

# 2002 CTS AMENDMENTS to the Communication Technology Guide to Standards and Implementation

## Summary of Curriculum Changes

- New Courses:
  - COM1210: Digital Imaging 1
  - COM2210: Digital Imaging 2
  - COM3210: Digital Imaging 3
- Effective September 2002, Section I has been removed from all CTS strands and replaced with a general information page.

### Section B

1. **Remove** pages B.5–B.8 (1999) and **replace** with new pages B.5–B.8 (Revised 2002).

### Section D

1. **Remove** pages D.1–D.2 (1997) and **replace** with new pages D.1–D.2 (Revised 2002).
2. **Add** new pages D.31–D.34 (2002).

### Section E

1. **Remove** pages E.1–E.2 (1997) and **replace** with new pages E.1–E.2 (Revised 2002).
2. **Add** new pages E.49–E.54 (2002).

### Section F

1. **Remove** pages F.1–F.2 (1997) and **replace** with new pages F.1–F.2 (Revised 2002).
2. **Add** new pages F.49–F.54 (2002).

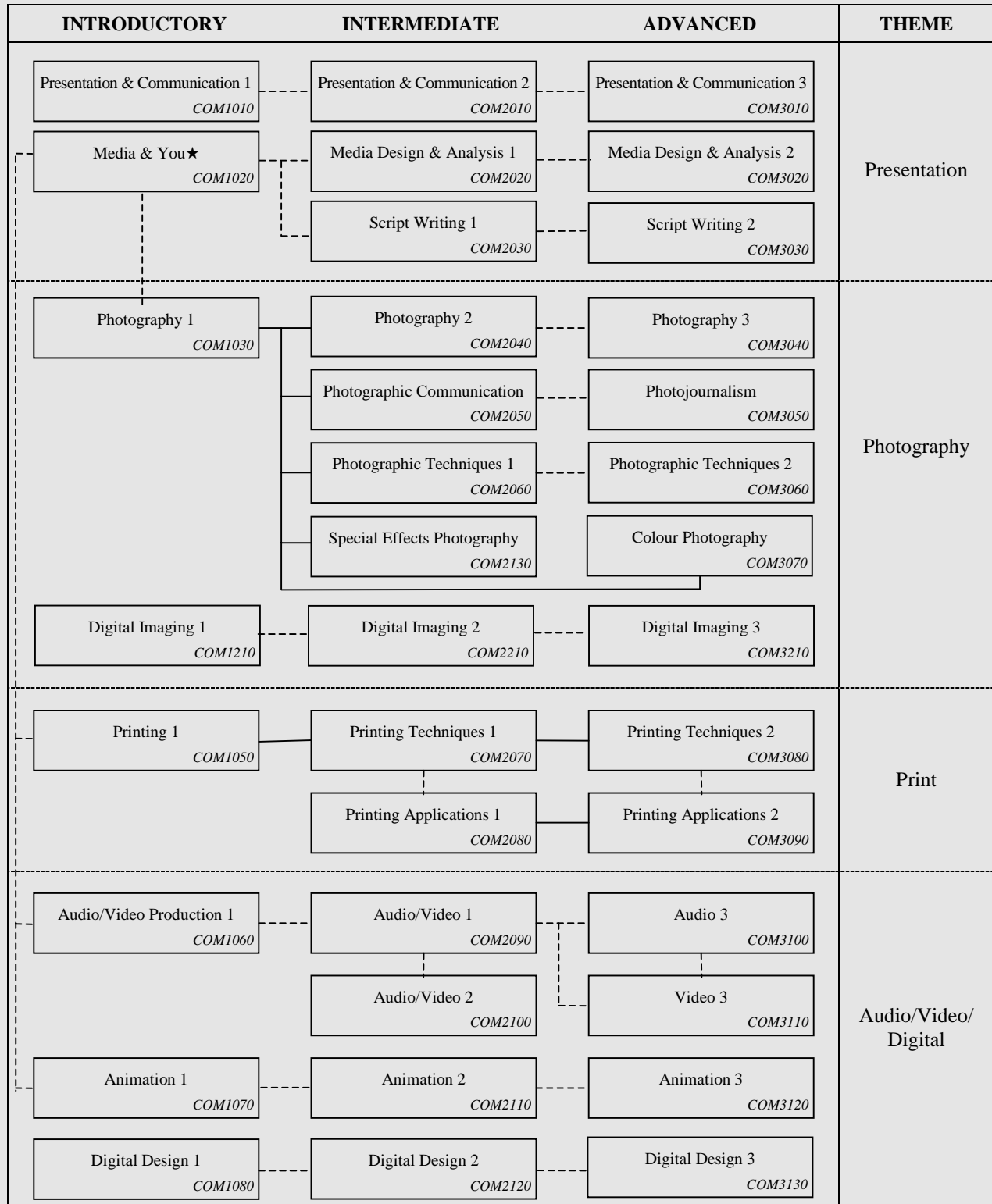
### Section G

1. **Remove** pages G.3–G.4 (1999) and **replace** with new pages G.3–G.4 (Revised 2002).
2. **Add** new pages G.81–G.88 (2002).

### Section I

1. **Remove** Section I (Revised 1999) and **replace** with new page I.1 (Revised 2002).

## SCOPE AND SEQUENCE



—— Prerequisite

----- Recommended sequence

★ Course provides a strong foundation for further learning in this strand.

## **COURSE DESCRIPTIONS**

### **Course COM1010: Presentation & Communication 1**

Students communicate information and ideas through the use of speech, body language and meaningful text, graphics, audio, video and/or animation.

### **Course COM1020: Media & You**

Students are provided with a hands-on introduction to the various segments of communication studies: presentation and communication, photography, print, and audio/video production.

### **Course COM1030: Photography 1**

Students operate a camera to take photographs and produce prints.

### **Course COM1050: Printing 1**

Students are introduced to basic layout/design techniques and to various print reproduction processes; e.g., offset, screen, electrostatic.

### **Course COM1060: Audio/Video Production 1**

Students acquire basic production skills through the use of simple audio and/or video equipment and techniques.

### **Course COM1070: Animation 1**

Students are introduced to a variety of animation techniques and are given the opportunity to produce simple animation.

### **Course COM1080: Digital Design 1**

Students are introduced to the integration of various media; e.g., audio, video, photographic, graphic, for the purpose of producing a multimedia message.

### **Course COM1210: Digital Imaging 1**

Students will learn the fundamentals of digital image acquisition, using a digital camera. Images will be saved to a folder or directory and manipulated, using bitmap editing software.

### **Course COM2010: Presentation & Communication 2**

Students use verbal and nonverbal communication skills to produce and deliver presentations incorporating a variety of media.

### **Course COM2020: Media Design & Analysis 1**

Students explore various media and examine their impact on personal, community and national interests.

### **Course COM2030: Script Writing 1**

Students write sample scripts for a variety of media forms.

### **Course COM2040: Photography 2**

Students review and expand on the concepts outlined in COM1030 Photography 1, including composition, exposure, camera operation, image processing, proofing and enlarging.

### **Course COM2050: Photographic Communication**

Students use photographic prints, slides or digital images to communicate a message or tell a story.

### **Course COM2060: Photographic Techniques 1**

Students expand photographic concepts using various lenses and applying depth of field in composition.

### **Course COM2070: Printing Techniques 1**

Students are introduced to single-register reproductive printing.

### **Course COM2080: Printing Applications 1**

Students apply the technique of single-register printing to practical situations.

### **Course COM2090: Audio/Video 1**

Students expand on basic audio/video production techniques.

### **Course COM2100: Audio/Video 2**

Students build on production skills through application of preproduction and post-production techniques.

### **Course COM2110: Animation 2**

Students build skills in planning, idea development and storytelling technique, and their application through various animation methods.

### **Course COM2120: Digital Design 2**

Students enhance their abilities to integrate various media for the purpose of producing a multimedia message for a target audience, using the computer as a significant production tool.

**Course COM2130: Special Effects Photography**

Students are introduced to the creative use of the camera, the darkroom and/or digital techniques, in order to produce various photographic effects.

**Course COM2210: Digital Imaging 2**

Students will acquire digital images from a digital camera and one or more other sources. They will extend and refine their knowledge of bitmap editing software and composition principles, and apply more advanced editing techniques to composite images.

**Course COM3010: Presentation & Communication 3**

Students refine presentation skills specific to a target audience.

**Course COM3020: Media Design & Analysis 2**

Students use school and/or community resources to produce messages for a target audience to be delivered through two or more media.

**Course COM3030: Script Writing 2**

Students refine script-writing skills by producing scripts for specific media formats.

**Course COM3040: Photography 3**

Students apply various light sources, multiple lighting arrangements and metering techniques with an emphasis on flash and studio lighting.

**Course COM3050: Photojournalism**

Students are introduced to photojournalism.

**Course COM3060: Photographic Techniques 2**

Students create special photographic effects through a variety of approaches, including advanced enlarging techniques, high contrast derivations, toning, retouching and print presentation.

**Course COM3070: Colour Photography**

Students are introduced to colour photography.

**Course COM3080: Printing Techniques 2**

Students are introduced to multiregister reproductive printing.

**Course COM3090: Printing Applications 2**

Students apply the technique of multiregister printing to practical situations.

**Course COM3100: Audio 3**

Students plan, develop and produce specific audio projects.

**Course COM3110: Video 3**

Students plan, develop and produce specific video projects.

**Course COM3120: Animation 3**

Students apply production planning techniques to produce animation that tells a story, communicates an idea or message, or creates a mood or theme. Students select and employ traditional animation techniques for the project work..

**Course COM3130: Digital Design 3**

Students develop and produce multimedia messages within a common theme and for a client who has an identified target audience. Students select and use a variety of media and justify their selection based on the strengths of the media and appropriateness to the task. Digital technology forms a key link in all project work.

**Course COM3210: Digital Imaging 3**

Students will apply advanced digital imaging software and techniques to develop a digital portfolio that demonstrates creativity and attention to aesthetic concerns. The course requires students to complete a number of projects consistent with assignments frequently encountered in the work world.



# COURSE CURRICULUM AND ASSESSMENT STANDARDS:

## SECTION D: INTRODUCTORY LEVEL

The following pages define the curriculum and assessment standards for the introductory level of Communication Technology.

Introductory level courses help students build daily living skills and form the basis for further learning. Introductory courses are developed for students who have no previous experience in the strand.

General outcomes define the competencies a student must demonstrate to achieve success in a course. Assessment standards define the criteria and conditions to be used for assessing the competencies defined in the general outcomes.

Specific outcomes provide a detailed framework for instruction to help students build the competencies defined in the general outcomes. Additional information and suggestions for instruction are provided in the Notes column; teachers may wish to use this space to record their ideas for instruction or student projects.

Course COM1010: Presentation & Communication 1 .....	D.3
Course COM1020: Media & You .....	D.7
Course COM1030: Photography 1 .....	D.11
Course COM1050: Printing 1 .....	D.15
Course COM1060: Audio/Video Production 1 .....	D.19
Course COM1070: Animation 1 .....	D.23
Course COM1080: Digital Design 1 .....	D.27
Course COM1210: Digital Imaging 1 .....	D.31



**COURSE COM1210: DIGITAL IMAGING 1****Level:** Introductory**Theme:** Photography**Prerequisite:** None**Description:** Students will learn the fundamentals of digital image acquisition, using a digital camera. Images will be saved to a folder or directory and manipulated, using bitmap editing software.**Parameters:** Access to a digital camera and computer(s) with bitmap editing software.**Supporting Courses:** COM1010 Presentation & Communication 1  
COM1080 Digital Design 1**Curriculum and Assessment Standards**

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
<p><i>The student will:</i></p> <ul style="list-style-type: none"> <li>• demonstrate knowledge of:               <ul style="list-style-type: none"> <li>– digital camera components, commands and controls</li> <li>– basic compositional strategies used in photography</li> </ul> </li> <li>• use a digital camera to acquire images that follow basic rules of composition</li> <li>• download to a directory images acquired from a digital camera, and save as editable files</li> </ul>	<p><i>Assessment of student achievement should be based on:</i></p> <ul style="list-style-type: none"> <li>• a teacher-directed evaluation designed to determine knowledge of:               <ul style="list-style-type: none"> <li>– digital camera components, commands and controls</li> <li>– basic bitmap editing functions and commands</li> </ul> </li> <li>• knowledge of the advantages and disadvantages of common file formats, and conversion of files from proprietary or camera format to another format suitable for editing by bitmap software; i.e.:               <ul style="list-style-type: none"> <li>– files are saved in an appropriate file format</li> <li>– file format takes into account export to other applications</li> </ul> </li> </ul> <p><i>Assessment Tool</i> <i>Portfolio Assessment, COM1210-1</i></p> <p><i>Standard</i> <i>Performance rating of 1 for each criteria</i></p>	<p>10</p> <p>10</p>
	<ul style="list-style-type: none"> <li>• demonstration, through an experimental approach, of the use of bitmap editing software; i.e.:               <ul style="list-style-type: none"> <li>– basic bitmap editing tools are explained and demonstrated</li> </ul> </li> </ul>	<p>30</p>

**COURSE COM1210: DIGITAL IMAGING 1** (continued)

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
<p><i>The student will:</i></p> <ul style="list-style-type: none"> <li>• apply basic bitmap editing software functions and commands to edit digital image files</li> <li>• present edited images to an audience</li> <li>• demonstrate basic competencies.</li> </ul>	<p><i>Assessment of student achievement should be based on:</i></p> <ul style="list-style-type: none"> <li>– digital image files are edited through an experimental approach</li> <li>– editing effects for each image are recorded on a log sheet</li> </ul> <p><i>Assessment Tool</i> <i>Portfolio Assessment, COM1210–1</i></p> <p><i>Standard</i> <i>Performance rating of 1 for each criteria</i></p> <ul style="list-style-type: none"> <li>• a portfolio of 10 to 15 digital images:               <ul style="list-style-type: none"> <li>– acquired from a digital camera</li> <li>– composed according to basic composition principles</li> <li>– saved in a dedicated folder or directory</li> <li>– manipulated/edited using bitmap editing software</li> <li>– annotated with details regarding the effects of editing</li> </ul> </li> </ul> <p><i>Assessment Tool</i> <i>Portfolio Assessment, COM1210–1</i></p> <p><i>Standard</i> <i>Performance rating of 1 for each criteria</i></p> <ul style="list-style-type: none"> <li>• a presentation of images to an audience; the presentation may be:               <ul style="list-style-type: none"> <li>– on screen, using slide show/bitmap software, or</li> <li>– printed in a portfolio, displaying appropriate size and layout</li> </ul> </li> </ul> <p><i>Assessment Tool</i> <i>Presentations/Reports, COM1210–2</i></p> <p><i>Standard</i> <i>Performance rating of 1 for each criteria</i></p> <ul style="list-style-type: none"> <li>• observations of individual effort and interpersonal interaction during the learning process</li> </ul> <p><i>Assessment Tool</i> <i>Basic Competencies Reference Guide and any assessment tools noted above</i></p>	<p></p> <p>40</p> <p>10</p> <p>Integrated throughout</p>

**COURSE COM1210: DIGITAL IMAGING 1 (continued)**

Concept	Specific Outcomes	Notes
<p>Process and Procedures</p>	<p><i>The student should:</i></p> <ul style="list-style-type: none"> <li>• articulate the “rule of thirds” as it applies to image composition and framing</li> <li>• frame and crop images for composition by demonstrating:               <ul style="list-style-type: none"> <li>– focal point; i.e., emphasis</li> <li>– an appropriate layout; i.e., horizontal or vertical</li> <li>– awareness of background</li> <li>– clear focus</li> <li>– composition control</li> </ul> </li> <li>• create a directory or folder and move files from a source to a directory</li> <li>• create prints from files</li> <li>• demonstrate, through an experimental approach, the use of bitmap editing software:               <ul style="list-style-type: none"> <li>– basic tool box functions</li> <li>– basic menu commands</li> </ul> </li> <li>• create, either on screen or in print format, a display of edited images</li> <li>• record on a log sheet, for future reference, the editing effects for each image</li> <li>• present display of edited images; answer questions and discuss solutions to problems that were encountered</li> <li>• demonstrate ethical behaviours by working within school and community standards.</li> </ul>	<p>Student work should demonstrate basic compositional strategies of introductory photography.</p> <p>Go to “Beginning of Photographic Composition” at <a href="http://www.Kodak.com">www.Kodak.com</a> for guidelines on photographic composition; e.g., simplicity, rule of thirds, line, balance, framing.</p> <p>Prior to capturing carefully considered and composed images, students might be given an opportunity to digitally alter problem photographs they are given; e.g., photographs with common problems such as red eye, over/under exposure, lens flare.</p> <p>Basic tool box functions could include use of:</p> <ul style="list-style-type: none"> <li>• masking tools</li> <li>• object selection tools</li> <li>• shape tools</li> <li>• fill and line tools</li> </ul> <p>The log sheet can be referenced for discussion during presentation of the composition to an audience.</p>

**COURSE COM1210: DIGITAL IMAGING 1 (continued)**

Concept	Specific Outcomes	Notes
Applied Technologies	<p><i>The student should:</i></p> <ul style="list-style-type: none"> <li>• explain the advantages and disadvantages of different types of digital cameras</li> <li>• explain and demonstrate basic digital camera functions and commands</li> <li>• use a digital camera as a source for acquiring images</li> <li>• transfer files from a source (i.e., digital camera) to a specified directory using any file manipulation method</li> <li>• explain the advantages and disadvantages of three common file formats</li> <li>• select, with limited assistance, basic bitmap editing functions and commands that are appropriate to the task</li> <li>• use bitmap editing software to create interesting and aesthetically appealing compositions.</li> </ul>	<p>Recommended file formats include:</p> <ul style="list-style-type: none"> <li>• JPG (Joint Photographers Expert Group)</li> <li>• GIF (Graphics Interchange File Format)</li> <li>• TIF (Tagged Image File Format).</li> </ul> <p>Research the advantages/disadvantages of conversion file formats by searching the web for “bitmap file formats.”</p>
Presentation	<ul style="list-style-type: none"> <li>• present a series of 10 to 15 edited bitmap compositions to teacher and peers (i.e., a small group) that illustrates teacher-defined expectations</li> <li>• for each composition presented, discuss with reference to a log sheet maintained:               <ul style="list-style-type: none"> <li>– problems and solutions</li> <li>– aesthetics</li> <li>– composition</li> <li>– bitmap effects</li> </ul> </li> <li>• create a portfolio of projects completed in this course or add projects to an existing portfolio.</li> </ul>	<p>Images should be presented in a simple, yet professional manner.</p> <p>Teacher-defined expectations could require a unified theme, exploration of specific effects or replication of exemplars.</p> <p>The log sheet could consist of handwritten notes for discussion, or text included on the presentation slides.</p>

# COURSE CURRICULUM AND ASSESSMENT STANDARDS:

## SECTION E: INTERMEDIATE LEVEL

The following pages define the curriculum and assessment standards for the intermediate level of Communication Technology.

Intermediate level courses help students build on the competencies developed at the introductory level and focus on developing more complex competencies. They provide a broader perspective, helping students recognize the wide range of related career opportunities available within the strand.

Course COM2010: Presentation & Communication 2 .....	E.3
Course COM2020: Media Design & Analysis 1 .....	E.7
Course COM2030: Script Writing 1 .....	E.11
Course COM2040: Photography 2 .....	E.15
Course COM2050: Photographic Communication .....	E.19
Course COM2060: Photographic Techniques 1 .....	E.21
Course COM2070: Printing Techniques 1 .....	E.25
Course COM2080: Printing Applications 1 .....	E.29
Course COM2090: Audio/Video 1 .....	E.31
Course COM2100: Audio/Video 2 .....	E.35
Course COM2110: Animation 2 .....	E.39
Course COM2120: Digital Design 2 .....	E.43
Course COM2130: Special Effects Photography .....	E.47
Course COM2210: Digital Imaging 2 .....	E.49



**COURSE COM2210: DIGITAL IMAGING 2****Level:** Intermediate**Theme:** Photography**Prerequisite:** None**Description:** Students will acquire digital images from a digital camera and one or more other sources. They will extend and refine their knowledge of bitmap editing software and composition principles, and apply more advanced editing techniques to composite images.**Parameters:** Access to a digital camera and one or more other sources of digital images (e.g., Internet, CD-ROM, scanner, screen capture software, other software that can export bitmap files), computer(s) with bitmap editing software and digital storage (e.g., zip drive, CD-ROM writer, hard drive, network drive).**Supporting Courses:** COM2010 Presentation & Communication 2  
COM2120 Digital Design 2**Curriculum and Assessment Standards**

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
<p><i>The student will:</i></p> <ul style="list-style-type: none"> <li>• acquire, edit, composite and manipulate images from:               <ul style="list-style-type: none"> <li>– a digital camera</li> <li>– one or more other sources for creating or acquiring digital images</li> </ul> </li> </ul>	<p><i>Assessment of student achievement should be based on:</i></p> <ul style="list-style-type: none"> <li>• a portfolio of 10 or more bitmap compositions comprised of:               <ul style="list-style-type: none"> <li>– five or more finished compositions that illustrate the use of digital photographs as a starting point for digital manipulation and exploration</li> <li>– two or more compositions that illustrate the use of source file(s) obtained from one or more other pieces of software; e.g., vector graphics, two-and/or three-dimensional animation software</li> <li>– three or more compositions that illustrate composite imaging; i.e., multiple source files aggregated to form one unified composition</li> </ul> </li> </ul>	80

**COURSE COM2210: DIGITAL IMAGING 2** (continued)

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
<p><i>The student will:</i></p> <ul style="list-style-type: none"> <li>• create and deliver an on-screen presentation of the completed compositions, using a unified theme or style</li> <li>• demonstrate basic competencies.</li> </ul>	<p><i>Assessment of student achievement should be based on:</i></p> <p>The portfolio should demonstrate:</p> <ul style="list-style-type: none"> <li>– files saved in a format that is most effective for transfer to screen show software or HTML presentation</li> <li>– files saved, either in compressed or uncompressed format, for speed and quality of display on a monitor or projector; resolution should be appropriate for the purpose</li> <li>– the use of different bitmap source file formats</li> <li>– an understanding of composition and aesthetic control</li> <li>– use of a variety of bitmap editing commands and effects, as dictated by software; e.g., filters, mask effects, layers, lenses</li> <li>– a unified theme or style</li> </ul> <p><i>Assessment Tool</i> <i>Portfolio Assessment, COM2210–1</i></p> <p><i>Standard</i> <i>Performance rating of 2 for each criteria</i></p> <ul style="list-style-type: none"> <li>• an on-screen presentation of the portfolio to an audience; the presentation must: <ul style="list-style-type: none"> <li>– be unified by theme or style</li> <li>– describe, through text or oral explanation, how compositions were created and saved</li> <li>– illustrate compositional control</li> <li>– demonstrate refined aesthetic awareness</li> </ul> </li> </ul> <p><i>Assessment Tool</i> <i>Presentations/Reports, COM2210–2</i></p> <p><i>Standard</i> <i>Performance rating of 2 for each criteria</i></p> <ul style="list-style-type: none"> <li>• observations of individual effort and interpersonal interaction during the learning process</li> </ul> <p><i>Assessment Tool</i> <i>Basic Competencies Reference Guide and any assessment tools noted above</i></p>	<p></p> <p>20</p> <p>Integrated throughout</p>

**COURSE COM2210: DIGITAL IMAGING 2 (continued)**

Concept	Specific Outcomes	Notes
<p>Process and Procedures</p>	<p><i>The student should:</i></p> <ul style="list-style-type: none"> <li>• frame and crop images for compositions by demonstrating:               <ul style="list-style-type: none"> <li>– focal point; i.e., emphasis</li> <li>– an appropriate format; i.e., horizontal or vertical</li> <li>– awareness of background</li> <li>– clear focus, using either manual or automatic focus features</li> <li>– composition control; e.g., the “rule of thirds”</li> <li>– aesthetic awareness</li> </ul> </li> <li>• acquire 10 or more digital photographs to use as a starting point for digital manipulation exploration and compositing</li> <li>• create, or acquire, and export digital images from one or more sources, other than a digital camera, to a specified directory. Sources may include:               <ul style="list-style-type: none"> <li>– a scanner</li> <li>– screen capture software</li> <li>– royalty free stock images</li> <li>– three-dimensional rendering software</li> <li>– vector graphics software</li> <li>– animation software</li> </ul> </li> <li>• create and maintain a logical directory structure</li> <li>• create a presentation for displaying finished images</li> <li>• present information, orally or in text format, on how each finished composition was created; answer questions and discuss solutions to problems that were encountered</li> <li>• explain the implications of copyright laws; e.g., scanned images and stock photographs must be used with permission</li> <li>• demonstrate ethical behaviours by working within school and community standards.</li> </ul>	<p>Student work should demonstrate concepts of compositional control.</p> <p>Go to “Beginnings of Photographic Composition” at <a href="http://www.kodak.com">www.kodak.com</a> for guidelines on photographic composition; e.g., simplicity, rule of thirds, line, balance, framing, avoiding mergers.</p> <p>Students may use a digital camera to acquire most of their images, but must also have access to and use one other source for acquiring or creating digital images.</p> <p>Students should make notes for their presentation.</p> <p>Text data may be a handout, notes for oral support, or on-screen annotation explaining the steps in composition generation.</p>

**COURSE COM2210: DIGITAL IMAGING 2 (continued)**

Concept	Specific Outcomes	Notes
<p>Applied Technologies</p>	<p><i>The student should:</i></p> <ul style="list-style-type: none"> <li>• demonstrate the use of one or more of the following sources for creating or acquiring images, or specific portions of images:               <ul style="list-style-type: none"> <li>– a scanner</li> <li>– screen capture software</li> <li>– stock photographs; e.g., from the Internet or CD-ROM</li> <li>– animation software</li> <li>– three-dimensional rendering software</li> <li>– vector graphics, or hybrid vector/raster software</li> <li>– other software as dictated by lab facilities</li> </ul> </li> <li>• apply bitmap editing effects to create interesting and aesthetically appealing compositions. Bitmap editing should demonstrate the use of:               <ul style="list-style-type: none"> <li>– basic tool box functions</li> <li>– basic menu commands</li> <li>– filters, effects, plug-ins</li> </ul> </li> <li>• create, alter, delete and generally maintain a logical directory structure for saving work</li> <li>• identify and describe common file formats, with reference to:               <ul style="list-style-type: none"> <li>– advantages and disadvantages</li> <li>– problems and solutions</li> <li>– compression issues</li> <li>– export methods</li> <li>– issues surrounding multiple file formats</li> </ul> </li> <li>• apply advanced digital camera functions, commands and effects, based on camera features available for a specific purpose</li> <li>• select, with limited assistance, advanced bitmap editing functions and commands that are appropriate to the task.</li> </ul>	<p>Students should be able to aggregate different sources of bitmap data to create composited images.</p> <p>Specific lab software will dictate effects and filters.</p> <p>Students may wish to use:</p> <ul style="list-style-type: none"> <li>• JPG (Joint Photographers Expert Group)</li> <li>• GIF (Graphics Interchange File Format)</li> <li>• TIF (Tagged Image File Format)</li> <li>• CDR (CorelDRAW! Vector Graphic)</li> <li>• PSD (PhotoShop Bitmap File)</li> <li>• CPT (Corel Photo-Paint Bitmap File)</li> <li>• EMF (Enhanced Metafile)</li> <li>• WMF (Windows Metafile)</li> <li>• PIC (Lotus Picture File).</li> </ul> <p>Other file formats and compression schemes may be chosen as the need arises. Research applications of different file formats on the Internet.</p>

**COURSE COM2210: DIGITAL IMAGING 2 (continued)**

Concept	Specific Outcomes	Notes
Presentation	<p><i>The student should:</i></p> <ul style="list-style-type: none"> <li>• present a series of 10 or more finished bitmap compositions to teacher(s) and peers that illustrate thematic or stylistic unity</li> <li>• discuss the images that are presented in terms of:               <ul style="list-style-type: none"> <li>– problems and solutions</li> <li>– aesthetics</li> <li>– composition</li> <li>– copyright issues</li> <li>– bitmap effects</li> <li>– file import/export issues</li> <li>– compression/decompression issues</li> </ul> </li> <li>• generate a handout, notes or text data on screen for oral support during the presentation</li> <li>• create and present a portfolio of work completed in this course or add work completed to an existing portfolio; the portfolio should be written to CD-ROM/zip disk or saved to a hard drive.</li> </ul>	<p>Presentations may be completed in PowerPoint, HTML or other formats as dictated by lab facilities.</p> <p>Potentially useful sources of information are available through the Internet at:</p> <ul style="list-style-type: none"> <li>• <a href="http://www.focalfix.com/">http://www.focalfix.com/</a></li> <li>• <a href="http://www.lonestar.digital.com/">http://www.lonestar.digital.com/</a></li> <li>• <a href="http://www.kodak.com/US/en/nav/digital/shtml">http://www.kodak.com/US/en/nav/digital/shtml</a></li> <li>• <a href="http://www.shortcourses.com/">http://www.shortcourses.com/</a></li> </ul> <p>Megapixel.net is a monthly digital camera web magazine available at <a href="http://www.megapixel.net/">http://www.megapixel.net/</a></p>



## COURSE CURRICULUM AND ASSESSMENT STANDARDS:

### SECTION F: ADVANCED LEVEL

The following pages define the curriculum and assessment standards for the advanced level of Communication Technology.

Advanced level courses demand a higher level of expertise and help prepare students for entry into the workplace or a related post-secondary program.

Course COM3010:	Presentation & Communication 3 .....	F.3
Course COM3020:	Media & Design Analysis 2 .....	F.7
Course COM3030:	Script Writing 2 .....	F.11
Course COM3040:	Photography 3 .....	F.13
Course COM3050:	Photojournalism .....	F.17
Course COM3060:	Photographic Techniques 2 .....	F.21
Course COM3070:	Colour Photography .....	F.25
Course COM3080:	Printing Techniques 2 .....	F.29
Course COM3090:	Printing Applications 2 .....	F.31
Course COM3100:	Audio 3 .....	F.33
Course COM3110:	Video 3 .....	F.37
Course COM3120:	Animation 3 .....	F.41
Course COM3130:	Digital Design 3 .....	F.45
Course COM3210:	Digital Imaging 3 .....	F.49



**COURSE COM3210: DIGITAL IMAGING 3****Level:** Advanced**Theme:** Photography**Prerequisite:** None**Description:** Students will apply advanced digital imaging software and techniques to develop a digital portfolio that demonstrates creativity and attention to aesthetic concerns. The course requires students to complete a number of projects consistent with assignments frequently encountered in the work world.**Parameters:** Access to a digital camera and two or more other sources of digital images (e.g., Internet, CD-ROM, scanner, screen capture software, other software that can export bitmap files), computer(s) with bitmap editing software and digital storage (e.g., zip drive, CD-ROM writer, hard drive, network drive).**Supporting Courses:** COM3010 Presentation & Communication 3  
DES3190 Portfolio Presentation  
Art 30 – portfolio creation**Curriculum and Assessment Standards**

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
<p><i>The student will:</i></p> <ul style="list-style-type: none"> <li>• acquire, edit, composite and manipulate images from:               <ul style="list-style-type: none"> <li>– a digital camera</li> <li>– two or more other sources for creating or acquiring digital images</li> </ul> </li> </ul>	<p><i>Assessment of student achievement should be based on:</i></p> <ul style="list-style-type: none"> <li>• a portfolio of three to five bitmap composition projects that simulate work world assignments or, if possible, are work world assignments. Each project should:               <ul style="list-style-type: none"> <li>– specify a theme or outline a specific set of parameters within which the project was completed</li> <li>– require four to six image solutions</li> <li>– have different resolution and size restrictions</li> <li>– include notes explaining how each image was constructed</li> <li>– be completed according to specific deadlines</li> <li>– specify a file type for the final work</li> <li>– be saved to a portfolio; e.g., CD-ROM, print format</li> </ul> </li> <li>• one or more of the projects should demonstrate the acquisition of images from multiple source files; i.e., composite imaging</li> </ul> <p><i>Illustrative Examples</i>  <i>Sample Work World Projects, COM3210–1</i></p> <p><i>Assessment Tool</i>  <i>Portfolio Assessment, COM3210–2</i></p> <p><i>Standard</i>  <i>Performance rating of 3 for each criteria</i></p>	60

**COURSE COM3210: DIGITAL IMAGING 3 (continued)**

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
<p><i>The student will:</i></p> <ul style="list-style-type: none"> <li>demonstrate knowledge and control of aesthetics, technical processes and software tools</li> </ul>	<p><i>Assessment of student achievement should be based on:</i></p> <ul style="list-style-type: none"> <li>application of a variety of techniques and tools consistent with the requirements of the assignment. The applied techniques and tools should demonstrate:               <ul style="list-style-type: none"> <li>composite imaging, including advanced masking and layer control</li> <li>a variety of filters, effects and plug-in manipulations that are suited to the assignment</li> <li>control over file format, size, resampling, resolution and other specified factors</li> <li>compositional and aesthetic awareness</li> <li>creative problem solving</li> <li>control over digital processes; e.g., camera, scanner, software</li> </ul> </li> </ul> <p><i>Assessment Tool</i> <i>Portfolio Assessment, COM3210–2</i></p> <p><i>Standard</i> <i>Performance rating of 3 for each criteria</i></p>	<p>20</p>
<ul style="list-style-type: none"> <li>present finished compositions in a portfolio suitable for post-secondary application</li> </ul>	<ul style="list-style-type: none"> <li>presentation of a portfolio that includes 12 or more finished bitmap compositions. The portfolio must:               <ul style="list-style-type: none"> <li>describe how each composition was created and saved through appropriate text notes</li> <li>illustrate compositional control</li> <li>demonstrate refined aesthetic awareness</li> <li>be suitable for entry-level employment or post-secondary application</li> </ul> </li> </ul> <p><i>Assessment Tool</i> <i>Presentations/Reports, COM3210–3</i></p> <p><i>Standard</i> <i>Performance rating of 3 for each criteria</i></p>	<p>20</p>
<ul style="list-style-type: none"> <li>demonstrate basic competencies.</li> </ul>	<ul style="list-style-type: none"> <li>observations of individual effort and interpersonal interaction during the learning process</li> </ul> <p><i>Assessment Tool</i> <i>Basic Competencies Reference Guide and any assessment tools noted above</i></p>	<p>Integrated throughout</p>

**COURSE COM3210: DIGITAL IMAGING 3 (continued)**

Concept	Specific Outcomes	Notes
<p>Process and Procedures</p>	<p><i>The student should:</i></p> <ul style="list-style-type: none"> <li>• frame and crop images for composition by demonstrating:               <ul style="list-style-type: none"> <li>– focal point; i.e., emphasis</li> <li>– an appropriate format; i.e., horizontal or vertical</li> <li>– awareness of background</li> <li>– clear focus, using either manual or automatic focus features</li> <li>– composition control; e.g., the “rule of thirds”</li> <li>– aesthetic awareness</li> </ul> </li> <li>• acquire a number of digital images relevant to the project to use as a starting point for digital manipulation and project completion</li> <li>• create, or acquire, and export digital images from two or more sources, other than a digital camera, to a specified directory for specific purposes; sources may include:               <ul style="list-style-type: none"> <li>– a scanner</li> <li>– screen capture software</li> <li>– royalty-free stock images</li> <li>– three-dimensional rendering software</li> <li>– vector graphics software</li> <li>– animation software</li> </ul> </li> <li>• create, alter, delete and generally maintain a logical directory structure for saving work</li> <li>• apply a creative problem-solving approach to the projects</li> <li>• work to deadlines to complete a number of simulated or real work world graphic communication projects</li> <li>• create a presentation for displaying finished images</li> <li>• present the display of finished images; provide text data on how each finished manipulated composition was created; answer questions and discuss solutions to problems that were encountered</li> </ul>	<p>Student work should demonstrate more advanced concepts of compositional control.</p> <p>Go to “Beginnings of Photographic Composition” at <a href="http://www.kodak.com">www.kodak.com</a> for guidelines on photographic composition; e.g., simplicity, rule of thirds, line, balance, framing, avoiding mergers.</p> <p>Students may choose to use a digital camera to acquire most of their images, but must also have access to the use of two or more other sources for acquiring or creating digital images.</p> <p>Text data that explains the steps used in generating the composition should accompany each finished image.</p>

**COURSE COM3210: DIGITAL IMAGING 3 (continued)**

Concept	Specific Outcomes	Notes
	<p><i>The student should:</i></p> <ul style="list-style-type: none"> <li>• explain the implications of copyright laws; e.g.:               <ul style="list-style-type: none"> <li>– scanned images and stock photographs must be used with permission</li> <li>– persons having copyright must sign legal waivers to permit use of their images by others</li> </ul> </li> <li>• demonstrate ethical behaviours by working within school and community standards.</li> </ul>	
Applied Technologies	<ul style="list-style-type: none"> <li>• demonstrate the use of two or more of the following as a creative source for generating or acquiring images, textures, backgrounds and specific portions of images:               <ul style="list-style-type: none"> <li>– digital camera</li> <li>– scanner</li> <li>– screen capture software</li> <li>– stock photographs; e.g., from the Internet or CD-ROM</li> <li>– animation software</li> <li>– three-dimensional rendering software</li> <li>– vector graphics or hybrid vector/raster software</li> <li>– other software as dictated by lab facilities</li> </ul> </li> <li>• apply bitmap editing effects to create interesting and aesthetically appealing compositions. Bitmap editing should demonstrate the use of:               <ul style="list-style-type: none"> <li>– tool box functions and menu commands</li> <li>– filters, effects, plug-ins</li> <li>– composite imaging</li> </ul> </li> <li>• demonstrate ability to:               <ul style="list-style-type: none"> <li>– verbalize how different bitmap editing effects may contribute to a composition</li> <li>– hypothesize how a digital composition may have been created</li> </ul> </li> <li>• identify and describe common file formats, with reference to:               <ul style="list-style-type: none"> <li>– advantages and disadvantages</li> <li>– problems and solutions</li> <li>– compression issues</li> <li>– export methods</li> <li>– issues surrounding multiple file formats</li> </ul> </li> </ul>	<p>Software available in the lab will dictate which image sources can be used.</p> <p>Megapixel.net is a monthly digital camera web magazine available at <a href="http://www.megapixel.net">http://www.megapixel.net</a></p> <p>Students may wish to use:</p> <ul style="list-style-type: none"> <li>• JPG (Joint Photographers Expert Group)</li> <li>• GIF (Graphics Interchange File Format)</li> <li>• TIF (Tagged Image File Format)</li> <li>• CDR (CorelDRAW! Vector Graphic)</li> <li>• PSD (PhotoShop Bitmap File)</li> <li>• CPT (Corel Photo-Paint Bitmap File)</li> <li>• EMF (Enhanced Metafile)</li> </ul>

**COURSE COM3210: DIGITAL IMAGING 3 (continued)**

Concept	Specific Outcomes	Notes
	<p><i>The student should:</i></p> <ul style="list-style-type: none"> <li>• apply advanced digital camera functions, commands and effects, based on camera features available for a specific purpose</li> <li>• select, in a self-directed manner, advanced bitmap editing functions and commands that are appropriate to the task</li> <li>• demonstrate effective use of a CD-ROM writer and colour printer in preparing a portfolio suitable for presentation for entry-level employment or post-secondary study.</li> </ul>	<ul style="list-style-type: none"> <li>• WMF (Windows Metafile)</li> <li>• PIC (Lotus Picture File).</li> </ul> <p>Other file formats and compression schemes may be chosen as the need arises. Research applications of different file formats on the Internet.</p>
Presentation	<ul style="list-style-type: none"> <li>• present a series of 10 or more finished bitmap compositions to teacher and peers that illustrate thematic or stylistic unity</li> <li>• discuss the presented images in terms of:               <ul style="list-style-type: none"> <li>– problems and solutions</li> <li>– aesthetics</li> <li>– composition</li> <li>– copyright issues</li> <li>– bitmap effects</li> <li>– file import/export issues</li> <li>– compression/decompression issues</li> </ul> </li> <li>• generate text data for oral support during the presentation</li> <li>• create and present a portfolio of work completed in this course or add work completed to an existing portfolio; the portfolio should be written to CD-ROM/zip disk or saved to a hard drive.</li> </ul>	<p>Research post-secondary calendars and interview business/industry for ideas about how to create a useful portfolio.</p> <p>Potentially useful sources of information are available through the Internet at:</p> <ul style="list-style-type: none"> <li>• <a href="http://www.focalfix.com/">http://www.focalfix.com/</a></li> <li>• <a href="http://www.lonestar.digital.com/">http://www.lonestar.digital.com/</a></li> <li>• <a href="http://www.kodak.com/US/en/nav/digital/shtml">http://www.kodak.com/US/en/nav/digital/shtml</a></li> <li>• <a href="http://www.shortcourses.com/">http://www.shortcourses.com/</a></li> </ul> <p>Text data that describes how the images were created can be in the form of a handout, notes or text data on screen.</p>



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## ASSESSING STUDENT ACHIEVEMENT IN CTS

The CTS assessment standards assess two basic forms of competency:

- What can a student *do*?
  - **make** a product (e.g., wood bowl, report, garment)
  - **demonstrate** a process
    - strand-related competencies (e.g., keyboarding, hair cutting, sewing techniques, lab procedures)
    - basic competencies (e.g., resource use, safety procedures, teamwork).
- What does a student *know*?
  - knowledge base needed to demonstrate a competency (link theory and practice).

### CTS Defines Summative Assessment Standards

The assessment standards and tools defined for the CTS courses, referenced in Sections D, E and F of this Guide, focus on the final (or summative) assessment of student achievement.

Assessment throughout the learning period (formative assessment) will continue to evaluate how students are progressing. Teachers direct and respond to students' efforts to learn—setting and marking tasks and assignments, indicating where improvement is needed, sending out interim reports, congratulating excellence, etc.

Teachers will decide which instructional and assessment strategies to apply during the formative learning period. As formative and summative assessment are closely linked, some teachers may wish to modify the tools included in this section to use during the instructional process. Teachers may also develop their own summative assessment tools as long as the standards are consistent with the minimum expectations outlined by Alberta Learning.

## Grading and Reporting Student Achievement

When a student can demonstrate ALL of the exit-level competencies defined for a 1-credit course (general outcomes), the teacher will designate the course as “successfully completed.” The teacher will then use accepted grading practices to determine the percentage grade to be given for the course—a mark not less than 50%.

The time frame a teacher allows a student to develop the exit-level competency is a local decision. NOTE: The *Guide to Education: ECS to Grade 12* specifies that students must have access to 25 hours of instruction for each credit. Students may, however, attain the required competencies in less time and may then proceed to other courses.

Teachers are encouraged to consult their colleagues to ensure grading practices are as consistent as possible. Further information about assessing and reporting student achievement in CTS is provided in the *CTS Manual for Administrators, Counsellors & Teachers* (Assessing Student Achievement).

### Components of Assessment Standards in CTS

The following components are included in each 1-credit course:

- **general outcomes** (in the shaded left-hand column) define the exit-level competencies students are expected to achieve to complete the course. Each general outcome defines and describes critical behaviours that can be measured and observed. The student must meet the standard specified for **ALL** the general outcomes within a course to be successful.

Student Name: \_\_\_\_\_

Teacher: \_\_\_\_\_

Course/Project(s): \_\_\_\_\_

Date: \_\_\_\_\_

CRITERIA	OBSERVATION/ RATING	STANDARD
Management	4 3 2 1 0	1
Teamwork	4 3 2 1 0	1
Content	4 3 2 1 0	1
Equipment and Materials	4 3 2 1 0	1

**STANDARD IS 1 IN EACH APPLICABLE CRITERIA**

**Rating Scale**

*The student:*

- 4** exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence.
- 3** meets defined outcomes. Plans and solves problems in a self-directed manner. Tools, materials and/or processes are used efficiently and effectively.
- 2** meets defined outcomes. Plans and solves problems with limited assistance. Tools, materials and/or processes are used appropriately.
- 1** meets defined outcomes. Follows a guided plan of action. A limited range of tools, materials and/or processes are used appropriately.
- 0** has not completed defined outcomes. Tools, materials and/or processes are used inappropriately.

<p><b>CRITERIA</b></p> <p><i>The student:</i></p> <p><b>Management</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> prepares self for task</li> <li><input type="checkbox"/> organizes and works in an orderly manner</li> <li><input type="checkbox"/> demonstrates file management skills</li> <li><input type="checkbox"/> carries out instructions accurately</li> <li><input type="checkbox"/> uses time effectively</li> </ul> <p><b>Teamwork</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> cooperates with team members</li> <li><input type="checkbox"/> shares work appropriately among group members</li> <li><input type="checkbox"/> exhibits basic teamwork skills; e.g., cooperation, appropriate conduct, leadership, commitment, negotiation, sharing</li> </ul> <p><b>Content</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> uses a digital camera to acquire images of different subjects</li> <li><input type="checkbox"/> employs and can discuss basic composition principles</li> </ul>	<p><b>Content</b> (continued)</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> downloads images obtained from a digital camera to a directory, and saves as editable files</li> <li><input type="checkbox"/> uses bitmap editing software to manipulate, crop, edit and experiment with image composition and effects</li> <li><input type="checkbox"/> maintains a log sheet of digital effects applied to images</li> <li><input type="checkbox"/> produces ten or more manipulated images</li> <li><input type="checkbox"/> saves work in an appropriate file format</li> <li><input type="checkbox"/> understands and can use two or more different file formats (JPG, GIF and TIF are recommended)</li> <li><input type="checkbox"/> ensures work meets school and community standards</li> </ul> <p><b>Equipment and Materials</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> selects and uses appropriate equipment/materials</li> <li><input type="checkbox"/> is able to use various commands and features of a digital camera</li> <li><input type="checkbox"/> follows safe procedures/techniques</li> <li><input type="checkbox"/> returns equipment/materials to storage areas</li> </ul>
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<p><b>COMMENTS</b></p>
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**PRESENTATIONS/REPORTS: DIGITAL IMAGING 1**

**COM1210-2**

Student Name: \_\_\_\_\_

Teacher: \_\_\_\_\_

Course/Project(s): \_\_\_\_\_

Date: \_\_\_\_\_

CRITERIA	OBSERVATION/ RATING	STANDARD
Preparation and Planning	4 3 2 1 0	1
Content	4 3 2 1 0	1
Presentation	4 3 2 1 0	1

**STANDARD IS 1 IN EACH APPLICABLE CRITERIA**

**Rating Scale**

*The student:*

- 4** exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence.
- 3** meets defined outcomes. Plans and solves problems in a self-directed manner. Tools, materials and/or processes are used efficiently and effectively.
- 2** meets defined outcomes. Plans and solves problems with limited assistance. Tools, materials and/or processes are used appropriately.
- 1** meets defined outcomes. Follows a guided plan of action. A limited range of tools, materials and/or processes are used appropriately.
- 0** has not completed defined outcomes. Tools, materials and/or processes are used inappropriately.

**CRITERIA**

*The student:*

**Preparation and Planning**

- sets goals for presentation
- interprets and organizes information into a logical sequence
- prepares compositions by saving digital images in an appropriate format
- creates and maintains a log sheet of manipulation effects for discussion during presentation
- uses time effectively

**Content**

- presents finished work to teacher and peers
- annotates presentation with information about how each image was created and/or modified
- creates a portfolio or adds to an existing portfolio

**Content** (continued)

- obtains and responds to feedback based on:
  - expectations of the assignment
  - processes used to acquire bitmap images from a digital camera
  - aesthetics
  - composition control
  - effects, processes and techniques used to manipulate images
  - how finished compositions meet school and community standards

**Presentation**

- describes the purpose and/or theme of the presentation
- presents 10 or more edited bitmap images either on screen or printed in a portfolio
- demonstrates effective communication techniques
- uses correct grammatical conventions and technical terms
- introduces and concludes presentation
- responds effectively to questions

**COMMENTS**

Student Name: \_\_\_\_\_

Teacher: \_\_\_\_\_

Course/Project(s): \_\_\_\_\_

Date: \_\_\_\_\_

CRITERIA	OBSERVATION/ RATING	STANDARD
Management	4 3 2 1 0	2
Teamwork	4 3 2 1 0	2
Content	4 3 2 1 0	2
Equipment and Materials	4 3 2 1 0	2

**STANDARD IS 2 IN EACH APPLICABLE CRITERIA**

**Rating Scale**

*The student:*

- 4** exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence.
- 3** meets defined outcomes. Plans and solves problems in a self-directed manner. Tools, materials and/or processes are used efficiently and effectively.
- 2** meets defined outcomes. Plans and solves problems with limited assistance. Tools, materials and/or processes are used appropriately.
- 1** meets defined outcomes. Follows a guided plan of action. A limited range of tools, materials and/or processes are used appropriately.
- 0** has not completed defined outcomes. Tools, materials and/or processes are used inappropriately.

**CRITERIA**

*The student:*

**Management**

- prepares self for task
- organizes and works in an orderly manner
- demonstrates file management skills
- carries out instructions accurately
- uses time effectively

**Teamwork**

- cooperates with team members
- shares work appropriately among group members
- exhibits basic teamwork skills; e.g., cooperation, appropriate conduct, leadership, commitment, negotiation, sharing

**Content**

- uses a digital camera to acquire images of thematically unified subjects
- employs and can discuss basic principles of composition and aesthetics
- produces 10 or more manipulated/edited images

**Content (continued)**

- uses bitmap editing software and effects, filters and/or plug-ins to manipulate, crop, edit and composite images
- demonstrates image compositing in three or more finished compositions
- uses source files obtained from another piece of software (e.g., vector graphics, two- and/or three-dimensional animation software) in creating two or more compositions
- maintains notes of digital effects applied to images
- saves and exports work in appropriate file formats
- understands and can use four or more different file formats (e.g., JPG, GIF, TIF, other proprietary formats)
- ensures work meets school and community standards

**Equipment and Materials**

- selects and uses appropriate equipment, materials and software
- is able to demonstrate advanced commands and features of a digital camera
- follows safe procedures/techniques
- returns equipment/materials to storage areas

**COMMENTS**

**PRESENTATIONS/REPORTS: DIGITAL IMAGING 2**

**COM2210-2**

Student Name: \_\_\_\_\_

Teacher: \_\_\_\_\_

Course/Project(s): \_\_\_\_\_

Date: \_\_\_\_\_

CRITERIA	OBSERVATION/ RATING	STANDARD
Preparation and Planning	4 3 2 1 0	2
Content	4 3 2 1 0	2
Presentation	4 3 2 1 0	2

**STANDARD IS 2 IN EACH APPLICABLE CRITERIA**

Rating Scale

*The student:*

- 4** exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence.
- 3** meets defined outcomes. Plans and solves problems in a self-directed manner. Tools, materials and/or processes are used efficiently and effectively.
- 2** meets defined outcomes. Plans and solves problems with limited assistance. Tools, materials and/or processes are used appropriately.
- 1** meets defined outcomes. Follows a guided plan of action. A limited range of tools, materials and/or processes are used appropriately.
- 0** has not completed defined outcomes. Tools, materials and/or processes are used inappropriately.

<p><b>CRITERIA</b></p> <p><i>The student:</i></p> <p><b>Preparation and Planning</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> sets goals for the presentation</li> <li><input type="checkbox"/> interprets and organizes information into a logical sequence</li> <li><input type="checkbox"/> prepares compositions by saving digital images in an appropriate format</li> <li><input type="checkbox"/> maintains notes on the image manipulation processes used as a source of support during presentation and discussion</li> <li><input type="checkbox"/> uses time effectively</li> </ul> <p><b>Content</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> presents finished work to teacher and peers</li> <li><input type="checkbox"/> annotates presentation with information about how each image was created and/or modified</li> <li><input type="checkbox"/> creates a portfolio or adds to an existing portfolio</li> </ul>	<p><b>Content</b> (continued)</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> obtains and responds to feedback based on:                             <ul style="list-style-type: none"> <li>- expectations of the assignment</li> <li>- processes used to acquire bitmap images from a digital camera</li> <li>- aesthetics</li> <li>- composition control</li> <li>- the effects, processes and techniques used to manipulate images</li> <li>- how finished compositions meet school and community standards</li> </ul> </li> </ul> <p><b>Presentation</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> describes the purpose and/or theme of the presentation</li> <li><input type="checkbox"/> presents 10 or more edited bitmap images on screen to an audience</li> <li><input type="checkbox"/> demonstrates effective communication techniques</li> <li><input type="checkbox"/> uses correct grammatical conventions and technical terms</li> <li><input type="checkbox"/> introduces and concludes the presentation</li> <li><input type="checkbox"/> responds effectively to questions</li> </ul>
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<p><b>COMMENTS</b></p>
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## ILLUSTRATIVE EXAMPLES: SAMPLE WORK WORLD PROJECTS

COM3210-1

<p>The illustrative examples provided below are intended to simulate assignments frequently encountered in the work world. Teachers may decide to refine and/or modify these examples for specific students and classes, or create new projects. When possible, students should be given an opportunity to create image solutions for real work world assignments.</p>		
<p>Project One: Editorial Illustration</p>	<p>Create three bitmap compositions relevant to an editorial theme; i.e., the compositions could be used as editorial illustrations for a periodical, newspaper or newsletter.</p> <p>Technical Specifications:</p> <ul style="list-style-type: none"> <li>• Resolution: 200 dots per inch (DPI)</li> <li>• Size: no larger than 5.5" by 4.25"</li> <li>• File Format: saved as Tagged Image File Format (TIF)</li> </ul> <p>The editorial theme should be assigned by the teacher. Possible themes could include "The Middle East," "Canadian Politics," "High School Life" or other topics of civic or historical significance.</p>	<p>This project simulates an editorial illustration assignment common to the newspaper industry.</p>
<p>Project Two: Jewel Case Background</p>	<p>Create three bitmap compositions that convey a musical theme; i.e., the compositions could be used as backgrounds for an audio CD-ROM jacket.</p> <p>Technical Specifications:</p> <ul style="list-style-type: none"> <li>• Resolution: 300 dots per inch (DPI)</li> <li>• Size: 100% the size of a jewel case insert</li> <li>• File Format: saved as PhotoShop Bitmap File (PSD), Corel Photo-Paint Bitmap File (CPT) or other format based on the bitmap software used</li> </ul> <p>The musical theme should be assigned by the teacher. Possible musical themes could include punk, metal, country, new-age.</p> <p>There should be no legible text included on the CD-ROM jacket; assume that text will be added later.</p>	<p>This project represents a typical design problem in the music industry and involves communicating a "look" or "feel" to convey a musical theme.</p>
<p>Project Three: Stock Photography Portfolio</p>	<p>Create a small portfolio of 10 or more stock images that can be used to highlight particular aspects of high school life.</p> <p>Technical Specifications:</p> <ul style="list-style-type: none"> <li>• Resolution: each image must be saved at 75 DPI (suitable for on-screen display) <u>and</u> 300 DPI (suitable for print display)</li> <li>• Size: each image must be 4"x 3"</li> <li>• File Format: all images will be saved as Joint Photographers Expert Group (JPG) format with no compression</li> </ul> <p>The specific theme for the stock images will be assigned by the teacher. Possible themes could include "Technology in School," "Basketball," "School Environment."</p> <p>Persons photographed in the stock images will not be recognizable unless legal release forms are included with the portfolio.</p>	<p>This project could prove useful for school faculty looking for education-related stock images. Stock photography provides an opportunity for photographers to supplement their income.</p>

Student Name: \_\_\_\_\_

Teacher: \_\_\_\_\_

Course/Project(s): \_\_\_\_\_

Date: \_\_\_\_\_

CRITERIA	OBSERVATION/ RATING	STANDARD
Management	4 3 2 1 0	3
Teamwork	4 3 2 1 0	3
Content	4 3 2 1 0	3
Equipment and Materials	4 3 2 1 0	3

**STANDARD IS 3 IN EACH APPLICABLE  
CRITERIA**

Rating Scale

*The student:*

- 4** exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence.
- 3** meets defined outcomes. Plans and solves problems in a self-directed manner. Tools, materials and/or processes are used efficiently and effectively.
- 2** meets defined outcomes. Plans and solves problems with limited assistance. Tools, materials and/or processes are used appropriately.
- 1** meets defined outcomes. Follows a guided plan of action. A limited range of tools, materials and/or processes are used appropriately.
- 0** has not completed defined outcomes. Tools, materials and/or processes are used inappropriately.

**CRITERIA**

*The student:*

**Management**

- prepares self for task
- organizes and works in an orderly manner
- demonstrates file management skills
- carries out instructions accurately
- uses time effectively

**Teamwork**

- cooperates with team members
- shares work appropriately among group members
- exhibits basic teamwork skills; e.g., cooperation, appropriate conduct, leadership, commitment, negotiation, sharing

**Content**

- uses a digital camera to acquire images for specific purposes and to solve specific graphic problems
- employs and can discuss principles of composition and aesthetics
- completes three or more bitmap composition projects, each requiring four to six image solutions

**Content** (continued)

- uses bitmap editing software and effects, filters and/or plug-ins to manipulate, crop, edit and composite images
- demonstrates image compositing as required to produce images for specific projects
- uses source files obtained from two or more other pieces of software (e.g., vector graphics, two- and/or three-dimensional animation software) in creating compositions
- maintains notes of digital effects applied to images
- saves and exports work in appropriate file formats
- ensures work meets school and community standards
- produces a portfolio appropriate for application to post-secondary studies

**Equipment and Materials**

- selects and uses appropriate equipment, materials and software
- is able to demonstrate advanced commands and features of a digital camera
- follows safe procedures/techniques
- returns equipment/materials to storage areas

**COMMENTS**

**PRESENTATIONS/REPORTS: DIGITAL IMAGING 3**

**COM3210-3**

Student Name: \_\_\_\_\_

Teacher: \_\_\_\_\_

Course/Project(s): \_\_\_\_\_

Date: \_\_\_\_\_

CRITERIA	OBSERVATION/ RATING	STANDARD
Preparation and Planning	4 3 2 1 0	3
Content	4 3 2 1 0	3
Presentation	4 3 2 1 0	3

**STANDARD IS 3 IN EACH APPLICABLE CRITERIA**

**Rating Scale**

*The student:*

- 4** exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence.
- 3** meets defined outcomes. Plans and solves problems in a self-directed manner. Tools, materials and/or processes are used efficiently and effectively.
- 2** meets defined outcomes. Plans and solves problems with limited assistance. Tools, materials and/or processes are used appropriately.
- 1** meets defined outcomes. Follows a guided plan of action. A limited range of tools, materials and/or processes are used appropriately.
- 0** has not completed defined outcomes. Tools, materials and/or processes are used inappropriately.

**CRITERIA**

*The student:*

**Preparation and Planning**

- sets goals for presentation
- interprets and organizes information into a logical sequence
- prepares compositions by saving digital images in an appropriate format
- maintains notes on the image manipulation processes used as a source of support during presentation and discussion
- uses time effectively

**Content**

- presents finished work to teacher and peers
- annotates presentation with information about how each image was created and/or modified
- creates a portfolio or adds to an existing portfolio
- discusses the advantages and disadvantages of five or more different file formats; e.g., JPG, GIF, TIF, other proprietary formats

**Content (continued)**

- obtains and responds to feedback based on:
  - expectations of the assignment
  - processes used to obtain bitmap images from a digital camera
  - aesthetics and composition control
  - the effects, processes and techniques used to manipulate images
  - how finished compositions meet school and community standards
  - how the presentation meets requirements of a post-secondary application portfolio

**Presentation**

- describes the purpose and/or theme of three projects
- explains how each project impacted design and communication choices
- describes and illustrates multiple solutions for each project
- presents 12 or more finished bitmap compositions
- demonstrates effective communication techniques
- uses correct grammatical conventions and technical terms
- introduces and concludes the presentation
- responds effectively to questions

**COMMENTS**



## Section I: Learning Resource Guide

### NOTICE

Effective September 2002, Section I has been removed from all CTS strands and replaced with this general information page.

Alberta Learning authorizes a variety of resources that support learning and teaching in this strand. Teachers are encouraged to browse the Alberta Learning Web site at <<http://www.learning.gov.ab.ca>> on a regular basis for the most up-to-date information on:

- authorized resources; i.e., student basic, support and authorized teaching
- provincial software licensing agreements
- additional sources of support.

The lists of authorized resources that were previously included in Section I of the *1997 Guides to Standards and Implementation* have been deleted. Up-to-date listings of authorized resources are available at the Alberta Learning Web site and can be accessed through:

- Authorized Resources Database, a searchable online index of every approved learning and teaching resource for use in each subject area. The database is searchable for each 1-credit course.
- Learning Resources Centre (LRC). The LRC ensures accessible, available and affordable resources to enhance learning to all Alberta students.

A variety of documents and related sites are also accessible at the Alberta Learning Web site. These include:

- *Connection: Information for Teachers*, an online information newsletter for administrators, counsellors and teachers. It includes information on curriculum, resources, assessment, technology, new initiatives and projects.
- Learning Technologies Branch, a partnering branch that develops and provides information about distance learning programs and other learning alternatives offered by Alberta Learning.
- 2Learn Alliance, an education–business partnership that provides Internet inservice, support and mentorship for Alberta teachers.

