PennWest UNIVERSITY

Degree: BS
College: College of Science, Technology & Business
Major: Computer Information Systems
Major Code: CISY
Concentration: No Concentration

Credits Required: 120
Minor: N/A
Minor Code: N/A

General Education

Foundations: (12 Credits)

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

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

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

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

Discoveries: (Credits 27)

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

Social Sciences (9 Credits)
- ☐ ECON 1000 Elements of Economics or ECON 2100 Principles of Microeconomics or ECON 2200 Principles of Macroeconomics or GEOG 1050 People and Planet or GEOG 1110 World Geography
- ☐ _____
- ☐ _____

Natural Sciences & Technology (9 Credits)
- ☐ MGMT 2400 Business, Nature, and Well Being or GEOG 2150 Conservation of Natural Resources
- ☐ STAT 2020 Elements of Statistics or STAT 2010 Business Statistics
- ☐ _____

Wellness & Personal Health: (3 Credits)
- ☐ CMAC 2000 Introduction to Cybersecurity

Competencies:

Quantitative Applications
- ☐ CMIS 4250 Applications of ML & DL

Applied Methodologies
- ☐ CMIS 4250 Applications of ML & DL or CMIS 4920 Senior Capstone II

Intercultural Fluency
- ☐ CMIS 4900 Senior Capstone I

Ethical Reasoning
- ☐ CMIS 3000 Principles of Responsible Computing

Information Literacy
- ☐ CMIS 3000 Principles of Responsible Computing

Writing Intensive
- ☐ CMIS 4900 Senior Capstone I and Any ENGL course

Keystone Experience
- ☐ CMIS 4920 Senior Capstone II

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 Applications of Machine Learning and Deep Learning
- ☐ CMIS 4900 Senior Capstone I
- ☐ CMIS 4920 Senior Capstone II

Major Electives: (11 Credits)

Restrictions apply for the 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.

Pick 11 credits from CMIS 3260 CISCO CCNA II, CMIS 3270 CISCO CCNA III, CMIS 3340 COBOL, CMIS 3720 Decision Support Systems, CMIS 4720 ERP, CMIS 4950 CIS Internship, CMSC 3380 Python, CMAC 3740 Mobile Application Development, DSA 5100 Database Management Systems and Data Warehousing, DSA 5200 Python Programming for Data Science, DSA 5300 Analytical Methods and 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

- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____

Required Related Electives: (9 Credits)

Choose 9 credits from one of the tracks:

Business Track:
- ☐ MGMT 3000 Introduction to Management
- ☐ One 2000+ level ACC or FINA
- ☐ One 2000+ level BLAW or MKTG or IENT

Geosciences Track:
- ☐ GIST 1510 GeoBusiness

Choose Two GIST courses: GIST 1210 Mapping Our Environment or GIST 2300 Environmental Remote Sensing or GIST 3050 Spatial Methods in Energy and Natural Resources or GIST 2100 Geographic Information Systems or GIST 3110 Geospatial Data Handling and Integration

- ☐ _____
- ☐ _____

Free Electives: (18 Credits)

- ☐ _____ ☐ _____
- ☐ _____ ☐ _____
- ☐ _____ ☐ _____

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
MGMT 2400: Business, Nature, and Well Being
~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 and the Planet, or GEOG 1110: World Geography
CMIS 3250: Cisco CCNA I
MGMT 3000: Principles of Management
~Or~ GGIS 1510: GeoBusiness
Discoveries: Social Science
Discovereis: Social Science

Spring Semester

CMIS 3125: Systems Analysis and Design
Discoveries: Natural Science & Technology
Discoeries: 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
Discovereies: Arts And Humanities or Social Sciences

Spring Semester

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