

IT - DATA AND ANALYTICS SPECIALIST

Overview

IT - Database and Analytics Specialist Associate of Applied Science Degree

Program Code: 10-156-3

For more information: www.wctc.edu/data-spec (<http://www.wctc.edu/data-spec/>)

Prepare for a variety of careers in the rapidly-growing field of data. Gain skills in data modeling, database development, report development, and data warehouse design and development. Explore the basics of programming, data visualization, statistical data analysis and data analytics.

The minimum required course grades and program grade point average (GPA) for students under this catalog are:

Core Courses = C

General Studies Courses = C

Program GPA = 2.0

Related Certificates that can be earned along the way.

- Business Systems Analyst Certificate (<https://catalog.wctc.edu/programs/business-systems-analyst/>)
- Database Server Administrator Certificate (<https://catalog.wctc.edu/programs/database-server-administrator/>)
- Database Developer Certificate (<https://catalog.wctc.edu/programs/database-developer/>)
- Report Analyst Certificate (<https://catalog.wctc.edu/programs/report-analyst/>)

Learning Outcomes

Program Outcomes

1. Create complex SQL queries.
2. Develop data driven reports.
3. Analyze data.
4. Develop database driven applications.
5. Design a database.
6. Develop ETL processes.
7. Manage database servers.
8. Model Real-World Processes as Data.

Critical Life Skills

To help our students prepare for success in a workplace and society that is **increasingly global, multi-cultural, and collaborative**, all students are given opportunities to develop and demonstrate Critical Life Skills, both in and out of the classroom. The following Critical Life Skills are learning outcomes for WCTC students.

- **Communication:** Demonstrate appropriate communication.
- **Critical Thinking/Problem Solving:** Demonstrate critical thinking skills to analyze situations and solve problems.

- **Relationships:** Demonstrate effective interpersonal skills.
- **Self-management:** Demonstrate responsible and respectful behavior.

Required Courses

Listed below are the required courses for the program. To view the recommended sequence for taking courses click on the plan of study tab(s) above. Work with your Academic Advisor to design a program plan!

View your Program Matrix (https://www.wctc.edu/_site-pdfs/course-offering-matrix/101563.pdf) to find out when each course will be offered (term and time of day).

Code	Title	Credits
Core Courses		
107-119	System Analysis Agile Methods	3
Approved Substitute: 107-118		
107-123	IT Internship	2
150-137	MS Server	3
150-190	Network Fundamentals	2
Approved Substitutes: 150-117 OR 150-175 OR 150-178		
152-101	Python Programming	1
Approved Substitute: 150-154		
152-112	Intro to Programming with C#	3
152-170	IS Project	4
156-102	Advanced SQL	3
156-103	Database Administration	3
156-106	Data Warehouse Development	4
156-107	Data Modeling	2
156-108	Intro to Databases & Reporting	1
Approved Substitute: 152-115		
156-109	Intro to SQL	2
Approved Substitute: 152-115		
156-110	Data Visualization & Reporting	2
Approved Substitute: 156-104		
156-111	Intro to Data Analytics	2
156-112	Predictive Analytics	2
Approved Substitute: 156-105		
156-113	Python Data Manipulation	2
156-117	Big Data Engineering	3
890-108	Employment Success	1
General Studies		
801-136	English Composition 1	3
Approved Substitute: 809-223		
801-197	Technical Reporting	3
Approved Substitute: 801-243		
804-133	Math & Logic	3
Approved Substitutes: 804-118 OR 804-116 OR 804-195 OR 804-198		
804-189	Introductory Statistics	3
809-195	Economics	3
Approved Substitutes: 809-143 OR 809-287		
809-199	Psychology of Human Relations	3

Approved Substitute: 809-198

Total Credits 63

Full-time, Fall Start Plan

First Year

Fall Term 1

		Credits
152-101	Python Programming	1
156-108	Intro to Databases & Reporting	1
804-133	Math & Logic	3
Credits		5

Fall Term 2

152-112	Intro to Programming with C#	3
156-109	Intro to SQL	2
156-107	Data Modeling	2
Credits		7

Winter Interim

890-108	Employment Success	1
Credits		1

Spring Term 1

156-102	Advanced SQL <small>This course will run 16 weeks.</small>	3
156-110	Data Visualization & Reporting	2
809-199	Psychology of Human Relations	3
Credits		8

Spring Term 2

156-113	Python Data Manipulation	2
801-136	English Composition 1	3
Credits		5

Summer Term

801-197	Technical Reporting	3
804-189	Introductory Statistics	3
Credits		6

Second Year

Fall Term 1

156-106	Data Warehouse Development <small>This course will run 16 weeks.</small>	4
156-111	Intro to Data Analytics	2
107-119	System Analysis Agile Methods	3
Credits		9

Fall Term 2

150-190	Network Fundamentals	2
156-112	Predictive Analytics	2
Credits		4

Spring Term 1

150-137	MS Server	3
152-170	IS Project <small>This course runs 16 weeks.</small>	4
156-117	Big Data Engineering	3
Credits		10

Spring Term 2

156-103	Database Administration	3
Credits		3

Summer Term

107-123	IT Internship	2
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809-195 Economics 3

Credits 5**Total Credits** 63

Part-time, Fall Start Plan

First Year

Fall Term 1

		Credits
156-108	Intro to Databases & Reporting	1
804-133	Math & Logic	3
Credits		4

Fall Term 2

156-107	Data Modeling	2
156-109	Intro to SQL	2
Credits		4

Spring Term 1

156-102	Advanced SQL	3
<small>This course runs 16 weeks.</small>		
156-110	Data Visualization & Reporting	2
Credits		5

Spring Term 2

801-136	English Composition 1	3
Credits		3

Summer Interim

152-101	Python Programming	1
Credits		1

Summer Term

801-197	Technical Reporting	3
804-189	Introductory Statistics	3
Credits		6

Second Year

Fall Term 1

156-106	Data Warehouse Development	4
<small>This course runs 16 weeks.</small>		
156-111	Intro to Data Analytics	2
Credits		6

Fall Term 2

150-190	Network Fundamentals	2
Credits		2

Spring Term 1

150-137	MS Server	3
152-112	Intro to Programming with C#	3
Credits		6

Spring Term 2

156-103	Database Administration	3
156-113	Python Data Manipulation	2
Credits		5

Summer Term

809-195	Economics	3
809-199	Psychology of Human Relations	3
Credits		6

Third Year**Fall Term 1**

107-119	System Analysis Agile Methods	3
Credits		3

Fall Term 2

156-112	Predictive Analytics	2
Credits		2

Winter Interim

890-108	Employment Success	1
Credits		1

Spring Term 1

152-170	IS Project	4
This course runs 16 weeks.		
156-117	Big Data Engineering	3
Credits		7

Summer Term

107-123	IT Internship	2
Credits		2

Total Credits **63**

Full-time, Spring Start Plan**First Year****Spring Term 1**

156-108	Intro to Databases & Reporting	1	Credits
801-136	English Composition 1	3	
804-133	Math & Logic	3	
Credits		7	

Spring Term 2

156-107	Data Modeling	2
801-197	Technical Reporting	3
Credits		5

Fall Term 1

107-119	System Analysis Agile Methods	3
152-101	Python Programming	1
804-189	Introductory Statistics	3
Credits		7

Fall Term 2

152-112	Intro to Programming with C#	3
156-109	Intro to SQL	2
Credits		5

Second Year**Spring Term 1**

156-102	Advanced SQL <small>This course runs 16 weeks.</small>	3
156-110	Data Visualization & Reporting	2
809-195	Economics	3
Credits		8

Spring Term 2

156-113	Python Data Manipulation	2
809-199	Psychology of Human Relations	3
Credits		5

Fall Term 1

150-137	MS Server	3
156-111	Intro to Data Analytics	2
156-106	Data Warehouse Development <small>This course runs 16 weeks.</small>	4
Credits		9

Fall Term 2

150-190	Network Fundamentals	2
156-112	Predictive Analytics	2
Credits		4

Third Year**Winter Interim**

890-108	Employment Success	1
Credits		1

Spring Term 1

107-123	IT Internship <small>This course runs 16 weeks.</small>	2
152-170	IS Project <small>This course runs 16 weeks.</small>	4
156-117	Big Data Engineering	3
Credits		9

Spring Term 2

156-103	Database Administration	3
Credits		3
Total Credits		63

Part-time, Spring Start Plan**First Year****Spring Term 1**

152-112	Intro to Programming with C#	3	Credits
156-108	Intro to Databases & Reporting	1	
Credits		4	

Spring Term 2

156-107	Data Modeling	2
804-133	Math & Logic	3
Credits		5

Summer Interim

152-101	Python Programming	1
Credits		1

Summer Term

156-109	Intro to SQL	2
801-136	English Composition 1	3
Credits		5

Fall Term 1

107-119	System Analysis Agile Methods	3
156-102	Advanced SQL <small>This course runs 16 weeks.</small>	3
Credits		6

Fall Term 2

150-190	Network Fundamentals	2
Credits		2

Second Year**Spring Term 1**

150-137	MS Server	3
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156-110	Data Visualization & Reporting	2
Credits		5
Spring Term 2		
156-113	Python Data Manipulation	2
Credits		2
Summer Term		
801-197	Technical Reporting	3
804-189	Introductory Statistics	3
Credits		6
Fall Term 1		
156-106	Data Warehouse Development <small>This course runs 16 weeks.</small>	4
156-111	Intro to Data Analytics	2
Credits		6
Fall Term 2		
156-112	Predictive Analytics	2
Credits		2
Third Year		
Spring Term 1		
156-117	Big Data Engineering	3
809-199	Psychology of Human Relations	3
Credits		6
Spring Term 2		
156-103	Database Administration	3
890-108	Employment Success	1
Credits		4
Summer Term		
107-123	IT Internship	2
809-195	Economics	3
Credits		5
Fall Term 1		
152-170	IS Project <small>This course runs 16 weeks.</small>	4
Credits		4
Total Credits		63