NEW CERTIFICATE SUMMARY

Degree: Certificate in Data Analytics

School/College: Metropolitan Collage

Summary of New Certificate:

The new graduate Certificate in Data Analytics explores the intricacies of data analytics and exposes students to topics and tools related to data processing, analysis and visualization. Students will learn probability theory, statistical analysis methods and tools, generating relevant visual presentations of data, and concepts and techniques for data mining, text mining, and web mining. Graduates of the program will have a solid knowledge of concepts and techniques in data analytics as well as a broad exposure to the methods and tools for data mining and knowledge discovery.

The rapid pace at which digital data is being generated has resulted in very large amounts of data, usually referred to as Big Data, which requires new techniques for processing and analysis. Data analytics is needed in nearly every industry to guide the decision-making process through the collection, storage and analysis of data. Careers in data analytics have become highly sought after in recent years, with a widespread shortage of a skilled workforce amidst a rising global demand. According to the McKinsey Global Institute assessment, United States alone faces a shortage of 140,000 to 190,000 personnel required with deep analytical skills. A number of universities are already offering programs in data science/analytics to address this shortfall. The development of the Graduate Certificate in Data Analytics is driven by the job market needs and the desire to prepare students for the changing workforce requirements. The new certificate in Data Analytics provides students with the required skills and tools to compete and stay abreast in today's market.

Required Courses:
MET CS 544 Foundations of Analytics
MET CS 555 Data Analysis and Visualization MET CS 688 Web Analytics and Mining
MET CS 699 Data Mining

The Certificate in Data Analytics prepares students for the positions of data analyst or data scientist. The main learning outcomes of the program are as follows:

- To provide the foundation for applied probability and statistics and its relevance in day-to- day data analysis
- To explore the various data visualization techniques and their applications using real-world data sets
- To understand web analytics and metrics, procure and process unstructured text, and delve into the hidden patterns
- To facilitate knowledge discovery using data mining techniques over vast amounts of data

To meet the varied needs of students, the proposed certificate would be offered in three formats -- online, face-to-face, and blended, as proposed by the faculty and approved by the Academic Policy Committee (APC) of the Metropolitan College. The proposed certificate relates strongly to the certificate offerings provided by the MET Computer Science department catering to part-time professional students. Faculty have been reassigned from some of the existing courses to the new ones. No additional reassignment will be necessary. Existing virtual labs supported by MET IT will be utilized for the proposed courses.

Approved March 18, 2015 by the University Council