Institute for ADVANCED ANALYTICS

Dr. Michael Rappa, Founding Director

MASTER OF SCIENCE IN ANALYTICS

2021 BENCHMARK REPORT

Each year the Master of Science in Analytics (MSA) is benchmarked against leading MBA programs with comparable enrollment on two-dozen metrics using publicly available data. Why MBA programs? Because too few analytics and data science programs publicly disclose student outcomes with the thoroughness and consistency needed to accurately benchmark. Also, the variation in cohort enrollment size and program formats make comparisons difficult.

MBA programs have a long history of reporting enrollment and outcomes data as a part of the annual ranking process conducted by organizations such as *U.S. News*. The data are reported under clear and consistent guidelines that make fair and accurate benchmarking possible. The Institute follows these guidelines in reporting results for the MSA program. Other analytics and data science programs are encouraged to do the same.

The rank order (and cohort size) of the top MBA programs and the requisite range for benchmark comparisons for the current year are highlighted below.

1.	Stanford / 436	16.	Carnegie Mellon (Tepper) / 141
1.	Pennsylvania (Wharton) / NA	17.	Southern California (Marshall) / 217
3.	Chicago (Booth) / 621	18.	UCLA (Anderson) / 352
4.	Northwestern (Kellogg) / 559	18.	UT-Austin (McCombs) / 241
5.	Harvard / 732	20.	UNC (Kenan-Flagler) / 344
5.	MIT (Sloan) / NA	21.	Georgetown (McDonough) / 247
7.	Columbia / 571	22.	Washington (Foster) / 110
7.	Berkeley (Haas) / 283	23.	Indiana (Kelley) / 92
9.	Yale / 350	23.	Vanderbilt (Owen) / 182
10.	Dartmouth (Tuck) / 289	25.	Rice (Jones) / 174
10.	New York (Stern) / 317	26.	Emory (Goizueta) / 144
12.	Duke (Fuqua) / 408	26.	Florida (Warrington) / 33
13.	Michigan (Ross) / 359	28.	Georgia Tech (Scheller) / 66
13.	Virginia (Darden) / 397	28.	Minnesota (Carlson) / 74
15.	Cornell (Johnson) / 292	30.	Arizona State (Carey) / 60

For further information contact: analytics@ncsu.edu

The highest ranked MBA programs with similar cohort sizes to the MSA tend to fall between 20th and 30th in the ranking. The highest ranked MBA programs, 20th or above, usually have large full-time cohorts in the range of 200-1000 students. The top-5 highest-ranked MBA programs with similar cohort sizes to the MSA program, selected for comparison this year are:

16. Carnegie Mellon (CMU)
22. University of Washington (UW)
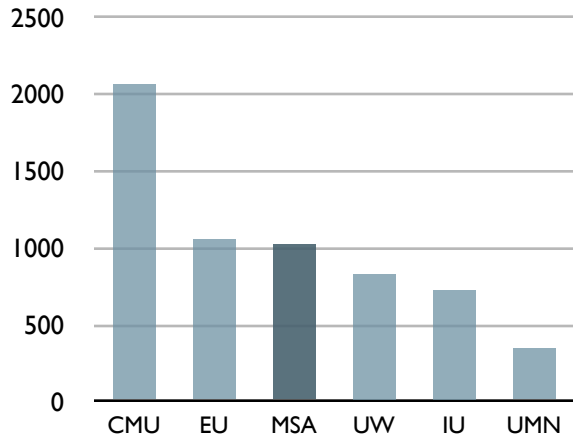23. Indiana (IU)
26. Emory (EU)
28. Minnesota (UMN)

The benchmark study is updated each year (in April) with the latest data from *U.S. News*. The schools used in this study may change from year to year based on the changes in the annual ranking or cohort sizes.

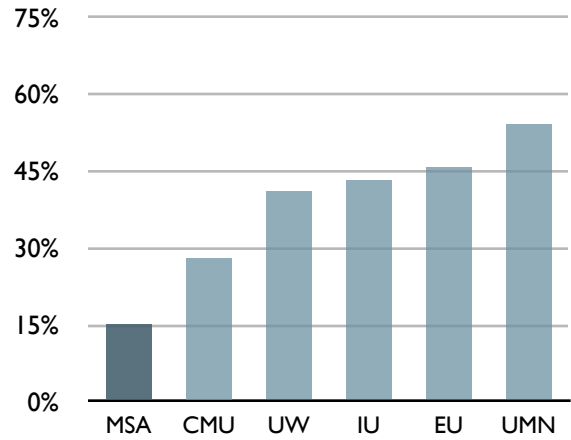For more information on the U.S. News ranking of business schools, see: https://www.usnews.com/best-graduate-schools/top-business-schools

Based on the available data, the following metrics are used to benchmark the MSA against the top-5 comparable-sized MBA programs:

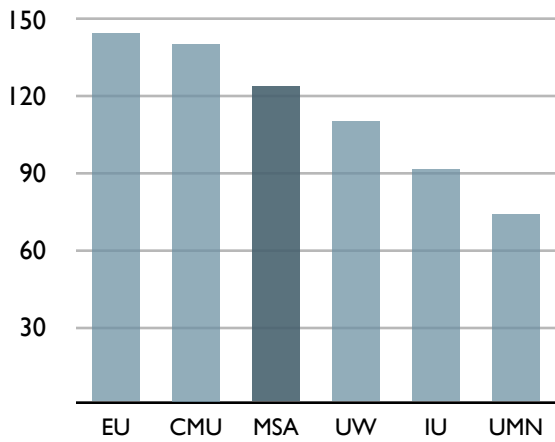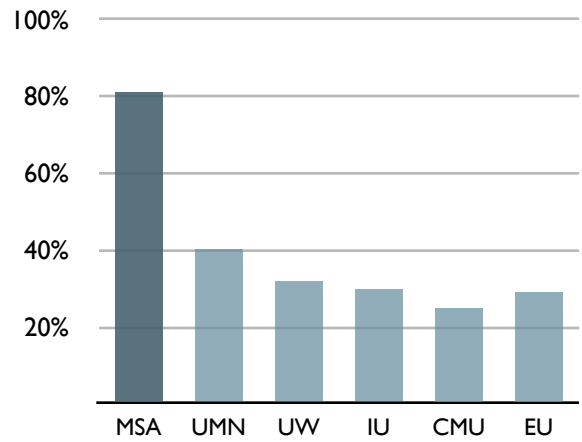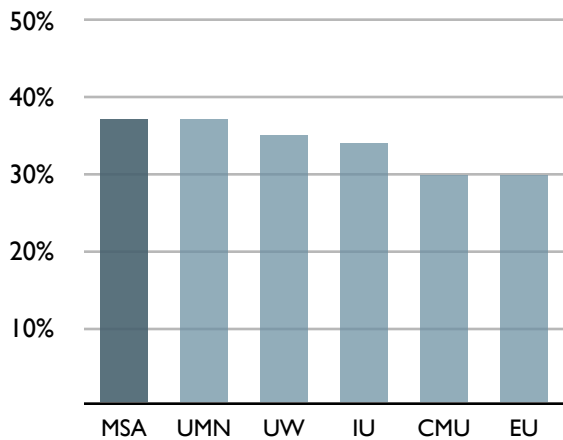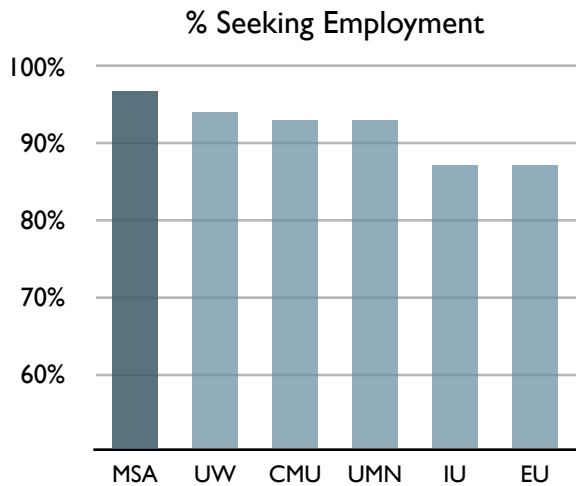|	
Number of Applicants	Average Base Salary
Acceptance Rate	% Reporting Salary Data
Enrollment	% Employed at Graduation
Enrollment Rate	% Employed 3-Months After Graduation
% Female Students	Signing Bonus
% International Students	% Receiving Signing Bonus
Length of Work Experience	Tuition and Fees
% Work Experience	Tuition and Fees – Residents
Age	Average Indebtedness
Undergraduate GPA	% Students with Debt
% Seeking Employment	ROI Payback Period
Number Seeking Employment	ROI Payback Period – Residents

Applicants
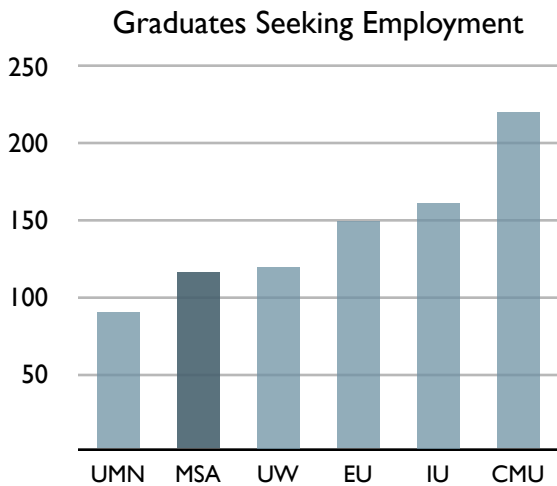

Acceptance Rate

New Enrollment

Enrollment Rate

Gender (Female)
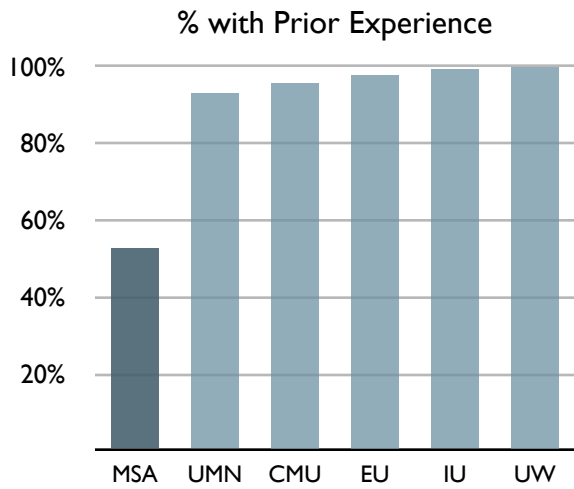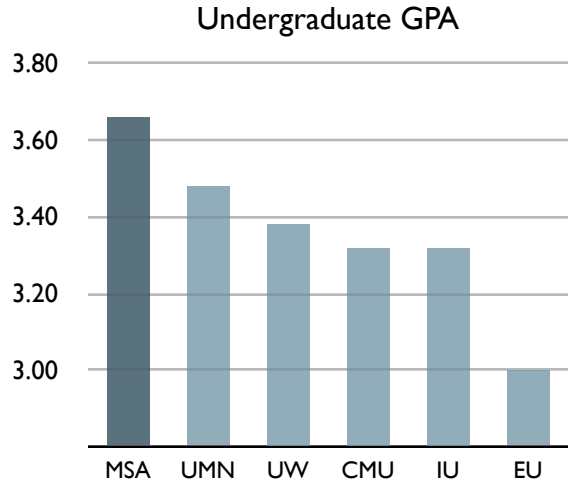

International

Average Age at Entry

Institution	Value
MSA	25
CMU	28
EU	28
UW	29
IU	29
UMN	29

Undergraduate GPA

Institution	Value
MSA	3.66
UMN	3.48
UW	3.38
CMU	3.32
IU	3.32
EU	3.00

% with Prior Experience

Institution	Value
MSA	53%
UMN	93%
CMU	96%
EU	98%
IU	99%
UW	100%

Average Prior Experience (months)

Institution	Value
MSA	23
CMU	65
EU	65
IU	66
UMN	66
UW	90

Graduates Seeking Employment

Institution	Value
UMN	90
MSA	115
UW	120
EU	150
IU	160
CMU	220

% Seeking Employment

Institution	Value
MSA	96%
UW	94%
CMU	93%
UMN	93%
IU	87%
EU	87%

Average Base Salary

School	Salary
MSA	~$111,000
UMN	~$117,000
IU	$120,000
UW	$125,000
EU	$130,000
CMU	$135,000

Graduates Reporting Salary Data
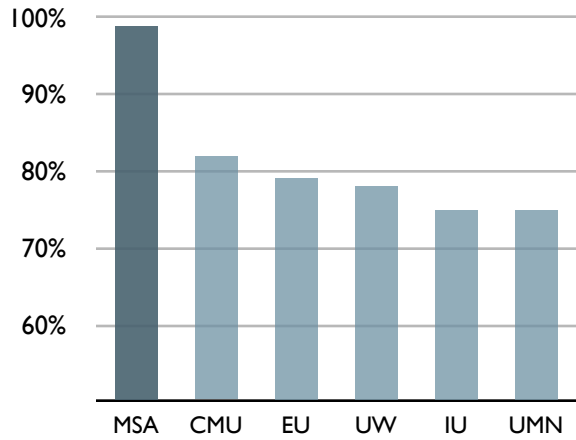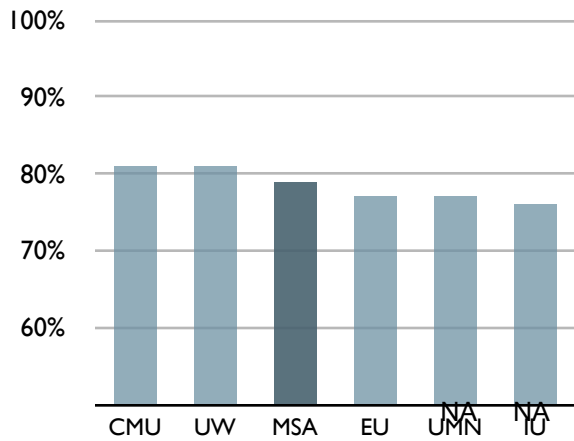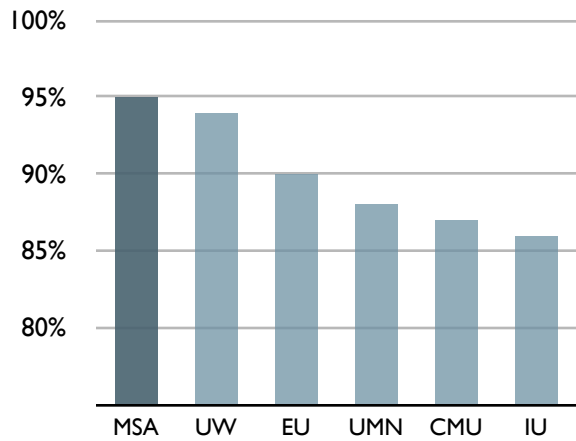
School	Percent
MSA	99%
CMU	82%
EU	79%
UW	78%
IU	75%
UMN	75%

Employed at Graduation

School	Percent
CMU	81%
UW	81%
MSA	79%
EU	77%
UMN	77%
IU	76%

Employed 3-Months After

School	Percent
MSA	95%
UW	94%
EU	90%
UMN	88%
CMU	87%
IU	86%

Average Signing Bonus

School	Bonus
UW	~$36,000
CMU	~$33,000
EU	~$28,000
UMN	~$28,000
IU	~$26,000
MSA	~$10,000

% Receiving Signing Bonus

School	Percent
CMU	91%
IU	85%
MSA	81%
EU	78%
UW	72%
UMN	66%

Resident Tuition & Fees

$150,000	
$120,000	
$90,000	
$60,000	
$30,000	

MSA IU UW UMN EU CMU

Non-Resident Tuition & Fees

$150,000	
$120,000	
$90,000	
$60,000	
$30,000	

MSA UW IU UMN EU CMU

Student Indebtedness

$100,000	
$80,000	
$60,000	
$40,000	
$20,000	

MSA UW IU EU CMU UMN

Graduates with Debt

100%	
80%	
60%	
40%	
20%	

MSA EU UW IU CMU UMN

Resident Payback Period (months)

60	
48	
36	
24	
12	

MSA UW IU CMU UMN EU

Non-Resident Payback Period

60	
48	
36	
24	
12	

MSA UW CMU EU IU UMN
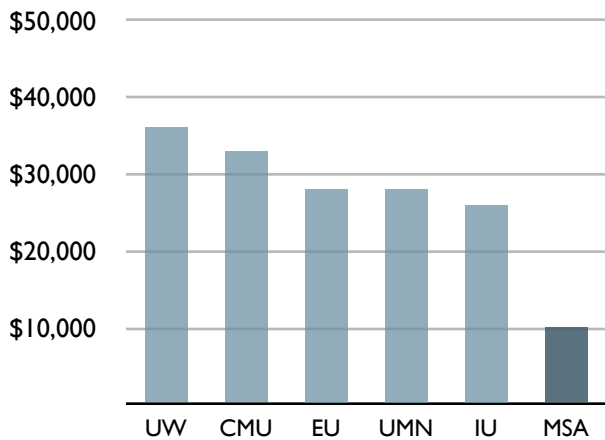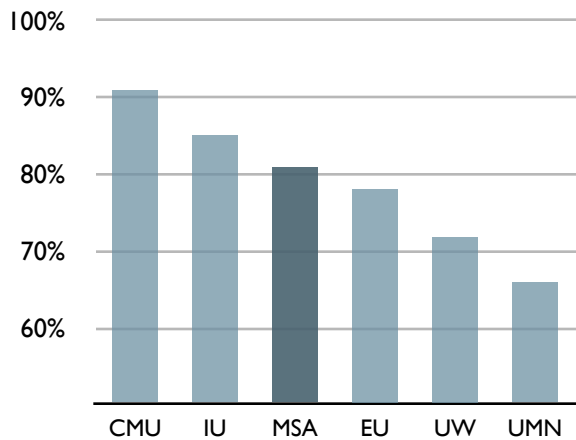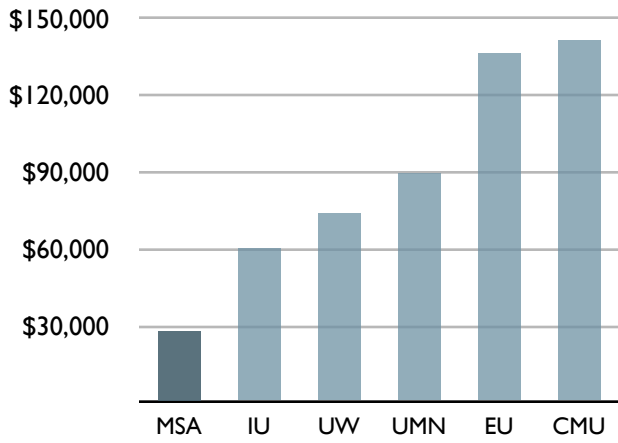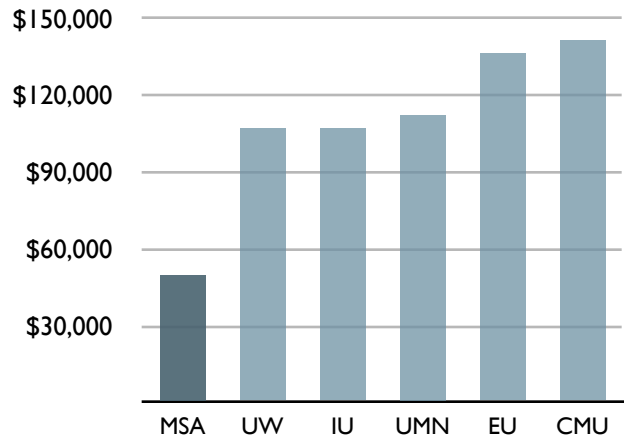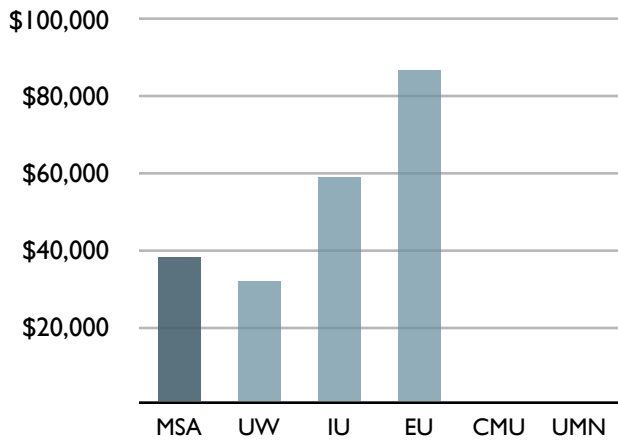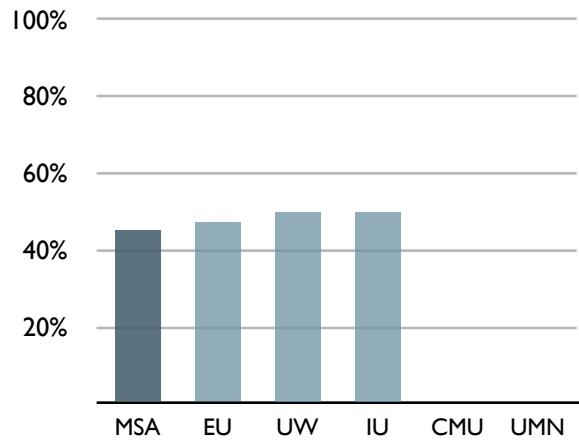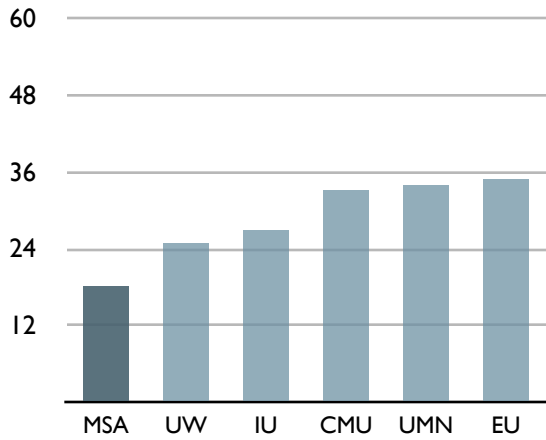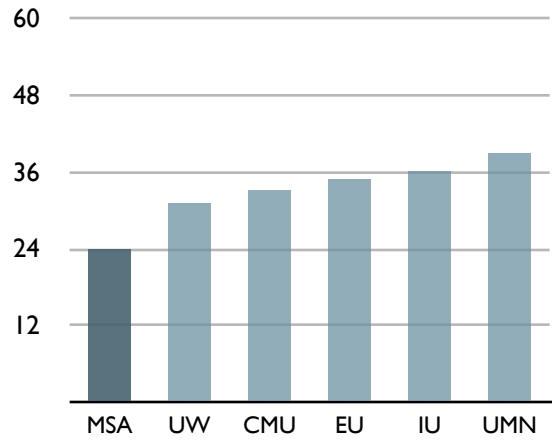
	MSA	MBA PROGRAMS					
		Mean	CMU	UW	IU	EU	UMN
US News Rank (April 2020)	–	–	16	22	23	26	28
Rank Score (out of 100 points)		71	79	72	70	67	65
Number of Applicants	1028	1008	2,071	833	728	1,067	342
Acceptance Rate	15%	42%	28%	41%	43%	46%	54%
Enrollment	124	112	141	110	92	145	74
Enrollment Rate	81%	31%	25%	32%	30%	29%	40%
% Female Students	37%	33%	30%	35%	34%	30%	37%
% International Students	10%	26%	32%	25%	31%	28%	14%
Average Age	25	29	28	29	29	28	29
Undergraduate GPA	3.66	3.30	3.32	3.38	3.32	3.00	3.48
Prior Work Experience (mo.)	23	70	65	90	66	65	66
% Work Experience	53%	97%	96%	100%	99%	98%	93%
% Seeking New Employment	97%	91%	93%	94%	87%	87%	93%
Average Base Salary ($000)	111	125	135	125	120	130	117
Reporting Salary Data	99%	78%	82%	78%	75%	79%	75%
Employed at Graduation	79%	78%	81%	81%	76%	77%	77%
Employed 3-mo. After	95%	89%	87%	94%	86%	90%	88%
Signing Bonus ($000)	10	30	33	36	26	28	28
% Receiving Signing Bonus	81%	78%	91%	72%	85%	78%	66%
Tuition and Fees ($000)	50	121	142	107	107	136	112
Tuition and Fees – Residents	28	100	142	73	60	134	90
Average Indebtedness ($000)	38	59	—	32	59	87	—
Students with Debt	45%	49%	—	50%	50%	47%	—
Payback Period (months)	24	35	33	31	36	35	39
Payback Period – Residents	18	31	33	25	27	35	34

Applicants

MSA   MBA-5 (AVG)

	2017	2018	2019	2020	2021

Acceptance Rate

MSA   MBA-5 (AVG)

	2017	2018	2019	2020	2021

New Enrollment

MSA   MBA-5 (AVG)

	2017	2018	2019	2020	2021

Enrollment Rate

MSA   MBA-5 (AVG)

	2017	2018	2019	2020	2021

Average Base Salary

MSA   MBA-5 (AVG)

	2017	2018	2019	2020	2021

Employed at Graduation

MSA   MBA-5 (AVG)

	2017	2018	2019	2020	2021
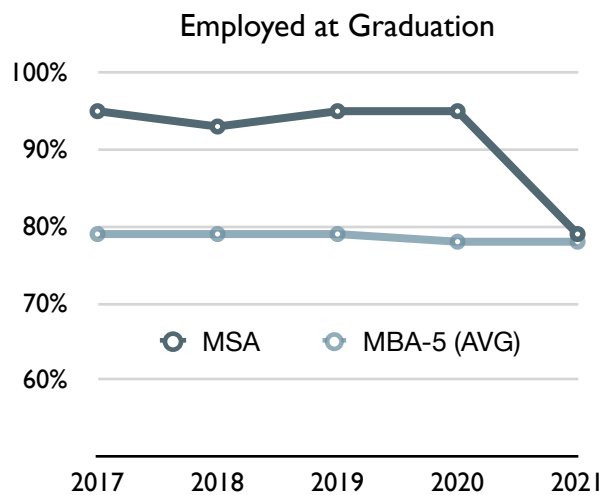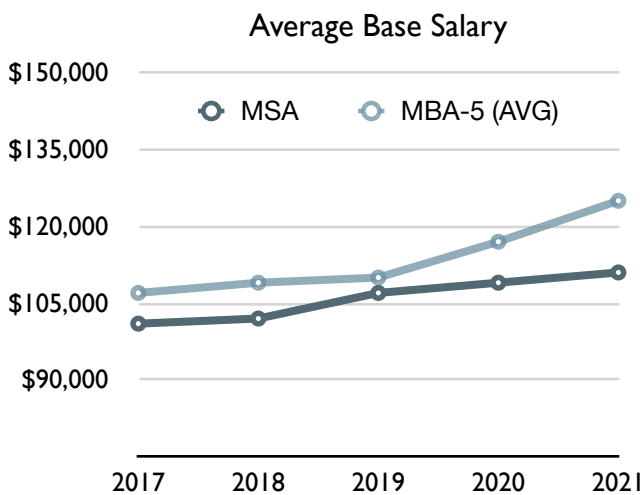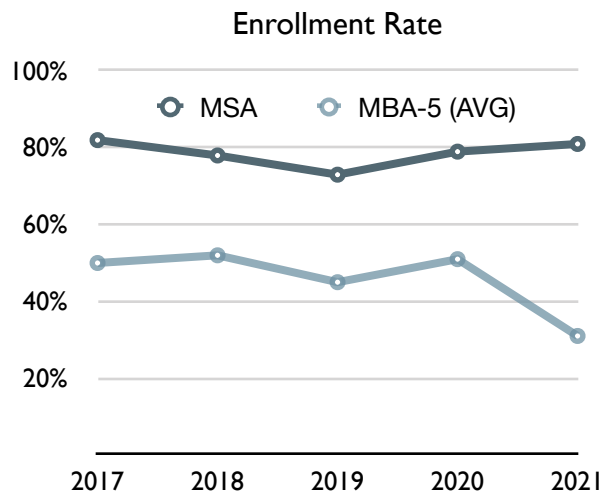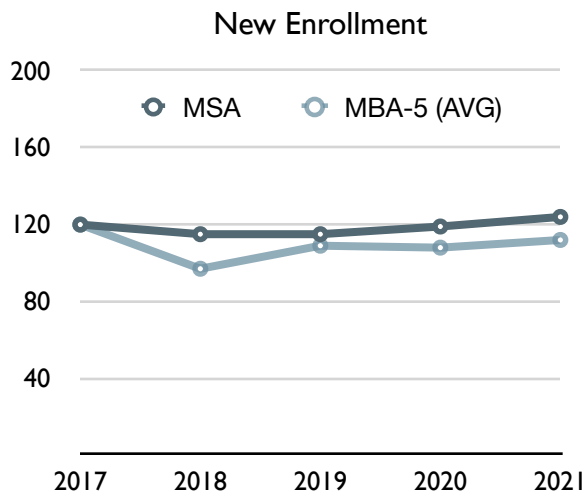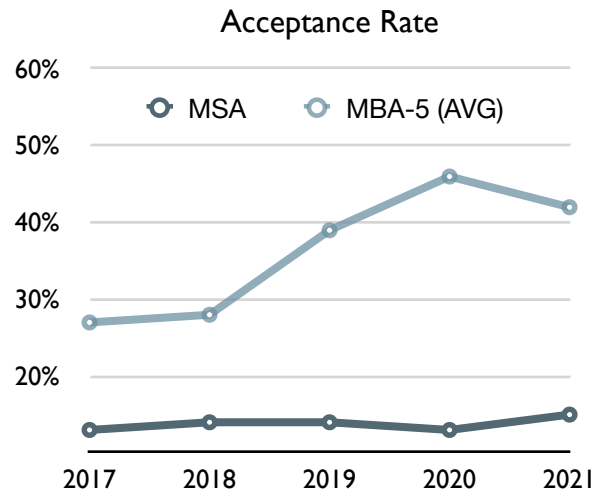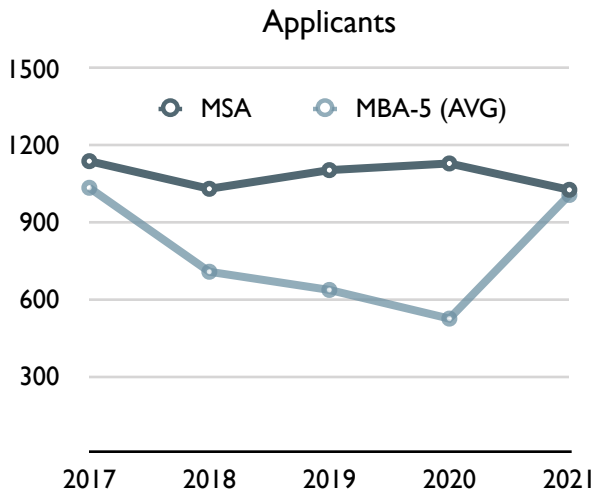
About the Data

Data in this report are compiled primarily from two sources: (1) Institute records on admissions and employment published annually; and (2) publicly available information from each of the universities chosen for comparison and compiled by U.S. News in its annual ranking of business schools. Business schools comply with certain accepted guidelines in compiling admissions and employment data, and the Institute abides by those guidelines, as closely as possible, in its own reporting.

Please make note of the following:

(1) The MSA is 10-months in duration (running from late June to early May each year. By comparison, Full-time MBA program are typically 21 months (or four semesters over two academic years.

(2) The length of the MBA program adds to the overall cost of degree, in terms of tuition, and lost wages while in school. The cost can be mitigated by summer internships between the first and second year.

(3) About half of MSA candidates enter the program without prior professional work experience (i.e., directly out of their undergraduate degree program). By contrast, in the benchmark, almost all MBA candidates have prior work experience averaging more than 5 years. For this reason, data for MSA candidates with prior work experience is used in the benchmark comparison on starting salaries. Although it reduces the size of the population for comparison, it's important to note that MSA salary reporting is 95% compares to 77% on average for the MBA programs in the benchmark.

(4) The benchmark report is updated annually. Universities used in the comparison may change due to changing in the ranking, as well as changes in the cohort sizes.

(5) The Return on Investment (ROI) payback period does not taken into account scholarship money that may have been received by a student. It is calculated as follows:

$$\text{Payback period (months)} = \frac{((\text{Pre-Salary} + \text{Tuition}) \times \text{Duration}) - (\text{Signing Bonus} + \text{Summer Salary})}{(\text{Post-Salary} - \text{Pre-Salary})} \times 12$$

NC STATE UNIVERSITY