

# APPLIED COMPUTING (APC)

## Applied Computing Courses

### APC 300 Programming 1

3 cr. Undergraduate.

Provides a solid foundation in computing by focusing on problem-solving and fundamental programming skills. Students will gain skills in computational thinking and will learn to implement solutions using a contemporary programming language.

**Prerequisites:** none.

**Last Taught:** Fall 2025, Spring 2025, Fall 2024, Summer 2024.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

### APC 310 Math for Computer Science

3 cr. Undergraduate.

Important foundational topics in computer science.

**Prerequisites:** none.

**Last Taught:** Fall 2025, Fall 2024, Summer 2024, Fall 2023.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

### APC 320 Introduction to Business

3 cr. Undergraduate.

Introduction to the major functional areas of business including the roles of accounting, finance, human resources, marketing, information systems, and operations in the organization.

**Prerequisites:** none.

**Last Taught:** Fall 2025, Fall 2024, Fall 2023, Spring 2023.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

### APC 330 Technical and Professional Communication

3 cr. Undergraduate.

Technical and professional communication skills and techniques. Practice in creating effective memos and reports, developing technical material, delivering presentations, and developing communication within teams.

**Prerequisites:** none.

**Last Taught:** Fall 2025, Fall 2024, Fall 2023, Fall 2022.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

### APC 340 Legal and Ethical Responsibilities of the IT Professional

3 cr. Undergraduate.

Legal, regulatory, ethical and compliance issues associated with developing software and using information systems in an organization.

**Prerequisites:** admis to the Applied Computing program.

**Last Taught:** Spring 2025, Spring 2024, Summer 2023, Spring 2023.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

### APC 350 Programming 2

3 cr. Undergraduate.

Continuation of fundamental computer concepts and Programming.

**Prerequisites:** APC 300(P); 310(P).

**Last Taught:** Summer 2025, Spring 2025, Summer 2024, Spring 2024.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

### APC 360 Database Management 1

3 cr. Undergraduate.

Design and implementation of relational database management systems to support computer-based information systems.

**Prerequisites:** admis to the Applied Computing program and APC 300(P).

**Last Taught:** Summer 2025, Spring 2025, Spring 2024, Fall 2023.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

### APC 370 System Analysis and Design

3 cr. Undergraduate.

The five phases of Systems Development Life Cycle: scope definition, problem analysis, requirements analysis, logical design and decision analysis.

**Prerequisites:** admis to BS-APC prog; APC 300(P); 320(P); 330(P).

**Last Taught:** Spring 2025, Spring 2024, Spring 2023, Spring 2022.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

### APC 380 Project Management Techniques

3 cr. Undergraduate.

An introduction to project management techniques including project selection and life cycle, stakeholder/scopequality/procurement management, budget control, scheduling, risk identification.

**Prerequisites:** admis to BS-APC prog; APC 300(P); APC 320(P); APC 330(P).

**Last Taught:** Spring 2025, Spring 2024, Spring 2023, Summer 2022.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

### APC 390 Object Oriented Programming

3 cr. Undergraduate.

An introduction to Object-Oriented Programming techniques using the Java programming language.

**Prerequisites:** APC 350(P)

**Last Taught:** Fall 2025, Fall 2024, Fall 2023, Fall 2022.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

### APC 400 Applied Communication Networks

3 cr. Undergraduate.

Fundamental concepts in the design, configuration, and problem solving of computer networks.

**Prerequisites:** admis to BS-APC prog; APC 350(P).

**Last Taught:** Fall 2025, Fall 2024, Fall 2023, Summer 2023.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

### APC 410 Database Management 2

3 cr. Undergraduate.

Architecture and use-cases of non-relational (NoSQL) based on four types of databases including document, Graph, Key-value, and wide column store.

**Prerequisites:** admis to BS-APC prog; APC 360(P).

**Last Taught:** Fall 2025, Fall 2024, Fall 2023, Fall 2022.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

### APC 420 Computer Security 1

3 cr. Undergraduate.

Security and risk management, security engineering, identity and access management, and security operations.

**Prerequisites:** APC 350(P).

**Last Taught:** Fall 2025, Fall 2024, Fall 2023, Summer 2023.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

### APC 425 Machine Learning

3 cr. Undergraduate.

Introduction to machine learning and methods, including neural networks and deep learning. Incorporates underlying concepts, hands-on experience and machine learning tools. Topics include generative AI and large language models, supervised, unsupervised, and reinforcement learning.

**Prerequisites:** APC 350(P).

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

**APC 430 Applied Data Structures and Algorithms**

3 cr. Undergraduate.

Concepts and the application of data structures and algorithms.

**Prerequisites:** APC 390(P).

**Last Taught:** Spring 2025, Spring 2024, Spring 2023, Spring 2022.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

**APC 440 Web Development**

3 cr. Undergraduate.

Creating advanced and interactive websites web sites using technologies like HTML 5, CSS, JavaScript, Bootstrap, XML, web services, and database integration within the ASP.Net platform.

**Prerequisites:** APC 360(P).

**Last Taught:** Spring 2025, Spring 2024, Summer 2023, Spring 2023.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

**APC 450 Operating Systems Theory and Practice**

3 cr. Undergraduate.

An introduction to important operating systems concepts such as processes, threads, scheduling, concurrency control and memory management.

**Prerequisites:** admis to BS-APC prog; APC 430(C).

**Last Taught:** Fall 2025, Fall 2024, Fall 2023, Fall 2022.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

**APC 460 Software Engineering**

3 cr. Undergraduate.

Basic software development methodologies and tools, including the waterfall, iterative, and agile approaches.

**Prerequisites:** APC 370(P); 390(P).

**Last Taught:** Spring 2025, Spring 2024, Spring 2023, Spring 2022.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

**APC 470 IS Strategy and Management**

3 cr. Undergraduate.

Organizational/IS strategy using a capability maturity model for topics such as budgeting, acquisition, service/change/personnel management.

**Prerequisites:** admis to the Applied Computing program and APC 380(P).

**Last Taught:** Fall 2025, Fall 2024, Fall 2023, Fall 2022.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

**APC 480 Computer Security 2**

3 cr. Undergraduate.

Communication and network security, security assessment and testing, software development security, and asset security.

**Prerequisites:** APC 360(P); 400(P); 420(P); 450(P).

**Last Taught:** Spring 2025, Spring 2024, Spring 2023, Spring 2022.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

**APC 485 Computer Security**

3 cr. Undergraduate.

Introduction to the fundamental concepts of computer security and its applications. Topics include security concepts, cryptography, policies, access control, Java security, malware, and security concepts of operating systems, software, networks, and the Web.

**Prerequisites:** APC 350(P).

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

**APC 490 Capstone Project Preparation**

1 cr. Undergraduate.

Student capstone project and creation of initial plan with specific deliverables identified.

**Prerequisites:** admis to the Applied Computing program, APC 380(P), and APC 460(C).

**Last Taught:** Fall 2025, Fall 2024, Fall 2023, Fall 2022.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

**APC 495 Capstone Project**

3 cr. Undergraduate.

Development, management and delivery of an applied computer science project for a client, including communication of project requirements and status to a non-technical audience.

**Prerequisites:** admis to BS-APC prog; APC 490(P).

**Last Taught:** Spring 2025, Spring 2024, Spring 2023, Spring 2022.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>