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.

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

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Composition I: Principles of Composition</td>
<td>4-7</td>
</tr>
<tr>
<td></td>
<td>Advanced Composition</td>
<td>3</td>
</tr>
</tbody>
</table>

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.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A minimum of six courses is required, as follows:</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>Humanities &amp; the Arts: Literature &amp; the Arts (1-2 courses)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Humanities &amp; the Arts: Historical &amp; Philosophical Perspectives (1-2 courses)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Natural Sciences &amp; Technology: Physical Sciences (0-2 courses)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Natural Sciences &amp; Technology: Life Sciences (0-2 courses)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Behavioral Sciences (1 course)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Cultural Studies: Non-Western Cultures (1 course)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Cultural Studies: U.S. Minorities Cultures (1 course)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Cultural Studies: Western/Comparative Cultures (1 course)</td>
<td></td>
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<tr>
<td></td>
<td>Quantitative Reasoning (2 courses)</td>
<td></td>
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</tbody>
</table>

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.

Information listed in this catalog is current as of 06/2023
Data Science Core

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 234</td>
<td>Calculus for Business I</td>
<td>4</td>
</tr>
<tr>
<td>MATH 227</td>
<td>Linear Algebra for Data Science</td>
<td>3</td>
</tr>
<tr>
<td>or MATH 257</td>
<td>Linear Algebra with Computational Applications</td>
<td></td>
</tr>
</tbody>
</table>

Data Science Fundamentals

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>STAT/CS/IS 107</td>
<td>Data Science Discovery</td>
<td>4</td>
</tr>
<tr>
<td>STAT 207</td>
<td>Data Science Exploration</td>
<td>4</td>
</tr>
<tr>
<td>CS 307</td>
<td>Modeling and Learning in Data Science</td>
<td>4</td>
</tr>
</tbody>
</table>

Computational Fundamentals

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 277</td>
<td>Algorithms and Data Structures for Data Science</td>
<td>4</td>
</tr>
</tbody>
</table>

Social Impact in Data Science

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>IS 467</td>
<td>Ethics and Policy for Data Science</td>
<td>3</td>
</tr>
<tr>
<td>IS 477</td>
<td>Data Management, Curation &amp; Reproducibility</td>
<td>3</td>
</tr>
</tbody>
</table>

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.

Summary of Total Hours

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
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<tbody>
<tr>
<td>General Education Requirements</td>
<td></td>
<td>25</td>
</tr>
<tr>
<td>Total Business Core Hours</td>
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<td>42</td>
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<tr>
<td>Total Finance Specialization Hours</td>
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<td>21</td>
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<tr>
<td>Total Data Science Core Hours</td>
<td></td>
<td>29</td>
</tr>
<tr>
<td>Meaningful Research or Discovery Experience</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Total Hours</td>
<td></td>
<td>124</td>
</tr>
</tbody>
</table>

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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 General and Education Requirements page.

First Year

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Hours</th>
<th>Second Semester Hours</th>
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</thead>
<tbody>
<tr>
<td>BUS 101</td>
<td>3</td>
<td>ECON 103</td>
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<tr>
<td>ECON 102</td>
<td>3</td>
<td>STAT 107</td>
</tr>
<tr>
<td>Comp. I or Language Other than English (3rd level)</td>
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<td>FIN 221</td>
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<tr>
<td>RHET 105</td>
<td>4</td>
<td>MATH 234</td>
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Second Year

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Hours</th>
<th>Second Semester Hours</th>
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</thead>
<tbody>
<tr>
<td>FIN 300</td>
<td>3</td>
<td>FIN 321</td>
</tr>
<tr>
<td>ACCY 201</td>
<td>3</td>
<td>ACCY 202</td>
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<tr>
<td>STAT 207</td>
<td>4</td>
<td>CS 307</td>
</tr>
<tr>
<td>MATH 227 or 257</td>
<td>3</td>
<td>IS 467</td>
</tr>
<tr>
<td>BUS 201</td>
<td>3</td>
<td>Free elective course</td>
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Third Year

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Hours</th>
<th>Second Semester Hours</th>
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<tbody>
<tr>
<td>FIN 411</td>
<td>3</td>
<td>FIN 4XX</td>
</tr>
<tr>
<td>BUS 301</td>
<td>3</td>
<td>CS 277</td>
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<tr>
<td>BTW 250</td>
<td>3</td>
<td>BADM 275</td>
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<tr>
<td>BADM 300</td>
<td>3</td>
<td>BADM 310</td>
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<tr>
<td>GENERAL EDUCATION COURSE</td>
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<td>GENERAL EDUCATION COURSE</td>
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Fourth Year

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Hours</th>
<th>Second Semester Hours</th>
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<tbody>
<tr>
<td>FIN 4XX</td>
<td>3</td>
<td>FIN 4XX</td>
</tr>
<tr>
<td>BUS 401</td>
<td>3</td>
<td>FIN 4XX</td>
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<tr>
<td>BADM 320</td>
<td>3</td>
<td>BADM 449</td>
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<tr>
<td>IS 477</td>
<td>3</td>
<td>General Education course or Elective course</td>
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General Education course

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Hours</th>
<th>Second Semester Hours</th>
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</thead>
<tbody>
<tr>
<td>General Education course</td>
<td>3</td>
<td>Education course or Elective course</td>
</tr>
</tbody>
</table>

Total Hours 124

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Information listed in this catalog is current as of 06/2023
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 (https://giesbusiness.illinois.edu/finance/)
overview of college admissions & requirements: Gies Catalog
(http://catalog.illinois.edu/schools/gies-business/academic-units/)