

## **Certificate in Data Mining (12 credits)**

### **Training Data Analysts**

This certificate program provides essential skills for **data analysts** working to extract actionable intelligence from their data resources. Topics covered include principles of information-retrieval system design and management, and basic techniques for data analysis.

Many companies collect significant amounts of data about their customers and their interactions, but must “mine” through data silos to discover crucial insights and knowledge. This certificate provides an introduction to data mining with an emphasis on large-scale databases as a source of knowledge generation and competitive advantage. The program consists of 4 courses of 3 credits each, taught over 2 semesters of 15 weeks each. Instruction includes formal lectures as well as hands-on projects involving database management, mining methods and basic analytic techniques to extract, report and visualize information from the data.

In this program, we make extensive use of software tools such as SQL, Hive, Pig, SAP/Oracle Warehouse and Power BI/Tableau. Students work on assignments and projects covering both theory and applications on real data with guidance from the professor and teaching assistants.

**Recommended part-time credit schedule:** First semester: 6, Second semester: 6. Total: 12 credits over two semesters (incl. summer).

#### **Core (required) courses:**

IS 601	Web Systems Development
IS 665	Data Analytics for Information Systems
CS 634	Data Mining

#### **Sample electives:**

CS 602	Java Programming
IS 631	Enterprise Database Management
IS 634	Information Retrieval
IS 687	Transaction Mining and Fraud Detection
IS 688	Web Mining

Credit earned in a Certificate program can be used later towards the MS in Data Science degree.

#### **Program Outcomes:**

- Be an analytics specialist in your company, focusing on the management of data from various sources and providing data-driven insights to relevant departments.
- Visualize data for exploration, analysis, and communication
- Be able to provide departments with reproducible data analysis, reporting, and dashboard solutions that will enable the achievement of the company’s overall goals.

**Cost for NJ residents (2018-19 rates):** \$1,101 tuition + \$185 fees per credit. Total: \$15,432 for the certificate. Up to 20% merit-based discount available.

#### **Possible course sequence for students starting in Fall 2019 (required courses in red):**

**Fall 2019:** **CS634, IS601.** **Spring 2020:** **CS665, IS688**

**For more information, contact Tim Hart, ph: (973) 596-2911, (862) 234-5706, [hart@njit.edu](mailto:hart@njit.edu), or visit [njit.edu/JerseyCity](http://njit.edu/JerseyCity)**