IBIT INSTITUTE FOR BUSINESS AND INFORMATION TECHNOLOGY

THE IBIT REPORT

Munir Mandviwalla
Michael Dinger
Brianna Anderson

INFORMATION SYSTEMS JOB INDEX 2022

LEARN ABOUT THE IS ENTRY LEVEL JOB MARKET

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INFORMATION SYSTEMS JOB INDEX 2022

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THE IBIT REPORT

The IBIT Report is a publication of the Institute for Business and Information Technology at Temple University. IBIT reports provide actionable knowledge to industry based on rigorous academic research.

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ABOUT THE IS JOB INDEX

The Information Systems Information Systems Job Index is the only national longitudinal assessment of jobs, placement, demographics, search, acceptance, geographical patterns, and knowledge of information systems (IS), management information systems (MIS), and computer information systems (CIS) graduates. Inaugurated in 2013 and published every 2 years, each report is based on several thousand labor market entrants from more than 30 universities across the United States.

LEARN MORE AT ISJOBINDEX.COM

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Thanks to **Meta** for making the 2022 report possible.

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ACKNOWLEDGMENTS

FOREWORD

Throughout your life, you will spend some of your most meaningful and consequential time within your career. Choosing a career path within Information Systems (IS), however, is no small task. As you consider options, it's of great importance that you have data and insights at your fingertips to help you make the most informed decision possible and home in on what you value most in your work.

That's why I'm particularly thrilled to introduce to you the fifth biennial iteration of the Information Systems Job Index. It is a rich resource full of data on key considerations including salary, demographics, diversity, job satisfaction and search strategies. As an engineer myself and current Chief Information Officer at Meta, I can tell you that not only is a career in IS rewarding and engaging, but the demand for skill sets in the field grows year over year, with no signs of slowing as new technologies emerge.

I've long had an interest in helping folks in the IS space grow and establish their careers because I believe we are uniquely positioned to play a principal role in building the future of a broad range of industries. The IS Job Index is an essential tool you can employ to expand your horizons, flourish in your profession and determine how you will help shape the future.

Atish Banerjea
CIO, Meta

ABOUT THE AUTHORS

Munir Mandviwalla

Munir Mandviwalla is Professor of Management Information Systems, Milton F. Stauffer Senior Research Fellow, and Executive Director of the Institute for Business and Information Technology at the Fox School of Business, Temple University. Mandviwalla applies design to improve business and society on topics such as digital transformation, broadband, social media, and IT workforce. His research has been published in top journals including *MIS Quarterly, Information Systems Research, ACM Transactions, Public Administration Review,* and others. He leads the Institute for Business and Information Technology, which engages with industry on knowledge and human capital development. Mandviwalla has received awards from AIS, IBM, Microsoft, Claremont Graduate University, and Temple University. He holds a BSc from Boston University, and an MBA and PhD both from Claremont Graduate University.

Michael Dinger

Michael Dinger is an associate professor of management in the Johnson College of Business and Economics at the University of South Carolina Upstate. He received a PhD in management information systems from Clemson University. His research interests include IT workforce management, information security, and virtual communities. His work appears in *Information Systems Research, Journal of the Association for Information Systems, Journal of Management Information Systems, MIS Quarterly,* and other outlets. He serves as associate editor at *Communications of the Association for Information Systems.*

Brianna Anderson

Brianna Anderson is a senior pursuing a Bachelor of Business Administration with a dual major in Management Information Systems and Marketing at the Fox School of Business, Temple University. She has always had a passion for technology and was awarded the IT Leaders Scholarship in 2021 for her outstanding achievements and accomplishments within the MIS department. Brianna has maintained high academic standing while being highly involved in her community and engaged in active memberships within various student professional organizations. Besides her role as an IS Job Index Research Assistant, she is very active within the MIS community, serving as an Information Technology Assistant for several courses and a student ambassador for the Professional Achievement program.

REPORT HIGHLIGHTS

STUDENT HIGHLIGHTS

→ **Page 18: Consulting** and **Analytics** are the most popular jobs among Bachelor IS graduates.

→ **Page 20:** An internship **almost doubles** the likelihood of getting a job offer.

PARENT HIGHLIGHTS

→ **Page 12:** Salaries for IS graduates are **significantly higher than typical business majors** for both Bachelor's and most Master's degrees.

→ **Page 19:** Bachelor's IS **placement is red hot** at over 80% at graduation.

FACULTY HIGHLIGHTS

→ **Page 21:** There is **very little change** across the years in the knowledge of IS graduates.

→ **Page 15:** IS Bachelor's **female representation has grown significantly.**

EMPLOYER HIGHLIGHTS

→ **Page 23:** Fairness is the **most important reason** that graduates accept a job offer.

→ **Page 15:** IS Bachelor's **female representation is double** compared to other STEM fields.

2022 IS SNAPSHOT

About the IS Industry

Information Systems (IS) professionals apply and develop Information Technology (IT) in organizations, and comprise a significant portion of the IT labor market.

WHO ARE THESE PROFESSIONALS AND WHAT DO THEY DO?

- **Data Analysts**
- **IT Consultants**
- **Application Developers**
- **Chief Information Officers (CIO) & Chief Technology Officers (CTO)**

IS professionals are experts in **developing, applying, modifying,** and **strategizing technology** to digitally transform organizations. IS professionals work with other business professionals including computer scientists and engineers to create platforms that **integrate digital technologies** to design solutions that solve organizational problems.

THE 2022 IS JOB MARKET IS RED HOT

JOB PLACEMENT RATE

	At Graduation	6-Months after Graduation
BACHELOR'S:	**81%**	**91%**
MASTER'S:	**65%**	**92%**

CONFIDENCE IN JOB MARKET

BACHELOR'S: **64%**
MASTER'S: **60%**

AVERAGE SALARY

BACHELOR'S: **$75,517**
MASTER'S: **$94,839**

BACHELOR'S IN IS

Bachelor's in IS graduates command the **highest salary** among all Business School Bachelor's majors.[1]

MASTER'S IN IS

Master's in IS graduates command the **second highest salary** among all Business School Master's majors.[1]

ABOUT THE IS JOB MARKET

There are over 4 million estimated jobs in the U.S. relevant to IS.[2]

There are about **1,600 colleges** that offer IS programs in the U.S., which are often based in **Business Schools,** in standalone Information Schools or integrated with Computer Science. IS programs are classified as **STEM** and are typically called:

+ **Management Information Systems (MIS)**
+ **Information Systems (IS)**
+ **Computer Information Systems (CIS)**

> The recruitment, mindset, education, demographics, career paths, skills, and jobs of IS professionals are different and yet remain poorly understood.

1. Based on comparing IS Job Index 2022 salaries to all other business school Bachelor's or Master's majors (Nace, 2022) 2. Bureau of Labor Statistics, Occupational Employment and Wage Statistics, May 2021.

Entry level IS job entrants are optimistic about their careers

SATISFACTION & ENTHUSIASM ABOUT JOB OFFER

BACHELOR'S: **81%**
MASTER'S: **73%**

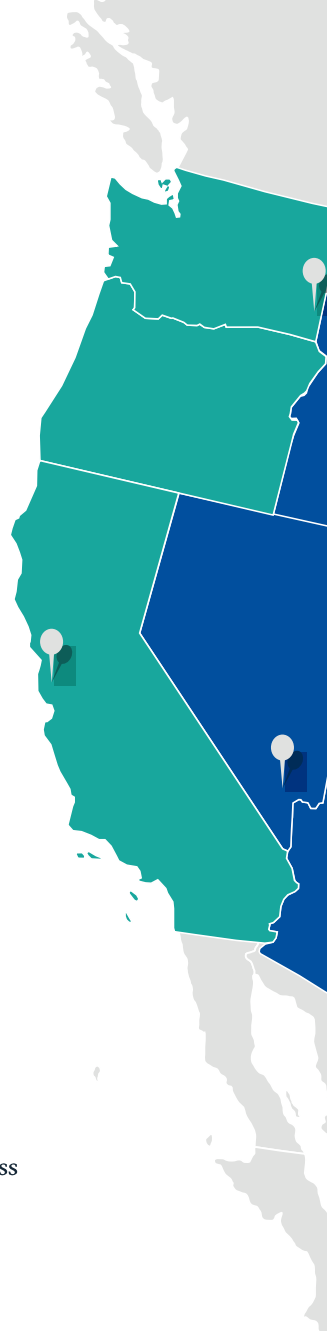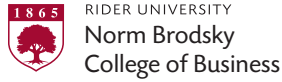**OFFER FROM APPEALING ORGANIZATION**

BACHELOR'S: **86%**
MASTER'S: **82%**

JOB IS A GOOD FIT

BACHELOR'S: **72%**
MASTER'S: **72%**

Participating Colleges & Universities
BY REGION

Thanks to the **36 universities** across the nation that agreed to formally participate in the 2022 IS Job Index.
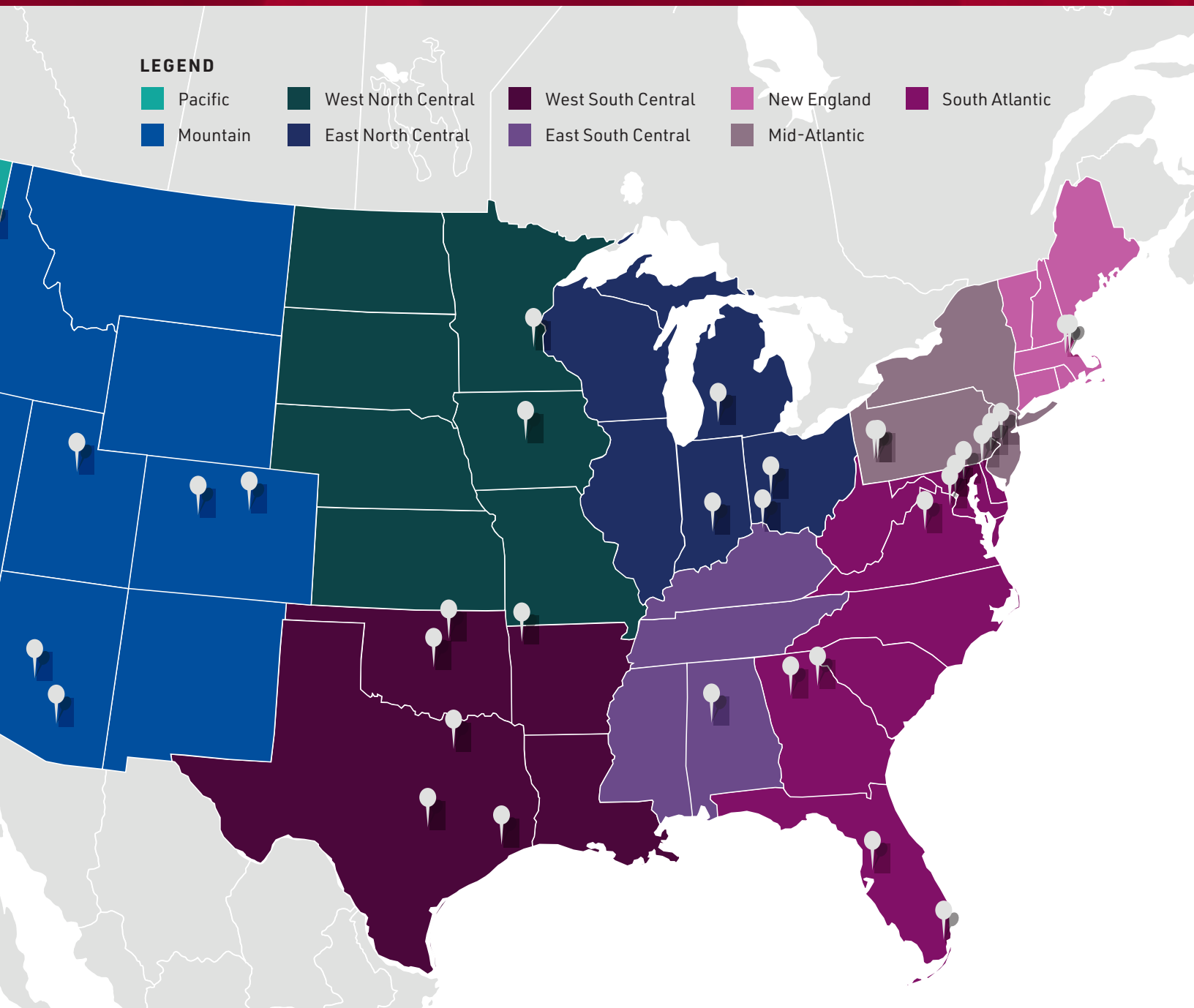
KOGOD SCHOOL of BUSINESS
AMERICAN UNIVERSITY • WASHINGTON, DC

IOWA STATE UNIVERSITY

UNIVERSITY OF DELAWARE
LERNER BUSINESS & ECONOMICS

ASU Arizona State University

NKU COLLEGE OF Informatics

UNIVERSITY OF GEORGIA
Terry College of Business

BENTLEY UNIVERSITY

SPEARS SCHOOL OF BUSINESS

UH

BOSTON UNIVERSITY

RIDER UNIVERSITY
Norm Brodsky College of Business

CARLSON SCHOOL OF MANAGEMENT
UNIVERSITY OF MINNESOTA

BYU

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HeinzCollege
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OU PRICE COLLEGE OF BUSINESS
Management Information Systems

COLORADO STATE UNIVERSITY

TU TOWSON UNIVERSITY

UNIVERSITY of SOUTH FLORIDA
Muma College of Business
Department of Information Systems Decision Sciences

DUQUESNE UNIVERSITY
Palumbo-Donahue School of Business

THE UNIVERSITY OF ALABAMA

The University of Texas at Austin
McCombs School of Business

FIU Business
FLORIDA INTERNATIONAL UNIVERSITY

THE UNIVERSITY OF ARIZONA
Eller MIS

UT DALLAS

GEORGE MASON UNIVERSITY School of Business

UNIVERSITY OF ARKANSAS Sam M. Walton College of Business

UNIVERSITY of VIRGINIA
McINTIRE SCHOOL of COMMERCE

Georgia State University
J. MACK ROBINSON COLLEGE OF BUSINESS

CU Business School
UNIVERSITY OF COLORADO DENVER

WASHINGTON STATE UNIVERSITY
Carson College of Business

KELLEY SCHOOL OF BUSINESS
INDIANA UNIVERSITY

UNIVERSITY of DAYTON

WESTERN MICHIGAN UNIVERSITY
HAWORTH College of Business

1408 job market entrants from 36 universities across the nation.

LEGEND

- Pacific
- Mountain
- West North Central
- East North Central
- West South Central
- East South Central
- New England
- Mid-Atlantic
- South Atlantic

FAST FACTS

A quick look at the
2022 IS Job Market Entrants

BACHELOR'S	MASTER'S
Age 23	Age 28

77% of Bachelor's and **55%** of Master's had one or more internships prior to graduation.

Female representation has jumped 10 percentage points from 2019.

Bachelor's
47%
Master's
44%

Bachelor's
53%
Master's
55%

Read more about female representation **on page 13.**

Based on **1408 job market entrants** from **36** universities across the nation.

IS Bachelor's job market entrants are mostly White and increasingly Asian.

5%
Black

49%
White

10%
Hispanic

31%
Asian

5%
Other
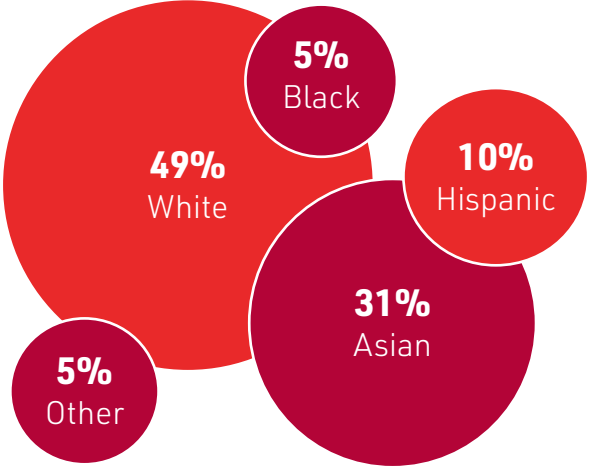
Read more about IS demographics on **page 14.**

Employed Full Time or Received Job Offer by Graduation

| 86% | BACHELOR'S |
| 84% | MASTER'S |

Read more about what impacts placement **on page 17.**

Salaries & Offers OVERVIEW

BACHELOR'S AVERAGE OFFER

Year	Offer
2013	$57,212
2015	$57,817
2017	$62,820
2019	$65,314
2022	$75,517

32% higher than the average offer to all business school Bachelor's graduates

(NACE Salary Survey, Summer 2022)

MASTER'S AVERAGE OFFER

Year	Offer
2013	$65,394
2015	$67,632
2017	$72,517
2019	$84,113
2022	$94,839

19% higher than the average offer to all business school Master's graduates

(NACE Salary Survey, Summer 2022, *Note: Includes MBA*)

2022 BACHELOR'S

Field	Offer
INFORMATION SYSTEMS	$75,517
ACCOUNTING	$56,103
FINANCE	$62,163
MARKETING	$49,481

Source: NACE Salary Survey, Summer 2022

2022 MASTER'S

Field	Offer
INFORMATION SYSTEMS	$94,839
ACCOUNTING	$58,703
FINANCE	$72,024
MARKETING	$58,611

KEY TAKEAWAYS

> **Salaries for IS graduates are significantly higher than typical business majors** for both Bachelor's and most Master's degrees.

> Overall, IS salaries are **outpacing business school salaries,** and their growth relative to 2019 represents an increasingly competitive market for hiring IS professionals.

Average **Business School** Offer

BACHELOR'S	$57,186
MASTER'S	$78,545

ABOUT META / ENTERPRISE ENGINEERING

—

Meta builds technologies that help people connect, find communities, and grow businesses. When Facebook launched in 2004, it changed the way people connect. Apps like Messenger, Instagram, and WhatsApp further empowered billions around the world. Now, Meta is moving beyond 2D screens toward immersive experiences like augmented and virtual reality to help build the next evolution in social technology.

As Chief Information Officer for Meta, **Atish Banerjea** oversees Enterprise Engineering, a global team that builds and runs the systems that help Meta scale globally and ships people-centric solutions that transform and accelerate Meta's business.

The Enterprise Engineering (EE) organization focuses on building enterprise products, running corporate infrastructure and security, managing enterprise operations, including traditional operations as well as events, studios, etc. All Meta employees use EE's services and products, so the team's scale and opportunity to make an impact are boundless.

The Enterprise Engineering organization is truly unique in how it functions and how it was developed. Several years ago, Meta (then Facebook), was faced with a difficult problem. The company was growing exponentially, and the tools available in the marketplace could not support the rapid growth. They realized they needed to throw out the IT rulebook and do it themselves: build their own tools and have their engineers underpin all the infrastructure and operations at Meta. And so, Enterprise Engineering was born.

Salaries & Offers BY REGION

| | BACHELOR'S | | | | | | | MASTER'S | | | | | | |
| | MOVEMENT PATTERNS | | 2022 SALARY | SALARY CHANGE | | | | MOVEMENT PATTERNS | | 2022 SALARY | SALARY CHANGE | | | |
	From↓	To↑		2019	2017	2015	2013	From↓	To↑		2019	2017	2015	2013
NEW ENGLAND	57%	38%	$78,177	10%	19%	25%	32%			$103,000	8%	30%	22%	47%
MID-ATLANTIC	19%	51%	$75,792	19%	14%	20%	39%	65%	43%	$99,833	8%	35%	29%	79%
SOUTH ATLANTIC	32%	23%	$72,174	6%	15%	23%	24%	24%	22%	$82,320	10%	23%	43%	57%
EAST NORTH CENTRAL	28%	38%	$68,774	8%	5%	32%	29%	38%	35%	$97,500	31%	36%	62%	55%
EAST SOUTH CENTRAL	69%	9%	$74,903	22%	44%	32%	36%			$92,194	39%	39%	29%	31%
WEST NORTH CENTRAL	30%	6%	$67,773	11%	17%	18%	24%			$69,733	0%	7%	9%	39%
WEST SOUTH CENTRAL	24%	20%	$74,880	17%	24%	28%	32%	33%	47%	$95,221	30%	32%	36%	46%
MOUNTAIN	25%	33%	$70,737	8%	15%	47%	29%	38%	2%	$85,707	8%	20%	20%	32%
PACIFIC	30%	53%	$95,481	45%	36%	59%	72%		100%	$115,859	8%	28%	101%	

Notes: Blank cells indicate that there is insufficient data to interpret. 'Movement from' indicates the % of entry level IS job entrants who graduated from a university in this region but moved out of this region for work. 'Movement to' indicates the % of entry level IS job entrants who graduated from a university outside this region but moved into this region for work.

LEGEND

New England: ME, NH, VT, MA, RI, CT
Mid-Atlantic: NY, PA, NJ
South Atlantic: DE, MD, DC, VA, WV, NC, SC, GA, FL

East North Central: WI, MI, IL, IN, OH
East South Central: KY, TN, MS, AL
West North Central: MO, ND, SD, NE, KS, MN, IA

West South Central: OK, TX, AR, LA
Mountain: ID, MT, WY, NV, UT, CO, AZ, NM
Pacific: AK, WA, OR, CA, HI

KEY TAKEAWAYS

> **39%** of Master's and **31%** of Bachelor's IS students move to a job outside the region in which they got their degree.

BACHELOR'S

> **The Pacific** outpaces all others for the highest Bachelor's salaries.

> **The Pacific** had the largest increase in salaries, followed by East South Central (KY, TN, MS, AL).

> **The Mid-Atlantic** and **Pacific** regions are hot - **over 50%** of Bachelor's hires move there from outside the region.

> **Less than 10%** of Bachelor's hires in **West North Central** and **East South Central** are from outside the region.

> **2022** shows mixed salary growth, with large increases in some places contrasted with small changes in others suggesting an uneven labor market across regions.

> Only **19%** of Bachelor's move out of the **Mid-Atlantic** - making them the least likely to relocate.

> Bachelor's from **East South Central** are highly mobile - about **69%** leave for jobs elsewhere in the country.
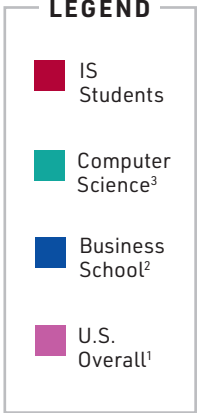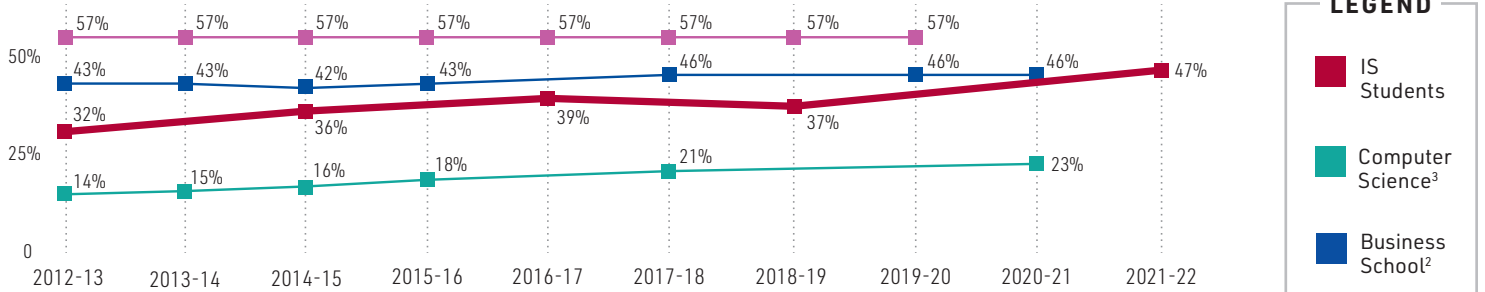
MASTER'S

> **The Pacific** offers the highest salaries for Master's graduates.

> **East South Central, East North Central** and **West South Central** show the highest salary growth of more than **30%** since 2019.

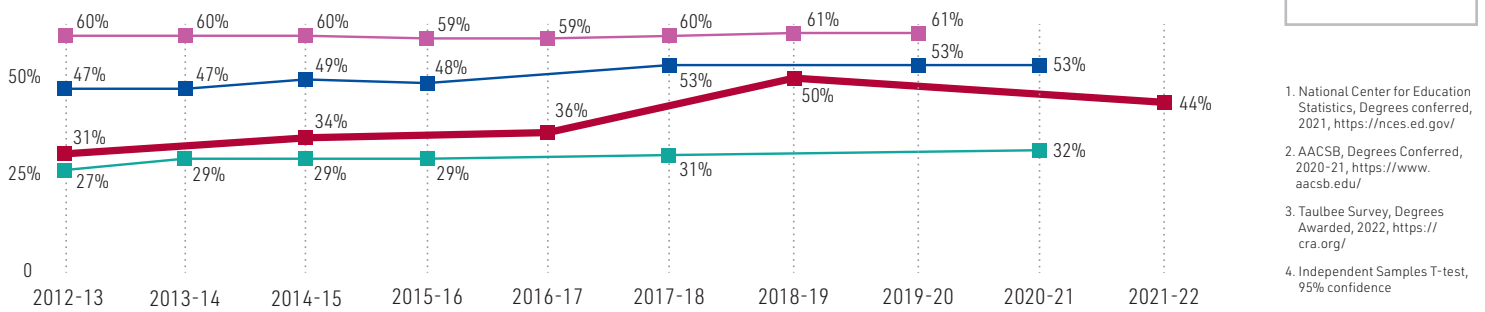> Master's from the **Mid-Atlantic** are highly mobile - about two-thirds leave for jobs elsewhere in the country.

14

Representation BY GENDER & INTERNATIONAL STUDENTS

For the first time, IS Bachelor's female representation has surpassed the overall Business School average of 45.7%.
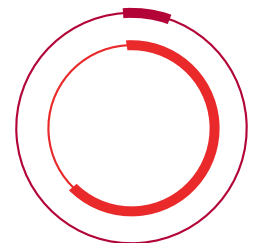
BACHELOR'S

Data points (Bachelor's):
- U.S. Overall: 57%, 57%, 57%, 57%, 57%, 57%, 57%, 57%
- Business School: 43%, 43%, 42%, 43%, 46%, 46%, 46%
- IS Students: 32%, 36%, 39%, 37%, 47%
- Computer Science: 14%, 15%, 16%, 18%, 21%, 23%

Years: 2012-13, 2013-14, 2014-15, 2015-16, 2016-17, 2017-18, 2018-19, 2019-20, 2020-21, 2021-22

MASTER'S

Data points (Master's):
- U.S. Overall: 60%, 60%, 60%, 59%, 59%, 60%, 61%, 61%
- Business School: 47%, 47%, 49%, 48%, 53%, 53%, 53%
- IS Students: 31%, 34%, 36%, 53%, 50%, 44%
- Computer Science: 27%, 29%, 29%, 29%, 31%, 32%

Years: 2012-13, 2013-14, 2014-15, 2015-16, 2016-17, 2017-18, 2018-19, 2019-20, 2020-21, 2021-22

LEGEND
- IS Students
- Computer Science[3]
- Business School[2]
- U.S. Overall[1]

1. National Center for Education Statistics, Degrees conferred, 2021, https://nces.ed.gov/
2. AACSB, Degrees Conferred, 2020-21, https://www.aacsb.edu/
3. Taulbee Survey, Degrees Awarded, 2022, https://cra.org/
4. Independent Samples T-test, 95% confidence

INTERNATIONAL STUDENTS

7% BACHELOR'S DEGREE
International Students

63% MASTER'S DEGREE
International Students

KEY TAKEAWAYS

› IS female graduates surprisingly have **significantly lower confidence in the job market** than males[4] despite comparable placement rates and salaries and high confidence in their job search.

BACHELOR'S

› **IS Bachelor's** female representation has grown significantly in **2021-2022.**

› **IS Bachelor's** female representation is over twice as high as **Computer Science.**

MASTER'S

› **IS Master's** female representation compares favorably to **STEM fields such as Computer Science,** but slightly lags behind **Business Schools** in general.

› **IS Master's** female graduates dropped slightly from **2018-2019.**

INTERNATIONAL

› **International female IS graduates** are represented more equally at about **57%** Bachelor's and **47%** Master's.

› **International IS Bachelor's placement** is about **68%** at graduation, while Master's placement is **48%** at graduation and **93%** six months after graduation.

Representation BY ETHNICITY

BACHELOR'S
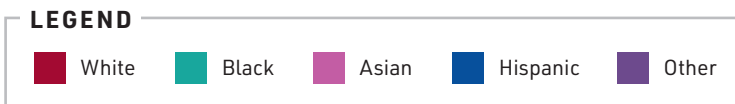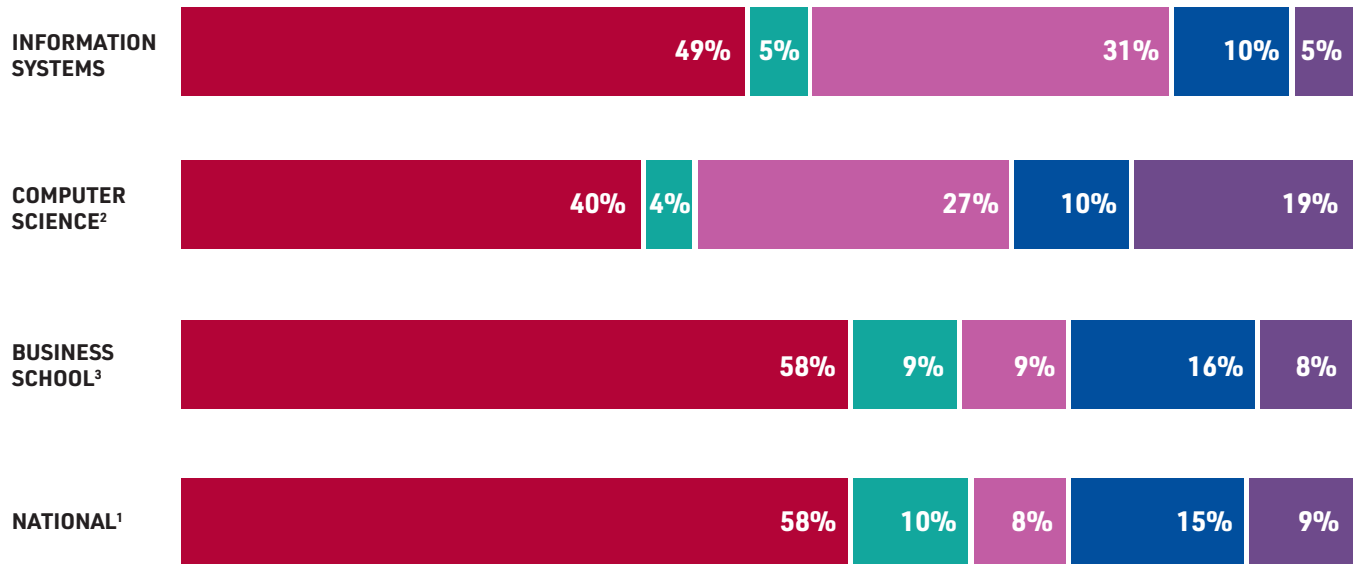
INFORMATION SYSTEMS
| 49% | 5% | 31% | 10% | 5% |

COMPUTER SCIENCE[2]
| 40% | 4% | 27% | 10% | 19% |

BUSINESS SCHOOL[3]
| 58% | 9% | 9% | 16% | 8% |

NATIONAL[1]
| 58% | 10% | 8% | 15% | 9% |

LEGEND
- White
- Black
- Asian
- Hispanic
- Other

MASTER'S

INFORMATION SYSTEMS
| 22% | 4% | 65% | 7% | 3% |

COMPUTER SCIENCE[2]
| 20% | 2% | 12% | 3% | 64% |

BUSINESS SCHOOL[3]
| 54% | 10% | 12% | 13% | 11% |

NATIONAL[1]
| 53% | 11% | 6% | 10% | 19% |

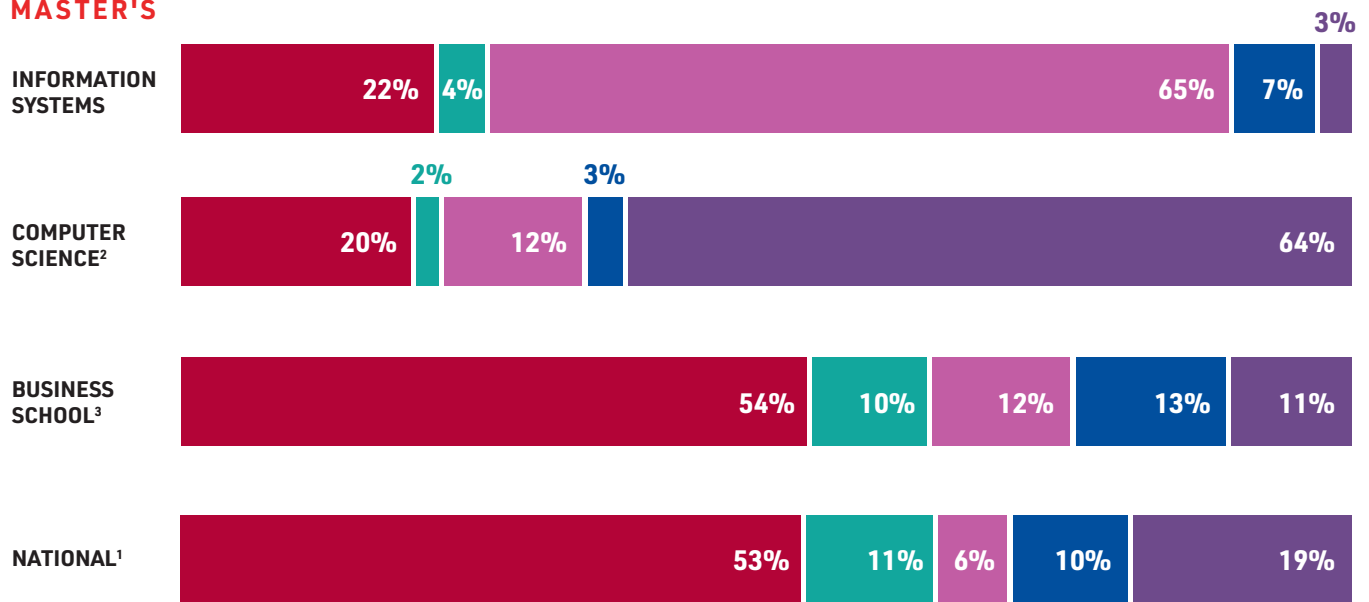1. National Center for Education Statistics, Degrees conferred, 2021, https://nces.ed.gov/   2. Taulbee Survey, Degrees Awarded, 2022, https://cra.org/   3. AACSB, Enrollment by Ethnicity, 2021, https://www.aacsb.edu/

KEY TAKEAWAYS

> IS Master's job market entrants are about **double the percentage of African Americans** than other STEM fields. However, their representation is still **much less** when compared to their percentage in the overall population.

> There are about **3 times more Asian IS Master's graduates** than the next largest ethnic group.

Salaries & Offers BY INDUSTRY

SALARY BY SIZE OF ORGANIZATION
Bachelor's Students

	% of Graduates
VERY LARGE (10,001 or more Employees) **$76,809**	71%
LARGE (5,001-10,000 Employees) **$72,264**	10%
MID-SIZED (1,001-5,000 Employees) **$78,616**	9%
SMALL (101-1,000 Employees) **$67,152**	7%
VERY SMALL (1-100 Employees) **$57,000**	3%

SALARY BY SIZE OF ORGANIZATION
Master's Students

	% of Graduates
VERY LARGE (10,001 or more Employees) **$100,425**	61%
LARGE (5,001-10,000 Employees) **$82,623**	12%
MID-SIZED (1,001-5,000 Employees) **$92,632**	13%
SMALL (101-1,000 Employees) **$87,029**	9%
VERY SMALL (1-100 Employees) **$81,250**	5%

BACHELOR'S | Average Salary Breakdown by Industry

INDUSTRY	% of Graduates
FINANCIAL SERVICES / BANKING / ACCOUNTING $82,251	15%
INFORMATION TECHNOLOGY $76,393	23%
BUSINESS SERVICES / CONSULTING $75,104	35%
MANUFACTURING (INCLUDING AUTOMOBILE, APPLIANCES, GOODS, FABRICATION, DEVICES) $73,059	5%
INSURANCE / REAL ESTATE / LEGAL $71,492	3%
BIOTECHNOLOGY / PHARMACEUTICAL / HEALTHCARE / MEDICAL SERVICES $69,615	4%
OTHER $66,972	5%

MASTER'S | Average Salary Breakdown by Industry

INDUSTRY	% of Graduates
INFORMATION TECHNOLOGY $102,689	24%
BIOTECHNOLOGY / PHARMACEUTICAL / HEALTHCARE / MEDICAL SERVICES $97,000	6%
OTHER $91,950	5%
FINANCIAL SERVICES / BANKING / ACCOUNTING $91,470	17%
BUSINESS SERVICES / CONSULTING $86,810	21%
GOVERNMENT: FEDERAL (INCLUDING MILITARY) $73,151	5%

KEY TAKEAWAYS

› **81%** of Bachelor's and **73%** of Master's IS graduates **accept jobs** in very large or large firms.

› **Biotechnology/Pharmaceutical/Healthcare/Medical** are close behind the IT industry on Master's salary.

› **35%** of IS Bachelor's and **21%** of Master's go into the **Business Services / Consulting field.**

› **The IT industry** continues to pay highly and attract the largest percentage of Master's IS graduates.

Salaries & Offers BY JOB TYPE

About the Data: Job types with less than 10 responses omitted below.

BACHELOR'S | Salary Breakdown by Job Type

JOB CATEGORY

INFORMATION SECURITY ANALYSTS
$82,197

OTHER IT/IS JOBS
$78,412

PROJECT MANAGER
$76,706

INFORMATION TECHNOLOGY ADVISOR/CONSULTANT
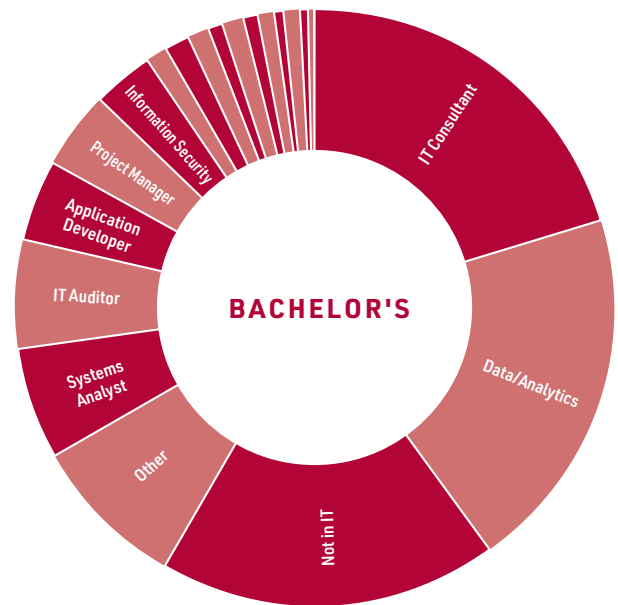$76,454

SOFTWARE DEVELOPERS
$73,664

DATA/ANALYTICS
$72,982

COMPUTER SYSTEMS ANALYSTS
$72,774

INFORMATION TECHNOLOGY AUDITOR
$69,345

BACHELOR'S

MASTER'S | Salary Breakdown by Job Type

JOB CATEGORY

PROJECT MANAGER
$110,077

SOFTWARE DEVELOPERS
$104,448

OTHER IT/IS JOBS
$96,656

INFORMATION TECHNOLOGY ADVISOR/CONSULTANT
$94,032

DATA/ANALYTICS
$93,402

COMPUTER SYSTEMS ANALYSTS
$78,006

INFORMATION SECURITY ANALYSTS
$72,113
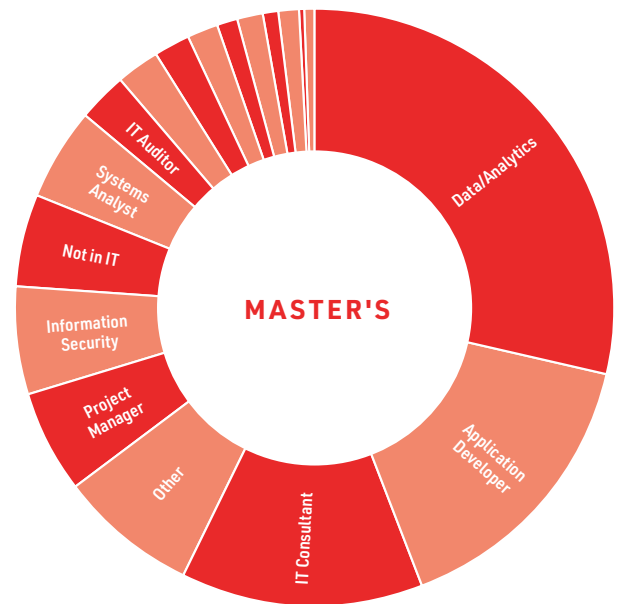
MASTER'S

KEY TAKEAWAYS

› **Project Managers** are towards the top in salary for Bachelor's and Master's IS graduates.

BACHELOR'S

› Bachelor's salaries grew **about 10%** since 2019.

› **20%** of the jobs are in **Consulting.**

› **20%** of the jobs are in **Data / Analytics,** up from **16%** in 2019.

MASTER'S

› **Master's salaries** for Software Application Developers have grown **69%** since 2013.

› **29%** of the jobs are in **Data / Analytics,** down from about **42%** in 2019.

› **5%** received **Systems Analyst** offers compared to **27%** in 2013.

Job Placement

JOB PLACEMENT^

■ AT GRADUATION ■ 6 MONTHS AFTER GRADUATION
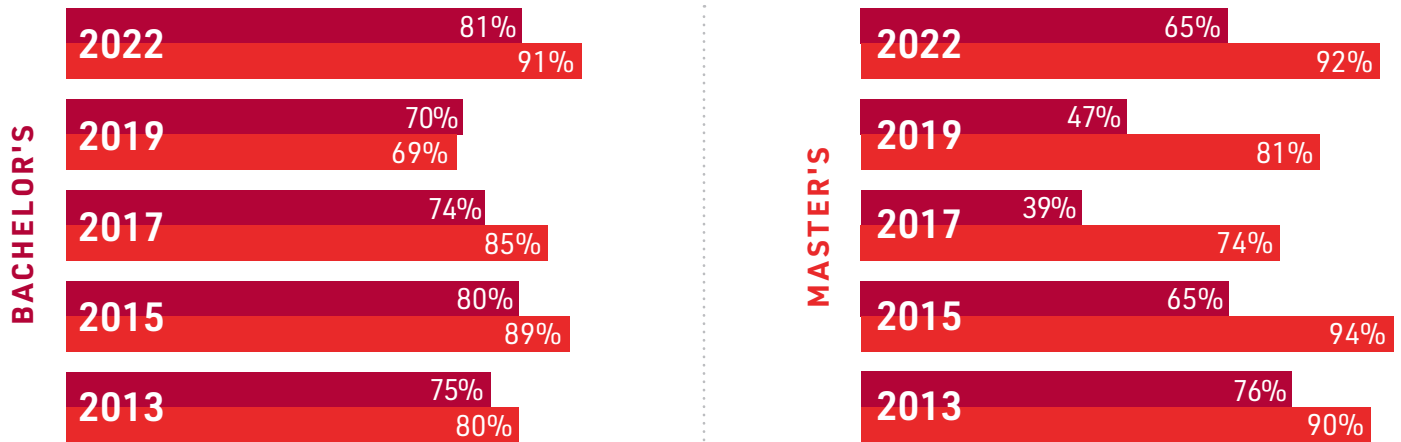
BACHELOR'S

2022 81% / 91%
2019 70% / 69%
2017 74% / 85%
2015 80% / 89%
2013 75% / 80%

MASTER'S

2022 65% / 92%
2019 47% / 81%
2017 39% / 74%
2015 65% / 94%
2013 76% / 90%

^ Placement is based on student's reporting their job status at the time the survey was administered. The survey was distributed to graduating or recently graduated students of each participating university during April - May 2022. Offers received after a particular student completed the survey are not reflected in the above analysis.

1. AACSB, Employment Status, 2020-21, https://www.aacsb.edu/   2. NACE - First Destinations, 2020, https://www.naceweb.org/

KEY TAKEAWAYS

› **Bachelor's IS placement** of 81% upon graduation is higher than the Business School rate of 47.2%[1] and the national six month rate of 53.6%.[2]

› **Master's IS placement** is higher at graduation than in previous years and significantly improves by the six month mark.

› **Confidence in the job market has stayed about the same** for Bachelor's IS graduates at 64%, but has increased to 60% for Master's IS graduates in 2022.

Offers & Internships

WHAT IMPACTS OFFERS?

JOB OFFER RECEIVED	EXPERIENCE	APPLICATIONS	INTERVIEWS	JOB SEARCH AND PREPARATION	INTERNSHIPS
BACHELOR'S NO	2.3	19.9	2.9	17.8	0.7
BACHELOR'S YES	2.2	20.3	6.4	32.8	1.7
MASTER'S NO	4.4	56.6	5.0	63.4	0.7
MASTER'S YES	4.2	37.2	6.5	64.1	1.1
	(Average Years)	(Average Number)	(Average Number)	(Average Hours)	(Average Total Number)

HOW DO INTERNSHIPS AFFECT OFFERS?

BACHELOR'S

Internships	Receive Offers NO	Receive Offers YES
0	57%	12%
1	26%	37%
2	10%	34%
>2	7%	17%

MASTER'S

Internships	Receive Offers NO	Receive Offers YES
0	60%	32%
1	23%	43%
2	11%	15%
>2	6%	10%

1. AACSB, Employment Status, 2020-21, https://www.aacsb.edu/ 2. NACE - First Destinations, 2020, https://www.naceweb.org/ 3. Logistic regression including gender, race, origin, university, applications, internships, search hours, and knowledge. Race, Internships and Job development significant at <0.05 with RSQE = .227 for Bachelor's and Race, University, Internships, Job development and Business knowledge significant at < 0.05 with RSQE .304 for Master's.

KEY TAKEAWAYS

> Successful IS job seekers **spent more time and effort searching,** but submitted about the same or fewer job applications than those who did not receive offers. This suggests that **putting more effort into fewer applications** can lead to job offer success.

> Bachelor's and Master's IS students are **significantly more likely** to get an offer if they do at least one internship.[3]

> Surprisingly, **experience has virtually no impact on offers** for Bachelor's or Master's.

BACHELOR'S

> Bachelor's IS graduates improve their chances of an offer by **spending additional hours on preparation** including professional development, resume building, and participating in career fairs.[3]

> **80%** of Bachelor's IS graduates have **1 or more internships.**

> **88%** of the offers went to students with **1 or more internships.**

MASTER'S

> **59%** of Master's IS graduates have **1 or more internships.**

> **68%** of the offers went to students with **1 or more internships.**

Knowledge Level & Salary

BACHELOR'S

AWARENESS/LITERACY

$70,487

$70,296

CONCEPT/USE

$72,204

$71,648

DETAILED ADVANCED KNOWLEDGE

$77,477

$72,841

LEGEND ■ Information Systems ■ Business and Foundations

MASTER'S

AWARENESS/LITERACY

$81,985

$90,833

CONCEPT/USE

$93,982

$90,646

DETAILED ADVANCED KNOWLEDGE

$98,780

$94,607

SKILL LEVEL DESCRIPTIONS

AWARENESS
Define, list characteristics, name components, list advantage/disadvantages

LITERACY
Can compare and contrast, explain, execute, define capabilities, describe interrelations, describe framework

CONCEPT / USE
Can use, communicate the idea of, form abstraction, extrapolate, list concepts, comprehension and ability to use the knowledge

DETAILED UNDERSTANDING / APPLICATION ABILITY
Detailed understanding, search for and apply correct solution, design and implement, apply the principles, can select the right thing and use

ADVANCED
Develop, originate, construct, evaluate, judge relative value

Source: Topi et al. "IS 2010 Curriculum Guidelines..." CAIS, 2010

IT DOES PAY TO STUDY

IS Master's received **significantly higher salary** offers when they report advanced IS knowledge.[1]

KNOWLEDGE DEFINITIONS

IS KNOWLEDGE
> Improving Organizational Processes
> Exploiting Opportunities Created by Technology Innovations
> Understanding and Addressing Information Requirements
> Designing and Managing Enterprise Architecture
> Identifying and Evaluating Solution and Sourcing Alternatives
> Software Development
> Securing Data and Infrastructure
> Understanding, Managing, and Controlling IT Risks

BUSINESS AND FOUNDATIONAL KNOWLEDGE
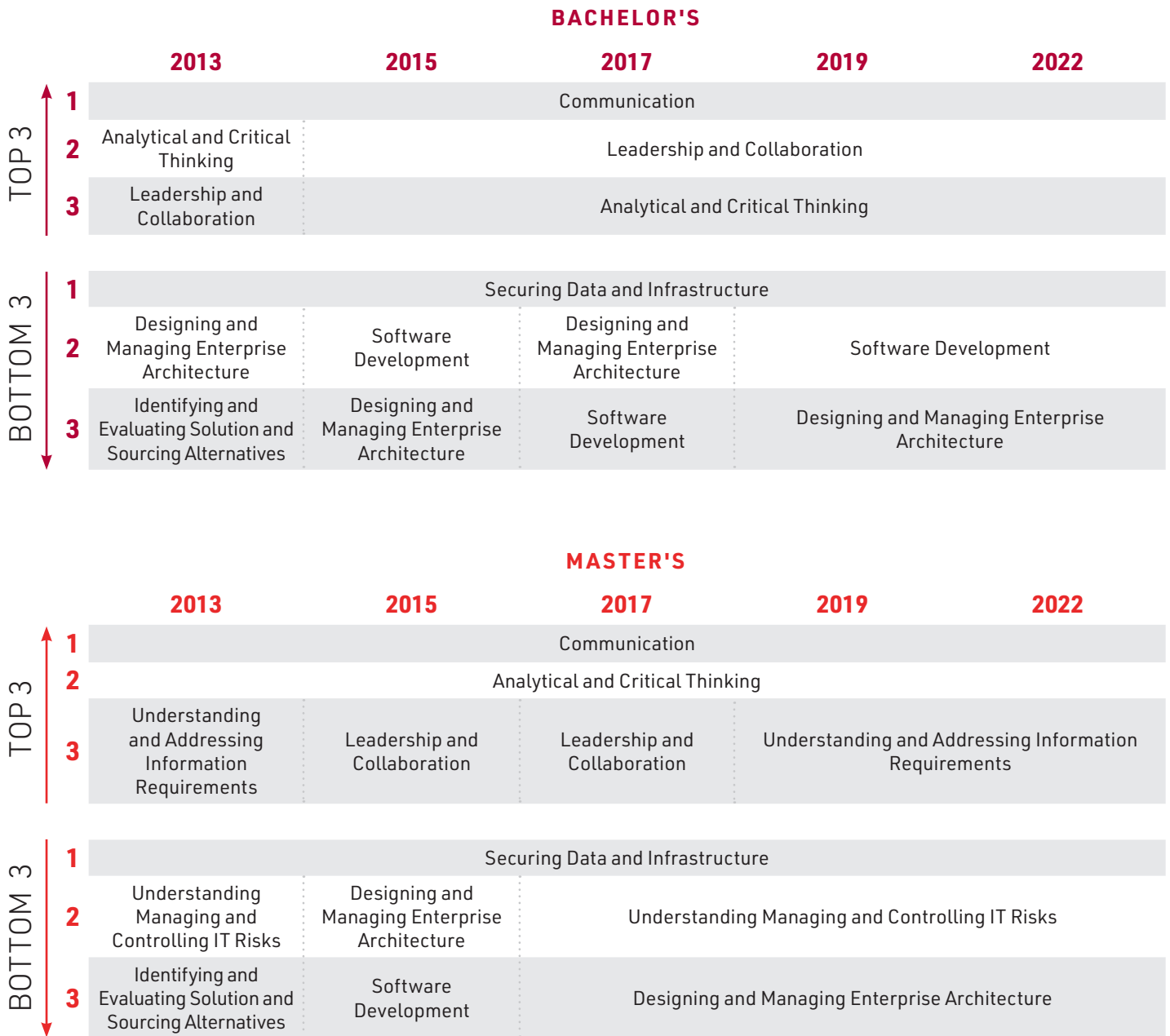> Leadership and Collaboration
> Communication
> Negotiation
> Analytical and Critical Thinking including Creativity and Ethical Analysis
> Mathematical Foundations
> General Models of Business
> Business Functions
> Evaluation of Business Performance

Source: Adapted from Topi et al. (2010) "IS 2010: Curriculum Guidelines..." CAIS, Vol. 26, Article 18, 2010

1. Linear regression, p<.01

Knowledge Self-Ratings TOP & BOTTOM 3

BACHELOR'S

		2013	2015	2017	2019	2022
TOP 3	1	Communication				
	2	Analytical and Critical Thinking	Leadership and Collaboration			
	3	Leadership and Collaboration	Analytical and Critical Thinking			
BOTTOM 3	1	Securing Data and Infrastructure				
	2	Designing and Managing Enterprise Architecture	Software Development	Designing and Managing Enterprise Architecture	Software Development	
	3	Identifying and Evaluating Solution and Sourcing Alternatives	Designing and Managing Enterprise Architecture	Software Development	Designing and Managing Enterprise Architecture	

MASTER'S

		2013	2015	2017	2019	2022
TOP 3	1	Communication				
	2	Analytical and Critical Thinking				
	3	Understanding and Addressing Information Requirements	Leadership and Collaboration	Leadership and Collaboration	Understanding and Addressing Information Requirements	
BOTTOM 3	1	Securing Data and Infrastructure				
	2	Understanding Managing and Controlling IT Risks	Designing and Managing Enterprise Architecture	Understanding Managing and Controlling IT Risks		
	3	Identifying and Evaluating Solution and Sourcing Alternatives	Software Development	Designing and Managing Enterprise Architecture		

KEY TAKEAWAYS

- **IS Bachelor's** are **consistently unsure** about their software development and cyber-security skills.

- **IS Master's** are **unsure** about their cyber-security and managing risk knowledge.

- There is **very little change** across the years in the knowledge of **IS graduates.**

- Employers rate **critical thinking and communication** as the most important competencies of career readiness.[1]

- IS Bachelor's and Master's are **consistently confiden**t about their communication, leadership, collaboration, analytical, and critical thinking skills.

Job Acceptance

WHY DO BACHELOR'S ACCEPT/REJECT OFFERS?

ACCEPT

HIGHEST RATED OFFER ATTRIBUTES FOR ACCEPTED JOBS

Process Fairness
Organization Reputation
Job Fit

LOWEST RATED OFFER ATTRIBUTES FOR ACCEPTED JOBS

Job Attributes
Compensation
Recruiter

REJECT

HIGHEST RATED OFFER ATTRIBUTES FOR REJECTED JOBS

Process Fairness
Organization Reputation
Recruiter

LOWEST RATED OFFER ATTRIBUTES FOR REJECTED JOBS

Job Attributes
Compensation
Values Fit

WHY DO MASTER'S ACCEPT/REJECT OFFERS?

ACCEPT

HIGHEST RATED OFFER ATTRIBUTES FOR ACCEPTED JOBS

Process Fairness
Job Fit
Organization Reputation

LOWEST RATED OFFER ATTRIBUTES FOR ACCEPTED JOBS

Compensation
Job Attributes
Recruiter

REJECT

HIGHEST RATED OFFER ATTRIBUTES FOR REJECTED JOBS

Process Fairness
Recruiter
Organization Attributes

LOWEST RATED OFFER ATTRIBUTES FOR REJECTED JOBS

Compensation
Job Attributes
Job Fit

DEFINITIONS

JOB ATTRIBUTES: Challenging, interesting, enjoy, freedom

JOB FIT: Looking for, match, skills, requirements

COMPENSATION: Salary, bonuses, benefits

ORGANIZATION: Size, location, coworkers, supervisor, facilities, environment

VALUES FIT: Culture, work/life, values

REPUTATION: Reputation, distinctive, prestigious

RECRUITER: Answer questions, knowledgeable, informative, valuable

PROCESS FAIRNESS: Timeliness, fairness, respect, helpfulness

KEY TAKEAWAYS

› Bachelor's and Master's IS graduates rated **process fairness** the highest for job offers they accepted, and process fairness was rated the least important reason for rejecting a job offer. This indicates that IS graduates **generally perceive hiring processes as fair** for both jobs they accept and jobs they reject.

› **Job fit** plays a critical role for both Bachelor's and Master's IS graduates, as it appears in the most important reasons to accept an offer as well as most important reasons to reject an offer.

› Although **compensation** does not appear to be the primary driver of accepting a job offer, dissatisfaction with compensation does appear to be a consistent motivation to reject an offer.

INFORMATION SYSTEMS JOB INDEX 2022

THE IBIT REPORT

The IBIT Report is a publication of the Institute for Business and Information Technology at Temple University. IBIT reports provide actionable knowledge to industry based on rigorous academic research.

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