

DATA ANALYTICS - TOOLS AND TECHNIQUES, ASSOCIATE OF APPLIED BUSINESS

Curriculum Code #6650

Effective May 2024

Division of Engineering, Business and Information Technologies (<http://catalog.lorainccc.edu/academic-programs/engineering-business-information-technologies/>)

This program prepares students to apply the tools and techniques used in data analytics and assist a data scientist. The process of data analysis is taught in the context of data from manufacturing (IoT), marketing, finance and other sources. Lorain County Community College has articulation agreements with colleges and universities including programs offered by the Lorain County Community College's University Partnership.

First Year

| Fall Semester | | Hours |
|---------------|--|-----------|
| CISS 121 | MICROCOMPUTER APPLICATIONS I | 3 |
| DATA 110 | INTRODUCTION TO DATA ANALYTICS | 4 |
| DATA 130 | ETHICAL AND LEGAL FRAMEWORK OF BIG DATA ¹ | 3 |
| ENGL 161 | COLLEGE COMPOSITION I | 3 |
| MTHM 168 | STATISTICS | 3 |
| SDEV 101 | INTRODUCTION TO THE LCCC COMMUNITY ² | 1 |
| Hours | | 17 |

Spring Semester

| | | |
|--------------|---|-----------|
| CISS 143 | DATABASE DESIGN AND IMPLEMENTATION ¹ | 3 |
| DATA 150 | DATA ANALYSIS WITH LINUX TOOLS | 3 |
| CISS 212 | SPREADSHEET APPLICATIONS | 3 |
| PHLY 171 | INTRODUCTION TO LOGIC | 3 |
| PSYH 151 | INTRODUCTION TO PSYCHOLOGY | 3 |
| Hours | | 15 |

Second Year

Fall Semester

| | | |
|-------------------------------|---|-----------|
| DATA 205 | MANAGING DATA FOR ANALYTICS | 3 |
| DATA 221 | MODELING & ANALYSIS WITH R & PYTHON FOR DATA PROFESSIONALS ¹ | 3 |
| DATA 287 | WORK-BASED LEARNING I - DATA | 1 |
| PHLY 174 | CRITICAL THINKING | 3 |
| SOCY 151G | INTRODUCTION TO SOCIOLOGY | 3 |
| Science Elective ³ | | 4 |
| Hours | | 17 |

Spring Semester

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|----------|--|---|
| CMMC 151 | ORAL COMMUNICATION | 3 |
| DATA 230 | PREDICTIVE AND VISUAL ANALYTICS ¹ | 3 |

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| DATA 222 | BUILDING ANALYTICAL MODELS AND MACHINE LEARNING ALGORITHMS ¹ | 3 |
| DATA 248 | DATA ANALYTICS CAPSTONE ¹ | 4 |
| DATA 288 | WORK-BASED LEARNING II - DATA | 1 |
| Hours | | 14 |
| Total Hours | | 63 |

1

Indicates that this course requires a prerequisite or may be taken concurrently.

2

A student must register for the orientation course when enrolling for more than six credit hours per semester or any course that would result in an accumulation of 13 or more credit hours.

3

Science elective from Ohio Transfer 36 (<http://catalog.lorainccc.edu/academic-information/transfer-module-requirements/>) (with lab if required by accepting institution).

4

The data analytic core courses in this program may be earned through a competency-based education option. See your advisor for more information.

Program Contact(s):

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For information about admissions, enrollment, transfer, graduation and other general questions, please contact your advising team (<https://www.lorainccc.edu/admissions-and-enrollment/advising-and-counseling/>).

Credit for Prior Learning (PLA) options may be available for your program.

For more information, please visit our website: www.lorainccc.edu/PLA (<http://www.lorainccc.edu/PLA>)

Program Learning Outcomes

1. Understand the benefits and privacy issues with using Big Data.
2. Utilize the industry common tools to mine large data sets for relationships and other insights.
3. Utilize visualization techniques to discover useful information within large data sets and communicate them to an appropriate audience.
4. Understand the purpose of machine learning and related artificial intelligence algorithms in analyzing large data sets.