

Technology (TECH)

Courses

TECH A110 Graphic Design Fundamentals 3 Credits

Introduces design fundamentals as applied to desktop publishing, image editing and web design applications to communicate through online or print media.

TECH A111 Digital Imagery 3 Credits

Introduces the key concepts and practices of digital image creation and editing, including tools, color theory, image file types, filters, layers and image sizing.

TECH A120 Commercial Web Page Development 3 Credits

Uses responsive, mobile-first design principles to create accessible, cross-device, commercially-oriented web sites using current versions of Hypertext Markup Language (HTML) and Cascading Style Sheets (CSS).

TECH A121 Extensible Markup Language 1 Credit

Introduces and examines how Extensible Markup Language (XML) is used to store and transport data, as well as how XML is used to define page content found in the web and mobile applications environments.

TECH A125 Web Database Systems 3 Credits

Teaches commercial-grade database skills needed to create and administer dynamic data-driven sites used in eCommerce and mobile application development.

TECH A170 Apprenticeship Training Level I 1-10 Credits

This course is designed to award credit for experiential learning and related technical instruction derived from a federally registered apprenticeship program. Training Level I awards credit for the first year of apprenticeship, which is typically 1000 to 2000 hours of supervised field experience depending upon the occupation and requires a minimum of 144 hours of related technical instruction.

Registration Restrictions: Admission to the Associate of Applied Science in Apprenticeship Technologies or the Bachelor of Science in Applied Technologies Leadership, and a Certificate of Apprenticeship Completion issued by the United States Department of Labor

TECH A171 Apprenticeship Training Level II 1-10 Credits

This course is designed to award credit for experiential learning and related technical instruction derived from a federally registered apprenticeship program. Training Level II awards credit for the second year of apprenticeship, which is typically 2000 to 4000 (cumulative) hours of supervised field experience depending upon the occupation with a minimum of 144 hours of related technical instruction annually. This builds upon the previous years' experience.

Registration Restrictions: Admission to the Associate of Applied Science in Apprenticeship Technologies or the Bachelor of Science in Applied Technologies Leadership, and a Certificate of Apprenticeship Completion issued by the United States Department of Labor

TECH A172 Apprenticeship Training Level III 1-10 Credits

This course is designed to award credit for experiential learning and related technical instruction derived from a federally registered apprenticeship program. Training Level III awards credit for the third year of apprenticeship, which is typically 4000 to 6000 (cumulative) hours of supervised field experience depending upon the occupation and requires a minimum of 144 hours of related technical instruction.

Registration Restrictions: Admission to the Associate of Applied Science in Apprenticeship Technologies or the Bachelor of Science in Applied Technologies Leadership, and a Certificate of Apprenticeship Completion issued by the United States Department of Labor

TECH A173 Apprenticeship Training Level IV 1-10 Credits

This course is designed to award credit for experiential learning and related technical instruction derived from a federally registered apprenticeship program. Training Level IV awards credit for the fourth year of apprenticeship, which is typically 6000 to 8000 (cumulative) hours of supervised field experience depending upon the occupation and requires a minimum of 144 hours of related technical instruction.

Registration Restrictions: Admission to the Associate of Applied Science in Apprenticeship Technologies or the Bachelor of Science in Applied Technologies Leadership, and Certificate of Apprenticeship Completion issued by the United States Department of Labor

TECH A222 Client-Side Scripting Languages 3 Credits

Includes browser architecture, JavaScript data types, anonymous and named functions, event listeners, the Document Object Model (DOM), client-side security concerns, cookies, local storage, Dynamic Hypertext Markup Language (DHTML), Ajax, jQuery and jQuery User Interface (UI).

Prerequisites: CS A109 with a minimum grade of D and TECH A120 with a minimum grade of D.

TECH A227 Server-Side Scripting Languages 3 Credits

Topics covered include configuring an Apache/MySQL/PHP server suite, GET and POST superglobal variables, includes, generating and displaying result sets, validation of data and system security, using sessions and session variables, building a robust login sequence and a shopping cart, and using a web service.

Prerequisites: CS A109 with a minimum grade of D and TECH A120 with a minimum grade of D.

TECH A230 Mobile Application Programming I 3 Credits

Covers the application of programming principles in a mobile application development environment.

Prerequisites: CS A109 with a minimum grade of C or CS A110 with a minimum grade of C.

TECH A240 Mobile Application Development I 3 Credits

Creates efficient, effective, compliant, accessible and well-designed mobile applications using a mobile application development suite.

Prerequisites: TECH A121 with a minimum grade of C and TECH A125 with a minimum grade of C.

TECH A295 Technical Internship 1-6 Credits

Provides work experience, familiarization with technical operations and equipment and insight to management practices closely related with technology-rich career fields. Work for the internship is supervised by industry and faculty members.

Registration Restrictions: Instructor permission required.

TECH A302 Organizational Safety and Health 3 Credits

Covers issues, concerns and factors relating to environmental, safety and health issues that leaders and managers in technical fields are likely to encounter in their workplace. Examines common occupational safety and health (OSH) and Alaska OSH (AKOSH) standards for maintaining a safe and healthy workplace, recognizing safety issues, and taking action to mitigate and prevent safety issues. Includes steps for establishing a corporate culture of safety and health.

Prerequisites: (COMM A111 with a minimum grade of C or COMM A235 with a minimum grade of C or COMM A237 with a minimum grade of C or COMM A241 with a minimum grade of C) and (WRTG A211 with a minimum grade of C or WRTG A212 with a minimum grade of C or WRTG A213 with a minimum grade of C or WRTG A214 with a minimum grade of C) and TECH A305 with a minimum grade of C or concurrent enrollment.

TECH A305 Applied Leadership for Technicians 3 Credits

Serves as the bridge course in the Bachelor of Science in Applied Technologies Leadership program. Covers principles of career management. Develops leadership perspectives that prepare students to think and act strategically as technical leaders in their organization. Builds leadership capacity for driving business results to deliver customer value.

Prerequisites: (COMM A111 with a minimum grade of C or COMM A235 with a minimum grade of C or COMM A237 with a minimum grade of C or COMM A241 with a minimum grade of C) and (WRTG A211 with a minimum grade of C or WRTG A212 with a minimum grade of C or WRTG A213 with a minimum grade of C or WRTG A214 with a minimum grade of C).

TECH A390 Selected Topics in Applied Technologies Management 1-4 Credits

Offers selected topics in applied technologies leadership and management based on current trends, technologies, and student and employer needs.

Special Note: May be repeated for a maximum of 12 credits with a change of subtitle.

Registration Restrictions: Department approval required.

TECH A412 Field-Based Study 1-9 Credits

Provides an opportunity for students to increase mastery in a specific technical discipline using means not otherwise accessible through traditional academic settings. Areas of field-based study may include industry certifications and participation in professional development classes or seminars offered by industry, proprietary schools or government agencies.

Special Note: Students must coordinate with the instructor of the course prior to the semester in which they intend to take the course to discuss their proposed study area.

Registration Restrictions: Faculty approval

Prerequisites: TECH A305 with a minimum grade of C or concurrent enrollment.

TECH A433 Project Design, Implementation and Control 3 Credits

Provides the foundation for understanding the basic principles of project management methodologies, including how to manage, monitor and control success factors. Examines project management from a leadership and management standpoint. Includes understanding and meeting stakeholder expectations, communicating and working with teams, and solving problems.

Prerequisites: STAT A200 with a minimum grade of C and TECH A305 with a minimum grade of C.

TECH A443 Quality Leadership 3 Credits

Supports the principles and practices of quality leadership. Demonstrates ways to achieve continuous improvement for a successful workplace environment. Emphasizes leadership skills applicable to technicians and managers as they work with customers, subordinates, peers, and supervisors.

Registration Restrictions: Junior standing.

Prerequisites: MATH A151 with a minimum grade of D or MATH A155 with a minimum grade of D.

TECH A453 Capstone Project 3 Credits

Integrates professional, communication and leadership skills with general education knowledge to complete a project related to opportunities, problems or issues in students' career fields or in the community. Requires a written report and oral presentation at the end of the semester.

Special Note: Students meet weekly with faculty advisor and other students in the BS in Applied Technologies Leadership program, but this is an independent study project which requires at least 175 hours of commitment.

Registration Restrictions: Junior standing and faculty approval required. Completion of GER Tier 1 (basic college-level skills) courses.

Prerequisites: TECH A302 with a minimum grade of C and TECH A305 with a minimum grade of C and TECH A433 with a minimum grade of C.

Attributes: UAA Integrative Capstone GER.

TECH A490 Selected Topics in Technology Management 1-3 Credits

Provides customized development training in areas related to technology management. Course content is determined by specific industry needs.

Special Note: May be repeated with a change of topic for a maximum of 9 credits.

Registration Restrictions: Faculty approval required.

TECH A495 Technical Internship 1-3 Credits

Supports supervisory and management practices used in business operations through a work experience internship.

Special Note: Requires at least 75 hours of work internship per credit hour plus additional instructor contact time.

Registration Restrictions: Faculty approval

Crosslisted With: VE A495