

Computer Applications: Database Systems Certificate (238)

Program Description

MC's database systems certificate curriculum will provide you with the training, skills, and knowledge necessary for employment as an entry level database programmer or designer. The certificate can also enhance your skills if you are already working in the field. Through curriculum coursework, you will create Microsoft Access and web database applications, and will write database user interfaces in the Visual Basic.Net environment.

Program Outcomes

Upon completion of this program a student will be able to:

- Describe the advantages, disadvantages, and appropriate uses of various database management systems (DBMS).
- Design a database system based on user requirements.
- Create entity-relationship diagrams that accurately describe a database structure.
- Understand and successfully utilize basic database design concepts such as primary and foreign keys, normalizing, bridge tables, alternate primary keys, and strong versus weak entities.
- Create a database system that successfully fulfills an organization's data requirements.

Program Advising

Germantown

Prof. Terri Maradei
240-567-1967
Terri.Maradei@montgomerycollege.edu

Rockville

Prof. Linda Fontaine
240-567-4005
Linda.Fontaine@montgomerycollege.edu

Takoma Park/Silver Spring

Prof. Karen Penn de Martinez
240-567-7661
Karen.Penn demartinez@montgomerycollege.edu

All students should review the [Program Advising Guide](https://www.montgomerycollege.edu/acalog/working/program-advising-guides/database-systems-certificate-238.pdf) and consult an advisor. For more information, please visit <https://appserv3.montgomerycollege.edu/acalog/working/program-advising-guides/database-systems-certificate-238.pdf>

To view the [Advising Worksheet](https://www.montgomerycollege.edu/_documents/counseling-andadvising/advising-worksheets/current-catalog/006.pdf), please visit https://www.montgomerycollege.edu/_documents/counseling-andadvising/advising-worksheets/current-catalog/006.pdf

Suggested Course Sequence for Part-Time Students

Listed below is a suggested course sequence for part-time students. It is recommended that students take courses in the order stated.

Database Systems Certificate (238) <u>Program Requirements</u>		
Course Code	Course Name	Hours
CMSC 140	Introduction to Programming	3
CMSC 222	Visual Programming**	3
CMAP 245	Database Applications*	3
TECH 272	Professional Website Development***	4
TECH 278	Web Application Development Using ColdFusion†	4
TECH 282 -Or- TECH 288	Web Application Development Using PHO and MySQL†† -Or- Advanced Web Application Development Using ColdFusion‡	3

Total Credit Hours: 20

* PREREQUISITE: [CMAP 120](#) or consent of department.

** PREREQUISITE: A grade of C or better in [CMSC 140](#) or consent of department..

*** PREREQUISITE(S): Any CMAP, CMSC, GDES or TECH course that is two credits or more or consent of department.

† PREREQUISITE: [TECH 272](#) or consent of department.

†† PREREQUISITE(S): [CMSC 140](#) or [TECH 278](#) or consent of department.

‡ PREREQUISITE: [TECH 278](#) or consent of department.

Computer Applications: Information Technology Certificate (213)

Program Description

This certificate curriculum is for the career professional who needs to become more proficient at using today's popular software applications as tools in decision making, managing people and information, communicating effectively, enhancing company viability, and addressing today's many technology challenges.

Program Outcomes

Upon completion of this program a student will be able to:

- Utilize productivity software (such as word processing, spreadsheet, database, and presentation software) to create, analyze, store, and report information.
- Locate and manage data on personal or collaborative technology.
- Present information using multiple electronic media.

Program Advising

Germantown

Prof. Terri Maradei
240-567-1967
Terri.Maradei@montgomerycollege.edu

Rockville

Prof. Linda Fontaine
240-567-4005
Linda.Fontaine@montgomerycollege.edu

Takoma Park/Silver Spring

Prof. Karen Penn de Martinez
240-567-7661
Karen.Penn demartinez@montgomerycollege.edu

All students should review the [Program Advising Guide](https://appserv3.montgomerycollege.edu/acalog/working/program-advising-guides/database-systems-certificate-238.pdf) and consult an advisor. For more information, please visit <https://appserv3.montgomerycollege.edu/acalog/working/program-advising-guides/database-systems-certificate-238.pdf>

To view the [Advising Worksheet](https://appserv3.montgomerycollege.edu/acalog/working/program-advising-guides/information-technology-certificate-213.pdf), please visit <https://appserv3.montgomerycollege.edu/acalog/working/program-advising-guides/information-technology-certificate-213.pdf>

Suggested Course Sequence for Part-Time Students

Listed below is a suggested course sequence for part-time students. It is recommended that students take courses in the order stated.

Information Technology Certificate (213) <u>Program Requirements</u>		
Course Code	Course Name	Hours
CMAP 106	Computer Literacy	3
CMAP 120	Introduction to Computer Applications	3
CMAP 232	Word Processing Applications*	3
CMAP 245	Database Applications*	3
CMAP 252	Spreadsheet Applications*	3
TECH 272	Professional Website Development**	4

Total Credit Hours: 19

* PREREQUISITE: [CMAP 120](#) or consent of department.

** PREREQUISITE(S): Any CMAP, CMSC, GDES or TECH course that is two credits or more or consent of department.