



**2023-2024 Academic Year**

# Computer Information Systems

**Associate in Science Degree in Information Systems (A.S.)**

**Certificate of Proficiency: Database Administration**

**Business, Technology, and  
Professional Studies Division**

609.570.3482 [admiss@mccc.edu](mailto:admiss@mccc.edu)

The associate degree in **Computer Information Systems**, based on guidelines from the Association for Computing Machinery, prepares students for transfer to business- or technically-oriented four-year degree programs at the junior level.

Careers for graduates from related four-year degree programs include business application programmer, business process specialist, database administrator, information systems analyst, network engineer, and system sales associate.

## PROGRAM OUTCOMES

- Transfer to a four-year college as a junior;
- Explain, interpret, and develop computer information policies and procedures;
- Create, edit, and use printed and online technical documentation and literature;
- Understand business organizations and practices, and the role of information technology in organizations;
- Develop, describe, understand, and apply network protocols and technology;
- Determine the feasibility of a computer information system, estimate its cost, and manage its implementation;
- Design, program, implement, and document a computer application or website to install and implement computer systems;
- Work effectively individually and in workgroups to install and implement information systems;
- Communicate in written documents and in oral presentations in technical or business settings.

Admission requires a high school diploma or equivalent, two years of high school algebra, geometry, and computer literacy. Applicants must demonstrate competency in English composition, reading and mathematics as determined by placement testing. Students who are required to complete foundations courses must plan their curriculum with an academic advisor.

Mercer County Community College has articulation agreements for Information Systems graduates to transfer to Drexel University, Fairleigh Dickinson University, and NJIT. Other institutions that students have successfully transferred to include Rider University, Penn State, The University of Maryland, and The University of Delaware.

The Database Administration certificate of proficiency teaches the skills to manage and maintain database management systems (DBMS) software and advanced functionalities of Microsoft Excel to support administrative decision-making, including mainstream products

such as Oracle and Microsoft SQL Server. Students who demonstrate solid academic performance will be encouraged to complete the MCDBA core examination and Oracle certification exams.

**SEE ALSO:**

- [Computer Science](#) degree program
- [Computer Science](#) certificate program
- [Computer Support Specialist](#) certificate program
- [Data Analytics](#) certificate program
- [Database Concepts and Skills Associate](#) certificate program
- [Information Technology](#) degree program
- [Information Technology: Cybersecurity](#) degree program
- [IT System Analyst Associate](#) certificate program
- [Mobile and Web Computing](#) certificate program
- [Oracle SQL Programming and Database Design Specialist](#) certificate program
- [Web Development](#) certificate program

## DEGREE CURRICULUM

2023-2024 Academic Year

INFO.SYS.AS  
CIP 110201

The course sequence below represents a recommended example of how this degree program can be completed in two years, presuming a Fall Term start and satisfaction of all Developmental Studies (foundation courses) requirements and prerequisites. Actual approaches toward completion depend on each student's anticipated transfer institution, career objectives, or other individual circumstances.

Students are encouraged to meet regularly with an academic advisor or Success Coach to consider options, establish plans, and monitor progress.

Code	Course (lecture/lab hours)	Credits	To Do This Semester
<b>FIRST SEMESTER</b>			
<a href="#">ENG 101</a>	English Composition I (3/0)	3	<ul style="list-style-type: none"> <li>✓ Meet with your faculty advisor to complete an academic plan. Make sure you are aware of any course prerequisites you may need to take, and how long it will take to complete your degree.</li> <li>✓ Use your online tools: Check your <a href="#">MercerMail</a> daily, utilize features of Office 365, and get to know <a href="#">Student Planning</a>.</li> <li>✓ Take advantage of <a href="#">Learning Centers</a> or <a href="#">Online Tutoring</a> to support your studies and assignments.</li> </ul>
<a href="#">MAT 151</a>	Calculus I for the Mathematical and Physical Sciences <ul style="list-style-type: none"> <li>• Or consult academic advisor if lower course level more appropriate.</li> </ul>	4	
<a href="#">NET 102</a>	Introduction to PC Hardware and Software (2/3)	3	
<a href="#">IST</a> —	Computer Concepts requirement (2/2) <ul style="list-style-type: none"> <li>• Select from IST 101 or 102.</li> </ul>	3	
— —	<a href="#">Humanities general education elective</a>	3	

## SECOND SEMESTER

<a href="#">CMN 111</a>	Speech: Human Communication (3/0)		<ul style="list-style-type: none"> <li>✓ Transitioning to college can be challenging. Meet with your <a href="#">Success Coach</a> for guidance and support.</li> <li>✓ Apply for <a href="#">financial aid</a> by May 1.</li> <li>✓ Contact professors with questions and use their office hours to develop a connection.</li> <li>✓ Apply for Continuing Student scholarships at <a href="http://www.mccc.edu/m-scholarships">www.mccc.edu/m-scholarships</a>.</li> <li>✓ Begin attending college transfer events and visit campuses. Be sure to visit the <a href="#">Transfer Services</a> and <a href="#">Career Services</a> offices to get to know how the transfer process works and to explore career options.</li> <li>✓ Plan for how you will complete transfer applications while finishing your classes.</li> </ul>
	OR	3	
<a href="#">CMN 112</a>	Public Speaking (3/0)		
<a href="#">ENG 102</a>	English Composition II (3/0)	3	
<a href="#">IST 110</a>	Introduction to Python (2/2)	3	
<a href="#">NET 104</a>	Fundamentals of Computer Networks (2/2)	3	
— —	Programming elective	3	
	<ul style="list-style-type: none"> <li>• Select from COS 101 or IST 109. Consult academic advisor for IST 108 substitution.</li> </ul>		

## THIRD SEMESTER

<a href="#">COS 102</a>	Computer Science I (3/2)	4	<ul style="list-style-type: none"> <li>✓ Keep in contact with each professor and your faculty advisor. Make sure you are on track to graduate.</li> <li>✓ Complete your applications to desired transfer institutions.</li> <li>✓ Develop team and leadership skills by getting involved in <a href="#">activities and clubs</a>.</li> <li>✓ Manage your stress! Take advantage of the MCCC pool, <a href="#">Fitness Center</a>, free yoga and Zumba. Reach out for <a href="#">counseling</a> or other support if you need it. Your <a href="#">Success Coach</a> can connect you with resources.</li> </ul>
<a href="#">ECO 111</a>	Macroeconomics (3/0)	3	
<a href="#">IST 256</a>	Systems Analysis (2/2)	3	
<a href="#">PHY 115</a>	University Physics I (3/3)	4	
	<ul style="list-style-type: none"> <li>• Consult academic advisor for PHY 101 substitution.</li> </ul>		

## FOURTH SEMESTER

<a href="#">BUS 230</a>	Global Environment of Business (3/0)	3	<ul style="list-style-type: none"> <li>✓ Apply for <a href="#">financial aid</a> by May 1.</li> <li>✓ Talk to your faculty advisor and the <a href="#">Transfer office</a> for advice on how to successfully transition to a new school.</li> </ul>
<a href="#">IST 251</a>	Management of Computer Technology (2/2)	3	
<a href="#">IST 253</a>	Database Concepts (2/2)		
	OR	3	
<a href="#">CIS 173</a>	PC Applications: Database (2/2)		

<u>NET 256</u>	Cloud Foundations (2/2)	3	✓ Apply for Graduating Student scholarships at <a href="http://www.mccc.edu/m-scholarships">www.mccc.edu/m-scholarships</a> .
	<ul style="list-style-type: none"> <li>Consult academic advisor for other IST or NET course substitution.</li> </ul>		
— —	<u>Social Science general education elective</u>	3	
		<b>60</b>	

## CERTIFICATE CURRICULUM

2023-2024 Academic Year

INFO.TECH.DB.CERT  
CIP 521201

Credit-bearing certificate programs can serve as gateways to earning an associate degree. Students are encouraged to consult the program coordinator, an academic advisor or Success Coach to explore such opportunities.

Code	Course (lecture/lab hours)	Credits
<u>ENG 101</u>	English Composition I (3/0)	3
<u>IST 109</u>	Introduction to Programming (2/2)	3
<u>IST 222</u>	PL/SQL Programming (2/2)	3
<u>IST 250</u>	Decision Support Using MS Excel (3/2)	4
<u>IST 253</u>	Database Concepts (2/2)	3
<u>IST 260</u>	SQL Server Database Design (3/2)	4
<u>IST 261</u>	SQL Server System Administration (3/2)	4
<u>IST 262</u>	Oracle SQL (3/2)	4
	<ul style="list-style-type: none"> <li>Must be taken in sequence.</li> </ul>	
<u>IST 263</u>	Database Administration I (3/2)	4
	<ul style="list-style-type: none"> <li>Must be taken in sequence.</li> </ul>	
<u>IST 264</u>	Database Administration II (3/2)	4
	<ul style="list-style-type: none"> <li>Must be taken in sequence.</li> </ul>	
		<b>36</b>