Arkansas CTE

# Digital Communications II: Grades 10, 11, 12

Adopted 2010

**Hardware/Software & Storage Media**

**1.1 Define terminology**

1. Prepare a list of terms with definitions 1.1.1

**1.2 Discuss storage devices**

1. Compare and contrast storage media available and the the storage capacity of each: kilobyte, megabyte, gigabyte, terabyte 1.2.1
2. Compare and contrast the advantages and disadvantages of available storage media/hardware 1.2.2
3. Access/write using optical storage media (CD/DVD) 1.2.3
4. Access/write using optical storage media (CD/DVD) 1.2.4

**1.3 Explore emerging methods to deliver and store multimedia and the equipment**

1. Identify basic equipment needed for presentation, i.e. projector, smartboard, Internet, and kiosk 1.3.1
2. Identify advantages and disadvantages in current trends and technology; i.e. bluetooth, online storage, cloud computing, file sharing, etc. 1.3.2

**1.4 Review the types of software needed to develop media**

1. Compare and contrast different types of software used for developing media projects, i.e. image editing software, drawing software, and painting software 1.4.1
2. Discuss situations in which software is appropriate, i.e. creating documents in page layout software, editing photos in image editing software, creating a logo using 1.4.2

**1.5 Describe the types of hardware needed to develop media**

1. Identify hardware components used to acquire images, i.e. SLR camera, point and shoot camera, and scanner 1.5.1
2. Research the different types of hardware components used to acquire images such as cost, storage size, and specifications 1.5.2

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**Define terminology**

1. Prepare a list of terms with definitions 2.1.1

**2.2 Discuss the basic components of a digital camera**

1. Demonstrate an understanding of the basic components of a digital camera, i.e. storage media, battery, optical zoom, digital zoom, flash, preview mode, mode dial, and LCD screens 2.2.1
2. Analyze the relationship between camera resolution and megapixel 2.2.2
3. Compare and contrast SLR cameras with point and shoot cameras 2.2.3

**2.3 Identify framing techniques in digital photography**

1. Identify the four basic framing shots using photography: long shot, mid shot, close up, extreme close up 2.3.1
2. Demonstrate and understand the rule of thirds, point of view, and frame movement 2.3.2
3. Take pictures using appropriate composition techniques 2.3.3

**2.4 Discuss the different types of digital camera storage and methods of transferring images to a computer**

1. Compare and contrast the types of storage used for the digital camera: SD card, memory stick, internal memory, and compact flash card 2.4.1
2. Identify and use methods of transferring digital images: USB cables, bluetooth, card readers 2.4.2
3. Construct a file management system for photos (make folders, rename files) 2.4.3

## Graphics Editing

**3.1 Define terminology**

1. Prepare a list of terms with definitions 3.1.1

**3.2 Identify the different digital image file formats and compression**

1. Compare and contrast the two categories of digital images: bitmap and vector 3.2.1
2. Identify the different bitmap file formats (such as .bmp, .jpg, .gif, .png, .tif) and their uses 3.2.2
3. Identify vector file formats (such as .ai, .wmf, .pdf) and their uses 3.2.3
4. Categorize the two different types of compression: lossy and lossless 3.2.4
5. Analyze digital file formats in relation to file size and qualities 3.2.5
6. Demonstrate the proper procedure to zip and unzip files 3.2.6
7. Convert a graphic to a different format 3.2.7

**Identify the software available for creating digital images**

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1. Examine software for creating bitmap (paint) and vector (draw) images 3.3.1

2. Create bitmap images 3.3.2
3. Create vector images 3.3.3
4. Convert a vector image into a bitmap (rasterize) 3.3.4

**3.4 Demonstrate basic editing techniques**

1. Edit images in the following ways: move, resize, scale, rotate, flip, crop, convert to grayscale 3.4.1
2. Create a publication using these basic editing techniques 3.4.2

**3.5 Demonstrate advanced editing techniques**

1. Edit images in the following ways: transparency, brightness, contrast, masking, special effects, feathering, layering images, redeye, text, shapes, retouching 3.5.1
2. Create a publication using these advanced editing techniques 3.5.2

**Advanced Desktop Publishing**

**4.1 Define terminology**

1. Prepare a list of terms with definitions 4.1.1

**4.2 Demonstrate advanced desktop publishing techniques**

1. Create formatting styles in a document 4.2.1
2. Modify template elements 4.2.2
3. Apply a template to a document 4.2.3

**4.3 Describe master pages and their uses**

1. Set repetitive elements, i.e. headers, footers, columns, and page numbers 4.3.1
2. Apply a master page to a document 4.3.2

**4.4 Demonstrate the basic components and layout of a multi-page document**

1. Create a multi-page document using spreads, i.e. recipe books, magazines, children's books, etc. 4.4.1
2. Create a table of contents 4.4.2
3. Create an index 4.4.3

**4.5 Integrate page layout design with photo editing software**

1. Convert a document to a .pdf 4.5.1
2. Print a document identifying printer marks 4.5.2

**College/Career Capstone**

**5.1 Define terminology**

1. Prepare a list of terms with definitions 5.1.1

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**Identify the basic components of developing a resume**

1. Critique and analyze the different types of resumes 5.2.1
2. Prepare and create a resume for entry into the workforce 5.2.2

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**5.3 Integrate the elements of desktop publishing into a project for career and college readiness**

1. Create various publications incorporating the elements of desktop publishing that demonstrates mastery of student learning; i.e., corporate identity packet (logo, letterhead, business card, etc.) or student portfolio (examples of newsletters, brochures, etc.) 5.3.1