Technology (TECH)

Courses

**TECH A101 Introduction to Technological Principles 3 Credits**
Introduces basic physical properties commonly found in a technical field. Emphasizes data collection and test equipment procedures. **Prerequisites:** MATH A105 or concurrent enrollment.

**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 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 and TECH A120.

**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 and TECH A120.

**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 or ENGL 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 or MATH A155.

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