Data Mining

Many companies collect reams of data about their customers and their transactions, but must drill through these repositories of data to unearth crucial insights and knowledge about customer behavior and market trends.

This graduate certificate provides an introduction to data mining with an emphasis on large-scale databases as a source of knowledge generation and competitive advantage.

Who would be suited to take this program?

This certificate is designed for data analysts working with large organizations to design and use their data resources.

What will I learn?

In this program you’ll gain 12 credits that can be applied to NJIT master’s programs, and learn:

• The fundamentals of relational database technology, concurrency, and recovery
• Methods of database design and conceptual modeling
• The principles of information-retrieval system design
• Techniques essential for building text databases, document-processing systems, office automation systems, and other advanced information management systems
• And more in two elective courses

Why study Data Mining at NJIT?

The graduate certificate’s narrow focus allows you to dig deep into this specific topic, and start applying your knowledge sooner. It’s possible to earn the certificate entirely through online courses, so you can more easily fit it into your busy life. And whether you take courses online or on campus, you’ll learn from NJIT’s distinguished professors and instructors of the Department of Computer Science.

Prerequisites

NJIT’s standard admission requirements apply to this graduate certificate. In addition, non-elective courses within the program require prior knowledge of C and data structures learned in these courses:

Note: Students lacking background relevant to NJIT’s IS 513, IS 531 or IS 565 courses may need to take a placement exam, or take undergraduate bridge courses at NJIT or elsewhere. Please, contact the IS department for details. More information is found here (http://is.njit.edu/academics/graduate/PlacementExam.php).

• CS 113  Intro to Computer Science I
• CS 252  Comp Org & Architecture
• CS 114  Intro to Computer Science II
• CS 332  Principles of Operating Systems
• CS 356  Introduction to Computer Networks
• CS 431  Database System Design & Mgmt
• CS 506  Foundations of Computer Science
• Math 111  Calculus I
• Math 112  Calculus II
• Math 333  Probability and Statistics

Check the course descriptions for full details.

Related Degree Programs

All credits from the data mining graduate certificate can be applied toward these NJIT programs:

• M.S. Computer Science (http://cs.njit.edu/academics/graduate/mscs.php)
• M.S. Information Systems (https://is.njit.edu/academics/graduate/msis/)
• M.S. Business and Information Systems (https://is.njit.edu/academics/graduate/msbis/)

Take Note

Some courses have prerequisites, and must be taken in order.
Gainful Employment Disclosure

Click here (http://www.njit.edu/graduatestudies/sites/graduatestudies/files/gainfulemployment/data-mining-cert-gainful-employment.html) for the Gainful Employment Disclosure for this program.

What are the Required Courses?

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>IS 601</td>
<td>Web Systems Development</td>
<td>3</td>
</tr>
<tr>
<td>IS 665</td>
<td>Data Analytics for Info System</td>
<td>3</td>
</tr>
<tr>
<td>CS 634</td>
<td>Data Mining</td>
<td>3</td>
</tr>
</tbody>
</table>

**Core Courses (3)**

**Electives**

Select one of the following:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 602</td>
<td>Java Programming</td>
<td>3</td>
</tr>
<tr>
<td>IS 631</td>
<td>Enterprise Database Management</td>
<td></td>
</tr>
<tr>
<td>IS 634</td>
<td>Information Retrieval</td>
<td></td>
</tr>
<tr>
<td>IS 687</td>
<td>Transaction Mining and Fraud Detection</td>
<td></td>
</tr>
<tr>
<td>IS 688</td>
<td>Web Mining</td>
<td></td>
</tr>
<tr>
<td>MGMT 635</td>
<td>Data Mining and Analysis</td>
<td></td>
</tr>
</tbody>
</table>