeal this sanction, it will lose eligibility to participate in the FFEL, Direct Loan, and/or Federal Pell Grant Program until September 30, 2012. For more information on this sanction and specific exceptions, please refer to the Cohort Default Rate Guide.

ARKANSAS DEPARTMENT OF HIGHER EDUCATION


Arkansas Department of Higher Education
Higher Education Grants Fund
Funding Trends 2000-2014
$60,000,000
$50,000,000
$40,000,000
$30,000,000
$20,000,000
$10,000,000
$-
$(10,000,000)
Maximum Reserve Balance
Lottery Reserve
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
General Revenue
FA Expense
FA Balance

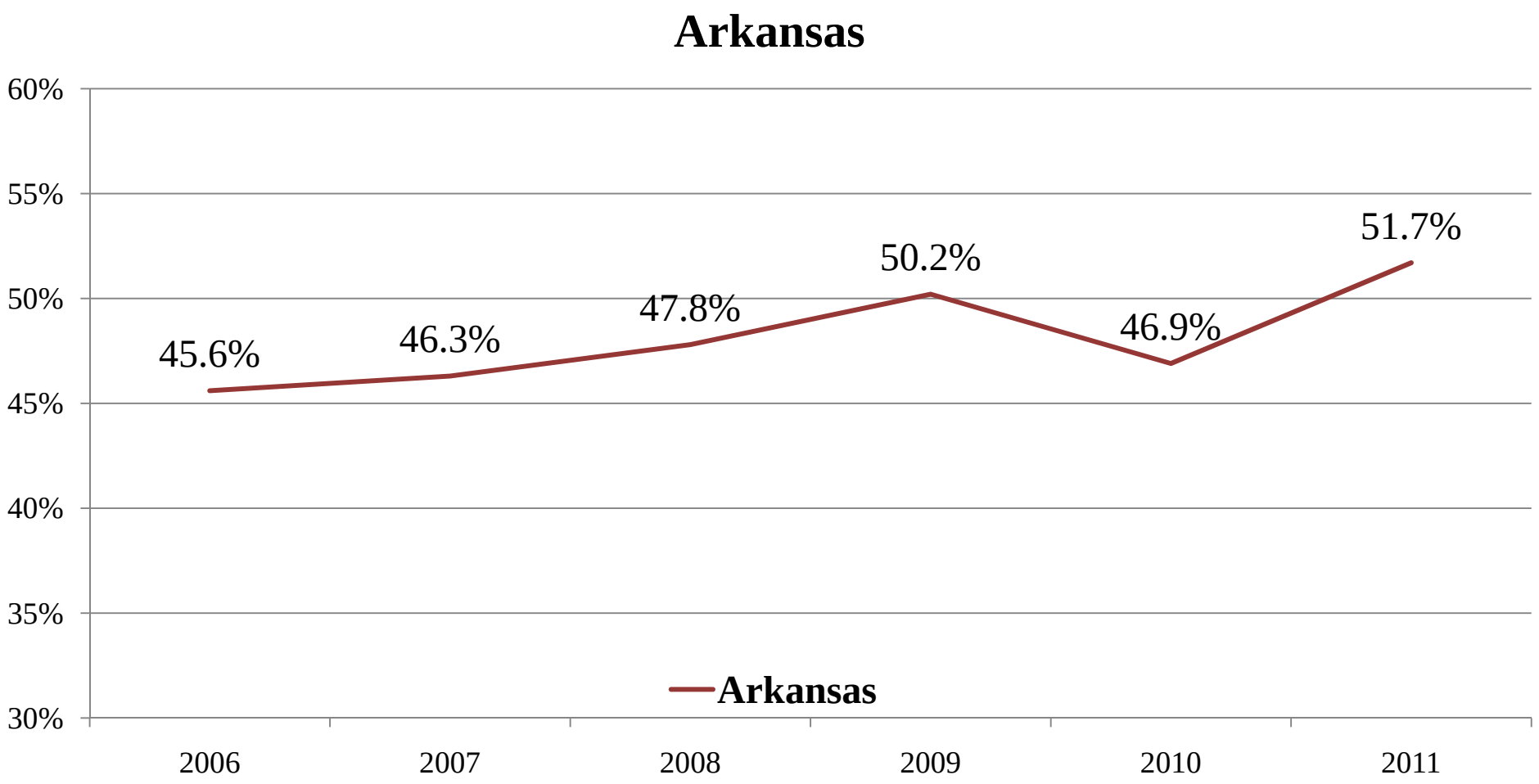
Arkansas Department of Higher Education
Higher Education Grants Fund
2010-2013



Statewide Statistics

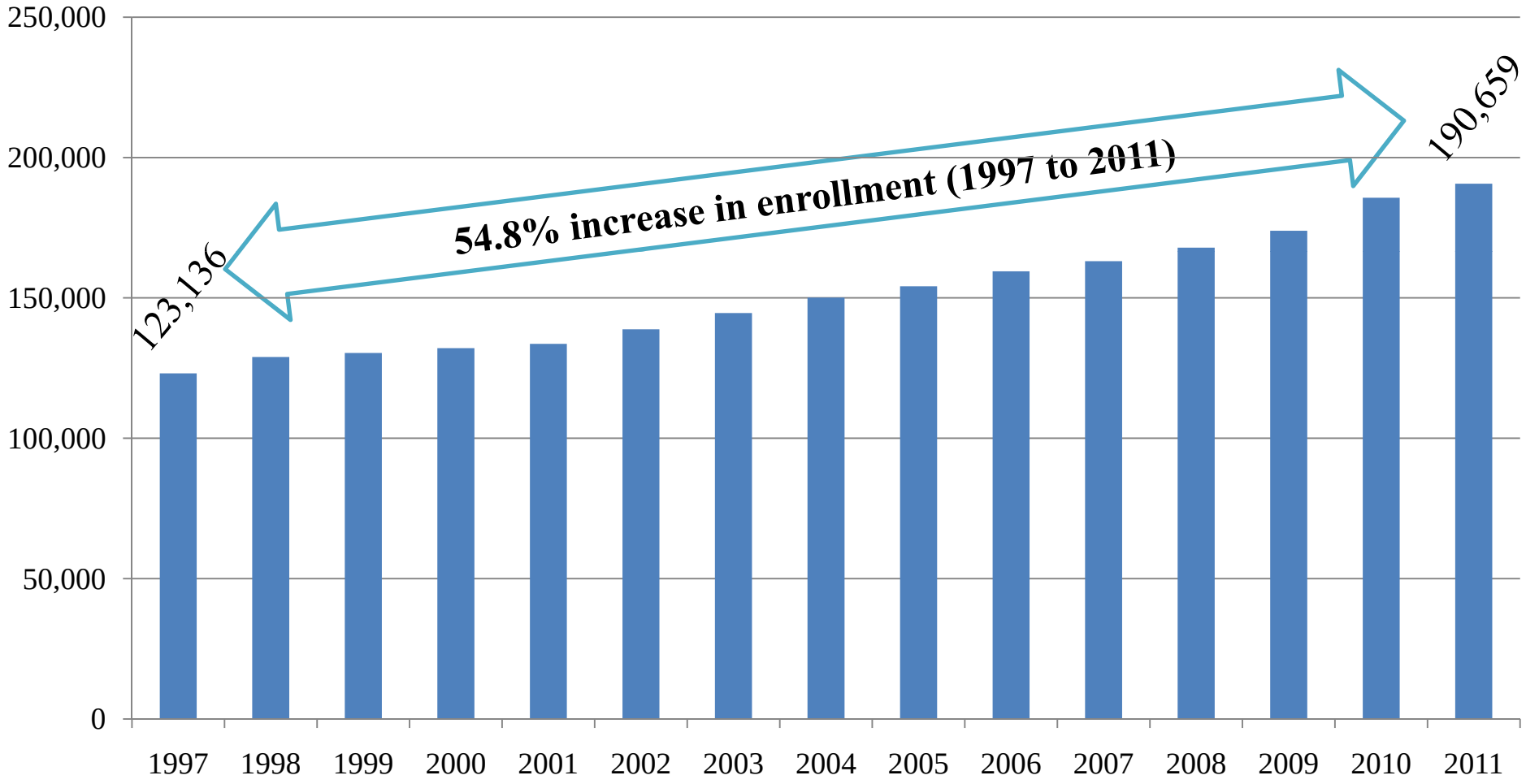
Five-Year College Going Rates

Public High School Students



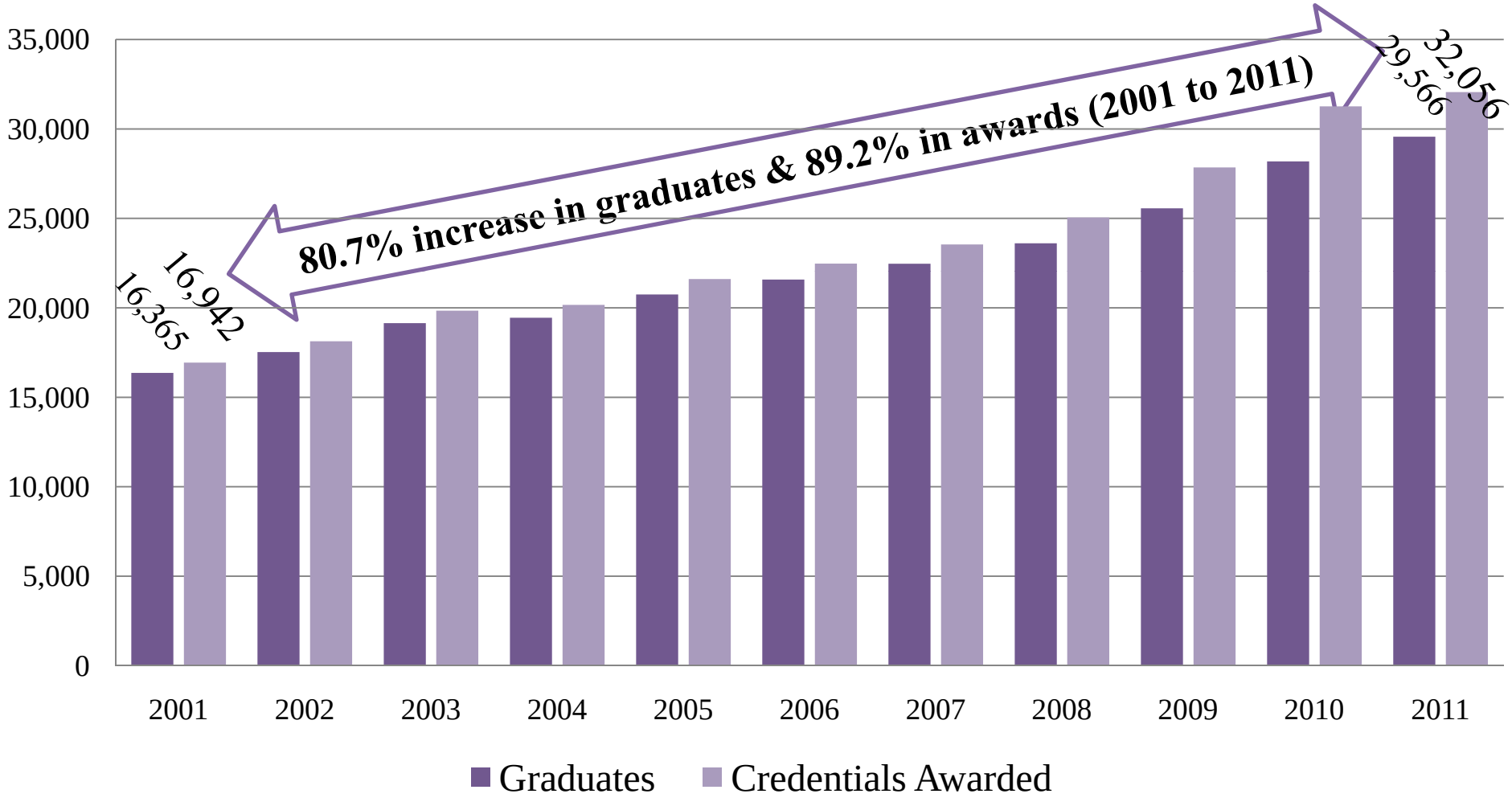
Source: 2011, ADHE SIS; NOTE: College Going Rate of Public High School Students Only.

Annual Unduplicated Enrollment for Public Institutions



Source: 2011, ADHE SIS; public institutions only (AY1997-AY2011).

Graduates and Credentials Awarded



Source: 2011, ADHE SIS; public institutions only (AY2001-AY2011).

Higher Education Attainment

- **Arkansas is second to last with 19.49% of adults with a bachelor's. (Nationally=28.1%)**
- **West Virginia is last in terms of bachelor's at 17.5%; Mississippi decreased to 19.51% in 2010.**
- **SREB report that 37% of FT-FT four-year students in 2002 graduated in 6 years. (Lowest of the 16 SREB states) (Nationally=55%)**

Source: 2011, U.S. Census Bureau, American Community Survey 2010.

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ARKANSAS DEPARTMENT OF HIGHER EDUCATION

Arkansas Public Colleges and Universities Enrollment, 2010 Fall Term, Undergraduate Students Only

Age less than 20	35.7%
Age 20-24	32.9%
Age 25-34	17.9%
Age 35-44	8.1%
Age 45-54	3.9%
Age 55 or higher	1.6%
Traditional Students	**68.6%**
Non-Traditional Students	**31.4%**
Average Age	**24.6**

Source: 2011, ADHE SIS; public institutions only.

Arkansas Public Colleges and Universities Enrollment, 2010 Fall Term, Undergraduate Students Only

Age Range	4-Year Universities	2-Year Colleges	Difference
Age less than 20	38.0%	32.6%	5.4%
Age 20-24	40.2%	23.8%	16.4%
Age 25-34	13.6%	23.4%	-9.8%
Age 35-44	5.2%	11.7%	-6.5%
Age 45-54	2.2%	6.0%	-3.7%
Age 55 or higher	0.7%	2.6%	-1.8%
Traditional	78.2%	56.4%	21.8%
Non-Traditional	21.8%	43.6%	-21.8%
Average Age	22.9	26.7	-3.8%

Source: 2011, ADHE SIS; public institutions only.

Arkansas Public Colleges and Universities Graduates

Academic Year 2011 (2010-11)	Number	Percent
Traditional	16,592	51.4%
Non-Traditional	15,690	48.6%
Total	32,282	100.0%

Source: 2011, ADHE SIS; public institutions only (AY2011).

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ARKANSAS DEPARTMENT OF HIGHER EDUCATION

Summary

- **Two-year public colleges serve substantially higher rates of non-traditional students than do four-year universities.**

- **Traditional students make up about two-thirds of public higher education enrollment.**

- **Traditional students make up about one-half of public higher education graduates, only slightly higher than Non-Traditional students.**

ARKANSAS DEPARTMENT OF HIGHER EDUCATION

Amounts Credited Due to the State Scholarship Stacking Policy

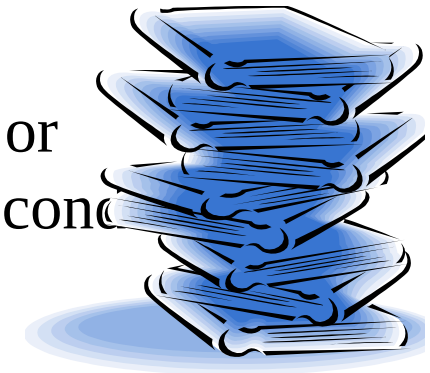
Stacking Policies of the State's Institutions

- One state stacking policy
- Each institution has variations in FA packaging policies

A postsecondary institution shall not award state aid in a student aid package in excess of the cost of attendance. When a student receives a student aid package that includes state aid and the student's aid package exceeds the cost of attendance, the institution shall repay state aid in the amount exceeding cost of attendance, starting with state aid received under the Academic Challenge Scholarship.

Stacking Definitions

- Cost of Attendance - An estimate of a student's educational expenses that is designed to provide an accurate projection of the reasonable costs for the period of enrollment.
- State Aid – scholarships or grants awarded to a student from public funds, including without limitation the Academic Challenge Scholarship, DHE scholarship and grant programs, state general revenue, tuition, and local tax revenue.
- Student aid package – federal aid, state aid, and other aid a student receives for postsecondary education expenses
  - "Federal Aid" – scholarships or grants awarded to a student as a result of the FAFSA, excluding the Pell Grant
  - "Other Aid" – scholarships, grants, tuition waivers, or housing waivers awarded to a student from a postsecondary institution or private sources.



Reductions Due To Stacking

Fall 2010

Program	# of students	Amount
Academic Challenge Scholarship	220	$ 229,453.66
Governor's Scholars Program	4	$ 2,767.00
Go! Grant	69	$ 24,428.00
National Guard Tuition Incentive Program	1	$ 2,500.00
	294	$ 259,148.66

Source: 2011, ADHE SIS.

ARKANSAS DEPARTMENT OF HIGHER EDUCATION

ARKANSAS DEPARTMENT OF EDUCATION

Critical Academic Licensure Shortage Areas
2011-2012 School Year

Pursuant to A.C.A. § 6-81-601 et seq. and A.C.A. § 6-85-109, the Arkansas Department of Education has designated the following areas as critical academic licensure/endorsement shortage areas for the 2011-2012 school year.

Licensure Areas:

Mathematics (Secondary)
Mathematics (7-12)

Middle Childhood
Mathematics/Science (4-8)
English/Language Arts/Social Studies (4-8)

Special Education
Deaf Education
Visually Impaired
Speech Language Pathologist/
Speech Therapist
Special Education Instructional
Specialist (P-4 and 4-12) **or**
(Old Licenses: {K-12} Mildly Handicapped,
Moderately/Profound Handicapped
Severely Emotionally Disturbed)

Science (Secondary)
Life/Earth Science (7-12)
Physical/Earth Science (7-12)
or (Old Licenses: Biology/Chemistry/
Physical Science/Physics)

Foreign Language(s) – All areas

Endorsements:

Library Media

School Counselor

Gifted and Talented

Algebra 1 Middle School

5th/6th Grade Endorsement

English as Second Language (ESL)

Middle School (5-8)
(Old Licenses by subject:)
English (056)
Math (111)
Social Studies (159)
Science (139)

Bldg. Level Administrators

Total Waivers Requested
2010-2011

2010-2011 ALP Code	Out of Area	ALP Waivers Total to Date	%
230, 231, 232, 234, 291, 292	Special Education	508	36.89%
305, 306	Gifted & Talented	121	8.79%
295, 296	Library Media	96	6.97%
002, 168	Middle Childhood Education	91	6.61%
299, 300	School Counselor	88	6.39%
169, 170	Secondary Sciences	52	3.78%
312, 313	Bldg. Level Adm.	46	3.34%
103, 104, 105, 106, 107	5th/6th Endorsement	44	3.20%
200	Mathematics	35	2.54%
167	Social Studies	34	2.47%
314, 315, 318	Curriculum Program Adm.	25	1.82%
307, 308	ESL	24	1.74%
166	English	23	1.67%
108	Journalism	23	1.67%
203, 204, 205, 206	Music	22	1.60%
227, 228, 235, 236	PE/Wellness/Leisure	19	1.38%
201, 202	Art	19	1.38%
114	Speech Endorsement	15	1.09%
410, 411, 412, 418	Career Orientation	13	0.94%
311	District Level Adm.	12	0.87%
209	Algebra 1 Endorsement	10	0.73%
113	Drama Endorsement	8	0.58%
001	ECE P-4	7	0.51%
293	Coaching Endorsement	7	0.51%
224, 225	Business Technology	6	0.44%
003, 004	Spanish	6	0.44%
207, 208	Drama/Speech	5	0.36%
229	Adult Education	5	0.36%
215	FACS	4	0.29%
297	Reading Specialist	4	0.29%
2010	Survey of Fine Arts	2	0.15%
165	Latin	1	0.07%
221, 222	Marketing	1	0.07%
4546	Transition Math	1	0.07%
217, 218	Agricultural Education		0.00%
005, 006	French		0.00%
007, 008	German		0.00%
410	Keystone - Career Academy End.		0.00%
9	Mandarin Chinese		0.00%
	Total Waivers	**1377**	**100.00%**

Waivers for Teachers Teaching Out of Area
School Year 2011-2012 (as of 9/30/11)

CODE	Area Of Licensure	# Waivers Requested	%
001	Early Childhood Education P-4	7	0.57%
002	English/Language/Social Studies 4-8	35	2.85%
003	Spanish P-8	2	0.16%
004	Spanish 7-12	4	0.33%
103	Grade 5/6 Endorsement (Math)	1	0.08%
105	Grade 5/6 Endorsement (English)	6	0.49%
106	Grade 5/6 Endorsement (Social Studies)	4	0.33%
107	Grade 5/6 Endorsement (P-4)	40	3.26%
108	Journalism 7-12	15	1.22%
113	Drama Endorsement 7-12	5	0.41%
114	Speech Endorsement 7-12	8	0.65%
166	English/ Language/ Arts 7-12	13	1.06%
167	Social Studies 7-12	33	2.69%
168	Science/Mathematics 4-8	41	3.34%
169	Physical /Earth Science 7-12	46	3.75%
170	Life/Earth Science 7-12	8	0.65%
200	Mathematics 7-12	35	2.85%
201	Art P-8	12	0.98%
202	Art 7-12	3	0.24%
203	Vocal Music P-8	8	0.65%
204	Vocal Music 7-12	3	0.24%
205	Instrumental Music P-8	5	0.41%
208	Drama/Speech 7-12	1	0.08%
209	Algebra I Endorsement 8	6	0.49%
215	Family & Consumer Sciences 7-12	5	0.41%
222	Marketing Technology 7-12	2	0.16%
224	Business Technology 4-8	6	0.49%
225	Business Technology 7-12	7	0.57%
229	Adult Education PS	4	0.33%
230	Sp Education Instructional Specialist 4-12	252	20.54%
231	Sp Ed Ech Inst Specialist P-4	164	13.37%
232	Sp Education Visual Specialist P-4	8	0.65%
234	Sp Education Visual Specialist 4-12	8	0.65%
235	Physical Education, Wellness & Leisure P-8	11	0.90%
236	Physical Education, Wellness & Leisure 7-12	10	0.81%
239	Curriculum/Prog/Adm/Curriculum P-12	6	0.49%
293	Coaching 7-12	3	0.24%
295	Library Media Science P-8	42	3.42%
296	Library Media Science 7-12	41	3.34%
299	Guidance & Counseling P-8	51	4.16%
300	Guidance & Counseling 7-12	38	3.10%
302	Building Level Administrator 5-12	14	1.14%
305	Gifted & Talented P-8	69	5.62%

Professional License by Fiscal Year

FISCAL YEAR: 2008 - 2009

RENEWALS July 2008 - June 2009

Area Description	Area Code	Count
Administrator	301	1
Adult Educ	229	9
Advertising Design	571	1
Agri Sci & Tech	217	3
Agri Sci & Tech	218	15
American History	7015	20
Ap Biology	6529	2
Ap Chemistry	6531	5
Ap Physics	6543	5
Applied Bio/Chem I	6527	11
Applied Bio/Chem II	6528	10
Applied Math I	4511	27
Applied Math II	4512	27
Arkansas History	7010	22
Art	202	35
Art	201	36
Assistant Coach	8012	1
Assistant Principal	8516	3
Assistant Principal	8518	1
Astronomy	6546	12
Basic Math Endorsement	112	10
Biology	6525	7
Biology II	6526	3
Botany	6553	1
Build Administrator	313	30
Build Administrator	312	41
Building Level Administrator	302	30
Business Ed/Comp Tech Endors	035	18
Business Ed/Sect Endors	031	38
Business Ed/Voc Endors	036	53
Business Education	5510	1
Business Tech	225	74
Business Tech	226	2
Business Tech	224	19
Career Academy Endorsement	410	8
Career And Tech Admin	415	1
Career Orientation	9050	27
Career Orientation Endorsement	411	7
Career Orn/Voc Fund	9051	32
Career Preparation Endorsement	412	16
Career Ser For Special Popul	9041	3

Professional License by Fiscal Year		
FISCAL YEAR: 2008 - 2009		
RENEWALS July 2008 - June 2009		
Elementary Principal	402	87
Emotionally Disturbed	192	7
Eng Lang Arts	166	161
English Adv	4032	1
English Dev	4030	1
English Reg	4031	3
ESL	308	67
ESL	307	67
Family & Con Sci	215	28
Family & Con Sci	214	10
French	006	7
French	005	1
Functional Mathematics	4545	3
Gen Coop Education	9035	1
General Science	6520	1
General Science	131	69
Geography	7065	24
Geology	6547	12
German	008	3
German	007	1
Gift & Talented	306	58
Gift & Talented	305	59
Global Studies	7035	7
Grade 5-6 Endorsement (P-4)	107	4
Graduate Elementary	185	12
Graduate Secondary	188	11
Guid & Counseling	300	20
Guid & Counseling	299	16
Guidance Elementary	522	46
Guidance Secondary	523	46
Health	3020	5
Health Education	081	68
Industrial Coop Training	584	1
Industrial Tech Edu	212	3
Instrumental Music	206	38
Instrumental Music	205	38
Journalism	4040	24
Journalism	054	9
Journalism	108	8
Junior ROTC	612	3
Lib Media Sci	296	38
Lib Media Sci	295	37

Professional License by Fiscal Year		
FISCAL YEAR: 2008 - 2009		
RENEWALS July 2008 - June 2009		
Reading	051	34
Reading (Advanced)	4022	1
Reading (Regular)	4021	2
Reading (Remedial)	4020	1
Reading Specialist	298	57
Reading Specialist	297	63
Sch Psych Spec	316	4
Sec Vocational Administrator	175	4
Secondary Physical Education	082	101
Secondary Principal	403	87
Social Studies	167	145
Sociology	7075	5
Spanish	004	21
Spanish	003	3
Spch Lang Path	317	27
Special Ed Ech Inst Specialist	231	234
Special Ed Hearing Specialist	292	9
Special Ed Hearing Specialist	291	9
Special Ed Inst Specialist	230	232
Special Ed Visual Specialist	232	7
Special Ed Visual Specialist	234	7
Special Eduation Supervisor	190	2
Speech Therapy (R)	198	6
Srv Of Fine Arts/Art	2012	1
Subject Area Supv	8550	2
Supervisor Buisness	353	1
Supervisor Elementary	365	1
Supervisor Gifted and Talented	340	3
Supervisor Other	8590	1
Supervisor Special Education	341	12
SupervisorElementary	366	1
Supv Special Educ	8585	1
Survey Of Fine Arts	2010	4
Technical Permit	566	13
Television Broadcasting	595	1
Title I (Reading)	1510	1
Title I/Language Arts	1520	1
Transitional Math	4546	20
Vocal Music	203	39
Vocal Music	204	38
Welding	597	1
Work Place Readiness	9042	29

Professional License by Fiscal Year		
FISCAL YEAR: 2008 - 2009		
RENEWALS July 2008 - June 2009		
Journalism	108	1
Junior ROTC	612	5
Life/Earth Science	170	16
Marketing Tech	222	3
Mathematics	200	38
Medical Professions	611	3
Middle Childhood Lang Arts/SS	002	132
Middle Childhood Science/Math	168	135
PE/Wellness/Leisure	227	1
PE/Wellness/Leisure	228	1
PE/Wellness/Leisure	235	107
PE/Wellness/Leisure	236	129
Phys/Earth Science	169	7
Sch Psych Spec	316	6
Social Studies	167	88
Spanish	003	8
Spanish	004	20
Spch Lang Path	317	34
Special Ed Ech Inst Specialist	231	20
Technical Permit	566	14
Vocal Music	203	25
Vocal Music	204	26
GRAND TOTAL		**2,375**
ADD-ONS July 2008 - June 2009		
Area Description	**Area Code**	**Count**
Adult Educ	229	7
Adult Education	290	1
Advertising Design	571	1
Agri Sci & Tech	218	4
Algebra 1 Endorsement	209	3
Art	201	10
Art	202	2
Build Administrator	312	8
Build Administrator	313	7
Building Level Administrator	302	7
Business Tech	225	13
Business Tech	224	11
Career Academy Endorsement	410	34
Career And Tech Admin	415	2
Career Orientation Endorsement	411	61

Professional License by Fiscal Year		
FISCAL YEAR: 2008 - 2009		
RENEWALS July 2008 - June 2009		
Lib Media Sci	295	74
Lib Media Sci	296	68
Life/Earth Science	170	8
Mandarin Chinese	009	1
Marketing Tech	222	3
Marketing Tech	221	1
Mathematics	200	18
Medical Professions	611	4
Middle Childhood Lang Arts/SS	002	135
Middle Childhood Science/Math	168	138
Middle School Social Studies	159	1
PE/Wellness/Leisure	235	23
PE/Wellness/Leisure	236	30
PE/Wellness/Leisure	227	4
PE/Wellness/Leisure	228	4
Phys/Earth Science	169	26
Pre Engineering	606	4
Radio Television Broadcasting	591	1
Reading Specialist	298	77
Reading Specialist	297	77
Sec Vocational Administrator	175	2
Social Studies	167	25
Spanish	004	5
Special Ed Ech Inst Specialist	231	59
Special Ed Inst Specialist	230	93
Speech	114	17
Technical Permit	566	14
Transitional Math	4546	5
Vocal Music	203	18
Vocal Music	204	19
Welding	597	2
GRAND TOTAL		**2,155**
OTHER July 2008 - June 2009		
Area Description	**Area Code**	**Count**
Administrator	301	22
Adult Educ	229	32
Adv Guidance Supervisor	525	1
Advance Manufacturing	616	1
Advertising Design	571	1

Professional License by Fiscal Year		
FISCAL YEAR: 2008 - 2009		
RENEWALS July 2008 - June 2009		
Career Orientation Endorsement	411	109
Career Orn/Voc Fund	9051	32
Career Preparation Endorsement	412	98
Career Ser For Special Popul	9041	2
Career Ser Special Population	413	33
Chemistry	6530	111
Chemistry	133	3
Child Care	610	2
Coach	8010	22
Coaching	294	27
Coaching	087	126
Coaching	293	98
Coaching - Oth Sports	8015	2
Comp Assisted Instrl Endors	473	1
Computer Engineering	572	2
Computer Tech Endorsement	037	7
Construction Technology	570	5
Contemp Am History	7020	92
Cosmetology	573	7
Criminal Justic	603	4
Culinary Arts And Chef Prep	580	1
Curr Prog Adm PE Wellness & Le	394	1
Curr Prog AdmSocSt	395	1
Curr/Prog Admin (Curr)	322	50
Curr/Prog Admin (Curr)	321	51
Curr/Prog Admin (Curr)	239	51
Curr/Prog Admin (GT)	238	2
Curr/Prog Admin (GT)	314	2
Curr/Prog Admin (GT)	315	1
Curr/Prog Admin (Spec Ed)	320	46
Curr/Prog Admin (Spec Ed)	319	2
Curr/Prog Admin (Spec Ed)	318	2
Curr/Prog Admin Career & Tech	323	1
Curr/Prog Admin Career &Tech	324	3
Curr/Prog/AdmCareer Tech	334	1
Curriculum Specialist	441	561
CurrProgAdmMath	335	2
Day Trade	171	3
District Administrator	311	968
Drafting and Design	575	4
Drama	4060	39
Drama	113	2

Professional License by Fiscal Year		
FISCAL YEAR: 2008 - 2009		
RENEWALS July 2008 - June 2009		
Geology	6547	20
German	008	18
German	007	6
Gift & Talented	305	88
Gift & Talented	306	89
Global Studies	7035	10
Grade 5-6 Endorsement (P-4)	107	376
Grade 5-6 Endorsement English	105	2
Grade 5-6 Endorsement Math	103	1
Graduate Elementary	185	13
Graduate Secondary	188	14
Graphic Communication	582	1
Guid & Counseling	300	237
Guid & Counseling	299	218
Guidance Elementary	522	71
Guidance Secondary	523	78
Health	3020	7
Health Education	081	106
High School Principal	8513	1
Horticulture	604	1
Industrial Coop Training	584	4
Industrial Equipment Maintenan	585	1
Industrial Tech Edu	212	35
Industrial Tech Edu	211	7
Instrumental Music	206	256
Instrumental Music	205	259
Instrumental Music K-12	125	1
Journalism	108	95
Journalism	054	38
Journalism	4040	134
Junior ROTC	612	7
Kindergarten Adv	3522	1
Kindergarten Dev	3520	1
Kindergarten Reg	3521	1
Latin	2570	1
Latin	064	1
Latin	164	1
Latin	165	3
Lib Media Sci	295	96
Lib Media Sci	296	100
Librarian K-12	501	14
Library Media Lev I Elementary	503	2

Professional License by Fiscal Year		
FISCAL YEAR: 2008 - 2009		
RENEWALS July 2008 - June 2009		
Pre Engineering	606	1
Pre-Algebra	4515	11
Principles Of Tech	6541	28
Principles Of Tech II	6542	30
Psychology	7070	14
Reading	051	61
Reading (Regular)	4021	1
Reading Specialist	298	164
Reading Specialist	297	190
Reading Specialist K-12	453	3
Russian	162	1
Russian	163	2
Sch Psych Spec	316	53
Sec Vocational Administrator	175	2
Secondary Mathematics	110	1
Secondary Physical Education	082	130
Secondary Principal	403	1220
Severely/Emotionally Disturbed	242	1
Social Studies	167	721
Social Studies	150	3
Sociology	7075	4
Spanish	2560	3
Spanish	004	258
Spanish	003	168
Spch Lang Path	317	118
Special Ed Ech Inst Specialist	231	1046
Special Ed Hearing Specialist	292	28
Special Ed Hearing Specialist	291	29
Special Ed Inst Specialist	230	966
Special Ed Visual Specialist	232	18
Special Ed Visual Specialist	234	20
Special Eduation Supervisor	190	143
Speech	114	6
Speech Therapy (R)	198	6
Subject Area Supv	8550	1
Supervisor (X)	451	1
Supervisor Adult Ed	367	3
Supervisor Art	350	1
Supervisor Buisness	353	2
Supervisor Counseling	362	1
Supervisor Counseling	363	1
Supervisor Elementary	365	16

FISCAL YEAR: 2009 - 2010		
RENEWALS July 2009 - June 2010		
Area Description	Area Code	Count
Administrator	301	3
Adult Educ	229	12
Adv Guidance Supervisor	525	2
Adv School Guidance/Counselor	524	1
Advertising Design	571	1
Agri Sci & Tech	219	1
Agri Sci & Tech	217	4
Agri Sci & Tech	218	20
Algebra 1 Endorsement	209	1
American History	7015	14
Anatomy And Physiology	6551	4
Ap Biology	6529	2
Ap Chemistry	6531	5
Ap Physics	6543	5
Applied Bio/Chem I	6527	14
Applied Bio/Chem II	6528	13
Applied Math I	4511	45
Applied Math II	4512	43
Arkansas History	7010	19
Art	2020	2
Art	201	51
Art	202	50
Assistant Coach	8012	1
Assistant Principal	8516	1
Assistant Principal	8518	4
Astronomy	6546	26
Automotive Service Technology	568	1
Basic Math Endorsement	112	24
Biology	132	1
Biology	6525	18
Biology II	6526	13
Botany	6553	2
Build Administrator	313	63
Build Administrator	312	78
Building Level Administrator	302	62
Business Ed/Comp Tech Endors	035	24
Business Ed/Sect Endors	031	29
Business Ed/Voc Endors	036	59
Business Education	5510	1
Business Tech	225	93
Business Tech	226	4
Business Tech	224	39
Career Academy Endorsement	410	17

FISCAL YEAR: 2009 - 2010		
RENEWALS July 2009 - June 2010		
Area Description	**Area Code**	**Count**
Career And Tech Admin	415	1
Career Orientation	9050	21
Career Orientation Endorsement	411	25
Career Orn/Voc Fund	9051	30
Career Preparation Endorsement	412	22
Career Ser For Special Popul	9041	2
Career Ser Special Population	413	11
Chemistry	133	1
Chemistry	6530	35
Child Care	610	1
Coach	8010	1
Coaching	294	4
Coaching	087	132
Coaching	293	24
Comp Assisted Instrl Endors	473	1
Computer Engineering	572	3
Computer Tech Endorsement	037	13
Construction Technology	570	1
Contemp Am History	7020	5
Coord Career Educ	9040	1
Curr/Prog Admin (Curr)	322	5
Curr/Prog Admin (Curr)	239	9
Curr/Prog Admin (Curr)	321	9
Curr/Prog Admin (GT)	315	2
Curr/Prog Admin (GT)	314	3
Curr/Prog Admin (GT)	238	3
Curr/Prog Admin (Spec Ed)	318	3
Curr/Prog Admin (Spec Ed)	319	3
Curr/Prog Admin (Spec Ed)	320	8
Curriculum Specialist	441	19
Day Trade	171	4
District Administrator	311	81
Drafting and Design	575	2
Drama	4060	10
Drama/Speech	208	39
Drama/Speech	207	2
Driver Education	5020	6
Driver Education Endorsement	417	40
Early Childhood Education	001	685
Earth Science	6535	6
Ecology	6554	2
Economics	7060	10
Educ Examiner	309	8

FISCAL YEAR: 2009 - 2010		
RENEWALS July 2009 - June 2010		
Area Description	**Area Code**	**Count**
Educ Examiner	310	8
Elementary 1-6	184	586
Elementary K-6	183	462
Elementary Physical Education	085	26
Elementary Principal	8511	1
Elementary Principal	402	105
Emotionally Disturbed	192	4
Eng Lang Arts	166	190
English	052	1
English Reg	4031	2
ESL	307	154
ESL	308	152
Explor Ind Tech Ed	579	1
Family & Con Sci	215	37
Family & Con Sci	214	18
French	005	2
French	006	14
Functional Mathematics	4545	5
Furniture/Cabinet Ma	581	1
Gen Coop Education	9035	5
General Home Economics	090	1
General Science	6520	1
General Science	131	120
Geo Spacial Technology	607	1
Geography	7065	26
Geology	6547	25
German	008	4
Gift & Talented	306	55
Gift & Talented	305	57
Gifted & Talented	237	1
Global Studies	7035	7
Grade 5-6 Endorsement (P-4)	107	7
Grade 5-6 Endorsement Math	103	2
Grade 5-6 Endorsement Science	104	1
Grade 5-6 Endorsement Soc Stu	106	1
Graduate Elementary	185	12
Graduate Secondary	188	15
Guid & Counseling	300	37
Guid & Counseling	299	37
Guidance Elementary	522	67
Guidance Secondary	523	61
Health	3020	4
Health Education	081	102

FISCAL YEAR: 2009 - 2010		
RENEWALS July 2009 - June 2010		
Area Description	Area Code	Count
Industrial Equipment Maintenan	585	1
Industrial Tech Edu	212	6
Instrumental Music	205	53
Instrumental Music	206	52
Journalism	054	10
Journalism	4040	29
Journalism	108	5
Junior ROTC	612	5
Latin	165	1
Learning Disabilities (C)	194	1
Lib Media Sci	296	40
Lib Media Sci	295	40
Librarian K-12	501	16
Library Media Lev I Elementary	503	2
Library Media Lev I K-12	502	6
Library Media Lev I Secondary	504	1
Library Media Spec Elementary	506	11
Library Media Spec Secondary	507	8
Life Science	6550	9
Life/Earth Science	170	119
Machine Tool Technology	587	1
Marketing Tech	222	6
Mathematics	4510	6
Mathematics	200	130
Media Spec K-12	511	4
Medical Professions	611	4
Middle Childhood Lang Arts/SS	002	148
Middle Childhood Science/Math	168	150
Middle School English	056	114
Middle School French	067	1
Middle School Mathematics	111	83
Middle School Physical Edu	086	53
Middle School Science	139	109
Middle School Social Studies	159	403
Middle School Spanish	068	2
Mildly Handicapped K-12	245	2
Mod/Prof Handicapped K-12	244	1
Non-Business Ed Voc Endors	038	1
Oral Communications	4050	32
PE/Wellness/Leisure	235	5
PE/Wellness/Leisure	236	9
PE/Wellness/Leisure	228	44
PE/Wellness/Leisure	227	45

FISCAL YEAR: 2009 - 2010		
RENEWALS July 2009 - June 2010		
Area Description	**Area Code**	**Count**
PE/Wellness/Leisure	228	575
PE/Wellness/Leisure	227	524
Performing Art Permit	613	1
Phys/Earth Science	169	350
Physical Education	083	71
Physical Science	6545	125
Physically Handicapped	196	1
Physics	135	1
Physics	6540	47
Post Sec Assistant Director	304	12
Post Sec Vocational Admin	303	10
Power Equipment Technology	593	2
Pre Engineering	606	1
Pre-Algebra	4515	11
Principles Of Tech	6541	25
Principles Of Tech II	6542	27
Psychology	7070	15
Radio Television Broadcasting	591	2
Reading	051	55
Reading (Regular)	4021	1
Reading Specialist	298	160
Reading Specialist	297	179
Reading Specialist K-12	453	3
Russian	162	1
Russian	163	2
Sch Psych Spec	316	52
Sec Vocational Administrator	175	2
Secondary Mathematics	110	1
Secondary Physical Education	082	124
Secondary Principal	403	1183
Severely/Emotionally Disturbed	242	1
Social Studies	167	757
Social Studies	150	3
Sociology	7075	4
Spanish	2560	3
Spanish	004	271
Spanish	003	181
Spch Lang Path	317	111
Special Ed Ech Inst Specialist	231	1057
Special Ed Hearing Specialist	292	28
Special Ed Hearing Specialist	291	29
Special Ed Inst Specialist	230	985
Special Ed Visual Specialist	232	21

FISCAL YEAR: 2009 - 2010		
RENEWALS July 2009 - June 2010		
Area Description	Area Code	Count
Special Ed Visual Specialist	234	23
Special Eduation Supervisor	190	139
Speech	114	14
Speech Therapy (R)	198	5
Subject Area Supv	8550	1
Supervisor Adult Ed	367	3
Supervisor Art	350	1
Supervisor Buisness	353	2
Supervisor Counseling	362	1
Supervisor Counseling	363	1
Supervisor Elementary	365	14
Supervisor English	345	5
Supervisor Gifted and Talented	340	33
Supervisor Library Media	360	1
Supervisor Math	342	4
Supervisor Music	351	1
Supervisor Other	8590	2
Supervisor Physical Education	356	1
Supervisor Physical Education	355	2
Supervisor Reading	346	8
Supervisor Science	343	1
Supervisor Social Studies	344	4
Supervisor Special Education	341	224
SupervisorElementary	366	31
Supv Special Educ	8585	1
Survey Of Fine Arts	2010	47
Technical Permit	566	89
Television Broadcasting	595	4
Transitional Math	4546	291
Visually Impaired	7540	1
Vocal Music	2030	1
Vocal Music	204	283
Vocal Music	203	292
Vocal Music K-12	124	1
Welding	597	8
Work Place Readiness	9042	21
World Cult/History	7030	82
Zoology	6552	1
GRAND TOTAL		**33,548**

FISCAL YEAR: 2009 - 2010		
RENEWALS July 2009 - June 2010		
Area Description	**Area Code**	**Count**
Phys/Earth Science	169	57
Physical Education	3030	1
Physical Education	083	31
Physical Science	6545	54
Physically Handicapped	196	2
Physics	6540	23
Physics	135	2
Post Sec Assistant Director	304	2
Post Sec Vocational Admin	303	1
Pre Engineering	606	3
Pre-Algebra	4515	3
Principles Of Tech	6541	14
Principles Of Tech II	6542	14
Psychology	7070	5
Reading	051	45
Reading (Regular)	4021	2
Reading Specialist	298	74
Reading Specialist	297	83
Reading Specialist K-12	453	1
Sch Psych Spec	316	5
Sec Vocational Administrator	175	2
Secondary Physical Education	082	160
Secondary Principal	403	120
Social Studies	167	192
Social Studies	150	1
Sociology	7075	3
Spanish	2560	1
Spanish	004	30
Spanish	003	5
Spch Lang Path	317	30
Special Ed Ech Inst Specialist	231	269
Special Ed Hearing Specialist	292	3
Special Ed Hearing Specialist	291	3
Special Ed Inst Specialist	230	280
Special Ed Visual Specialist	234	3
Special Ed Visual Specialist	232	2
Special Eduation Supervisor	190	8
Speech	114	3
Speech Therapy (R)	198	5
Student Activity/Club	8040	1
Subject Area Supv	8550	2
Superintendent	1002	1
Supervisor (X)	451	1

FISCAL YEAR: 2009 - 2010		
RENEWALS July 2009 - June 2010		
Area Description	**Area Code**	**Count**
Supervisor Elementary	365	2
Supervisor Reading	346	1
Supervisor Special Education	341	13
SupervisorElementary	366	2
Supv Special Educ	8585	1
Survey Of Fine Arts	2010	9
Technical Permit	566	16
Television Broadcasting	595	1
Title I (Math)	1530	1
Title I (Reading)	1510	2
Title I/Language Arts	1520	1
Transitional Math	4546	29
Vocal Music	2030	1
Vocal Music	203	48
Vocal Music	204	47
Vocational Business	9015	1
Work Place Readiness	9042	20
World Cult/History	7030	4
Zoology	6552	2
GRAND TOTAL		**8,099**
INITIALS July 2009 - June 2010		
Area Description	**Area Code**	**Count**
Adult Educ	229	4
Agri Sci & Tech	218	11
Agri Sci & Tech	217	2
Algebra 1 Endorsement	209	2
Art	201	35
Art	202	35
Build Administrator	312	149
Build Administrator	313	117
Building Level Administrator	302	117
Business Tech	224	4
Business Tech	225	24
Coaching	293	43
Curr/Prog Admin (Curr)	322	18
Curr/Prog Admin (Curr)	239	25
Curr/Prog Admin (Curr)	321	25
Curr/Prog Admin (GT)	238	4
Curr/Prog Admin (GT)	314	4
Curr/Prog Admin (GT)	315	4
Curr/Prog Admin (Spec Ed)	319	9

FISCAL YEAR: 2009 - 2010		
RENEWALS July 2009 - June 2010		
Area Description	**Area Code**	**Count**
Curr/Prog Admin (Spec Ed)	320	14
Curr/Prog Admin (Spec Ed)	318	9
CurrProgAdm Sch Couns	386	1
CurrProgAdm Sch Couns	385	1
Drama/Speech	208	4
Driver Education Endorsement	417	3
Early Childhood Education	001	687
Elementary 1-6	184	2
Eng Lang Arts	166	68
ESL	308	23
ESL	307	23
Family & Con Sci	215	22
French	005	1
French	006	2
German	008	2
German	007	1
Grade 5-6 Endorsement (P-4)	107	5
Guid & Counseling	300	1
Guid & Counseling	299	1
Instrumental Music	206	67
Instrumental Music	205	66
Journalism	108	2
Life/Earth Science	170	19
Mathematics	200	45
Middle Childhood Lang Arts/SS	002	139
Middle Childhood Science/Math	168	146
Middle School English	056	1
Middle School Social Studies	159	2
PE/Wellness/Leisure	227	3
PE/Wellness/Leisure	235	99
PE/Wellness/Leisure	236	115
PE/Wellness/Leisure	228	3
Phys/Earth Science	169	5
Sch Psych Spec	316	5
Social Studies	167	79
Spanish	003	9
Spanish	004	15
Spch Lang Path	317	39
Special Ed Ech Inst Specialist	231	36
Special Ed Inst Specialist	230	2
Vocal Music	203	37
Vocal Music	204	37
GRAND TOTAL		**2,473**

FISCAL YEAR: 2009 - 2010		
RENEWALS July 2009 - June 2010		
Area Description	Area Code	Count
ADD-ONS July 2009 - June 2010		
Area Description	Area Code	Count
Adult Educ	229	9
Agri Sci & Tech	217	2
Agri Sci & Tech	218	3
Algebra 1 Endorsement	209	11
Art	201	6
Art	202	6
Automotive Service Technology	568	1
Build Administrator	312	13
Build Administrator	313	14
Building Level Administrator	302	14
Business Tech	225	19
Business Tech	224	7
Career Academy Endorsement	410	10
Career And Tech Admin	415	2
Career Orientation Endorsement	411	61
Career Preparation Endorsement	412	31
Career Ser Special Population	413	30
Coaching	293	72
Computer Engineering	572	1
Construction Technology	570	2
Criminal Justic	603	1
Curr/Prog Admin (Curr)	321	1
Curr/Prog Admin (Curr)	239	1
Curr/Prog Admin (Spec Ed)	319	1
Curr/Prog Admin (Spec Ed)	318	1
Curr/Prog Admin (Spec Ed)	320	2
District Administrator	311	4
Drama	113	3
Drama/Speech	208	6
Driver Education	5020	4
Driver Education Endorsement	417	13
Early Childhood Education	001	44
Educ Examiner	309	2
Educ Examiner	310	2
Elementary K-6	183	2
Eng Lang Arts	166	26
ESL	308	277
ESL	307	278
Explor Ind Tech Ed	579	1

FISCAL YEAR: 2009 - 2010		
RENEWALS July 2009 - June 2010		
Area Description	**Area Code**	**Count**
Family & Con Sci	214	2
Family & Con Sci	215	12
Gift & Talented	305	42
Gift & Talented	306	39
Grade 5-6 Endorsement (P-4)	107	54
Grade 5-6 Endorsement English	105	3
Grade 5-6 Endorsement Math	103	1
Grade 5-6 Endorsement Science	104	3
Grade 5-6 Endorsement Soc Stu	106	4
Guid & Counseling	300	67
Guid & Counseling	299	70
Industrial Tech Edu	212	1
Instrumental Music	206	10
Instrumental Music	205	10
Journalism	108	2
Lib Media Sci	295	82
Lib Media Sci	296	81
Life/Earth Science	170	8
Mandarin Chinese	009	1
Marketing Tech	222	4
Marketing Tech	221	2
Mathematics	200	23
Medical Professions	611	1
Middle Childhood Lang Arts/SS	002	142
Middle Childhood Science/Math	168	146
PE/Wellness/Leisure	235	22
PE/Wellness/Leisure	236	32
PE/Wellness/Leisure	227	4
PE/Wellness/Leisure	228	5
Performing Art Permit	613	2
Phys/Earth Science	169	24
Pre Engineering	606	2
Principles Of Tech II	6542	1
Reading	051	1
Reading Specialist	298	55
Reading Specialist	297	55
Sch Psych Spec	316	2
Sec Vocational Administrator	175	3
Social Studies	167	29
Spanish	004	5
Spanish	003	1
Special Ed Ech Inst Specialist	231	88
Special Ed Inst Specialist	230	94

FISCAL YEAR: 2009 - 2010		
RENEWALS July 2009 - June 2010		
Area Description	**Area Code**	**Count**
Special Ed Visual Specialist	232	3
Special Ed Visual Specialist	234	3
Speech	114	37
Technical Permit	566	5
Transitional Math	4546	1
Vocal Music	203	26
Vocal Music	204	27
Welding	597	1
GRAND TOTAL		**2,321**
OTHER July 2009 - June 2010		
Area Description	**Area Code**	**Count**
Administrator	301	22
Adult Educ	229	33
Adv Guidance Supervisor	525	1
Advance Manufacturing	616	1
Agri Sci & Tech	218	99
Agri Sci & Tech	219	3
Agri Sci & Tech	217	31
Am Government/Civics	7040	1
American History	7015	119
Anatomy And Physiology	6551	2
Ap Chemistry	6531	15
Ap Physics	6543	8
Applied Bio/Chem I	6527	6
Applied Bio/Chem II	6528	5
Applied Math I	4511	32
Applied Math II	4512	32
Arkansas History	7010	80
Art	2020	1
Art	202	392
Art	201	403
Assistant Coach	8012	1
Assistant Principal	8516	12
Assistant Principal	8518	15
Assistant Principal	8514	2
Astronomy	6546	20
Automotive Collision Repair	567	2
Automotive Service Technology	568	6
Basic Math Endorsement	112	7
Biology	6525	33
Biology	132	10

FISCAL YEAR: 2009 - 2010		
RENEWALS July 2009 - June 2010		
Area Description	Area Code	Count
Biology II	6526	5
Botany	6553	1
Build Administrator	313	575
Build Administrator	312	618
Building Level Administrator	302	575
Business Ed/Comp Tech Endors	035	24
Business Ed/Sect Endors	031	20
Business Ed/Voc Endors	036	88
Business Education	5510	5
Business Tech	226	34
Business Tech	225	498
Business Tech	224	243
Career Academy Endorsement	410	84
Career And Tech Admin	415	2
Career Orientation	9050	20
Career Orientation Endorsement	411	109
Career Orn/Voc Fund	9051	31
Career Preparation Endorsement	412	97
Career Ser For Special Popul	9041	2
Career Ser Special Population	413	32
Chemistry	6530	109
Chemistry	133	2
Child Care	610	2
Coach	8010	22
Coaching	294	26
Coaching	087	120
Coaching	293	106
Coaching - Oth Sports	8015	2
Communications	618	1
Comp Assisted Instrl Endors	473	1
Computer Engineering	572	4
Computer Tech Endorsement	037	7
Construction Technology	570	9
Contemp Am History	7020	85
Cosmetology	573	9
Criminal Justic	603	7
Culinary Arts And Chef Prep	580	2
Curr/Prog Admin (Curr)	322	54
Curr/Prog Admin (Curr)	321	57
Curr/Prog Admin (Curr)	239	57
Curr/Prog Admin (GT)	238	2
Curr/Prog Admin (GT)	314	2
Curr/Prog Admin (GT)	315	1

FISCAL YEAR: 2009 - 2010		
RENEWALS July 2009 - June 2010		
Area Description	**Area Code**	**Count**
Curr/Prog Admin (Spec Ed)	320	50
Curr/Prog Admin (Spec Ed)	319	7
Curr/Prog Admin (Spec Ed)	318	7
Curr/Prog Admin Career & Tech	323	1
Curr/Prog Admin Career &Tech	324	4
Curr/Prog/AdmCareer Tech	334	1
Curriculum Specialist	441	524
CurrProgAdm/Reading	326	1
CurrProgAdmMath	335	3
Day Trade	171	2
District Administrator	311	974
Drafting and Design	575	5
Drama	4060	39
Drama	113	5
Drama/Speech	208	159
Drama/Speech	207	54
Driver Education	210	2
Driver Education	5020	43
Driver Education Endorsement	417	110
Early Childhood	3510	7
Early Childhood Education	001	3309
Earth Science	6535	22
Ecology	6554	2
Economics	7060	7
Educ Examiner	310	61
Educ Examiner	309	61
Elementary 1-6	184	646
Elementary Adv	3552	1
Elementary Dev	3550	1
Elementary K-6	183	510
Elementary Physical Education	085	13
Elementary Principal	402	1063
Elementary Principal	8511	1
Elementary Reg	3551	1
Emotionally Disturbed	192	4
Eng As A Sec Lan/ESL	4036	12
Eng Lang Arts	166	1148
English	052	2
English Adv	4032	1
English Dev	4030	1
English Reg	4031	9
ESL	307	185
ESL	308	158

FISCAL YEAR: 2009 - 2010		
RENEWALS July 2009 - June 2010		
Area Description	**Area Code**	**Count**
ESL Post Secondary	059	1
Explor Ind Tech Ed	579	2
Family & Con Sci	216	7
Family & Con Sci	215	207
Family & Con Sci	214	95
French	005	31
French	006	51
Functional Mathematics	4545	57
Furniture/Cabinet Ma	581	1
General Home Economics	090	5
General Science	6520	14
General Science	131	141
Geography	7065	48
Geology	6547	20
German	008	18
German	007	5
Gift & Talented	305	87
Gift & Talented	306	87
Global Studies	7035	9
Grade 5-6 Endorsement (P-4)	107	449
Grade 5-6 Endorsement English	105	5
Grade 5-6 Endorsement Math	103	1
Grade 5-6 Endorsement Soc Stu	106	3
Graduate Elementary	185	10
Graduate Secondary	188	12
Graphic Communication	582	2
Guid & Counseling	300	236
Guid & Counseling	299	217
Guidance Elementary	522	67
Guidance Secondary	523	76
Health	3020	7
Health Education	081	103
Horticulture	604	1
Industrial Coop Training	584	3
Industrial Equipment Maintenan	585	1
Industrial Tech Edu	212	32
Industrial Tech Edu	211	7
Instrumental Music	206	270
Instrumental Music	205	275
Instrumental Music K-12	125	1
Journalism	108	94
Journalism	054	39
Journalism	4040	152

FISCAL YEAR: 2009 - 2010		
RENEWALS July 2009 - June 2010		
Area Description	Area Code	Count
Junior ROTC	612	13
Kindergarten Adv	3522	1
Kindergarten Dev	3520	1
Kindergarten Reg	3521	1
Latin	2570	1
Latin	064	1
Latin	164	1
Latin	165	3
Lib Media Sci	295	95
Lib Media Sci	296	97
Librarian K-12	501	14
Library Media Lev I Elementary	503	2
Library Media Lev I K-12	502	3
Library Media Spec Elementary	506	8
Library Media Spec Secondary	507	1
Life Science	6550	26
Life/Earth Science	170	554
Machine Tool Technology	587	2
Mandarin Chinese	619	4
Mandarin Chinese	009	3
Marketing Education	9030	1
Marketing Tech	221	12
Marketing Tech	222	29
Marketing Tech	223	1
Mathematics	4510	18
Mathematics	200	794
Media Spec K-12	511	2
Medical Professions	611	22
Middle Childhood Lang Arts/SS	002	2325
Middle Childhood Science/Math	168	2259
Middle School English	056	130
Middle School French	067	3
Middle School Mathematics	111	74
Middle School Physical Edu	086	29
Middle School Science	139	87
Middle School Social Studies	159	393
Middle School Spanish	068	2
Mildly Handicapped K-12	245	9
National Board Certification	700	1
Non-Business Ed Voc Endors	038	1
Oral Communications	4050	93
PE/Wellness/Leisure	235	230
PE/Wellness/Leisure	236	236

FISCAL YEAR: 2010 - 2011		
RENEWALS July 2010 - June 2011		
Area Description	Area Code	Count
Adult Educ	229	10
Adv Mth/Pre-Calculus	4560	1
Agri Sci & Tech	217	2
Agri Sci & Tech	218	24
Algebra 1 Endorsement	209	2
Am Government/Civics	7040	1
American History	7015	23
Anatomy And Physiology	6551	3
Ap Biology	6529	3
Ap Chemistry	6531	5
Ap Physics	6543	3
Applied Bio/Chem I	6527	20
Applied Bio/Chem II	6528	17
Applied Math I	4511	55
Applied Math II	4512	52
Arkansas History	7010	36
Art	201	78
Art	202	74
Assistant Coach	8012	1
Assistant Principal	8518	2
Assistant Principal	8516	3
Assistant Principal	8517	1
Astronomy	6546	23
Automotive Collision Repair	567	2
Automotive Service Technology	568	1
Basic Math Endorsement	112	7
Biology	6525	20
Biology II	6526	11
Botany	6553	4
Build Administrator	313	48
Build Administrator	312	65
Building Level Administrator	302	59
Business Ed/Comp Tech Endors	035	13
Business Ed/Sect Endors	031	40
Business Ed/Voc Endors	036	51
Business Tech	225	80
Business Tech	224	39
Career Academy Endorsement	410	27
Career Orientation	9050	24
Career Orientation Endorsement	411	35
Career Orn/Voc Fund	9051	28
Career Preparation Endorsement	412	20
Career Ser For Special Popul	9041	2

FISCAL YEAR: 2010 - 2011		
RENEWALS July 2010 - June 2011		
Area Description	Area Code	Count
Career Ser Special Population	413	13
Chemistry	6530	27
Coach	8010	4
Coaching	293	18
Coaching	294	1
Coaching	087	148
Computer Engineering	572	4
Computer Tech Endorsement	037	7
Construction Technology	570	3
Contemp Am History	7020	1
Coord Career Educ	9040	2
Curr/Prog Admin (Curr)	239	9
Curr/Prog Admin (Curr)	321	9
Curr/Prog Admin (Curr)	322	9
Curr/Prog Admin (Spec Ed)	319	1
Curr/Prog Admin (Spec Ed)	320	3
Curriculum Specialist	441	10
Day Trade	171	7
District Administrator	311	38
Drafting and Design	575	3
Drama	4060	10
Drama/Speech	208	31
Drama/Speech	207	1
Driver Education	5020	5
Driver Education Endorsement	417	58
Early Childhood	3510	1
Early Childhood Education	001	772
Earth Science	6535	12
Ecology	6554	3
Economics	7060	9
Educ Examiner	310	7
Educ Examiner	309	7
Elementary 1-6	184	719
Elementary K-6	183	567
Elementary Physical Education	085	43
Elementary Principal	402	47
Emotionally Disturbed	192	2
Eng Lang Arts	166	206
English Adv	4032	6
English Dev	4030	5
English Reg	4031	7
ESL	307	104
ESL	308	102

FISCAL YEAR: 2010 - 2011		
RENEWALS July 2010 - June 2011		
Area Description	Area Code	Count
Explor Ind Tech Ed	579	1
Exploratory T & I	599	1
Family & Con Sci	214	20
Family & Con Sci	215	55
French	005	1
French	006	14
Functional Mathematics	4545	2
Furniture/Cabinet Ma	581	1
Gen Coop Education	9035	7
General Science	131	118
General Science	6520	4
Geography	7065	40
Geology	6547	20
German	008	3
Gift & Talented	306	68
Gift & Talented	305	68
Global Studies	7035	14
Grade 5-6 Endorsement (P-4)	107	17
Grade 5-6 Endorsement Math	103	1
Graduate Elementary	185	7
Graduate Secondary	188	13
Guid & Counseling	300	37
Guid & Counseling	299	38
Guidance Elementary	522	72
Guidance Secondary	523	52
Health	3020	12
Health Education	081	146
Industrial Tech Edu	212	6
Instrumental Music	206	69
Instrumental Music	205	69
Journalism	054	12
Journalism	108	2
Journalism	4040	32
Junior ROTC	612	3
Kindergarten Adv	3522	1
Kindergarten Dev	3520	1
Kindergarten Reg	3521	1
Lib Media Sci	296	45
Lib Media Sci	295	48
Librarian K-12	501	16
Library Media Admin K-12	508	1
Library Media Lev I Elementary	503	8
Library Media Lev I K-12	502	7

FISCAL YEAR: 2010 - 2011		
RENEWALS July 2010 - June 2011		
Area Description	**Area Code**	**Count**
Library Media Spec Elementary	506	7
Library Media Spec Secondary	507	4
Life Science	6550	18
Life/Earth Science	170	123
Marketing Education	9030	1
Marketing Tech	221	2
Marketing Tech	222	6
Mathematics	200	156
Mathematics	4510	4
Media Spec K-12	511	2
Medical Professions	611	4
Middle Childhood Lang Arts/SS	002	152
Middle Childhood Science/Math	168	152
Middle School English	056	116
Middle School French	067	2
Middle School Mathematics	111	107
Middle School Physical Edu	086	63
Middle School Science	139	120
Middle School Social Studies	159	423
Middle School Spanish	068	5
Mildly Handicapped K-12	245	1
Non-Cat Special Edu	7580	3
Oral Communications	4050	28
PE/Wellness/Leisure	236	5
PE/Wellness/Leisure	227	33
PE/Wellness/Leisure	228	47
PE/Wellness/Leisure	235	6
Performing Art Permit	613	1
Phys/Earth Science	169	50
Physical Education	083	66
Physical Science	6545	58
Physical Science	136	1
Physically Handicapped	196	3
Physics	6540	21
Pre Engineering	606	4
Principles Of Tech	6541	16
Principles Of Tech II	6542	16
Psychology	7070	8
Radio Television Broadcasting	591	1
Reading	051	69
Reading (Regular)	4021	1
Reading Specialist	298	59
Reading Specialist	297	64

FISCAL YEAR: 2010 - 2011		
RENEWALS July 2010 - June 2011		
Area Description	**Area Code**	**Count**
Sch Psych Spec	316	5
Secondary Physical Education	082	200
Secondary Principal	403	62
Social Studies	150	1
Social Studies	167	200
Sociology	7075	5
Spanish	003	6
Spanish	004	38
Spch Lang Path	317	34
Special Ed Ech Inst Specialist	231	327
Special Ed Hearing Specialist	292	4
Special Ed Hearing Specialist	291	4
Special Ed Inst Specialist	230	319
Special Ed Visual Specialist	232	2
Special Ed Visual Specialist	234	2
Special Eduation Supervisor	190	4
Speech	114	1
Speech Therapy (R)	198	14
Srv Of Fine Arts/Dra	2016	1
Subject Area Supv	8550	2
Supervisor Gifted and Talented	340	1
Supervisor Special Education	341	1
Survey Of Fine Arts	2010	17
Technical Permit	566	22
Television Broadcasting	595	1
Title I (Reading)	1510	1
Title I/Language Arts	1520	1
Transitional Math	4546	37
Vocal Music	2030	2
Vocal Music	203	64
Vocal Music	204	64
Vocational Business	9015	1
Welding	597	2
Work Place Readiness	9042	38
World Cult/History	7030	1
Zoology	6552	4
GRAND TOTAL		**8,725**
INITIALS July 2010 - June 2011		
Area Description	**Area Code**	**Count**
Adult Educ	229	6
Adult Education	290	1

FISCAL YEAR: 2010 - 2011		
RENEWALS July 2010 - June 2011		
Area Description	Area Code	Count
Agri Sci & Tech	217	1
Agri Sci & Tech	218	14
Algebra 1 Endorsement	209	2
Art	202	44
Art	201	44
Build Administrator	312	205
Build Administrator	313	85
Building Level Administrator	302	165
Business Tech	225	26
Business Tech	224	3
Coaching	293	72
Communications	618	1
Curr/Prog Admin (Curr)	239	29
Curr/Prog Admin (Curr)	321	20
Curr/Prog Admin (Curr)	322	17
Curr/Prog Admin (Spec Ed)	318	6
Curr/Prog Admin (Spec Ed)	319	6
Curr/Prog Admin (Spec Ed)	320	14
Curr/Prog Admin Career &Tech	324	1
CurrProgAdmMath	335	1
Drama/Speech	208	7
Driver Education Endorsement	417	1
Early Childhood Education	001	812
Elementary 1-6	184	1
Eng Lang Arts	166	69
ESL	307	22
ESL	308	22
Family & Con Sci	215	25
French	006	7
German	008	1
Grade 5-6 Endorsement (P-4)	107	6
Industrial Tech Edu	212	1
Instrumental Music	206	47
Instrumental Music	205	46
Life/Earth Science	170	21
Marketing Tech	222	2
Mathematics	200	41
Middle Childhood Lang Arts/SS	002	198
Middle Childhood Science/Math	168	206
PE/Wellness/Leisure	236	167
PE/Wellness/Leisure	235	152
Phys/Earth Science	169	14
Sch Psych Spec	316	9

FISCAL YEAR: 2010 - 2011		
RENEWALS July 2010 - June 2011		
Area Description	**Area Code**	**Count**
Social Studies	167	90
Spanish	003	1
Spanish	004	10
Spch Lang Path	317	43
Special Ed Ech Inst Specialist	231	44
Special Ed Inst Specialist	230	1
Speech	114	1
Technical Permit	566	1
Vocal Music	204	43
Vocal Music	203	43
GRAND TOTAL		**2,917**
ADD-ONS July 2010 - June 2011		
Area Description	**Area Code**	**Count**
Adult Educ	229	7
Advertising Design	571	3
Agri Sci & Tech	218	1
Algebra 1 Endorsement	209	13
Art	201	13
Art	202	9
Build Administrator	312	8
Build Administrator	313	11
Building Level Administrator	302	10
Business Tech	224	11
Business Tech	225	8
Career Academy Endorsement	410	6
Career Orientation Endorsement	411	57
Career Preparation Endorsement	412	23
Career Ser Special Population	413	26
Coaching	293	73
Commercial Photography	602	2
Communications	618	1
Computer Engineering	572	1
Construction Technology	570	1
Criminal Justic	603	1
Curr/Prog Admin (Spec Ed)	318	2
Curr/Prog Admin (Spec Ed)	319	2
Curr/Prog Admin (Spec Ed)	320	1
District Administrator	311	3
Drafting and Design	575	2
Drama	113	7
Drama/Speech	208	6

FISCAL YEAR: 2010 - 2011		
RENEWALS July 2010 - June 2011		
Area Description	**Area Code**	**Count**
Driver Education	5020	5
Driver Education Endorsement	417	9
Early Childhood Education	001	51
Elementary 1-6	184	1
Eng Lang Arts	166	21
ESL	307	219
ESL	308	218
Family & Con Sci	214	6
Family & Con Sci	215	11
Gift & Talented	305	39
Gift & Talented	306	40
Grade 5-6 Endorsement (P-4)	107	55
Grade 5-6 Endorsement English	105	3
Grade 5-6 Endorsement Science	104	2
Grade 5-6 Endorsement Soc Stu	106	6
Guid & Counseling	299	69
Guid & Counseling	300	66
Industrial Tech Edu	212	2
Instrumental Music	205	12
Instrumental Music	206	12
Journalism	108	2
Junior ROTC	612	1
Lib Media Sci	295	88
Lib Media Sci	296	90
Life/Earth Science	170	11
Mandarin Chinese	009	1
Marketing Tech	221	2
Marketing Tech	222	9
Mathematics	200	30
Medical Professions	611	1
Middle Childhood Lang Arts/SS	002	142
Middle Childhood Science/Math	168	128
PE/Wellness/Leisure	235	22
PE/Wellness/Leisure	236	29
PE/Wellness/Leisure	227	5
PE/Wellness/Leisure	228	4
Performing Art Permit	613	2
Phys/Earth Science	169	28
Pre Engineering	606	5
Radio Television Broadcasting	591	3
Reading Specialist	297	49
Reading Specialist	298	50
Sch Psych Spec	316	1

FISCAL YEAR: 2010 - 2011		
RENEWALS July 2010 - June 2011		
Area Description	**Area Code**	**Count**
Social Studies	167	36
Spanish	003	1
Spanish	004	4
Special Ed Ech Inst Specialist	231	120
Special Ed Inst Specialist	230	111
Special Ed Visual Specialist	232	4
Special Ed Visual Specialist	234	4
Speech	114	40
Technical Permit	566	7
Television Broadcasting	595	4
Vocal Music	203	26
Vocal Music	204	26
Welding	597	2
GRAND TOTAL		**2,243**
OTHER July 2010 - June 2011		
Area Description	**Area Code**	**Count**
Administrator	301	22
Adult Educ	229	31
Adv Guidance Supervisor	525	1
Advertising Design	571	2
Agri Sci & Tech	217	30
Agri Sci & Tech	218	100
Agri Sci & Tech	219	3
Am Government/Civics	7040	1
American History	7015	117
Anatomy And Physiology	6551	2
Ap Chemistry	6531	15
Ap Physics	6543	8
Applied Bio/Chem I	6527	6
Applied Bio/Chem II	6528	5
Applied Math I	4511	32
Applied Math II	4512	32
Arkansas History	7010	78
Art	2020	1
Art	201	433
Art	202	422
Assistant Coach	8012	1
Assistant Principal	8516	12
Assistant Principal	8518	15
Assistant Principal	8515	1
Assistant Principal	8514	2

FISCAL YEAR: 2010 - 2011		
RENEWALS July 2010 - June 2011		
Area Description	Area Code	Count
Astronomy	6546	20
Automotive Collision Repair	567	4
Automotive Service Technology	568	10
Aviation Mechanics	569	1
Basic Math Endorsement	112	7
Biology	6525	33
Biology	132	9
Biology II	6526	5
Botany	6553	1
Build Administrator	313	627
Build Administrator	312	717
Building Level Administrator	302	645
Business Ed/Comp Tech Endors	035	23
Business Ed/Sect Endors	031	20
Business Ed/Voc Endors	036	86
Business Education	5510	5
Business Tech	225	520
Business Tech	226	32
Business Tech	224	249
Career Academy Endorsement	410	84
Career And Tech Admin	415	1
Career Orientation	9050	19
Career Orientation Endorsement	411	106
Career Orn/Voc Fund	9051	30
Career Preparation Endorsement	412	92
Career Ser For Special Popul	9041	2
Career Ser Special Population	413	31
Chemistry	6530	112
Chemistry	133	2
Child Care	610	2
Coach	8010	23
Coaching	294	25
Coaching	087	116
Coaching	293	111
Coaching - Oth Sports	8015	2
Communications	618	3
Comp Assisted Instrl Endors	473	1
Computer Engineering	572	4
Computer Tech Endorsement	037	7
Construction Technology	570	9
Contemp Am History	7020	83
Cosmetology	573	18
Criminal Justic	603	14

FISCAL YEAR: 2010 - 2011		
RENEWALS July 2010 - June 2011		
Area Description	Area Code	Count
Culinary Arts And Chef Prep	580	3
Curr/Prog Admin (Curr)	322	60
Curr/Prog Admin (Curr)	321	61
Curr/Prog Admin (Curr)	239	63
Curr/Prog Admin (GT)	238	4
Curr/Prog Admin (GT)	315	3
Curr/Prog Admin (GT)	314	4
Curr/Prog Admin (Spec Ed)	320	66
Curr/Prog Admin (Spec Ed)	319	17
Curr/Prog Admin (Spec Ed)	318	17
Curr/Prog Admin Career & Tech	323	1
Curr/Prog Admin Career &Tech	324	5
Curr/Prog/AdmCareer Tech	334	1
Curriculum Specialist	441	503
CurrProgAdm/Reading	326	1
CurrProgAdmMath	335	4
Day Trade	171	2
District Administrator	311	994
Drafting and Design	575	5
Drama	113	10
Drama	4060	37
Drama/Speech	208	163
Drama/Speech	207	56
Driver Education	5020	44
Driver Education	210	2
Driver Education Endorsement	417	116
Early Childhood	3510	6
Early Childhood Education	001	3518
Earth Science	6535	22
Ecology	6554	2
Economics	7060	7
Educ Examiner	310	57
Educ Examiner	309	58
Elementary 1-6	184	628
Elementary Adv	3552	1
Elementary Dev	3550	1
Elementary K-6	183	502
Elementary Physical Education	085	12
Elementary Principal	402	1035
Elementary Principal	8511	1
Elementary Reg	3551	1
Emotionally Disturbed	192	4
Eng As A Sec Lan/ESL	4036	12

FISCAL YEAR: 2010 - 2011		
RENEWALS July 2010 - June 2011		
Area Description	Area Code	Count
Eng Lang Arts	166	1209
English	052	2
English Adv	4032	1
English Dev	4030	1
English Reg	4031	9
ESL	308	169
ESL	307	192
ESL Post Secondary	059	1
Explor Ind Tech Ed	579	3
Family & Con Sci	216	6
Family & Con Sci	215	211
Family & Con Sci	214	93
French	005	32
French	006	54
Functional Mathematics	4545	56
Furniture/Cabinet Ma	581	1
General Home Economics	090	5
General Science	6520	14
General Science	131	136
Geography	7065	48
Geology	6547	20
German	008	20
German	007	6
Gift & Talented	305	85
Gift & Talented	306	86
Global Studies	7035	9
Grade 5-6 Endorsement (P-4)	107	528
Grade 5-6 Endorsement English	105	7
Grade 5-6 Endorsement Math	103	3
Grade 5-6 Endorsement Science	104	1
Grade 5-6 Endorsement Soc Stu	106	8
Graduate Elementary	185	10
Graduate Secondary	188	10
Graphic Communication	582	2
Guid & Counseling	300	230
Guid & Counseling	299	213
Guidance Elementary	522	64
Guidance Secondary	523	74
Health	3020	7
Health Education	081	100
Heating Vent A/C	578	1
Industrial Coop Training	584	3
Industrial Equipment Maintenan	585	1

FISCAL YEAR: 2010 - 2011		
RENEWALS July 2010 - June 2011		
Area Description	Area Code	Count
Industrial Tech Edu	211	7
Industrial Tech Edu	212	32
Instrumental Music	206	286
Instrumental Music	205	290
Instrumental Music K-12	125	1
Journalism	108	84
Journalism	054	37
Journalism	4040	166
Junior ROTC	612	19
Kindergarten Adv	3522	1
Kindergarten Dev	3520	1
Kindergarten Reg	3521	1
Latin	164	2
Latin	2570	1
Latin	064	1
Latin	622	1
Latin	165	4
Lib Media Sci	295	95
Lib Media Sci	296	97
Librarian K-12	501	14
Library Media Lev I Elementary	503	2
Library Media Lev I K-12	502	3
Library Media Spec Elementary	506	7
Library Media Spec Secondary	507	1
Life Science	6550	26
Life/Earth Science	170	588
Machine Tool Technology	587	2
Mandarin Chinese	009	4
Mandarin Chinese	619	8
Marketing Education	9030	1
Marketing Tech	221	11
Marketing Tech	223	1
Marketing Tech	222	30
Mathematics	4510	17
Mathematics	200	863
Media Spec K-12	511	2
Medical Professions	611	32
Middle Childhood Lang Arts/SS	002	2494
Middle Childhood Science/Math	168	2429
Middle School English	056	127
Middle School French	067	3
Middle School Mathematics	111	73
Middle School Physical Edu	086	28

FISCAL YEAR: 2010 - 2011		
RENEWALS July 2010 - June 2011		
Area Description	Area Code	Count
Middle School Science	139	85
Middle School Social Studies	159	383
Middle School Spanish	068	2
Mildly Handicapped K-12	245	9
National Board Certification	700	1
Non-Business Ed Voc Endors	038	1
Oral Communications	4050	89
PE/Wellness/Leisure	235	298
PE/Wellness/Leisure	236	310
PE/Wellness/Leisure	227	520
PE/Wellness/Leisure	228	573
Performing Art Permit	613	2
Phys/Earth Science	169	374
Physical Education	083	67
Physical Science	6545	125
Physically Handicapped	196	1
Physics	135	1
Physics	6540	48
Post Sec Assistant Director	304	12
Post Sec Vocational Admin	303	7
Power Equipment Technology	593	4
Pre Engineering	606	1
Pre-Algebra	4515	10
Principles Of Tech	6541	26
Principles Of Tech II	6542	28
Psychology	7070	15
Radio Television Broadcasting	591	5
Reading	051	51
Reading (Regular)	4021	2
Reading Specialist	298	169
Reading Specialist	297	188
Reading Specialist K-12	453	3
Russian	162	1
Russian	163	2
Sch Psych Spec	316	48
Sec Vocational Administrator	175	2
Secondary Mathematics	110	1
Secondary Physical Education	082	119
Secondary Principal	403	1160
Severely/Emotionally Disturbed	242	1
Social Studies	167	810
Social Studies	150	3
Sociology	7075	4

FISCAL YEAR: 2010 - 2011		
RENEWALS July 2010 - June 2011		
Area Description	**Area Code**	**Count**
Spanish	2560	3
Spanish	004	283
Spanish	003	191
Spch Lang Path	317	107
Special Ed Ech Inst Specialist	231	1119
Special Ed Hearing Specialist	292	31
Special Ed Hearing Specialist	291	32
Special Ed Inst Specialist	230	1040
Special Ed Visual Specialist	232	23
Special Ed Visual Specialist	234	25
Special Eduation Supervisor	190	132
Speech	114	28
Speech Therapy (R)	198	5
Sports Medicine	625	1
Subject Area Supv	8550	1
Supervisor Adult Ed	367	3
Supervisor Buisness	353	2
Supervisor Counseling	363	1
Supervisor Counseling	362	1
Supervisor Elementary	365	14
Supervisor English	345	5
Supervisor Gifted and Talented	340	29
Supervisor Library Media	360	1
Supervisor Math	342	3
Supervisor Music	351	1
Supervisor Other	8590	1
Supervisor Physical Education	356	1
Supervisor Physical Education	355	1
Supervisor Reading	346	8
Supervisor Science	343	1
Supervisor Social Studies	344	4
Supervisor Special Education	341	206
SupervisorElementary	366	28
Supv Special Educ	8585	1
Survey Of Fine Arts	2010	52
Technical Permit	566	144
Television Broadcasting	595	7
Transitional Math	4546	341
Visually Impaired	7540	1
Vocal Music	2030	1
Vocal Music	204	298
Vocal Music	203	307
Vocal Music K-12	124	1

FISCAL YEAR: 2010 - 2011		
RENEWALS July 2010 - June 2011		
Area Description	**Area Code**	**Count**
Welding	597	10
Work Place Readiness	9042	21
World Cult/History	7030	81
Zoology	6552	1
GRAND TOTAL		**35,173**