

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: Spring 2025, Fall 2024, Summer 2024, Spring 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 2024, Summer 2024, Fall 2023, Spring 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 2024, Fall 2023, Spring 2023, Fall 2022.

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 2024, Fall 2023, Fall 2022, Fall 2021.

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 2024, Fall 2023, Fall 2022, Fall 2021.

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 2024, Fall 2023, Summer 2023, Fall 2022.

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 2024, Fall 2023, Fall 2022, Fall 2021.

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 2024, Fall 2023, Summer 2023, Fall 2022.

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 2024, Fall 2023, Fall 2022, Fall 2021.

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 2024, Fall 2023, Fall 2022, Fall 2021.

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 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 2024, Fall 2023, Fall 2022, Fall 2021.

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/>