

# AET - Arts and Entertainment Technologies

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## Arts and Entertainment Technologies: AET Lower-Division Courses

### AET 304. Foundations of Arts and Entertainment Technologies.

Explore the industries, practices, and concepts defining arts and entertainment technologies in the twenty-first century. The equivalent of three lecture hours a week for one semester.

### AET 310. Foundations of Creative Coding.

Explore applied computational thinking and logical processes for solving creative problems with technical solutions using the graphics language Processing. Three lecture hours a week for one semester, with studio hours as required.

### AET 110T, 310T. Topics in Innovative Design.

Exploration of innovative topics in design. For each semester hour of credit earned, one lecture hour a week for one semester. May be repeated for credit when the topics vary. Offered on the letter-grade basis only. Prerequisite: Varies with the topic.

### AET 311. Media and Motion.

Restricted to arts and entertainment technologies majors. Introduction to effective visual storytelling with 2D and 3D digital content. Three lecture hours a week for one semester, with additional studio hours to be arranged. Arts and Entertainment Technologies 311 and 319 (Topic: Art & Content) may not both be counted. Offered on the letter-grade basis only.

### AET 312. Games and Interactivity.

Restricted to arts and entertainment technologies majors. Introduction to user-centered design process, interactivity, and game design. Three lecture hours a week for one semester, with additional studio hours to be arranged. Arts and Entertainment Technologies 312 and 319 (Topic: Design & Interactivity) may not both be counted. Offered on the letter-grade basis only.

### AET 313. Code and Fabrication.

Restricted to arts and entertainment technologies majors. Introduction to building interactive physical projects with hands-on code, microcontrollers, and cardboard. Three lecture hours a week for one semester, with additional studio hours to be arranged. Arts and Entertainment Technologies 313 and 319 (Topic: Media & Technology) may not both be counted. Offered on the letter-grade basis only.

### AET 314. Sound and Space.

Restricted to arts and entertainment technologies majors. Introduction to dynamic sound, lighting, and video projection for screens and spaces. Three lecture hours a week for one semester, with additional studio hours to be arranged. Arts and Entertainment Technologies 313 and 319 (Topic: Sound & Space) may not both be counted. Offered on the letter-grade basis only.

## AET 119, 219, 319. Topics in Arts and Entertainment Technologies.

For each semester hour of credit earned, the equivalent of one lecture hour per week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic.

## AET 119S, 219S, 319S, 419S, 519S, 619S, 719S, 819S, 919S. Topics in Arts and Entertainment Technologies.

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the School of Design and Creative Technologies. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

## Upper-Division Courses

### AET 320D. Musical Acoustics.

Restricted to Arts and Entertainment Technologies majors. Explores the science of sound and how musical instruments work as well as principles of musical scales, hearing, architectural acoustics, and electronic music. Three lecture hours per week for one semester. Only one of the following may be counted: Arts and Entertainment Technologies 320D, 339 (Topic: Musical Acoustics), Mechanical Engineering 379M (Topic: Musical Acoustics), 379Q, Music 376J (Topic: Musical Acoustics), 379Q. Offered on the letter-grade basis only.

### AET 320F. Immersive Audio.

Restricted to arts and entertainment technologies majors. Use spatial audio systems to create public sound installations and immersive experiences. Explore designing novel multichannel audio systems, binaural audio mixing, and combining spatial audio and visual tech to design immersive installations. Three lecture hours a week for one semester, with additional studio hours to be arranged. Arts and Entertainment Technologies 320F and 339 (Topic: Immersive Audio). Offered on the letter-grade basis only. Prerequisite: Upper-division standing.

### AET 320G. Audio Coding I.

Restricted to Arts and Entertainment Technologies majors. Explore programming methods for MIDI and audio signal processing in the visual interface language Max/MSP. Examine how to manage audio signal flow and communications with external devices such as keyboard controllers, pedals and other sensors. Discuss the creation of systems for musical interactivity in live performance and immersive sound installation applications and integration with Ableton Live. Three lecture hours a week for one semester, with lab hours as required. Offered on the letter-grade basis only. Prerequisite: Arts and Entertainment Technologies 305 and 320D.

### AET 320J. Music Information Retrieval.

Restricted to Arts and Entertainment Technologies majors. Examination of the primary technologies used to retrieve perceptually-based music/sound information for audio signal identification and their applications in copyright protection. Three lecture hours a week for one semester, with lab hours as required. Offered on the letter-grade basis only. Prerequisite: Arts and Entertainment Technologies 320E and 322G.

### AET 320L. Generative Music.

Restricted to Arts and Entertainment Technologies majors. Explores algorithmic music systems including procedural techniques, genetic algorithms and cellular automata. Three lecture hours a week for one

semester, with lab hours as required. Offered on the letter-grade basis only. Prerequisite: Arts and Entertainment Technologies 322G.

### **AET 320M. Live Music Coding.**

Restricted to Arts and Entertainment Technologies majors. An exploration of techniques for live, real-time music programming and sound production in performance settings. Three lecture hours a week for one semester, with lab hours as required. Offered on the letter-grade basis only. Prerequisite: Arts and Entertainment Technologies 322G.

### **AET 321C. Audio Processing.**

Restricted to Arts and Entertainment Technologies majors. Explores the use of sound-shaping tools, convolution reverb, noise reduction, pitch and time editing to make precise corrections to audio files. Three lecture hours a week for one semester, with lab hours as required. Arts and Entertainment Technologies 321C and 339 (Topic: Audio Processing) may not both be counted. Offered on the letter-grade basis only. Prerequisite: Arts and Entertainment Technologies 305.

### **AET 321F. Film Sound Design.**

Restricted to Arts and Entertainment Technologies majors. Explore post-production concepts for preparing sound in relation to picture including sound effects, foley, voiceovers and sonic environments. Three lecture hours a week for one semester, with lab hours as required. Arts and Entertainment Technologies 321F and 339 (Topic: Audio for Visual Media) may not both be counted. Offered on the letter-grade basis only. Prerequisite: Arts and Entertainment Technologies 305.

### **AET 323C. Screen Scoring.**

Restricted to Arts and Entertainment Technologies majors. Create original music tracks for screen-based media and games. Three lecture hours per week for one semester. Offered on the letter-grade basis only. Prerequisite: Arts and Entertainment Technologies 304 and 314.

### **AET 323D. Interactive Music.**

Restricted to Arts and Entertainment Technologies majors. Create real-time interactive music using Ableton Live and Musical Instrument Digital Interface (MIDI) controllers. Three lecture hours per week for one semester, with lab hours as required. Arts and Entertainment Technologies 323D and 339 (Topic: Interactive Music) may not both be counted. Offered on the letter-grade basis only. Prerequisite: Arts and Entertainment Technologies 304 and 314.

### **AET 323G. Generative Audio Programming.**

Restricted to arts and entertainment technologies majors. Use real-time, generative audio coding tools. Three lecture hours a week for one semester, with additional studio hours to be arranged. Arts and Entertainment Technologies 323G and 339 (Topic: Generative Audio Programming) Offered on the letter-grade basis only. Prerequisite: Upper-division standing.

### **AET 324. Themed Entertainment Design.**

Restricted to arts and entertainment technologies majors. Explore best practices behind the design of themed entertainment experiences through a variety of lectures, group projects, and individual study. Three lecture hours a week for one semester, with additional studio hours to be arranged. Arts and Entertainment Technologies 324 and 339 (Topic: Themed Entertainment Design) may not both be counted. Offered on the letter-grade basis only.

### **AET 324D. Principles of Animation.**

Restricted to Arts and Entertainment Technologies majors. An introduction to the principles of animation for 2D and 3D systems. Use various techniques to convey a sense of weight, emotion, and story for simple and complex objects in both 2D and 3D. Three lecture hours a

week for one semester, with lab hours as required. Offered on the letter-grade basis only. Prerequisite: Arts and Entertainment Technologies 311.

### **AET 324F. Videography.**

Restricted to Arts and Entertainment Technologies majors. An introduction to mobile and smart device video capture, storytelling, and editing. Three lecture hours a week for one semester, with lab hours as required. Offered on the letter-grade basis only. Prerequisite: Arts and Entertainment Technologies 311.

### **AET 324J. Visual Storytelling.**

Restricted to Arts and Entertainment Technologies majors. An introduction to digital visual storytelling. Three lecture hours a week for one semester, with lab hours as required. Offered on the letter-grade basis only. Prerequisite: Arts and Entertainment Technologies 324C.

### **AET 124P, 224P, 324P. Advanced Production Laboratory.**

Same as Theatre and Dance 124P. Same as Theatre and Dance 224P. Same as Theatre and Dance 324P. Restricted to theatre and dance and arts and entertainment technologies majors. For each semester hour of credit earned, one lecture hour a week for one semester, with additional laboratory hours to be arranged. Theatre and Dance 124P, 224P, 324P and Arts and Entertainment Technologies 124P, 224P, 324P may not both be counted. May be repeated for credit. Prerequisite: For Theatre and Dance majors, Theatre and Dance 314P or consent of instructor; For Arts and Entertainment Technologies majors, Arts and Entertainment Technologies 316C.

### **AET 325E. Motion Graphics.**

Restricted to Arts and Entertainment Technologies majors. An introduction to motion graphics, compositing, and visual effects for games and previsualization. Three lecture hours a week for one semester, with lab hours as required. Offered on the letter-grade basis only. Prerequisite: Arts and Entertainment Technologies 311.

### **AET 326E. 3D Animation and Rigging.**

Restricted to Arts and Entertainment Technologies majors. An introduction to 3D animation techniques and rigging systems. Three lecture hours a week for one semester, with lab hours as required. Only one of the following may be counted: Arts and Entertainment Technologies 326E, 328 and 339 (Topic: Animation and Rigging). Offered on the letter-grade basis only. Prerequisite: Upper-division standing; Arts and Entertainment Technologies 310, 311, and 324D.

### **AET 326G. Realtime VFX.**

Restricted to Arts and Entertainment Technologies majors. An introduction to creating visual effects for games and realtime engines. Three lecture hours a week for one semester, with lab hours as required. Offered on the letter-grade basis only. Prerequisite: Upper-division standing; Arts and Entertainment Technologies 310, 311, and 312.

### **AET 329J. Digital Fabrication.**

Restricted to Arts and Entertainment Technologies majors. Explores common and emerging digital fabrication technologies for artists and designers. Three lecture hours a week for one semester, with lab hours as required. Arts and Entertainment Technologies 329J and 339 (Topic: Digital Fabrication) may not both be counted. Offered on the letter-grade basis only. Prerequisite: Arts and Entertainment Technologies 316C.

### **AET 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Arts and Entertainment Technologies.**

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credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

### **AET 130T, 330T. Topics in Innovative Design.**

Exploration of innovative topics in design. For each semester hour of credit earned, one lecture hour a week for one semester. May be repeated for credit when the topics vary. Offered on the letter-grade basis only. Prerequisite: Varies with the topic.

### **AET 133, 333. Topics in Video Game Development.**

Restricted to arts and entertainment technologies majors. Topics in video game development. For each semester hour of credit earned, one lecture hour a week for one semester. May be repeated for credit when the topics vary. Offered on the letter-grade basis only. Prerequisite: Arts and Entertainment Technologies 310. Additional prerequisites vary with the topic.

### **AET 333D. Video Game Production.**

Restricted to Arts and Entertainment Technologies majors. Explores the creation and execution of plans and roadmaps to strategize how game development is executed, organized, scheduled, budgeted, and managed. Three lecture hours a week for one semester, with lab hours as required. Offered on the letter-grade basis only. Prerequisite: Upper-division standing.

### **AET 334. Video Game Character Animation.**

Restricted to arts and entertainment technologies majors. Examine the process of creating 3D gameplay animations, techniques to improve animation workflow, and how to implement animations into the Unreal Engine. For each semester hour of credit earned, one lecture hour a week for one semester. May be taken two times for credit. May be repeated for credit. Offered on the letter-grade basis only. Prerequisite: Upper-division standing and Arts and Entertainment Technologies 312.

### **AET 334C. Level Design.**

Restricted to Arts and Entertainment Technologies majors. Design and build interactive 2D or 3D game levels (game maps) using an industry standard tool such as Unity or Unreal. Explore the design pipeline for creating levels from concept and layout, to whiteboxing, creating and integrating environment art and sound, worldbuilding, and adding simple scripted interactions, animations, sound effects, and VFX. Examine the different design process for small indie games compared to big AAA games. Three lecture hours a week for one semester, with lab hours as required. Arts and Entertainment Technologies 334C and 339 (Topic: Level Design) may not both be counted. Offered on the letter-grade basis only. Prerequisite: Arts and Entertainment Technologies 312.

### **AET 334E. Video Game Art Pipeline.**

Restricted to Arts and Entertainment Technologies majors. An introduction to creating and working with game ready assets in 2D and 3D. Three lecture hours a week for one semester, with lab hours as required. Arts and Entertainment Technologies 334E and 339 (Topic: Game Art Pipeline) may not both be counted. Offered on the letter-grade basis only. Prerequisite: Arts and Entertainment Technologies 310.

### **AET 334F. Video Game Scripting I.**

Restricted to Arts and Entertainment Technologies majors. Introduction to scripting interactive content for games using an industry-standard scripting language and game engine. Three lecture hours a week for one semester, with lab hours as required. Offered on the letter-grade basis only. Prerequisite: Arts and Entertainment Technologies 310 and 312.

### **AET 334I. Interactive Environments.**

Restricted to arts and entertainment technologies majors. Focus on design strategies and technology for creating interactive experiences in virtual, augmented, and physical environments. Create solutions for multiple real-world scenarios. Three lecture hours a week for one semester, with additional studio hours to be arranged. Arts and Entertainment Technologies 334I and 333 (Topic: Interactive Environments) may not both be counted. Offered on the letter-grade basis only. Prerequisite: Upper-division standing and Arts and Entertainment Technologies 312.

### **AET 334J. Multiplayer Video Game Design.**

Restricted to Arts and Entertainment Technologies majors. Examination of the design and technical requirements for developing multiplayer games in different genres. Three lecture hours a week for one semester, with lab hours as required. Offered on the letter-grade basis only. Prerequisite: Upper-division standing and Arts and Entertainment Technologies 312.

### **AET 334K. Video Game Prototyping.**

Restricted to arts and entertainment technologies majors. Explore rapid prototyping techniques for video game art and design using ideation, storyboarding, pitching, prototyping, testing, and documentation. Three lecture hours per week for one semester. Only one of the following may be counted: Arts and Entertainment Technologies 333K, 334K and 339 (Topic: Game Prototyping). Offered on the letter-grade basis only. Prerequisite: Upper-division standing; Arts and Entertainment Technologies 310 and 312.

### **AET 134L, 334L. User Interface/User Experience for Video Games.**

Restricted to Arts and Entertainment Technologies majors. An introduction to user interface (UI) and user experience (UX) design for video games. For each semester hour of credit earned, one lecture hour a week for one semester. Offered on the letter-grade basis only. Prerequisite: Arts and Entertainment Technologies 310

### **AET 334M. Video Game Systems Design.**

Restricted to Arts and Entertainment Technologies majors. Create and apply play systems which establish the framework for user experience (UX) and level design. Three lecture hours a week for one semester, with lab hours as required. Arts and Entertainment Technologies 334M and 339 (Topic: Game Systems Design) may not both be counted. Prerequisite: Arts and Entertainment Technologies 312.

### **AET 334N. Interactive Storytelling.**

Restricted to Arts and Entertainment Technologies majors. Apply cross-disciplinary methods to create immersive narratives for interactive experiences. Three lecture hours a week for one semester, with lab hours as required. Only one of the following may be counted: Arts and Entertainment Technologies 334D, 334N, 339 (Topic: Narrative Design for Games). Offered on the letter-grade basis only. Prerequisite: Upper-division standing.

### **AET 334P. User Interfaces.**

Restricted to arts and entertainment technologies majors. Explore data visualization and user interface design for games, simulation, and digital environments. Discuss infographics, accessibility, and user centered design. Three lecture hours a week for one semester, with additional studio hours to be arranged. Arts and Entertainment Technologies 334P and 339 (Topic: User Interfaces) may not both be counted. Offered on the letter-grade basis only. Prerequisite: Upper-division standing.

### **AET 334R. Technical Art I.**

Restricted to arts and entertainment technologies majors. Examine technical aspects of game content creation including shaders, automation, tool creation, and special effects. Three lecture hours a week for one semester. May be taken two times for credit. May be repeated for credit. Prerequisite: Upper-division standing; Arts and Entertainment Technologies 310, 311, 312, and 313.

### **AET 334S. Technical Art II.**

Restricted to arts and entertainment technologies majors. Explore advanced technical art projects for games. Three lecture hours a week for one semester. May be taken two times for credit. May be repeated for credit. Offered on the letter-grade basis only. Prerequisite: Arts and Entertainment Technologies 334R.

### **AET 335D. Realtime Visualization.**

Restricted to Arts and Entertainment Technologies majors. An introduction to using game engines and realtime graphics systems for architectural, automotive, and other types of product visualization. Three lecture hours a week for one semester, with lab hours as required. Offered on the letter-grade basis only. Prerequisite: Upper-division standing and Arts and Entertainment Technologies 312.

### **AET 335F. Video Game Scripting II.**

Restricted to Arts and Entertainment Technologies majors. Advanced scripting of interactive content for video games using an industry-standard scripting language and game engine. Three lecture hours a week for one semester, with lab hours as required. Offered on the letter-grade basis only. Prerequisite: Arts and Entertainment Technologies 334F.

### **AET 135J, 335J. Live Video Game Design.**

Restricted to Arts and Entertainment Technologies majors. An introduction to design methods for video games as a service and persistent multiplayer video game worlds. For each semester hour of credit earned, one lecture hour a week for one semester. Offered on the letter-grade basis only. Prerequisite: Arts and Entertainment Technologies 334E, 334F, and 334C or 334K.

### **AET 335K. Virtual Reality for Video Games.**

Restricted to Arts and Entertainment Technologies majors. Explores design and creation of virtual reality (VR) content for games, and deploying and testing on VR hardware. Three lecture hours a week for one semester, with lab hours as required. Arts and Entertainment Technologies 335K and 339 (Topic: Virtual Reality for Games) may not both be counted. Offered on the letter-grade basis only. Prerequisite: Upper-division standing; Arts and Entertainment Technologies 310 and 312.

### **AET 335V. Introduction to Mixed Reality.**

Restricted to arts and entertainment technologies majors. Introduction to mixed reality platforms and hands-on development of XR experiences. Explore creative AR interactions with 3D models, animated characters, sound assets, and visual effects, to promote learning opportunities and branded marketing. Three lecture hours a week for one semester, with additional studio hours to be arranged. Only one of the following may be counted: Arts and Entertainment Technologies 330T (Topic: Mixed Reality for the Masses), 335V, 339 (Topic: Mixed Reality for the Masses). Offered on the letter-grade basis only. Prerequisite: Upper-division standing.

### **AET 336C. Video Game History and Culture.**

Analyze the history of video games from their origins in computer labs, to their surge in popularity that has significantly impacted modern society. Examine the evolution of video games, their influences on culture and

laws, controversies in gender politics and minority representation, and how the medium developed both commercially and as a form of artistic expression. Three lecture hours a week for one semester.

### **AET 337. Writing for Interactive Games.**

Exploration of game creation as a multi-threaded narrative story. Students create, write, edit, and refine game stories and game dialogue and build small game scenarios using a variety of game design software platforms. Three lecture hours a week for one semester.

### **AET 337D. Narrative Design.**

Restricted to arts and entertainment technologies majors. Explore establishing, communicating, and assimilating a cohesive narrative into all aspects of interactive and immersive media experiences through a cross-disciplinary lens. Three lecture hours a week for one semester, with additional studio hours to be arranged. Arts and Entertainment Technologies 337D and 339 (Topic: Narrative Design) may not both be counted. Offered on the letter-grade basis only. Prerequisite: Upper-division standing.

### **AET 337N. Introduction To Narrative.**

Restricted to arts and entertainment technologies majors. Explore the origins, formal elements, and best practices of good storytelling across multiple mediums through study, analysis, and writing practice. For each semester hour of credit earned, one lecture hour a week for one semester. Arts and Entertainment Technologies 337N and 339 (Topic: Intro to Narrative) may not both be counted. Offered on the letter-grade basis only.

### **AET 139, 239, 339, 439. Advanced Topics in Arts and Entertainment Technologies.**

Advanced topics in arts and entertainment technologies. For each semester hour of credit earned, one lecture hour a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic.

### **AET 340C. Event Production.**

Restricted to arts and entertainment technologies majors. Formulate skillsets to implement the operational and management details related to live and conference-type events. Three lecture hours a week for one semester, with additional studio hours to be arranged. May be taken three times for credit. May be repeated for credit. Offered on the letter-grade basis only. Prerequisite: Upper-division standing.

### **AET 341C. Virtual Instruments.**

Restricted to Arts and Entertainment Technologies majors. An introduction to the concepts and current trends of virtual instruments to produce, arrange and orchestrate musical ideas in a variety of contemporary musical settings. Three lecture hours per week for one semester, with lab hours as required. Offered on the letter-grade basis only. Prerequisite: Arts and Entertainment Technologies 314.

### **AET 341D. Digital Musicianship.**

Restricted to Arts and Entertainment Technologies majors. Explore harmony, chord progressions, and song structure in the MIDI grid. Three lecture hours per week for one semester, with lab hours as required. Arts and Entertainment Technologies 319 (Topic: Digital Musicianship I) and 341D may not both be counted. Offered on the letter-grade basis only. Prerequisite: Arts and Entertainment Technologies 314.

### **AET 342C. 3D Modeling and Texturing.**

Restricted to arts and entertainment technologies majors. Utilize hard surface and organic modeling workflows, modern texturing techniques, and physically-based shaders to create efficient assets based on clear content goals. Three lecture hours a week for one semester. May



be taken three times for credit. May be repeated for credit. Offered on the letter-grade basis only. Prerequisite: Arts and Entertainment Technologies 311 and 312.

### **AET 342D. 3D Materials And Lighting.**

Restricted to arts and entertainment technologies majors. Explore 3D game models using state of the art workflows and tools. Three lecture hours a week for one semester. May be taken three times for credit. May be repeated for credit. Offered on the letter-grade basis only. Prerequisite: Arts and Entertainment Technologies 311 and 312.

### **AET 344D. 3D Previsualization for Live Entertainment.**

Restricted to Arts and Entertainment Technologies majors. Instructs students on how to bring an idea from concept to fully rendered pitch-ready environment by utilizing 2D and 3D technical drafting tools in Vectorworks, and a lighting visualizer. Three lecture hours a week for one semester, with lab hours as required. Only one of the following may be counted: Arts and Entertainment Technologies 344, 344C, or 344D. Offered on the letter-grade basis only.

### **AET 346C. Video Game Modding.**

Restricted to Arts and Entertainment Technologies majors. Focus on modifying existing video games to experiment with gameplay ideas and create unique play experiences. Three lecture hours a week for one semester, with lab hours as required. Offered on the letter-grade basis only. Prerequisite: Arts and Entertainment Technologies 334E, 334F, and 334C or 334K.

### **AET 346F. Video Game Design Challenges.**

Restricted to Arts and Entertainment Technologies majors. Focuses on the creation of unique play experiences under extreme constraints. Three lecture hours a week for one semester, with lab hours as required. Offered on the letter-grade basis only. Prerequisite: Arts and Entertainment Technologies 334E, 334F, and 334C or 334K.

### **AET 348. Concert and Event Lighting.**

Explore methodologies utilized in live event lighting. Three lecture hours a week for one semester, with lab hours as required. Offered on the letter-grade basis only. Prerequisite: Consent of instructor; Arts and Entertainment Technologies 348C.

### **AET 348C. Live Event Engineering.**

Restricted to Arts and Entertainment Technologies majors. Examine a variety of design elements controlled over live entertainment networks, including hardware and software components and how they communicate with one another. Combine programming techniques, technical research, and design process. Three lecture hours a week for one semester, with lab hours as required. Only one of the following may be counted: Arts and Entertainment Technologies 348C, 360 or 360C. Offered on the letter-grade basis only. Prerequisite: Arts and Entertainment Technologies 316C.

### **AET 348K. 3D Projection Mapping.**

Restricted to Arts and Entertainment Technologies majors. Explore common 3D mapping techniques and applications that include architectural mapping, dome projection and Cave automatic virtual environments (CAVE) projection. Three lecture hours a week for one semester, with lab hours as required. Offered on the letter-grade basis only. Prerequisite: Arts and Entertainment Technologies 348C; consent of instructor.

### **AET 348L. Advanced System Engineering.**

Restricted to Arts and Entertainment Technologies majors. Study common signals (digital and analogue), data communication protocols, synchronization, show control as well as layout and contingency

considerations for professional entertainment systems. Three lecture hours a week for one semester, with lab hours as required. Offered on the letter-grade basis only. Prerequisite: Upper-division standing and Arts and Entertainment Technologies 314.

### **AET 350C. Advanced Creative Coding.**

Restricted to arts and entertainment technologies majors. Explore advanced computational concepts and their application to more diverse creative media domains including; audio, video, music, and the web. Three lecture hours a week for one semester. Arts and Entertainment Technologies 339 (Topic: Advanced Creative Coding) and 350C may not both be counted. Offered on the letter-grade basis only. Prerequisite: Arts and Entertainment Technologies 310.

### **AET 351C. Audio Production Lab.**

Restricted to Arts and Entertainment Technologies majors. Individual or team projects in audio production for live performance. Three lecture hours per week for one semester, with lab hours and performance participation as required. Offered on the letter-grade basis only. Prerequisite: Consent of instructor.

### **AET 351E. Do It Yourself Synthesizer Lab.**

Restricted to Arts and Entertainment Technologies majors. Projects to design and build microprocessor-based synthesizers and special effects (SFX) components and systems. Three lecture hours per week for one semester, with lab hours and performance participation as required. Offered on the letter-grade basis only. Prerequisite: Upper-division standing and Arts and Entertainment Technologies 314.

### **AET 153, 353. Advanced Topics in Video Game Development.**

Restricted to Arts and Entertainment Technologies majors. Advanced topics in game development. For each semester hour of credit earned, one lecture hour a week for one semester. May be repeated for credit when the topics vary. Offered on the letter-grade basis only. Prerequisite: Arts and Entertainment Technologies 334E, 334F, and 334C or 334K. Additional prerequisites vary with the topic.

### **AET 354C. Cross Platform Storytelling.**

Restricted to arts and entertainment technologies majors. Focus on the future of storytelling and experience design across multiple platforms and services. Three lecture hours a week for one semester, with additional studio hours to be arranged. Offered on the letter-grade basis only. Prerequisite: Upper-division standing.

### **AET 357. Solo Studio.**

Restricted to arts and entertainment technologies majors. Build creative confidence through a range of methodologies including iterative design and prototyping, exploring research strategies, and exercising critical reflection. Three lecture hours a week for one semester, with additional studio hours to be arranged. Offered on the letter-grade basis only.

### **AET 358. Topics in Collaborative Studio.**

Restricted to arts and entertainment technologies majors. Focus on team based projects that culminate in large events, presentations, or performances. Three lecture hours a week for one semester, with additional studio hours to be arranged. May be repeated for credit when the topics vary. Offered on the letter-grade basis only. Prerequisite: Upper-division standing.

**Topic 1: Next Level Arcade.** Produce a custom arcade game; create game designs, art, sound, and the physical enclosure and controls. Arts and Entertainment Technologies 339 (Topic: Next Level Arcade) and 358 (Topic 1) may not both be counted. Offered on the letter-grade basis only.

**Topic 2: Collaborative Music Project.** Produce collaborative projects in advanced sound processing and synthesis and audio-visual systems. Arts and Entertainment Technologies 350 and 358 (Topic 2) may not both be counted. Offered on the letter-grade basis only.

### **AET 361C. Physical Computing.**

Restricted to Arts and Entertainment Technologies majors. Introduces concepts and methods of physical computing, including the creation, building, and programming of small devices and the integration of external devices and objects. Three lecture hours a week for one semester. Only one of the following may be counted: Arts and Entertainment Technologies 360, 361, 361C. Prerequisite: Arts and Entertainment Technologies 310 and 313.

### **AET 170. Research Methods Proseminar.**

Explore research methods and the preparation of a thesis topic and senior thesis proposal. The equivalent of one lecture hour a week for one semester.

### **AET 374. Independent Study.**

Independent study or research in arts and entertainment technologies. Hours to be arranged. May be repeated for credit. Prerequisite: Upper-division standing, a grade point of average of at least 3.5, and consent of instructor.

### **AET 375. Portfolio.**

Restricted to arts and entertainment technologies majors. Focus on portfolio development, showcasing professional skills, and preparation for the demands of industry. Three lecture hours a week for one semester, with additional studio hours to be arranged. Arts and Entertainment Technologies 339 (Topic: Portfolio Development) and AET 375 may not both be counted. Offered on the letter-grade basis only. Prerequisite: Upper-division standing.

### **AET 376. Game Capstone: 2-D.**

Work in small teams from different disciplines to develop 2D games. Hours to be arranged. Only one of the following may be counted: Arts and Entertainment Technologies 376, Computer Science 354S, 378 (Topic: Game Development Capstone: 2D Games), Music 354S, 376J (Topic: Game Development Capstone: 2D Games), Theatre and Dance 354T (Topic 17), Radio-Television-Film 344N (Topic 6), 344T (Topic 1). Prerequisite: Upper-division standing and consent of instructor based on portfolio submission.

### **AET 377. Game Capstone: 3-D.**

Work in small teams from different disciplines to develop 3D games. Hours to be arranged. Prerequisite: Upper-division standing and consent of instructor based on portfolio submission.

### **AET 378H. Honors Senior Thesis.**

Participate in a large scale senior project. The equivalent of four-and-one-half laboratory hours a week for one semester. Offered on the letter-grade basis only. Prerequisite: Upper-division standing; Arts and Entertainment Technologies 170, and consent of the Arts and Entertainment Technologies Honors Coordinator.

## **Graduate Courses**

## **Professional Courses**