

Pennsylvania Western University

Computer Science Advisement Sheet (Fall 2023)

General Education (60 Credits)

Foundations

COMJ 1010: Public Speaking _____
 ENGL 1200: College Composition _____
 MATH 2410: Analytical Geometry and Calculus I _____
 CMSC 1200: Problem Solv/Prg Constructs _____

Foundations (6 courses total, 1 is Intercultural **)

Arts & Humanities _____
 Arts & Humanities _____
 Arts & Humanities _____

Social Sciences _____
 Social Sciences _____
 Social Sciences _____

MATH 2420: Analytical Geometry and Calculus II _____
 Natural Science * _____
 Natural Science * _____

Elective or Wellness

CMAC 1240: Computer Programming I _____

Competencies

Intercultural Fluency ** _____
 Ethical Reasoning *** _____
 Writing Intensive _____

Free Electives (8 credits)

Program Notes:

* Choose from: CHEM 1108, CHEM 1128, GLGY 1500, ATMS 1100

** Choose from: ANTH 1000, ART 1200, ENGL 2310, ENGL 2330.

*** Choose from: CMIS 3000, PHIL 3210

Program Requirements (60 Credits)

Required Major Courses

CMSC 2040: Object-Oriented Programming _____
 CMSC 2100: Logic and Switching Theory _____
 CMSC 3040: Data Structures _____
 CMSC 3100: Assembly _____
 CMSC 3140: Analysis of Algorithms _____
 CMSC 3180: Data Comm. and Networking _____
 CMSC 3240: Computer Architecture _____
 CMSC 3320: Tech Computing using Java _____
 CMSC 4000: Operating Systems _____
 CMSC 4080: Structures of Prog. Lang _____
 CMSC 4140: Theory of Languages _____
 CMSC 4180: Language Translations _____
 CMSC 4900: Senior Project I _____
 CMSC 4920: Senior Project II _____

Required Related Courses

MAT 1510: Discrete Structures _____
 MATH 3210: Linear Algebra I _____
 STAT 2020: Elements of Statistics _____

CMSC Elective (Choose 3 courses, at least one course from Advanced Elective and at most two courses from Programming Elective)

Advanced Elective

CMSC 3200: Database Application Prog _____
 CMSC 3990: Special Topics in Computer Science _____
 CMSC 3780: Computer Graphics _____
 CMSC 4120: Parallel Processing _____
 CMSC 4200: Artificial Intelligence _____
 CMSC 4240: Numerical Analysis _____

Programming Elective

CMSC 3340: COBOL _____
 CMSC 3360: FORTRAN _____
 CMSC 3380: Python _____
 CMSC 3700: 2D Game Programming _____
 CMSC 3720: 3D Game Programming _____
 CMSC 4950: Internship _____

Suggested Eight-Semester Course Sequence

<p>Semester 1 (16 Credits) CMSC 1200: Problem Solving and Programming Constructs (3 credits) ENGL 1200: College Composition (3 credits) MATH 2410: Analytical Geometry and Calculus I (4 credits) Arts & Humanities/Social Sciences course (3 credits) Arts & Humanities/Social Sciences course (3 credits)</p>	<p>Semester 2 (16 Credits) CMAC 1240: Computer Programming I (3 credits) MAT 1510: Discrete Structures (3 credits) MATH 2420: Analytical Geometry and Calculus II (4 credits) Arts & Humanities/Social Sciences course (3 credits) Writing intensive course (3 credits)</p>
<p>Semester 3 (15 Credits) CMSC 2040: Object-Oriented Programming (3 credits) CMSC 2100: Logic and Switching Theory (3 credits) COMJ 1010: Public Speaking (3 credits) Intercultural AND Arts & Humanities/Social Sciences course (3 credits) Arts & Humanities/Social Sciences course (3 credits)</p>	<p>Semester 4 (16 Credits) CMSC 3100: Assembly Language Programming (3 credits) CMSC 3040: Data Structures (3 credits) MATH 3210: Linear Algebra I (3 credits) Natural Science I (4 credits) CMIS 3000: Principles of Responsible Computing Or PHIL 3210 Engineering Ethics (3 credits)</p>
<p>Semester 5 (16 Credits) CMSC 3140: Analysis of Algorithms (3 credits) CMSC 3240: Computer Architecture (3 credits) CMSC 3180: Data Comm. and Networking (3 credits) CMSC Elective course (3 credits) Natural Science II (4 credits)</p>	<p>Semester 6 (15 Credits) CMSC 4000: Operating Systems (3 credits) CMSC 4080: Structures of Prog. Lang. (3 credits) CMSC 3320: Technical Computing using Java (3 credits) STAT 2020: Elements of Statistics (3 credits) Arts & Humanities/Social Sciences course (3 credits)</p>
<p>Semester 7 (12 Credits) CMSC 4140: Theory of Languages (3 credits) CMSC 4900: Senior Project I (3 credits) CMSC Elective course (3 credits) Free Elective course (3 credits)</p>	<p>Semester 8 (14 Credits) CMSC 4180: Language Translation (3 credits) CMSC 4920: Senior Project II (3 credits) CMSC Elective course (3 credits) Free Elective courses (5 credits)</p>