



**Computer Information Systems**  
**Concentration: Database Analyst (DATA)**  
**AAS #1796 (61 credits)**  
**Effective Fall 2020**

\*Students should see your assigned advisor to develop your individual educational plan. The course schedule, program sequencing and curriculum are subject to change.

**Developmental Courses (as determined through College Placement Testing) \* and Prerequisites:**

*\* Zero level courses must be completed with a C grade or higher.*

<input type="checkbox"/> ESL classes	<input type="checkbox"/> ENGL 050	<input type="checkbox"/> MATH 006
<input type="checkbox"/> ENGL 002	<input type="checkbox"/> ENGL 051	<input type="checkbox"/> MATH 070 – Fundamentals of Quantitative Lit
<input type="checkbox"/> ENGL 003	<input type="checkbox"/> ENGL 057	<input type="checkbox"/> MATH 080 – Fundamentals of Statistics

**General Education Courses**

<b>ENGL 101</b>	<b>3</b>	Pre: ENGL 003 and ENGL 051 or ENGL 057 with C or higher & Co: ENGL 003
<b>Comm 101 or Comm 203</b>	<b>3</b>	Eligibility for ENGL 101 and completion of any reading course ENGL 101 with a grade of C or higher
<b>Core A: Humanities and Arts Elective</b>	<b>3</b>	Select ONE from list: ART 181 or 182; ENGL 206; HUM 101, 115 or 201; MUS 104; PHIL 200; THTR 101; or a foreign language
<b>Core B: Social/Behavioral Science Elective</b>	<b>3</b>	
<b>PE/Wellness</b>	<b>1</b>	See HACC catalog for a list of Wellness courses
<b>FYS Seminar</b>	<b>1</b>	Unless exempted by examination. See HACC catalog for a list of approved courses.

**Required Program Courses**

		<b>Course Title</b>	<b>Pre/Co-Req/Notes</b>
<b>CIS 105</b>	<b>3</b>	Intro to Software for Business	Pre: ENGL 003 and ENGL 051
<b>CIS 110</b>	<b>3</b>	Intro to Computer Information Systems	Pre: ENGL 003 and ENGL 051; Pre or Co-req: CIS 105
<b>CIS 135</b>	<b>3</b>	Intermediate Spreadsheet Application	Pre: CIS 105 with C or higher
<b>CNT 120</b>	<b>3</b>	Network Communications Technology I	Pre: MATH 070 (Advisor Approval) & ENGL 101
<b>Computer Related Elective</b>	<b>3</b>	Choose ONE course from the following subject areas: CIS (except CIS 100), CISE, CNT, GIS, and WEB	
	<b>32</b>	<b>DATABASE ANALYST Concentration</b>	
<b>CIS 140</b>	<b>3</b>	Intermediate Database Management	Pre: CIS 105 or WEB 143 with C or higher
<b>CIS 224</b>	<b>4</b>	Intro to Systems Analysis & Design	See Advising Notes
<b>CIS 241</b>	<b>3</b>	Database Administration I	Pre: CIS 140 or WEB 143
<b>CIS 243</b>	<b>3</b>	Database Administration II	Pre: CIS 241
<b>CIS 245</b>	<b>3</b>	Database Programming	Pre: CIS 140 or WEB 143
<b>CIS 247</b>	<b>3</b>	Database Backup and Recovery	Pre: CIS 243
<b>CIS 257</b>	<b>3</b>	Data Warehouse	Pre: CIS 140 or 241 or permission of the instructor
<b>CIS 278</b>	<b>3</b>	Business Intelligence & Database Analyst Capstone	See Advising Notes
<b>MATH 202</b>	<b>4</b>	Introduction to Statistics (Core C)	Pre: See Math Advising Guide and ENGL 003 & 051

<b>Database Related Elective</b>	<b>3</b>	Select ONE course: CIS 222, 249, 258, 264; WEB 126, 143	
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### Advising Notes

**Prerequisites for CIS 224:** CNT 120 (with a grade of “C” or higher) **and** one of the following: CIS 238, 245, CPS 115, 121, 135, 230, WEB 140, 143, 144, 220, 240, 242, 244, 246 (with a grade of “C” or higher) .

**Pre and Co-requisites for CIS 278:** Prerequisites: CIS 243 or WEB 240 & CIS 245 or WEB 245.

Co-requisites: CIS 224, CIS 257 & either CIS 247 or CIS 258; or permission of instructor.

*Grades of C or higher are required for all computer-related courses (CIS, CISE, CNT, CPS, ELEC, GIS, and WEB) and in all degree concentrations for graduation (BUSI, MATH).*

### RECOMMENDED SEQUENCE FOR FULL-TIME STUDENTS

Part time students can complete this program by taking one or more courses each semester.

#### Database Analyst Concentration

Fall Semester I		Spring Semester I		Summer		Fall Semester II		Spring Semester II	
CIS 105	3	CIS 135	3	CIS 241	3	CIS 243	3	CIS 224	4
CIS 110	3	CIS 140	3			CIS 245	3	CIS 247	3
CNT 120	3	MATH 202 (Core C)	4			CIS 257	3	CIS 278	3
COMM 101 or 203	3	Humanities/Arts	3			Computer Elective	3	Social/Behavioral	3
ENGL 101	3	Elective				Database Elective	3	Science Elective	
FYS Elective	1							PE/Wellness	1

*This is an overview of the program. Any suggested course sequencing is meant to serve as a guideline for your semester planning. Students are expected to see your assigned advisor to develop and review their individual educational plans. Program specific questions can be directed to the faculty contacts. The scheduling of courses, program sequencing and curriculum are subject to change.*

#### Counselor/Advisor Contact Information by Campus:

<u>Gettysburg</u>	<u>Harrisburg</u>	<u>Lancaster</u>	<u>Lebanon</u>	<u>York</u>
Student Services	Counseling and Advising	Counseling and Advising	Receptionist Desk	Welcome Center
Lobby	Cooper	221 Main	Lobby	Leader 102
717-337-3855	717-780-2498	(717) 358-2988	717-270-4222	717-801-3213, ext. 3513

## **Certifications and Certificates for Credit Computer Department ~ April 2017**

Certifications must be current at the time of presentation for this credit.

**\*\*\* Computer industry certifications and transfer of college computer related credits over 7 years of age will not be accepted for students in the following majors: AOM, CIS, CISE, CNT, Computer Repair or WEB. \*\*\***

### **Software, AOS and Database:**

1. **CAP/CPS** = AOS 101, 110, 203, 225, & 226. (15 credits)
2. **MOS in PowerPoint** = CIS 108
3. **MOS in Word, Access and Excel** = CIS 105
4. **MOS Expert** = no credit
5. **MOS Master**- student must take Word, Access and excel options of the exam to earn credit for CIS 105
6. **MOS Master**- if student takes PowerPoint exam as part of the series, they also would earn CIS 108
7. **Non-credit** certificate in computer proficiency = CIS 105
8. **PHEAA training academy** certificate in PowerPoint = CIS 108
9. **PHEAA training academy** certificate in word, excel and access = CIS 105
10. **MCDBA -Microsoft Certified Database Administrator (MCDBA) credential**, you must pass four exams: equivalent to CIS140 (Access), CIS241 (DBAI), and DB Elective (9 - credits).
11. **Microsoft Solutions Expert in Business Intelligence** certificate = CIS 257

### **Hardware & Networking:**

1. **A+**= CIS 127, ELEC 125 and ELEC 126= 10 credits
2. **BICSI (Installer 1, Installer 2, Technician)** = credit for CNT 140 can be given (Contact Rich Elwell for ok)
3. **Cisco CCNA** = CNT 240
4. **Cisco CCNA specialty certification - CCNA Wireless** = CNT 260
5. **CCNA specialty cert - CCNA Voice** = CNT 230 (previously a 282 course)
6. **Cisco CCNA specialty cert - CCNA Security** = nothing at this time. See Professor Rich Elwell for any updates.
7. **MCSA** = CIS 127 and 1 computer elective=6 credits
8. **MCSE** = CIS 127, CIS 110 and 2 computer electives=12 credits
9. **MCSE and A+** = CIS 127, CIS 110, ELEC 125, ELEC 126 and 1 computer elective= 16 credits
10. **MCDST** = CIS 127
11. **Network+** = CNT 120
12. **Network+ cert & proof of "On the Job"** experience with networking - credit for CNT 120 & CNT 125 may be given. Student should contact Professor Doug Brown or Professor Rich Elwell for approval
13. **SECURITY+** = CNT Technical Elective
14. **CCNA Security** Exam 210-260 (may not be more than 3 years old) = CISE 200