PennWest UNIVERSITY

Degree: Bachelor of Science
College: Science, Technology, and Business
Major: Computer Information Systems
Major Code: CISY
Concentration: N/A

Credits Required: 120

Minor: N/A
Minor Code: N/A

General Education

Foundations: (12 Credits)

Oral Communication (3 Credits)
- ☐ COMJ 1010 Public Speaking

Quantitative Reasoning (3 Credits)
- ☐ MATH 1510 Discrete Structures

Technological Literacy (3 Credits)
- ☐ CMIS 1100 Introduction to Information Systems

Written Communication (3 Credits)
- ☐ ENGL 1200 College Composition

Discoveries: (Credits 27)

Art/Humanities (9 Credits)
- ☐ _____
- ☐ _____
- ☐ _____

Natural Sciences & Technology (9 Credits)
- ☐ QBA 1000 or GEOG 2150
- ☐ STAT 2020 or STAT 2010
- ☐ _____

Social Sciences (9 Credits)
- ☐ ECON 1000, 2100, 2200 or GEOG 1050 or 1110
- ☐ _____
- ☐ _____

Elective/Wellness & Personal Health: (3 Credits)
- ☐ CMAC 2000 Intro to Cybersercurity

Competencies:

Applied Methodologies
- ☐ CMIS 4250 or CMIS 4920

Ethical Reasoning
- ☐ CMIS 3000 Principles of Responsible Computing

Information Literacy
- ☐ CMIS 3000 Principles of Responsible Computing

Intercultural Fluency
- ☐ CMIS 4900 Senior Capstone I

Keystone Experience
- ☐ CMIS 4920 Senior Capstone II

Quantitative Applications
- ☐ CMIS 4250 Appl of Machine Learning and Deep Learning

Writing Intensive
- ☐ CMIS 4900 Senior Capstone I
  - ☐ ~And~ one of the following:
    ENGL 3230, ENGL 3240 or CMAC 3010

Program Requirements

Required Major Courses: (40 Credits)

- ☐ CMIS 1200 Application Programming I
- ☐ CMIS 2200 Application Programming II
- ☐ CMIS 3000 Principles of Responsible Computing
- ☐ CMIS 3125 Systems Analysis and Design
- ☐ CMIS 3150 Database Design and Modeling
- ☐ CMIS 3200 Database Application Programming
- ☐ CMIS 3250 CISCO CCNA 1
- ☐ CMIS 3500 Web Programming I
- ☐ CMIS 3600 Systems Project Management
- ☐ CMIS 4500 Web Programming II
- ☐ CMIS 4250 Appl of Machine Learning and Deep Learning
- ☐ CMIS 4900 Senior Capstone I
- ☐ CMIS 4920 Senior Capstone II

Major Electives: (11 Credits) Select from the following:
**See note on 2nd page **

CMIS 3260 CISCO CCNA II , CMIS 3270 CISCO CCNA III, CMIS 3340 COBOL, CMIS 3720 Decision Support System, CMIS 4720 ERP, CMIS 4950 CIS Internship, CMIS 3990 Special Topics in Inf Sys, CMSC 3380 Python, CMAC 3740 Mobile Application Development, DSA 5100 Database Mgmt Systems & Data Warehousing, DSA 5200 Python Programming for Data Science, DSA 5300 Analytical Methods & Optimization, DSA 5400 Applied Data Mining, PSC 6000 Operating Systems, PSM 6450 Applied Cryptography, PSC 7350 Biometrics, PSC 7450 Cyber Risk Mgmt & Assess, PSC 7550 Wireless Network & Security

Related Electives: (9 Credits) *Select from the following:*

Business Track:
MGMT 3000 - Introduction to Management **and**
Choose one from any 2000-3000 level ACCT or FINA **and**
Choose one from any 2000-3000 level BLAW, BSIN, MKTG or IENT

Geosciences Track:
GGIS 1510 Geo Business or GEOG 3420 Envrn Disasters & Mapping, **And choose any two from**: GGIS 1210 Mapping Our Environment, GGIS 2300 Environmental Remote Sensing, GGIS 3050 Spatial Methods in Energy & Natural Resources, GGIS 2100 Geographic Information Systems, or GGIS 3110 Geospatial Data Handling & Integration, or GEOG 3420 Environmental Disasters & Mapping

Free Electives: (18 Credits)

- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____ Updated 7/16/2024

Suggested Four Year Course Sequence

Year 1

Fall Semester

CMIS 1100 Introduction to Information Systems
CMIS 1200 Application Programming I
ENGL 1200 College Composition
COMJ 1010 Public Speaking
STAT 2020 Elements of Statistics
    ~Or~ STAT 2010 Business Statistics

Spring Semester

CMIS 2200 Application Programming II
CMAC 2000 Introduction to Cybersecurity
MATH 1510 Discrete Structures
QBA 1000 QBA-1 Optimization
    ~Or~ GEOG 2150 Conservation of Natural Resources
ENGL 3230 Technical Writing
    ~Or~ ENGL 3240 Workplace Writing

Year 2

Fall Semester

ECON 1000 Elements of Economics
    ~Or~ ECON 2100 Principles of Microeconomics, ECON 2200 Principles of Macroeconomics, GEOG 1050 People & The Planet, or GEOG 1110 World Geography
CMIS 3250 Cisco CCNA I
MGMT 3000 Principles of Management
    ~Or~ GGIS 1510 Geo Business
Discoveries - Social Science
Discoveries - Social Science

Spring Semester

CMIS 3125 Systems Analysis and Design
Discoveries - Natural Science & Technology
Discoveries - Arts and Humanities
Discoveries - Arts and Humanities
Free Elective

Year 3

Fall Semester

CMIS 3000 Responsible Computing
CMIS 3150 Database Design & Modeling
CMIS 3500 Web Programming I
CMIS 3600 Systems Project Management
Discoveries - Arts And Humanities

Spring Semester

CMIS 4900: Senior Capstone
CIS Major Elective
CIS Major Elective
Related Elective
Free Elective

Year 4

Fall Semester

CMIS 3200 Database Application Programming
CMIS 4500 Web Programming II
CMIS 4250 Applications of Machine Learning
Related Elective
Free Elective

Spring Semester

CMIS 4920: Senior Capstone II
CIS Major Elective
CIS Major Elective
Free Elective
Free Elective

Program Note:
Restrictions apply for the allowed number of graduate credits (level DSA, PSM and PSC courses) allowed for an undergraduate major and only a maximum of 4 credits of CMIS 4950 will be allowed for electives