



TENNESSEE DEPARTMENT OF

EDUCATION

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Digital Arts & Design I

Primary Career Cluster:	Arts, A/V Technology & Communications
Consultant:	Rachel Allen, (615) 532-2835, Rachel.Allen@tn.gov
Course Code(s):	6084
Prerequisite(s):	None
Credit:	1
Grade Level:	9
Graduation Requirements:	This course satisfies one of three credits required for an elective focus when taken in conjunction with other Arts, A/V Technology & Communication courses.
Programs of Study and Sequence:	This is the first course in the <i>Digital Arts & Design</i> program of study.
Necessary Equipment:	Refer to the Teacher Resources page.
Aligned Student Organization(s):	SkillsUSA: http://tnskillsusa.com/ Brandon Hudson, (615) 532-2804, Brandon.Hudson@tn.gov Technology Student Association (TSA): http://www.tntsa.org Amanda Hodges, (615) 532-6270, Amanda.Hodges@tn.gov
Coordinating Work-Based Learning:	If a teacher has completed work-based learning training, appropriate student placement can be offered. To learn more, please visit http://www.tn.gov/education/cte/work_based_learning.shtml .
Available Student Industry Certifications:	Adobe Certified Associate
Dual Credit or Dual Enrollment Opportunities:	There are no known dual credit/dual enrollment opportunities for this course. If interested in developing, reach out to a local postsecondary institution to establish an articulation agreement.
Teacher Endorsement(s):	230, 311, 435, 436, 475, 476, 516, 519, 520, 521, 537, 538, 543, 583
Required Teacher Certifications/Training:	NOCTI Advertising & Design or Adobe Certified Expert (Photoshop or Illustrator) or ADDA Certified Digital Designer
Teacher Resources:	http://www.tn.gov/education/cte/artstech.shtml

Course Description

Digital Arts & Design I is a foundational course in the Arts, A/V Technology & Communications cluster for students interested in art and design professions. The primary aim of this course is to build a strong understanding of the principles and elements of design and the design process. Upon completion of this course, proficient students will be able to utilize industry tools to conceptualize and create

communications solutions which effectively reach targeted audiences. Students will acquire basic skills in illustration, typography, and photography. Standards in this course include career exploration, an overview of the history of design, basic business management, and legal issues. In addition, students will begin compiling artifacts for inclusion in a portfolio, which they will carry with them throughout the full sequence of courses in this program of study. Standards in this course are aligned with Tennessee State Standards for English Language Arts & Literacy in Technical Subjects, Tennessee State Standards in Mathematics, Tennessee Visual Art standards, and Tennessee Art History standards.*

Program of Study Application

This is the first course in the *Digital Arts & Design* program of study. For more information on the benefits and requirements of implementing this program in full, please visit the Arts, A/V Technology & Communications website at <http://www.tn.gov/education/cte/artstech.shtml>.

Course Standards

Safety

- 1) Demonstrate the ability to comply with personal and environmental safety practices associated with art and design applications: the use of adhesives; hand tools; machines; and the handling, storage, and disposal of chemicals/materials in accordance with local, state, and federal safety and environmental regulations.
 - a. Inspect, maintain, and employ safe operating procedures with tools and equipment.
 - b. Adhere to responsibilities, regulations, and Occupational Safety & Health Administration (OSHA) policies regarding reporting of accidents and observed hazards, and regarding emergency response procedures.
 - c. Complete a written safety test with 100 percent accuracy. For equipment used in the course, complete equipment examinations with 100 percent accuracy in which the student performs an operational checkout by the instructor. Maintain a record of written safety examinations and equipment examinations.

(TN Reading 3, 4, 9; TN Writing 4, 8, 9)

Introduction to Design

- 2) Investigate the role of designers in communicating ideas in society, both historically and currently, emphasizing how social, cultural, economic, and political developments are reflected in and influenced by visual messaging. Synthesize research from informational texts, including design magazines and textbooks, to create an informational artifact that illustrates how visual art and design is used as a communication tool, citing specific examples to illustrate concepts. (TN Reading 1, 2, 4, 9; TN Writing 2, 4, 8, 9; TN Visual Art 1.3, 4.1, 4.2; TN Art History 4.1)
- 3) Research the development of design throughout history, analyzing how advances in technology have impacted design (Gutenberg's invention of movable type, lithography, computers, and more). Citing resources from informational text, create an annotated timeline or visual graphic emphasizing significant time periods in design (such as Victorian, Arts and Crafts, Modernism, Art Deco, etc.) and the key technological advances impacting design. (TN Reading 1, 2, 3, 4, 7, 9; TN Writing 2, 5, 6, 8, 9; TN Art History 4.1)



Career Exploration

- 4) Identify and analyze the career pathways in art and design professions and the industries in which art and design professionals work, including but not limited to manufacturing, specialized design services, publishing, and advertising. Cite supporting evidence from multiple sources (such as interviews with design professionals retrieved from industry magazines), to produce a chart or other graphic detailing the aptitudes and training needed for at least three careers of interest. For example, outline the typical requirements needed to become a graphic designer, including personal aptitudes and secondary and postsecondary training required. Devise a tentative career plan to reach employment goals. (TN Reading 1, 2, 4, 7, 9; TN Writing 2, 6, 8, 9)
- 5) Compile and analyze real-time and projected labor market data from public sources such as the U.S. Bureau of Labor Statistics to explore local and regional occupational opportunities and trends in design careers. Synthesize collected data to develop an informational artifact comparing occupations by job availability, salaries, and benefits. (TN Reading 2, 4, 7; TN Writing 4, 6, 9; TN Math S-ID)

Elements and Principles of Design

- 6) Categorize and describe the principles of design which affect: 1) the internal relationships of a design, and 2) the design as a whole.
 - a. Unity
 - b. Contrast/Variety
 - c. Hierarchy
 - d. Dominance/Emphasis
 - e. Proportion/Scale
 - f. Balance
 - g. Rhythm/Repetition

Illustrate the principles of design by creating an informational artifact explaining each principle with example graphics and supporting text. (TN Reading 3, 4, 7; TN Writing 4, 8, 9; TN Visual Art 2.1; TN Art History 2.1)

- 7) Analyze the elements of design by evaluating their purposes and applications in a variety of design applications.
 - a. Line
 - b. Shape/Form
 - c. Space/Size/Stability
 - d. Value
 - e. Color
 - f. Texture
 - g. Typography

For example, label and explain the elements of design in a given book cover compared with a billboard. (TN Reading 3, 4, 7; TN Writing 9; TN Visual Art 2.1; TN Art History 2.1)

- 8) Research rules of composition (such as the rule of thirds) and explain how the rules govern the elements and principles of design. Write persuasively to describe the properties of a strong composition by providing examples and counterexamples and citing evidence from informational texts. (TN Reading 1, 2, 4, 5; TN Writing 1, 4, 9; TN Visual Art 2.2)



- 9) Explain the function of the color wheel and identify techniques that achieve desired hues, values, intensities, and color schemes for use in design. Compare and contrast additive and subtractive color systems, and relate these principles to color specification systems (such as CMYK and RGB) used in design software. (TN Reading 3, 4, 9)
- 10) Research the psychological characteristics of colors, comparing and contrasting the differences in warm and cool color palettes. Illustrate and describe in a written narrative how color is measured in hue, value, and intensity, and how these properties combine to produce specific psychological characteristics and illustrate themes. Produce examples that demonstrate how emotions may be influenced by the use of color in designs. (TN Reading 2, 4; TN Writing 2, 4, 9)
- 11) Examine color theories such as color context and contrasts of colors. Evaluate the use of various color schemes (such as complementary, tertiary, and analogous) in designs. Apply the knowledge to demonstrate basic techniques in combining colors to create designs. (TN Reading 2, 7; TN Visual Art 1.3)
- 12) Analyze, assess, and identify the effectiveness of design products based on the intended function of the design and the principles and elements of design used in the composition. Investigate the intent of a given design and evaluate whether the intent was met through the structure of the design. For example, create an evaluation rubric based on the elements and principles of design and use it to evaluate given design products. (TN Reading 1, 2, 4, 7, 9; TN Writing 4, 8, 9; TN Visual Art 2.1, 2.2, 2.3, 5.1, 5.2, 5.3)

Introduction to the Design Process

- 13) Research design processes described in textbooks, designers' professional websites, or by interviewing design professionals. (Steps may include problem identification, research, identifying the audience, brainstorming, and idea refinement.) Citing research, create a visual illustration describing the major steps to the design process for digital arts and design. (TN Reading 1, 2, 3, 4; TN Writing 4, 6, 8, 9)
- 14) Describe the importance of setting design goals such as determining the purpose, message, and audience for given design projects. Examine the research techniques professionals use to inform design goals and influence design outcomes. For example, describe how designers use market data to identify the audience for advertisement of a given product. (TN Reading 2, 3, 4)

Basic Illustration

- 15) Create two-dimensional and three-dimensional sketches, including rough and refined sketches, demonstrating shape, volume, depth, and dimension. Distinguish among common illustration techniques used in design composition such as one-point, two-point, and multi-point perspective drawings. Develop conceptual design ideas using freehand sketching. For a given design problem, generate, analyze, and refine sketches to develop design solutions. Use the sketches to create refined drawings utilizing design software. For example, create thumbnail sketches to generate ideas for a logo or advertisement. (TN Reading 2, 3, 4, 7; TN Writing 4, 6, 7, 8, 9)



- 16) Describe how symbols have been used and have developed throughout history. Explain how symbols communicate visual information in design. Analyze the use of symbols in pictograms, ideograms, and logos, explaining and providing examples of each in an infographic or similar artifact. (TN Reading 2, 3, 4, 7; TN Writing 9; TN Visual Art 3.1)
- 17) Examine a variety of well-known company logos to create a list of key characteristics that influence a logo's effectiveness. Compare the list with other resources such as textbooks and design journals, evaluating the credibility of each source. Drawing on research, plan and create an effective logo for a given mock company. Appraise the effectiveness of the resulting logo design as well as the designs of peers based on the criteria generated from the prior research. (TN Reading 2, 3, 4, 7; TN Writing 4, 7, 8, 9; TN Visual Art 3.1)

Basic Photography

- 18) Demonstrate basic techniques to adjust camera settings and operate a camera to capture digital images. Define and explain white balance, depth of field, and shutter speed; demonstrate procedures for properly adjusting each for a particular scene. Apply the principles of design and the rules of composition to capture photographs. (TN Reading 2, 3, 4)
- 19) Read and interpret instructional narratives, such as manuals or tutorials, to perform basic edits and enhancements to photographs using software, including but not limited to cropping, resizing, retouching, making selections, and using layers. Assess the extent to which each text addresses the given editing task. Demonstrate the procedures for editing raster-based imagery, both high resolution and low resolution, in CMYK and RGB, and preparing files for both print and web media. (TN Reading 2, 3, 4, 7, 8)

Introduction to Design Software

- 20) Demonstrate basic procedures to manage digital files. Describe file storage in memory cards and estimate the number of photographs a memory card can hold based on the resolution of the photographs and other factors. Use a scanner to create digital files. Explain appropriate resolutions for various applications such as printed and web media. Use file system folders to organize files. Utilize online file management services to backup files. (TN Reading 2, 3, 4; TN Writing 4, 6; TN Math N-Q)
- 21) Distinguish between the various software used for visual design, including page layout software, illustration software, photo editing software, and web publishing software. Describe and illustrate the difference between raster and vector graphics. Create a chart or infographic explaining the major types and uses of design software. Employ the appropriate software to complete assigned tasks. (TN Reading 2, 3, 4; TN Writing 4, 6, 9; TN Math N-Q)

Basic Typography

- 22) Categorize varieties of type, including but not limited to serif, sans serif, script, and decorative. Employ the units of measurement used to describe line spacing (leading), type size, tracking, and kerning. Apply appropriate typography to given projects, emphasizing readability and the impact on design goals. (TN Reading 2, 3, 4, 7; TN Writing 4, 6, 9; TN Visual Art 1.3)



Design Projects

- 23) Apply the design process to complete projects of increasing complexity and of varying applications such as print, web, film, and marketing communications. Demonstrate the ability to select and use the appropriate tools and procedures to accomplish project goals. Prepare an informative narrative to explain a design to a peer, emphasizing how the design process and the design elements and principles were applied. (TN Reading 2, 3, 4, 7; TN Writing 2, 4, 9; TN Visual Art 1.3)
- 24) Utilize the critique and refinement strategy as part of the design process to achieve project goals. As part of a design project, present preliminary design ideas in a way that is understandable to an audience using both visual and verbal explanations. Note constructive criticism received and use it to influence design refinement. Similarly, evaluate the work of others, drawing on design principles and project goals, to provide clear, specific, and constructive feedback. (TN Reading 2, 3, 4; TN Writing 4, 5, 6, 7, 9; TN Visual Art 1.3, 2.1, 2.2, 5.1, 5.3; TN Art History 2.1)

Ethical & Legal Issues

- 25) Research and interpret laws and regulations protecting intellectual property as they relate to the design industry, such as copyright laws. Explain ethical and legal conduct that provides proper credit to those whose ideas and content have been used in creating new works. Distinguish between copyrights, trademarks, infringement, and fair use. Summarize and explain guiding principles in a written or oral presentation, as though leading a training or tutorial for fellow employees. (TN Reading 1, 2, 4, 6; TN Writing 2, 4)

Business Management

- 26) Explore how design professionals and companies calculate profit. Relate the profitability of a business to pricing and cost. For example, create a list of expenses incurred by a freelance designer and calculate the price and amount of work that must be accomplished in order to earn profit. (TN Reading 2, 3, 4, 6, 9; TN Writing 4, 9; TN Math N-Q)
- 27) Describe the components of a basic contract document for design work by analyzing an example contract. Drawing on textbooks, news articles and other resources, explain the benefits of utilizing written contracts as opposed to oral agreements. (TN Reading 2, 3, 4, 6; TN Writing 4, 5, 8, 9)

Portfolio

- 28) Gather examples of professional portfolios from contemporary designers and photographers. List the items that are often included in a professional portfolio. In a written, visual, or oral presentation, describe the components of a professional portfolio and the benefits of maintaining one. (TN Reading 1, 4; TN Writing 2, 4, 9)
- 29) Compile important artifacts to create a student portfolio connecting personal career preparation to concepts learned in this course, including written descriptions of project processes and reflections on learning outcomes. (TN Writing 4, 5, 7, 9; TN Visual Art 5.1)



Standards Alignment Notes

*References to other standards include:

- TN Reading: [Tennessee State Standards for English Language Arts & Literacy in History/Social Studies, Science, and Technical Subjects](#); Reading Standards for Literacy in Science and Technical Subjects 6-12; Grades 9-10 Students (page 62).
 - Note: While not directly aligned to one specific standard, students who are engaging in activities outlined above should be able to also demonstrate fluency in Standard 10 at the conclusion of the course.
- TN Writing: [Tennessee State Standards for English Language Arts & Literacy in History/Social Studies, Science, and Technical Subjects](#); Writing Standards for Literacy in History/Social Studies, Science, and Technical Subjects 6-12; Grades 9-10 Students (pages 64-66).
 - Note: While not directly aligned to one specific standard, students who are engaging in activities outlined above should be able to also demonstrate fluency in Standards 3 and 10 at the conclusion of the course.
- TN Math: [Tennessee State Standards for Mathematics](#); Math Standards for High School: Number and Quantity, Statistics (pages 58-83).
 - Note: The standards in this course are not meant to teach mathematical concepts. However, the concepts referenced above may provide teachers with opportunities to collaborate with mathematics educators to design project based activities or collaborate on lesson planning. Students who are engaging in activities listed above should be able to demonstrate quantitative and statistical reasoning as applied to specific technical concepts. In addition, students will have the opportunity to practice the habits of mind as described in the eight Standards for Mathematical Practice.
- TN Visual Art: Tennessee Visual Art: [Visual Art](#) standards 1.3, 2.1, 2.2, 2.3, 3.1, 4.1, 4.2, 5.1, 5.2, and 5.3 may provide additional insight and activities for educators.
- TN Visual Art History: Tennessee Visual Art History: [Visual Art History](#) standards 2.1 and 4.1 may provide additional insight and activities for educators.
- P21: Partnership for 21st Century Skills [Framework for 21st Century Learning](#)
 - Note: While not all standards are specifically aligned, teachers will find the framework helpful for setting expectations for student behavior in their classroom and practicing specific career readiness skills.





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Digital Arts & Design II

Primary Career Cluster:	Arts, A/V Technology & Communications
Consultant:	Rachel Allen, (615) 532-2835, Rachel.Allen@tn.gov
Course Code(s):	6086
Prerequisite(s):	<i>Digital Arts & Design I</i>
Credit:	1
Grade Level:	10
Graduation Requirements:	This course satisfies one of three credits required for an elective focus when taken in conjunction with other Arts, A/V Technology & Communication courses.
Programs of Study and Sequence:	This is the second course in the <i>Digital Arts & Design</i> program of study.
Necessary Equipment:	Refer to the Teacher Resources page.
Aligned Student Organization(s):	SkillsUSA: http://tnskillsusa.com/ Brandon Hudson, (615) 532-2804, Brandon.Hudson@tn.gov Technology Student Association (TSA): http://www.tntsa.org Amanda Hodges, (615) 532-6270, Amanda.Hodges@tn.gov
Coordinating Work-Based Learning:	If a teacher has completed work-based learning training, appropriate student placement can be offered. To learn more, please visit http://www.tn.gov/education/cte/work_based_learning.shtml .
Available Student Industry Certifications:	Adobe Certified Associate
Dual Credit or Dual Enrollment Opportunities:	There are no known dual credit/dual enrollment opportunities for this course. If interested in developing, reach out to a local postsecondary institution to establish an articulation agreement.
Teacher Endorsement(s):	230, 311, 435, 436, 475, 476, 516, 519, 520, 521, 537, 538, 543, 583
Required Teacher Certifications/Training:	NOCTI Advertising & Design or Adobe Certified Expert (Photoshop or Illustrator) or ADDA Certified Digital Designer
Teacher Resources:	http://www.tn.gov/education/cte/artstech.shtml

Course Description

Digital Arts & Design II is a course that builds on the basic principles and the design process learned in the introductory *Digital Arts & Design* course. Upon completion of this course, proficient students will be able to perform advanced software operations to create photographs and illustrations of increasing complexity. Students will employ design principles and use industry software to create layouts for a

variety of applications. Standards in this course also include an overview of art and design industries, career exploration, and business management. In addition, students will begin compiling artifacts for inclusion in a portfolio, which they will carry with them throughout the full sequence of courses in this program of study. Standards in this course are aligned with Tennessee State Standards for English Language Arts & Literacy in Technical Subjects, Tennessee State Standards in Mathematics, Tennessee Visual Art standards, and Tennessee Art History standards.*

Program of Study Application

This is the second course in the *Digital Arts & Design* program of study. For more information on the benefits and requirements of implementing this program in full, please visit the Arts, A/V Technology & Communications website at <http://www.tn.gov/education/cte/artstech.shtml>.

Course Standards

Safety

- 1) Demonstrate the ability to comply with personal and environmental safety practices associated with art and design applications: the use of adhesives; hand tools; machines; and the handling, storage, and disposal of chemicals/materials in accordance with local, state, and federal safety and environmental regulations.
 - a. Inspect, maintain, and employ safe operating procedures with tools and equipment.
 - b. Adhere to responsibilities, regulations, and Occupational Safety & Health Administration (OSHA) policies regarding reporting of accidents and observed hazards, and regarding emergency response procedures.
 - c. Complete a written safety test with 100 percent accuracy. For equipment used in the course, complete equipment examinations with 100 percent accuracy in which the student performs an operational checkout by the instructor. Maintain a record of written safety examinations and equipment examinations.

(TN Reading 3, 4, 9; TN Writing 4, 8, 9)

The Art & Design Industry

- 2) Analyze how art and design professionals interact with others within industry. Perform a case study of a company to evaluate the role of art and design professionals within the company. Create an oral, written, or visual presentation of findings. For example, investigate a package designer's interactions with engineers, managers, and assembly crews in a manufacturing company to create package designs for a product. (TN Reading 1, 2, 3, 4, 5, 7; TN Writing 2, 9)
- 3) Develop a research paper, media production, or visual display demonstrating the impact of technology on the careers of art and design professionals, including the impact on technical work and business management. Write persuasively to describe the personal traits and skills needed for professionals in the field as technology advances, citing an example of an emerging or future technology. (TN Reading 2, 6, 8; TN Writing 1, 4, 6, 8, 9)



Career Exploration

- 4) Research postsecondary institutions (i.e., colleges of applied technology, community colleges, and four-year universities) in Tennessee and other states that offer art and design programs. Write an informative paper or develop an infographic identifying admissions criteria, the postsecondary programs of study, and the secondary courses that will prepare individuals to be successful in an art or design program. Evaluate the tentative career plan developed in the introductory course in light of these findings, and update the career plan to reflect any new discoveries, citing evidence from the research. (TN Reading 1, 2, 3, 5; TN Writing 4, 7, 9)

Principles of Photography

- 5) Analyze the relationship between shutter speeds, f-stop, and ISO settings in determining the exposure of an image. Synthesize information from instructional manuals and other resources to appropriately adjust manual camera settings including shutter, ISO, f-stop controls, and white balance to take photographs for a range of settings and content. (TN Reading 1, 3, 4)
- 6) Describe the purposes and functions of lighting techniques such as strobe lighting, bounce flash, and diffusing devices from sources such as textbooks, photography blogs, or instructional manuals. Utilize proper lighting techniques to take photographs for a range of settings and content. (TN Reading 1, 4)
- 7) Develop photo editing skills by utilizing software operations of advancing complexity to modify and enhance images. For example, use layers to manipulate parts of an image independently or remove objects from an image. Explain the steps required to perform a given photo editing technique in a presentation such as an instructional video or text with supporting graphics. (TN Reading 1, 2, 3, 5; TN Writing 2, 4, 9)
- 8) Document photography activity in a photography journal or portfolio. Use proper measurements and terminology to record camera settings and lighting techniques when capturing photographs in a variety of environments. Include any editing techniques performed using software and the resulting photographs. Reflecting on the results, summarize strategies for taking photographs in at least three different environments in a written narrative, citing evidence from supporting texts as well as the finished product. (TN Reading 1, 2; TN Writing 4, 6, 9)

Principles of Illustration

- 9) Create and modify vector illustrations of increasing complexity. Apply the principles of design and utilize advanced software tools such as live trace, creating gradients, transforming objects, and more. (TN Reading 3, 4; TN Visual Art 2.1; TN Art History 2.1)

Visual Layouts

- 10) Use publishing software to create single- and multi-page layouts. Apply and build on compositional techniques learned in the introductory course, including the rule of thirds. Describe the elements of a page layout, including headings, body text, illustrations, frames,



color schemes, and white space. Identify and use layout tools such as a grid system, guides, margins, columns, gutters, and rows. Distinguish among measurement and layout terminology such as picas, bleeds, and slugs. Based on a project's theme and the medium of the final product, create comprehensive layouts properly integrating page layout elements, design principles, and compositional techniques. (TN Reading 3; TN Writing 6, 9; TN Math N-Q, G-MG; TN Visual Art 2.1; TN Art History 2.1)

- 11) Apply mathematics concepts and measurement techniques to design and finish layouts. Concepts should include, but are not limited to:
 - a. Determining and applying the equivalence between fractions and decimals. For example, convert a decimal to a fraction to prepare a unit for measurement on a fractional scale to the precision of 1/16 of an inch.
 - b. Working with units such as feet, inches, meters, centimeters, millimeters, and picas. For example, convert a dimension from centimeters to inches.
 - c. Performing proportionate reasoning to estimate quantities, such as determining the appropriate scale of an image for a given sheet size.(TN Reading 3; TN Math N-Q, G-MG)
- 12) Apply principles of typography as they relate to layout and page composition in order to appropriately use various forms of type when designing layouts. Employ typography tools to manipulate text within layouts such as threading and flowing text frames. Further, investigate the use of typography as an expressive form. For example, use text as an image or combine type and image into a cohesive form. (TN Reading 3, 4; TN Writing 6)
- 13) In teams, use software to create complex layouts, including multiple-page layouts, large displays, and/or product designs (i.e., for corporate branding packages, product-line packaging and marketing, and more). Demonstrate consistency of style throughout the design package while managing the storage of complex files within the selected software environment. (TN Reading 3, 4; TN Writing 4, 6)
- 14) Understand the connection between digital layouts and final products, such as understanding the difference between the screen color and the print color. Prepare layouts for production by testing and refining files using pre-flight procedures. Make final products in varying formats, including but not limited to layouts printed on paper and layouts published digitally. (TN Reading 3, 4; TN Writing 6)

Projects

- 15) Employ research methods when planning a design project, including data collection and analysis. Synthesize research to present appropriate precedents for the development of a project and articulate logical rationale for the use of chosen precedents. Create a detailed presentation or written report, citing evidence from research, which summarizes design decisions in light of research findings. For example, conduct a survey to determine the target audience for a given company branding package, and select colors and symbols based on the target audience. (TN Reading 1, 2, 4, 6, 9; TN Writing 2, 4, 6, 9)
- 16) Apply the design process to complete projects of increasing complexity and of varying applications such as print, web, film, and marketing communications. Demonstrate the ability to



select and use the appropriate tools and procedures to accomplish project goals. Prepare a persuasive narrative to explain the design to a client, communicating the project in such a way that is understandable to the audience. (TN Reading 3, 4, 5, 7; TN Writing 1, 4; TN Math N-Q, G-MG)

- 17) Utilize the critique and refinement strategy as part of the design process to achieve project goals. As part of a design project, present preliminary design ideas in a way that is understandable to an audience using both visual and verbal explanations. Note constructive criticism received and use it to influence design refinement. Similarly, evaluate the work of others, drawing on design principles and project goals, to provide clear, specific, and constructive feedback. (TN Reading 2, 3, 4; TN Writing 4, 5, 6, 7, 9; TN Visual Art 1.3, 2.1, 2.2, 5.1, 5.3; TN Art History 2.1)
- 18) Complete a design project in a specific application (i.e., print, web, film, marketing, or other design communications) using multiple software formats. Referencing supporting evidence such as industry standards, select the appropriate software for each specific task and efficiently manage file content. Convert and export files as needed for the given application. For example, place photographs and illustrations in publishing software by appropriately linking the files. (TN Reading 1, 2, 3, 5; TN Writing 4, 7, 9)
- 19) Explore time management techniques utilized by professionals from case studies or professional organizations, noting key habits and best practices of freelance designers as compared with their salaried peers. Create and implement a work schedule, timeline, and budget for completing a given project. (TN Reading 1, 2, 3; TN Writing 2, 4, 7, 9)

Business Management

- 20) Analyze the relationship and responsibilities of various parties involved in a business contract. Write a basic contract for design work, such as a graphic designer's contract with a new business to create a marketing package. Emulate a design professional by explaining the contract to a mock client. (TN Reading 2, 3, 4, 5; TN Writing 2, 4)

Portfolio

- 21) Update materials from coursework to add to the portfolio begun in *Digital Arts & Design I*, including artifacts that demonstrate ability to use industry-specific technology. Continually reflect on coursework experiences and revise and refine the career plan generated in the introductory course. Include written descriptions of project types and learning outcomes. (TN Writing 4, 5, 7, 9; TN Visual Art 5.1)

Standards Alignment Notes

*References to other standards include:

- TN Reading: [Tennessee State Standards for English Language Arts & Literacy in History/Social Studies, Science, and Technical Subjects](#); Reading Standards for Literacy in Science and Technical Subjects 6-12; Grades 9-10 Students (page 62).



- Note: While not directly aligned to one specific standard, students who are engaging in activities outlined above should be able to also demonstrate fluency in Standard 10 at the conclusion of the course.
- TN Writing: [Tennessee State Standards for English Language Arts & Literacy in History/Social Studies, Science, and Technical Subjects](#); Writing Standards for Literacy in History/Social Studies, Science, and Technical Subjects 6-12; Grades 9-10 Students (pages 64-66).
 - Note: While not directly aligned to one specific standard, students who are engaging in activities outlined above should be able to also demonstrate fluency in Standards 3 and 10 at the conclusion of the course.
- TN Math: [Tennessee State Standards for Mathematics](#); Math Standards for High School: Number and Quantity, Geometry (pages 58-83).
 - Note: The standards in this course are not meant to teach mathematical concepts. However, the concepts referenced above may provide teachers with opportunities to collaborate with mathematics educators to design project based activities or collaborate on lesson planning. Students who are engaging in activities listed above should be able to demonstrate quantitative and geometric reasoning as applied to specific technical concepts. In addition, students will have the opportunity to practice the habits of mind as described in the eight Standards for Mathematical Practice.
- TN Visual Art: Tennessee Visual Art: [Visual Art](#) standards 1.3, 2.1, 2.2, 3.1, 4.1, 4.2, 5.1, 5.2, and 5.3 may provide additional insight and activities for educators.
- TN Visual Art History: Tennessee Visual Art History: [Visual Art History](#) standard 2.1 may provide additional insight and activities for educators.
- P21: Partnership for 21st Century Skills [Framework for 21st Century Learning](#)
 - Note: While not all standards are specifically aligned, teachers will find the framework helpful for setting expectations for student behavior in their classroom and practicing specific career readiness skills.





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Digital Arts & Design III

Primary Career Cluster:	Arts, A/V Technology & Communications
Consultant:	Rachel Allen, (615) 532-2835, Rachel.Allen@tn.gov
Course Code(s):	6087
Prerequisite(s):	<i>Digital Arts & Design I, Digital Arts & Design II</i>
Credit:	1-2 (See Recommended Credits Below)
Grade Level:	11-12
Graduation Requirements:	This course satisfies one to two of three credits required for an elective focus when taken in conjunction with other Arts, A/V Technology & Communications courses.
Programs of Study and Sequence:	This is the third course in the <i>Digital Arts & Design</i> program of study.
Necessary Equipment:	Refer to the Teacher Resources page.
Aligned Student Organization(s):	SkillsUSA: http://tnskillsusa.com/ Brandon Hudson, (615) 532-2804, Brandon.Hudson@tn.gov Technology Student Association (TSA): http://www.tntsa.org Amanda Hodges, (615) 532-6270, Amanda.Hodges@tn.gov
Coordinating Work-Based Learning:	If a teacher has completed work-based learning training, appropriate student placement can be offered. To learn more, please visit http://www.tn.gov/education/cte/work_based_learning.shtml .
Available Student Industry Certifications:	Adobe or American Design Drafting Association
Dual Credit or Dual Enrollment Opportunities:	There are no known dual credit/dual enrollment opportunities for this course. If interested in developing, reach out to a local postsecondary institution to establish an articulation agreement.
Teacher Endorsement(s):	230, 311, 435, 436, 475, 476, 516, 519, 520, 521, 537, 538, 543, 583
Required Teacher Certifications/Training:	NOCTI Advertising & Design or Adobe Certified Expert (Photoshop or Illustrator) or ADDA Certified Digital Designer
Teacher Resources:	http://www.tn.gov/education/cte/artstech.shtml

Course Description

Digital Arts & Design III is the third course in the Digital Arts & Design program of study. Applying design skills developed in prior courses, students will expand their creative and critical thinking skills to create comprehensive multimedia projects and three-dimensional designs. Upon completion of this course, proficient students will be able to use industry-standard software to create multimedia projects, web

pages, three-dimensional models, and animations. Students will utilize research techniques to plan and enhance project outcomes. Standards in this course also include professionalism and ethics, career exploration, and business and project management. In addition, students will begin compiling artifacts for inclusion in a portfolio, which they will carry with them throughout the full sequence of courses in this program of study. Standards in this course are aligned with Tennessee State Standards for English Language Arts & Literacy in Technical Subjects, Tennessee State Standards in Mathematics, Tennessee Visual Art standards, and Tennessee Art History standards.*

Program of Study Application

This is the third course in the *Digital Arts & Design* program of study. Flexibility is built in to offer this course for either one or two credits, depending on school capacity and teacher background. Whether offered for one credit or two credits, this course leads to a fourth-level *Applied Arts Practicum* course in which students apply the skills learned here toward the completion of an in-depth, semester- or year-long project. For more information on the benefits and requirements of implementing this program in full, please visit the Arts, A/V Technology & Communications website at <http://www.tn.gov/education/cte/artstech.shtml>.

Recommended Credit

If all standards in the course are covered, the course is recommended for two credits. If only one credit is to be offered, two options are recommended. Option A focuses more on multimedia and web applications, while Option B is tailored for programs with a specific interest in or capacity for teaching animation.

1 Credit - Option A

Content	Standards
Safety	1
Professionalism & Ethics in Design	2, 3
Career Exploration	4
Multimedia	5, 6
Web Applications	7, 8, 9
Three-Dimensional Graphics	10, 11
Research Project	21
Design Projects	22, 23, 24
Business Management	25, 26
Portfolio	27

1 Credit - Option B

Content	Standards
Safety	1
Professionalism & Ethics in Design	2, 3
Career Exploration	4
Three-Dimensional Graphics	10, 11
Animation	12, 13, 14, 15, 16, 17, 18, 19, 20
Research Project	21
Design Projects	22, 23, 24
Business Management	25, 26
Portfolio	27



Course Standards

Safety

- 1) Demonstrate the ability to comply with personal and environmental safety practices associated with art and design applications: the use of adhesives; hand tools; machines; and the handling, storage, and disposal of chemicals/materials in accordance with local, state, and federal safety and environmental regulations.
 - a. Inspect, maintain, and employ safe operating procedures with tools and equipment.
 - b. Adhere to responsibilities, regulations, and Occupational Safety & Health Administration (OSHA) policies regarding reporting of accidents and observed hazards, and regarding emergency response procedures.
 - c. Complete a written safety test with 100 percent accuracy. For equipment used in the course, complete equipment examinations with 100 percent accuracy in which the student performs an operational checkout by the instructor. Maintain a record of written safety examinations and equipment examinations.

(TN Reading 3, 4; TN Writing 4)

Professionalism and Ethics

- 2) Collaboratively develop a professionalism rubric for professional attributes required within art and design professions. Research job descriptions, career information, and online job boards such as general employability skills and character traits most often mentioned or desired for digital art and design professionals. For each item on the rubric, define the characteristic, state why it is important for professionals working in these fields, and list performance indicators for the skill. Possible skills include:
 - a. Creative design skills
 - b. Ethical business practices
 - c. Honesty
 - d. Respect
 - e. Communication
 - f. Responsibility

(TN Reading 1, 4; TN Writing 2, 4, 8)

- 3) Examine current and emerging ethical and legal issues related to the digital art and design industry (e.g., copyright, font licensing, piracy, photo manipulation, sustainability). Choose one such issue and develop a claim about its impact on society and the responsibility of the digital art and design professional. (TN Reading 7, 8; TN Writing 1, 4, 9)

Career Exploration

- 4) Research the range of credentials one can earn with advanced study of art and design at the postsecondary level (i.e., technical certification, BA, BS, MFA, etc.). Investigate both in-state and out-of-state postsecondary programs in a variety of digital art and design fields, including but not limited to graphic design, photography, industrial design, digital media, animation, and more. Synthesize research conducted in previous Digital Arts & Design courses to update the portfolio career plan to achieve post-high school goals. (TN Reading 5, 7, 9; TN Writing 2, 4, 6, 8)



Multimedia

- 5) Drawing on research from industry journals and similar publications, analyze how the principles of design converge with digital technology and imagery in motion graphics and multimedia. Select a multimedia product and explain in a visual, oral, or written presentation how the principles of design work in harmony with technical skills such as creating visual layouts, illustrations, and photographs to achieve the final product. (TN Reading 1, 2, 4; TN Writing 2, 6, 9; TN Visual Art 2.1)
- 6) Apply the design process to complete advanced multimedia projects of increasing complexity for a range of applications such as print, web, film, and marketing communications. Demonstrate the ability to select and use the appropriate tools and procedures to accomplish project goals. Gather and arrange image, audio, and media for incorporation into comprehensive media projects. For example, create an interactive presentation that a client could use as a marketing and educational tool for potential customers. (TN Reading 2, 5; TN Writing 4; TN Math N-Q, G-MG)

Web Applications

- 7) Research design constraints affecting the design of graphics and layouts for web devices, including computers and mobile devices. Describe how design processes for the web differ from design processes for print or product creation. Evaluate and critique webpages based on the principles and elements of design and other considerations related to user friendliness and navigability. (TN Reading 1, 5, 9; TN Visual Art 2.2, 5.1, 5.3)
- 8) Apply illustration, photography, and layout skills to create interactive media for use on the web. For example, create a navigation bar, logo, or banner to incorporate in a web page. (TN Reading 3, 4)
- 9) Describe the steps involved in creating webpages. Use a content management system or web design software to create a simple informative webpage. Apply the principles of design and composition. Prepare images and illustrations in the proper format for use on the web. For example, as part of a design package for a client, create a mock-up of a webpage incorporating color schemes and graphics that coordinate with the design package. (TN Reading 3, 4; TN Writing 4; TN Visual Art 2.1)

Three-Dimensional Graphics

- 10) Research and compile examples of digital three-dimensional modeling and graphics created by design professionals in a range of industries, such as entertainment, health sciences, architecture, engineering, aerospace, advertising, and graphic design. In a visual display such as an infographic, evaluate examples from at least five industries, citing the sources used. (TN Reading 1, 2, 7, 9; TN Writing 2, 6, 7, 9)



- 11) Perform multistep procedures in industry software to create three-dimensional models of increasing complexity. Apply design principles and software tools to develop the design, including but not limited to:
- Applying surface materials
 - Creating a background environment
 - Adding lighting features to create shading and shadow effects
 - Positioning cameras to set-up scenes
 - Rendering the models to create finished products
 - Generating videos of three-dimensional models such as walkthroughs or flyovers
- (TN Reading 3, 4; TN Visual Art 2.1)

Animation

- 12) Synthesize research from informational texts, including industry magazines and online resources, to create an annotated timeline or visual graphic emphasizing significant time periods, technological advances, and key figures in animation. (TN Reading 2, 7; TN Writing 2, 9)
- 13) Research and report on the principles of animation. Examine movies, cartoons, or other animations to identify applications of the principles of animation. As a class, create a presentation explaining the principles of animation by citing resources and identifying examples in works of animation. (TN Reading 1, 2, 3, 4, 7, 9; TN Writing 2, 5, 6, 8, 9)
- 14) Describe the animation process, outlining the steps involved in planning, creating, and editing an animation. Drawing on research, perform multistep procedures to develop a three-dimensional animation. Steps should include:
- Brainstorming to develop an idea
 - Conducting research to determine the target audience
 - Conducting research to develop visual ideas
 - Producing sketches of the presentation
 - Creating an environment for the animation
 - Applying the principles of animation toward the completion of a working animation
- (TN Reading 1, 2, 5; TN Writing 2)
- 15) Create a storyboard to develop animation concepts. The storyboard should present visual elements of the animation, illustrations of the sequence of actions, and major themes and ideas. Present the storyboard to peers for evaluation. Revise and refine the storyboards based on constructive feedback. (TN Reading 3, 4; TN Writing 4, 5, 6)
- 16) Apply three-dimensional modeling skills to create the elements of an animation, including creating, modifying, and manipulating polygonal objects and creating and applying surface textures. (TN Reading 3, 4)
- 17) Analyze the properties and uses of different types of lighting for an animation scene, including three point lighting, animated lighting, indirect and direct lighting, and environmental lighting. Create a chart or visual display to compare and contrast each type. Use software tools to apply appropriate lighting to the scene, utilizing the principles of design and animation. (TN Reading 1, 2, 4, 9; TN Writing 2, 4, 9; TN Visual Art 2.1)



- 18) Follow multistep procedures to use cameras, including animated cameras, to create animations. Demonstrate the ability to bring conceptual ideas from the storyboards to fruition. (TN Reading 3)
- 19) Utilize animation software to understand and apply the mechanics of animation. Apply basic software techniques to create animations. Techniques include the following:
- Create and modify key frames and poses
 - Change an objects state or position over time
 - Establish an object's speed
 - Move an object along a path
 - Apply basic rigging to a model
- For example, utilize software tools to simulate a mechanical cycle such as a ball dropping and bouncing. (TN Reading 3, 4)
- 20) Apply various animation effects when working on animation projects, including particle systems, environmental simulation (wind, gravity, time), and other effects. Use appropriate rendering settings to render a sequence of frames. Save the file in appropriate formats for given applications and explain why a particular format is most acceptable for the selected application and audience, such as the use of an .swf file on a webpage. (TN Reading 3, 4; TN Writing 4, 9)

Research Project

- 21) In preparation for a design project, perform in-depth research to investigate the context of the project's use and the potential users of the project. Create an informative essay describing the context of the design, citing both qualitative and quantitative research. For example, for a three-dimensional animation of a product's design, make a claim for the targeted audience and the environment in which the product will be used, citing specific textual evidence to support the claim. (TN Reading 1, 2, 4, 6, 9; TN Writing 2, 4, 8, 9)

Design Projects

- 22) Apply the design process to complete projects of increasing complexity, combining multiple media to communicate, market, or advertise across different platforms, including print, web, film, and other digital forums, in order to maximize audience reach and reinforce message. Describe why multiple media are needed to accomplish project goals; specifically, justify why a web-based format is appropriate for one audience whereas a print format is more appropriate for another. Demonstrate the ability to select and use the appropriate tools, procedures, and project management techniques to accomplish project goals. Prepare a persuasive narrative to explain the project to a client, communicating the project in such a way that is understandable to the audience. (TN Reading 3, 4, 5, 7; TN Writing 1, 4; TN Math N-Q, G-MG)
- 23) Utilize the critique and refinement strategy as part of the design process to achieve project goals. As part of a design project, present preliminary design ideas in a way that is understandable to an audience using both visual and verbal explanations. Note constructive criticism received and use it to influence design refinement. Similarly, evaluate the work of others, drawing on design principles and project goals to provide clear, specific, and constructive feedback. (TN Reading 2, 3, 4; TN Writing 4, 5, 6, 7, 9; TN Visual Art 1.3, 2.1, 2.2, 5.1, 5.3; TN Art History 2.1)



- 24) Complete a project using multiple software. Determine the appropriate software for each specific task and efficiently manage file content. Convert and export files as needed for the given application. For example, import photographs and illustrations into three-dimensional modeling software by appropriately linking the files. (TN Reading 1, 2, 3, 5; TN Writing 4, 7, 9)

Business Management

- 25) Analyze the components of a professional design proposal. Write an informative text describing the purpose of each element of a proposal. Include strategies for the designer to use to generate the information contained in each section. (TN Reading 4, 5; TN Writing 2, 9)
- 26) Use an online editing tool to develop a professional proposal for a specific project. Use a variety of sources to gather data, cite each source, and briefly describe why the chosen source is reliable. (TN Reading 1, 7, 8; TN Writing 2, 6, 8)

Portfolio

- 27) Update the portfolio to reflect the cumulative total of all projects undertaken across the program of study. Compile information, sketches, photographs, illustrations, layouts, and design projects from each course. Include artifacts that demonstrate ability to use industry-specific technology. Select projects from course work that showcase qualifications as a design student. Upon completion of this course, the following artifacts will reside in the student portfolio:
- Career plan
 - Professionalism rubric
 - Example designs showing best work from each course
- (TN Reading 1, 4, 7; TN Writing 2, 4)

Standards Alignment Notes

*References to other standards include:

- TN Reading: [Tennessee State Standards for English Language Arts & Literacy in History/Social Studies, Science, and Technical Subjects](#); Reading Standards for Literacy in Science and Technical Subjects 6-12; Grades 11-12 Students (page 62).
 - Note: While not directly aligned to one specific standard, students who are engaging in activities outlined above should be able to also demonstrate fluency in Standards 10 at the conclusion of the course.
- TN Writing: [Tennessee State Standards for English Language Arts & Literacy in History/Social Studies, Science, and Technical Subjects](#); Writing Standards for Literacy in History/Social Studies, Science, and Technical Subjects 6-12; Grades 11-12 Students (pages 64-66).
 - Note: While not directly aligned to one specific standard, students who are engaging in activities outlined above should be able to also demonstrate fluency in Standards 3 and 10 at the conclusion of the course.
- TN Math: [Tennessee State Standards for Mathematics](#); Math Standards for High School: Number and Quantity, Geometry, Statistics (pages 58-83).
 - Note: The standards in this course are not meant to teach mathematical concepts. However, the concepts referenced above may provide teachers with opportunities to



collaborate with mathematics educators to design project based activities or collaborate on lesson planning. Students who are engaging in activities listed above should be able to demonstrate quantitative, geometric, and statistical reasoning as applied to specific technical concepts. In addition, students will have the opportunity to practice the habits of mind as described in the eight Standards for Mathematical Practice.

- TN Visual Art: Tennessee Visual Art: [Visual Art](#) standard 1.3, 2.1, 2.2, 3.1, 4.1, 4.2, 5.1, 5.2, and 5.3 may provide additional insight and activities for educators.
- TN Visual Art History: Tennessee Visual Art History: [Visual Art History](#) standard 2.1 may provide additional insight and activities for educators.
- P21: Partnership for 21st Century Skills [Framework for 21st Century Learning](#)
 - Note: While not all standards are specifically aligned, teachers will find the framework helpful for setting expectations for student behavior in their classroom and practicing specific career readiness skills.





A/V Production I

Primary Career Cluster:	Arts, A/V Technology & Communications
Consultant:	Rachel Allen, (615) 532-2835, Rachel.Allen@tn.gov
Course Code(s):	6049
Prerequisite(s):	None
Credit:	1
Grade Level:	9
Graduation Requirements:	This course satisfies one of three credits required for an elective focus when taken in conjunction with other Arts, A/V Technology & Communication courses.
Programs of Study and Sequence:	This is the first course in the <i>A/V Production</i> program of study.
Necessary Equipment:	Refer to the Teacher Resources page.
Aligned Student Organization(s):	SkillsUSA: http://tnskillsusa.com/ Brandon Hudson, (615) 532-2804, Brandon.Hudson@tn.gov Technology Student Association (TSA): http://www.tntsa.org Amanda Hodges, (615) 532-6270, Amanda.Hodges@tn.gov
Coordinating Work-Based Learning:	If a teacher has completed work-based learning training, appropriate student placement can be offered. To learn more, please visit http://www.tn.gov/education/cte/work_based_learning.shtml .
Available Student Industry Certifications:	Adobe Certified Associate or Apple Certified Pro
Dual Credit or Dual Enrollment Opportunities:	There are no known dual credit/dual enrollment opportunities for this course. If interested in developing, reach out to a local postsecondary institution to establish an articulation agreement.
Teacher Endorsement(s):	576, 597
Required Teacher Certifications/Training:	None
Teacher Resources:	http://www.tn.gov/education/cte/artstech.shtml

Course Description

A/V Production I is a foundational course in the Arts, A/V Technology & Communications cluster for students interested in a/v (audio/visual) production occupations. Upon completion of this course, proficient students will be to explain and complete the phases of the production process including pre-production, production, and post-production. Students will establish basic skills in operating cameras

and other production equipment. Standards in this course include career exploration, an overview of the history and evolution of a/v production, and legal issues affecting a/v production. In addition, students will begin compiling artifacts for inclusion in a portfolio, which they will carry with them throughout the full sequence of courses in this program of study. Standards in this course are aligned with Tennessee State Standards for English Language Arts & Literacy in Technical Subjects, Tennessee State Standards in Mathematics, and Tennessee State Standards for Physical World Concepts, Physics, and Visual Art.*

Program of Study Application

This is the first course in the *A/V Production* program of study. For more information on the benefits and requirements of implementing this program in full, please visit the Arts, A/V Technology & Communications website at <http://www.tn.gov/education/cte/artstech.shtml>.

Course Standards

Safety

- 1) Accurately read and interpret safety rules, including but not limited to rules published by the Occupational Safety and Health Administration (OSHA), and state and national code requirements. Be able to distinguish between the rules and explain why certain rules apply in a written, oral, or digital presentation using domain-specific terminology. (TN Reading 3, 4, 6; TN Writing 4, 5, 6, 9)
- 2) Explain the intended use of equipment available in the classroom. Demonstrate how to properly inspect, use, and maintain safe operating procedures with equipment. Incorporate safety procedures and complete a written safety test with 100 percent accuracy. (TN Reading 3, 4; TN Writing 9)
- 3) Determine the safety considerations for working both in the studio and in the field. Create a hazard assessment checklist and perform safety inspections for various environments, including a classroom studio. (TN Reading 3, 4; TN Writing 4, 8)

History and Evolution of A/V Production

- 4) Research the development of a/v production throughout history, analyzing how advances in technology have impacted the industry. Create an annotated timeline or visual graphic illustrating the significant people, time periods, and technological advances affecting a/v production. Citing resources from informational texts, include justification for why each identified item is significant. (TN Reading 1, 2, 3, 4, 5, 7; TN Writing 2, 9)
- 5) Analyze the impact a/v productions have on society. Investigate the role of media in communicating ideas in society, emphasizing how social, cultural, economic, and political developments are reflected in and influenced by media, including the impact of social media on a/v production. For example, compose a persuasive essay describing how a given social media application has positively or negatively impacted society, such as the rise of cyberbullying on social networks or how non-profit organizations use social media to fundraise. (TN Reading 1, 2, 4; TN Writing 2, 4, 9)



Career Exploration

- 6) Research a/v production occupations, such as film and video editor, a/v equipment technician, broadcast engineering technician, multimedia animator, camera operator, producer, director, or reporter. Interpret labor market data, such as information from the Bureau of Labor Statistics and O*Net OnLine, to identify the industries that a/v production professionals work in, including but not limited to the motion picture industry, radio and television broadcasting, advertising, and more. Determine areas of largest growth and discuss emerging trends and careers in a/v production-related industries. (TN Reading 1, 2, 4, 7; TN Writing 2, 6, 9; TN Math S-ID)

Ethical and Legal Issues

- 7) Investigate the laws impacting the work of a/v production professionals. Accurately describe the First Amendment to the U.S. Constitution and justify its impact on the media industry, citing specific textual evidence from landmark legal cases. (TN Reading 2, 5; TN Writing 4, 9)
- 8) Drawing evidence from a variety of resources, evaluate the proper procedures for legally obtaining and using content for production purposes, including attribution procedures. Examine copyright laws and fair use. In a written, oral, or video presentation, summarize and explain the legal concerns for creating, obtaining, or sharing a production as though leading a training or tutorial for fellow employees. Include the use of property and talent releases. (TN Reading 2, 3, 4, 6; TN Writing 2, 4)

Introduction to the Production Process

- 9) Explain the production process as described in textbooks, professional websites, and by industry professionals. Describe the components of each phase of production, including pre-production, production, and post-production. Exhibit findings in a written, oral, or digital presentation, citing resources used. (TN Reading 3, 4, 5; TN Writing 2, 4, 6)

Production Equipment

- 10) Examine the features and functions of various types of video cameras. Explain the interrelationship between f-stops, the iris, and aperture in controlling light, and relate concepts to the physical laws that govern light and other optical phenomena. Differentiate between the focal length and the focal point related to a zoom lens. Describe how to focus a camera and explain the depth of field. Describe the importance and procedures for setting white balance. Summarize the purpose and steps of camera settings in a checklist that a camera operator could use to prepare a camera for capturing video in various environments. (TN Reading 1, 2, 3, 4, 9; TN Writing 4, 9; TN Physical World Concepts 3, TN Physics 4)
- 11) Analyze the rules of composition and elements of design as related to composing camera shots (i.e. the rule of thirds, field of view, lead room, color, lines, etc.) Examine videos, artwork, and photographs to identify examples of the rules of composition in use and evaluate the impact on the scene. Create a visual presentation to describe the rules of composition, citing examples and counterexamples from various resources. (TN Reading 3, 4, 9; TN Writing 6, 9; TN Visual Art 2.1, 2.2)



- 12) Distinguish among different types of tri-pods and other camera mounting devices. Demonstrate the proper procedures for setting up a camera on a tripod. Analyze and describe the various types of camera angles, shots, and movements in an infographic or demonstration. Correctly use the proper equipment and procedures to capture video footage. (TN Reading 3, 4; TN Writing 2, 4)
- 13) Select the appropriate camera and basic accessories for a given production location. Properly set up the camera including positioning and mounting the camera and connecting the necessary cables. Demonstrate proper procedures to clean and store cameras and equipment. (TN Reading 3, 4, 9)
- 14) Examine the basic types and applications of various lighting equipment. Compare and contrast studio and field lighting equipment and techniques. Evaluate light quality in terms of intensity, color, direction, and other characteristics. Describe a variety of lighting techniques, including one, two, and three point lighting techniques; demonstrate the ability to provide written specifications for required lighting setups, as a set designer would instruct a gaffer. Employ proper lighting equipment according to industry safety standards. (TN Reading 3, 4, 5, 8, 9; TN Writing 2, 4)
- 15) Connect microphones to camera equipment using the proper cables. Research basic techniques for capturing audio with a camera and accompanying microphone. Demonstrate the proper placement of microphones for capturing audio for a video production. (TN Reading 3, 4)

Planning a Production

- 16) Describe the elements of a story, such as characters, setting, conflict, and resolution. Distinguish among the script styles and writing techniques for different types of productions, including but not limited to news broadcast, documentary, fictional narrative, and advertising. Select at least one example of a fact-based script, an entertainment-based script, and an advertising-based script. Investigate the scripts to compare and contrast the elements of each type. Summarize findings in an informational text, citing evidence from research. (TN Reading 2, 3, 4, 9; TN Writing 2, 9)
- 17) Utilize the steps of the pre-production phase to create a written plan for a simple production. Conduct a pre-production meeting to develop a production plan. The plan should include but would not be limited to:
 - a. Justifying the purpose of the production
 - b. Determining the target audience
 - c. Writing a script for the production
 - d. Creating a project budget
 - e. Outlining a production schedule
 - f. Choosing a method of content delivery (i.e., online, on television, live production, etc.)(TN Reading 3, 4; TN Writing 2, 4, 9)



Capturing a Production

- 18) Select and set up the most appropriate production equipment for a chosen production location. Properly use the appropriate equipment, camera techniques, and composition principles to capture video according to a pre-production plan. (TN Reading 3, 4)

Post-Production

- 19) Demonstrate common procedures to manage digital files and distinguish between the various types of digital video, image, and audio files. Describe file storage in cameras and calculate the amount of recording time a device can hold based on the settings. Log, upload, and organize video resources in preparation for editing, converting file formats as necessary. Utilize online file management services to backup files. (TN Reading 3, 4, 9; TN Writing 5, 9; Math N-Q)
- 20) Perform basic software operations to edit videos, including assembling clips for proper sequencing, applying transition effects, and inserting basic text to enhance video (i.e. captions and credits). Utilize digital video editing software to individually perform post-production procedures to create a short video production such as a three-minute film, news report, or other production. (TN Reading 3, 4, 7; TN Writing 4, 6)

Projects

- 21) Apply the production process to independently complete video projects for a public audience. Demonstrate the ability to set goals according to the project plan, and select and use the appropriate equipment and procedures to achieve goals. Prepare an informative narrative to explain the final product to a peer, emphasizing how the production process, composition rules, and scientific principles were applied. (TN Reading 3, 4, 7; TN Writing 2, 4)
- 22) Create a rubric to evaluate the effectiveness of a production based on the rules of composition and project goals. Use the rubric to reflect upon project outcomes and gather feedback from peers. Note constructive feedback received, and use it to improve the outcomes of future projects. Similarly, evaluate the work of others, drawing on composition rules and project goals to provide clear, specific, and constructive feedback. (TN Reading 2, 4, 9; TN Writing 5, 9)

Portfolio

- 23) Gather examples of professional portfolios from contemporary videographers and journalists. List the items that are often included in a professional portfolio. In a written, visual, or oral presentation, describe the components of a professional portfolio and the benefits of maintaining one. (TN Reading 1, 4, 9; TN Writing 2, 4, 8, 9)
- 24) Compile relevant artifacts to create a student portfolio connecting personal career preparation to concepts learned in this course, including written descriptions of project processes and reflections on learning outcomes. (TN Reading 2, 4, 9; TN Writing 4, 9)



Standards Alignment Notes

*References to other standards include:

- TN Reading: [Tennessee State Standards for English Language Arts & Literacy in History/Social Studies, Science, and Technical Subjects](#); Reading Standards for Literacy in Science and Technical Subjects 6-12; Grades 9-10 Students (page 62).
 - Note: While not directly aligned to one specific standard, students who are engaging in activities outlined above should be able to also demonstrate fluency in Standard 10 at the conclusion of the course.
- TN Writing: [Tennessee State Standards for English Language Arts & Literacy in History/Social Studies, Science, and Technical Subjects](#); Writing Standards for Literacy in History/Social Studies, Science, and Technical Subjects 6-12; Grades 9-10 Students (pages 64-66).
 - Note: While not directly aligned to one specific standard, students who are engaging in activities outlined above should be able to also demonstrate fluency in Standards 1, 3, 7, and 10 at the conclusion of the course.
- TN Math: [Tennessee State Standards for Mathematics](#); Math Standards for High School: Number and Quantity, Statistics (pages 58-83).
 - Note: The standards in this course are not meant to teach mathematical concepts. However, the concepts referenced above may provide teachers with opportunities to collaborate with mathematics educators to design project based activities or collaborate on lesson planning. Students who are engaging in activities listed above should be able to demonstrate quantitative and statistical reasoning as applied to specific technical concepts. In addition, students will have the opportunity to practice the habits of mind as described in the eight Standards for Mathematical Practice.
- TN Physical World Concepts: Tennessee Science: [Physical World Concepts](#) standard 3 may provide additional insight and activities for educators.
- TN Physics: Tennessee Science: [Physics](#) standard 4 may provide additional insight and activities for educators.
- TN Visual Art: Tennessee Visual Art: [Visual Art](#) standards 2.1 and 2.2 may provide additional insight and activities for educators.
- P21: Partnership for 21st Century Skills [Framework for 21st Century Learning](#)
 - Note: While not all standards are specifically aligned, teachers will find the framework helpful for setting expectations for student behavior in their classroom and practicing specific career readiness skills.





A/V Production II

Primary Career Cluster:	Arts, A/V Technology & Communications
Consultant:	Rachel Allen, (615) 532-2835, Rachel.Allen@tn.gov
Course Code(s):	6050
Prerequisite(s):	<i>A/V Production I</i>
Credit:	1
Grade Level:	10
Graduation Requirements:	This course satisfies one of three credits required for an elective focus when taken in conjunction with other Arts, A/V Technology & Communication courses.
Programs of Study and Sequence:	This is the second course in the <i>A/V Production</i> program of study.
Necessary Equipment:	Refer to the Teacher Resources page.
Aligned Student Organization(s):	SkillsUSA: http://tnskillsusa.com/ Brandon Hudson, (615) 532-2804, Brandon.Hudson@tn.gov Technology Student Association (TSA): http://www.tntsa.org Amanda Hodges, (615) 532-6270, Amanda.Hodges@tn.gov
Coordinating Work-Based Learning:	If a teacher has completed work-based learning training, appropriate student placement can be offered. To learn more, please visit http://www.tn.gov/education/cte/work_based_learning.shtml .
Available Student Industry Certifications:	Adobe Certified Associate or Apple Certified Pro
Dual Credit or Dual Enrollment Opportunities:	There are no known dual credit/dual enrollment opportunities for this course. If interested in developing, reach out to a local postsecondary institution to establish an articulation agreement.
Teacher Endorsement(s):	576, 597
Required Teacher Certifications/Training:	None
Teacher Resources:	http://www.tn.gov/education/cte/artstech.shtml

Course Description

A/V Production II is the second course in the *A/V Production* program of study intended to prepare students for a careers in audio/video production. Building on knowledge acquired in *A/V Production I*, this course advances technical skill in utilizing industry equipment related to lighting and audio, and it places special emphasis on the research and technical writing involved in planning productions. Upon

completion of this course, proficient students will be able to plan, capture, and edit research-based productions of increasing complexity, individually and through collaboration in teams. In addition to more robust career preparation, standards in this course include an investigation of concerns affecting a/v production businesses, such as ethical and legal issues, technology, funding, and the organization of professional roles in various industries. Students will continue compiling artifacts for inclusion in their portfolios, which they will carry with them throughout the full sequence of courses in this program of study. Standards in this course are aligned with Tennessee State Standards for English Language Arts & Literacy in Technical Subjects, as well as Tennessee State Standards for Physical World Concepts and Physics.*

Program of Study Application

This is the second course in the *A/V Production* program of study. For more information on the benefits and requirements of implementing this program in full, please visit the Arts, A/V Technology & Communications website at <http://www.tn.gov/education/cte/artstech.shtml>.

Course Standards

Safety

- 1) Accurately read and interpret safety rules, including but not limited to rules published by the Occupational Safety and Health Administration (OSHA), and state and national code requirements. Be able to distinguish between the rules and explain why certain rules apply in a written, oral or digital presentation using domain-specific terminology. (TN Reading 3, 4, 6; TN Writing 4, 5, 6, 9)
- 2) Explain the intended use of equipment available in the classroom. Demonstrate how to properly inspect, use, and maintain safe operating procedures with equipment. Review the hazard assessment checklist from the introductory course and update as needed for various environments. Incorporate safety procedures and complete a written safety test with 100 percent accuracy. (TN Reading 3, 4; TN Writing 9)

A/V Production Industries

- 3) Analyze how a/v professionals interact with others within industry. Conduct a case study of a company to evaluate the roles and responsibilities of a/v production professionals within the company. Create an oral, written, or visual presentation to illustrate the similarities and differences among the various roles. For example, investigate how a video editor interacts with producers, directors, cinematographers, and assistants in a motion picture company to create a movie trailer. (TN Reading 1, 2, 3, 4, 5, 7; TN Writing 2, 6, 8, 9)
- 4) Develop a research paper, video production, or visual display demonstrating the influence of technology on the careers of a/v production professionals, including the impact on technical work and business management. Write persuasively to describe the personal traits and skills needed for professionals in the field as technology advances, citing an example of an emerging or future technology. (TN Reading 2, 4, 7, 9; TN Writing 4, 5, 6, 8, 9)



- 5) Examine funding methods for various types of productions, including private equity and capital investment, tax incentives, and grants. Describe the relationship between a/v productions and advertising. Select a production type and describe how a specific project is funded, including the role advertising plays in the project, citing examples and identifying key personnel involved in production finance. Use technology to compile the information as a class and create a library of production types, with example funding strategies for each. (TN Reading 1, 2, 4, 9; TN Writing 4, 6, 8, 9)

Career Preparation

- 6) Research the postsecondary institutions (colleges of applied technology, community colleges, and four-year universities) in Tennessee and other states that offer a/v production-related programs. Based on the research, determine how postsecondary study and other advanced training help facilitate career development. Identify specific occupations of interest, outline preliminary employment goals, and devise a tentative career plan to reach those goals. Include in the plan descriptions of admissions criteria, postsecondary programs of study, and the secondary courses that will prepare a student to be successful in a chosen a/v career. (TN Reading 1, 2, 3, 5; TN Writing 4, 7, 9)

Ethical and Legal Issues

- 7) Examine the significance of ethical practices in a/v production occupations, using professional organizations' codes of ethics or other industry sources. Evaluate ethical issues affecting the industry, such as truth telling in broadcast journalism and cultural sensitivity. Compose an argument with claim(s) and counterclaim(s), debating the sociological and economic impacts of these issues on industry. (TN Reading 1, 2, 8, 9; TN Writing 1, 4, 8, 9)

Production Writing

- 8) Employ research methods when planning a production, including data collection, critical reading, and analysis of such information as casting tapes or location scouting reports. Synthesize research to draw conclusions and present a claim, citing resources and articulating logical rationale for the use of chosen resources. For example, conduct a survey to determine study body opinions regarding a current news event. (TN Reading 1, 2, 4, 6, 8, 9; TN Writing 2, 4, 8, 9)
- 9) Utilize research methods to determine the target audience for a given advertising production. Analyze the wants and needs of the target audience to prepare persuasive writing to communicate the intended message to the viewer. Create a distribution plan to deliver the content to the target audience such as through television, email, websites, and social media. (TN Reading 1, 2, 4, 8, 9; TN Writing 2, 4, 6, 9)
- 10) Building on the experiences and knowledge from *A/V Production I*, conduct research and write scripts for various production types. Analyze and break down the components of each type to create narratives that communicate the desired message or story with a logical beginning, middle, and end. Produce script for each of the following production types, utilizing the appropriate style and formatting conventions of each:
 - a. Entertainment-based productions



- b. Fact-based productions
 - c. Market-based productions such as advertising and proposals
- (TN Reading 1, 2, 4, 9; TN Writing 4, 5, 6, 8, 9)

Interviewing

- 11) Examine interviewing techniques used in a/v production. Create an interviewing plan outlining the selected topic, interviewees, interview location, and scheduling plan. Include justification for why the selected interviewees and location are appropriate for the given topic, noting any potential biases that may exist. (TN Reading 3, 4, 9; TN Writing 4, 9)
- 12) Analyze techniques used for writing interview questions. Compare and contrast a variety of example interview questions to determine the characteristics of quality interview questions, such as those which evoke detailed responses. Recognize the properties of biased and unbiased questions. Create a library of example questions a professional could use to prepare for interviews. (TN Reading 3, 4, 9; TN Writing 4, 5, 9)
- 13) Drawing on research, create a list of interview questions for a specified interview with a specific purpose and audience. Evaluate the questions for bias and quality. Perform interviews using prepared questions, appropriately improvising based on responses. (TN Reading 2, 3, 4, 9; TN Writing 8, 9)

Planning a Production

- 14) Explain the components and function of storyboards for a/v productions. Search for short scripts or draw excerpts from larger texts in order to analyze and prepare them for conversion into storyboards. For the identified production, create an original storyboard based on the written script. (TN Reading 3, 4, 9; TN Writing 4, 5, 6, 9)
- 15) Utilize the steps of the pre-production phase to create written plans for productions of increasing complexity. Conduct a pre-production meeting to develop production plans. The plans should include but would not be limited to:
 - a. Justifying the purpose of the production
 - b. Researching the topic of interest
 - c. Determining the target audience
 - d. Writing a script for the production based on research
 - e. Crafting a storyboard
 - f. Creating a project budget
 - g. Outlining a production schedule
 - h. Choosing a method of content delivery (i.e., online, on local television, live production, etc.)

For example, research a popular or controversial topic within a/v production, and create a production plan for a well-organized, short documentary film that explores expert opinion on both sides of the debate. Sample topics include the portrayal of athletes as positive role models or the prevalence of violence on television. (TN Reading 2, 3, 4, 9; TN Writing 4, 5, 6, 8, 9)



Lighting

- 16) Examine the scientific principles of light, distinguishing among the characteristics of hard light, diffused light, and incident light. Describe techniques used for manipulating light such as filters, gels, diffusers, and more. Utilizing these principles and building on techniques learned in *A/V Production I*, plan and implement the lighting for a production scene. Steps include planning the scene and equipment, blocking the scene, setting the lights, and adjusting the white balance of the camera. (TN Reading 2, 3, 4, 5, 9; TN Writing 7, 8, 9; TN Physical Science 2, TN Physical World Concepts 3, TN Physics 4)
- 17) Analyze how lighting techniques are used to create composition, visual continuity, and mood by examining case studies of video productions. Examine a given production and formulate a hypothesis concerning the types and setup of lighting equipment used for the scenes. Corroborate the hypothesis where possible and illustrate the conclusions in a written narrative with supporting graphics (such as a lighting set-up diagram). Formulate a strategy for creating a given mood by studying and citing examples from textbooks, online resources, and results of the case study. (TN Reading 2, 3, 4, 5; TN Writing 7, 8, 9)

Basic Audio

- 18) Examine the scientific properties and principles of sound, including how sound travels and how digital audio is created. Citing textbooks and online resources, create an informational text with supporting graphics illustrating the principles. (TN Reading 2, 3, 4, 5; TN Writing 2, 4, 7, 9; TN Physical World Concepts 3, TN Physical Science 2)
- 19) Compare and contrast the types, uses, and pick-up patterns of various microphones. Create a visual display illustrating pick-up patterns of microphones and listing example scenarios when each is commonly used. Experiment with different microphones and predict the pick-up pattern of each. Consult instructional manuals and manufacturer online resources to evaluate if the conclusions are correct. Utilize the knowledge of microphones and scientific principles of sound to appropriately select and place microphones for a given production. (TN Reading 2, 4, 9; TN Writing 7, 9; TN Physical World Concepts 3, TN Physical Science 2)
- 20) Create a written explanation to illustrate the importance and characteristics of quality audio. Explain the proper techniques for capturing quality audio for productions. Cite sources employing both scientific and industry perspectives, briefly justifying why each is valid. (TN Reading 1, 2, 4; TN Writing 2, 4, 8, 9)
- 21) Properly set up audio recording equipment and perform a pre-production check. Record an audio sequence and properly monitor the sound level. Troubleshoot poor sound quality and interferences by identifying the source of the problem and making corrections. Record quality sound, both in the studio and on location. (TN Reading 3, 4, 9)

Production Equipment

- 22) Design the staging and layout of a set. Appropriately integrate lighting, audio, scenery, costumes, and props according to the script and production plan. In teams, demonstrate the proper setup and operation of a wide array of production equipment, and rotate roles to



complete the various jobs necessary for a studio and/or remote production. (TN Reading 3, 4; TN Writing 4, 5, 6)

23) Demonstrate camera operations of advancing skill in studio and field environments including:

- a. Selecting proper framing
- b. Capturing action footage
- c. Using appropriate lens focal length, aperture, and exposure
- d. Implementing appropriate recording sequence

(TN Reading 3, 4, 9)

24) Identify and describe the function of the equipment in a control room. Appropriately use an audio mixer, switch cameras, and utilize traffic control equipment. Drawing on instructional manuals and other resources, create a tutorial video that a beginning a/v production student could view to understand the basic functions of a control room. (TN Reading 2, 3, 4, 9; TN Writing 4, 6, 8)

25) Interpret instructional manuals and other resources to determine routine maintenance and cleaning procedures to protect and prolong the life of a/v production equipment. Create a maintenance plan for a given piece of equipment that another peer could use to perform proper cleaning and storing techniques. (TN Reading 2, 3, 4, 9; TN Writing 4, 8, 9)

26) Perform troubleshooting procedures, including researching solutions used by a/v technicians, to solve basic technical problems involving production equipment. For example, examine a malfunctioning piece of equipment or improperly set-up network of equipment and determine the cause. Apply knowledge gained through experience in the course and employ research procedures to fix the equipment, adjust the settings, and prepare for production. (TN Reading 2, 3, 4)

Post-Production

27) Examine the importance of post-production editing to the a/v production process, and determine the impact of editing on continuity, performance, emphasis, and pacing. Perform advancing software operations to edit videos. Build on the skills learned in *A/V Production I* (assembling clips for proper sequencing, applying transition effects, and inserting basic text to enhance video) to complete more sophisticated tasks, including:

- a. Adjusting audio levels for balance and emphasis
- b. Using multiple audio sources
- c. Mixing audio for video such as applying sound effects, equalizing, and matching levels.
- d. Applying visual effects such as filters, keying, and image control
- e. Creating graphics for video productions such as titles and still images
- f. Exporting and uploading video in the appropriate format based on its distribution

Utilize digital editing software to create productions of increasing complexity, such as a documentary film that incorporates photographs, interviews, narrative voice-over, and other footage. (TN Reading 2, 3, 4, 7, 9)



Projects

- 28) Apply the production process to complete video projects (independently and in teams) for a public audience of increasing complexity and of varying type. Demonstrate the ability to select and use the appropriate equipment and procedures to accomplish project goals. Create a persuasive narrative to promote the production to a targeted audience. For example, write a synopsis of a short film, as though for a movie listing. (TN Reading 3, 4, 5, 7; TN Writing 2, 4)
- 29) Reflect on the outcomes of productions created in the course. Evaluate whether the various elements of the production meet the goals set in the production plan. Additionally, evaluate the productions of others, assuming the role of a film critic or analyst to write a critical review of a production, citing evidence to justify claims made. (TN Reading 1, 2, 3, 4, 7, 9; TN Writing 2, 4, 5, 9)

Portfolio

- 30) Update materials from coursework to add to the portfolio started in *A/V Production I*, including the career plan generated in this course, and continually reflect on coursework experiences. Include written descriptions of project types and learning outcomes. (TN Reading 3, 4; TN Writing 4, 5, 7, 9)

Standards Alignment Notes

*References to other standards include:

- TN Reading: [Tennessee State Standards for English Language Arts & Literacy in History/Social Studies, Science, and Technical Subjects](#); Reading Standards for Literacy in Science and Technical Subjects 6-12; Grades 9-10 Students (page 62).
 - Note: While not directly aligned to one specific standard, students who are engaging in activities outlined above should be able to also demonstrate fluency in Standard 10 at the conclusion of the course.
- TN Writing: [Tennessee State Standards for English Language Arts & Literacy in History/Social Studies, Science, and Technical Subjects](#); Writing Standards for Literacy in History/Social Studies, Science, and Technical Subjects 6-12; Grades 9-10 Students (pages 64-66).
 - Note: While not directly aligned to one specific standard, students who are engaging in activities outlined above should be able to also demonstrate fluency in Standards 3 and 10 at the conclusion of the course.
- TN Physical World Concepts: Tennessee Science: [Physical World Concepts](#) standard 3 may provide additional insight and activities for educators.
- TN Physics: Tennessee Science: [Physics](#) standard 4 may provide additional insight and activities for educators.
- P21: Partnership for 21st Century Skills [Framework for 21st Century Learning](#)
 - Note: While not all standards are specifically aligned, teachers will find the framework helpful for setting expectations for student behavior in their classroom and practicing specific career readiness skills.





A/V Production III

Primary Career Cluster:	Arts, A/V Technology & Communications
Consultant:	Rachel Allen, (615) 532-2835, Rachel.Allen@tn.gov
Course Code(s):	6083
Prerequisite(s):	<i>A/V Production I, A/V Production II</i>
Credit:	1-2 credits (See Recommended Credit below)
Grade Level:	11-12
Graduation Requirements:	This course satisfies one to two of three credits required for an elective focus when taken in conjunction with other Arts, A/V Technology & Communication courses.
Programs of Study and Sequence:	This is the third course in the <i>A/V Production</i> program of study.
Necessary Equipment:	Refer to the Teacher Resources page.
Aligned Student Organization(s):	SkillsUSA: http://tnskillsusa.com/ Brandon Hudson, (615) 532-2804, Brandon.Hudson@tn.gov Technology Student Association (TSA): http://www.tntsa.org Amanda Hodges, (615) 532-6270, Amanda.Hodges@tn.gov
Coordinating Work-Based Learning:	If a teacher has completed work-based learning training, appropriate student placement can be offered. To learn more, please visit http://www.tn.gov/education/cte/work_based_learning.shtml .
Available Student Industry Certifications:	Adobe Certified Associate or Apple Certified Pro
Dual Credit or Dual Enrollment Opportunities:	There are no known dual credit/dual enrollment opportunities for this course. If interested in developing, reach out to a local postsecondary institution to establish an articulation agreement.
Teacher Endorsement(s):	576, 597
Required Teacher Certifications/Training:	None
Teacher Resources:	http://www.tn.gov/education/cte/artstech.shtml

Course Description

A/V Production III is an applied-knowledge course intended to prepare students to pursue careers and postsecondary learning in audio/video production. Students in this course will apply knowledge and skills from previous courses in the program of study to create productions both independently and in teams, with the option of participating in a work-based learning experience for additional credit.

Students will use industry equipment and technology to complete all phases of the production process, including planning, coordinating, capturing, editing, and distributing productions. Standards in this course include policies and regulations, independent and collaborative productions, distribution of media, and the production of live events. Students will continue compiling artifacts for inclusion in their portfolios, which they will carry with them throughout the full sequence of courses in this program of study. Upon completion of this course, proficient students will be prepared for a career in audio/video production or to transition to a postsecondary program for further study. Standards in this course are aligned with Tennessee State Standards for English Language Arts & Literacy in Technical Subjects.*

Program of Study Application

This is the third course in the *A/V Production* program of study. Flexibility is built in to offer this course for either one or two credits, depending on whether or not a student completes an internship. Whether offered for one credit or two credits, this course can feed into a fourth-level *Applied Arts Practicum* course in which students can apply learned skills toward the completion of an in-depth, semester- or year-long project. For more information on the benefits and requirements of implementing this program in full, please visit the Arts, A/V Technology & Communications website at <http://www.tn.gov/education/cte/artstech.shtml>.

Recommended Credit

If standards 1-20 are covered, the course is recommended for one credit. If all standards (1-23) are covered, the course is recommended for two credits.

Course Standards

Safety

- 1) Accurately read and interpret safety rules, including but not limited to rules published by the Occupational Safety and Health Administration (OSHA), and state and national code requirements. Be able to distinguish between the rules and explain why certain rules apply in a written, oral, or digital presentation using domain-specific terminology. (TN Reading 3, 4, 6; TN Writing 4, 5, 6, 9)
- 2) Explain the intended use of equipment available in the classroom. Demonstrate how to properly inspect, use, and maintain safe operating procedures with equipment. Review the hazard assessment checklist from *A/V Production I* and *A/V Production II* and update as needed for various environments. Incorporate safety procedures and complete a written safety test with 100 percent accuracy. (TN Reading 3, 4; TN Writing 9)

Policies and Regulations

- 3) Research and summarize relevant legislation, regulations, and laws regulating audio/video production, such as Federal Communications Commission regulations and the Freedom of Information Act. Discuss the influence of government regulations on various media. (TN Reading 1, 2, 9)



- 4) Examine labor management processes and agreements used in a/v production fields. Describe the roles and functions of unions and professional organizations. Explain how such organizations influence and impact the development of production plans and work production. (TN Reading 2, 3, 4)

Independent Production

- 5) Perform research to develop a project idea for a given production type. Prepare a proposal and storyboard for the proposed project and pitch the idea to industry professionals, clients, and/or peers. In the presentation include:
 - a. Justification of identified production type
 - b. Determination of the target audience based on research
 - c. Relevance of the project idea to targeted audience
 - d. A draft of a written script based on research and appropriate to the purpose
 - e. A storyboard illustrating the main ideas of the productionCollect and reflect on constructive feedback from the audience, and incorporate feedback to develop the production plan. (TN Reading 1, 2, 3, 4, 7; TN Writing 1, 4, 5, 9)
- 6) Apply skills and knowledge from previous courses to independently coordinate and complete all elements of the pre-production, production, and post-production processes to create an original production according to identified schedule and intended purpose (e.g. client requirements). (TN Reading 2, 3, 4; TN Writing 2, 4, 9)
- 7) Assume the role of a producer to coordinate production activities. Log activities in a production log. Determine the personnel, equipment, and associated costs needed to complete the project, including anticipated scheduling, coordinating, and managing of crews to complete projects. (TN Reading 3, 4; TN Writing 4, 9)
- 8) Examine characteristics of high quality on-camera performances by reading textbooks and other resources and by analyzing actual professional video productions. Synthesize research to create guidelines for on-screen performances. Practice performing on-screen and identify strengths and areas to improve for future performances, both through personal reflection based on identified guidelines and by requesting constructive feedback from the instructor and/or peers. (TN Reading 2, 3, 4, 9; TN Writing 2, 4, 9)
- 9) Read and interpret instructional materials to generate special effects and animated elements for a given production using industry software. Employ the elements of design such as type, color, and composition to enhance the communication of the theme and message. For example, create and employ graphical elements consistent with a company's or broadcasting station's branding to appeal to the identified target audience. (TN Reading 2, 3, 4, 5, 6, 7, 8; TN Writing 6)

Collaborative Production

- 10) Drawing on research conducted in *A/V Production II* regarding the roles of individuals within a/v production teams, determine the structure of a production team needed to complete a classroom production. Draw a diagram to illustrate the breakdown of the team. Create job descriptions to indicate the responsibilities of every position. (TN Reading 2, 3, 4, 5, 7; TN Writing 2, 4, 9)



- 11) Apply skills and knowledge in an authentic production laboratory. Organize a production team; assign roles based on the strengths of each individual, working collaboratively to set and complete project goals. Demonstrate professionalism, exercise leadership, and complete tasks in a timely manner according to the production schedule. (TN Reading 3; TN Writing 9)
- 12) Schedule and conduct team project meetings as needed throughout all phases of production, emphasizing team goals and values. For example, conduct meetings to brainstorm and refine project ideas, prepare for production, coordinate logistics, address challenges as production is implemented, and to plan and delegate editing and distribution responsibilities during post-production. (TN Reading 2, 3; TN Writing 9)
- 13) Work in production teams to complete all aspects of the production process including planning, coordinating, capturing, editing, and distributing a production. Demonstrate advanced skills in selecting, setting up, and using industry equipment and software. Utilize advanced scheduling techniques to manage extended projects by developing a Gantt chart, monitoring production processes, and appropriately adjusting plans in response to problems or delays. (TN Reading 2, 3, 4; TN Writing 6)
- 14) Reflect upon project outcomes, evaluating the results based on project goals. Evaluate team operations and identify opportunities to improve functioning processes of the team. As a group, evaluate the effectiveness of production content and implementation based on audience feedback, ratings, etc. Note constructive and positive feedback received, and incorporate feedback to improve the outcomes of future projects. (TN Reading 1, 2, 3, 5; TN Writing 5, 7, 9)

Distribution of Media

- 15) Research outlets for media distribution. Explain the techniques and procedures of online distribution (e.g., web hosting, streaming, social media), television broadcast and cable networks, syndication, and public broadcast. Compare and contrast each in an infographic or written narrative, citing evidence from the sources consulted. (TN Reading 1, 2, 3, 4, 7, 9; TN Writing 2, 9)
- 16) Select a specific media outlet and research in more detail the transmission procedures of that outlet. For example, analyze methods a local news broadcasting company uses to send transmissions from a remote site to a studio, and how news broadcasts are transmitted to viewers. (TN Reading 2, 3, 4, 5)
- 17) Create a strategy to gather audience feedback utilizing technology. For example, utilize social media sites to monitor audience feedback posts or create an online survey. Gather and analyze feedback from audience responses and use it to influence future productions. (TN Writing 7, 9)

Live Events

- 18) Analyze the unique procedures and equipment needed to capture and stream/broadcast video productions of live events, such as a sporting event or a performance. Summarize findings in an informational text, citing research from online resources or industry professionals. (TN Reading 1, 2, 3, 4; TN Writing 2, 4, 9)



- 19) Work in teams to produce live events. Follow proper procedures to set up, use, and tear down equipment for producing live events in various contexts. Reflect on production outcomes in a journal and use the reflections to improve future outcomes. (TN Reading 1, 3, 4; TN Writing 2, 4, 9)

Portfolio

- 20) Update the portfolio to reflect the cumulative total of all projects undertaken across the program of study. Continually reflect on coursework experiences and revise and refine the career plan generated in *A/V Production II*. Include written descriptions of project types and learning outcomes. (TN Writing 4, 5, 7, 9)

Internship Option**

- 21) Participate in a work-based learning internship experience to develop, practice, and demonstrate skills outlined in course standards. An internship must follow current Tennessee work-based learning (WBL) guidelines.
- 22) Create and continually update a personal journal to document internship activities. Draw connections between the experience and course content, thoughtfully reflecting on:
- Acquired leadership and technical skills
 - Problem-solving techniques and decision-making skills
 - Team member participation in a learning environment
 - Personal career development
- (TN Writing 2, 4)
- 23) Upon conclusion of the internship, write an informative essay summarizing the internship experience and next steps for personal and professional growth. Produce a technology-enhanced class presentation showcasing highlights, challenges, and lessons learned from the internship. (TN Writing 2, 4, 6)

** Although a hands-on experience in work-based learning (WBL) is most ideal, it is recognized that not all students will be able to be placed in a company setting. If a student is placed, then the experience must follow Tennessee WBL guidelines found online at http://www.tn.gov/education/cte/work_based_learning.shtml.

Standards Alignment Notes

*References to other standards include:

- TN Reading: [Tennessee State Standards for English Language Arts & Literacy in History/Social Studies, Science, and Technical Subjects](#); Reading Standards for Literacy in Science and Technical Subjects 6-12; Grades 11-12 Students (page 62).
 - Note: While not directly aligned to one specific standard, students who are engaging in activities outlined above should be able to also demonstrate fluency in Standard 10 at the conclusion of the course.



- TN Writing: [Tennessee State Standards for English Language Arts & Literacy in History/Social Studies, Science, and Technical Subjects](#); Writing Standards for Literacy in History/Social Studies, Science, and Technical Subjects 6-12; Grades 11-12 Students (pages 64-66).
 - Note: While not directly aligned to one specific standard, students who are engaging in activities outlined above should be able to also demonstrate fluency in Standards 3 and 10 at the conclusion of the course.
- P21: Partnership for 21st Century Skills [Framework for 21st Century Learning](#)
 - Note: While not all standards are specifically aligned, teachers will find the framework helpful for setting expectations for student behavior in their classroom and practicing specific career readiness skills.





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Applied Arts Practicum

Primary Career Cluster:	Arts, A/V Technology & Communications
Consultant:	Rachel Allen, (615) 532-2835, Rachel.Allen@tn.gov
Course Code:	TBD
Prerequisite(s):	Minimum of 3 credits in an Arts, A/V Technology & Communications program of study.
Credit:	1
Grade Level:	12
Graduation Requirement:	This course satisfies one of three credits required for an elective focus when taken in conjunction with other Arts, A/V Technology & Communications courses.
Programs of Study and Sequence:	This is the fourth course in the <i>Digital Arts & Design</i> and <i>A/V Production</i> programs of study.
Necessary Equipment:	Refer to the Teacher Resources page.
Aligned Student Organization(s):	SkillsUSA: http://tnskillsusa.com/ Brandon Hudson, (615) 532-2804, Brandon.Hudson@tn.gov Technology Student Association (TSA): http://www.tntsa.org Amanda Hodges, (615) 532-6270, Amanda.Hodges@tn.gov
Coordinating Work-Based Learning:	If a teacher has completed work-based learning training, he or she can offer appropriate placement. To learn more, please visit http://www.tn.gov/education/cte/work_based_learning.shtml .
Available Student Industry Certifications:	<i>A/V Production</i> POS: Adobe Certified Associate or Apple Certified Pro <i>Digital Arts & Design</i> POS: Adobe Certified Associate
Dual Credit or Dual Enrollment Opportunities:	There are no known dual credit/dual enrollment opportunities for this course. If interested in developing, reach out to a local postsecondary institution to establish an articulation agreement.
Teacher Endorsement(s):	A/V Production- 576, 597 Digital Arts & Design- 230, 311, 435, 436, 475, 476, 516, 519, 520, 521, 537, 538, 543, 583, and ADDA Certified Digital Designer
Required Teacher Certifications/Training:	If students are assigned in work-based learning settings, teachers who have never taught this course must attend WBL training and earn the WBL Certificate provided by the Department of Education.
Teacher Resources:	http://www.tn.gov/education/cte/artstech.shtml

Course Description

The *Applied Arts Practicum* is a capstone course intended to provide students with the opportunity to apply the skills and knowledge learned in previous Arts, A/V Technology & Communications courses within a professional, working environment. In addition to developing an understanding of the professional and ethical issues encountered by professionals in these careers, students learn to refine their skills in problem solving, research, communication, teamwork, and project management through the completion of a course-long project. The course is highly customizable to meet local system needs. Instruction may be delivered through school laboratory training or through work-based learning arrangements such as internships, service learning, and job shadowing. Upon completion of the practicum, proficient students will be prepared to pursue postsecondary study in arts, a/v technology, or communications programs; or seek additional training or employment with the aid of the portfolio, which documents the student's work completed throughout the program of study. Standards in this course are aligned with Tennessee State Standards for English Language Arts & Literacy in Technical Subjects.*

Note: Practicum activities may take the form of work-based learning opportunities (such as internships, cooperative education, service learning, and job shadowing) or industry-driven project-based learning. As such, this course must be taught by a teacher with an active WBL Certificate issued by the Tennessee Department of Education and follow policies outlined in the Work-Based Learning Policy Guide available online at http://www.tn.gov/education/cte/work_based_learning.shtml.

Program of Study Application

This is the fourth course in the *Digital Arts & Design* and *A/V Production* programs of study. For more information on the benefits and requirements of implementing these programs in full, please visit the Arts, A/V Technology & Communications website at <http://www.tn.gov/education/cte/artstech.shtml>.

Course Standards

Safety

- 1) Accurately read and interpret safety rules, including but not limited to rules published by the Occupational Safety and Health Administration (OSHA), and state and national code requirements. Be able to distinguish between the rules and explain why certain rules apply. (TN Reading 3, 4, 6; TN Writing 2, 4)
- 2) Identify and explain the intended use of safety equipment available in the studio or on the jobsite. Demonstrate how to properly inspect, use, and maintain safe operating procedures with equipment. If assigned to a school laboratory, incorporate safety procedures and complete a written safety test with 100 percent accuracy. If assigned to work-based learning, follow all applicable safety requirements and guidelines outlined by the company and document completion of training topics on the appropriate work-based learning and work site forms. (TN Reading 3, 4; TN Writing 4, 9)



Postsecondary and Career Preparation

- 3) Research and select a company or organization for a work-based learning project in an arts, a/v technology, or communications field. Cite specific textual evidence from the organization's literature, as well as independent news articles, to summarize:
 - a. The mission and history of the organization
 - b. Headquarters and organizational structure
 - c. Products or services provided
 - d. Credentials required for employment and how they are obtained and maintained
 - e. Policies and procedures
 - f. Reports, newsletters, and other documents published by the organization
 - g. Website and contact information(TN Writing 4, 7)
- 4) Interview supervisors and other employees in a work environment to identify appropriate methods of pursuing education and employment in the given industry, and determine what knowledge, skills, and educational credentials are required in the given workplace setting. Summarize the interviews in an informational narrative. (TN Reading 2, 3, 6, 9; TN Writing 2, 9)
- 5) Apply learning experiences from work placement to review and update the education and career plan based on the knowledge and feedback acquired. Proactively identify areas of strength and opportunities for professional growth, encourage and act on feedback from peers, supervisors, and customers, and seek and use resources to improve skills. (TN Reading 4; TN Writing 8, 9)
- 6) Search for the resumes of arts, a/v technology, and communications professionals retrieved from the websites of companies, organizations, or professional networks. Discuss what is typically included in the resumes of these professionals, compare and contrast several examples, and create a personal resume modeled after elements identified in the search. (TN Reading 1, 4, 5, 6; TN Writing 4)
- 7) Conduct a job search and simulate the experience by researching local employment options. In preparation for a future career in arts, a/v technology, and communications, compose a cover letter highlighting relevant experience and skills from the resume for a specific job posting. (TN Reading 7; TN Writing 2, 4)
- 8) Participate in a mock interview. Prior to the interview, research tips on dress and grooming, most commonly asked interview questions, appropriate conduct during an interview, and recommended follow-up procedures. Highlight sample work compiled in the portfolio that illustrates mastery of specific skills attained throughout the program of study. Upon completion of the interview, write a thank you letter to the interviewer in a written or email format. (TN Reading 2; TN Writing 2, 4, 7, 9)

Transferring Course Concepts to Practicum

- 9) Apply skills and knowledge from previous courses in an authentic work-based learning internship, job shadow, or classroom-based project. Where appropriate, develop, practice, and demonstrate skills outlined in previous courses. (TN Reading 2, 3)



- 10) Work with the supervising teacher and work based learning supervisor (if applicable) to develop a personalized student-learning plan, in accordance with approved policies, to address the methods for practicing and demonstrating each of the skills identified in the pre-requisite Arts, A/V Technology & Communications course standards. Relate how each skill applies to a placement in the workplace or in-class setting. (TN Reading 1, 2, 3, 4, 9; TN Writing 2, 4, 6, 7, 8, 9)
- 11) As part of a course project, develop a comprehensive project plan to guide all work based on project planning techniques used in prior coursework. Collaboratively update the plan to reflect unexpected changes in conditions or capacity. For example, demonstrate the ability to reschedule an activity if there is a technical issue with equipment due to unforeseen circumstances. (TN Reading 3, 4, 7, 9; TN Writing 2, 5, 7)
- 12) Create and continually update a personal journal to document skills learned during the practicum and draw connections between the experience and previous course content by reflecting on:
 - a. Tasks accomplished and activities implemented
 - b. Positive and negative aspects of the experience
 - c. How challenges were addressed
 - d. Team participation in a learning environment
 - e. Comparisons and contrasts between classroom and work environments
 - f. Interactions with colleagues and supervisors
 - g. Personal career development
 - h. Personal satisfaction(TN Writing 2, 4)

Business Skills and Project Management

- 13) In teams, develop and successfully implement a suite of project management tools and processes to aid in the completion of the course project. (If participating in a work-based learning arrangement, apply tools and processes to satisfy placement requirements.) Demonstrate the ability to divide roles and responsibilities among team members, track progress toward goals, and satisfy client specifications as would a director, producer, or executive member of a production team. For example, assign tasks and monitor deliverables using a Gantt chart or other tracker. (TN Reading 7; TN Writing 4)

Portfolio

- 14) Update materials from coursework to add to the portfolio begun in the introductory course. The portfolio should reflect thoughtful assessment and evaluation of the progression of work involving the application of project management skills specific to the industry. The following documents will reside in the career portfolio:
 - a. Career plan
 - b. Resume
 - c. List of responsibilities undertaken through the course
 - d. Artifacts of project outcomes (such as storyboards, production schedules, and videos)
 - e. Periodic journal entries reflecting on tasks and activities



- f. Feedback from instructor and/or supervisor based on observations
 - g. Transcripts or other evidence of certifications obtained throughout the program of study
- (TN Writing 4, 5)

15) Synthesize best representations of all coursework in the program of study to create a cohesive professional webpage, digital portfolio, or video exemplifying personal accomplishments. Develop a plan to distribute the electronic portfolio as part of a career job search and/or application to a postsecondary institution. (TN Reading 1, 8; TN Writing 4, 9)

Communication of Project Results

16) Apply all steps of the production or design process to successfully complete projects as outlined in the course project plan. Demonstrate the ability to communicate results over the course of the project's duration. Produce a memo documenting the progress of the project and evaluating the final product as though writing to studio executives or project funders. Upon completion of the course, stage a live production, public screening, or other showcase to share the final product, if applicable within the work-based learning placement. (TN Reading 1, 2, 3, 4, 5, 7, 8, 9; TN Writing 1, 2, 4, 5, 6, 7, 8, 9)

17) Upon completion of the practicum, develop a technology-enhanced presentation showcasing highlights, challenges, and lessons learned from the experience. The presentation should be delivered orally, but supported by relevant artifacts, such as storyboards, casting videos, scripts, or screenshots of the finished product. Throughout the presentation, justify decisions and assess the quality of the work. Prepare the presentation in a format that could be presented to both a technical and a non-technical audience, as well as for a career and technical student organization (CTSO) competitive event. (TN Reading 1, 3, 7, 9; TN Writing 2, 4, 5, 6, 9)

Standards Alignment Notes

*References to other standards include:

- TN Reading: [Tennessee State Standards for English Language Arts & Literacy in History/Social Studies, Science, and Technical Subjects](#); Reading Standards for Literacy in Science and Technical Subjects 6-12; Grades 11-12 Students (page 62).
 - Note: While not directly aligned to one specific standard, students who are engaging in activities outlined above should be able to also demonstrate fluency in Standard 10 at the conclusion of the course.
- TN Writing: [Tennessee State Standards for English Language Arts & Literacy in History/Social Studies, Science, and Technical Subjects](#); Writing Standards for Literacy in History/Social Studies, Science, and Technical Subjects 6-12; Grades 11-12 Students (pages 64-66).
 - Note: While not directly aligned to one specific standard, students who are engaging in activities outlined above should be able to also demonstrate fluency in Standards 3 and 10 at the conclusion of the course.
- P21: Partnership for 21st Century Skills [Framework for 21st Century Learning](#)



- Note: While not all standards are specifically aligned, teachers will find the framework helpful for setting expectations for student behavior in their classroom and practicing specific career readiness skills.

