# APPLIED COMPUTING (APC)

## APC 300 Programming 1
3 cr. Undergraduate.
Introduction to history of computing, fundamental computer concepts and structured programming techniques.
**Prerequisites:** none.
**Last Taught:** Spring 2018, Fall 2017.
**Current Offerings:** [http://uwm.edu/schedule](http://uwm.edu/schedule)

## APC 310 Math for Computer Science
3 cr. Undergraduate.
Important foundational topics in computer science.
**Prerequisites:** none.
**Last Taught:** Summer 2018, Spring 2018.
**Current Offerings:** [http://uwm.edu/schedule](http://uwm.edu/schedule)

## 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:** Spring 2018, Fall 2017.
**Current Offerings:** [http://uwm.edu/schedule](http://uwm.edu/schedule)

## 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:** Spring 2018, Fall 2017.
**Current Offerings:** [http://uwm.edu/schedule](http://uwm.edu/schedule)

## 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:** admits to BS-APC prog; APC 320(P).
**Last Taught:** Summer 2018, Spring 2018.
**Current Offerings:** [http://uwm.edu/schedule](http://uwm.edu/schedule)

## APC 350 Programming 2
3 cr. Undergraduate.
Continuation of fundamental computer concepts and Programming.
**Prerequisites:** APC 300(P); 310(P).
**Last Taught:** Summer 2018.
**Current Offerings:** [http://uwm.edu/schedule](http://uwm.edu/schedule)

## 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 BS-APC prog; APC 300(P); 310(P).
**Current Offerings:** [http://uwm.edu/schedule](http://uwm.edu/schedule)

## 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).
**Current Offerings:** [http://uwm.edu/schedule](http://uwm.edu/schedule)

## 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 370(P).
**Current Offerings:** [http://uwm.edu/schedule](http://uwm.edu/schedule)

## APC 390 Object Oriented Programming
3 cr. Undergraduate.
An introduction to Object-Oriented Programming techniques using the Java programming language.
**Prerequisites:** APC 350(P)
**Current Offerings:** [http://uwm.edu/schedule](http://uwm.edu/schedule)

## APC 400 Applied Communication Networks
3 cr. Undergraduate.
Fundamental concepts in the design, configuration, and problem solving of computer networks.
**Prerequisites:** admits to BS-APC prog; APC 350(P).
**Current Offerings:** [http://uwm.edu/schedule](http://uwm.edu/schedule)

## 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).
**Current Offerings:** [http://uwm.edu/schedule](http://uwm.edu/schedule)

## 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).
**Current Offerings:** [http://uwm.edu/schedule](http://uwm.edu/schedule)

## APC 430 Applied Data Structures and Algorithms
3 cr. Undergraduate.
Concepts and the application of data structures and algorithms.
**Prerequisites:** APC 390(P).
**Current Offerings:** [http://uwm.edu/schedule](http://uwm.edu/schedule)

## 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); 400(P).
**Current Offerings:** [http://uwm.edu/schedule](http://uwm.edu/schedule)
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:** admits to BS-APC prog; APC 430(C).
**Current Offerings:** http://uwm.edu/schedule

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).
**Current Offerings:** http://uwm.edu/schedule

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:** admits to BS-APC prog; APC 380(P); 460(C).
**Current Offerings:** http://uwm.edu/schedule

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).
**Current Offerings:** http://uwm.edu/schedule

APC 490 Capstone Project Preparation
1 cr. Undergraduate.
Student capstone project and creation of initial plan with specific deliverables identified.
**Prerequisites:** admits to BS-APC prog; APC 460(C).
**Current Offerings:** http://uwm.edu/schedule

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:** admits to BS-APC prog; APC 490(P).
**Current Offerings:** http://uwm.edu/schedule