Advanced User Experience

PEIMS Code: N1302814

Abbreviation: ADVUXD

Grade Level(s): 10–12

Award of Credit: 1.0

Approved Innovative Course

- Districts must have local board approval to implement innovative courses.

- In accordance with Texas Administrative Code (TAC) §74.27, school districts must provide instruction in all essential knowledge and skills identified in this innovative course.

- Innovative courses may only satisfy elective credit toward graduation requirements.

- Please refer to TAC §74.13 for guidance on endorsements.

Course Description:

The Advanced User Experience (UX) Design course allows students to master skills in science and art to make technology useful, meaningful, memorable, and accessible to all users. Students will use knowledge from the Foundations of User Experience Design course to expand the research, design, testing, design process, storytelling, and communication skills essential for success in this user-focused career field. With the Advanced UX Design Course, students will be engaged in UX design projects that simulate real-world scenarios. This is an approach with several activities that simulates real world scenarios to apply foundations of UX Design including the creation of visual designs, research, storytelling, and delineated design project steps.

Essential Knowledge and Skills:

(a) General Requirements. Students shall be awarded one credit for successful completion of this course. This course is recommended for students in grades 10-12. Required prerequisite course: Foundations of User Experience.

(b) Introduction.

(1) Career and technical education instruction provides content aligned with challenging academic standards and relevant technical knowledge and skills for students to further their education and succeed in current or emerging professions.

(2) The Information Technology (IT) Career Cluster focuses on building linkages in IT occupations for entry level, technical, and professional careers related to the design, development, support, and management of hardware, software, digital interactions, multimedia, and systems integration services.

(3) The Advanced User Experience (UX) Design course allows students to apply skills in science and art to integrate technology as a useful, meaningful, memorable, and accessible source for all users. Students will use knowledge from the Foundations of User Experience Design course to

expand the research, design process, testing, and communication skills essential for success in this user-focused career field.

(4) Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.

(5) Statements that contain the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples.

(c) Knowledge and Skills.

(1) The student demonstrates professional standards/employability skills in the information technology (IT) field with a focus in the area of user experience (UX). The student is expected to:

(A) identify job opportunities in UX and individual skills and abilities to apply;

(B) employ effective interpersonal and communication skills to work collaboratively;

(C) achieve at least one UX professional certification as well as build resumes and portfolios for UX positions; and

(D) demonstrate adaptability and flexibility for teamwork by adjusting project outcomes from peer-review and critique.

(2) The student understands and demonstrates legal and ethical procedures for UX designers as they apply to the use of information technology. The student is expected to:

(A) identify intellectual property violations within given scenarios; and

(B) write a summary of the ramifications and consequences of plagiarism and copyright infringement within a business context.

(3) The student connects and applies UX Design conceptual foundations with real-world scenarios. The student is expected to:

(A) present arguments to support findings, potential ideas, and peer-review interventions; and

(B) use proper terms and professional language for UX Design context, both orally and in written form.

(4) The student uses different options of project management to produce a successful UX design. The student is expected to:

(A) identify and apply different stages of the UX design process, including research, identification of problem, ideation, prototyping, and testing, to refine or create products;

(B) analyze and test partial products during the process to inform the refinement phase;

(C) explain the conceptual design, content strategy, and ways to get feedback from various users and stakeholders in the project; and

(D) demonstrate time-management awareness and planning ability to achieve tasks.

(5) The student collects and interprets data to US tools and protocols. The student is expected to:

(A) create templates for questionnaires, data collection, summary reports, as well as project conclusions to include insights into affordances and constraints for the design;

(B) distinguish differences in various qualitative research methods such as user interviews, ethnography, field studies, focus groups, and usability testing; and

(C) identify quantitative methods such as A/B testing, card sorting, heat maps, analytics, and user surveys.

(6) The student creates and analyzes prototypes for UX design products. The student is expected to:

(A) identify pain-points and come up with potential solutions;

(B) determine requirements and desirable features in order to create an action plan;

(C) create a presentable content strategy;

(D) develop conceptual designs and symbolic messages;

(E) generate possible solutions with ideation methods such as unstructured discussion, storyboards, brainstorming, role playing, game storming, mind mapping, teamwork games, sketching, and written ideation;

(F) refine and select ideas for prototyping with a people-centered rationale for the decision;

(G) create low-fidelity prototypes, including sketches, paper models, and click-through prototypes; and

(H) create mockups and high-fidelity prototypes, including digital and physical versions.

(7) The student structures solutions while applying UX design principles. The student is expected to:

(A) explain how the connected layouts, blocks of content, visual designs, and navigation requirements enhance user experience;

(B) distinguish channels and formats to develop website usability across different devices;

(C) develop and implement design activities for co-creation, peer-review, and collaborative work;

(D) evaluate and test navigation experiences contrasting with current competitors; and

(E) incorporate best practices from references, adding designer's voice and signature.

(8) The student describes best practices and plans for a usability test. The student is expected to:

(A) create a usability test plan, including cognitive, perceptual, emotional, cultural information about users, data collection requirements, and user testing methods;

(B) execute testing methodologies and collect data for analysis purposes; and

(C) present conclusions and recommendations that apply design principles, communication, and creative skills.

Recommended Resources and Materials:

Bokhua George, Principles of Logo Design Logo: a practical guide to creating effective Signs, Symbols, and Icons. Rockport Publishers, 2022

Chesnut, Donald, and Kevin Nichols. UX for Dummies. West Sussex, England: John Wiley & Sons, Ltd, 2014.

Coates, Del. Watches Tell More than Time: Product Design, Information, and the Quest for Elegance. New York: McGraw-Hill, 2003.

"Creating Meaningful Experiences: An Introduction to User Experience Design." Learn UX, July 1, 2020. https://www.keepitusable.com/blog/creating-meaningful-experiences-an-introduction-to-user-experience-design/.

"Creative Collaboration | Adobe Creative Cloud." Accessed December 8, 2022. https://www.adobe.com/creativecloud/collaboration.html.

Davis, Meredith. Teaching Design: A Guide to Curriculum and Pedagogy for College Design Faculty and Teachers Who Use Design in Their Classrooms. New York: Allworth Press, 2017.

Design kit: The human-centered design toolkit. Accessed December 8, 2022. https://www.ideo.com/post/design-kit.

"Digital Accessibility Advocacy, Training and Consulting." Knowability. Accessed December 8, 2022. https://knowbility.org/?ref=confir.

Garrett, Jesse James. The Elements of User Experience: User-Centered Design for the Web and Beyond. Berkeley, CA: New Riders, 2011.

Gothelf, Jeff, and Josh Seiden. Lean Ux. Logroño: Universidad Internacional de La Rioja, S.A. (UNIR), 2015.

https://xd.adobe.com/ideas/perspectives/wireframe-podcast/falling-in-love-with-good-design-episode-13/

Krippendorff, Klaus. The Semantic Turn: A New Foundation for Design. Boca Raton, Fla: CRC/Taylor & Francis, 2006.

Krug, Steve. Don't Make Me Think! A Common Sense Approach to Web Usability. Berkley: New Riders, 2017.

Krug, Steve. Rocket Surgery Made Easy: The Do-It-Yourself Guide to Finding and Fixing Usability Problems. New Riders, 2010.

Lidwell, William, Kristina Holden, Kimberly Elam, and Jill Butler. Universal Principles of Design: 125 Ways to Enhance Usability, Influence Perception, Increase Appeal, Make Better Design Decisions, and Teach through Design. Beverly, Mass: Rockport Publishers, 2003.

Lockwood, Thomas, and Edgar Papke. Innovation by Design How Any Organization Can Leverage Design Thinking to Produce Change, Drive New Ideas, and Deliver Meaningful Solutions. Wayne, NJ: Career Press, 2018.

Lupton, Ellen, and Ellen Lupton. Design Is Storytelling. New York, NY: Cooper Hewitt, Smithsonian Design Museum, 2021.

"Mural Is a Collaborative Intelligence Company." Mural. Accessed December 8, 2022. https://mural.co/.

Muller-Roterberg, Christian. Design Thinking for Dummies. S.l.: HOEPLI, 2021.

Muratovski, Gjoko, Kenneth Scott Friedman, Donald A. Norman, and Steven Heller. Research for Designers: A Guide to Methods and Practice. Los Angeles: SAGE Publications, 2022.

Norman, D. & Nielsen, J. "UX Training, Consulting, & Research." Nielsen Norman Group. Accessed December 8, 2022. https://www.nngroup.com/.

O'Leary, Zina. The Essential Guide to Doing Your Research Project. Los Angeles: SAGE, 2021.

Posts by Katie Messner, and Originally posted by Katie Messner on Jul 30. "Improving the User Experience with the Usability.gov Reboot." Digital.gov, July 30, 2013. https://digital.gov/2013/07/30/improving-the-user-experience-with-the-usability-gov-reboot/.

Sinek, Simon, and Hye-ri Yun. Start with Why: How Great Leaders Inspire Everyone to Take Action. Sŏul-si: Segyesa, 2021.

"Sketchapp.com - Analysis and Stats | Sketch - the Digital Design Toolkit." Accessed December 8, 2022. https://onlinewebtool.com/analysis/sketchapp.com.

The Design of Everyday Things: Revised and Expanded Edition. New York: Basic Books, 2013.

Weinschenk, Susan. 100 Things Every Presenter Needs to Know about People. Edgar, WI: The Team W Inc., 2018.

Recommended Course Activities:

- Derive solutions to UX related challenges using design tools.
- Identify a UX issue to remedy as a team and derive a solution within a given timeframe.
- Provide feedback and act upon peer feedback based upon a rubric aligned to UX industry standards.
- Evaluate designs and learning via reflections, journals, and reports.
- Present findings, connections, and ideas as the result of previous work.

Complementary activities:

- UX workshops conducted by UX professionals.
- Job shadowing.
- Real-world projects to use UX design to solve problems at school or in the community.
- UX Design Speakers.
- Visits to Design Schools.
- UX Internships with local industry.
- Collaborative UX projects with other schools or businesses.

Suggested methods for evaluating student outcomes:

- Oral presentations
- Rubrics to evaluate work
- Surveys

- Reflections/journals
- Portfolios
- Capstone projects
- Exam/assessments

Teacher qualifications:

- Technology Applications 8-12
- Technology Education 6-12
- Computer Science 8-12
- Business Education 6-12
- Secondary Industrial Arts 6-12
- Secondary Industrial Technology 6-12
- Alternative Certification in any of the previously listed certification areas

Additional information:

UX Design Professional certification trainings available online for a monthly fee