Data Analytics

Degree Type
Certificate

The Certificate in Data Analytics provides a strong base for professionals or students interested in developing skills to collect, organize, analyze, interpret and present data. The combination of courses provides the necessary knowledge and experience to use large data sets to make data driven decisions and to effectively communicate patterns and relationships. Content is reinforced with hands-on experience applying course content to applications from business and industry using current industry accepted computer programs.

Upon the completion of the Data Analytics Certificate, graduates will be able to:

1. Identify data sources, types of data, and data structures, including structured and unstructured data.
2. Remediate raw data as appropriate before analysis including cleaning and restructuring data using software tools and programming skills.
3. Collect and combine data from multiple sources using database programming (SQL) and related skills.
4. Use analytical tools to identify patterns and relationships in data sets including time trends, cluster analysis, association analysis, classification, and statistical associations and relations.
5. Apply data analytics to address real-world problems and communicate results to stakeholders.
6. Visually communicate patterns and relations in data applying best practices of data visualization.
7. Identify legal and ethical issues in analyzing data and adhere to ethical standards.

Fall Semester

Item #	Title	Class Hours	Lab Hours	Credits
DATA101N	Introduction to Data Analytics	2	2	3
MATH106N	Statistics I	4	0	4
	CSCI120N or CSCI161N			3
DATA105N	Data Mining	2	2	3

Spring Semester

Item #	Title	Class Hours	Lab Hours	Credits
DATA120N	Applied Data Analysis	2	2	3
	CSCI130N or CSCI207N			3
DATA205N	Data Visualization	2	2	3
DATA210N	Data Wrangling with R and Python	2	2	3
	Total Credits			**25**