Preparing Students to Succeed in a Data-driven World

Soumya Sen

May 28, 2021. IT Teaching Workshop.

MS in Business Analytics (MSBA)

One Year
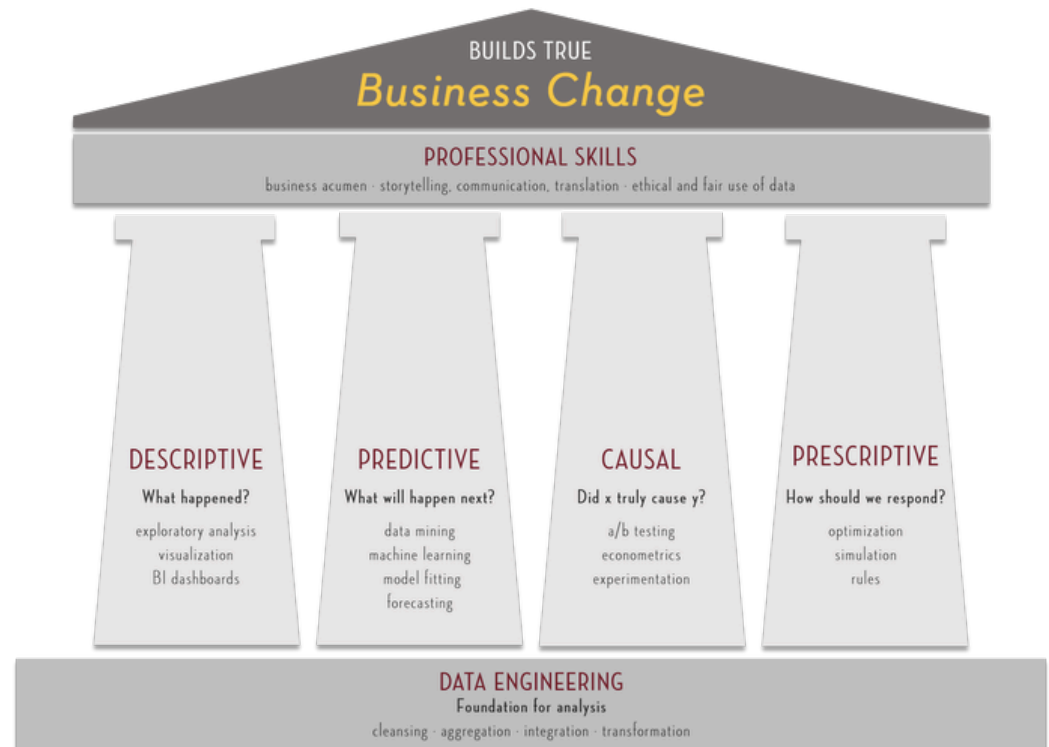
Full Time. Cohort-based.
45 credits – 15 credits per term.
STEM-designated.

Real-world Experience Built In

Experiential learning is a hallmark of the Carlson School. Students in the MSBA program put what they learn to work for real clients like Mall of America and gain valuable resume experience along the way.

EXPERIENTIAL LEARNING IN ANALYTICS

BUILDS TRUE
Business Change

PROFESSIONAL SKILLS
business acumen · storytelling, communication, translation · ethical and fair use of data

DESCRIPTIVE
What happened?
exploratory analysis
visualization
BI dashboards

PREDICTIVE
What will happen next?
data mining
machine learning
model fitting
forecasting

CAUSAL
Did x truly cause y?
a/b testing
econometrics
experimentation

PRESCRIPTIVE
How should we respond?
optimization
simulation
rules

DATA ENGINEERING
Foundation for analysis
cleansing · aggregation · integration · transformation

MSBA Curriculum

Business & Technical Fundamentals

	credits
Business Essentials	3
Statistics for Data Scientists	3
Introduction to Business Analytics in R	3
Programming for Data Science	3
Data Management, Databases, & Data Warehousing	3

Core Analytics Courses

	credits
Exploratory Data Analytics	3
Predictive Analytics	3
Big Data Analytics	3
Building & Managing Teams	1.5
Ethics & Data Privacy	1
Casual Inference via Econometrics & Experimentation	3

Advanced Analytics & Experiential Learning

	credits
Optimization & Simulation for Decision Making Support	3
Advanced Issues in Business Analytics	3
Agile Management of Analytics Projects	1.5
Elective	2
Business Analytics Experiential Learning Project	6

LIVE CASE
4-week competition sponsored by a client partner

TREND MARKETPLACE

LIVE CASE

TREND MARKETPLACE
tradeshow-style event with industry guests

CARLSON ANALYTICS LAB Experiential Learning Projects
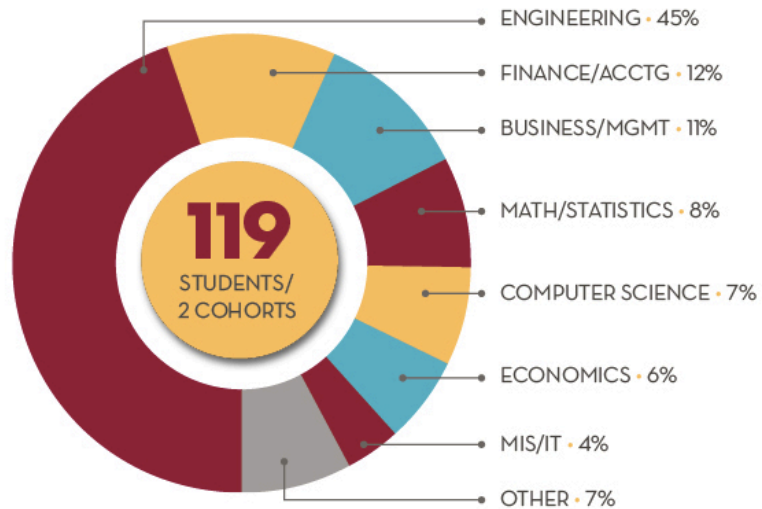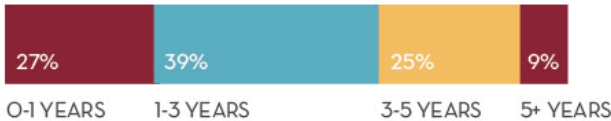*paying clients, 14 weeks, end-to-end project lifecycle*

Semester 1   Semester 2   Semester 3

Carlson MSBA Students

FULL-TIME MSBA CLASS OF 2020 PROFILE (119 students)

Averages

24	3.54	703	320
AGE	GPA	GMAT	GRE

AVERAGE WORK EXPERIENCE

27%	39%	25%	9%
0-1 YEARS	1-3 YEARS	3-5 YEARS	5+ YEARS

119 STUDENTS / 2 COHORTS

- ENGINEERING · 45%
- FINANCE/ACCTG · 12%
- BUSINESS/MGMT · 11%
- MATH/STATISTICS · 8%
- COMPUTER SCIENCE · 7%
- ECONOMICS · 6%
- MIS/IT · 4%
- OTHER · 7%

WOMEN 40%

INTERNATIONAL 87%

Carlson MSBA Placements

2019

98% of 2019 graduates **received** employment offers within six months after graduation

95% with U.S. work authorization
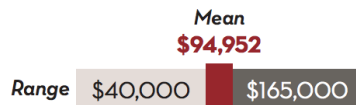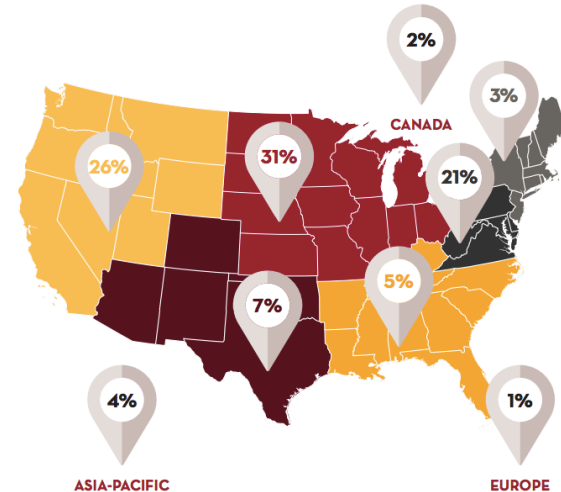**99%** without U.S. work authorization

Base Salary

Mean
$97,290

Range $68,000 — $140,000
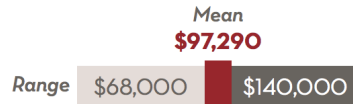
2020

94% of 2020 graduates **received** employment offers within six months after graduation

89% with U.S. work authorization
94% without U.S. work authorization

Base Salary

Mean
$94,952

Range $40,000 — $165,000

amazon

Capital One

Ford

McKinsey&Company

TARGET

Deloitte.

Google

LAND O'LAKES, INC.

Ameriprise Financial

Microsoft

UNITEDHEALTH GROUP

BEST BUY

facebook

OPTUM

Walmart

PayPal

WHERE STUDENTS ACCEPTED JOBS

2%
3%
CANADA
26%
31%
21%
7%
5%
4%
1%
ASIA-PACIFIC
EUROPE

MS in Applied Business Analytics (MABA)

Program

*Part Time HyFlex
2 Years*

*32 credits
2 courses/term*

Capstone project

Students

*15 – 20 students
Professionals*

*8.4 years avg. exp.
20 – 40% female*

Analytics Certificate

*NEW
12 credits*

*Subset of MABA courses
Extensible to MABA degree*

Analytics in Carlson MBA Program

Core

MBA 6240. Competing in a Data-Driven Age (2 credits)

Students learn general state-of-the-art analytics skills in the context of new platform based business models, digital search, big-data, social networks, social media and open innovation that pervade competition in the digital age.

Elective

IDSC 6444. Business Analytics for Managers I (2 credits)

Introduction to basic techniques in visualization, association rules, clustering, classification, regression, and elementary natural language processing.

Elective

IDSC 6446. Business Analytics for Managers II (2 credits)

Advanced techniques in data and text mining text, temporal data analytics, and advanced data visualization with real world data from different business contexts.

Analytics in Carlson Core UG Program

BUSINESS AS A FORCE FOR GOOD

Undergraduate Curriculum

PEOPLE & PLANET
Courses That Prepare Students to
Lead with Purpose
—

Career skills,
Leadership, Ethics,
Sustainability courses

INTERNATIONAL EXPERIENCE
Developing culturally aware leaders
through an immersive global experience

FOUNDATIONS & IMPACT
Courses That Equip Students with
Business Fundamentals for Lasting Impact
—

Managerial economics &
core area courses

IMPACT CORE (I-CORE)
Building core business knowledge in a
yearlong community for lasting impact

DATA & DECISIONS
Courses That Build Skills for
Solving Complex Problems
—

Business Statistics in R (4 cr)

Modeling Business Decisions
in Excel (2 cr)

Data-driven Business Decisions (3 cr)

Business Analytics (3 cr)

INDUSTRY LAB (I-LAB)
Students solving real problems for nonprofits,
social enterprises & corporations

Analytics Specialization for UMN-Coursera