

Finance + Data Science, BS

for the degree of Bachelor of Science Major in Finance plus Data Science

This major is sponsored by the Finance Department in the Gies College of Business, in collaboration with the Departments of Statistics, Computer Science, iSchool, and Mathematics. The FIN + Data Science major is designed for students who desire to supplement their finance foundation with a strong background in data science. The major prepares students for professional or graduate work in all Finance fields, but particularly those focused on analytics.

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Minimum hours for graduation: 124 hours

University Composition Requirement

For a list of the specific courses that meet this requirement, see the college Office of Undergraduate Affairs in 1055 Business Instructional Facility or see the [Course Explorer](#) for a list of approved general education courses.

Composition I: Principles of Composition	4-7
Advanced Composition	3

General Education Requirements

Three courses in the Humanities & the Arts area are required and students must complete at least one course in the Literature & the Arts and Historical & Perspectives subcategories. At least one of the courses must be a 200 or higher level course.

Two courses in the Natural Sciences & Technology area are required. It is strongly recommended that students complete one course in the Physical Sciences and Life Sciences subcategories.

A minimum of six courses is required, as follows:	18
Humanities & the Arts: Literature & the Arts (1-2 courses)	
Humanities & the Arts: Historical & Philosophical Perspectives (1-2 courses)	
Natural Sciences & Technology: Physical Sciences (0-2 courses)	
Natural Sciences & Technology: Life Sciences (0-2 courses)	
Behavioral Sciences (1 course)	
Cultural Studies: Non-Western Cultures (1 course)	
Cultural Studies: U.S. Minorities Cultures (1 course)	
Cultural Studies: Western/Comparative Cultures (1 course)	
Quantitative Reasoning (2 courses)	

Language Other Than English

Completion of the third semester or equivalent of a language other than English is required. Completion of three years of a single language in high school satisfies this requirement.	0-15
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Business Core

ACCY 201 & ACCY 202	Accounting and Accountancy I and Accounting and Accountancy II	6
BADM 275	Fundamentals of Operations Management	3
BADM 300	The Legal Environment of Bus	3
BADM 310	Mgmt and Organizational Beh (This course includes limited voluntary participation as a subject in experiments)	3
BADM 320	Principles of Marketing	3

BADM 449	Business Policy and Strategy	3
Business Sequence		
BUS 101 , BUS 201 , BUS 301 (under Meaningful Research) and BUS 401 are required for all Gies College of Business students. Students who enter the College their first year take each sequential course every fall.		
Inter-College transfer students take BUS 301 and BUS 401 in their sophomore year. Off-campus transfer students take BUS 101 and BUS 201 in their junior year.		
BUS 101	Professional Responsibility and Business	3
BUS 201	Business Dynamics	3
BUS 401	Global Business Perspectives	3
CMN 101	Public Speaking	3
ECON 102 & ECON 103	Microeconomic Principles and Macroeconomic Principles	6
FIN 221	Corporate Finance	3
Total Hours		42

Finance Specialization

FIN 300	Financial Markets	3
FIN 321	Advanced Corporate Finance	3
FIN 411	Investment & Portfolio Mngt	3
Four additional full-semester, 3 hours 400 level-Finance courses except FIN 494 or 495 Senior Research) and FIN 490 (Special Topics).		12
FIN 412	Options and Futures Markets	3
FIN 415	Fixed Income Portfolios	3
FIN 418	Financial Modeling	3
FIN 423	Entrepreneurial Finance	3
FIN 424	Mergers and Acquisition	3
FIN 432	Managing Market Risks for Financial Institutions	3
FIN 433	Corporate Risk Management	3
FIN 435	Personal Wealth Management	3
FIN 444	Urban Real Estate Valuation	3
FIN 445	Real Estate Investment	3
FIN 447	Real Estate Development	3
FIN 463	Investment Banking	3
FIN 464	Applied Financial Analysis	3
Total Hours		21

Data Science Core

Mathematical Foundations		7
MATH 234	Calculus for Business I	4
MATH 227	Linear Algebra for Data Science	3
or MATH 257	Linear Algebra with Computational Applications	
Data Science Fundamentals		12
STAT/CS/IS 107	Data Science Discovery	4
STAT 207	Data Science Exploration	4
CS 307	Modeling and Learning in Data Science	4
Computational Fundamentals		4
CS 277	Algorithms and Data Structures for Data Science	4

Social Impact in Data Science		6
IS 467	Ethics and Policy for Data Science	3
IS 477	Data Management, Curation & Reproducibility	3
Total Hours		29

Meaningful Research or Discovery Experience

One of the most important skills a student will gain in a FIN + DS degree will be the ability to present data in meaningful ways. A meaningful research and discovery experience is as much a pillar of this degree program as both the core coursework and the area of specialization. This capstone experience can be fulfilled through BUS 301 , listed above in the Business Core. This course is an active learning, real-client experience that will allow students to join their data science skills with their business skills.	3
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Summary of Total Hours

General Education Requirements	25
Total Business Core Hours	42
Total Finance Specialization Hours	21
Total Data Science Core Hours	29
Meaningful Research or Discovery Experience	3
Total Hours	124

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department office: 340 Wohlers Hall, 1206 South Sixth, Champaign, IL 61820

phone: (217) 244-2239

college website: <https://giesbusiness.illinois.edu/>

department website: <https://giesbusiness.illinois.edu/finance/>

overview of college admissions & requirements: [Gies Catalog](#)

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