PREDICTIVE ANALYTICS AND RISK MANAGEMENT: ENTERPRISE RISK MANAGEMENT, MS

for the Master of Science in Predictive Analytics and Risk Management, Enterprise Risk Management concentration

Prepares students for the nascent profession of predictive analytics; it provides background and skill sets for data analytics with focus on financial and insurance industries. A student successfully finishing the program will typically have acquired a broad foundation of machine learning and predictive modeling techniques to forecast outcomes and glean valuable insights that can lead to better-informed business and investment decisions.

The assessment of the above-stated learning objectives will include:

- the job placement/graduate school acceptance rates
- feedback from employers
- graduate satisfaction surveys

These assessments will be conducted on an annual basis. We conduct exit surveys on all students each year, which should provide data on graduate students’ job placement and graduate school acceptance rates. On the survey we will design questions to assess student’s overall evaluation of these learning objectives. The curriculum was developed in close collaboration with industry partners. We expect to maintain close relationship with them and seek their feedback on the quality of our graduates on a regular basis.

Graduate Degree Programs in Mathematics

Actuarial Science, MS (http://catalog.illinois.edu/graduate/las/actuarial-science-ms/)
Applied Mathematics, MS (http://catalog.illinois.edu/graduate/las/applied-mathematics-ms/)
Mathematics, MS (http://catalog.illinois.edu/graduate/las/mathematics-ms/)
Predictive Analytics and Risk Management, MS (http://catalog.illinois.edu/graduate/las/predictive-analytics-risk-management-ms/)

Enterprise Risk Management (p. 1) | Financial and Insurance Analytics (http://catalog.illinois.edu/graduate/las/predictive-analytics-risk-management-ms/financial-insurance-analytics/)

Mathematics, PhD (http://catalog.illinois.edu/graduate/las/mathematics-phd/)

optional concentrations:
Actuarial Science & Risk Analytics (http://catalog.illinois.edu/graduate/las/mathematics-phd/actuarial-science-risk-analytics/)
Computational Science and Engineering (http://catalog.illinois.edu/graduate/engineering/concentration/computational-science-engineering/)
Teaching of Mathematics, MS (http://catalog.illinois.edu/graduate/las/teaching-mathematics-ms/)

for the Master of Science in Predictive Analytics and Risk Management, Enterprise Risk Management concentration

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIN 530</td>
<td>Foundations in Risk Management</td>
<td>2</td>
</tr>
<tr>
<td>ASRM 410</td>
<td>Investments and Financial Markets</td>
<td>4</td>
</tr>
<tr>
<td>ASRM 539</td>
<td>Risk Analytics and Decision Making</td>
<td>2</td>
</tr>
<tr>
<td>ASRM 555</td>
<td>Advanced Predictive Analytics</td>
<td>4</td>
</tr>
</tbody>
</table>

Concentration Required Courses (see below) 12
Electives (see below) 8
Total Hours 32

Other Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
</table>

Other requirements may overlap
A concentration is required.
Minimum 500-level Hours Required Overall: 12
Minimum GPA: 2.75

Enterprise Risk Management Concentration

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIN 526</td>
<td>Investment Banking</td>
<td>12</td>
</tr>
<tr>
<td>FIN 537</td>
<td>Financial Risk Management</td>
<td></td>
</tr>
<tr>
<td>ASRM 533</td>
<td>Risk Management Practices and Regulation</td>
<td></td>
</tr>
</tbody>
</table>

Electives: 8
Choose two of the following:
ASRM 409 Stochastic Processes for Finance and Insurance

Information listed in this catalog is current as of 08/2024
for the Master of Science in Predictive Analytics and Risk Management,
Enterprise Risk Management concentration

department chair: Vera Hur

director of graduate studies: Yuliy Baryshnikov

overview of admissions & requirements:

overview of grad college admissions & requirements: https://grad.illinois.edu/admissions/apply (https://grad.illinois.edu/admissions/apply/)

department website: http://www.math.illinois.edu

program website: https://math.illinois.edu/admissions/graduate-program-mathematics-admissions#MS-ActSci (https://math.illinois.edu/admissions/graduate-program-mathematics-admissions/#MS-ActSci)

department faculty: https://math.illinois.edu/research/faculty-research/actuarial-science (https://math.illinois.edu/research/faculty-research/actuarial-science/)

college website: https://las.illinois.edu/

department office: 273 Altgeld Hall, 1409 West Green Street, Urbana, IL 61801

phone: (217) 333-5749

email: math-grad@illinois.edu

Information listed in this catalog is current as of 08/2024