

# BUSINESS + DATA SCIENCE, BS

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

This major is sponsored by the Department of Business Administration within the Gies College of Business, in collaboration with the iSchool and the Departments of Statistics, Computer Science, and Mathematics. The Business+Data Science major is designed for students seeking to supplement their business specialization foundations with a strong background in data science. The major prepares students for professional and graduate work while involving a particular distinction with respect to analytics.

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## 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 (<https://courses.illinois.edu/gened/DEFAULT/DEFAULT/>) for a list of approved general education courses.

Code	Title	Hours
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.

Code	Title	Hours
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

Code	Title	Hours
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

Code	Title	Hours
<b>Business Core</b>		<b>42</b>
ACCY 201	Accounting and Accountancy I	3
ACCY 202	Accounting and Accountancy II	3
BADM 275	Fundamentals of Operations Management	3
BADM 300	The Legal Environment of Bus	3
BADM 310	Mgmt and Organizational Beh	3
BADM 320	Principles of Marketing	3
BADM 449	Business Policy and Strategy	3
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	Microeconomic Principles	3
ECON 103	Macroeconomic Principles	3
FIN 221	Corporate Finance	3
<b>Data Science Core</b>		<b>29-30</b>
STAT/CS/IS 107	Data Science Discovery	4
STAT 207	Data Science Exploration	4
CS 307	Modeling and Learning in Data Science	4
CS 277	Algorithms and Data Structures for Data Science	4
IS 467	Ethics and Policy for Data Science	3
IS 477	Data Management, Curation & Reproducibility	3
Choose one Calculus:		4-5
MATH 220	Calculus	
MATH 221	Calculus I	
MATH 234	Calculus for Business I	
Choose one Linear Algebra		3
MATH 227	Linear Algebra for Data Science	
MATH 257	Linear Algebra with Computational Applications	
<b>Business Administration Specialization (choose one of the four specializations below)</b>		<b>12</b>
Information Systems Specialization:		
BADM 350	IT for Networked Organizations	3
BADM 351	Social Media Strategy	3
BADM 352	Database Design and Management	3
BADM 353	Info Sys Analysis and Design	3
International Business Specialization:		
BADM 380	International Business	3
BADM 381	Multinational Management	3
BADM 382	International Marketing	3
BADM 383	Topics in International Business	3
Management Specialization:		
BADM 311	Leading Individuals and Teams	3
BADM 312	Designing and Managing Orgs	3

BADM 313	Strategic Human Resource Management	3
BADM 314	Leading Negotiations	3
Operations Management Specialization:		
BADM 374	Management Decision Models	3
BADM 375	Operations Strategy	3
BADM 377	Project Management	3
BADM 379	Business Process Improvement	3

### Meaningful Research or Discovery Experience

Code	Title	Hours
One of the most important skills a student will gain in a BUS+ DS degree will be the ability to present data in meaningful ways. A meaningful research and 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. This course is an active learning, real-client experience that will allow students to join their data science skills with their business skills.		
Total Hours		3

### Summary of Total Hours

Code	Title	Hours
Total General Education Hours		25
Total Business Core Hours		42
Total Business Specialization Hours		12
Total Data Science Core Hours		29-30
Meaningful Research or Discovery Experience		3
Electives		13-14
<b>Total Hours</b>		<b>124</b>

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### Sample Sequence

This sample sequence is intended to be used only as a guide for degree completion. All students should work individually with their academic advisors to decide the actual course selection and sequence that works best for them based on their academic preparation and goals. Enrichment programming such as study abroad, minors, internships, and so on may impact the structure of this four-year plan. Course availability is not guaranteed during the semester indicated in the sample sequence.

Students must fulfill their Language Other Than English requirement by successfully completing a third level of a language other than English. For more information see the corresponding section on the Degree and General Education Requirements page (<http://catalog.illinois.edu/general-information/degree-general-education-requirements/>).

### First Year

First Semester	Hours	Second Semester	Hours
BUS 101		3 ECON 103	3
ECON 102		3 MATH 234 (or MATH 220 or MATH 221)	4
STAT 107		4 FIN 221	3
Composition I or CMN 101		4 CMN 101 (or Composition I)	3

Language Other than English (3rd level)	4 General Education course	3
<b>18</b>		<b>16</b>

### Second Year

First Semester	Hours	Second Semester	Hours
BUS 201		3 ACCY 202	3
ACCY 201		3 MATH 227 or 257	3
BADM 310		3 BADM 320	3
General Education course		3 General Education course	3
General Education course		3 General Education course	3
<b>15</b>		<b>15</b>	

### Third Year

First Semester	Hours	Second Semester	Hours
BUS 301		3 CS 277	4
BADM 275		3 IS 467	3
STAT 207		4 BADM Specialization	3
BADM 300		3 General Education course	3
BADM Specialization		3 General Education course	3
<b>16</b>		<b>16</b>	

### Fourth Year

First Semester	Hours	Second Semester	Hours
BUS 401		3 BADM 449	3
CS 307		4 IS 477	3
BADM Specialization		3 BADM Specialization	3
General Education course		3 General Education course	3
General Education course		3	
<b>16</b>		<b>12</b>	

### Total Hours 124

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The learning objectives related to student learning outcomes includes competence in selected concentration, data science, critical thinking, group work, communication. These outcomes are mapped to questions concerning student ability to use data analytics and problem solving to effectively understand real-world business issues, problem analysis and articulating conclusions, assuming leadership roles, grasp of international complexities effect business and data science.

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### Gies College of Business

College website (<https://giesbusiness.illinois.edu/undergraduate-hub/majors-and-minors/gies-and-data-science/>)

### Office of Undergraduate Affairs

1055 Business Instructional Facility

515 East Gregory Drive  
Champaign, IL 61820  
(217) 333-2740

Gies Office of Undergraduate Programs webpage (<https://giesgroups.illinois.edu/oua/welcome/>)  
Gies Undergraduate Programs email ([undergrads@business.illinois.edu](mailto:undergrads@business.illinois.edu))

**Advising**

Undergraduate Advising website (<https://giesgroups.illinois.edu/advising/home/>)  
(217) 333-2740  
Undergraduate Advising email ([undergrads@business.illinois.edu](mailto:undergrads@business.illinois.edu))

**Admissions**

College Undergraduate Admissions (<https://giesbusiness.illinois.edu/undergraduate-hub/admissions/>)  
University of Illinois Undergrad Admissions (<https://www.admissions.illinois.edu/>)  
Undergraduate Admissions email ([admissions@illinois.edu](mailto:admissions@illinois.edu))