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:** Summer 2021, Spring 2021, Fall 2020, Summer 2020.  
**Current Offerings:** [https://catalog.uwm.edu/course-search/](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:** Summer 2021, Summer 2020, Fall 2019, Spring 2019.  
**Current Offerings:** [https://catalog.uwm.edu/course-search/](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 2020, Spring 2020, Fall 2019, Spring 2019.  
**Current Offerings:** [https://catalog.uwm.edu/course-search/](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 2020, Fall 2019, Fall 2018, Spring 2018.  
**Current Offerings:** [https://catalog.uwm.edu/course-search/](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:** admits to the Applied Computing program.  
**Last Taught:** Spring 2021, Spring 2020, Spring 2019, Summer 2018.  
**Current Offerings:** [https://catalog.uwm.edu/course-search/](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 2021, Spring 2021, Summer 2020, Fall 2019.  
**Current Offerings:** [https://catalog.uwm.edu/course-search/](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:** admits to the Applied Computing program and APC 300(P).  
**Last Taught:** Spring 2021, Fall 2020, Spring 2020, Spring 2019.  
**Current Offerings:** [https://catalog.uwm.edu/course-search/](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:** admits to BS-APC prog; APC 300(P); 320(P); 330(P).  
**Last Taught:** Spring 2021, Spring 2020, Spring 2019, Fall 2018.  
**Current Offerings:** [https://catalog.uwm.edu/course-search/](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:** admits to BS-APC prog; APC 370(P).  
**Last Taught:** Summer 2021, Spring 2021, Summer 2020, Summer 2019.  
**Current Offerings:** [https://catalog.uwm.edu/course-search/](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 2020, Fall 2019, Fall 2018.  
**Current Offerings:** [https://catalog.uwm.edu/course-search/](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:** admits to BS-APC prog; APC 350(P).  
**Last Taught:** Summer 2021, Fall 2020, Spring 2020, Fall 2019.  
**Current Offerings:** [https://catalog.uwm.edu/course-search/](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:** admits to BS-APC prog; APC 360(P).  
**Last Taught:** Fall 2020, Spring 2020, Spring 2019.  
**Current Offerings:** [https://catalog.uwm.edu/course-search/](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:** Summer 2021, Fall 2020, Fall 2019, Fall 2018.  
**Current Offerings:** [https://catalog.uwm.edu/course-search/](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 2021, Spring 2020, Spring 2019.  
**Current Offerings:** [https://catalog.uwm.edu/course-search/](https://catalog.uwm.edu/course-search/)
APC 440 Web Development
3 cr. Undergraduate.
Creating advanced and interactive websites 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: 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).
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: Fall 2020, Fall 2019.
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 2020, Fall 2019.
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).
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 2020, Fall 2019.
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).
Current Offerings: https://catalog.uwm.edu/course-search/