

DATA ANALYTICS - TOOLS AND TECHNIQUES, ASSOCIATE OF APPLIED BUSINESS

Curriculum Code #6650

Effective May 2026

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 ²	3
CISS 212	SPREADSHEET APPLICATIONS ²	3
CYBR 220	PYTHON SCRIPTING AND PROGRAM CONCEPTS	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
DATA 231	ENTERPRISE VISUAL ANALYTICS	3
Hours		16

Spring Semester

CMMC 151	ORAL COMMUNICATION	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
Science Elective ³		3-4
Hours		14-15
Total Hours		62-63

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 12 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.