



THOMAS MORE UNIVERSITY

Computer Information Systems

Dual-Credit Pathway

Pathway Description:

Computer Information Systems has emerged as a professional discipline in recent years and the importance of computer technology in science, business and our daily lives is well recognized. The program is structured to prepare students for graduate school or employment in the business sector. The program emphasizes skills and professional practice set in the context of an integrated liberal arts education. An optional cooperative educational program is available to provide additional related experience. Programs with dual majors in Accounting, Business and Mathematics are encouraged.

Pathway Courses (to be taken in order):

<u>Course</u>	<u>Title</u>
CIS 113	Computer Applications and Hardware
CIS 114/CIS 114L	Introduction to Programming (with Lab)
CIS 115/CIS 115L	Introduction to Programming II (with Lab)
CIS 231	Foundations of Networking
CIS 267	Database I

Pathway Course Descriptions:

- **CIS 113: Computer Applications and Hardware**
 - Prerequisite: None
 - Description: A review of the history and need for information processing, the basic information processing cycle and functions, the processing capabilities of computers, system development, and program development. Key application areas in business, including word processing, data base management systems, spreadsheets, and web page design will be examined in some depth. The hardware associated with a computer will be discussed and examined. Hands-on use of a microcomputer for at least an introductory acquaintance with each application will be required. Installation of hardware and software will also be covered.
- **CIS 114/CIS 114L: Introduction to Programming**
 - *Note:* Students who earn a 3+ on AP Computer Science earn credit for CIS 114 at TMU.
 - Prerequisite: None
 - Description: Introduction to basic programming techniques and fundamental structures and methodologies of modern programming languages. Topics include basic program structure, variables, scope, decision structures, and loops. The course involves multiple programming projects
- **CIS 115/CIS 115L: Introduction to Programming II**
 - Prerequisite: CIS 114/L



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- Description: Expand the basic programming concepts introduced in CIS114 Introduction to Programming. Introduce advanced concepts - inheritance, polymorphism, abstract classes, exception handling, and the use of graphical user interfaces. Gain more practical experience by designing and writing applications.
- **CIS 231: Foundations of Networking**
 - Prerequisite: CIS 113
 - Description: An introduction to digital communications, local area networks, wide area networks, inter networks, error handling, and network security. This course will have a strong “hands-on” component.
- **CIS 267: Database I**
 - Prerequisite: CIS 113
 - Description: Introduction to database concepts for modern database design. Topics include entity relationship modeling, relational data model, SQL, relational database design, and normalization. Non-relational databases will be highlighted.

Certifications Earned:

- n/a

Additional Notes:

- No Computer Information Systems major may graduate with a “D” in any Computer Information Systems (CIS) or Mathematics (MAT) courses required for their major.
- Future CIS/MIS Majors have the opportunity for a full tuition scholarship in exchange for working 20hrs/week in the computer center. This scholarship is usually awarded to two students each year. For more information, please visit:
<https://www.thomasmore.edu/admissions/scholarships-financial-aid/mis-cis-scholarship/>

Links:

- Program website: <https://www.thomasmore.edu/program/computer-information-systems/>