

HARD TIMES

2013

COLLEGE MAJORS, UNEMPLOYMENT AND EARNINGS



GEORGETOWN UNIVERSITY



Georgetown Public
Policy Institute

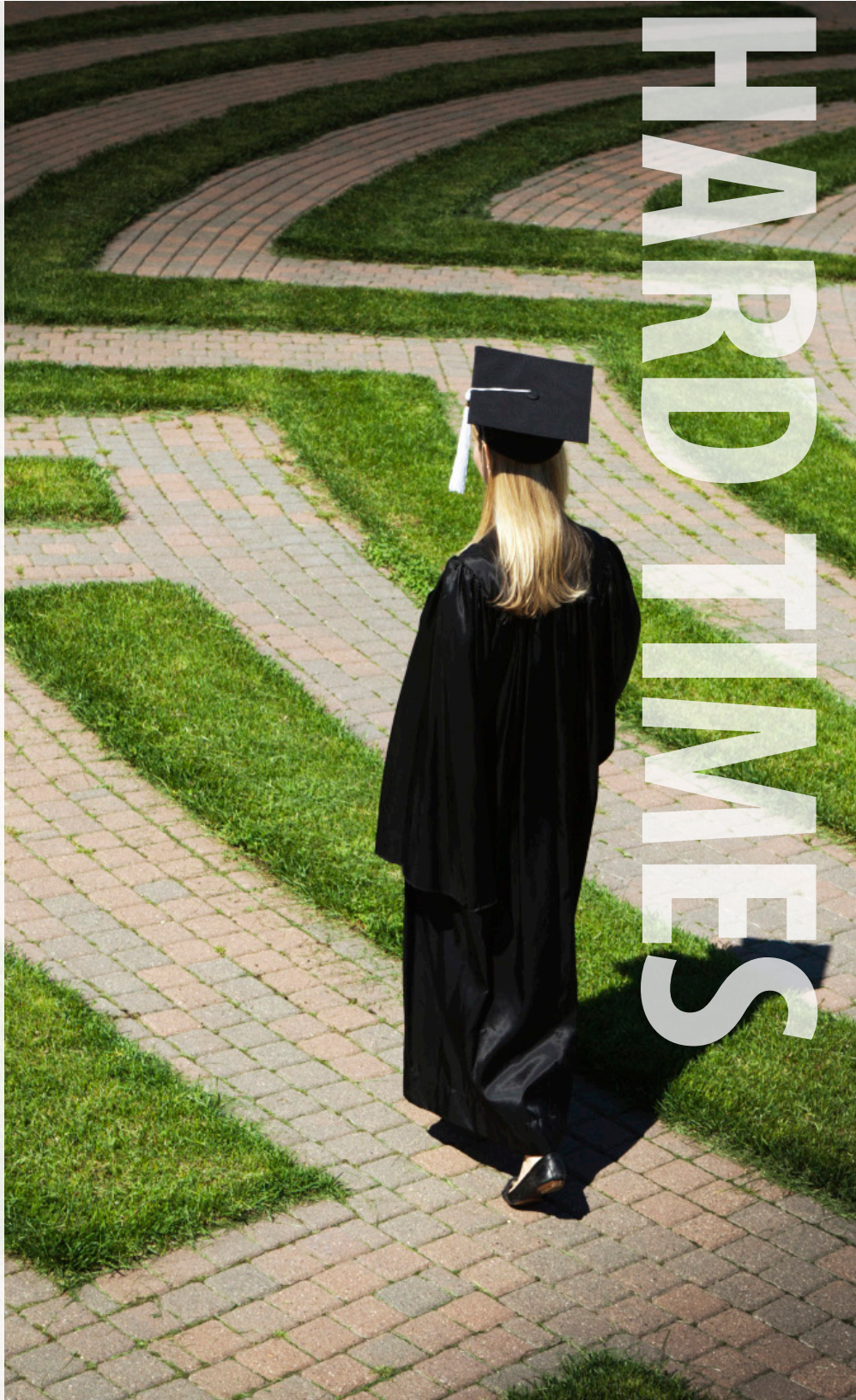
Center on Education and the Workforce

ANTHONY P. CARNEVALE | BAN CHEAH

2013

It Still Pays to Earn a College Degree But Not All College Degrees are created Equal

While graduates, parents, and journalists raise thoughtful questions about the worth of a college degree, this update confirms what we've said all along: it still pays to earn one. As we recovered from the recession during 2010 and 2011, college graduates fared better than less educated workers. Overall unemployment rates during this period were 9–10 percent for non-college graduates compared to 4.6–4.7 percent for college graduates 25 years of age or older. However, recent college graduates with a Bachelor's degree or better are still bearing the greatest unemployment risk, with unemployment rates ranging from a low of 4.8 percent to a high of 14.7 percent depending on their major. Despite the slow recovery, the overall unemployment rate for recent college graduates is 7.9 percent and the overall unemployment rate for graduate degree holders is 3.3 percent.



HARD TIMES

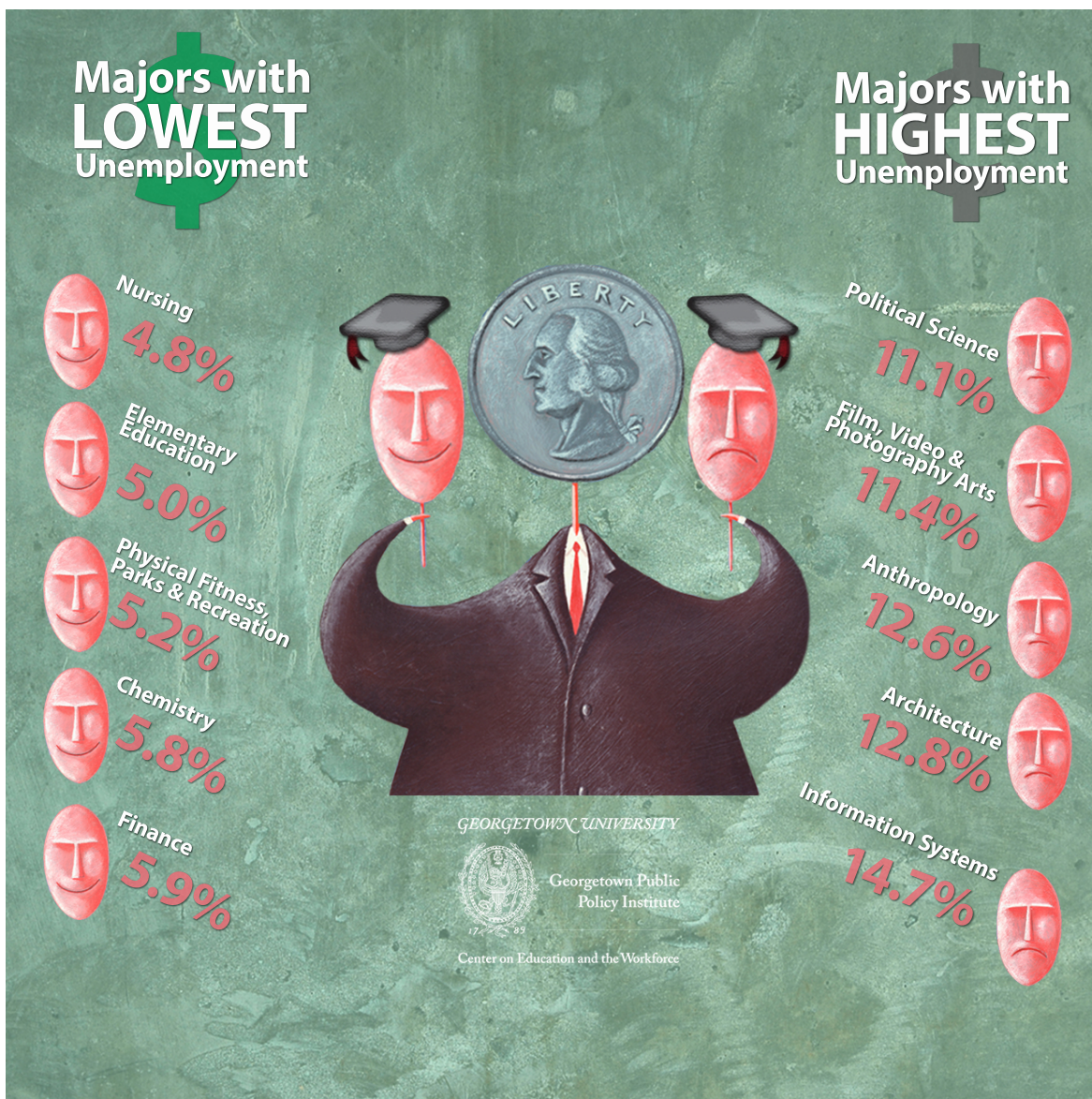


Figure 1.1

Majors with highest and lowest unemployment rates. Nursing and Elementary Education majors have the lowest unemployment rates among recent graduates. Architecture and Information Systems major have the highest.

Just as Education Matters, So Does Field of Study

The higher than average unemployment rates for recent college graduates tend to be concentrated in specific majors:

COMPUTER & MATHEMATICS

Unemployment seems mostly concentrated in information systems (14.7 %) compared with computer science (8.7%) and mathematics (5.9%). As noted in an earlier report, hiring tends to be slower for users of information compared to those who write programs and create software applications. Moreover, the relatively low unemployment rates for experienced Bachelor's degree-holders and those with a Master's degree or better seem to indicate these majors have a stable employment outlook.

SOCIAL SCIENCES

High unemployment rates are evenly spread across economics (10.4%); political science and government (11.1%); and sociology (9.9%). As with those in computer and mathematics, there is a brighter outlook for experienced Bachelor's degree-holders and those with a Master's degree or better.

ARTS

Unemployment is highest for film, video, and photographic arts (11.4%); commercial art and graphic design (10.5%); and fine arts (10.1 %). Within this sector drama and theater arts experienced the lowest unemployment at 6.4 percent.

HUMANITIES & LIBERAL ARTS

Unemployment is highest in anthropology and archeology (12.6%); only slightly higher than the overall economy average of nine percent for English language and literature (9.8%); and for history, philosophy and religious studies majors (9.5%). Liberal Arts and foreign languages majors fared best with unemployment rates of 8.1 percent.



No Relief from Sector Specific Shocks

When workers are sorted by occupation and educational attainment, the risk of unemployment can be greater for workers in sectors affected by the recession than for recent college graduates employed elsewhere. For instance, the fallout from the real estate bubble of 2007 still haunts architecture majors whose unemployment rates are highest among all workers in related sectors. As disappointing as high unemployment rates for recent college graduates can be, a graduate degree or work experience sometimes shelters them from higher unemployment rates. For instance, the unemployment rate for recent architecture graduates was 12.8 percent, while the unemployment rate for graduates with experience in the field was 9.3 percent, the same rate for the economy overall. The unemployment rate decreased even further to 6.9 percent for those with a graduate degree.

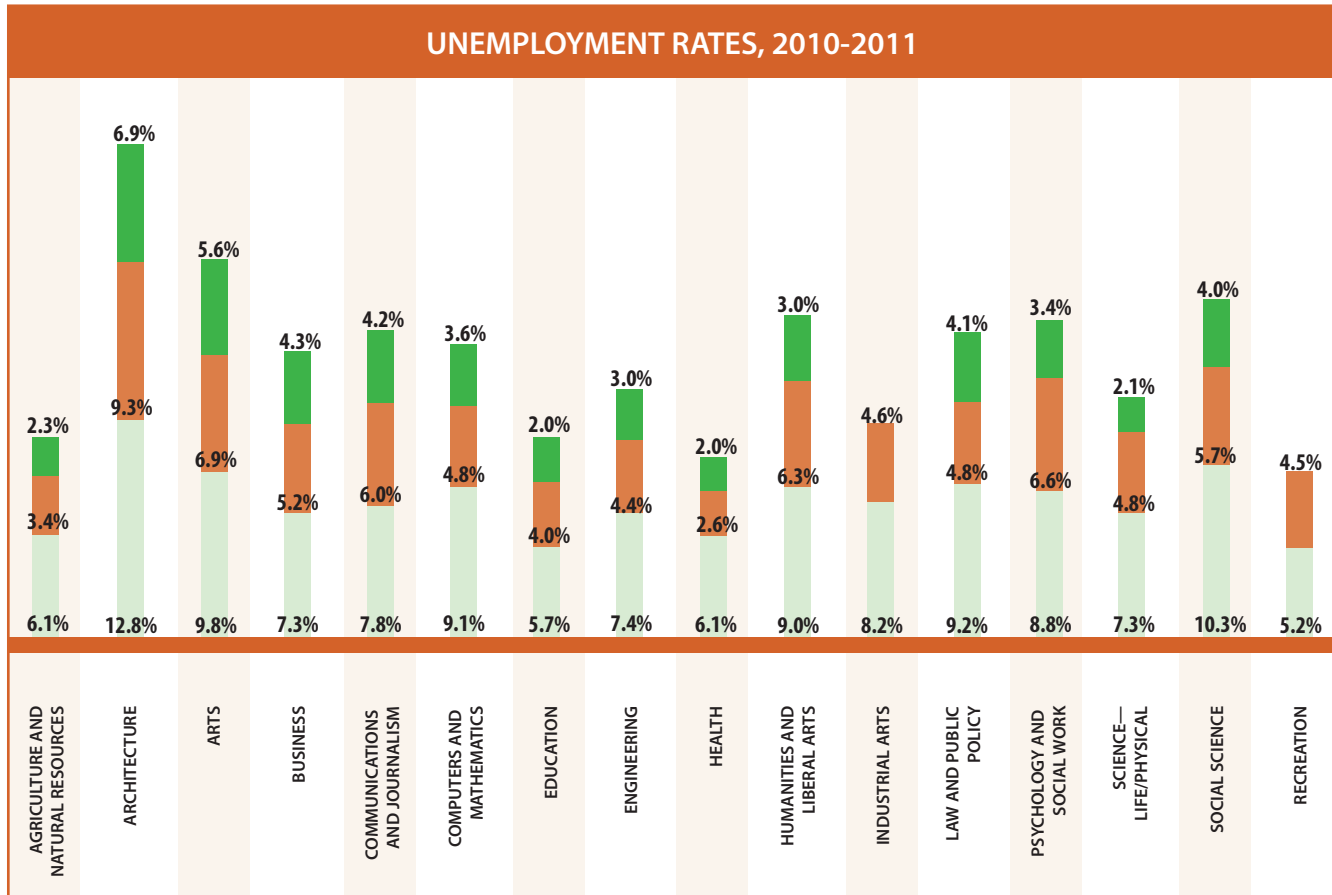
During the recession even workers with a graduate degree in fields most affected by the recession were most vulnerable. For instance, recent college graduates who majored in education had a lower unemployment rate than those with a Master's degree or better who majored in architecture for their undergraduate degree. However, graduate degree-holders still usually fared better. Except for architecture, the more educated, more experienced worker had a lower unemployment rate than the average worker in the overall economy.



Hard Times During the Recovery

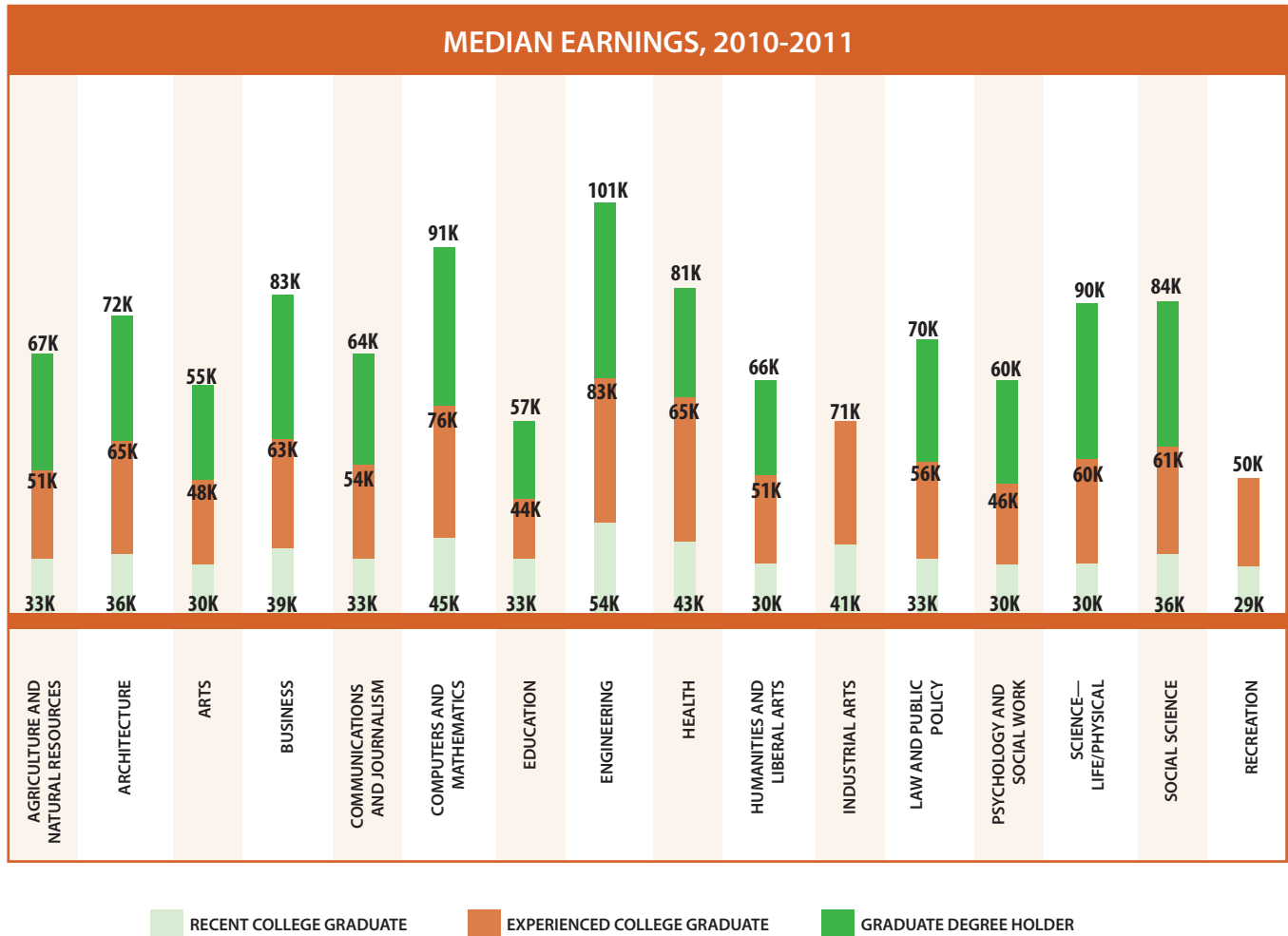
Hard times could still be ahead for the current college students about to select a major. This report reconfirms a harsh reality: not all college degrees are created equal. Specific fields and the higher technical skills associated with these fields can and often do offer lower unemployment and higher earnings; however, as can be seen for architecture majors, certain fields of study can result in higher unemployment risk after graduation.

UNEMPLOYMENT RATES DECREASE AS RECENT COLLEGE GRADUATES GAIN EXPERIENCE AND GRADUATE EDUCATION



RECENT COLLEGE GRADUATE
 EXPERIENCED COLLEGE GRADUATE
 GRADUATE DEGREE HOLDER

EARNINGS INCREASE AS RECENT COLLEGE GRADUATES GAIN EXPERIENCE AND GRADUATE EDUCATION



DETAILED UNEMPLOYMENT AND EARNINGS FOR COLLEGE MAJORS

MAJOR GROUP	MAJOR	UNEMPLOYMENT RATES			EARNINGS		
		RECENT COLLEGE GRADUATE	EXPERIENCED COLLEGE GRADUATE	GRADUATE DEGREE HOLDER	RECENT COLLEGE GRADUATE	EXPERIENCED COLLEGE GRADUATE	GRADUATE DEGREE HOLDER
AGRICULTURE AND NATURAL RESOURCES	GENERAL AGRICULTURE	—	2.8%	—	—	\$49,000	—
	ANIMAL SCIENCES	—	4.1%	—	—	\$46,000	—
	PLANT SCIENCE AND AGRONOMY	—	2.7%	—	—	\$50,000	—
	NATURAL RESOURCES MANAGEMENT	—	4.7%	—	—	\$55,000	—
ARCHITECTURE	ARCHITECTURE	12.8%	9.3%	6.9%	\$36,000	\$65,000	\$72,000
ARTS	FINE ARTS	10.1%	7.3%	6.0%	\$29,000	\$48,000	\$55,000
	DRAMA AND THEATER ARTS	6.4%	7.6%	5.9%	\$25,000	\$46,000	\$56,000
	MUSIC	8.6%	5.1%	4.8%	\$30,000	\$46,000	\$55,000
	VISUAL AND PERFORMING ARTS	—	9.3%	—	—	\$38,000	—
	COMMERCIAL ART AND GRAPHIC DESIGN	10.5%	6.7%	6.4%	\$33,000	\$50,000	\$61,000
	FILM VIDEO AND PHOTOGRAPHIC ARTS	11.4%	6.5%	—	\$30,000	\$51,000	—
	STUDIO ARTS		7.3%			\$38,000	—
BUSINESS	GENERAL BUSINESS	7.6%	4.7%	3.9%	\$38,000	\$62,000	\$84,000
	ACCOUNTING	8.8%	5.1%	3.6%	\$43,000	\$66,000	\$89,000
	BUSINESS MANAGEMENT AND ADMINISTRATION	7.8%	5.6%	4.7%	\$36,000	\$60,000	\$77,000
	BUSINESS ECONOMICS	—	5.9%	—	—	\$75,000	—
	MARKETING AND MARKETING RESEARCH	6.6%	5.8%	5.9%	\$36,000	\$65,000	\$81,000
	FINANCE	5.9%	4.4%	4.0%	\$44,000	\$72,000	\$98,000

DETAILED UNEMPLOYMENT AND EARNINGS FOR COLLEGE MAJORS (continued)

MAJOR GROUP	MAJOR	UNEMPLOYMENT RATES			EARNINGS		
		RECENT COLLEGE GRADUATE	EXPERIENCED COLLEGE GRADUATE	GRADUATE DEGREE HOLDER	RECENT COLLEGE GRADUATE	EXPERIENCED COLLEGE GRADUATE	GRADUATE DEGREE HOLDER
	HUMAN RESOURCES AND PERSONNEL MANAGEMENT	—	5.9%	5.1%	—	\$57,000	\$70,000
	INTERNATIONAL BUSINESS	—	7.9%	—	—	\$60,000	—
	HOSPITALITY MANAGEMENT	6.0%	5.4%	—	\$30,000	\$52,000	—
	MANAGEMENT INFORMATION SYSTEMS AND STATISTICS	—	4.0%	—	—	\$76,000	—
	MISCELLANEOUS BUSINESS & MEDICAL ADMINISTRATION	—	4.3%	—	—	\$58,000	—
COMMUNICATIONS & JOURNALISM	COMMUNICATIONS	8.2%	6.0%	4.4%	\$33,000	\$58,000	\$66,000
	JOURNALISM	7.0%	5.4%	4.2%	\$32,000	\$56,000	\$69,000
	MASS MEDIA	8.9%	7.9%	6.2%	\$31,000	\$51,000	\$53,000
	ADVERTISING AND PUBLIC RELATIONS	7.3%	5.8%	—	\$33,000	\$57,000	—
	FAMILY & CONSUMER SCIENCES	6.4%	5.6%	3.9%	\$30,000	\$43,000	\$58,000
COMPUTERS & MATHEMATICS	COMMUNICATION TECHNOLOGIES	—	6.7%	—	—	\$57,000	—
	INFORMATION SYSTEMS	14.7%	4.4%	5.4%	\$40,000	\$66,000	\$81,000
	COMPUTER SCIENCE	8.7%	4.7%	3.6%	\$50,000	\$81,000	\$97,000
	INFORMATION SCIENCE	—	5.2%	—	—	\$71,000	—

DETAILED UNEMPLOYMENT AND EARNINGS FOR COLLEGE MAJORS (continued)

MAJOR GROUP	MAJOR	UNEMPLOYMENT RATES			EARNINGS		
		RECENT COLLEGE GRADUATE	EXPERIENCED COLLEGE GRADUATE	GRADUATE DEGREE HOLDER	RECENT COLLEGE GRADUATE	EXPERIENCED COLLEGE GRADUATE	GRADUATE DEGREE HOLDER
	COMPUTER ENGINEERING	—	5.3%	—	—	\$90,000	—
	MATHEMATICS	5.9%	4.6%	2.9%	\$41,000	\$71,000	\$87,000
EDUCATION	GENERAL EDUCATION	7.6%	4.2%	2.8%	\$34,000	\$43,000	\$56,000
	ELEMENTARY EDUCATION	5.0%	3.7%	1.4%	\$33,000	\$41,000	\$55,000
	PHYSICAL & HEALTH EDUCATION TEACHING	—	4.1%	2.6%	—	\$49,000	\$65,000
	EARLY CHILDHOOD EDUCATION	—	5.5%	—	—	\$39,000	—
	SECONDARY TEACHER EDUCATION	—	3.6%	—	—	\$46,000	—
	SPECIAL NEEDS EDUCATION	—	4.5%	1.9%	—	\$45,000	\$58,000
	LANGUAGE & DRAMA EDUCATION	—	4.6%	12.3%	—	\$44,000	\$58,000
	ART & MUSIC EDUCATION	—	3.9%	—	—	\$45,000	—
	MISCELLANEOUS EDUCATION	—	3.1%	—	—	\$50,000	—
ENGINEERING	GENERAL ENGINEERING	7.0%	4.8%	2.3%	\$55,000	\$77,000	\$98,000
	CHEMICAL ENGINEERING	—	3.1%	2.8%	—	\$94,000	\$102,000
	CIVIL ENGINEERING	7.6%	4.0%	3.1%	\$51,000	\$81,000	\$95,000
	ELECTRICAL ENGINEERING	7.6%	4.6%	3.0%	\$57,000	\$91,000	\$109,000

DETAILED UNEMPLOYMENT AND EARNINGS FOR COLLEGE MAJORS *(continued)*

MAJOR GROUP	MAJOR	UNEMPLOYMENT RATES			EARNINGS		
		RECENT COLLEGE GRADUATE	EXPERIENCED COLLEGE GRADUATE	GRADUATE DEGREE HOLDER	RECENT COLLEGE GRADUATE	EXPERIENCED COLLEGE GRADUATE	GRADUATE DEGREE HOLDER
	INDUSTRIAL & MANUFACTURING ENGINEERING	—	5.1%	—	—	\$80,000	—
	MECHANICAL ENGINEERING	8.1%	3.4%	2.9%	\$57,000	\$86,000	\$101,000
	MISCELLANEOUS ENGINEERING	—	5.8%	—	—	\$76,000	—
	ELECTRICAL ENGINEERING TECHNOLOGY	—	5.7%	—	—	\$70,000	—
	INDUSTRIAL PRODUCTION TECHNOLOGIES	—	2.5%	—	—	\$70,000	—
	MISCELLANEOUS ENGINEERING	—	7.1%	—	—	\$66,000	—
HEALTH	GENERAL MEDICAL & HEALTH SERVICES	—	3.9%	—	—	\$56,000	—
	HEALTH & MEDICAL ADMINISTRATIVE SERVICES	—	4.6%	—	—	\$55,000	—
	MEDICAL TECHNOLOGIES TECHNICIANS	—	2.8%	—	—	\$61,000	—
	NURSING	4.8%	2.3%	1.7%	\$48,000	\$65,000	\$81,000
	PHARMACY PHARMACEUTICAL SCIENCES AND ADM.	—	2.5%	2.9%	—	\$180,000	\$110,000
	TREATMENT THERAPY PROFESSIONS	—	2.1%	—	—	\$65,000	—

DETAILED UNEMPLOYMENT AND EARNINGS FOR COLLEGE MAJORS (continued)

MAJOR GROUP	MAJOR	UNEMPLOYMENT RATES			EARNINGS		
		RECENT COLLEGE GRADUATE	EXPERIENCED COLLEGE GRADUATE	GRADUATE DEGREE HOLDER	RECENT COLLEGE GRADUATE	EXPERIENCED COLLEGE GRADUATE	GRADUATE DEGREE HOLDER
HUMANITIES & LIBERAL ARTS	AREA ETHNIC & CIVILIZATION STUDIES	—	7.2%	3.9%	—	\$55,000	\$73,000
	LINGUISTICS & COMPARATIVE LANGUAGE	—	7.3%	—	—	\$54,000	—
	FRENCH, GERMAN LATIN AND OTHER COMMON FOREIGN LANGUAGES	8.1%	5.0%	3.1%	\$30,000	\$52,000	\$63,000
	ENGLISH LANGUAGE & LITERATURE	9.8%	6.3%	3.9%	\$31,000	\$52,000	\$65,000
	LIBERAL ARTS	8.1%	6.7%	4.0%	\$31,000	\$51,000	\$68,000
	HUMANITIES	—	9.8%	—	—	\$48,000	—
	INTERDISCIPLINARY STUDIES	—	8.5%	—	—	\$45,000	—
	INTERCULTURAL & INTERNATIONAL STUDIES	—	7.4%	—	—	\$54,000	—
	PHILOSOPHY & RELIGIOUS STUDIES	9.5%	7.3%	4.0%	\$29,000	\$48,000	\$62,000
	THEOLOGY & RELIGIOUS STUDIES	—	3.9%	3.2%	—	\$41,000	\$48,000
	ANTHROPOLOGY & ARCHEOLOGY	12.6%	6.7%	4.6%	\$27,000	\$45,000	\$63,000
	ART HISTORY & CRITICISM	—	8.3%	—	—	\$48,000	—
	HISTORY	9.5%	5.8%	3.7%	\$32,000	\$55,000	\$76,000

DETAILED UNEMPLOYMENT AND EARNINGS FOR COLLEGE MAJORS (continued)

MAJOR GROUP	MAJOR	UNEMPLOYMENT RATES			EARNINGS		
		RECENT COLLEGE GRADUATE	EXPERIENCED COLLEGE GRADUATE	GRADUATE DEGREE HOLDER	RECENT COLLEGE GRADUATE	EXPERIENCED COLLEGE GRADUATE	GRADUATE DEGREE HOLDER
INDUSTRIAL ARTS	CONSTRUCTION SERVICES	—	5.4%	—	—	\$73,000	—
	TRANSPORTATION SCIENCES & TECHNOLOGY	—	4.0%	—	—	\$71,000	—
LAW & PUBLIC POLICY	PRE-LAW AND LEGAL STUDIES	—	6.2%	—	—	\$50,000	—
	CRIMINAL JUSTICE & FIRE PROTECTION	8.9%	4.6%	4.1%	\$30,000	\$56,000	\$66,000
	PUBLIC ADMINISTRATION	—	6.2%	—	—	\$56,000	—
PSYCHOLOGY & SOCIAL WORK	PSYCHOLOGY	9.2%	6.6%	3.6%	\$30,000	\$50,000	\$61,000
	HUMAN SERVICES & COMMUNITY ORGANIZATION	—	8.1%	—	—	\$40,000	—
	SOCIAL WORK	8.2%	6.5%	3.8%	\$29,000	\$41,000	\$53,000
RECREATION	PHYSICAL FITNESS & PARKS & RECREATION	5.2%	4.5%	—	\$29,000	\$50,000	—
SCIENCE-LIFE/ PHYSICAL	ENVIRONMENTAL SCIENCES	—	3.6%	—	—	\$55,000	—
	BIOLOGY	7.8%	5.1%	1.7%	\$30,000	\$57,000	\$90,000
	BIOCHEMICAL SCIENCES	—	—	1.7%	—	—	\$97,000
	CHEMISTRY	5.8%	5.6%	2.4%	\$31,000	\$65,000	\$99,000
	GEOLOGY & EARTH SCIENCES	—	5.8%	—	—	\$67,000	—
	PHYSICS	—	5.1%	2.6%	—	\$81,000	\$97,000

DETAILED UNEMPLOYMENT AND EARNINGS FOR COLLEGE MAJORS (continued)

MAJOR GROUP	MAJOR	UNEMPLOYMENT RATES			EARNINGS		
		RECENT COLLEGE GRADUATE	EXPERIENCED COLLEGE GRADUATE	GRADUATE DEGREE HOLDER	RECENT COLLEGE GRADUATE	EXPERIENCED COLLEGE GRADUATE	GRADUATE DEGREE HOLDER
	MULTI-DISCIPLINARY OR GENERAL SCIENCE	6.6%	3.9%	2.3%	\$35,000	\$56,000	\$83,000
SOCIAL SCIENCE	INTERDISCIPLINARY SOCIAL SCIENCES	—	6.4%	—	—	\$45,000	—
	GENERAL SOCIAL SCIENCES	—	7.5%	—	—	\$51,000	—
	ECONOMICS	10.4%	5.3%	4.2%	\$46,000	\$75,000	\$102,000
	GEOGRAPHY	—	5.5%	—	—	\$60,000	—
	INTERNATIONAL RELATIONS	—	6.8%	3.7%	—	\$68,000	\$95,000
	POLITICAL SCIENCE & GOVERNMENT	11.1%	5.8%	3.6%	\$35,000	\$65,000	\$87,000
	SOCIOLOGY	9.9%	6.1%	4.2%	\$30,000	\$50,000	\$61,000

APPENDICES

UNEMPLOYMENT AND EARNINGS FOR COLLEGE MAJORS

MAJOR	UNEMPLOYMENT RATES			EARNINGS		
	RECENT COLLEGE GRADUATE	EXPERIENCED COLLEGE GRADUATE	GRADUATE DEGREE HOLDER	RECENT COLLEGE GRADUATE	EXPERIENCED COLLEGE GRADUATE	GRADUATE DEGREE HOLDER
AGRICULTURE & NATURAL RESOURCES	6.1%	3.4%	2.3%	\$33,000	\$51,000	\$67,000
SCIENCE- LIFE/PHYSICAL	7.3%	4.8%	2.1%	\$30,000	\$60,000	\$90,000
ARCHITECTURE	12.8%	9.3%	6.9%	\$36,000	\$65,000	\$72,000
HUMANITIES AND LIBERAL ARTS	9.0%	6.3%	3.9%	\$30,000	\$51,000	\$66,000
COMMUNICATIONS & JOURNALISM	7.8%	6.0%	4.2%	\$33,000	\$54,000	\$64,000
COMPUTERS & MATHEMATICS	9.1%	4.8%	3.6%	\$45,000	\$76,000	\$91,000
EDUCATION	5.7%	4.0%	2.0%	\$33,000	\$44,000	\$57,000
ENGINEERING	7.4%	4.4%	3.0%	\$54,000	\$83,000	\$101,000
LAW AND PUBLIC POLICY	9.2%	4.8%	4.1%	\$33,000	\$56,000	\$70,000
SOCIAL SCIENCE	10.3%	4.6%	4.0%	\$36,000	\$61,000	\$84,000
INDUSTRIAL ARTS	8.2%	2.6%	—	\$41,000	\$71,000	—
HEALTH	6.1%	2.6%	2.0%	\$43,000	\$65,000	\$81,000
PSYCHOLOGY & SOCIAL WORK	8.8%	6.6%	3.4%	\$30,000	\$46,000	\$60,000
RECREATION	5.2%	4.5%	—	\$29,000	\$50,000	—
ARTS	9.8%	6.9%	5.6%	\$30,000	\$48,000	\$55,000
BUSINESS	7.5%	5.2%	4.3%	\$39,000	\$63,000	\$83,000

Methodology

Data from the American Community Survey for the years 2010 and 2011 were pooled to provide a larger sample size for the estimates. The unemployment rates were then computed for each of the three groups by dividing the total unemployed with the total employed and unemployed. The earnings used are median earnings in 2010 dollars rounded to the nearest \$1,000. The three groups are: recent college graduates (those between ages 22 and 26 with bachelor degrees), experienced college graduates (those between ages 30 and 54), and graduate degree holders (those with master's degrees or higher and are between 30 and 54). Median earnings are based on those who worked more than 35 hours a week and at least 50 weeks a year. All calculations use the survey weights provided by the Census Bureau.

Acknowledgements

We would like to express our gratitude to the individuals and organizations that have made this report possible. First we thank Lumina Foundation, Bill and Melinda Gates Foundation and the Joyce Foundation for their support of our research over the past few years, and in particular we are grateful for the support of Jamie Merisotis, Holly Zanville, Daniel Greenstein, Elise Miller and Whitney Smith. We are honored to be partners in their mission of promoting postsecondary access and completion for all Americans.

Special thanks to Andrea Porter who provided superb research and editorial assistance throughout. We would also like to thank Ana Castanon – the report's designer, Stephanie Soutaris-Slick– the report's editor and Isabel Macdonald - the report's translator.

Many have contributed their thoughts and feedback throughout the production of this report. That said, all errors, omissions, and views remain the responsibility of authors.

The views expressed in this publication are those of the authors and do not necessarily represent those of Lumina Foundation, Bill and Melinda Gates Foundation or Joyce Foundation, their officers, or employees.