

# Computer Information Systems

Associate in Science Degree in Information Systems  
Certificate of Proficiency: Database Administration

Program **INFO.SYS.AS**  
CIP 110201  
Certificate **INFO.TECH.DB.CERT**  
CIP 521201

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.

## Curriculum

Code	Course (lecture/lab hours)	Credits
<b>FIRST SEMESTER</b>		
CSW 100	College Success and Personal Wellness (2/0)†	2
ENG 101	English Composition I (3/0)	3
NET 102	Introduction to PC Hardware and Software (2/3)	3
IST —	Computer Concepts requirement (2/2) <sup>1</sup>	3
MAT —	Mathematics elective <sup>2</sup>	4
<b>SECOND SEMESTER</b>		
ACC 111	Financial Accounting (4/0)	4
CMN 111	Speech: Human Communication (3/0)	3
CMN 112	Public Speaking (3/0)	3
ENG 102	English Composition II (3/0)	3
NET 104	Fundamentals of Computer Networks (2/2)	3
— —	Programming elective <sup>3</sup>	3-4
<b>THIRD SEMESTER</b>		
COS 102	Computer Science I (3/2)	4
ECO 111	Macroeconomics (3/0)	3
IST 256	Systems Analysis (2/2)	3
— —	Lab Science elective <sup>4</sup>	3-4
— —	Social Science general education elective	3
<b>FOURTH SEMESTER</b>		
BUS 230	Global Environment of Business (3/0)	3
IST 251	Management of Computer Technology (2/2)	3
IST 253	Database Concepts (2/2)	3
CIS 173	PC Applications: Database (2/2)	3
— —	IST or NET elective (2/2)	3
— —	IST or NET elective (2/2)	3
— —	Humanities general education elective	3
		<b>65-67</b>

<sup>1</sup> Select from IST 101 or 102.

<sup>2</sup> Select from MAT 151 (preferred), 146.

<sup>3</sup> Select from COS 101; IST 107, 108, or (with IST 109 prerequisite) 123.

<sup>4</sup> PHY 101 or 111 recommended.

†Some exemptions apply. Consult academic advisor for details.

## Certificate Curriculum

Code	Course (lecture/lab hours)	Credits
ENG 101	English Composition I (3/0)	3
IST 109	Introduction to Programming (2/2)	3
IST 222	PL/SQL Programming (2/2)	3
IST 250	Decision Support Using MS Excel (3/2)	4
IST 253	Database Concepts (2/2)	3
IST 260	SQL Server Database Design (3/2)	4
IST 261	SQL Server System Administration (3/2)	4
IST 262	Oracle SQL (3/2) <sup>1</sup>	4
IST 263	Database Administration I (3/2) <sup>1</sup>	4
IST 264	Database Administration II (3/2) <sup>1</sup>	4
		<b>36</b>

<sup>1</sup> Must be taken in sequence.