

## Computer Information Systems (CIS)

This curriculum is designed to prepare graduates for employment opportunities in programming, networking, and web administration. Students are encouraged to also complete one of the certificates in Web Programming or Computer Networking. Positions as programmers and technicians are available in various sectors of business, particularly insurance, banking, public utilities, retailing and manufacturing firms. Schools, colleges and government agencies also employ such individuals. Students entering this curriculum should have successfully completed Regents Algebra I. Dutchess Community College graduates also are able to transfer many of their credits to accredited colleges if students decide to pursue a Bachelor's Degree in an Information Science field.

The Associate in Applied Science (A.A.S.) degree is awarded upon completion of the requirements for this program. Upon successful completion of the CIS program, graduates should be able to:

- Develop a creative and structured approach to solving a business problem by configuring alternate IT approaches.
- Write, test, and debug a program that utilizes basic programming fundamentals such as variable declaration, iteration, conditionals, array manipulation, basic computational constructs and relational database connectivity.
- Differentiate and utilize operating system routines in developing business solutions.
- Critically discern the quality of data and identify the parameters and constraints of using, transmitting, securing, and storing of data.

Courses should be selected in consultation with an advisor.

### First Semester

Course No.	Descriptive Title	Credit Hours
ENG 101	Composition I	3
BHS 103	Social Problems in Today's World	3
CIS 111	Computer Systems and Applications	3
CIS 112	Computer Programming I	4
CIS 107 or	Web Programming for Business OR	3
CIS 117	Data Communication Concepts (b)	
<b>TOTAL</b>		<b>16</b>

### Second Semester

Course No.	Descriptive Title	Credit Hours
ENG 102	Composition II	3
Math Course (a)		3
American History course (Appendix D) OR		

ECO 105	Economics Issues	3
CIS 123	Computer Programming II	3
CIS 124	Computer Operating Systems	3
<b>TOTAL</b>		<b>15</b>

### Third Semester

Course No.	Descriptive Title	Credit Hours
Natural Science course (Appendix B)		4
General Education course from any Appendix except H or J		3
CIS 211	Applied Database Concepts	3
CIS 212	Systems Analysis and Design	3
CIS 126	Linux with Python OR	
CIS 216	Windows Server (b)	3
<b>TOTAL</b>		<b>16</b>

### Fourth Semester

Course No.	Descriptive Title	Credit Hours
Free elective (c)		3
CIS 213 OR	Data Analytics for Business OR	3
CIS 106	Cloud Computing Fundamentals	
CIS 223	Computer Projects and Applications	3
CIS 150 OR	Information Security Management OR	
CIS 140	Health Information Management	3
CIS 228 OR	Web Site Administration OR	
CIS 218 OR	Routing and Switching Tech. OR	
CIS 265 (b)	Career Capstone Seminar	3
<b>TOTAL</b>		<b>15</b>

- a. MAT118 or MAT210 or MAT184 or higher. Students intending to transfer to a 4-year school for Information Systems should speak with the CIS Program Chair to determine which math course(s) are required at the transfer school.
- b. See advisor to discuss which course is most appropriate.
- c. Read a full discussion of the free elective requirement.