COMPUTER INFORMATION SYSTEMS: DATA ANALYTICS, AS

Program code: CISD-AS

Location: Gateway, Housatonic, Naugatuck Valley, Northwestern

Program Description

The Computer Information Systems (CIS) degree program offers students a diverse technical curriculum that provides an understanding of many areas of information technology (IT). The program features a core of technical courses that cover topics such as database design, operating systems, and project management, and differentiated options that allow students to concentrate their learning in a particular area.

Students also have an opportunity to experience the workplace in an internship course, or via a simulated workplace capstone that allows them to work directly with employers or in a case study environment. They can leverage the skills acquired in this diverse program to prepare for employment, industry-recognized certification credentials or to pursue baccalaureate degrees. The CIS program allows students to tailor their degree to their interests by offering a wide range of electives. Certificates are also provided as a guide to assist students in the selection of electives.

Learning Outcomes

- Develop the ability to analyze and design solutions through knowledge and comprehension of information systems concepts and skills.
- Develop strategic and critical thinking skills through development of the ability to identify, gather, measure, summarize, verify, analyze, design, develop and test programs.
- Develop the ability to identify and solve unstructured problems in unfamiliar settings and exercise judgment based on facts.
- Develop mastery in communication by gaining proficiency in oral/written/electronic communication skills and the ability to explain systems development concepts and related technical issues to various stakeholders.
- Develop leadership skills by learning to work collaboratively with a diverse team, including organization, control, and assessment of group-based work, and provide leadership when appropriate.
- Develop the skills to apply current technology, analyze business problems, and design software and solve technical issues; apply word processing, spreadsheet, database, presentation, email, and collaborative software skills in a professional context.
- Develop the skills to communicate using network technologies, access information via the internet, and understand information integrity and security issues.
- Understand and respect the employer-employee relationship and appreciate the need to produce high quality work.
- Demonstrate sufficient understanding of information technology for entry-level employment and advancement in the field.

Data Analytics Option

The Data Analytics option will provide students with foundational knowledge and practical experience in data analysis vis-a-vis business and scientific applications. Students will understand how organizations strive to turn structured and unstructured data into useful information by using best practices, processes, and tools. Students will learn more about data sources, data significance, data attributes, data ethics, data security, and data governance. The option provides hands-on data analysis experience including use of spreadsheets and programming.

Learning Outcomes

1. Describe key aspects of data in an organizational setting
2. Implement foundational concepts of data computation, data structures, and analysis
3. Utilize various technologies to organize, analyze, explore, and visualize data
4. Execute data organization, exploration, and develop proficiency in a programming language (e.g. R)

Degree Requirements

CSC 1201 Introduction to Programming *and* CSC 2213 Object Oriented Programming *are not allowed in this program. Students are encouraged to take* CSC 1211 Java I *or other programming language.*

Code	Title	Credits
Computer Information System General Education Core		
ENG 1010	Composition	3
MATH 1000 or higher [1]		3-4
Elective ARHX - Arts & Humanities Course		3-4
Elective SCKX - Scientific Knowledge Course or Elective SCRX - Scientific Reasoning Course		3-4
Elective SBSX - Social / Behavioral Science Course or Elective HISX - Historical Knowledge Course		3
Elective ORAX - Oral Communication Course or Elective WRIX - Written Communication II Course		3
CCS 1001	College and Career Success	3
Computer Information Systems Program Core		
CIS 1001	Introduction to Computers	3
CIS 1211	Database Design I	3-4
or CSC 1231	Database Development and Design I	
CIS 1104	Introduction to Operating Systems	3
CIS 1141	Introduction to Management Information Systems	3
CIS 1143	Project Management	3
CIS 2994	Coop Ed/Work Experience	3
or CIS 2990	Capstone Research	
Open Elective		3-4
Specialization Courses		
DTS 2215	Data Ethics and Security	3
CSA 1111	Spreadsheet Applications	3
DTS 2201	Programming in Data Science	3
Directed Elective [2]		9-15
Total Credits		**60-71**

[1] MATH 1010 Intermediate Algebra recommended

[2] Minimum number of any CIS, CSA (excluding CSA 1110 Introduction to Software Applications), CST, CYS, DTS, CSC (excluding CSC 1201 Introduction to Programming and CSC 2213 Object Oriented Programming), needed to meet minimum total credit count of 60.

There are five Associate degree options within Computer Information Systems. Students may earn only one degree but can earn additional certificates.

- Computer Information Systems: Cloud Computing
- Computer Information Systems: Cloud Computing Certificate
- Computer Information Systems: Computer Networking Certificate
- Computer Information Systems: Computer Programming Certificate
- Computer Information Systems: Generalist
- Computer Information Systems: IT Support
- Computer Information Systems: IT Support Certificate
- Computer Information Systems: Networking, AS
- Computer Information Systems: Programming