ecpi UNIVERSITY

COLLEGE OF TECHNOLOGY
BACHELOR'S DEGREE
COMPUTER & INFORMATION SCIENCE
SOFTWARE DEVELOPMENT

DATA ANALYTICS

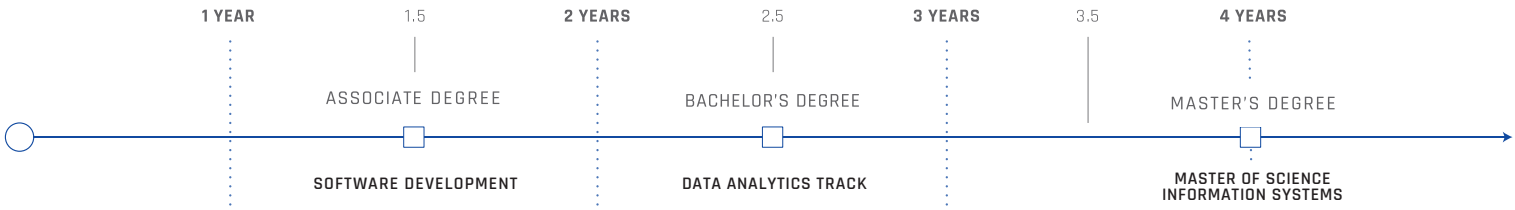
Data analytics is the method of examining large collections of data in order to make educated recommendations and uncover opportunities to improve business functions, often with the help of various analytics tools and software. When you're dealing with a plethora of data, it can seem like an overwhelming task. The goal of data analytics is to simplify the process and explore efficient ways to organize and consolidate data to enhance an organization and give them a competitive edge.

A practice that emphasizes strong analytical and problem-solving skills, your job will be to maximize efficiency and provide data driven recommendations to improve an organization while applying technical knowledge of data structures and analytical tools. Do you consider yourself creative and analytical? Do you like to explore data and solve problems? If yes, a major in software development in the data analytics track could be a good fit for you.

During the course of this program, you could gain the necessary skills vital to:

- Enhance the quality of an organization and maximize efficiency.
- Apply strategy and analysis to drive real change.
- Research data mining techniques.
- Recommend new programs and software.
- Boost efficiency and profitability by applying knowledge of big data as it relates to the organization's goals.

Through ECPI's year-round schedule, you could earn a Bachelor of Science in Computer and Information Science with a Major in Software Development in the Data Analytics track in as little as 2.5 years.



Outcomes

Students in the B.S. in Computer & Information Science program develop planning, design, implementation, and support skills in operating systems, networking, software programs, and security. Students develop additional focused skills based on which major the student pursues. Students also learn principles of excellent customer service in order to assist clients with technical issues.

Upon successful completion of the Bachelor of Science in Computer & Information Science, graduates are able to:

- Design, implement, and evaluate computer-based solutions that incorporate the appropriate computing requirements identified through the analysis of specific organizational or computing problems
- Function effectively on teams to establish goals, plan tasks, meet deadlines, manage risk, and produce deliverables
- Apply written, oral, and graphical communication in both technical and non-technical environments
- Evaluate and use appropriate technical literature
- Engage in continuous professional development through user groups, associations, conferences, readings, research, and other channels
- Develop and apply ethical and legal best practices in the maintenance and security of information and systems
- Develop cloud computing tools

In addition to the BS CIS Program Outcomes, students in the Software Development Major learn how to manage projects, create interesting web pages, design and write a variety of programs, use and maintain databases, and understand and utilize computer networks.

Upon completion of the Software Development major - Data Analytics Track, graduates are able to:

- Design and develop security software solutions using object-oriented principles
- Plan secure software solutions with customers
- Develop integrated systems solutions using software, web, and mobile applications to access organizational databases

Possible Career Track

- Webmaster
- Game Developer
- Mobile App Developer
- Database Administrator
- Data Analyst
- Computer Hardware Engineer
- Software Developer
- Quantitative Analyst
- Data Scientist
- Business Analyst
- Computer Programmer

DATA ANALYTICS TRACK
BACHELOR OF SCIENCE DEGREE

To receive the Bachelor of Science in Computer and Information Science with a Major in Software Development - Data Analytics Track, students must earn 120 semester credit hours. The program requires a minimum of eight semesters, 30 months or 60 weeks of instruction.

Program Requirements are as follows:

CORE CURRICULUM 28 SEMESTER CREDIT HOURS	CREDITS
Introduction to Business	3
Introduction to Programming	3
Introduction to Cloud Solutions	3
Introduction to Networking	3
Linux Administration	3
Service Desk Fundamentals **OR** Introduction to Scripting	3
Principles of Cybersecurity	3
Introduction to Database	3
Applied Project Management	3
Applied Project Management LAB	1

ARTS AND SCIENCES* 31 SEMESTER CREDIT HOURS	
Arts and Sciences Capstone	3
Principles of Communication	3
College Composition	3
Advanced Composition	3
Culture and Diversity	3
College Algebra	3
Statistics	3
ONE PAIR OF THE FOLLOWING	
Physics	3
Physics LAB	1
Environmental Biology	3
Environmental Biology LAB	1
Introduction to Psychology	3
Positive Psychology	3

*For allowable substitutions of arts and sciences courses, see the Arts and Sciences Department page

SELF INTEGRATION 9 SEMESTER CREDIT HOURS	
Introduction to Operating Systems	3
Career Orientation Seminar	0
Essentials for Success	3
Computer Applications	3

SOFTWARE DEVELOPMENT 38 SEMESTER CREDIT HOURS	CREDITS
Logic and Design	3
Introduction to Programming LAB	1
Introduction to Object Oriented Programming	3
Javascript	3
Object-Oriented Programming Using C# **OR** Object-Oriented Programming Using C++ **OR** Object-Oriented Programming Using Java	3
Server-Side Scripting with PHP	3
Structured Query Langauge	3
Web Interface Design	3
Advanced Object-Oriented Programming Using C# **OR** Advanced Object-Oriented Programming Using Java	3
Mobile App Development I	3
System Analysis and Design **OR** Software Engineering	3
ONE PAIR OF THE FOLLOWING	
SQL Server	3
SQL Server LAB	1
Oracle with PL/SQL	3
Oracle with PL/SQL LAB	1
Software Development Capstone **OR** Bachelor's Externship-CIS	3

DATA ANALYTICS TRACK 14 SEMESTER CREDIT HOURS	
Introduction to Scripting	3
Introduction to Data Analytics	3
Data Analytics Tools	3
Data Analytics Methods and Modeling	3
Data Analytics Methods and Modeling LAB	1
Advanced Data Analytics LAB	1

SEMESTER CREDIT HOURS	120

*These are the courses making up the degree plan at the time of student enrollment. The University at its sole discretion may modify the program track as deemed necessary.