MANCHESTER REGIONAL HIGH SCHOOL

Introduction to P.C. Graphics 1

REVISED
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Manchester Regional High School Board of Education

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I.   Course Description – PC Graphics 1

This full year course will expose students to the world of computer graphics. The course will focus on the principles, equipment, and skills used in advertising and computer graphic industries through hands-on computer work. Students will utilize computer programs such as Adobe Photoshop and Illustrator to create artwork and illustrations that can be incorporated into desktop publishing documents, and websites. Students will also learn production techniques for finishing, mounting and the creation of mock ups for final display. This course will address topics such as computer imaging, typography, and layout design in order to assure that students acquire knowledge and understanding of the visual and graphic arts fields.

In addition to the computer and software, students will properly learn to handle digital cameras, scanners, and other various output devices such as printers and backup storage disks applicable to projects.

COURSE DATA:

Length of Course:	Full Year
Credits:	5
Periods Per Week:	5
Classification:	Elective
Prerequisite:	None

EVALUATION:

> The purposes of evaluation are to provide information about student progress and to determine if students have learned the subject matter, which has been taught. Teachers will evaluate student progress by utilizing standardized tests, teacher-made quizzes and tests, oral questioning, class participation, homework, special projects, special exams, and other school records.

EVALUATION CRITERIA:

Evaluation will be based on the following weighted components:

> Formal tests ……………....50%
> Effort/Participation ……50%

Grading structure: Benchmark for mastery of course content is 65%; content mastery for students with IEPs may be less than the Board of Education approved minimum for regular education students.

II. Course Outline and Objectives

UNIT 1: DESIGN FUNDAMENTALS (8.1.12.A,2-3;8.1.12.D.2)
Students will:
1. develop a general knowledge of the history of Graphic Design
2. identify different industries and career paths for Graphic Design
3. learn best practices for a digital workflow
4. understand how to properly navigate an OS (Operating System) for increased efficiency when working on projects
5. identify skills needed for success in various areas of Graphic Design
6. practice concepting through the use of thumbnail sketches
7. understand image and type relationships

UNIT 2: CLASSROOM GUIDELINES/SAFETY (8.1.12.D.1) (8.2.12.E.1)

Students will:
1. complete each project following all required criteria as given in job or project description
2. understand why following dimensions and specific instruction in job descriptions are vital for successful completion
3. use appropriate equipment and tools in a safe, proper manner within the assigned job or project deadline
4. understand purpose of overhead projectors for large format projects
5. use proportional scale for figuring proper enlargement/reduction values
6. operate the Xerox printers/copiers safely for enlarging/reducing, scanning and duplicating, using appropriate modes and paper
7. operate and maintain computers and all peripherals (digital camera, scanner, printers)

UNIT 3: FOUNDATIONS OF DESIGN (8.1.12.A.1.A.3)

Section 1: Principles of Design – Level 1
Students will:
1. be introduced to the characteristics of basic design elements such as: line, shape, volume, space, value, texture, color, scale/proportion, unity, contrast, repetition/variation, and rhythm
2. learn the effective use of negative and positive space within design elements and layout

Section 2: Design and Layout- Level 1
Students will:
1. learn the basics of effective layout composition
2. effectively utilize design principals in their design solutions
3. execute design solutions through traditional methods and through digital print media applications
4. understand how functional design leads the viewer's eye

Section 3: Basic Color- Level 1
Students will:
1. learn the basic color wheel
2. understand primary, secondary and tertiary colors
3. understand the difference between warm and cool colors
4. understand tints, shades and tones
5. be introduced to basic color harmonies based on the color wheel
6. understand how to select complementary, analogous color schemes
7. learn the differences between RGB, CMYK and spot colors and how to properly utilize each for specific projects and media

8. utilize Color as a functional design element of perception and visual communication

Section 4: Typography- Level1
Students will:
1. be introduced to the history of letterforms and the functions of typography

2. learn about the anatomy of type

3. understand the differences between type classifications, typestyles and type families

4. understand the use of typography as an essential element of design

5. appropriately and effectively use, treatment and application of type in a variety of formats

6. learn to modify and customize type for specific project needs

UNIT 4: TECHNOLOGY FOUNDATIONS (8.1.12.A.1.A.3)

Section 1: Technology Skills
Students will:
1. identify and use computer and peripherals used in Graphic Design

2. be proficient in software applications used in a typical Graphic Design environment

3. understand how to open, close and manage fonts utilizing a font manager for various projects

4. utilize the scanner to properly digitize custom illustrations, textures and photography

5. learn how to properly adjust a digital camera for taking photos in various environments

6. understand the costs of all hardware, peripherals and software used in the Graphic Design field

7. properly create files and save them in the appropriate folders and/or network drives

8. name files according to project name for easy retrieval

9. understand the importance of frequent saving and backing up of files

10. maintain computers and peripherals, shutting down and storing appropriately

11. utilize the internet to assist in subject matter research, understanding copyright laws

12. utilize online tutorials and educational tools

13. understand how to use the computer to save, resize and properly print reference

14. understand how to use spell-check and the importance of perfect spelling and punctuation in projects

15. understand the need for proofing, revisions and acquiring a sign off/approval from the client

16. utilize printer/copier to further enlarge, resize and alter reference images

17. complete all projects following all criteria within deadline assigned

Section 2: Pixel-Based Software (Adobe Photoshop) Level1

Students will:
1. learn the Photoshop interface and setup custom work spaces

2. learn how to effectively use Bridge for quickly finding and viewing images

3. be introduced to the basics of setting up documents, saving files in different formats and customizing Preferences

4. learn keyboard shortcuts to streamline workflow

5. make selections via quick selection tools or quick mask mode

6. create accurate paths with the Pen tool

7. be introduced to the basics of Layers and Adjustment Layers

8. learn to crop, transform and straighten images

9. use Adjustment layers and the Adjustment panel

10. adjust tones with Levels

11. limit adjustments with Layer Masks

12. adjust images with Hue/Saturation

13. adjust images with the Black & White adjustment layer

14. learn to paint with brushes and gradients

15. learn how to Warp text

16. learn Special Effects such as adding Layer Styles and Smart Filters

17. combine group photos

18. learn how to output a file by selecting the appropriate print settings for individual projects

19. save in appropriate format upon request and understand purpose of file formats (PSD, JPEG, EPS, GIF, PNG, RAW, PDF, etc)

Section 3: Vector-Based Software (Adobe Illustrator) Level1

Students will:
1. learn key Illustrator concepts

2. create Illustrator documents for various projects

3. utilize keyboard commands to maximize productivity

4. understand the Illustrator interface (menus, palettes)

5. practice basic drawing technique with the pen, brush and objects tools

6. practice basic path editing

7. practice basic text editing

8. understand how to make selections

9. understand Appearances and how to edit them

10. work with Groups and Layers to keep drawings organized

11. understand how to work with color

12. practice object transformation and positioning

13. understand how to work with images

14. learn how to save and print their projects

15. Represent proper use of color, tint, opacity and stroke thickness

16. use guides for proper alignment in designs

17. save in appropriate format upon request and understand purpose of file formats (AI, EPS, PDF, etc)

18. resize artwork in layouts in proportion using correct tools and keys

UNIT 5: PRODUCTION & FINISHING SKILLS

Students will:
1. understand how to setup document bleeds

2. understand crop marks, registration marks, color bars and page information

3. know to size and trim a presentation board

4. know how to mount printed pieces on board using eco-friendly adhesives

5. know how to clean their finished pieces with a kneaded eraser

6. understand how to setup and fold multi-page pieces

III. Textbooks, Instructional Materials and Software

Technology:
• PC based environment with Adobe Creative Suite, latest version (Photoshop, Illustrator)
• Computer projector with wall mounted screen for teacher instruction

- Microsoft Internet Explorer/ Google Chrome
- Microsoft Office (Word, PowerPoint)
- Wacom 4 drawing tablets
- Wacom Cintiq digital drawing display
- Digital cameras
- Black & White and color copiers
- Scanner
- Laser printers

Tools of the trade:
- Rulers, T-squares & triangles
- Sketch pads
- Various paper stocks
- colored pencils
- markers
- Rubber cement, tape, StudioTac adhesive
- Paper cutter

IV. Evaluation

Students are evaluated using tile following criteria:

1. Weekly Work Grade (examples include attendance, completion of daily duties,
 General behavior towards classmates and instructor, sharing and maintenance of equipment and tools)
2. Research and design maintenance (examples include maintenance of all notes, project stages, file backups)
3. Accuracy in meeting project criteria
5. Meeting deadlines (deductions apply to all late projects)

Scope and Sequence Chart
KEY   I= Introduced   D =Developed   R =Reinforced

SKILLS TO BE LEARNED	9	10	11	12
Handle tools of the trade and equipment correctly and safely	IDR	IDR	IDR	IDR
Demonstrate knowledge of digital file organization and archiving	ID	R	R	R
Demonstrate a professional work ethic	I		DR	DR
Use effective time management skills in the production of projects	ID		DR	R
Demonstrate craftsmanship (organization, neatness, precision)	ID	IDR	IDR	IDR
Understand and practice the characteristics of basic design principles	I	R	R	R
Understand the creative process and importance of each step	I	D	IDR	IDR
Apply appropriate software solutions to design problems	I	D	DR	R
Articulate and solve basic problems of form and function	I	D	DR	DR
Identify and apply the critical thinking process to design challenges	I	DR	DR	DR
Understand the value of all tools, equipment, and supplies	I	ID	IDR	IDR
Demonstrate tool skills through a variety of creative art projects	I	D	R	R
Demonstrate knowledge of alignment, balance, proportion and use of positive and negative space	I	ID		IDR
'Demonstrate knowledge of color (primary, secondary, tertiary, complimentary)	I	D		IDR
Demonstrate knowledge of working in mixed media.	I	ID		IDR
Create vector illustrations to be used in design layouts	I	ID	ID	IDR
Utilize work area in a clean organized manner.	IDR	IDR	IDR	IDR
:Demonstrate an awareness of art history and how it relates to design and media	I	D		IDR
Understand the creative process and importance of each step	I	D		IDR
understand of the importance of meeting a deadline	IDR	IDR	IDR	IDR
:Demonstrate knowledge of documentation of design time and understanding commercial worth of the profession		I	ID	IDR

Task	1	2	3	4
Prepare thumbnails, roughs, and camps	I	IDR	DR	IDR
Demonstrate knowledge of typography, font styles, point size & layout purposes	I	ID	IDR	IDR
Create and understand purpose of logos(s) to brought through on other projects. Ex. Stationary, ad, package, etc.		I	ID	IDR
Demonstrate knowledge of package design				IDR
Demonstrate knowledge of basic elements of operation of computers, printers, scanners	IDR	IDR	IDR	IDR
Demonstrate knowledge of appropriately enlarging and reducing art with copying and printing	ID	IDR	IDR	IDR
Demonstrate knowledge of the differences between vector based and pixel based !artwork and the appropriate use for each	I	D		IDR
Demonstrate proficiency in Adobe Illustrator including tools, palettes, options and production formats	I	DR	IDR	IDR
Demonstrate proficiency in Adobe Photoshop including tools, palettes, options and production formats	I	DR	IDR	IDR
Demonstrate proficiency .in Adobe InDesign including tools, palettes, options and production formats	I	DR	IDR	IDR
Demonstrate proficiency in Using drawing tablets for illustration and digital image composition	I	D		IDR
Demonstrate proficiency in using digital cameras for artwork, layout, and Composition in various lighting conditions	I	ID		IDR
Understand print versus web resolution	I	IDR	IDR	IDR
Understand difference between RGB, spot color, and CMYK	I	IDR	IDR	IDR
Demonstrate knowledge and purpose of copyrighted images, Royalty Free images, the Fair Use Act and their rights and/or limitations .		I	R	IDR
Mount & Mat artwork in a professional manner		I	ID	IDR
Demonstrate knowledge of setting up research reference files	I	ID		IDR
Demonstrate knowledge of the cost of tools of the industry	I	I	DR	DR
Create .and revise of a resume for employment	I			IDR
Demonstrate knowledge of the many career opportunities related to graphic design	I	ID	IDR	IDR
Apply knowledge gained through research of trends & styles into design projects	I	ID	R	R
Integrate design concepts with materials, skills, and technology	I	ID	R	R
Develop ability to critique, defend, & support the integrity of a chosen project		ID	R	R
Relate printing terms, concepts, & processes to the prep of digital documents		I	ID	IDR
Assess personal strengths and weaknesses		I	D	R
Assemble a final portfolio with a variety of design projects			ID	IDR