ANIMATION/STIMULATION AND MOTION GRAPHICS

COURSE DESCRIPTION

Animation / Simulation and Motion Graphics — is a course that builds on foundational elements of visual communication learned in Digital Arts and Design classes. Course content is designed to develop a strong knowledge in animation and software applications, new media graphics and the latest visual communication technologies that are multi-faceted and essential to the industries. Focus will be on developing understandings of key concepts, processes and strategies that will result in realistic animated characters, digital effects, products and environments. Along with creative challenges, students will leverage digital tools to gather, evaluate, and use information, encouraging higher order thinking that will translate into focused and innovative animations. Students will explore career opportunities, develop leadership, teamwork, and creative skills that are requisite in many aspects of life and industry. Course content is also related to other pathways.

It is strongly recommended that administration and guidance follow the scope and sequence and course recommendations as listed.

Recommended:  
Digital Arts and Design I  
Digital Arts and Design II  
Digital Arts and Design III  

Recommended Credits: 1 to 2 credits

Recommended Grade Levels: 11th & 12th

Number of Competencies in Course: 59
STANDARDS

1. Students will perform safety examinations and maintain safety records.

2. Demonstrate leadership, citizenship, and teamwork skills required for success in the school, community, and workplace.

3. Integrate reading, writing, math, and science skills and understand the impact of academic achievement in the workplace.

4. Demonstrate understandings and application of knowledge, skills, and methods associated with animation, simulation and motion graphics that are supported by design processes, principles and software knowledge.

5. Demonstrate advanced understanding of a range of animation software, visual elements and effects, that utilize temporal concepts within animation and simulation, to transform content into effective vehicles for communication of story line, messages and ideas.

6. Students will develop critical thinking skills to critique and analyze animation projects followed by discussion of conclusions drawn as to what makes them effective or not effective in communicating ideas, along with reflection on the effectiveness of their choices.

7. Students will demonstrate image, audio and media acquisition skills related to preparation for incorporation into comprehensive media projects and animations.

8. Demonstrate understandings of concepts relating to theme development, story telling, storyboards, script writing and copy editing.

9. Students will evaluate career opportunities and career paths within the animation and entertainment industry.

10. Students will develop e-Skills that are flexible and evolve with the increasing demands of technology developments and business needs, helping students become life-long learners.

11. Students will communicate effectively, demonstrating professional oral and written communication skills when presenting projects for critical review.

12. Students will analyze and demonstrate in-depth understanding of software.

13. Students will develop a comprehensive animation portfolio reflecting a range of work.
ANIMATION/STIMULATION AND MOTION GRAPHICS

STANDARD 1.0

Students will perform safety examinations and maintain safety records.

LEARNING EXPECTATIONS

The student will:
1.1 Research safe work habits and procedures related to the application of visual art, design, printing, and photography.
1.2 Select and safely apply appropriate technologies in visual art, design, printing, and photography.
1.3 Identify health-related problems, which may result from exposure to work related chemicals and hazardous materials.
1.4 Pass with 100% accuracy a written examination relating to safety issues.
1.5 Pass with 100% accuracy a performance examination relating to safety.
1.6 Maintain a portfolio record of written safety examinations and equipment examinations for which the student has passed an operational checkout by the instructor.

PERFORMANCE INDICATORS: EVIDENCE STANDARD IS MET

The student:
1.1 Demonstrates safe work habits and procedures used in visual art, design, printing, and photography.
1.2 Comprehends the issues related to and environmental issues involved with technologies in visual art, design, printing, and photography.
1.4 Complies with Occupational Safety and Health Administration (OSHA) safety regulations and practices, and governmental environmental regulations and practices.
1.6 Presents a portfolio with the requisite portfolio records.

SAMPLE PERFORMANCE TASKS

- Demonstrate personal safety (dress, eye and hearing devices, and jewelry) in completion of a visual art, design, printing, and photography project.
- Demonstrate the handling and disposing of chemicals.
- Complete a safety inspection evaluating possible fire and water hazards.
- Develop a presentation on right to know laws and any other laws required for safety.
- Practice safe mixing and disposal procedures for chemicals used in photography, printing, and other related processes.
- Practice ergonomic processes when using the computer, photographic equipment and other visual art tools and equipment.
- Prepare Occupational Safety and Health notebook for the Tennessee SkillsUSA Championships.
INTEGRATION LINKAGES

Language Arts, Math, Science, Social Studies, Art Appreciation, History, Cultures, Computer Science, Industry Standards, Copyright Laws, Secretary's Commission on Achieving Necessary Skills, (SCANS), Occupational Safety and Health Administration (OSHA)
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STANDARD 2.0

Students will demonstrate leadership, citizenship, and teamwork skills required for success in the school, community, and workplace.

LEARNING EXPECTATIONS

The student will:
2.1 Incorporate positive leadership skills in school, community, and work-related activities.
2.2 Participate in SkillsUSA as an integral part of the classroom instruction.
2.3 Assess situations in the visual art, design, printing, and photography industry and develop presentation offering solutions or improvements.
2.4 Serve in leadership positions in the school and community.

PERFORMANCE INDICATORS: EVIDENCE STANDARD IS MET

The student:
2.1 Demonstrates character and leadership skills using creative and critical thinking skills.
2.2 Plans, conducts, and participates in meetings according to the acceptable rules of parliamentary procedure.
2.3A Analyzes a situation to resolve it, and uses the Professional Development Program, SkillsUSA.
2.3B Participates as a team member.
2.4 Participates in a community service project.

SAMPLE PERFORMANCE TASKS

- Participate in various SkillsUSA programs and competitive events.
- Develop an annual program of work.
- Conduct a meeting.
- Complete level 3 of the Professional Development Program, SkillsUSA.

INTEGRATION LINKAGES

Language Arts, Math, Science, Social Studies, Art Appreciation, History, Cultures, Computer Science, Industry Standards, Copyright Laws, Secretary’s Commission on Achieving Necessary Skills, (SCANS), Occupational Safety and Health Administration (OSHA)
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STANDARD 3.0

Students will integrate reading, writing, math, and science skills and understand the impact of academic achievement in the workplace.

LEARNING EXPECTATIONS

The student will:

3.1 Understanding clear thesis development and support it by using analogies, quotations, and facts.
3.2 Write a multi-paragraph essay with consistent use of standard grammatical forms.
3.3 Make oneself understood when speaking using consistent standard English grammatical forms.
3.4A Summarize literary pieces in greater detail by including the characters, setting, and plot and analyzing them in greater detail.
3.4B Demonstrate an understanding of figurative language and idiomatic expressions by responding to such expressions and using them appropriately. Identify strategies used by the media to present information for various purposes (e.g., to inform, entertain, or persuade).
3.5 Demonstrate listening skills and oral comprehension.
3.6 Construct tables and analyze data and spreadsheets which aid in project preparation.
3.7 Develop critical thinking skills in math and science that transfer into areas of software coding and script in use of animation software.
3.8 Produce projects and media integrates math and science in project development software.

PERFORMANCE INDICATORS: EVIDENCE STANDARD IS MET

The student:

3.1 Develop a clear thesis and support it by using analogies, quotations, and facts appropriately.
3.2 Essays show consistent use of standard grammatical forms.
3.3 Student is understood when speaking uses consistent standard English grammatical forms.
3.4 Demonstrates summarization skills of literary pieces.
3.5 Exhibits listening skills and oral comprehension during critiques and presentations.
3.6 Use of tables and understands data that support project preparation.
3.7 Demonstrates critical thinking skills in math and science that transfer into software coding and script used in animation software.
3.8 Produces projects and media that have integrated math and science aspects for production of projects.
SAMPLE PERFORMANCE TASKS

- Develops a clear thesis in support of scripts and messaging.
- Provides oral presentations of work to piers and exhibits listening skills during critiques and is able to discuss work reflecting critical thinking skills.
- Media created by student reflect the integrated math and science skills in the production of projects.

INTEGRATION LINKAGES
Language Arts, Math, Science, Social Studies, Art Appreciation, History, Cultures, Computer Science, Industry Standards, Copyright Laws, Secretary’s Commission on Achieving Necessary Skills, (SCANS), Occupational Safety and Health Administration (OSHA)
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STANDARD 4

Demonstrate understandings and application of knowledge, skills, and methods associated with animation, simulation and motion graphics that are supported by design processes, principles and software knowledge.

LEARNING EXPECTATIONS

The student will:

4.1 Demonstrate understandings of software knowledge associated with animation, simulation and motion graphics that are supported by processes, principles and comprehensive projects.

4.2 Gain an in-depth understanding of how art forms come together with current digital technology and imagery to create newer artistic genres like motion graphics and multimedia.

4.3 Evaluate new media appropriate for animation, simulation and motion graphics.

4.4 Develop understandings emphasizing key skills used with animation processes and principles.

PERFORMANCE INDICATORS: EVIDENCE STANDARD IS MET

The student:

4.1 Demonstrates understandings of software knowledge associated with animation with comprehensive animation projects.

4.2 Demonstrates understanding of newer artistic genres like motion graphics and multimedia.

4.3 Analyzes animation designs or products that are compatible with animation.

4.4 Demonstrates key skills used in animation projects to produce a functional work.

SAMPLE PERFORMANCE TASKS

• Development of a range of new media projects.
• Develop appropriate uses of newer artistic genres like motion graphics and multimedia.
• Evaluate a design for unity, contrast, flow, content, and balance.

INTEGRATION LINKAGES

Art, Math, Math for Technology, Chemistry, Science, Health, Manipulative Skills, Communication Skills, Teamwork Skills, Language Arts, Research and Writing Skills, Decision-Making Skills, Critical-Thinking Skills, Secretary’s Commission on Achieving Necessary Skills, (SCANS), Occupational Safety and Health Administration (OSHA), Environmental Protection Agency (EPA), Tennessee Occupational Safety and Health Administration (TOSHA), PrintED, SkillsUSA
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STANDARD 5

Demonstrate advanced understanding of a range of animation software, visual elements and effects, that utilize temporal concepts within animation and simulation, to transform content into effective vehicles for communication of storyline, messages and ideas.

LEARNING EXPECTATIONS

The student will:

5.1 Demonstrate the ability to develop animations that utilize temporal concepts within animation and simulation software.

5.2 Transform content into effective vehicles for communication, i.e. storyline, messages and ideas.

5.3 Visual elements demonstrate and communicate the aspects of storyline, messages and ideas.

5.4 Use of visual elements and effects that do not interfere with the purpose and communication strategy of project.

5.5 Apply a stylistic vocabulary to an animation within a temporal design concept.

PERFORMANCE INDICATORS: EVIDENCE STANDARD IS MET

The student:

5.1 Demonstrates the ability to develop animations that utilize temporal concepts within animation and simulation software.

5.2 Transforms content into effective vehicles for communication, i.e. storyline, messages and ideas.

5.3 Demonstrates and communicates the aspects of storyline, messages and ideas.

5.4 Uses visual elements and effects that do not interfere with the purpose and communication strategy of project.

5.5 Applies a stylistic vocabulary to an animation within a temporal design concept.

SAMPLE PERFORMANCE TASKS

- Utilizes temporal concepts to develop animations with targeted audiences.
- Uses storyboards to communicate concept and guide development of projects.
- Demonstrates and communicates aspects of storyline, attributes are clear and communicate the aspects desired.
INTEGRATION LINKAGES

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STANDARD 6

Students will develop critical thinking skills to critique and analyze animation projects. Followed by discussion of conclusions drawn as to what makes them effective or not effective in communicating ideas, along with reflection on the effectiveness of their choices.

LEARNING EXPECTATIONS

The student will:

6.1 Demonstrate knowledge of critical thinking skills with their components and choices.
6.2 Analyze relationships, critique and discuss conclusions drawn on the effectiveness of their choices.
6.3 Evaluate creative variations that exist within projects and animations.
6.4 Reflection on the effectiveness of their visual choices as related to design principles.

PERFORMANCE INDICATORS: EVIDENCE STANDARD IS MET

The student:

6.1 Distinguishes ideas and their identifying characteristics.
6.2 Distinguishes between effectiveness of communicating ideas and visuals used.
6.3 Is able to discuss creative variations that exist within projects and animations.
6.4 Is able to qualify the effectiveness of their visual choices as related to design principles.

SAMPLE PERFORMANCE TASKS

- Demonstrates knowledge and critical thinking skills when presenting work.
- Design a logo utilizing type faces that were researched.
- Within the formal critique is able to discuss conclusions drawn on work.

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STANDARD 7

Students will demonstrate image, audio and media acquisition skills related to preparation for incorporation into comprehensive media projects and animations.

LEARNING EXPECTATIONS

The student will:

7.1 Employ the use of digital device to produce image, audio and media for use in projects.
7.2 Demonstrate analog-to-digital conversion.
7.3 Demonstrate image, audio and media editing using industry software.
7.4 Demonstrate use of digital file formats for use in a range of applications.
7.5 Knowledge of measurement units used in digital arts and design.

PERFORMANCE INDICATORS: EVIDENCE STANDARD IS MET

The student:

7.1A Prepares and sets up a digital device for acquiring image, audio and media for use in projects.
7.1B Captures image, audio and media according to quality digital standards.
7.2A Crops, adjusts image, audio and media on computer.
7.2B Scans, imports or acquires originals using digital device and software.
7.2C Evaluates images, makes adjustments, and saves files.
7.3A Sets appropriate size and resolution of media and images.
7.3B Converts file formats for a range of uses.
7.4 Manipulates images to meet specifications.
7.5 Demonstrates understanding of dpi, ppi, and other measurement units used in digital arts and design.

SAMPLE PERFORMANCE TASKS

- Take a digital photograph of still-life or product for use in animations.
- Retouch and adjust color of a digital media using image-editing software.
- Saves asset images and media in multiple formats, resolutions and dimensions for use in multi-media applications.

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Agency (EPA), Tennessee Occupational Safety and Health Administration (TOSHA), PrintED, SkillsUSA
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STANDARD 8

Demonstrate understandings of concepts relating to theme development, story telling, storyboards, script writing and copy editing.

LEARNING EXPECTATIONS

The student will:

8.1 Demonstrate how to develop concept, story and storyboard for projects.
8.2 Demonstrate how to script writing and copy editing.
8.3 Create a draft, proofs and edit screen play.

PERFORMANCE INDICATORS: EVIDENCE STANDARD IS MET

The student:

8.1 Determines concept, story and storyboard for projects.
8.2 Creates concept script and writes screen play.
8.3 Create a draft of screen play, reviews and rewrites.

SAMPLE PERFORMANCE TASKS

- Designs and lays out concept using a storyboard for projects.
- Student writes screen play for development of animation and audio.
- Proofread and make necessary corrections.

INTEGRATION LINKAGES

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ANIMATION/STIMULATION AND MOTION GRAPHICS

STANDARD 9.0

Students will evaluate career opportunities and career paths within the animation and entertainment industry.

LEARNING EXPECTATIONS

The student will:

9.1 Develop a profile of career opportunities.
9.2 Develop a personal education-career roadmap.
9.3 Project future career opportunities within the visual communications industry including freelance opportunities.

PERFORMANCE STANDARDS: EVIDENCE STANDARD IS MET

The student:

9.1 Researches the visual communications industry for various career paths and job titles.
9.2A Plans personal education paths based on aptitude, available courses, post-secondary education, and current career paths.
9.2B Profiles personal characteristics, which are beneficial to the success of a professional in the visual communications industry.
9.3 Researches and develops a projection of visual communications industry trends related to career opportunities.

SAMPLE PERFORMANCE TASKS

- Develop a list of career opportunities, including education requirements, responsibilities, and salary ranges.
- Develop a personal career plan.
- Research and present information on focus and trends in the information technology industry.
- Research and present information on focus and trends in the visual communications industry.
- Incorporate professional terminology into conversations.
- Participate in SkillsUSA programs and events.

INTEGRATION LINKAGES

ANIMATION/STIMULATION AND MOTION GRAPHICS

STANDARD 10

Students will develop e-Skills that are flexible and evolve with the increasing demands of technology developments and business needs, helping students become life-long learners.

LEARNING EXPECTATIONS

The student will:
10.1 Take advantage of technology-based tools.
10.2A Locate, select, and manage reference materials and information.
10.2B Cross-reference information for accuracy.
10.3 Employ technology to explore ideas, solve problems, and derive meaning.
10.4 Use technology to express ideas and exchange information.
10.5 Understand technology’s impact on individuals and society.
10.6 Leverage technology for critical thinking and decision making.

PERFORMANCE INDICATORS: EVIDENCE STANDARD IS MET

The student:
10.1 Creates comprehensive design projects with technology-based tools.
10.2A Add content to projects with correct and accurate information.
10.2B Verified accuracy of content projects.
10.3 Produce designs that solve problems and communicate meaning.
10.4 Express complex ideas with design and exchange information.
10.5 Understand how to utilize design and information for a positive impact on individuals and society.
10.6 Exhibit successful projects that reflect critical thinking and decision making.

SAMPLE PERFORMANCE TASKS

- Demonstrate critical thinking and decision making in design research for target market.
- Documentation of solution design projects and correct use reference materials.
- Sequence information in project content.
- Demonstrate the results of compare and contrast information.
- Cross-referenced information is correct and has identified main and subordinate ideas.

INTEGRATION LINKAGES

Language Arts, Math, Science, Social Studies, Art Appreciation, History, Cultures, Computer Science, Industry Standards, Copyright Laws, Secretary’s Commission on Achieving Necessary Skills, (SCANS), Occupational Safety and Health Administration (OSHA)
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STANDARD 11

Students will communicate effectively, demonstrating professional oral and written communication skills when presenting projects for critical review.

LEARNING EXPECTATIONS

The student will:
11.1 Demonstrate effective verbal communication.
11.2 Demonstrate effective written communication.
11.3 Demonstrate listening skills and oral comprehension.
11.4 Demonstrate comprehension of written communication.

PERFORMANCE INDICATORS: EVIDENCE STANDARD IS MET

The student:
11.1A Evaluates the importance of clear and effective communication.
11.1B Predicts consequences of poor communication.
11.1C Analyses characteristics of effective oral communication.
11.1D Demonstrates effective oral communication skills in class and during team activities.
11.2A Analyses characteristics of effective written communication.
11.2B Creates effective business letters, memos, and e-mail.
11.2C Selects appropriate communication styles for given audiences.
11.3A Analyses characteristics of good listening.
11.3B Demonstrates good listening skills in class and during team activities.
11.4A Interprets and uses written information in common job formats, such as tables, lists, charts, graphs, and diagrams.
11.4B Chooses a reading strategy appropriate to the purpose.

SAMPLE PERFORMANCE TASKS

- Student creates presentation for their projects both written and oral presentation.
- Student discusses and explains design project and defends choices of design elements.
- Students describe potential problems from poor communication.
- Students are given a business scenario requiring written communication. Students choose the most appropriate format for the given situation (letter, memo, or e-mail) and create the item.

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Agency (EPA), Tennessee Occupational Safety and Health Administration (TOSHA), PrintED, Professional Development Program, SkillsUSA
ANIMATION/STIMULATION AND MOTION GRAPHICS

STANDARD 12

Students will analyze and demonstrate in-depth understanding of software.

LEARNING EXPECTATIONS

The student will:
12.1  Design projects using industry software.
12.2  Prepare files for deployment.
12.3  Troubleshoot software file problems.

PERFORMANCE INDICATORS: EVIDENCE STANDARD IS MET

The student:
12.1A  Uses appropriate industry software for design, i.e. image, illustration, web, motion graphics.
12.1B  Imports or enters appropriate elements into design layout and/or graphics software.
12.1C  Formats and places content in design.
12.1D  Scales and places photographs, illustrations, and other graphic images.
12.1E  Prepares proofs for client approval.
12.2A  Reviews file and edits colors according to production requirements.
12.2B  Provides all final electronic files and required components for deployment.
12.3  Identifies and resolves problems having to do with text, graphics, and images.
12.3A  Understands both vector and raster file types, their applications and output capabilities for multi-media.

SAMPLE PERFORMANCE TASKS

Uses the appropriate industry software to create projects.
Proofread and make corrections on a newsletter.
Tests work on multiple platforms for deployment.

INTEGRATION LINKAGES

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ANIMATION/STIMULATION AND MOTION GRAPHICS

STANDARD 13

Students will develop a comprehensive animation portfolio reflecting a range of work.

LEARNING EXPECTATIONS

The student will:
13.1 Explore the various types of presentation in development of a portfolio.
13.2 Determine target audience.
13.3 Demonstrate ability to critique work to include in portfolio.
13.4 Demonstrate ability to make an oral presentation.

PERFORMANCE INDICATORS: EVIDENCE STANDARD IS MET

The student:
13.1 Researches portfolios formats and styles both electronic and print portfolios
13.2 Describes purpose of his/her portfolio and who will review it.
13.3 Creates and uses a rubric for evaluating material to be included in a portfolio
13.4 Makes an oral presentation appropriate for audience.

SAMPLE PERFORMANCE TASKS

- Students should create a list of potential items to be included in a digital portfolio.
- Students should collect items for their digital portfolio and label each artifact and describe why it was selected to be included in the portfolio.
- Students should be able to critically assess 15 of their best works for inclusion in prospective interview portfolios that reflect the target company's values.
- Students should use their portfolio in a mock interview to provide evidence of their skills and abilities.

INTEGRATION LINKAGES

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