Data Analytics Program

Course Curriculum

Semester 01   (Tuition: $2,450)

Course #	Course Title	Credits
10-102-152	Data Analytics 1	3

Credits: 3   Lecture Hours: 54
In this course, the learner will learn the basic concepts of data analysis and how they are used to drive business processes. The learner will identify and retrieve relevant data sources, and to prepare data for analysis with pre-configured and custom tools. Upon completion of this course, the learner will be able to prepare data for further analysis to drive decision making for business.

10-102-153	Elicitation & Coll Techniques	3

Credits: 3   Lecture Hours: 54
The learner will learn the ability to define stakeholders and use the stakeholder analysis to conduct elicitation activities accurately capturing information needs, documenting and confirming results. Facilitates meetings and communication plan to support ongoing collaboration.

10-102-154	Databases	3

Credits: 3   Lecture Hours: 54
In this course, the learner will explore concepts, design, documentation, and implementation of various database systems, including proprietary and open source technologies. The learner will implement Structured Query Language (SQL) to store, retrieve, and manipulate data. The learner will create queries, normalize database structures, and create stored procedures. Upon completion of this course, the learner will be prepared to develop and maintain databases used in application development.

10-102-156	Ethics in Data Analytics	3

Credits: 3   Lecture Hours: 54
In this course, the learner will discover the risks, challenges, and opportunities data presents to the greater good. It will cover the moral implications of concepts such as social marketing, fraud, risk management, and data privacy. Upon completion the learner will be able to evaluate risks and results of data utilization, anticipate the shifts and safeguards in the industry, and asses the company's rights and responsibilities in data collection and usage.

10-804-189	Introductory Statistics	3

Credits: 3   Lecture Hours: 54
Students display data with graphs, describe distributions with numbers, perform correlation and regression analyses, and design experiments. They use probability and distributions to make predictions, estimate parameters, and test hypotheses. They draw inferences about relationships including ANOVA.

Semester 02   (Tuition: $1,960)

Course #	Course Title	Credits
10-102-155	Business Intelligence and Visualization	3

Credits: 3   Lecture Hours: 54
In this course, the learner will learn to organize, manage, and analyze very large data sets from various sources. The learner will use software tools to present complex data in visually meaningful representations that can be communicated to business stakeholders. Upon completion, the learner will learn how to transform raw data into meaningful information that will be utilized for data-driven decision making.

Course #	Course Title	Credits
10-102-157	Data Analytics 2	3

Credits: 3   Lecture Hours: 54
In this course, the learner will build upon the skills learned in Data Analytics 1. The learner will work with large data sets and organize that information for effective data analysis. The learner will utilize commercial data analysis software packages, and create custom computer programs to analyze data. Upon completion of the course, the learner will be able to perform analysis of relevant data with various software tools, and use the generated information to help make informed business decisions. Pre-requisite: Data Analytics 1 (10-102-152)

Course #	Course Title	Credits
10-196-209	Team Building and Problem Solving	3

Credits: 3   Lecture Hours: 54
Students will learn the benefits and challenges of group work, necessary roles in a team, stages of team development, meeting facilitation, different approaches to problem solving, consensus, data acquisition, analysis, developing alternative solutions, implementation and evaluation.

Course #	Course Title	Credits
10-801-196	Oral/Interpersonal Communication	3

Credits: 3   Lecture Hours: 54
Students demonstrate competency in speaking, verbal and nonverbal communication, and listening skills through individual presentations, group activities and other projects.

12

Semester 03   (Tuition: $1,150)

Course #	Course Title	Credits
10-103-118	Intermediate Microsoft Excel	1

Credits: 1   Lecture Hours: 18
This course introduces intermediate level features of Microsoft Excel. Students will learn to use relative & absolute reference formulas and functions, manage workbooks using multiple worksheets, create custom templates and use pivot tables effectively.

Course #	Course Title	Credits
10-809-166	Intro to Ethics: Theory & App	3

Credits: 3   Lecture Hours: 54
The learner will engage in the basics of theoretical foundations of ethical thought. Diverse ethical perspectives will be used to analyze and compare relevant issues. Learners will critically evaluate individual, social and/or professional standards of behavior, and apply a systematic decision-making process to these situations.

Course #	Course Title	Credits
10-809-195	Economics * OR *	

Credits: 3   Lecture Hours: 54
Students will develop analytical skills central to how a market-oriented system operates and the factors that influence national economic policy. Students will apply basic concepts and analyses to a variety of contemporary problems and public policy issues. These concepts include scarcity, resources, alternative

economic systems, growth, supply and demand, monetary and fiscal policy, inflation, unemployment, and global economic issues.

| 20-809-287 | Principles of Macroeconomics | 3 |

Credits: 3   Lecture Hours: 54
This course provides an introduction to basic economic principles with applications to current economic problems affecting the overall performance of a nation's economy. The course begins with an analysis of the role of markets and prices in an economy. Topics include the causes and consequences of unemployment, inflation, and economic growth; the role of money and banking in the economy; the role of government taxing and spending policies to correct market failure and stabilize the economy; the implications of budget deficits and the national debt; and the implications of an increasingly global economy. This course is designed to meet the need for college transfer credit.

7

Semester 04   (Tuition: $1,960)

Course #	**Course Title**	**Credits**
10-102-130	Management Principles	3

Credits: 3   Lecture Hours: 54
Students explore the challenges faced by the managers of organizations in today's competitive business environment. Students will examine managerial roles and skills as important factors in determining organizational performance. These factors include planning for the future by anticipating changes in the external environment, organizing people into groups, allocating resources to them and motivating them to attain organizational goals.

| 10-102-158 | Business Analytics & Insights | 3 |

Credits: 3   Lecture Hours: 54
The learner will learn to prioritize and trace requirements, organize large amounts of data, understand and model requirements using various analysis techniques; verify, validate and communicate the requirements.

| 10-102-160 | Software Applications | 3 |

Credits: 3   Lecture Hours: 54
The learner will learn to use BA software tools- Visio, Sharepoint, OneNote, and advanced Excel involving scenarios and case studies.

| 10-196-215 | Project Management Fundamentals | 3 |

Credits: 3   Lecture Hours: 54
Students will become familiar with the role of project management, developing a project proposal, demonstration of relevant software, working with project teams, sequencing tasks, charting progress, dealing with variations, budgets and resources, implementation, and assessment.

12

Semester 05   (Tuition: $2,290)

Course #	**Course Title**	**Credits**
10-102-161	Strategy Analysis & Evaluation	3

Credits: 3   Lecture Hours: 54
The learner will identify and define business needs; understand business structure, strategy, and impact of work efforts; define the importance of vision, strategy, goals and objectives; and define solution scope. Effectively facilitate change management. Pre-requisite: Business Intelligence & Visualization (10-102-155)

10-102-162   Programming in Data Analytics   3

Credits: 3 Lecture Hours: 54
In this course, the learner will investigate the fundamentals of computer programming using the Python and/or R programming language. The learner will examine data types, variables, conditional statements, looping, array structures, and structured programming techniques. Upon completion of the course, the learner will be able to use Python and/or R to apply problem-solving skills to create applications for delivery to various platforms.

10-102-163   Data Analytics Career Experience (Internship)   2

Credits: 2 Lecture Hours: 0 Occupational Hours: 144
Students will obtain practical, hands-on experience while applying skills developed in the Data Analytics program at an approved site with employer and instructor supervision. Professional behavior, good communication, and positive interpersonal skills will also be demonstrated.

10-623-110   Lean Concepts   3

Credits: 3 Lecture Hours: 54
Learners will develop techniques to identify and eliminate non-value-added activities in a process using 5S, TPM, Standard Work, and Mistake Proofing. Learners will explore the characteristics of an organizational culture necessary to support and sustain a lean enterprise.

10-801-197   Technical Reporting   3

Credits: 3 Lecture Hours: 54
Students prepare and present oral and written technical reports. Students create, but are not limited to the following reports: lab and field reports, proposals, technical letters and memos, technical research reports, case studies, and oral technical presentations. Students enroll in this advanced communication course after having completed at least the prerequisite introductory writing course.

                             14

Total Credits: 60
Estimated Total Tuition*: $9,810