

COURSE COM1005: VISUAL COMPOSITION

Level: Introductory

Prerequisite: None

Description: Students learn to employ fundamental elements and principles of design for various media and gain a strong foundational multidisciplinary experience in preparation for other Communication Technology courses.

Note: The terms ‘element’ and ‘principle’ are sometimes used interchangeably in design and an element or a principle can often have more than one name. Students should understand that flexibility in this respect is appropriate.

Parameters: Access to equipment used in the production of visual messages.

Outcomes: The student will:

- 1. identify and discuss the elements and principles of design**
 - 1.1 define the elements of design
 - 1.2 identify the elements of design using examples
 - 1.3 describe the impact of each element on the visual message; e.g., line, shape (2D) or form (3D), colour, texture, depth (perspective), light, direction (motion), mass (visual weight), tone (black and white) or value (colour), space (positive and negative)
 - 1.4 define the principles of design
 - 1.5 identify the principles of design using examples
 - 1.6 describe the impact of each principle on the visual message; e.g., balance, emphasis, proportion (scale), repetition (rhythm/pattern), unity, contrast, harmony, proximity, variety
- 2. discuss typography as it relates to the use of text in visual messages**
 - 2.1 explore the meanings of common terms used in typography; e.g., capline, topline, midline, baseline, beardline, serif, san serif, ascender, descender, bowl, counter
 - 2.2 discuss the use of the elements and principles of design in purposeful text creation; e.g., attention-getting text versus readable text
 - 2.3 discuss the role of whitespace in the use of text
- 3. produce visual compositions using a variety of media, e.g., print, photography, video, animation, where a number of elements and principles of design are used and have an identifiable impact on the intent of the message**
- 4. identify copyright restrictions and permissions and put them into practice**
- 5. present a selection of work completed in this course to an audience**
 - 5.1 discuss work regarding:
 - 5.1.1 how the elements and principles of design help facilitate good composition in his or her work
 - 5.1.2 the technical and creative aspects of the work; e.g., quality, uniqueness
 - 5.1.3 areas of concern/difficulty (if applicable)
 - 5.1.4 meeting school and community standards; e.g., appropriate language
 - 5.2 add the selected work to a portfolio
- 6. participate in a critique or an assessment of compositions created by others; e.g., classmates, professionals**
 - 6.1 identify elements and principles used in the images
 - 6.2 comment on the impact of the elements and principles in the construction of the message

- 7. apply consistent and appropriate work station routines**
 - 7.1 demonstrate good health and safety practices; e.g., posture, positioning of hardware and furniture
 - 7.2 demonstrate security for hardware, software, supplies and personal work
- 8. demonstrate basic competencies**
 - 8.1 demonstrate fundamental skills to:
 - 8.1.1 communicate
 - 8.1.2 manage information
 - 8.1.3 use numbers
 - 8.1.4 think and solve problems
 - 8.2 demonstrate personal management skills to:
 - 8.2.1 demonstrate positive attitudes and behaviours
 - 8.2.2 be responsible
 - 8.2.3 be adaptable
 - 8.2.4 learn continuously
 - 8.2.5 work safely
 - 8.3 demonstrate teamwork skills to:
 - 8.3.1 work with others
 - 8.3.2 participate in projects and tasks
- 9. make personal connections to the cluster content and processes to inform possible pathway choices**
 - 9.1 complete/update a personal inventory; e.g., interests, values, beliefs, resources, prior learning and experiences
 - 9.2 create a connection between a personal inventory and occupational choices

COURSE COM1015: MEDIA

Level: Introductory

Prerequisite: COM1005: Visual Composition

Description: Students discover the impact of the media and develop fundamental skills to relay a message effectively using various forms of media; e.g., photography, print, Web and audio or video production.

Parameters: Access to facilities or equipment such as a computer, software, still and/or video cameras, image-capture devices, display equipment and/or print or image-production equipment.

Outcomes: The student will:

1. identify and describe current media

- 1.1 identify and describe current and new media; e.g., technology, materials
- 1.2 identify and describe key characteristics of each type of media (e.g., photography, print, audio or video production), given various samples
- 1.3 identify the message from various types of media

2. explore the impact media has on society, considering:

- **technology; e.g., smartphones, Internet**
- **economics; e.g., consumerism, spending habits**
- **community; e.g., lifestyle, environment**
- **politics; e.g., grassroots movement**

3. analyze various types of media used to communicate ideas and information

- 3.1 critique sample projects (e.g., professional, student) regarding:
 - 3.1.1 intent
 - 3.1.2 project planning and execution; e.g., storyboard, script, audio, visual
 - 3.1.3 appropriateness of layout
 - 3.1.4 clarity of message
 - 3.1.5 techniques used
- 3.2 capture and display images and/or sound with available technology

4. identify copyright restrictions and permissions and put them into practice

5. prepare and deliver a presentation using media of choice

- 5.1 create a design with a message and display the message, ensuring that the:
 - 5.1.1 layout is suitable
 - 5.1.2 image or audio is appropriate
 - 5.1.3 message is clear
- 5.2 critique and evaluate own work and the work of others based on appropriateness and effectiveness of assignment(s) with respect to:
 - 5.2.1 how well the assignment met the objectives
 - 5.2.2 how the elements and principles of design help facilitate good composition in his or her work (if applicable)
 - 5.2.3 the technical and creative aspects of the work; e.g., quality, uniqueness
 - 5.2.4 areas of concern/difficulty (if applicable)
 - 5.2.5 meeting school and community standards; e.g., appropriate language
 - 5.2.6 the use of tools and equipment
- 5.3 add the selected work to a portfolio

- 6. apply consistent and appropriate work station routines**
 - 6.1 demonstrate good health and safety practices; e.g., posture, positioning of hardware and furniture
 - 6.2 demonstrate security for hardware, software, supplies and personal work
- 7. demonstrate basic competencies**
 - 7.1 demonstrate fundamental skills to:
 - 7.1.1 communicate
 - 7.1.2 manage information
 - 7.1.3 use numbers
 - 7.1.4 think and solve problems
 - 7.2 demonstrate personal management skills to:
 - 7.2.1 demonstrate positive attitudes and behaviours
 - 7.2.2 be responsible
 - 7.2.3 be adaptable
 - 7.2.4 learn continuously
 - 7.2.5 work safely
 - 7.3 demonstrate teamwork skills to:
 - 7.3.1 work with others
 - 7.3.2 participate in projects and tasks
- 8. make personal connections to the cluster content and processes to inform possible pathway choices**
 - 8.1 complete/update a personal inventory; e.g., interests, values, beliefs, resources, prior learning and experiences
 - 8.2 create a connection between a personal inventory and occupational choices

- 4. explore and create two or more page-layout structures**
 - 4.1 explore single-column versus multicolumn layouts
 - 4.2 articulate the need for a horizontal anchor
 - 4.3 explain modular grids
 - 4.4 position various texts within a modular grid and create variations to demonstrate the range of possibilities within a system
- 5. identify copyright restrictions and permissions and put them into practice**
- 6. present a selection of typography pieces completed in this course to an audience**
 - 6.1 create, in digital or print format, a display of images/text that encompasses typography work
 - 6.2 discuss work regarding:
 - 6.2.1 how the elements and principles of design help facilitate good composition in his or her work
 - 6.2.2 the technical and creative aspects of the work; e.g., quality, uniqueness
 - 6.2.3 areas of concern/difficulty (if applicable)
 - 6.2.4 meeting school and community standards; e.g., appropriate language
 - 6.2.5 the use of tools and equipment
 - 6.3 participate in peer/teacher assessment
 - 6.4 add the selected work to a portfolio
- 7. apply consistent and appropriate work station routines**
 - 7.1 demonstrate good health and safety practices; e.g., posture, positioning of hardware and furniture
 - 7.2 demonstrate security for hardware, software, supplies and personal work
- 8. demonstrate basic competencies**
 - 8.1 demonstrate fundamental skills to:
 - 8.1.1 communicate
 - 8.1.2 manage information
 - 8.1.3 use numbers
 - 8.1.4 think and solve problems
 - 8.2 demonstrate personal management skills to:
 - 8.2.1 demonstrate positive attitudes and behaviours
 - 8.2.2 be responsible
 - 8.2.3 be adaptable
 - 8.2.4 learn continuously
 - 8.2.5 work safely
 - 8.3 demonstrate teamwork skills to:
 - 8.3.1 work with others
 - 8.3.2 participate in projects and tasks
- 9. make personal connections to the cluster content and processes to inform possible pathway choices**
 - 9.1 complete/update a personal inventory; e.g., interests, values, beliefs, resources, prior learning and experiences
 - 9.2 create a connection between a personal inventory and occupational choices

COURSE COM1035: GRAPHICS TOOLS

Level:	Introductory
Prerequisite:	COM1005: Visual Composition
Description:	Students are introduced to the basics of computer graphics (vector and raster), and graphic computer programs.
Parameters:	Access to a computer, electronic storage equipment, graphic creation/manipulation software, image-capture devices.
Outcomes:	The student will:

1. investigate graphic programs

1.1 describe key features of graphic programs, considering:

- 1.1.1 purpose/use
- 1.1.2 resources required
- 1.1.3 cost
- 1.1.4 ease of use
- 1.1.5 industry standards

1.2 explain the advantages of using vector-based versus raster-based formats

2. select and use appropriate applications to create basic vector and raster graphic images

2.1 understand and use the primary program interface, using correct terminology

2.2 understand the importance and purpose of various file formats, resolutions and file sizes

2.3 set up a new document, considering:

- 2.3.1 size and type of output
- 2.3.2 units of measure
- 2.3.3 bleeding
- 2.3.4 use of colour in graphics
- 2.3.5 appropriate colour mode
- 2.3.6 pixel ratio

2.4 import images from various image-capture devices into a graphics program; e.g., stock images, photographs, scanned images

2.5 use help functions and references as appropriate

2.6 demonstrate use of basic tools; e.g., selection, crop, slice, drawing, type, retouching, reshaping, symbol, graph, annotation, measuring, navigation

2.7 create and/or manipulate original vector and raster graphics

3. organize and manage image files using correct file conventions

4. identify copyright restrictions and permissions and put them into practice

5. present a selection of work completed in this course to an audience

5.1 discuss work regarding:

- 5.1.1 how the elements and principles of design help facilitate good composition
- 5.1.2 the technical and creative aspects of the work; e.g., quality, uniqueness
- 5.1.3 areas of concern/difficulty (if applicable)
- 5.1.4 meeting school and community standards; e.g., appropriate language
- 5.1.5 the use of tools and equipment

5.2 participate in peer/teacher assessment

5.3 add the selected work to a portfolio

- 6. apply consistent and appropriate work station routines**
 - 6.1 demonstrate good health and safety practices; e.g., posture, positioning of hardware and furniture
 - 6.2 demonstrate security for hardware, software, supplies and personal work
- 7. demonstrate basic competencies**
 - 7.1 demonstrate fundamental skills to:
 - 7.1.1 communicate
 - 7.1.2 manage information
 - 7.1.3 use numbers
 - 7.1.4 think and solve problems
 - 7.2 demonstrate personal management skills to:
 - 7.2.1 demonstrate positive attitudes and behaviours
 - 7.2.2 be responsible
 - 7.2.3 be adaptable
 - 7.2.4 learn continuously
 - 7.2.5 work safely
 - 7.3 demonstrate teamwork skills to:
 - 7.3.1 work with others
 - 7.3.2 participate in projects and tasks
- 8. make personal connections to the cluster content and processes to inform possible pathway choices**
 - 8.1 complete/update a personal inventory; e.g., interests, values, beliefs, resources, prior learning and experiences
 - 8.2 create a connection between a personal inventory and occupational choices

COURSE COM1055: WEB DESIGN 1

Level: Introductory

Prerequisite: COM1005: Visual Composition

Description: Students research the characteristics of effective Web page(s) and learn World Wide Web Consortium (W3C) conventions and accessibility concerns to construct a simple Web page.

Parameters: Access to a computer, appropriate software and the Internet.

Outcomes: The student will:

1. research characteristics of an effective Web page

- 1.1 identify acceptable guidelines for creating Web pages, including:
 - 1.1.1 elements and principles of design
 - 1.1.2 layout
 - 1.1.3 World Wide Web Consortium (W3C) standards
 - 1.1.4 storage/folder structure
- 1.2 identify content-related features that contribute to effective Web site design and viewer satisfaction, including:
 - 1.2.1 all required information is provided
 - 1.2.2 content reflects the tastes and images of target audience
 - 1.2.3 the purpose of Web site is clear
- 1.3 identify design-related features that contribute to effective Web site design and viewer satisfaction, including the following:
 - 1.3.1 text style, size of headings and colour are consistent throughout
 - 1.3.2 after home page, navigation links are positioned in standard location
 - 1.3.3 overall impact and mood of Web site is positive and aligns with target audience's interests and needs
 - 1.3.4 organization of information is effective
 - 1.3.5 navigation throughout Web site is efficient; e.g., links to top of page and home page, global bars, categories, search features, navigation trails and paths
 - 1.3.6 basic principles of Web usability, readability and accessibility are addressed
- 1.4 evaluate a variety of Web pages for:
 - 1.4.1 use of accepted guidelines and ease of use
 - 1.4.2 key purpose and target audiences
 - 1.4.3 effective layout, navigation and design elements
- 1.5 search, review, select and bookmark Web sites that offer support to Web page developers

2. design and create a Web page

- 2.1 identify the purpose, audience and audience needs for a Web page
- 2.2 identify Web page content that is relevant to the purpose and appropriate for the target audience
- 2.3 demonstrate knowledge of flowcharts, storyboards and wireframes to create Web pages and a site map (site index) that maintain the planned Web page hierarchy
- 2.4 demonstrate general knowledge of best practices for designing a Web page, such as maintaining consistency, separating content from design, using standard fonts, Web-safe colours, and using visual hierarchy

- 2.5 create a Web page by:
 - 2.5.1 creating an organizational structure for files and folders; e.g., image folder, css folder
 - 2.5.2 creating a new Web page using appropriate naming conventions and original content
 - 2.5.3 adding text to a Web page
 - 2.5.4 inserting images and applying alternative text
 - 2.5.5 linking Web content, using hyperlinks, e-mail links and named anchors
 - 2.5.6 adhering to Web page usability, readability and accessibility standards
- 2.6 ensure that the Web page design works equally well on various operating systems and/or browser versions/configurations
- 2.7 add header content to make a Web page visible to search engines
- 2.8 publish site files to a local or remote server and update them when necessary
- 3. identify copyright restrictions and permissions and put them into practice**
- 4. present the Web page to an audience**
 - 4.1 make Web page development decisions based on analysis and interpretation of design specifications
 - 4.2 consider multiple assessments; e.g., after initial creation, revisions, final version
 - 4.3 add the Web page to a portfolio
- 5. evaluate, maintain and enhance the Web page to improve features and functions**
 - 5.1 identify techniques for basic usability tests
 - 5.2 identify methods for collecting site feedback
 - 5.3 evaluate the impact and navigation of the Web page
 - 5.4 identify potential layout improvements
 - 5.5 enhance a newly created or existing Web page by updating data, editing content, adding/modifying features
 - 5.6 explain reasons for the changes
 - 5.7 manage assets, links and files for a site
 - 5.8 publish site files to a local or remote server and update
- 6. apply consistent and appropriate work station routines**
 - 6.1 demonstrate good health and safety practices; e.g., posture, positioning of hardware and furniture
 - 6.2 demonstrate security for hardware, software, supplies and personal work
- 7. demonstrate basic competencies**
 - 7.1 demonstrate fundamental skills to:
 - 7.1.1 communicate
 - 7.1.2 manage information
 - 7.1.3 use numbers
 - 7.1.4 think and solve problems
 - 7.2 demonstrate personal management skills to:
 - 7.2.1 demonstrate positive attitudes and behaviours
 - 7.2.2 be responsible
 - 7.2.3 be adaptable
 - 7.2.4 learn continuously
 - 7.2.5 work safely
 - 7.3 demonstrate teamwork skills to:
 - 7.3.1 work with others
 - 7.3.2 participate in projects and tasks
- 8. make personal connections to the cluster content and processes to inform possible pathway choices**
 - 8.1 complete/update a personal inventory; e.g., interests, values, beliefs, resources, prior learning and experiences
 - 8.2 create a connection between a personal inventory and occupational choices

COURSE COM1105: AUDIO/VIDEO

Level: Introductory

Prerequisite: COM1005: Visual Composition

Description: Students acquire basic production skills, including planning, recording and editing, through the production of simple audio and/or video projects using basic equipment and techniques.

Parameters: Access to audio and video equipment and editing technology.

Supporting Course: COM1015: Media

Outcomes: The student will:

1. identify basic audio and video equipment, and demonstrate fundamental set-up procedures

- 1.1 explain and apply the function of:
 - 1.1.1 automatic and manual focus
 - 1.1.2 white balance and the need to balance for different lighting conditions
 - 1.1.3 recording media; e.g., digital, film, HD
 - 1.1.4 a microphone

2. identify and demonstrate basic audio and video concepts; e.g., camera moves, types of shots, audio mixing, audio set-up

- 2.1 identify and produce various types of shots; e.g., extreme close-up, close-up, medium close-up, medium shot, long shot, extreme long shot, over the shoulder shot
- 2.2 demonstrate various types of camera moves; e.g., tilt up/down, dolly in/out, pan left/right, truck left/right, zoom in/out
- 2.3 apply variety to screen composition
- 2.4 demonstrate how a two-dimensional object can be made to look three-dimensional by changing the camera angle
- 2.5 identify screen aspect ratio; e.g., 4:3, 16:9
- 2.6 investigate new audio and/or video technologies/techniques; e.g., compositing, digital manipulation

3. apply basic project planning skills to audio/video productions

- 3.1 produce an outline, script or shots sheet for a short video assignment; e.g., 3–5 minute interview, sporting event, advertisement
- 3.2 prepare and follow a recording plan for audio recording, considering the following, when applicable:
 - 3.2.1 narration
 - 3.2.2 interview
 - 3.2.3 music
 - 3.2.4 transitions and effects

4. apply a project plan to scripting, sound recording and basic lighting techniques in completing a production assignment

- 4.1 use correct technical terminology in describing equipment, techniques, processes and procedures in the context of project work and during presentations to others
- 4.2 create, adapt or apply a script

- 4.3 use introductory production and post-production techniques to complete a project; e.g., camera moves, transitions, audio recording
- 5. identify copyright restrictions and permissions and put them into practice**
- 6. present a selection of work completed in this course to an audience; e.g., project plan, shot list or storyboard, edited project**
 - 6.1 discuss work regarding:
 - 6.1.1 how the elements and principles of design help facilitate good composition in his or her work (if applicable)
 - 6.1.2 the technical and creative aspects of the work; e.g., quality, uniqueness
 - 6.1.3 areas of concern/difficulty (if applicable)
 - 6.1.4 the use of tools and equipment
 - 6.1.5 the relationship of the short outline/script to the final product
 - 6.1.6 the quality of completed project
 - 6.1.7 meeting school and community standards; e.g., appropriate language
 - 6.2 participate in peer/teacher assessment
 - 6.3 add the selected work to a portfolio
- 7. apply consistent and appropriate work station routines**
 - 7.1 demonstrate good health and safety practices; e.g., posture, positioning of hardware and furniture
 - 7.2 demonstrate security for hardware, software, supplies and personal work
- 8. demonstrate basic competencies**
 - 8.1 demonstrate fundamental skills to:
 - 8.1.1 communicate
 - 8.1.2 manage information
 - 8.1.3 use numbers
 - 8.1.4 think and solve problems
 - 8.2 demonstrate personal management skills to:
 - 8.2.1 demonstrate positive attitudes and behaviours
 - 8.2.2 be responsible
 - 8.2.3 be adaptable
 - 8.2.4 learn continuously
 - 8.2.5 work safely
 - 8.3 demonstrate teamwork skills to:
 - 8.3.1 work with others
 - 8.3.2 participate in projects and tasks
- 9. make personal connections to the cluster content and processes to inform possible pathway choices**
 - 9.1 complete/update a personal inventory; e.g., interests, values, beliefs, resources, prior learning and experiences
 - 9.2 create a connection between a personal inventory and occupational choices

COURSE COM1145: ANIMATION 1

Level: Introductory

Prerequisite: COM1005: Visual Composition

Description: Students are introduced to a variety of animation techniques and produce a simple animation; the focus is on basic skills, including planning, keyframing, stage set-up and production, used to create a moving picture.

Parameters: Access to basic analogue or digital animation equipment (examples include but are not limited to animation board, camera/image-capture device with single frame ability and/or a computer with animation software).

Supporting Course: COM1015: Media

Outcomes: The student will:

- 1. identify and describe the fundamental concepts of the illusion of movement through a minimum of three animation styles used in the animation industry; e.g., cel animation, claymation, pixilation, computer animation**
- 2. produce short animation assignment(s)**
 - 2.1 prepare a project plan, an outline and/or a storyboard for a presentation
 - 2.2 select an appropriate animation technique; e.g., clay, film and artwork, digital proofs, computer animation software
 - 2.3 use technical equipment; e.g., camera/image-capture device, computer, editor, to capture/create images, create movement and edit final product(s)
 - 2.4 identify and/or apply music and/or sound effects to enhance the production
 - 2.5 present the project to teacher and/or peers for feedback
- 3. identify copyright restrictions and permissions and put them into practice**
- 4. present a selection of work completed in this course to an audience**
 - 4.1 discuss work regarding:
 - 4.1.1 how the elements and principles of design help facilitate good composition in his or her work
 - 4.1.2 the technical and creative aspects of the work; e.g., quality, uniqueness
 - 4.1.3 areas of concern/difficulty (if applicable)
 - 4.1.4 the use of tools and equipment
 - 4.1.5 the relationship of the short outline/script to the final product
 - 4.1.6 the quality of completed project
 - 4.1.7 meeting school and community standards; e.g., appropriate language
 - 4.2 participate in peer/teacher assessment
 - 4.3 add this selected work to an ongoing portfolio
- 5. apply consistent and appropriate work station routines**
 - 5.1 demonstrate good health and safety practices; e.g., posture, positioning of hardware and furniture
 - 5.2 demonstrate security for hardware, software, supplies and personal work

6. demonstrate basic competencies

- 6.1 demonstrate fundamental skills to:
 - 6.1.1 communicate
 - 6.1.2 manage information
 - 6.1.3 use numbers
 - 6.1.4 think and solve problems
- 6.2 demonstrate personal management skills to:
 - 6.2.1 demonstrate positive attitudes and behaviours
 - 6.2.2 be responsible
 - 6.2.3 be adaptable
 - 6.2.4 learn continuously
 - 6.2.5 work safely
- 6.3 demonstrate teamwork skills to:
 - 6.3.1 work with others
 - 6.3.2 participate in projects and tasks

7. make personal connections to the cluster content and processes to inform possible pathway choices

- 7.1 complete/update a personal inventory; e.g., interests, values, beliefs, resources, prior learning and experiences
- 7.2 create a connection between a personal inventory and occupational choices

COURSE COM1165: PRINTING 1

Level: Introductory

Prerequisite: COM1005: Visual Composition

Description: Students are introduced to basic layout and design techniques as well as to various print reproduction processes using a positive or negative master such as digital, offset, screen, vinyl plotting, wide format and laser cutting.

Parameters: Access to layout tables, tools and materials and/or computers with graphic layout capabilities, and to one or more types of printing equipment/facilities.

Supporting Course: COM1015: Media

Outcomes: The student will:

- 1. identify the basic characteristics and applications of layout, medium and printing methods**
 - 1.1 identify appropriate design techniques for various output media typically used in the print industry; e.g., digital, offset, screen, vinyl plotting, wide format, sublimation and laser cutting
 - 1.2 use appropriate technical terminology in describing equipment, techniques, processes and procedures
 - 1.3 examine a minimum of three standard printing techniques; e.g., digital, offset, screen, vinyl plotting, wide format and laser cutting
- 2. apply design and printing techniques used in the production of graphic project(s)**
 - 2.1 select appropriate finished media; e.g., paper, plastic, ceramic, wood, cloth
 - 2.2 apply basic design principles
 - 2.3 create an appropriate design meeting criteria dictated by selected output media
 - 2.4 reproduce the graphic using appropriate methods; e.g., silkscreen, offset press
- 3. demonstrate a working knowledge of Workplace Hazardous Materials Information System (WHMIS) safety standards and responsible environmental and workplace procedures; e.g., personal protective equipment (PPE), chemical handling**
- 4. identify copyright restrictions and permissions and put them into practice**
- 5. present a selection of work completed in this course to an audience**
 - 5.1 discuss work regarding:
 - 5.1.1 how the elements and principles of design help facilitate good composition in his or her work
 - 5.1.2 the technical and creative aspects of the work; e.g., quality, uniqueness
 - 5.1.3 areas of concern/difficulty (if applicable)
 - 5.1.4 meeting school and community standards; e.g., appropriate language
 - 5.1.5 the use of tools and equipment
 - 5.2 participate in peer/teacher assessment
 - 5.3 add the selected work to a portfolio
- 6. apply consistent and appropriate work station routines**
 - 6.1 demonstrate good health and safety practices; e.g., posture, positioning of hardware and furniture
 - 6.2 demonstrate security for hardware, software, supplies and personal work

7. demonstrate basic competencies

- 7.1 demonstrate fundamental skills to:
 - 7.1.1 communicate
 - 7.1.2 manage information
 - 7.1.3 use numbers
 - 7.1.4 think and solve problems
- 7.2 demonstrate personal management skills to:
 - 7.2.1 demonstrate positive attitudes and behaviours
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 - 7.2.4 learn continuously
 - 7.2.5 work safely
- 7.3 demonstrate teamwork skills to:
 - 7.3.1 work with others
 - 7.3.2 participate in projects and tasks

8. make personal connections to the cluster content and processes to inform possible pathway choices

- 8.1 complete/update a personal inventory; e.g., interests, values, beliefs, resources, prior learning and experiences
- 8.2 create a connection between a personal inventory and occupational choices

COURSE COM1205: PHOTOGRAPHY – INTRODUCTION

Level: Introductory

Prerequisite: COM1005: Visual Composition

Description: Students develop essential skills in camera use with a focus on basic composition, set-up and examination of exposure. Students operate a camera to capture images and produce final display proofs.

Parameters: Access to a camera with the ability to control aperture and shutter speed independently, and to processing and display equipment.

Note: The term photograph refers to either a physical or digital representation, depending on equipment available to the student.

Supporting Course: COM1015: Media

Outcomes: The student will:

- 1. describe the role of photography in society; e.g., art, social statement, entertainment, historical record, illustrating ideas and concepts, scientific research, exploration**
- 2. use various photographic equipment, image-capture devices, materials and processes to demonstrate basic photographic skills**
 - 2.1 identify and describe the key components and functions of a camera
 - 2.2 classify different types of image-capture devices and some of their potential applications
 - 2.3 explain the rule of thirds as it applies to photographic composition and framing
 - 2.4 identify the light sources and their roles in manipulating mood, given a set of photographs/images
 - 2.5 explain the concept of focus in photography and differentiate between those photographs that are in focus and those that are out of focus
 - 2.6 explain the notion of depth of field in photography and differentiate between those photographs that have a long depth of field and those that have a shallow depth of field
 - 2.7 use correct terminology in the context of photographic work and during presentations
 - 2.8 load and unload photographic film and/or storage media from a camera
 - 2.9 differentiate between a snap shot and a planned photograph by:
 - 2.9.1 framing for composition
 - 2.9.2 focal point
 - 2.9.3 camera placement; e.g., not a view of the top of the dog's back—get down to subject level
 - 2.9.4 choosing vertical or horizontal format—changing camera direction
 - 2.9.5 being aware of the background; e.g., not having a tree appear to be growing out of the subject's head
 - 2.9.6 dynamic range
 - 2.9.7 field of view
 - 2.9.8 depth of field
 - 2.9.9 using a camera/image-capture device to capture and log aperture and shutter for least 24 images
 - 2.9.10 demonstrating an understanding of shutter speeds and aperture, basic composition (e.g., balance, line, perspective, rule of thirds, repetition), lighting (e.g., natural, artificial)

- 3. describe and/or use various processing methods; e.g., black and white, colour, digital**
 - 3.1 process images and print or display at least six images in proofing and in final format
 - 3.2 process photographs to produce prints, images or displays
 - 3.3 identify and demonstrate darkroom safety precautions and protocol (if applicable)
- 4. choose the proper International Standards Organization (ISO) light sensitivity/film speed and/or resolution setting, file format and image capture (camera) settings for good image capture; e.g., 64, 100, 160, 200, 400, 640, 800, 1600, raw, jpeg**
 - 4.1 explain what the International Standards Organization (ISO) system refers to when adjusting the ISO setting on film and/or digital type cameras; e.g., sensitivity to light by the film or digital sensor resulting in either film grain or digital noise
 - 4.2 capture images using an image-capture device/camera, considering:
 - 4.2.1 each image to be in focus
 - 4.2.2 basic composition guideline: the rule of thirds
 - 4.2.3 clear focal point
 - 4.3 create photographic images that generate curiosity and discussion
- 5. present a selection of work completed in this course to an audience**
 - 5.1 create a display using a minimum of five predefined photographs
 - 5.2 discuss each photograph regarding:
 - 5.2.1 illustrating expectations
 - 5.2.2 how the composition guidelines help facilitate good arrangement in his or her work
 - 5.2.3 the technical and creative aspects of the work; e.g., quality, focus, rule of thirds
 - 5.2.4 areas of challenge and solutions (if applicable)
 - 5.2.5 meeting school and community standards; e.g., appropriate language
 - 5.2.6 the use of tools and equipment; e.g., compare a photograph with a photo log
 - 5.3 participate in peer/teacher assessment
 - 5.4 add the selected work to a portfolio
- 6. apply consistent and appropriate work station routines**
 - 6.1 demonstrate good health and safety practices; e.g., posture, positioning of hardware and furniture
 - 6.2 demonstrate security for hardware, software, supplies and personal work
- 7. demonstrate basic competencies**
 - 7.1 demonstrate fundamental skills to:
 - 7.1.1 communicate
 - 7.1.2 manage information
 - 7.1.3 use numbers
 - 7.1.4 think and solve problems
 - 7.2 demonstrate personal management skills to:
 - 7.2.1 demonstrate positive attitudes and behaviours
 - 7.2.2 be responsible
 - 7.2.3 be adaptable
 - 7.2.4 learn continuously
 - 7.2.5 work safely
 - 7.3 demonstrate teamwork skills to:
 - 7.3.1 work with others
 - 7.3.2 participate in projects and tasks
- 8. make personal connections to the cluster content and processes to inform possible pathway choices**
 - 8.1 complete/update a personal inventory; e.g., interests, values, beliefs, resources, prior learning and experiences
 - 8.2 create a connection between a personal inventory and occupational choices

COURSE COM1215: PHOTOGRAPHY – EXPOSURE

Level: Introductory

Prerequisite: COM1005: Visual Composition

Description: Students learn the technical and creative uses of aperture, shutter speed and ISO, and demonstrate how combinations of the three elements give very different results. Students also discover how a correct exposure is obtained through the combination of shutter speed, aperture and ISO, which make up the photographic triangle.

Parameters: Access to a camera with the ability to control aperture and shutter speed independently, and to processing and display equipment.

Note: The term photograph refers to either a physical or digital representation, depending on equipment available to the student.

Outcomes: The student will:

- 1. describe and demonstrate the creative and technical natures of aperture**
 - 1.1 articulate how aperture controls the amount of light that enters the camera
 - 1.2 demonstrate how aperture controls depth of field by taking a combination of photographs with varying apertures, and record all settings
 - 1.3 understand the relationship between aperture and shutter speed, and which should be given priority and why; e.g., fast shutter for action shots, aperture for focal plane
 - 1.4 identify various common aperture types and common aperture f-stops that are associated with each type; e.g., single detail f/2.8-4, snap-shot f/8-11, storytelling f/16-22
 - 1.5 compose photographs in camera's aperture priority mode with depth of field emphasis as the clear intent
- 2. describe and demonstrate the creative and technical natures of shutter speed**
 - 2.1 articulate how shutter speed controls the amount of light that enters the camera
 - 2.2 demonstrate how shutter speed controls the effects of motion by taking a combination of photographs with varying shutter speeds, and record all settings
 - 2.3 explain the relationship between aperture and shutter speed
 - 2.4 identify the following two situations in which shutter speed becomes the photographer's first priority:
 - 2.4.1 capturing and/or implying motion and action
 - 2.4.2 shooting in low-light situations
 - 2.5 identify common shutter speeds for specific intended results; e.g., 1/500 second to freeze motion, 1 second or longer for dusk and low light
 - 2.6 compose photographs in camera's shutter priority mode with motion emphasis as the clear intent; e.g., panning, freezing motion, zooming
- 3. describe and demonstrate the benefits and disadvantages of various ISO settings**
 - 3.1 articulate ISO's role in the photographic triangle
 - 3.2 demonstrate the advantages and disadvantages that ISO offers to the photographer by taking a combination of photographs with varying ISOs

- 4. combine techniques and principles of shutter speed, aperture and ISO to make images in manual shooting mode**
 - 4.1 explain the purpose of the camera's light meter and demonstrate obtaining varying exposures; e.g., underexposed images, properly exposed images and overexposed images
 - 4.2 compare overexposed and underexposed images and identify the characteristics of each
 - 4.3 demonstrate manual shooting proficiency by making properly exposed images that have either shutter speed or aperture as the primary intent
 - 4.4 explore additional elements that aid in exposure; e.g., white balance, exposure compensation
- 5. present a selection of work completed in this course to an audience**
 - 5.1 create a display of photographs
 - 5.2 discuss each photograph regarding:
 - 5.2.1 the triangle aspect that was most important in making the photograph—aperture, shutter speed, ISO
 - 5.2.2 how the composition guidelines help facilitate good arrangement in his or her work
 - 5.2.3 the technical and creative aspects of the work; e.g., quality, focus, uniqueness
 - 5.2.4 areas of challenge/difficulty (if applicable)
 - 5.2.5 meeting school and community standards; e.g., appropriate language
 - 5.2.6 the use of tools and equipment
 - 5.3 participate in peer/teacher assessment
 - 5.4 add the selected work to a portfolio
- 6. apply consistent and appropriate work station routines**
 - 6.1 demonstrate good health and safety practices; e.g., posture, positioning of hardware and furniture
 - 6.2 demonstrate security for hardware, software, supplies and personal work
- 7. demonstrate basic competencies**
 - 7.1 demonstrate fundamental skills to:
 - 7.1.1 communicate
 - 7.1.2 manage information
 - 7.1.3 use numbers
 - 7.1.4 think and solve problems
 - 7.2 demonstrate personal management skills to:
 - 7.2.1 demonstrate positive attitudes and behaviours
 - 7.2.2 be responsible
 - 7.2.3 be adaptable
 - 7.2.4 learn continuously
 - 7.2.5 work safely
 - 7.3 demonstrate teamwork skills to:
 - 7.3.1 work with others
 - 7.3.2 participate in projects and tasks
- 8. make personal connections to the cluster content and processes to inform possible pathway choices**
 - 8.1 complete/update a personal inventory; e.g., interests, values, beliefs, resources, prior learning and experiences
 - 8.2 create a connection between a personal inventory and occupational choices

COURSE COM1255: E-LEARNING & LEARNING MANAGEMENT SYSTEMS

Level: Introductory

Prerequisite: None

Description: Students explore the elements of e-learning within a learning management system. They explore the appropriate use of tools and skills required to successfully implement an e-learning plan and evaluate their readiness to form educational relationships that will cross time and distance.

Parameters: An electronic device that has Internet access.

Outcomes: The student will:

- 1. demonstrate effective synchronous and asynchronous communication with the teacher and other students for the purposes of e-learning**
 - 1.1 compare and contrast communication in social networking and public digital environments to communication in a closed learning management system
 - 1.2 analyze and demonstrate the effective use of communication tools (synchronous and asynchronous) that are required to support e-learning in a learning management system
 - 1.3 demonstrate an understanding of effective communication cycles that support e-learning
 - 1.4 demonstrate and participate in the effective use of online meeting tools with voice, application share and embedded webcam
 - 1.5 investigate and describe techniques for forming and maintaining online relationships with teachers and peers for the purpose of e-learning
 - 1.6 evaluate the need and role of online relationships in e-learning
- 2. demonstrate an understanding of the differences between e-learning and traditional classroom-based experiences**
 - 2.1 compare and contrast e-learning with the traditional classroom model
 - 2.2 create a time management plan and apply effective strategies to accomplish learning within the time given
 - 2.3 create a personal e-learning plan that integrates learning management system tools to help facilitate success
 - 2.4 assist in the personalization of his or her program based on his or her considerations of past and current educational settings
 - 2.5 define and evaluate digital literacy as it relates to his or her planning for personal e-learning
 - 2.6 describe digital tools available to support different learning styles in a learning management system
- 3. manage computer/electronic device operations in the context of a learning management system**
 - 3.1 apply file management skills and conventions simultaneously on personal electronic devices and in a learning management system
 - 3.2 identify and troubleshoot/resolve conflicts between operating systems and learning management systems
 - 3.3 access and use assistive technologies effectively as they relate to an e-learning plan; e.g., speech recognition, video and audio playback
- 4. apply consistent and appropriate work station routines**
 - 4.1 demonstrate good health and safety practices; e.g., posture, positioning of hardware and furniture
 - 4.2 demonstrate security for hardware, software, supplies and personal work

5. demonstrate appropriate elements of digital citizenship

- 5.1 identify and explain the International Society for Technology in Education's nine elements of digital citizenship, namely:
 - 5.1.1 access
 - 5.1.2 commerce
 - 5.1.3 communication
 - 5.1.4 literacy
 - 5.1.5 etiquette
 - 5.1.6 law
 - 5.1.7 rights and responsibilities
 - 5.1.8 health and wellness
 - 5.1.9 security
- 5.2 apply the elements of digital citizenship in evaluating the safety and application of social networking and texting technologies
- 5.3 identify and evaluate cases of copyright infringement and plagiarism
- 5.4 identify the costs and consequences associated with copyright infringement and plagiarism
- 5.5 describe digital techniques for tracking, filtering, identifying and investigating suspected cases of plagiarism (inside and outside of learning management systems)

6. identify copyright restrictions and permissions and put them into practice

7. demonstrate basic competencies

- 7.1 demonstrate fundamental skills to:
 - 7.1.1 communicate
 - 7.1.2 manage information
 - 7.1.3 use numbers
 - 7.1.4 think and solve problems
- 7.2 demonstrate personal management skills to:
 - 7.2.1 demonstrate positive attitudes and behaviours
 - 7.2.2 be responsible
 - 7.2.3 be adaptable
 - 7.2.4 learn continuously
 - 7.2.5 work safely
- 7.3 demonstrate teamwork skills to:
 - 7.3.1 work with others
 - 7.3.2 participate in projects and tasks

8. make personal connections to the cluster content and processes to inform possible pathway choices

- 8.1 complete/update a personal inventory; e.g., interests, values, beliefs, resources, prior learning and experiences
- 8.2 create a connection between a personal inventory and occupational choices

COURSE COM1275: PHOTOGRAPHY – DIGITAL PROCESSING 1

Level: Introductory

Prerequisite: COM1005: Visual Composition

Description: Students learn the fundamentals of consumer-based digital image acquisition, management, composition, manipulation and editing software to improve image composition.

Parameters: Access to an image-capture device/digital camera and computer(s) with consumer-based image-editing software.

Note: The term photograph refers to either a physical or digital representation, depending on equipment available to the student.

Supporting Courses: COM1015: Media
COM1035: Graphics Tools
COM1205: Photography – Introduction

Outcomes: The student will:

1. explain different types of image-capturing devices

- 1.1 compare the advantages and disadvantages of different types of digital cameras and/or image-capturing devices; e.g., point-and-shoot camera, digital single-lens reflex (DSLR) camera, scanner, medium format camera
- 1.2 explain and demonstrate basic digital camera and/or image-capturing device functions and commands

2. use an image-capturing device/digital camera to acquire images that follow basic rules of visual composition

- 2.1 demonstrate the basic rules of composition—balance, repetition, perspective, line, rule of thirds
- 2.2 frame and crop images for composition by demonstrating:
 - 2.2.1 focal point; e.g., emphasis
 - 2.2.2 an appropriate layout; e.g., horizontal or vertical
 - 2.2.3 awareness of background
 - 2.2.4 clear focus
- 2.3 discuss various image file format characteristics and their impact on the quality of the image; e.g., size, compression, lossless versus non-lossless, resolution
- 2.4 record on a log sheet all relevant technical data; e.g., metadata, aperture, shutter speed, (ISO), file format
- 2.5 acquire and manage your images

3. apply basic image editing software functions and commands to edit digital image files

- 3.1 demonstrate, through an experimental approach, the use of image editing software to:
 - 3.1.1 apply basic menu/toolbox commands; e.g., rotate, red-eye reduction, crop, straighten
 - 3.1.2 recompose photographs to a different size without distortion
 - 3.1.3 adjust images; e.g., exposure, contrast, saturation, sharpness, red-eye
 - 3.1.4 apply various effects; e.g., sepia, black and white, fade, matte, vignette
 - 3.1.5 retouch photographs

- 3.2 select, with limited assistance, basic image-editing functions and commands that are appropriate to the task
- 3.3 use image-editing software to create interesting and aesthetically appealing compositions
- 4. investigate new technologies in the area of photo editing and manipulation; e.g., Global Positioning System (GPS) mapping, facial recognition, creating calendars and books**
- 5. present a selection of work completed in this course to an audience**
 - 5.1 create a display of photographs
 - 5.2 discuss each photograph regarding:
 - 5.2.1 editing techniques used
 - 5.2.2 how the composition guidelines help facilitate good arrangement in his or her work
 - 5.2.3 the technical and creative aspects of the work; e.g., quality, focus, uniqueness
 - 5.2.4 areas of challenge and solutions
 - 5.2.5 meeting school and community standards; e.g., appropriate language
 - 5.2.6 the use of tools and equipment
 - 5.3 participate in peer/teacher assessment
 - 5.4 add the selected work to a portfolio
- 6. apply consistent and appropriate work station routines**
 - 6.1 demonstrate good health and safety practices; e.g., posture, positioning of hardware and furniture
 - 6.2 demonstrate security for hardware, software, supplies and personal work
- 7. demonstrate basic competencies**
 - 7.1 demonstrate fundamental skills to:
 - 7.1.1 communicate
 - 7.1.2 manage information
 - 7.1.3 use numbers
 - 7.1.4 think and solve problems
 - 7.2 demonstrate personal management skills to:
 - 7.2.1 demonstrate positive attitudes and behaviours
 - 7.2.2 be responsible
 - 7.2.3 be adaptable
 - 7.2.4 learn continuously
 - 7.2.5 work safely
 - 7.3 demonstrate teamwork skills to:
 - 7.3.1 work with others
 - 7.3.2 participate in projects and tasks
- 8. make personal connections to the cluster content and processes to inform possible pathway choices**
 - 8.1 complete/update a personal inventory; e.g., interests, values, beliefs, resources, prior learning and experiences
 - 8.2 create a connection between a personal inventory and occupational choices

COURSE COM1910: COM PROJECT A

Level: Introductory

Prerequisite: None

Description: Students develop project design and management skills to extend and enhance competencies and skills in other CTS courses through contexts that are personally relevant.

Parameters: Introductory project courses must connect with a minimum of two CTS courses, one of which must be at the introductory level and be in the same occupational area as the project course. The other CTS course(s) can be either at the same level or at the intermediate level from any occupational area.

Project courses cannot be connected to other project courses or practicum courses.

All projects and/or performances, whether teacher- or student-led, must include a course outline or student proposal.

Outcomes:

The teacher/student will:

- 1. identify the connection between this project course and two or more CTS courses**
 - 1.1 identify the outcome(s) from each identified CTS course that support the project and/or performance deliverables
 - 1.2 explain how these outcomes are being connected to the project and/or performance deliverables
- 2. propose the project and/or performance**
 - 2.1 identify the project and/or performance by:
 - 2.1.1 preparing a plan
 - 2.1.2 clarifying the purposes
 - 2.1.3 defining the deliverables
 - 2.1.4 specifying time lines
 - 2.1.5 explaining terminology, tools and processes
 - 2.1.6 defining resources; e.g., materials, costs, staffing
 - 2.2 identify and comply with all related health and safety standards
 - 2.3 define assessment standards (indicators for success)
 - 2.4 present the proposal and obtain necessary approvals

The student will:

- 3. meet goals as defined within the plan**
 - 3.1 complete the project and/or performance as outlined
 - 3.2 monitor the project and/or performance and make necessary adjustments
 - 3.3 present the project and/or performance, indicating the:
 - 3.3.1 outcomes attained
 - 3.3.2 relationship of outcomes to goals originally set

- 3.4 evaluate the project and/or performance, indicating the:
 - 3.4.1 processes and strategies used
 - 3.4.2 recommendations on how the project and/or performance could have been improved
- 4. identify copyright restrictions and permissions and put them into practice**
- 5. demonstrate basic competencies**
 - 5.1 demonstrate fundamental skills to:
 - 5.1.1 communicate
 - 5.1.2 manage information
 - 5.1.3 use numbers
 - 5.1.4 think and solve problems
 - 5.2 demonstrate personal management skills to:
 - 5.2.1 demonstrate positive attitudes and behaviours
 - 5.2.2 be responsible
 - 5.2.3 be adaptable
 - 5.2.4 learn continuously
 - 5.2.5 work safely
 - 5.3 demonstrate teamwork skills to:
 - 5.3.1 work with others
 - 5.3.2 participate in projects and tasks
- 6. make personal connections to the cluster content and processes to inform possible pathway choices**
 - 6.1 complete/update a personal inventory; e.g., interests, values, beliefs, resources, prior learning and experiences
 - 6.2 create a connection between a personal inventory and occupational choices

COURSE COM2015: MEDIA IMPACT

Level: Intermediate

Prerequisite: COM1005: Visual Composition

Description: Students explore different media forms and examine their impact on personal, community and national interests. Using various media, students plan, create and present a simple message.

Parameters: Specialized facilities depend on the direction taken in the course. Students should have access to still and video cameras, video and image software, some type of print production equipment and a computer with appropriate software (either in the lab or through a community source).

Supporting Course: COM1015: Media

Outcomes: The student will:

- 1. analyze various media messages, e.g., radio, television, photography, Web or print, and describe the impact of the various messages from a personal, community and national perspective**
 - 1.1 describe the various roles of media; e.g., advertising, role modelling, stereotyping, cultural representation, propaganda, consumerism
 - 1.2 identify a current issue of media interest and describe its impact from a personal, community or national perspective
 - 1.3 identify and describe the media format(s) used to present selected commercially produced messages and the impact of the media on the effectiveness of message delivery
 - 1.4 develop and apply criteria to compare the anticipated effectiveness of media selected for delivering the message to the actual effectiveness of the result (audience reaction)
- 2. design and produce a simple message, and communicate it through a specified media; e.g., print, audio, video, animation or combination**
 - 2.1 develop a plan for producing a message in specified media or multimedia; e.g., consider target audience, intent of message, type of media
 - 2.2 use appropriate planning procedures for selected media; e.g., storyboard, script, outline, shot list, thumbnails, composites
 - 2.3 produce a specified media message from a personal, community or national perspective in one or more media formats; e.g., commercial or advertising layout, news item or interview (audio, video, print or combination), public service announcement, billboard design
- 3. identify copyright restrictions and permissions and put them into practice**
- 4. present a selection of work completed in this course to an audience**
 - 4.1 discuss work regarding:
 - 4.1.1 how the elements and principles of design help facilitate good composition in his or her work
 - 4.1.2 the technical and creative aspects of the work; e.g., quality, uniqueness
 - 4.1.3 areas of concern/difficulty (if applicable)
 - 4.1.4 meeting school and community standards; e.g., appropriate language
 - 4.1.5 the use of tools and equipment

- 4.2 participate in peer/teacher assessment
- 4.3 add the selected work to a portfolio
- 5. apply consistent and appropriate work station routines**
 - 5.1 demonstrate good health and safety practices; e.g., posture, positioning of hardware and furniture
 - 5.2 demonstrate security for hardware, software, supplies and personal work
- 6. demonstrate basic competencies**
 - 6.1 demonstrate fundamental skills to:
 - 6.1.1 communicate
 - 6.1.2 manage information
 - 6.1.3 use numbers
 - 6.1.4 think and solve problems
 - 6.2 demonstrate personal management skills to:
 - 6.2.1 demonstrate positive attitudes and behaviours
 - 6.2.2 be responsible
 - 6.2.3 be adaptable
 - 6.2.4 learn continuously
 - 6.2.5 work safely
 - 6.3 demonstrate teamwork skills to:
 - 6.3.1 work with others
 - 6.3.2 participate in projects and tasks
- 7. identify possible life roles related to the skills and content of this cluster**
 - 7.1 recognize and then analyze the opportunities and barriers in the immediate environment
 - 7.2 identify potential resources to minimize barriers and maximize opportunities

COURSE COM2025: ELECTRONIC LAYOUT & PUBLISHING 1

Level: Intermediate

Prerequisite: COM1005: Visual Composition

Description: Students develop skills and practical working knowledge of electronic publishing computer hardware and software and create well-designed documents and publications using desktop publishing technology.

Parameters: Access to a computer, storage medium, appropriate software, support resources.

Outcomes: The student will:

- 1. explain the importance of page layout and electronic publishing**
- 2. discuss the various forms of electronic publishing that one sees every day; e.g., books, magazines, posters**
- 3. produce print/electronic documents; e.g., pamphlets, posters, booklets, packages using industry standard techniques**
 - 3.1 create a plan for a document layout (e.g., brief, thumbnails), considering the following factors:
 - 3.1.1 message/purpose
 - 3.1.2 audience
 - 3.1.3 content
 - 3.1.4 media type; e.g., black and white, colour, electronic, print
 - 3.1.5 graphics/images
 - 3.1.6 consistent use of elements and principles of design in page layout
 - 3.2 lay out the document taking into consideration the following:
 - 3.2.1 number of pages
 - 3.2.2 orientation
 - 3.2.3 size of document; e.g., legal, letter, A4
 - 3.2.4 gutters
 - 3.2.5 margins
 - 3.2.6 output
 - 3.2.7 preproduced templates
 - 3.2.8 master pages
 - 3.2.9 objects
 - 3.2.10 styles; e.g., create, apply and modify
 - 3.3 work with text to:
 - 3.3.1 add and edit text; e.g., actual text or placeholder
 - 3.3.2 insert special characters; e.g., glyphs
 - 3.3.3 adjust text box/frame options; e.g., columns, inset, justification
 - 3.3.4 manipulate text flow through the use of text threading, resizing and text wrap
 - 3.3.5 import .rtf or .doc file and link style names to styles in a current document
 - 3.3.6 use bullets and numbering

- 3.4 work with tables to:
 - 3.4.1 edit and format a table
 - 3.4.2 modify tables
 - 3.4.3 create, apply, import, modify and organize cell and table styles
 - 3.4.4 update the information when original data has been changed
- 3.5 use graphics to:
 - 3.5.1 determine the best settings for choosing and placing an image
 - 3.5.2 import and/or place files from various sources; e.g., vector, raster, .pdf, .psd, .ai
 - 3.5.3 manage linked files
- 3.6 demonstrate understanding of colour and transparency by:
 - 3.6.1 using named swatches
 - 3.6.2 creating, modifying and applying gradients to objects or text
 - 3.6.3 using transparency effects
- 3.7 export document; e.g., print, .pdf
- 4. identify copyright restrictions and permissions and put them into practice**
- 5. present a selection of work completed in this course to an audience**
 - 5.1 discuss work regarding:
 - 5.1.1 how the elements and principles of design help facilitate good composition
 - 5.1.2 the technical and creative aspects of the work; e.g., quality, uniqueness
 - 5.1.3 areas of concern/difficulty (if applicable)
 - 5.1.4 meeting school and community standards; e.g., appropriate language
 - 5.1.5 the use of tools and equipment
 - 5.2 participate in peer/teacher assessment
 - 5.3 add the selected work to a portfolio
- 6. apply consistent and appropriate work station routines**
 - 6.1 demonstrate good health and safety practices; e.g., posture, positioning of hardware and furniture
 - 6.2 demonstrate security for hardware, software, supplies and personal work
- 7. demonstrate basic competencies**
 - 7.1 demonstrate fundamental skills to:
 - 7.1.1 communicate
 - 7.1.2 manage information
 - 7.1.3 use numbers
 - 7.1.4 think and solve problems
 - 7.2 demonstrate personal management skills to:
 - 7.2.1 demonstrate positive attitudes and behaviours
 - 7.2.2 be responsible
 - 7.2.3 be adaptable
 - 7.2.4 learn continuously
 - 7.2.5 work safely
 - 7.3 demonstrate teamwork skills to:
 - 7.3.1 work with others
 - 7.3.2 participate in projects and tasks
- 8. identify possible life roles related to the skills and content of this cluster**
 - 8.1 recognize and then analyze the opportunities and barriers in the immediate environment
 - 8.2 identify potential resources to minimize barriers and maximize opportunities

COURSE COM2035: RASTER GRAPHICS 1

Level: Intermediate

Prerequisite: COM1035: Graphics Tools

Description: A raster format is commonly used in full colour images/graphics and photographs by using a data structure representing a generally rectangular grid of pixels or points of colour. In this course, students are introduced to the fundamental skills of raster graphics and their application.

Parameters: Access to a computer, electronic storage equipment, graphic creation/manipulation software and image-capture devices.

Outcomes: The student will:

1. create raster images using graphic applications

- 1.1 set up a document, considering:
 - 1.1.1 size
 - 1.1.2 resolution
 - 1.1.3 colour mode
 - 1.1.4 background
- 1.2 organize and manage image files using correct file conventions by:
 - 1.2.1 considering aspects of file size
 - 1.2.2 explaining the benefits of different file formats
- 1.3 correct, paint and retouch images by:
 - 1.3.1 adjusting options and painting; e.g., brush types, pencil, blending
 - 1.3.2 using retouch tools appropriately given various situations
 - 1.3.3 creating and using gradients and patterns
 - 1.3.4 using filters
- 1.4 work with selections by:
 - 1.4.1 creating a selection using the appropriate selection tool
 - 1.4.2 saving and loading selections
 - 1.4.3 moving and transforming selections
- 1.5 create and use layers by:
 - 1.5.1 creating and arranging layers appropriately; e.g., using layer groups
 - 1.5.2 creating and using layer effects
 - 1.5.3 creating and using layer styles
- 1.6 work with masks by:
 - 1.6.1 explaining the use of masks
 - 1.6.2 using masks and painting tools to create and edit a layer mask
- 1.7 work with vector tools by:
 - 1.7.1 creating shape layers and paths using vector tools
- 1.8 automate tasks
- 1.9 manage colour by:
 - 1.9.1 describing the process and components of colour management; e.g., profiles, working spaces, rendering intents, settings
 - 1.9.2 describing the proper colour conversion given common situations; e.g., red-green-blue (RGB) colour model for Web and video, cyan-magenta-yellow-key black (CMYK) colour model for prepress

- 1.10 prepare image for output by:
 - 1.10.1 creating a proof
 - 1.10.2 discussing and using options in print dialog box
 - 1.10.3 creating a flattened CMYK image
 - 1.10.4 creating a layered RGB with layer comps
 - 1.10.5 creating a .pdf with vector layers
- 2. identify copyright restrictions and permissions and put them into practice**
- 3. present a selection of work completed in this course to an audience**
 - 3.1 discuss work regarding:
 - 3.1.1 how the elements and principles of design help facilitate good composition in his or her work
 - 3.1.2 the technical and creative aspects of the work; e.g., quality, uniqueness
 - 3.1.3 areas of concern/difficulty (if applicable)
 - 3.1.4 meeting school and community standards; e.g., appropriate language
 - 3.1.5 the use of tools and equipment
 - 3.2 participate in peer/teacher assessment
 - 3.3 add the selected work to a portfolio
- 4. apply consistent and appropriate work station routines**
 - 4.1 demonstrate good health and safety practices; e.g., posture, positioning of hardware and furniture
 - 4.2 demonstrate security for hardware, software, supplies and personal work
- 5. demonstrate basic competencies**
 - 5.1 demonstrate fundamental skills to:
 - 5.1.1 communicate
 - 5.1.2 manage information
 - 5.1.3 use numbers
 - 5.1.4 think and solve problems
 - 5.2 demonstrate personal management skills to:
 - 5.2.1 demonstrate positive attitudes and behaviours
 - 5.2.2 be responsible
 - 5.2.3 be adaptable
 - 5.2.4 learn continuously
 - 5.2.5 work safely
 - 5.3 demonstrate teamwork skills to:
 - 5.3.1 work with others
 - 5.3.2 participate in projects and tasks
- 6. identify possible life roles related to the skills and content of this cluster**
 - 6.1 recognize and then analyze the opportunities and barriers in the immediate environment
 - 6.2 identify potential resources to minimize barriers and maximize opportunities

COURSE COM2045: VECTOR GRAPHICS 1

Level: Intermediate

Prerequisite: COM1035: Graphics Tools

Description: Vector graphics are commonly used in graphic design, page layout, typography, logos, sharp-edged artistic illustrations, technical illustrations, diagramming and flowcharting. In this course, students use vector editing software to create basic vector graphics.

Parameters: Access to a computer, electronic storage equipment, graphic creation/manipulation software and image-capture devices.

Outcomes: The student will:

1. create raster images using graphic applications

- 1.1 set up a document, considering:
 - 1.1.1 printed area; e.g., single or multipage documents, artboards
 - 1.1.2 document profile; e.g., print, Web, mobile devices, video and film, basic cyan-magenta-yellow-key black (CMYK) colour model, basic red-green-blue (RGB) colour model
 - 1.1.3 colour spaces
- 1.2 draw and transform objects by:
 - 1.2.1 creating and modifying a vector object using a pen tool and bezier controls
 - 1.2.2 adjusting stroke settings
 - 1.2.3 cutting, erasing or deleting portions of an object by using the appropriate tool(s)
 - 1.2.4 editing objects, groups, symbols and more layers
 - 1.2.5 creating a mask to hide parts of objects
 - 1.2.6 using open and closed paths, compound paths and compound shapes
 - 1.2.7 selecting one or more objects and arranging their stacking order
 - 1.2.8 modifying an object with one or more transformation tools
- 1.3 manage colour and transparency by:
 - 1.3.1 setting up colour management settings and proofing colour onscreen
 - 1.3.2 creating or loading colour swatches
 - 1.3.3 applying transparency options to objects
- 1.4 use type by:
 - 1.4.1 creating text objects
 - 1.4.2 formatting type by using character and paragraph attributes
 - 1.4.3 creating and applying character and paragraph styles to text
 - 1.4.4 using special characters
- 1.5 control effects, appearance and styles by:
 - 1.5.1 adjusting the appearance of objects
 - 1.5.2 saving and applying graphic styles
- 1.6 build objects by:
 - 1.6.1 creating and formatting a graph
 - 1.6.2 using and controlling gradient match
 - 1.6.3 using and adjusting the settings for blend tool
 - 1.6.4 choosing and/or creating the appropriate brush

- 1.7 import images into the document
- 1.8 prepare for electronic output by:
 - 1.8.1 creating output for the Web and/or mobile devices using proper settings
 - 1.8.2 choosing the correct over-printing options
 - 1.8.3 previewing and analyzing colour separations
- 1.9 prepare for print output
- 2. identify copyright restrictions and permissions and put them into practice**
- 3. present a selection of work completed in this course to an audience**
 - 3.1 discuss work regarding:
 - 3.1.1 how the elements and principles of design help facilitate good composition in his or her work
 - 3.1.2 the technical and creative aspects of the work; e.g., quality, uniqueness
 - 3.1.3 areas of concern/difficulty (if applicable)
 - 3.1.4 meeting school and community standards; e.g., appropriate language
 - 3.1.5 the use of tools and equipment
 - 3.2 participate in peer/teacher assessment
 - 3.3 add the selected work to a portfolio
- 4. apply consistent and appropriate work station routines**
 - 4.1 demonstrate good health and safety practices; e.g., posture, positioning of hardware and furniture
 - 4.2 demonstrate security for hardware, software, supplies and personal work
- 5. demonstrate basic competencies**
 - 5.1 demonstrate fundamental skills to:
 - 5.1.1 communicate
 - 5.1.2 manage information
 - 5.1.3 use numbers
 - 5.1.4 think and solve problems
 - 5.2 demonstrate personal management skills to:
 - 5.2.1 demonstrate positive attitudes and behaviours
 - 5.2.2 be responsible
 - 5.2.3 be adaptable
 - 5.2.4 learn continuously
 - 5.2.5 work safely
 - 5.3 demonstrate teamwork skills to:
 - 5.3.1 work with others
 - 5.3.2 participate in projects and tasks
- 6. identify possible life roles related to the skills and content of this cluster**
 - 6.1 recognize and then analyze the opportunities and barriers in the immediate environment
 - 6.2 identify potential resources to minimize barriers and maximize opportunities

COURSE COM2055: WEB DESIGN 2

Level: Intermediate

Prerequisite: COM1055: Web Design 1

Description: Students learn intermediate coding and software applications to produce a Web site.

Parameters: Access to a computer workstation and the Internet.

Outcomes: The student will:

1. develop a multipage Web site

- 1.1 identify the purpose, audience and audience needs for a Web site
- 1.2 prepare Web page content that is relevant to the Web site purpose and appropriate for the target audience
- 1.3 plan the Web site navigation and pages; e.g., storyboarding, thumbnail sketches, site map
- 1.4 create a Web site according to the World Wide Web Consortium (W3C) standards, including:
 - 1.4.1 pages
 - 1.4.2 text
 - 1.4.3 graphics
 - 1.4.4 basic Hyper Text Markup Language (HTML) tags to set up an HTML document, format text, add links, create tables and build ordered and unordered lists
 - 1.4.5 original navigation bars, rollover images and buttons
 - 1.4.6 image maps
 - 1.4.7 Web page templates
 - 1.4.8 basic cascading style sheets (CSS) to implement a reusable element
 - 1.4.9 importing tabular data to a Web page; e.g., copy and paste
 - 1.4.10 rich media; e.g., video, sound, animation
 - 1.4.11 importing and displaying content from a document and spreadsheet
 - 1.4.12 creating forms
 - 1.4.13 inserting and/or writing code with or without software
- 1.5 demonstrate knowledge of W3C accessibility standards
- 1.6 demonstrate project management tasks and responsibilities
- 1.7 outline tasks and alternative strategies for Web site maintenance; e.g., in-house Webmaster, contract services
- 1.8 publish site files to a local or remote server and update them when necessary

2. identify copyright restrictions and permissions and put them into practice

3. present the Web site to an audience

- 3.1 make Web page development decisions based on analysis and interpretation of design specifications
- 3.2 consider multiple assessments; e.g., after initial creation, revisions, final version
- 3.3 add the Web site to portfolio

4. enhance Web site

- 4.1 update data
- 4.2 modify text and text properties
- 4.3 modify images and image properties

- 5. apply consistent and appropriate work station routines**
 - 5.1 demonstrate good health and safety practices; e.g., posture, positioning of hardware and furniture
 - 5.2 demonstrate security for hardware, software, supplies and personal work
- 6. demonstrate basic competencies**
 - 6.1 demonstrate fundamental skills to:
 - 6.1.1 communicate
 - 6.1.2 manage information
 - 6.1.3 use numbers
 - 6.1.4 think and solve problems
 - 6.2 demonstrate personal management skills to:
 - 6.2.1 demonstrate positive attitudes and behaviours
 - 6.2.2 be responsible
 - 6.2.3 be adaptable
 - 6.2.4 learn continuously
 - 6.2.5 work safely
 - 6.3 demonstrate teamwork skills to:
 - 6.3.1 work with others
 - 6.3.2 participate in projects and tasks
- 7. identify possible life roles related to the skills and content of this cluster**
 - 7.1 recognize and then analyze the opportunities and barriers in the immediate environment
 - 7.2 identify potential resources to minimize barriers and maximize opportunities

COURSE COM2105: AV PREPRODUCTION 1

Level: Intermediate

Prerequisite: COM1105: Audio/Video

Description: Students examine the value and need for audio and video preproduction, and explore strategies used to plan an audio and/or a video project using a variety of techniques. Students understand that preproduction is stage one in the audio and video process.

Parameters: No specialized facilities or equipment required. This course supports the audio, video and animation sequence of courses.

Outcomes: The student will:

- 1. describe various media preproduction considerations**
 - 1.1 describe the different types of production work flow; e.g., storyboard, script, shot list, flowchart
 - 1.2 consider final output and the criteria that it dictates
 - 1.3 describe the characteristics of a plan; e.g., beginning, middle, end; appropriate length; audience needs
- 2. identify and use an appropriate planning process in creating preproduction for a media format**
 - 2.1 understand that preproduction follows a process; e.g., identify a topic, conduct research, choose the medium/format and justify selection, develop a content/story line, develop a draft plan, collect and use feedback to further the planning process, develop a final production plan
 - 2.2 identify and describe the principles of planning for more than one media format
 - 2.3 produce a production plan
- 3. identify copyright restrictions and permissions and put them into practice**
- 4. present and discuss a production plan; e.g., project plan, shot list or storyboard, edited project**
 - 4.1 discuss the work regarding each of the following, if applicable:
 - 4.1.1 how the elements and principles of design help facilitate good composition
 - 4.1.2 the technical and creative aspects of the work; e.g., quality, uniqueness
 - 4.1.3 areas of concern/difficulty
 - 4.1.4 the relationship of the short outline/script to the production plan
 - 4.1.5 the quality of the completed project
 - 4.1.6 meeting school and community standards; e.g., appropriate language
 - 4.2 participate in peer/teacher assessment
 - 4.3 add the selected work to a portfolio
- 5. apply consistent and appropriate work station routines**
 - 5.1 demonstrate good health and safety practices; e.g., posture, positioning of hardware and furniture
 - 5.2 demonstrate security for hardware, software, supplies and personal work
- 6. demonstrate basic competencies**
 - 6.1 demonstrate fundamental skills to:
 - 6.1.1 communicate
 - 6.1.2 manage information
 - 6.1.3 use numbers
 - 6.1.4 think and solve problems

- 6.2 demonstrate personal management skills to:
 - 6.2.1 demonstrate positive attitudes and behaviours
 - 6.2.2 be responsible
 - 6.2.3 be adaptable
 - 6.2.4 learn continuously
 - 6.2.5 work safely
- 6.3 demonstrate teamwork skills to:
 - 6.3.1 work with others
 - 6.3.2 participate in projects and tasks
- 7. identify possible life roles related to the skills and content of this cluster**
 - 7.1 recognize and then analyze the opportunities and barriers in the immediate environment
 - 7.2 identify potential resources to minimize barriers and maximize opportunities

COURSE COM2115: AV PRODUCTION 1

Level: Intermediate

Prerequisite: COM1105: Audio/Video

Description: Students expand on basic audio and/or video production techniques with an emphasis on following a production plan, capturing content to edit and ensuring that continuity is maintained. Students understand that production is stage two in the audio/video process.

Parameters: Access to basic audio and video equipment.

Supporting Course: COM2105: AV Preproduction 1

Outcomes: The student will:

1. develop skills using production elements

- 1.1 use correct terminology in describing equipment, techniques, processes and procedures
- 1.2 demonstrate a variety of production elements through project work; e.g., camera framing and focusing, lighting, audio manipulation
- 1.3 demonstrate continuity and sequencing; e.g., costumes, lighting, location
- 1.4 identify and employ correct use of audio and video file formats

2. complete a production, using audio and/or video equipment

- 2.1 follow prepared production plans and storyboards
- 2.2 set up and operate audio and/or video recording equipment in a safe and responsible manner
- 2.3 record audio and/or video using specific techniques as described in production plan

3. identify copyright restrictions and permissions and put them into practice

4. present a selection of work completed in this course to an audience

- 4.1 discuss the work regarding each of the following, if applicable:
 - 4.1.1 how the elements and principles of design help facilitate good composition in his or her work
 - 4.1.2 the technical and creative aspects of the work; e.g., quality, uniqueness
 - 4.1.3 areas of concern/difficulty
 - 4.1.4 the use of tools and equipment
 - 4.1.5 the relationship of the production plan to the production
 - 4.1.6 the quality of the completed project
 - 4.1.7 meeting school and community standards; e.g., appropriate language
- 4.2 participate in peer/teacher assessment
- 4.3 add the selected work to a portfolio

5. apply consistent and appropriate work station routines

- 5.1 demonstrate good health and safety practices; e.g., posture, positioning of hardware and furniture
- 5.2 demonstrate security for hardware, software, supplies and personal work

6. demonstrate basic competencies

- 6.1 demonstrate fundamental skills to:
 - 6.1.1 communicate
 - 6.1.2 manage information
 - 6.1.3 use numbers
 - 6.1.4 think and solve problems

- 6.2 demonstrate personal management skills to:
 - 6.2.1 demonstrate positive attitudes and behaviours
 - 6.2.2 be responsible
 - 6.2.3 be adaptable
 - 6.2.4 learn continuously
 - 6.2.5 work safely
- 6.3 demonstrate teamwork skills to:
 - 6.3.1 work with others
 - 6.3.2 participate in projects and tasks
- 7. identify possible life roles related to the skills and content of this cluster**
 - 7.1 recognize and then analyze the opportunities and barriers in the immediate environment
 - 7.2 identify potential resources to minimize barriers and maximize opportunities

COURSE COM2125: AV POSTPRODUCTION 1

Level: Intermediate

Prerequisite: COM1105: Audio/Video

Description: Students expand on basic audio and/or video production techniques with an emphasis on following a plan, capturing content to edit and ensuring that continuity is maintained. Students understand that postproduction is stage three in the audio and video process.

Parameters: Access to basic audio and video equipment, a basic studio facility and editing equipment/facility.

Supporting Courses: COM2105: AV Preproduction 1
COM2115: AV Production 1

Outcomes: The student will:

- 1. apply postproduction techniques to complete an audio and/or a video project according to a production plan**
 - 1.1 produce an audio and/or video project, using prepared production plans and storyboards
 - 1.2 identify and employ appropriate use of file formats
 - 1.3 investigate and explain emerging editing technologies and recording and editing methods
 - 1.4 import audio and/or video
 - 1.5 edit, manipulate and arrange imported audio and/or video in a time line
 - 1.6 use audio and/or video effects to enhance the final production
 - 1.7 show responsibility for assigned role(s) during postproduction
 - 1.8 operate audio and/or video editing equipment in a safe and responsible manner
 - 1.9 use correct terminology in describing equipment, techniques, processes and procedures
- 2. identify copyright restrictions and permissions and put them into practice**
- 3. present the final work completed in this course to an audience; e.g., production plan, shot list or storyboard, edited project**
 - 3.1 discuss work regarding:
 - 3.1.1 how the elements and principles of design help facilitate good composition in his or her work
 - 3.1.2 the technical and creative aspects of the work; e.g., quality, uniqueness
 - 3.1.3 areas of concern/difficulty (if applicable)
 - 3.1.4 the use of tools and equipment
 - 3.1.5 the relationship of the production plan to the final product
 - 3.1.6 the quality of completed project
 - 3.1.7 meeting school and community standards; e.g., appropriate language
 - 3.2 participate in peer/teacher assessment
 - 3.3 add the selected work to a portfolio
- 4. apply consistent and appropriate work station routines**
 - 4.1 demonstrate good health and safety practices; e.g., posture, positioning of hardware and furniture
 - 4.2 demonstrate security for hardware, software, supplies and personal work

5. demonstrate basic competencies

- 5.1 demonstrate fundamental skills to:
 - 5.1.1 communicate
 - 5.1.2 manage information
 - 5.1.3 use numbers
 - 5.1.4 think and solve problems
- 5.2 demonstrate personal management skills to:
 - 5.2.1 demonstrate positive attitudes and behaviours
 - 5.2.2 be responsible
 - 5.2.3 be adaptable
 - 5.2.4 learn continuously
 - 5.2.5 work safely
- 5.3 demonstrate teamwork skills to:
 - 5.3.1 work with others
 - 5.3.2 participate in projects and tasks

6. identify possible life roles related to the skills and content of this cluster

- 6.1 recognize and then analyze the opportunities and barriers in the immediate environment
- 6.2 identify potential resources to minimize barriers and maximize opportunities

COURSE COM2145: ANIMATION 2

Level: Intermediate

Prerequisite: COM1145: Animation 1

Description: Students explore the evolution of various animation styles and techniques (traditional and digital). Students apply planning, idea development and storytelling techniques to create an effective animation.

Parameters: Access to basic animation equipment and/or a computer with animation software.

Supporting Courses: COM2105: AV Preproduction 1
COM2115: AV Production 1
COM2125: AV Postproduction 1

Outcomes: The student will:

- 1. demonstrate knowledge of various animation styles, techniques, applications and terminology**
 - 1.1 identify and provide examples of applications of animation that use storytelling to convey their message; e.g., cartoons, film, advertising
 - 1.2 identify and describe the evolution of traditional and digital animation styles and techniques; e.g., cel animation, stop-motion animation, pixilation, digital animation
 - 1.3 identify and describe principles of animation; e.g., personification, exaggeration, secondary action, anticipation, stretch/squash
- 2. produce an animation that develops an idea and tells a story; e.g., establishes a theme, evokes an emotional response**
 - 2.1 prepare a proposal and storyboard; e.g., description of the images or scenes to be animated, description of the story or idea
 - 2.2 select an animation technique to produce a project
 - 2.3 demonstrate a variety of animation production elements; e.g., visuals or models, backgrounds and/or sets as required, movement, beginning and/or end credits/titles, audio components such as voiceover, music and/or sound effects
- 3. identify copyright restrictions and permissions and put them into practice**
- 4. present a selection of work completed in this course to an audience**
 - 4.1 discuss work regarding:
 - 4.1.1 how the elements and principles of design help facilitate good composition in his or her work
 - 4.1.2 the technical and creative aspects of the work; e.g., quality, animation style
 - 4.1.3 areas of concern/difficulty (if applicable)
 - 4.1.4 the use of tools and equipment
 - 4.1.5 the relationship of the storyboard to the story told in the animation project
 - 4.1.6 the quality of completed project
 - 4.1.7 meeting school and community standards; e.g., appropriate language
 - 4.2 participate in peer/teacher assessment
 - 4.3 add the selected work to a portfolio

5. apply consistent and appropriate work station routines

- 5.1 demonstrate good health and safety practices; e.g., posture, positioning of hardware and furniture
- 5.2 demonstrate security for hardware, software, supplies and personal work

6. demonstrate basic competencies

- 6.1 demonstrate fundamental skills to:
 - 6.1.1 communicate
 - 6.1.2 manage information
 - 6.1.3 use numbers
 - 6.1.4 think and solve problems
- 6.2 demonstrate personal management skills to:
 - 6.2.1 demonstrate positive attitudes and behaviours
 - 6.2.2 be responsible
 - 6.2.3 be adaptable
 - 6.2.4 learn continuously
 - 6.2.5 work safely
- 6.3 demonstrate teamwork skills to:
 - 6.3.1 work with others
 - 6.3.2 participate in projects and tasks

7. identify possible life roles related to the skills and content of this cluster

- 7.1 recognize and then analyze the opportunities and barriers in the immediate environment
- 7.2 identify potential resources to minimize barriers and maximize opportunities

COURSE COM2155: DESIGN – BRAND IDENTITY

Level: Intermediate

Prerequisite: COM1035: Graphics Tools

Description: Students are introduced to the value and importance of branding and the process of creating and establishing strong brands. Students work through the process of creating branding from planning, to the creation of a new, unique brand, through to creating touch points.

Parameters: Access to a computer, audio and video equipment or multimedia production technology or software.

Supporting Courses: COM2035: Raster Graphics 1
COM2045: Vector Graphics 1
COM2105: AV Preproduction 1
COM2115: AV Production 1
COM2125: AV Postproduction 1

Outcomes: The student will:

- 1. explain the difference between brand and brand identity and how each is important**
- 2. describe a brand's primary functions; e.g., navigation, reassurance, engagement**
- 3. examine the process used to establish branding, including:**
 - **conducting research**
 - **developing a strategy**
 - **designing identity**
 - **creating touch points**
 - **managing assets**
- 4. identify and explore common brand touch points**
 - 4.1 define touch points
 - 4.2 identify a variety of touch points and explain why and how a brand may use them; e.g., publications, speeches, packaging, experiences
- 5. create a brand**
 - 5.1 identify and interview stakeholders/target audiences
 - 5.2 state mission and vision
 - 5.3 conduct quantitative and qualitative market research; e.g., survey
 - 5.4 write a creative brief outlining the basic precepts of the brand
 - 5.5 create and justify name and tag line through research
 - 5.6 design a logo with vector graphic software, considering:
 - 5.6.1 various uses; e.g., black and white, spot colour, full colour
 - 5.6.2 colour scheme
 - 5.6.3 typography
 - 5.6.4 application
 - 5.6.5 presentation
 - 5.6.6 touch points
 - 5.6.7 legal needs; e.g., copyright, trademark
 - 5.7 discuss the value of characters used in brand identity; e.g., Michelin Man

- 5.8 evaluate and critique a brand; e.g., vision, meaning, authenticity, differentiation, longevity, coherence, flexibility, commitment, value, sustainability
- 6. manage branding assets**
 - 6.1 create a brand standards and guidelines document, containing:
 - 6.1.1 appropriate logo use
 - 6.1.2 visual style elements and how they should be used; e.g., signature, colour palette, typography, tone of voice, graphic devices
 - 6.1.3 tagline application; e.g., “Freedom to create. Spirit to achieve.”
 - 6.2 create a minimum of four branded touch points, using appropriate software and equipment by:
 - 6.2.1 producing touch points following the guidelines and standards document for appropriate stakeholders/audience; e.g., letterhead, business card, packaging, advertising, favicon, Web site, signage
 - 6.2.2 making use of technological advances in media production; e.g., program integration
 - 6.2.3 combining media in a visually appealing composition and effective manner, where applicable
- 7. identify copyright restrictions and permissions and put them into practice**
- 8. present brand touch points completed in this course to an audience**
 - 8.1 assess work regarding:
 - 8.1.1 suitability
 - 8.1.2 clarity
 - 8.1.3 branding standards and guidelines
 - 8.1.4 how the elements and principles of design help facilitate good composition in his or her work
 - 8.1.5 the technical and creative aspects of the work; e.g., quality, uniqueness
 - 8.1.6 areas of concern/difficulty (if applicable)
 - 8.1.7 meeting school and community standards; e.g., appropriate language
 - 8.1.8 the use of tools and equipment
 - 8.2 participate in peer/teacher assessment
 - 8.3 add this selected work to a portfolio
- 9. apply consistent and appropriate work station routines**
 - 9.1 demonstrate good health and safety practices; e.g., posture, positioning of hardware and furniture
 - 9.2 demonstrate security for hardware, software, supplies and personal work
- 10. demonstrate basic competencies**
 - 10.1 demonstrate fundamental skills to:
 - 10.1.1 communicate
 - 10.1.2 manage information
 - 10.1.3 use numbers
 - 10.1.4 think and solve problems
 - 10.2 demonstrate personal management skills to:
 - 10.2.1 demonstrate positive attitudes and behaviours
 - 10.2.2 be responsible
 - 10.2.3 be adaptable
 - 10.2.4 learn continuously
 - 10.2.5 work safely
 - 10.3 demonstrate teamwork skills to:
 - 10.3.1 work with others
 - 10.3.2 participate in projects and tasks
- 11. identify possible life roles related to the skills and content of this cluster**
 - 11.1 recognize and then analyze the opportunities and barriers in the immediate environment
 - 11.2 identify potential resources to minimize barriers and maximize opportunities

COURSE COM2165: PRINTING 2

Level: Intermediate

Prerequisite: COM1165: Printing 1

Description: Students develop printing skills and create a finished product that demonstrates an ability to reproduce multicolour graphics for use on selected media; e.g., banners, signs, T-shirts, uniforms, posters, ceramics, plastics, decals.

Parameters: Access to layout tables, tools and materials and/or computers with graphic layout capabilities and to one or more types of image or printing reproduction equipment/facilities.

Supporting Courses: COM2035: Raster Graphics 1
COM2045: Vector Graphics 1

Outcomes: The student will:

- 1. explore various multicolour printing techniques on a variety of media**
- 2. prepare visual images for printing by various methods**
 - 2.1 prepare a layout using type and/or images suitable for printing reproduction by applying appropriate design elements and principles
 - 2.2 identify the printing or reproduction options available and suggest the most appropriate one for reproducing the designed layout
 - 2.3 select a printing/reproduction method and prepare master(s) for reproduction using that method
- 3. reproduce a multicolour graphic using two or more printing methods**
 - 3.1 place image colours accurately with the aid of registration marks/guides
 - 3.2 ensure proper adhesion to the media
 - 3.3 finish reproductions as required using appropriate equipment; e.g., curing, drying, trimming, collating, pad making, stitching
- 4. identify copyright restrictions and permissions and put them into practice**
- 5. present a selection of work completed in this course to an audience**
 - 5.1 discuss work regarding:
 - 5.1.1 the effective use of the reproduction method used to complete assignments
 - 5.1.2 the quality of the finished product(s)
 - 5.1.3 how the elements and principles of design help facilitate good composition in his or her work
 - 5.1.4 areas of concern/difficulty (if applicable)
 - 5.1.5 meeting school and community standards; e.g., appropriate language
 - 5.1.6 the use of tools and equipment
 - 5.2 participate in peer/teacher assessment
 - 5.3 add the selected work to a portfolio
- 6. apply consistent and appropriate work station routines**
 - 6.1 demonstrate good health and safety practices; e.g., posture, positioning of hardware and furniture
 - 6.2 demonstrate security for hardware, software, supplies and personal work

7. demonstrate basic competencies

- 7.1 demonstrate fundamental skills to:
 - 7.1.1 communicate
 - 7.1.2 manage information
 - 7.1.3 use numbers
 - 7.1.4 think and solve problems
- 7.2 demonstrate personal management skills to:
 - 7.2.1 demonstrate positive attitudes and behaviours
 - 7.2.2 be responsible
 - 7.2.3 be adaptable
 - 7.2.4 learn continuously
 - 7.2.5 work safely
- 7.3 demonstrate teamwork skills to:
 - 7.3.1 work with others
 - 7.3.2 participate in projects and tasks

8. identify possible life roles related to the skills and content of this cluster

- 8.1 recognize and then analyze the opportunities and barriers in the immediate environment
- 8.2 identify potential resources to minimize barriers and maximize opportunities

COURSE COM2175: INTERACTIVE PRESENTATION

Level:	Intermediate
Prerequisite:	COM1005: Visual Composition
Description:	Students refine presentation skills and develop and author interactive multimedia presentations using advanced presentation software tools and techniques.
Parameters:	Access to a computer workstation, software, presentation hardware and support resources.
Supporting Courses:	COM1035: Graphics Tools INF1070: Digital Presentation
Outcomes:	The student will:

1. plan, develop and create an interactive multimedia presentation

- 1.1 devise a message to deliver to a specific audience using a combination of two or more media
- 1.2 create and follow planning steps in preparing the presentation
- 1.3 prepare a script, storyboard and/or flowchart outlining the presentation content, theme and layout
- 1.4 establish parameters for presentation based on:
 - 1.4.1 time
 - 1.4.2 hardware and software available; e.g., output format, frame size, operating system
 - 1.4.3 client/teacher/student criteria/needs
- 1.5 demonstrate proficiency with software interface
- 1.6 use software in the creation of a presentation that includes the importing and modification of various components, including:
 - 1.6.1 text
 - 1.6.2 graphics
 - 1.6.3 video
 - 1.6.4 audio
 - 1.6.5 animation/transition
 - 1.6.6 standard practice regarding file convention and management
 - 1.6.7 connecting to external files through presentation interface; e.g., slides, movies, files
- 1.7 identify, select and apply software commands; e.g., image/object creation, timing, sequencing, markers, file format, duration, hyperlinks
- 1.8 create a user interface for the presentation from within for easy operation of the presentation
- 1.9 test the presentation to ensure it works as planned, being sure to:
 - 1.9.1 troubleshoot and correct issues; e.g., broken links, tracks and/or segments, display output, project sequence
 - 1.9.2 make revisions as necessary based on feedback
- 1.10 export the original presentation to a minimum of two different formats; e.g., Flash to Movie, Keynote to iPod, PowerPoint to PDF, Prezi to Flash

2. identify copyright restrictions and permissions and put them into practice

- 3. present an interactive presentation completed in this course to an audience**
 - 3.1 discuss work regarding:
 - 3.1.1 the relationship of the approved plan to the final presentation
 - 3.1.2 presentation techniques used to communicate intended message
 - 3.1.3 flow of ideas/information
 - 3.1.4 how the elements and principles of design help facilitate good composition
 - 3.1.5 areas of concern/difficulty (if applicable)
 - 3.1.6 meeting school and community standards; e.g., appropriate language
 - 3.1.7 the use of tools and equipment
 - 3.2 participate in peer/teacher assessment
 - 3.3 add the interactive presentation to a portfolio
- 4. apply consistent and appropriate work station routines**
 - 4.1 demonstrate good health and safety practices; e.g., posture, positioning of hardware and furniture
 - 4.2 demonstrate security for hardware, software, supplies and personal work
- 5. demonstrate basic competencies**
 - 5.1 demonstrate fundamental skills to:
 - 5.1.1 communicate
 - 5.1.2 manage information
 - 5.1.3 use numbers
 - 5.1.4 think and solve problems
 - 5.2 demonstrate personal management skills to:
 - 5.2.1 demonstrate positive attitudes and behaviours
 - 5.2.2 be responsible
 - 5.2.3 be adaptable
 - 5.2.4 learn continuously
 - 5.2.5 work safely
 - 5.3 demonstrate teamwork skills to:
 - 5.3.1 work with others
 - 5.3.2 participate in projects and tasks
- 6. identify possible life roles related to the skills and content of this cluster**
 - 6.1 recognize and then analyze the opportunities and barriers in the immediate environment
 - 6.2 identify potential resources to minimize barriers and maximize opportunities

COURSE COM2205: PHOTOGRAPHY – COMPOSITION

Level: Intermediate

Prerequisite: COM1205: Photography – Introduction

Description: Students expand their photography skills including composition, exposure, basic lighting, camera operation, image processing and proofing, and display.

Parameters: Access to a camera with the ability to control aperture and shutter speed independently, and to a metering device, processing and display equipment.

Note: The term photograph refers to either a physical or digital representation, depending on equipment available to the student.

Supporting Course: COM1275: Photography – Digital Processing 1

Outcomes: The student will:

- 1. apply exposure principles and composition guidelines in photography assignments**
 - 1.1 create photographs that demonstrate mastery of basic composition with reference to the following composition guidelines:
 - 1.1.1 simplicity
 - 1.1.2 camera angle
 - 1.1.3 rule of thirds
 - 1.1.4 backgrounds
 - 1.1.5 elements and principles of design
 - 1.1.6 golden triangle
 - 1.1.7 diagonals
 - 1.1.8 formal and informal balance
 - 1.2 demonstrate knowledge of apertures, shutter speeds, one-stop changes, bracketing, and equivalent exposures through log sheets and/or device operation
 - 1.3 use a metering device to determine image capture setting(s) based on the histogram readings
 - 1.4 integrate exposure compensation principles; e.g., underexposing compared to metering
- 2. demonstrate proficiency in the theory and practice of composition guidelines when processing images, proofing and displaying image**
 - 2.1 demonstrate basic retouching skills for an image
 - 2.2 process images with an understanding of final proofs and methods of display
 - 2.3 improve images by using image correction techniques such as dodging and burning
 - 2.4 produce a proof
- 3. produce images demonstrating composition guidelines through processing; e.g., cropping to emphasize subject matter, ensuring contrast, focus, simplicity**
- 4. present a selection of work completed in this course to an audience**
 - 4.1 create a display of photographs
 - 4.2 discuss each photograph regarding:
 - 4.2.1 the triangle (aperture, shutter speed, ISO) aspect that was most important in making the photograph
 - 4.2.2 how the composition guidelines help facilitate good arrangement in his or her work
 - 4.2.3 the technical and creative aspects of the work; e.g., quality, focus, interest

- 4.2.4 areas of challenge/difficulty (if applicable)
- 4.2.5 meeting school and community standards; e.g., appropriate language
- 4.2.6 the use of tools and equipment
- 4.3 participate in peer/teacher assessment
- 4.4 add the selected work to an ongoing portfolio; e.g., photographs, proofs, log sheets
- 5. apply consistent and appropriate work station routines**
 - 5.1 demonstrate good health and safety practices; e.g., posture, positioning of hardware and furniture
 - 5.2 demonstrate security for hardware, software, supplies and personal work
- 6. demonstrate basic competencies**
 - 6.1 demonstrate fundamental skills to:
 - 6.1.1 communicate
 - 6.1.2 manage information
 - 6.1.3 use numbers
 - 6.1.4 think and solve problems
 - 6.2 demonstrate personal management skills to:
 - 6.2.1 demonstrate positive attitudes and behaviours
 - 6.2.2 be responsible
 - 6.2.3 be adaptable
 - 6.2.4 learn continuously
 - 6.2.5 work safely
 - 6.3 demonstrate teamwork skills to:
 - 6.3.1 work with others
 - 6.3.2 participate in projects and tasks
- 7. identify possible life roles related to the skills and content of this cluster**
 - 7.1 recognize and then analyze the opportunities and barriers in the immediate environment
 - 7.2 identify potential resources to minimize barriers and maximize opportunities

COURSE COM2215: PHOTOGRAPHY – COMMUNICATION

Level: Intermediate

Prerequisite: COM1205: Photography – Introduction

Description: Students use photographic prints or digital images to communicate a message or tell a story.

Parameters: Access to a camera and to processing, display and audio equipment.

Note: The term photograph refers to either a physical or digital representation, depending on equipment available to the student.

Supported Course: COM2205: Photography – Composition

Outcomes: The student will:

- 1. plan to communicate a message or story**
 - 1.1 prepare an outline, script, shot list and/or storyboard for a message or story
 - 1.2 identify and describe storytelling and storyboarding techniques
- 2. produce photographic images to communicate a message or tell a story**
 - 2.1 select appropriate subjects and/or topics and capture required photographic images
 - 2.2 select images for display and/or presentation
 - 2.3 create graphics and captions to accompany images
 - 2.4 select and use equipment to complete the assignment
 - 2.5 present the completed production for feedback
- 3. enhance presentation through various means; e.g., music, narration, captions, animation, silence**
- 4. perform interim critiques and make necessary revisions**
- 5. present a selection of work completed in this course to an audience**
 - 5.1 discuss each photograph regarding:
 - 5.1.1 how the composition guidelines help facilitate good arrangement in his or her work
 - 5.1.2 the technical and creative aspects of the work; e.g., quality, focus, interest, writing
 - 5.1.3 areas of challenge/difficulty (if applicable)
 - 5.1.4 meeting school and community standards; e.g., appropriate language
 - 5.1.5 the use of tools and equipment
 - 5.2 participate in peer/teacher assessment
 - 5.3 add the selected work to a portfolio
- 6. apply consistent and appropriate work station routines**
 - 6.1 demonstrate good health and safety practices; e.g., posture, positioning of hardware and furniture
 - 6.2 demonstrate security for hardware, software, supplies and personal work
- 7. demonstrate basic competencies**
 - 7.1 demonstrate fundamental skills to:
 - 7.1.1 communicate
 - 7.1.2 manage information
 - 7.1.3 use numbers
 - 7.1.4 think and solve problems

- 7.2 demonstrate personal management skills to:
 - 7.2.1 demonstrate positive attitudes and behaviours
 - 7.2.2 be responsible
 - 7.2.3 be adaptable
 - 7.2.4 learn continuously
 - 7.2.5 work safely
- 7.3 demonstrate teamwork skills to:
 - 7.3.1 work with others
 - 7.3.2 participate in projects and tasks
- 8. identify possible life roles related to the skills and content of this cluster**
 - 8.1 recognize and then analyze the opportunities and barriers in the immediate environment
 - 8.2 identify potential resources to minimize barriers and maximize opportunities

COURSE COM2225: PHOTOGRAPHY – DARKROOM TECHNIQUES

Level: Intermediate

Prerequisite: COM1205: Photography – Introduction

Description: Students are introduced to the creative use of the image-capture device and processing techniques in order to produce various photographic effects.

Parameters: Access to a camera with the ability to control aperture and shutter speed independently, and to darkroom equipment.

Note: The term photograph refers to either a physical or digital representation, depending on equipment available to the student.

Supporting Courses: COM1015: Media
COM2035: Raster Graphics 1

Outcomes: The student will:

- 1. use the camera shutter and aperture or other accessories (shooting modes) to create special effects**
 - 1.1 demonstrate photographic effects; e.g., great or shallow depth of field, camera angle, close-up, blurred action, panning, filters
 - 1.2 demonstrate various lighting techniques; e.g., strobe lighting, lens filters
 - 1.3 use a log sheet
- 2. describe and apply processing techniques to create different photographic effects**
 - 2.1 identify tools and equipment used in a darkroom to process film and print
 - 2.2 proof all processed images
 - 2.3 demonstrate processing; e.g., cropping, double exposure, layers, masking, editing filters
 - 2.4 select a portrait image and experiment with vignetting and multiple methods of imaging
 - 2.5 select images with highlight and shadow problems and practise burning and dodging techniques to correct
 - 2.6 manipulate the finished product; e.g., by colouring, cutting, retouching
 - 2.7 select an image and make several displays, experimenting with varying contrast
 - 2.8 apply processing techniques to produce a variety of photographs
 - 2.9 make revisions, if necessary, based on feedback
- 3. present a selection of work completed in this course to an audience**
 - 3.1 create a display of photographs
 - 3.2 discuss each photograph regarding:
 - 3.2.1 the applications used to produce special effects
 - 3.2.2 the possible reasons for choosing various special effects; e.g., how does the use of an effect enhance the design of the planned message
 - 3.2.3 how the composition guidelines help facilitate good arrangement
 - 3.2.4 areas of challenge/difficulty (if applicable)
 - 3.2.5 meeting school and community standards; e.g., appropriate language
 - 3.2.6 the use of tools and equipment
 - 3.3 participate in peer/teacher assessment
 - 3.4 add the selected work to a portfolio; e.g., before and after samples of the photographs, demonstrating various techniques

- 4. apply consistent and appropriate work station routines**
 - 4.1 demonstrate good health and safety practices; e.g., posture, positioning of hardware and furniture
 - 4.2 demonstrate security for hardware, software, supplies and personal work
- 5. demonstrate basic competencies**
 - 5.1 demonstrate fundamental skills to:
 - 5.1.1 communicate
 - 5.1.2 manage information
 - 5.1.3 use numbers
 - 5.1.4 think and solve problems
 - 5.2 demonstrate personal management skills to:
 - 5.2.1 demonstrate positive attitudes and behaviours
 - 5.2.2 be responsible
 - 5.2.3 be adaptable
 - 5.2.4 learn continuously
 - 5.2.5 work safely
 - 5.3 demonstrate teamwork skills to:
 - 5.3.1 work with others
 - 5.3.2 participate in projects and tasks
- 6. identify possible life roles related to the skills and content of this cluster**
 - 6.1 recognize and then analyze the opportunities and barriers in the immediate environment
 - 6.2 identify potential resources to minimize barriers and maximize opportunities

COURSE COM2235: PHOTOGRAPHY – LENSES

Level: Intermediate

Prerequisite: COM1205: Photography – Introduction

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

Parameters: Access to a single-lens reflex (SLR) camera, variety of lenses, tripod, monopod, and processing and display equipment.

Note: The term photograph refers to either a physical or digital representation, depending on equipment available to the student.

Outcomes: The student will:

- 1. explain how a lens focuses an image on the focal plane**
 - 1.1 describe how a lens works
 - 1.2 identify and explain the following components of a lens:
 - 1.2.1 lens
 - 1.2.2 filter threads
 - 1.2.3 focus ring
 - 1.2.4 focal length ring
 - 1.2.5 aperture ring
 - 1.2.6 aperture
 - 1.2.7 lens mount
 - 1.3 explain focal length
 - 1.4 describe the relationship of focal length to image size
- 2. discuss camera stabilization techniques; e.g., tripods, monopods, bean bags, gaffer tape, gorilla pods, clamps**
- 3. describe and demonstrate the characteristics of the various types of lenses and their applications**
 - 3.1 describe basic lenses: standard, wide angle, telephoto and zoom
 - 3.2 describe specialty lenses; e.g., macro, fisheye, tele-converters, shift/perspective control lenses
 - 3.3 demonstrate, through photographs, the various lenses and their applications
- 4. explain the function of the f-stop system**
 - 4.1 discuss aperture size and light transmission
 - 4.2 explain how aperture affects depth of field
 - 4.3 discuss relationship of aperture to shutter speed and situations where either would be on priority
- 5. apply depth-of-field principles to obtain a variety of results using a selection of basic lenses; e.g., focal length, speed, sharpness**
 - 5.1 demonstrate, through photographs, how depth of field affects composition
 - 5.2 explain the significance of aperture, focal length and camera–subject distance in depth-of-field control
- 6. demonstrate correct camera/lens cleaning and handling techniques**

- 7. present a selection of work completed in this course to an audience**
 - 7.1 create a display of photographs
 - 7.2 discuss each photograph regarding:
 - 7.2.1 how depth of field affects composition
 - 7.2.2 how the composition guidelines help facilitate good arrangement in his or her work
 - 7.2.3 the technical and creative aspects of the work; e.g., quality, focus, interest
 - 7.2.4 areas of challenge/difficulty (if applicable)
 - 7.2.5 meeting school and community standards; e.g., appropriate language
 - 7.2.6 the use of tools and equipment
 - 7.3 participate in peer/teacher assessment
 - 7.4 add the selected work to a portfolio
- 8. apply consistent and appropriate work station routines**
 - 8.1 demonstrate good health and safety practices; e.g., posture, positioning of hardware and furniture
 - 8.2 demonstrate security for hardware, software, supplies and personal work
- 9. demonstrate basic competencies**
 - 9.1 demonstrate fundamental skills to:
 - 9.1.1 communicate
 - 9.1.2 manage information
 - 9.1.3 use numbers
 - 9.1.4 think and solve problems
 - 9.2 demonstrate personal management skills to:
 - 9.2.1 demonstrate positive attitudes and behaviours
 - 9.2.2 be responsible
 - 9.2.3 be adaptable
 - 9.2.4 learn continuously
 - 9.2.5 work safely
 - 9.3 demonstrate teamwork skills to:
 - 9.3.1 work with others
 - 9.3.2 participate in projects and tasks
- 10. identify possible life roles related to the skills and content of this cluster**
 - 10.1 recognize and then analyze the opportunities and barriers in the immediate environment
 - 10.2 identify potential resources to minimize barriers and maximize opportunities

COURSE COM2285: COM TECH CLIENT SERVICES 1

Level: Intermediate

Prerequisite: COM1005: Visual Composition

Description: Students are introduced to the principles and practices of client services.

Parameters: This course must be taught in conjunction with another specified Com Tech course.

Outcomes: The student will:

- 1. define the term client service and explain the relationship between client and service**
 - 1.1 identify and describe the similarities and differences between internal clients and external clients
- 2. identify and describe the scope of client services available to clients**
 - 2.1 identify industry standards for the selected work area
 - 2.2 identify tasks to standards specified by work to be completed
 - 2.3 identify factors affecting client satisfaction
 - 2.4 identify all resources needed to perform a task, provide a service or complete a project related to selected work area
- 3. demonstrate and document simulated client services**
 - 3.1 apply competencies learned in other courses to a variety of client service simulations
 - 3.2 identify and explain current service abilities and limitations
 - 3.3 use appropriate resources to provide specified client services
 - 3.4 maintain a detailed record of client services delivered
 - 3.5 demonstrate the following communication skills:
 - 3.5.1 effective face-to-face communication
 - 3.5.2 workplace-appropriate language
 - 3.5.3 appropriate responses to praise, complaints and criticism
 - 3.6 identify and demonstrate health, safety and sanitation practices appropriate to the selected work area
 - 3.7 use appropriate tools and procedures for each task
- 4. identify copyright restrictions and permissions and put them into practice**
- 5. demonstrate basic competencies**
 - 5.1 demonstrate fundamental skills to:
 - 5.1.1 communicate
 - 5.1.2 manage information
 - 5.1.3 use numbers
 - 5.1.4 think and solve problems
 - 5.2 demonstrate personal management skills to:
 - 5.2.1 demonstrate positive attitudes and behaviours
 - 5.2.2 be responsible
 - 5.2.3 be adaptable
 - 5.2.4 learn continuously
 - 5.2.5 work safely

- 5.3 demonstrate teamwork skills to:
 - 5.3.1 work with others
 - 5.3.2 participate in projects and tasks
- 6. identify possible life roles related to the skills and content of this cluster**
 - 6.1 recognize and then analyze the opportunities and barriers in the immediate environment
 - 6.2 identify potential resources to minimize barriers and maximize opportunities

COURSE COM2910: COM PROJECT B

Level: Intermediate

Prerequisite: None

Description: Students develop project design and management skills to extend and enhance competencies and skills in other CTS courses through contexts that are personally relevant.

Parameters: Intermediate project courses must connect with a minimum of two CTS courses, one of which must be at the intermediate level and be in the same occupational area as the project course. The other CTS course(s) can be at any level from any occupational area.

Project courses cannot be connected to other project courses or practicum courses.

All projects and/or performances, whether teacher- or student-led, must include a course outline or student proposal.

Outcomes:

The teacher/student will:

- 1. identify the connection between this project course and two or more CTS courses**
 - 1.1 identify the outcome(s) from each identified CTS course that support the project and/or performance deliverables
 - 1.2 explain how these outcomes are being connected to the project and/or performance deliverables
- 2. propose the project and/or performance**
 - 2.1 identify the project and/or performance by:
 - 2.1.1 preparing a plan
 - 2.1.2 clarifying the purposes
 - 2.1.3 defining the deliverables
 - 2.1.4 specifying time lines
 - 2.1.5 explaining terminology, tools and processes
 - 2.1.6 defining resources; e.g., materials, costs, staffing
 - 2.2 identify and comply with all related health and safety standards
 - 2.3 define assessment standards (indicators for success)
 - 2.4 present the proposal and obtain necessary approvals

The student will:

- 3. meet goals as defined within the plan**
 - 3.1 complete the project and/or performance as outlined
 - 3.2 monitor the project and/or performance and make necessary adjustments
 - 3.3 present the project and/or performance, indicating the:
 - 3.3.1 outcomes attained
 - 3.3.2 relationship of outcomes to goals originally set

- 3.4 evaluate the project and/or performance, indicating the:
 - 3.4.1 processes and strategies used
 - 3.4.2 recommendations on how the project and/or performance could have been improved
- 4. identify copyright restrictions and permissions and put them into practice**
- 5. demonstrate basic competencies**
 - 5.1 demonstrate fundamental skills to:
 - 5.1.1 communicate
 - 5.1.2 manage information
 - 5.1.3 use numbers
 - 5.1.4 think and solve problems
 - 5.2 demonstrate personal management skills to:
 - 5.2.1 demonstrate positive attitudes and behaviours
 - 5.2.2 be responsible
 - 5.2.3 be adaptable
 - 5.2.4 learn continuously
 - 5.2.5 work safely
 - 5.3 demonstrate teamwork skills to:
 - 5.3.1 work with others
 - 5.3.2 participate in projects and tasks
- 6. identify possible life roles related to the skills and content of this cluster**
 - 6.1 recognize and then analyze the opportunities and barriers in the immediate environment
 - 6.2 identify potential resources to minimize barriers and maximize opportunities

COURSE COM2920: COM PROJECT C

Level: Intermediate

Prerequisite: None

Description: Students develop project design and management skills to extend and enhance competencies and skills in other CTS courses through contexts that are personally relevant.

Parameters: Intermediate project courses must connect with a minimum of two CTS courses, one of which must be at the intermediate level and be in the same occupational area as the project course. The other CTS course(s) can be at any level from any occupational area.

Project courses cannot be connected to other project courses or practicum courses.

All projects and/or performances, whether teacher- or student-led, must include a course outline or student proposal.

Outcomes:

The teacher/student will:

- 1. identify the connection between this project course and two or more CTS courses**
 - 1.1 identify the outcome(s) from each identified CTS course that support the project and/or performance deliverables
 - 1.2 explain how these outcomes are being connected to the project and/or performance deliverables
- 2. propose the project and/or performance**
 - 2.1 identify the project and/or performance by:
 - 2.1.1 preparing a plan
 - 2.1.2 clarifying the purposes
 - 2.1.3 defining the deliverables
 - 2.1.4 specifying time lines
 - 2.1.5 explaining terminology, tools and processes
 - 2.1.6 defining resources; e.g., materials, costs, staffing
 - 2.2 identify and comply with all related health and safety standards
 - 2.3 define assessment standards (indicators for success)
 - 2.4 present the proposal and obtain necessary approvals

The student will:

- 3. meet goals as defined within the plan**
 - 3.1 complete the project and/or performance as outlined
 - 3.2 monitor the project and/or performance and make necessary adjustments
 - 3.3 present the project and/or performance, indicating the:
 - 3.3.1 outcomes attained
 - 3.3.2 relationship of outcomes to goals originally set

- 3.4 evaluate the project and/or performance, indicating the:
 - 3.4.1 processes and strategies used
 - 3.4.2 recommendations on how the project and/or performance could have been improved
- 4. identify copyright restrictions and permissions and put them into practice**
- 5. demonstrate basic competencies**
 - 5.1 demonstrate fundamental skills to:
 - 5.1.1 communicate
 - 5.1.2 manage information
 - 5.1.3 use numbers
 - 5.1.4 think and solve problems
 - 5.2 demonstrate personal management skills to:
 - 5.2.1 demonstrate positive attitudes and behaviours
 - 5.2.2 be responsible
 - 5.2.3 be adaptable
 - 5.2.4 learn continuously
 - 5.2.5 work safely
 - 5.3 demonstrate teamwork skills to:
 - 5.3.1 work with others
 - 5.3.2 participate in projects and tasks
- 6. identify possible life roles related to the skills and content of this cluster**
 - 6.1 recognize and then analyze the opportunities and barriers in the immediate environment
 - 6.2 identify potential resources to minimize barriers and maximize opportunities

COURSE COM2950: COM INTERMEDIATE PRACTICUM

Level: Intermediate

Prerequisite: None

Description: Students apply prior learning and demonstrate the attitudes, skills and knowledge required by an external organization to achieve a credential/credentials or an articulation.

Parameters: This practicum course, which may be delivered on- or off-campus, should be accessed only by students continuing to work toward attaining a recognized credential/credentials or an articulation offered by an external organization. This course must be connected to at least one CTS course from the same occupational area and cannot be used in conjunction with any advanced (3XXX) level course. A practicum course cannot be delivered as a stand-alone course, cannot be combined with a CTS project course and cannot be used in conjunction with the Registered Apprenticeship Program or the Green Certificate Program.

Outcomes: The student will:

- 1. perform assigned tasks and responsibilities, as required by the organization granting the credential(s) or articulation**
 - 1.1 identify regulations and regulatory bodies related to the credential(s) or articulation
 - 1.2 describe personal roles and responsibilities, including:
 - 1.2.1 key responsibilities
 - 1.2.2 support functions/responsibilities/expectations
 - 1.2.3 code of ethics and/or conduct
 - 1.3 describe personal work responsibilities and categorize them as:
 - 1.3.1 routine tasks; e.g., daily, weekly, monthly, yearly
 - 1.3.2 non-routine tasks; e.g., emergencies
 - 1.3.3 tasks requiring personal judgement
 - 1.3.4 tasks requiring approval of a supervisor
 - 1.4 demonstrate basic employability skills and perform assigned tasks and responsibilities related to the credential(s) or articulation
- 2. analyze personal performance in relation to established standards**
 - 2.1 evaluate application of the attitudes, skills and knowledge developed in related CTS courses
 - 2.2 evaluate standards of performance in terms of:
 - 2.2.1 quality of work
 - 2.2.2 quantity of work
 - 2.3 evaluate adherence to workplace legislation related to health and safety
 - 2.4 evaluate the performance requirements of an individual who is trained, experienced and employed in a related occupation in terms of:
 - 2.4.1 training and certification
 - 2.4.2 interpersonal skills
 - 2.4.3 technical skills
 - 2.4.4 ethics

3. demonstrate basic competencies

- 3.1 demonstrate fundamental skills to:
 - 3.1.1 communicate
 - 3.1.2 manage information
 - 3.1.3 use numbers
 - 3.1.4 think and solve problems
- 3.2 demonstrate personal management skills to:
 - 3.2.1 demonstrate positive attitudes and behaviours
 - 3.2.2 be responsible
 - 3.2.3 be adaptable
 - 3.2.4 learn continuously
 - 3.2.5 work safely
- 3.3 demonstrate teamwork skills to:
 - 3.3.1 work with others
 - 3.3.2 participate in projects and tasks

4. identify possible life roles related to the skills and content of this cluster

- 4.1 recognize and then analyze the opportunities and barriers in the immediate environment
- 4.2 identify potential resources to minimize barriers and maximize opportunities

COURSE COM3005: CREATIVE WRITING

Level: Advanced

Prerequisite: COM2105: AV Preproduction 1

Description: Students focus on honing the techniques and skills involved in story development, character pre-visualization and conceptualization for various genres of media production.

Parameters: None

Supporting Course: COM3105: AV Preproduction 2

Outcomes: The student will:

- 1. identify the different genres of media production; i.e., character development, film pre-visualization, product or service promotion, animation and interactive gaming**
 - 1.1 identify the elements of a written composition in each genre; e.g., written description, plot summary, concept development, structure, logic and sequence development
 - 1.2 compare the writing requirements for each genre of media production; e.g., narrative point of view, fact, fiction
- 2. examine the elements of a written composition in each of the different genres of media production**
 - 2.1 describe character development, including:
 - 2.1.1 the character's background
 - 2.1.2 the character's personal history and nuances
 - 2.1.3 the character's appearance, features and traits
 - 2.1.4 the character's motivation
 - 2.2 describe film pre-visualization, including:
 - 2.2.1 a list of characters involved
 - 2.2.2 a detailed description of at least five scenes
 - 2.2.3 the primary props
 - 2.2.4 the interaction between characters and the scenes in which the action takes place
 - 2.2.5 the appearance of characters; e.g., costumes, time, style
 - 2.3 describe product or service promotion, including:
 - 2.3.1 a description of the concept to promote a product or service
 - 2.3.2 copy used in various media; e.g., brochure, commercial, magazine advertisement
 - 2.4 describe animation, including:
 - 2.4.1 the style and concept for animation
 - 2.4.2 a description of plot summary or primary events
 - 2.4.3 a description of each of the main characters involved in the animation
 - 2.4.4 a detailed description of the scenes or locations involved
 - 2.5 describe interactive gaming, including:
 - 2.5.1 a description of each of the main characters involved in the game
 - 2.5.2 a description of the logic and sequence in the primary plot story
 - 2.5.3 a list of possible outcomes in following each of the paths; e.g., critical path
 - 2.5.4 a detailed description of the scenes or locations involved
 - 2.5.5 the game's narrative, dialogue, commentary, cutscene narrative, rules and hint system

- 3. produce a written composition in a minimum of two separate genres**
 - 3.1 identify key tasks and time frames for each step to be completed; e.g., creation of a concept board will be completed prior to a rough draft
 - 3.2 use the proper written language conventions; e.g., grammar, sentence structure, spelling
 - 3.3 create a storyboard or equivalent representation of the pre-planning process for each genre selected
 - 3.4 plan and organize each composition in a sequential, logical manner
 - 3.5 produce a rough draft of each composition for formative assessment; e.g., teacher review, peer review
 - 3.6 manage each project to completion; e.g., time, resources, files, equipment
 - 3.7 present the finished, revised written compositions
- 4. identify copyright restrictions and permissions and put them into practice**
- 5. present and discuss a selection of work to an audience; e.g., project plan, visual representations of character design or a segment of an edited written work**
 - 5.1 assess the work, considering:
 - 5.1.1 how the format enhances or detracts from the overall written work
 - 5.1.2 the technical and creative aspects of the work; e.g., grammar, spelling, sentence structure
 - 5.1.3 areas of concern/difficulty (if applicable)
 - 5.1.4 visual representations
 - 5.1.5 the quality of the completed project
 - 5.1.6 whether it met school and community standards; e.g., appropriate language
 - 5.2 participate in peer/teacher assessment
 - 5.3 revise and re-present the work, if necessary, based on feedback
 - 5.4 add this selected work to an ongoing portfolio
- 6. apply consistent and appropriate work station routines**
 - 6.1 demonstrate good health and safety practices; e.g., posture, positioning of hardware and furniture
 - 6.2 demonstrate security for hardware, software, supplies and personal work
- 7. demonstrate basic competencies**
 - 7.1 demonstrate fundamental skills to:
 - 7.1.1 communicate
 - 7.1.2 manage information
 - 7.1.3 use numbers
 - 7.1.4 think and solve problems
 - 7.2 demonstrate personal management skills to:
 - 7.2.1 demonstrate positive attitudes and behaviours
 - 7.2.2 be responsible
 - 7.2.3 be adaptable
 - 7.2.4 learn continuously
 - 7.2.5 work safely
 - 7.3 demonstrate teamwork skills to:
 - 7.3.1 work with others
 - 7.3.2 participate in projects and tasks
- 8. create a transitional strategy to accommodate personal changes and build personal values**
 - 8.1 identify short-term and long-term goals
 - 8.2 identify steps to achieve goals

COURSE COM3025: ELECTRONIC LAYOUT & PUBLISHING 2

Level: Advanced

Prerequisite: COM2025: Electronic Layout & Publishing 1

Description: Students build on the knowledge and practice gained in Electronic Layout & Publishing 1 and continue to work with desktop publishing software and hardware. Students expand their publication design, layout and print production skills by planning and creating customized, professional, multipage documents for a client.

Parameters: Access to a computer, storage medium, appropriate software and support resources.

Note: Students who have completed the outcomes in COM2025: Electronic Layout & Publishing 1 and COM3025: Electronic Layout & Publishing 2 using Adobe InDesign CS4 will have met the objectives specified by Adobe Certified Expert (ACE) for certification in Adobe InDesign CS4.

Outcomes: The student will:

1. demonstrate advanced publishing software competence to produce professional documents (e.g., print/electronic) while managing project constraints and timelines

- 1.1 create a project plan for a document, considering:
 - 1.1.1 client needs; e.g., message/purpose, audience, content, media type, electronic, print, graphics, images, cost, time constraints, consistency
 - 1.1.2 current trends in page layout industries; e.g., fonts, colours, style in magazines, newspapers, books, Web publications
- 1.2 layout a document by:
 - 1.2.1 applying elements and principles of design in page layout
 - 1.2.2 differentiating between master and working pages; e.g., page numbering, headers and footers
 - 1.2.3 using guides and/or grid; e.g., baseline
 - 1.2.4 creating, editing and manipulating text on a path
 - 1.2.5 importing vector images and manipulating paths
- 1.3 work with text by:
 - 1.3.1 creating/using advanced styles; e.g., global regular expression print (GREP) styles, nested styles
 - 1.3.2 creating user dictionary and populating it; e.g., custom words, acronyms
 - 1.3.3 identifying and avoiding widows, orphans and other typographic problems
 - 1.3.4 inserting a running head and page numbers
- 1.4 create and manipulate long documents by:
 - 1.4.1 inserting and formatting footnotes
 - 1.4.2 creating a book
 - 1.4.3 paginating the documents
 - 1.4.4 creating a table of contents across one or more documents
 - 1.4.5 synchronizing master pages, styles and swatches
 - 1.4.6 creating and applying cross-references

- 1.5 use graphics by:
 - 1.5.1 determining current resolution for a placed image
 - 1.5.2 locating metadata; e.g., extensive metadata platform (XMP)
 - 1.5.3 discussing how image transparency is handled; e.g., hide or show layers
- 1.6 demonstrate understanding of colour and transparency by:
 - 1.6.1 describing how and why to mix inks
 - 1.6.2 choosing the best course of action to manage colour, based on client needs
- 1.7 import, export and work with other media types by:
 - 1.7.1 selecting appropriate options for exporting to other file types
 - 1.7.2 creating hyperlinks/interactivity for document when exported to .pdf
 - 1.7.3 selecting appropriate options for exporting for use on a Web site
- 1.8 prepare for prepress and printing by:
 - 1.8.1 troubleshooting common printing issues; e.g., preflight, separations preview
 - 1.8.2 conforming to international conventions for registration placement
 - 1.8.3 choosing appropriate .pdf settings
- 1.9 present document(s) to a client for feedback/revision, based on outlined needs
- 2. identify copyright restrictions and permissions and put them into practice**
- 3. present a selection of work completed in this course to an audience**
 - 3.1 assess work regarding:
 - 3.1.1 how the elements and principles of design help facilitate good composition in his or her work
 - 3.1.2 the technical and creative aspects of the work; e.g., quality, uniqueness
 - 3.1.3 areas of concern/difficulty (if applicable)
 - 3.1.4 meeting school and community standards; e.g., appropriate language
 - 3.1.5 the use of tools and equipment
 - 3.2 participate in peer/teacher assessment
 - 3.3 add the selected work to a portfolio
- 4. apply consistent and appropriate work station routines**
 - 4.1 demonstrate good health and safety practices; e.g., posture, positioning of hardware and furniture
 - 4.2 demonstrate security for hardware, software, supplies and personal work
- 5. demonstrate basic competencies**
 - 5.1 demonstrate fundamental skills to:
 - 5.1.1 communicate
 - 5.1.2 manage information
 - 5.1.3 use numbers
 - 5.1.4 think and solve problems
 - 5.2 demonstrate personal management skills to:
 - 5.2.1 demonstrate positive attitudes and behaviours
 - 5.2.2 be responsible
 - 5.2.3 be adaptable
 - 5.2.4 learn continuously
 - 5.2.5 work safely
 - 5.3 demonstrate teamwork skills to:
 - 5.3.1 work with others
 - 5.3.2 participate in projects and tasks
- 6. create a transitional strategy to accommodate personal changes and build personal values**
 - 6.1 identify short-term and long-term goals
 - 6.2 identify steps to achieve goals

COURSE COM3035: RASTER GRAPHICS 2

Level: Advanced

Prerequisite: COM2035: Raster Graphics 1

Description: Students build on the knowledge and skills acquired in Raster Graphics 1 by using raster editing software to create advanced raster graphics.

Parameters: Access to a computer, electronic storage equipment, graphic creation/manipulation software, image-capture devices.

Note: Students who have completed the outcomes in COM2035: Raster Graphics 1 & COM3035: Raster Graphics 2 using Adobe Photoshop CS4 will have met the objectives specified by Adobe Certified Expert (ACE) for certification in Adobe Photoshop CS4.

Outcomes: The student will:

1. create raster images using graphic applications

- 1.1 set up a document, considering:
 - 1.1.1 bit size
 - 1.1.2 colour profile
 - 1.1.3 pixel aspect ratio
- 1.2 organize and manage image files using correct file conventions, including:
 - 1.2.1 compression methods
 - 1.2.2 colour support
 - 1.2.3 adding metadata to an image
- 1.3 correct, paint and retouch images by:
 - 1.3.1 correcting tonal range
 - 1.3.2 adjusting colour range
- 1.4 use a painting tool by creating, editing and using a custom brush
- 1.5 work with selections by:
 - 1.5.1 modifying selections
 - 1.5.2 previewing selections
- 1.6 create and use layers, explaining the use of layer comps and comparing to layer groups
- 1.7 work with masks and channels to:
 - 1.7.1 explain the use of channels
 - 1.7.2 create, view and edit channels
 - 1.7.3 differentiate between a layer mask and a vector mask
 - 1.7.4 use a clipping mask
 - 1.7.5 convert to or from a selection, a channel and a mask
- 1.8 work with vector tools to:
 - 1.8.1 manage paths
 - 1.8.2 alter properties of type

- 1.9 automate tasks by:
 - 1.9.1 creating and using automated actions; e.g., batch action
 - 1.9.2 describing the difference between actions and scripting
 - 1.9.3 creating variables
- 1.10 manage colour by:
 - 1.10.1 discussing colour management issues and proper actions to take
 - 1.10.2 discussing the relationship between the colour gamut and rendering intents
- 1.11 create, edit and convert a high dynamic range (HDR) image
- 1.12 prepare an image for output by:
 - 1.12.1 explaining the relationship between the application and the print driver
 - 1.12.2 setting correct colour management options
 - 1.12.3 creating output for the Web and/or mobile devices
- 2. identify copyright restrictions and permissions and put them into practice**
- 3. present a selection of work completed in this course to an audience**
 - 3.1 assess work regarding:
 - 3.1.1 how the elements and principles of design help facilitate good composition in his or her work
 - 3.1.2 the technical and creative aspects of the work; e.g., quality, uniqueness
 - 3.1.3 areas of concern/difficulty (if applicable)
 - 3.1.4 meeting school and community standards; e.g., appropriate language
 - 3.1.5 the use of tools and equipment
 - 3.2 participate in peer/teacher assessment
 - 3.3 add the selected work to a portfolio
- 4. apply consistent and appropriate work station routines**
 - 4.1 demonstrate good health and safety practices; e.g., posture, positioning of hardware and furniture
 - 4.2 demonstrate security for hardware, software, supplies and personal work
- 5. demonstrate basic competencies**
 - 5.1 demonstrate fundamental skills to:
 - 5.1.1 communicate
 - 5.1.2 manage information
 - 5.1.3 use numbers
 - 5.1.4 think and solve problems
 - 5.2 demonstrate personal management skills to:
 - 5.2.1 demonstrate positive attitudes and behaviours
 - 5.2.2 be responsible
 - 5.2.3 be adaptable
 - 5.2.4 learn continuously
 - 5.2.5 work safely
 - 5.3 demonstrate teamwork skills to:
 - 5.3.1 work with others
 - 5.3.2 participate in projects and tasks
- 6. create a transitional strategy to accommodate personal changes and build personal values**
 - 6.1 identify short-term and long-term goals
 - 6.2 identify steps to achieve goals

COURSE COM3045: VECTOR GRAPHICS 2

Level: Advanced

Prerequisite: COM2045: Vector Graphics 1

Description: Students build on knowledge and skills acquired in Vector Graphics 1 by using vector editing software to create advanced vector graphics.

Parameters: Access to a computer, electronic storage, graphic creation/manipulation software, image capture devices.

Note: Students who have completed the outcomes in COM2045: Vector Graphics 1 and COM3045: Vector Graphics 2 using Adobe Illustrator CS4 will have met the objectives specified by Adobe Certified Expert (ACE) for certification in Adobe Illustrator CS4.

Supporting Course: COM1025: Typography

Outcomes: The student will:

1. create raster images using graphic applications

- 1.1 set up document, considering:
 - 1.1.1 colour mode
 - 1.1.2 resolution
- 1.2 draw and transform objects by:
 - 1.2.1 creating and applying pattern swatch
 - 1.2.2 using macros
- 1.3 manage colour and transparency by:
 - 1.3.1 re-colouring and fine tuning the work
 - 1.3.2 exploring colour combinations using colour theory
 - 1.3.3 using appropriate tools to create, modify, save and apply colour gradients to objects
- 1.4 use type tools by:
 - 1.4.1 formatting a story
 - 1.4.2 locating or replacing fonts inside a document
 - 1.4.3 applying hyphenation
- 1.5 control effects, appearance and styles by using the colour-select tool to copy attributes between elements
- 1.6 build objects by:
 - 1.6.1 creating and using a symbol
 - 1.6.2 preparing and creating artwork by using variables
- 1.7 work with images by:
 - 1.7.1 turning a bitmap image into a vector object
 - 1.7.2 managing assets
- 1.8 prepare an image for print output by:
 - 1.8.1 flattening the image
 - 1.8.2 choosing the correct print options and creating custom print presets
 - 1.8.3 choosing the correct .pdf presets or customizing options

2. identify copyright restrictions and permissions and put them into practice

- 3. present a selection of work completed in this course to an audience**
 - 3.1 assess work regarding:
 - 3.1.1 how the elements and principles of design help facilitate good composition in his or her work
 - 3.1.2 the technical and creative aspects of the work; e.g., quality, uniqueness
 - 3.1.3 areas of concern/difficulty (if applicable)
 - 3.1.4 meeting school and community standards; e.g., appropriate language
 - 3.1.5 the use of tools and equipment
 - 3.2 participate in peer/teacher assessment
 - 3.3 add the selected work to a portfolio
- 4. apply consistent and appropriate work station routines**
 - 4.1 demonstrate good health and safety practices; e.g., posture, positioning of hardware and furniture
 - 4.2 demonstrate security for hardware, software, supplies and personal work
- 5. demonstrate basic competencies**
 - 5.1 demonstrate fundamental skills to:
 - 5.1.1 communicate
 - 5.1.2 manage information
 - 5.1.3 use numbers
 - 5.1.4 think and solve problems
 - 5.2 demonstrate personal management skills to:
 - 5.2.1 demonstrate positive attitudes and behaviours
 - 5.2.2 be responsible
 - 5.2.3 be adaptable
 - 5.2.4 learn continuously
 - 5.2.5 work safely
 - 5.3 demonstrate teamwork skills to:
 - 5.3.1 work with others
 - 5.3.2 participate in projects and tasks
- 6. create a transitional strategy to accommodate personal changes and build personal values**
 - 6.1 identify short-term and long-term goals
 - 6.2 identify steps to achieve goals

COURSE COM3055: RICH MEDIA – BASICS

Level: Advanced

Prerequisite: COM2055: Web Design 2

Description: Students learn to create online animations and interactive Web elements and applications to enhance an existing Web site.

Parameters: Access to a computer work station and the Internet.

Outcomes: The student will:

1. set project requirements

- 1.1 identify the purpose, audience and audience needs
- 1.2 identify rich media content that is relevant to the purpose of the media in which it will be used; e.g., Web sites, mobile devices
- 1.3 consider options for producing accessible rich media content
- 1.4 identify project management tasks and responsibilities
- 1.5 communicate with others about design and content plans; e.g., client, teacher, audience

2. identify rich media design elements

- 2.1 identify general and program-specific standard practices for designing rich media content for a Web site
- 2.2 identify general and program-specific techniques to create rich media elements that are accessible and readable
- 2.3 demonstrate knowledge of design elements and principles

3. build rich media elements

- 3.1 identify elements/tools of the program interface
- 3.2 use time lines
- 3.3 use motion editors
- 3.4 identify standard practices for managing the file size of a published document
- 3.5 use a storyboard to map, organize and produce rich media elements
- 3.6 adjust document properties
- 3.7 use guides and rulers
- 3.8 use tools to select, create, and manipulate graphics and text
- 3.9 import and modify graphics
- 3.10 use symbols and the library
- 3.11 create objects and convert them to symbols
- 3.12 edit symbols and instances
- 3.13 create animations; e.g., changes in shape, position, size, colour, transparency
- 3.14 add simple controls through programming
- 3.15 import and use sound
- 3.16 publish documents
- 3.17 export in various file formats
- 3.18 make document accessible
- 3.19 demonstrate project management tasks and responsibilities

4. evaluate rich media elements

- 4.1 conduct basic technical tests
- 4.2 identify techniques for basic usability tests
- 4.3 outline tasks and alternative strategies for Web site maintenance; e.g., in-house Webmaster, contract services

- 5. identify copyright restrictions and permissions and put them into practice**
- 6. present a Web site to an audience**
 - 6.1 make Web site development decisions based on the analysis and interpretation of design specifications
 - 6.2 consider multiple assessments; e.g., after initial creation, revisions, final version
 - 6.3 add the Web site to a portfolio
- 7. enhance a Web site**
 - 7.1 update data
 - 7.2 modify text and text properties
 - 7.3 modify images and image properties
 - 7.4 add or modify rich media
- 8. apply consistent and appropriate work station routines**
 - 8.1 demonstrate good health and safety practices; e.g., posture, positioning of hardware and furniture
 - 8.2 demonstrate security for hardware, software, supplies and personal work
- 9. demonstrate basic competencies**
 - 9.1 demonstrate fundamental skills to:
 - 9.1.1 communicate
 - 9.1.2 manage information
 - 9.1.3 use numbers
 - 9.1.4 think and solve problems
 - 9.2 demonstrate personal management skills to:
 - 9.2.1 demonstrate positive attitudes and behaviours
 - 9.2.2 be responsible
 - 9.2.3 be adaptable
 - 9.2.4 learn continuously
 - 9.2.5 work safely
 - 9.3 demonstrate teamwork skills to:
 - 9.3.1 work with others
 - 9.3.2 participate in projects and tasks
- 10. create a transitional strategy to accommodate personal changes and build personal values**
 - 10.1 identify short-term and long-term goals
 - 10.2 identify steps to achieve goals

COURSE COM3065: RICH MEDIA – PROGRAMMING

Level: Advanced

Prerequisite: COM3055: Rich Media – Basics

Description: Students develop programming skills for creating more complex interactive Web sites. Students also develop skills such as understanding the event model and object-oriented environment.

Parameters: Access to a computer work station and the Internet.

Outcomes: The student will:

- 1. set project requirements**
- 2. identify rich media design elements**
 - 2.1 identify general and program-specific standard practices for designing rich media content for a Web site
 - 2.2 identify general and program-specific techniques to create rich media elements that are accessible and readable
 - 2.3 demonstrate knowledge of design elements and principles
- 3. build rich media elements**
 - 3.1 identify elements/tools of the program interface
 - 3.2 use a storyboard to map, organize and produce rich media elements
 - 3.3 adjust document properties
 - 3.4 edit symbols and instances
 - 3.5 use an appropriate programming language, being sure to:
 - 3.5.1 create variables using appropriate data types
 - 3.5.2 assign data to the variables
 - 3.5.3 use appropriate selection structures; e.g., if, if ... else, switch
 - 3.5.4 use appropriate looping sequences
 - 3.5.5 use output commands, e.g., methods or operators, to display processed data in an appropriately formatted form
 - 3.5.6 maintain the input, processing and output structure of the algorithm
 - 3.5.7 use appropriate internal and external documentation; e.g., comments
 - 3.5.8 use pre-configured program-specific functions to manipulate on-screen activity
 - 3.5.9 use custom scripts to manipulate on-screen activity
 - 3.5.10 use program-specific event handler to manipulate on-screen activity; e.g., onClick, onComplete, onFocus
 - 3.6 test an application
 - 3.7 create masks
 - 3.8 use advanced controls through programming
 - 3.9 add and export video
- 4. evaluate rich media elements**
 - 4.1 conduct basic technical tests
 - 4.2 identify techniques for basic usability tests
 - 4.3 outline tasks and alternative strategies for Web site maintenance; e.g., in-house Webmaster, contract services
- 5. identify copyright restrictions and permissions and put them into practice**

- 6. present the Web site to an audience**
 - 6.1 make development decisions based on analysis and interpretation of design specifications
 - 6.2 consider multiple assessments; e.g., after initial creation, revisions, final version
 - 6.3 add the Web site to a portfolio
- 7. enhance the Web site**
 - 7.1 update data
 - 7.2 debug and revise code as required
- 8. apply consistent and appropriate work station routines**
 - 8.1 demonstrate good health and safety practices; e.g., posture, positioning of hardware and furniture
 - 8.2 demonstrate security for hardware, software, supplies and personal work
- 9. demonstrate basic competencies**
 - 9.1 demonstrate fundamental skills to:
 - 9.1.1 communicate
 - 9.1.2 manage information
 - 9.1.3 use numbers
 - 9.1.4 think and solve problems
 - 9.2 demonstrate personal management skills to:
 - 9.2.1 demonstrate positive attitudes and behaviours
 - 9.2.2 be responsible
 - 9.2.3 be adaptable
 - 9.2.4 learn continuously
 - 9.2.5 work safely
 - 9.3 demonstrate teamwork skills to:
 - 9.3.1 work with others
 - 9.3.2 participate in projects and tasks
- 10. create a transitional strategy to accommodate personal changes and build personal values**
 - 10.1 identify short-term and long-term goals
 - 10.2 identify steps to achieve goals

COURSE COM3075: CASCADING STYLE SHEETS

Level: Advanced

Prerequisite: COM2055: Web Design 2

Description: Students develop accessible and standards-compliant Web pages using current techniques for advanced cascading style sheets (CSS).

Parameters: Access to a computer work station and the Internet.

Note: Validation of work can be done at <http://validator.w3.org>.

Outcomes: The student will:

- 1. differentiate among the use of inline, embedded and external style sheets**
- 2. demonstrate standard CSS coding practices for design, navigation, images, forms, tables, positioning, accessibility and cross-browser issues**
- 3. show that CSS syntax is made up of selectors and declaration blocks**
 - 3.1 identify commonly used style declarations and selectors; e.g., type, class, id, child, adjacent, pseudo-class, and first-child pseudo-class
 - 3.2 explain when to use appropriate selectors
- 4. determine when to import or link a style sheet**
- 5. understand how the browser differentiates among the different styles; e.g., hierarchy**
- 6. identify and understand the types of rendering; e.g., quirks mode and compliance mode**
- 7. create navigation for a Web site using either a vertical, horizontal or tab-based system**
- 8. determine whether to use inline, embedded and/or external style sheets in a Web site**
 - 8.1 incorporate appropriate properties, values and unit identifiers regarding:
 - 8.1.1 fonts
 - 8.1.2 anchors
 - 8.1.3 text
 - 8.1.4 lists
 - 8.2 create/modify images to be used as both stand-alone and background, using:
 - 8.2.1 borders, background and padding properties
 - 8.2.2 float and margin properties to enhance image
 - 8.3 apply the following properties to tabular data to ensure that what is being viewed is accessible and attractive:
 - 8.3.1 border
 - 8.3.2 caption
 - 8.3.3 font
 - 8.3.4 text
 - 8.3.5 padding
 - 8.3.6 colour
 - 8.3.7 the :nth-child pseudo-class notation
 - 8.3.8 the “hover” value applied to the “tr” tag
 - 8.4 modify/create a form that accepts user input using input and text areas, radio button, check boxes, drop-down lists and buttons, considering:
 - 8.4.1 labels
 - 8.4.2 fieldset
 - 8.4.3 legends

- 8.5 use appropriate styles on each of the form elements to ensure the form is accessible and attractive to the user/client
- 8.6 test the Web site in more than one browser, or in a different version of the current browser, to check for cross-browser compatibility and fix all incompatibility issues using appropriate cross-browser techniques; e.g., getting .png image transparency in IE6
- 8.7 use appropriate id and class attributes appropriately
- 8.8 use enhanced layout properties: clear and position
- 9. identify copyright restrictions and permissions and put them into practice**
- 10. present a selection of work completed in this course to an audience**
 - 10.1 assess work regarding:
 - 10.1.1 how the elements and principles of design help facilitate good composition in his or her work
 - 10.1.2 the technical and creative aspects of the work; e.g., clean coding, attractive
 - 10.1.3 areas of concern/difficulty (if applicable)
 - 10.1.4 meeting school and community standards; e.g., appropriate language
 - 10.1.5 the use of tools and equipment
 - 10.2 participate in peer/teacher assessment
 - 10.3 add the selected work to a portfolio
- 11. apply consistent and appropriate work station routines**
 - 11.1 demonstrate good health and safety practices; e.g., posture, positioning of hardware and furniture
 - 11.2 demonstrate security for hardware, software, supplies and personal work
- 12. demonstrate basic competencies**
 - 12.1 demonstrate fundamental skills to:
 - 12.1.1 communicate
 - 12.1.2 manage information
 - 12.1.3 use numbers
 - 12.1.4 think and solve problems
 - 12.2 demonstrate personal management skills to:
 - 12.2.1 demonstrate positive attitudes and behaviours
 - 12.2.2 be responsible
 - 12.2.3 be adaptable
 - 12.2.4 learn continuously
 - 12.2.5 work safely
 - 12.3 demonstrate teamwork skills to:
 - 12.3.1 work with others
 - 12.3.2 participate in projects and tasks
- 13. create a transitional strategy to accommodate personal changes and build personal values**
 - 13.1 identify short-term and long-term goals
 - 13.2 identify steps to achieve goals

COURSE COM3085: CONTENT MANAGEMENT SYSTEMS

Level: Advanced

Prerequisite: COM2055: Web Design 2

Description: Students expand their skills from Web Design 2 by learning how to install and administer a content management system (CMS).

Parameters: Access to a computer work station and the Internet.

Supporting Course: COM3075: Cascading Style Sheets

Outcomes: The student will:

1. define and analyze characteristics of content management systems (CMS)

- 1.1 identify technical features that contribute to effective CMS installation, design and user satisfaction regarding:
 - 1.1.1 ease of installation for the administrator
 - 1.1.2 administration of users
 - 1.1.3 administration of site design and layout
 - 1.1.4 administration of add-ins to enhance the site
 - 1.1.5 administration of user-added content
 - 1.1.6 administration of multimedia files
 - 1.1.7 user registration and security
 - 1.1.8 user ability to control how content is presented
 - 1.1.9 identifying hosting criteria

2. prepare a detailed plan for a multipage content management system Web site

- 2.1 select an informational Web site to design, and describe the purpose of the Web site and the target audience
- 2.2 use a flowchart or storyboard to map out the home page and subsequent pages, indicating links between the pages
- 2.3 use thumbnail sketches to show proposed page design (including graphics) and sequencing
- 2.4 select consistent colour swatches, font styles, headings and text sizes, and highlighting features appropriate to the target audience
- 2.5 outline links and navigation tools
- 2.6 propose several domain names and check for availability

3. implement a plan for content management systems Web site

- 3.1 install and/or modify server services; e.g., IIS, Apache
- 3.2 install and/or modify a server-side scripting language; e.g., PHP, ASP.NET, Ruby
- 3.3 install and/or modify database software; e.g., MySQL, SQLite, Firebird, Drizzle
- 3.4 install and/or modify database administration software; e.g., phpMyAdmin, SQL Maestro
- 3.5 install a CMS package; e.g., Joomla, Moodle, WordPress, Drupal, Mambo

4. test, prepare, refine and document the Web site (this may be done on a stand-alone storage device—it does not have to go live to the Web)

- 4.1 test the Web site, using various browsers, to check for compatibility
- 4.2 debug the Web site by:
 - 4.2.1 modifying the default page layout to meet audience needs, based on a detailed plan
 - 4.2.2 modifying default cascading style sheets (CSS), based on a detailed plan

- 4.3 present the Web site for review
- 4.4 analyze viewer/client issues, concerns and recommendations, and outline adjustments and refinements that will be made to the Web site
- 4.5 implement Web site adjustments by:
 - 4.5.1 creating and installing a custom template
 - 4.5.2 identifying and installing add-on packages
 - 4.5.3 modifying data and revising text
 - 4.5.4 revising design; e.g., format, fonts, graphics, colours, mood
 - 4.5.5 modifying organization and/or sequences of Web pages
- 4.6 present the enhanced Web page for additional review and recommendations
- 5. identify copyright restrictions and permissions and put them into practice**
- 6. apply consistent and appropriate work station routines**
 - 6.1 demonstrate good health and safety practices; e.g., posture, positioning of hardware and furniture
 - 6.2 demonstrate security for hardware, software, supplies and personal work
- 7. demonstrate basic competencies**
 - 7.1 demonstrate fundamental skills to:
 - 7.1.1 communicate
 - 7.1.2 manage information
 - 7.1.3 use numbers
 - 7.1.4 think and solve problems
 - 7.2 demonstrate personal management skills to:
 - 7.2.1 demonstrate positive attitudes and behaviours
 - 7.2.2 be responsible
 - 7.2.3 be adaptable
 - 7.2.4 learn continuously
 - 7.2.5 work safely
 - 7.3 demonstrate teamwork skills to:
 - 7.3.1 work with others
 - 7.3.2 participate in projects and tasks
- 8. create a transitional strategy to accommodate personal changes and build personal values**
 - 8.1 identify short-term and long-term goals
 - 8.2 identify steps to achieve goals

COURSE COM3105: AV PREPRODUCTION 2

Level: Advanced

Prerequisite: COM2105: AV Preproduction 1

Description: Students refine planning skills used in an audio and video project.

Parameters: No specialized facilities or equipment required.

Outcomes: The student will:

1. identify and describe the components, goals and challenges of preproduction

- 1.1 analyze professionally developed production plans; e.g., story concept, storyboard, shot list, script
- 1.2 examine the considerations of a production plan; e.g., time line with key benchmarks, cost, sequence, equipment, creation of mood, human resources, on-location/studio-based requirements and permissions
- 1.3 compare and contrast student plans with other samples; e.g., professionally produced plan

2. apply appropriate knowledge and skills to a specific production plan

- 2.1 identify the project needs and prepare a proposal and treatment plan to meet the identified needs; e.g., story concept, storyboard, shot list, script
- 2.2 complete a plan for at least one of the following projects: public service announcement, commercial, news story, documentary, action event, animation, music video, radio play, live recording, screen play

3. identify copyright restrictions and permissions and put them into practice

4. present and discuss the production plan; e.g., project plan, shot list or storyboard, edited project

- 4.1 assess the work regarding each of the following, if applicable:
 - 4.1.1 how the elements and principles of design help facilitate good composition in his or her work
 - 4.1.2 the technical and creative aspects of the work; e.g., theme, style, shot list
 - 4.1.3 areas of concern/difficulty
 - 4.1.4 the use of tools and equipment
 - 4.1.5 the relationship of the short outline/script to the final product
 - 4.1.6 the quality of the completed project
 - 4.1.7 meeting school and community standards; e.g., appropriate language
- 4.2 participate in peer/teacher assessment
- 4.3 add the selected work to a portfolio

5. apply consistent and appropriate work station routines

- 5.1 demonstrate good health and safety practices; e.g., posture, positioning of hardware and furniture
- 5.2 demonstrate security for hardware, software, supplies and personal work

6. demonstrate basic competencies

- 6.1 demonstrate fundamental skills to:
 - 6.1.1 communicate
 - 6.1.2 manage information
 - 6.1.3 use numbers
 - 6.1.4 think and solve problems

- 6.2 demonstrate personal management skills to:
 - 6.2.1 demonstrate positive attitudes and behaviours
 - 6.2.2 be responsible
 - 6.2.3 be adaptable
 - 6.2.4 learn continuously
 - 6.2.5 work safely
- 6.3 demonstrate teamwork skills to:
 - 6.3.1 work with others
 - 6.3.2 participate in projects and tasks
- 7. create a transitional strategy to accommodate personal changes and build personal values**
 - 7.1 identify short-term and long-term goals
 - 7.2 identify steps to achieve goals

COURSE COM3115: AV PRODUCTION 2

Level: Advanced

Prerequisite: COM2115: AV Production 1

Description: Students expand on intermediate audio and video production techniques.

Parameters: Access to audio and video equipment suitable for production, including a basic studio facility; e.g., lights and green screen

Supporting Course: COM3105: AV Preproduction 2

Outcomes: The student will:

- 1. apply advanced production techniques and strategies to produce an audio and video project**
 - 1.1 follow a preproduction plan
 - 1.2 apply appropriate skills and demonstrate refinement
 - 1.3 investigate emerging audio and video technologies or formats
 - 1.4 explore refined, unique and innovative shot selections
- 2. use correct terminology in describing equipment, techniques, processes and procedures**
- 3. apply production elements, such as lighting, sound and special effects, to the production**
 - 3.1 enhance equipment operation skills by producing an audio/video project using:
 - 3.1.1 composition
 - 3.1.2 varying focal length and focal distance
 - 3.1.3 adding and subtracting light (artificial and natural)
 - 3.1.4 postproduction editing, including cutting on movement
 - 3.1.5 special effects through the use of sound
 - 3.1.6 keying; e.g., green screen
 - 3.1.7 shooting to edit
 - 3.2 analyze and apply an appropriate camera shot for the situation
- 4. watch ‘daily’s’ for review and recommendations**
- 5. identify copyright restrictions and permissions and put them into practice**
- 6. present a selection of work completed in this course to an audience**
 - 6.1 assess the work regarding each of the following, if applicable:
 - 6.1.1 how the elements and principles of design help facilitate good composition
 - 6.1.2 the technical and creative aspects of the work; e.g., quality, ‘daily’s’, camera use
 - 6.1.3 areas of concern/difficulty
 - 6.1.4 the use of tools and equipment
 - 6.1.5 the relationship of the storyboard to the story told in the ‘daily’s’
 - 6.1.6 quality of the completed project
 - 6.1.7 meeting school and community standards; e.g., appropriate language
 - 6.2 participate in peer/teacher assessment
 - 6.3 add the selected work to a portfolio
- 7. apply consistent and appropriate work station routines**
 - 7.1 demonstrate good health and safety practices; e.g., posture, positioning of hardware and furniture
 - 7.2 demonstrate security for hardware, software, supplies and personal work

8. demonstrate basic competencies

- 8.1 demonstrate fundamental skills to:
 - 8.1.1 communicate
 - 8.1.2 manage information
 - 8.1.3 use numbers
 - 8.1.4 think and solve problems
- 8.2 demonstrate personal management skills to:
 - 8.2.1 demonstrate positive attitudes and behaviours
 - 8.2.2 be responsible
 - 8.2.3 be adaptable
 - 8.2.4 learn continuously
 - 8.2.5 work safely
- 8.3 demonstrate teamwork skills to:
 - 8.3.1 work with others
 - 8.3.2 participate in projects and tasks

9. create a transitional strategy to accommodate personal changes and build personal values

- 9.1 identify short-term and long-term goals
- 9.2 identify steps to achieve goals

COURSE COM3125: AV POSTPRODUCTION 2

Level: Advanced

Prerequisite: COM2125: AV Postproduction 1

Description: Students expand on digital editing software skills to edit and process audio and video, and continue working with motion graphics and audio/video effects to enhance a product.

Parameters: Access to video and computer equipment suitable for postproduction.

Supporting Courses: COM3105: AV Preproduction 2
COM3115: AV Production 2
COM3135: Audio Techniques

Outcomes: The student will:

- 1. apply advanced postproduction techniques to produce a completed audio and video project**
 - 1.1 prepare a list regarding how edits will be carried out, using prepared production plans and storyboards and produce an audio and video project based on outlined criteria
 - 1.2 add video transitions
 - 1.3 create dynamic titles
 - 1.4 apply editing tools, considering:
 - 1.4.1 multicamera editing
 - 1.4.2 replacing clips and footage
 - 1.4.3 appropriate footage and audio syncs
 - 1.5 add video effects; e.g., filters, lighting, key framing
 - 1.6 use change time techniques; e.g., slow motion, reverse motion, time remapping
 - 1.7 use audio mixer to enhance the sound
 - 1.8 demonstrate composite techniques
- 2. manage the project to completion; e.g., time, resources, files, equipment**
- 3. export the edited project in an appropriate format; e.g., digital video (DV), digital video disc (DVD), compact disc (CD), common Internet video formats**
- 4. identify copyright restrictions and permissions and put them into practice**
- 5. present a selection of work completed in this course to an audience/client; e.g., project plan, shot list or storyboard, edited project**
 - 5.1 assess work regarding:
 - 5.1.1 how the elements and principles of design help facilitate good composition in his or her work
 - 5.1.2 the technical and creative aspects of the work; e.g., transitions, syncing
 - 5.1.3 areas of concern/difficulty (if applicable)
 - 5.1.4 the use of tools and equipment
 - 5.1.5 the relationship of the storyboard to the story told in final product
 - 5.1.6 the quality of the completed project
 - 5.1.7 meeting school and community standards; e.g., appropriate language
 - 5.2 participate in peer/teacher assessment
 - 5.3 based on feedback, revise and re-present the project, if necessary
 - 5.4 add the selected work to a portfolio

- 6. apply consistent and appropriate work station routines**
 - 6.1 demonstrate good health and safety practices; e.g., posture, positioning of hardware and furniture
 - 6.2 demonstrate security for hardware, software, supplies and personal work
- 7. demonstrate basic competencies**
 - 7.1 demonstrate fundamental skills to:
 - 7.1.1 communicate
 - 7.1.2 manage information
 - 7.1.3 use numbers
 - 7.1.4 think and solve problems
 - 7.2 demonstrate personal management skills to:
 - 7.2.1 demonstrate positive attitudes and behaviours
 - 7.2.2 be responsible
 - 7.2.3 be adaptable
 - 7.2.4 learn continuously
 - 7.2.5 work safely
 - 7.3 demonstrate teamwork skills to:
 - 7.3.1 work with others
 - 7.3.2 participate in projects and tasks
- 8. create a transitional strategy to accommodate personal changes and build personal values**
 - 8.1 identify short-term and long-term goals
 - 8.2 identify steps to achieve goals

COURSE COM3135: AUDIO TECHNIQUES

Level: Advanced

Prerequisite: COM2115: AV Production 1

Description: Students expand on audio production techniques to plan, develop and produce specific audio projects.

Parameters: Access to audio equipment (e.g., microphones, mixer, amplifier, speakers), a basic studio facility and audio editing equipment/facility.

Supporting Course: COM3105: AV Preproduction 2

Outcomes: The student will:

- 1. apply preproduction, production and postproduction techniques and strategies to complete an audio project**
 - 1.1 create a project proposal for an audio production, for a target audience, that recognizes and includes elements of preproduction, production and postproduction
 - 1.2 devise a treatment for the proposal outlining project details/criteria; e.g., project concept (script, genre) on-location/studio-based requirements, recording list, sound effects/clips, anticipated technical requirements, time line with key benchmarks, final file type
 - 1.3 follow production plans (e.g., script, storyboard, playlist, sheet music) to produce an audio project (e.g., radio drama, music tracks, video voiceovers, soundtracks)
- 2. use correct terminology in describing equipment, techniques, processes and procedures**
- 3. use audio equipment and various sound-recording techniques to enhance the production**
 - 3.1 select and implement postproduction techniques; e.g., fade, filters
 - 3.2 enhance audio equipment operation skills through producing audio projects; e.g., on-location recording and studio recording, microphone placement for recording, sound layering, dubbing, editing, special effects
 - 3.3 investigate new audio technologies; e.g., capture, manipulation, translation
 - 3.4 produce a separate audio project that is experimental in nature, concentrating on exploring the properties of sound and various sound-recording, editing and manipulation techniques
- 4. identify copyright restrictions and permissions and put them into practice**
- 5. present a selection of work completed in this course to an audience**
 - 5.1 assess work regarding:
 - 5.1.1 the technical and creative aspects of the work; e.g., sound quality, effects, volume
 - 5.1.2 areas of concern/difficulty (if applicable)
 - 5.1.3 the use of tools and equipment
 - 5.1.4 relationship of the script to the story told in final product
 - 5.1.5 the quality of the completed project
 - 5.1.6 meeting school and community standards; e.g., appropriate language
 - 5.2 participate in peer/teacher assessment
 - 5.3 based on feedback, revise and re-present the project, if necessary
 - 5.4 add the selected work to a portfolio

- 6. apply consistent and appropriate work station routines**
 - 6.1 demonstrate good health and safety practices; e.g., posture, positioning of hardware and furniture
 - 6.2 demonstrate security for hardware, software, supplies and personal work
- 7. demonstrate basic competencies**
 - 7.1 demonstrate fundamental skills to:
 - 7.1.1 communicate
 - 7.1.2 manage information
 - 7.1.3 use numbers
 - 7.1.4 think and solve problems
 - 7.2 demonstrate personal management skills to:
 - 7.2.1 demonstrate positive attitudes and behaviours
 - 7.2.2 be responsible
 - 7.2.3 be adaptable
 - 7.2.4 learn continuously
 - 7.2.5 work safely
 - 7.3 demonstrate teamwork skills to:
 - 7.3.1 work with others
 - 7.3.2 participate in projects and tasks
- 8. create a transitional strategy to accommodate personal changes and build personal values**
 - 8.1 identify short-term and long-term goals
 - 8.2 identify steps to achieve goals

COURSE COM3145: ANIMATION 3

Level: Advanced

Prerequisite: COM2145: Animation 2

Description: Students apply production planning techniques to produce a sophisticated animation for a client that tells a story, communicates an idea or a message, and creates a mood or establishes a theme.

Parameters: Access to animation equipment and/or a computer with animation software.

Outcomes: The student will:

1. prepare an animation project for a client

- 1.1 research and develop animation ideas based on client needs
- 1.2 prepare and present a client proposal that includes a storyboard and a short synopsis describing the story or idea and animation technique(s) to be used
- 1.3 receive client approval before proceeding to production phase

2. produce an animation project with advanced production elements that communicates a story, idea, theme or mood

- 2.1 create and use a variety of animation production elements; e.g., visuals or models, backgrounds and/or sets, movement, beginning and/or end credits/titles, audio components such as voiceover, music and/or sound effects
- 2.2 refine animation skills by demonstrating advanced production elements; e.g., multilayered animation, action script, special effects, modelling, character animation, motion graphics

3. identify copyright restrictions and permissions and put them into practice

4. present a selection of work completed in this course to an audience

- 4.1 assess work regarding:
 - 4.1.1 how the elements and principles of design help facilitate good composition
 - 4.1.2 the technical and creative aspects of the work; e.g., quality, uniqueness
 - 4.1.3 areas of concern/difficulty (if applicable)
 - 4.1.4 the use of tools and equipment
 - 4.1.5 relationship of the storyboard to the story told in the animation project
 - 4.1.6 quality of the completed project
 - 4.1.7 meeting school and community standards; e.g., appropriate language
- 4.2 participate in peer/teacher assessment
- 4.3 add the selected work to a portfolio

5. apply consistent and appropriate work station routines

- 5.1 demonstrate good health and safety practices; e.g., posture, positioning of hardware and furniture
- 5.2 demonstrate security for hardware, software, supplies and personal work

6. demonstrate basic competencies

- 6.1 demonstrate fundamental skills to:
 - 6.1.1 communicate
 - 6.1.2 manage information
 - 6.1.3 use numbers
 - 6.1.4 think and solve problems

- 6.2 demonstrate personal management skills to:
 - 6.2.1 demonstrate positive attitudes and behaviours
 - 6.2.2 be responsible
 - 6.2.3 be adaptable
 - 6.2.4 learn continuously
 - 6.2.5 work safely
- 6.3 demonstrate teamwork skills to:
 - 6.3.1 work with others
 - 6.3.2 participate in projects and tasks
- 7. create a transitional strategy to accommodate personal changes and build personal values**
 - 7.1 identify short-term and long-term goals
 - 7.2 identify steps to achieve goals

COURSE COM3155: DESIGN – ADVERTISING CAMPAIGNS

Level: Advanced

Prerequisite: COM2155: Design – Brand Identity

Description: Students develop advertising skills through projects and activities in conceptualization, campaign development and copy writing. The delivery and presentation of an ad campaign is also a major focus. Students enhance their abilities to integrate various media for the purpose of producing a multimedia message for a target audience.

Parameters: Access to a computer and/or audio and/or video equipment or digital media production equipment and a computer with appropriate software.

Supporting Courses: COM2035: Raster Graphics 1
COM2045: Vector Graphics 1
COM2105: AV Preproduction 1
COM2115: AV Production 1
COM2125: AV Postproduction 1
MAM2090: Promotion – Print Advertising
MAM3100: Promotion – Broadcast Advertising

Outcomes: The student will:

1. develop a strategy for an advertising campaign to promote a product, using two or more types of media

- 1.1 identify a product and/or client (e.g., personal grooming product/producer) and create a brief and/or client parameters (e.g., cost, time line, print, audio, video)
- 1.2 understand the product and what makes it unique and valuable by:
 - 1.2.1 learning about the product; e.g., history, background, environmental impact, use, key features
 - 1.2.2 studying the competition
 - 1.2.3 translating features into benefits
- 1.3 understand consumer behaviour by:
 - 1.3.1 identifying consumer needs
 - 1.3.2 conducting and applying research
- 1.4 analyze the marketplace for the product
- 1.5 identify and critique various types of advertising strategies using examples
- 1.6 explain the difference between product-oriented and consumer-oriented strategies
- 1.7 write the campaign strategy, including the following:
 - 1.7.1 set an objective
 - 1.7.2 propose appropriate media to convey consistent messages, justifying the selection based on the appropriateness of the media to the task; e.g., print, Web, billboard, television, radio
 - 1.7.3 identify the target audience and the general characteristics
 - 1.7.4 identify preferred media and justify the selection
 - 1.7.5 consider campaign resource requirements; e.g., equipment, facility, personnel, applications
- 1.8 assess the strategy based on client parameters

- 2. design a message to be communicated to a target audience as outlined in the strategy**
 - 2.1 devise message(s) appropriate to using a combination of two or more media
 - 2.2 devise a plan for delivering a message, using a combination of at least two different media, including:
 - 2.2.1 the statement of the message to be delivered and working title
 - 2.2.2 a time line with key delivery dates, including interim review and critique and final presentation
 - 2.2.3 a professional copy should be written to meet accepted industry standards
 - 2.2.4 storyboards illustrating connections and consistency
- 3. produce and present the message, using two or more media linked through technology**
 - 3.1 produce messages following a plan, modifying the plan as required
 - 3.2 make use of technological advances in media production; e.g., program integration
 - 3.3 combine media in a visually appealing composition and effective manner, where applicable
- 4. identify copyright restrictions and permissions and put them into practice**
- 5. present a completed campaign to a stakeholder and/or audience**
 - 5.1 assess the effectiveness of the campaign regarding:
 - 5.1.1 message suitability for the target audience
 - 5.1.2 message clarity
 - 5.1.3 media suitability for the message delivered
 - 5.1.4 how the elements and principles of design help facilitate good composition in his or her work
 - 5.1.5 the technical and creative aspects of the work; e.g., quality, uniqueness
 - 5.1.6 meeting school and community standards; e.g., appropriate language
 - 5.2 participate in peer/teacher assessment
 - 5.3 add the selected work to a portfolio
- 6. apply consistent and appropriate work station routines**
 - 6.1 demonstrate good health and safety practices; e.g., posture, positioning of hardware and furniture
 - 6.2 demonstrate security for hardware, software, supplies and personal work
- 7. demonstrate basic competencies**
 - 7.1 demonstrate fundamental skills to:
 - 7.1.1 communicate
 - 7.1.2 manage information
 - 7.1.3 use numbers
 - 7.1.4 think and solve problems
 - 7.2 demonstrate personal management skills to:
 - 7.2.1 demonstrate positive attitudes and behaviours
 - 7.2.2 be responsible
 - 7.2.3 be adaptable
 - 7.2.4 learn continuously
 - 7.2.5 work safely
 - 7.3 demonstrate teamwork skills to:
 - 7.3.1 work with others
 - 7.3.2 participate in projects and tasks
- 8. create a transitional strategy to accommodate personal changes and build personal values**
 - 8.1 identify short-term and long-term goals
 - 8.2 identify steps to achieve goals

COURSE COM3165: AV BROADCASTING

Level: Advanced

Prerequisite: COM1105: Audio/Video

Description: Students work through the sequential steps of audio/video production, including shooting, writing, editing and performance. Group work, peer-collaboration and deadlines make this a real-life experience culminating in a broadcast that is entirely produced by students.

Parameters: Access to audio and video equipment suitable for production, including a basic studio facility; e.g., lights, green screen and computer equipment/software suitable for postproduction.

Supporting Courses: COM3105: AV Preproduction 2
COM3115: AV Production 2
COM3125: AV Postproduction 2
COM3135: Audio Techniques

Outcomes: The student will:

1. identify and examine the various roles involved in a typical broadcast team

- 1.1 identify the responsibilities of each role, including:
 - 1.1.1 writer; e.g., selects story ideas and interview topics, creates a storyboard, writes the script
 - 1.1.2 anchor; e.g., narrates, reads from prompter or cue cards, demonstrates appropriate inflection and delivery of the script
 - 1.1.3 reporter; e.g., interviews, tells a story with beginning, middle and end
 - 1.1.4 videographer; e.g., captures the scene, demonstrates camera skills, works from shot list
 - 1.1.5 director; e.g., selects camera angles and locations, guides the filming process
 - 1.1.6 editor; e.g., edits footage, synchronizes audio effects and adds visual effects, transitions, credits, titles and graphics
 - 1.1.7 graphic artist; e.g., prepares graphic elements (logos, banners, overlays)
 - 1.1.8 production designer; e.g., determines sets, props and costumes in accordance with the script, ensures continuity
 - 1.1.9 producer; e.g., oversees details, production schedule and deadlines of the overall production
- 1.2 examine and compare the responsibilities of each of the roles in the overall completion of a broadcast

2. produce a series of 5- to 10-minute broadcasts as a member of a broadcast team

- 2.1 select, with broadcast team members, an appropriate production format for each broadcast; e.g., newscast, journal, round table discussion, tabloid, telethon
- 2.2 assume a minimum of three roles in the production of the broadcasts

3. produce, with broadcast team members, a production plan for each broadcast that outlines all tasks and responsibilities

- 3.1 follow the preproduction process for each broadcast, with broadcast team members; e.g., identify a topic, conduct research, choose the medium/format and justify the selection, develop a content/story line, develop a draft plan, collect and use feedback to further the planning process

- 3.2 develop, with broadcast team members, a final production plan for each broadcast, including:
 - 3.2.1 topic
 - 3.2.2 medium/format
 - 3.2.3 roles, tasks and responsibilities
 - 3.2.4 location; e.g., sets, environment, green screen
 - 3.2.5 time line with deadlines for each task
 - 3.2.6 storyboard
 - 3.2.7 script
 - 3.2.8 shot list
 - 3.2.9 graphic elements
 - 3.2.10 audio
 - 3.2.11 editing requirements
- 4. complete the broadcasts, with broadcast team members (e.g., through classroom broadcasting, school Web site vodcast, video streaming), fulfilling the responsibilities of his or her roles**
- 5. identify copyright restrictions and permissions and put them into practice**
- 6. present to an audience a selection of work completed in this course; e.g., project plan, shot list or storyboard, broadcast**
 - 6.1 assess the work, considering:
 - 6.1.1 how the elements and principles of design help facilitate good composition in the work
 - 6.1.2 the creative aspects of the work; e.g., transitions, syncing, style
 - 6.1.3 areas of concern/difficulty (if applicable)
 - 6.1.4 the use of tools and equipment
 - 6.1.5 the relationship between the storyboard and the story told in the final product
 - 6.1.6 the quality of the completed project
 - 6.1.7 the school and community standards being met; e.g., appropriate language
 - 6.2 participate in peer/teacher assessment
 - 6.3 revise and re-present the project, if necessary, based on feedback
 - 6.4 add this selected work to an ongoing portfolio
- 7. apply consistent and appropriate work station routines**
 - 7.1 demonstrate good health and safety practices; e.g., posture, positioning of hardware and furniture
 - 7.2 demonstrate security for hardware, software, supplies and personal work
- 8. demonstrate basic competencies**
 - 8.1 demonstrate fundamental skills to:
 - 8.1.1 communicate
 - 8.1.2 manage information
 - 8.1.3 use numbers
 - 8.1.4 think and solve problems
 - 8.2 demonstrate personal management skills to:
 - 8.2.1 demonstrate positive attitudes and behaviours
 - 8.2.2 be responsible
 - 8.2.3 be adaptable
 - 8.2.4 learn continuously
 - 8.2.5 work safely
 - 8.3 demonstrate teamwork skills to:
 - 8.3.1 work with others
 - 8.3.2 participate in projects and tasks
- 9. create a transitional strategy to accommodate personal changes and build personal values**
 - 9.1 identify short-term and long-term goals
 - 9.2 identify steps to achieve goals

COURSE COM3205: PHOTOGRAPHY – LIGHTING

Level: Advanced

Prerequisite: COM1205: Photography – Introduction

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

Parameters: Access to a camera with ability to control aperture and shutter speed independently, access to a studio facility, light meter, lighting equipment, flash, processing and display equipment.

Note: The term photograph refers to either a physical or digital representation, depending on equipment available to the student.

Outcomes: The student will:

- 1. identify and describe different methods of image capture appropriate to various light conditions**
 - 1.1 describe various types of cameras and their image-capture format, e.g.; single-lens reflex (SLR), viewfinder, rangefinder, 35 mm, 70 mm, digital, raw, bitmap
 - 1.2 discuss the appropriate application of the types of camera in various occupations; e.g., photojournalism, portraiture, product advertising
- 2. apply the theory and operation of light-metering devices and electronic-flash devices in a photographic assignment**
 - 2.1 identify and describe various lighting sources (e.g., sunlight, tungsten, fluorescent, electronic flash), their characteristics and their effect on the photographed subject
 - 2.2 describe and apply the following concepts:
 - 2.2.1 Kelvin ratings; e.g., white balance
 - 2.2.2 inverse-square law
 - 2.2.3 incident and reflective light
 - 2.3 use built-in, hand and/or flash meters and gray cards to determine desired image-capture device settings
 - 2.4 use flash lighting device(s); e.g., flash synchronization—medium (M) sync and X sync, aperture calculations
 - 2.5 produce photographs using a flash
- 3. apply studio lighting techniques to a photographic assignment**
 - 3.1 identify and describe different studio lighting arrangements; e.g., Rembrandt, Paramount
 - 3.2 demonstrate mastery of such basic lighting techniques as Rembrandt, bounce, Paramount, three-point lighting (key light, fill light and background light)
 - 3.3 apply studio knowledge in still and portrait photography
 - 3.4 select and use light sources to achieve desired effects
 - 3.5 control and adjust lighting intensity
- 4. discuss camera stabilization techniques; e.g., tripods**

- 5. present a selection of work completed in this course to an audience**
 - 5.1 create a display of photographs
 - 5.2 discuss each photograph regarding:
 - 5.2.1 how the composition guidelines help facilitate good arrangement in his or her work
 - 5.2.2 the technical and creative aspects of the work; e.g., lighting techniques such as Rembrandt, bounce, Paramount, three-point lighting (key light, fill light and background light)
 - 5.2.3 areas of challenge/difficulty (if applicable)
 - 5.2.4 meeting school and community standards; e.g., appropriate language
 - 5.2.5 the use of tools and equipment
 - 5.3 participate in peer/teacher assessment
 - 5.4 add the selected work (e.g., photographs, proofs, log sheets) to a portfolio
- 6. apply consistent and appropriate work station routines**
 - 6.1 demonstrate good health and safety practices; e.g., posture, positioning of hardware and furniture
 - 6.2 demonstrate security for hardware, software, supplies and personal work
- 7. demonstrate basic competencies**
 - 7.1 demonstrate fundamental skills to:
 - 7.1.1 communicate
 - 7.1.2 manage information
 - 7.1.3 use numbers
 - 7.1.4 think and solve problems
 - 7.2 demonstrate personal management skills to:
 - 7.2.1 demonstrate positive attitudes and behaviours
 - 7.2.2 be responsible
 - 7.2.3 be adaptable
 - 7.2.4 learn continuously
 - 7.2.5 work safely
 - 7.3 demonstrate teamwork skills to:
 - 7.3.1 work with others
 - 7.3.2 participate in projects and tasks
- 8. create a transitional strategy to accommodate personal changes and build personal values**
 - 8.1 identify short-term and long-term goals
 - 8.2 identify steps to achieve goals

COURSE COM3215: PHOTOGRAPHY – PHOTOJOURNALISM

Level: Advanced

Prerequisite: COM1205: Photography – Introduction

Description: Students develop skills and explore processes to present a story, primarily through the use of pictures and text.

Parameters: Access to a camera with the ability to control aperture and shutter speed independently, and to processing, display and audio equipment.

Note: The term photograph refers to either a physical or digital representation, depending on equipment available to the student.

Supporting Courses: COM2025: Electronic Layout & Publishing 1
COM2215: Photography – Communication
COM3025: Electronic Layout & Publishing 2

Outcomes: The student will:

- 1. apply knowledge of composition, lighting, ISO, exposure and image processing resolution choice to photographing specified events**
 - 1.1 coordinate picture-taking assignments (e.g., school newspaper, yearbook) with a client (the client can be in school or from the community)
 - 1.2 process and proof all images and develop an appropriate filing system; e.g., processing and file management software
 - 1.3 consult with client(s) and select images that will meet the requirements of a desired layouts
 - 1.4 illustrate representative coverage with long, medium and close-up photographs, having a variety of horizontal and vertical compositions
 - 1.5 review the work with the client and make changes as necessary
- 2. integrate type and photographs to complete a layout that explains a story or situation**
 - 2.1 use common page layout techniques
 - 2.2 add captions and stories to images
- 3. describe the legal and ethical responsibilities of a photojournalist**
- 4. perform interim critiques and make necessary revisions**
- 5. identify copyright restrictions and permissions and put them into practice**
- 6. present the work completed in this course to an audience**
 - 6.1 assess work regarding:
 - 6.1.1 how the composition guidelines help facilitate good arrangement in his or her work
 - 6.1.2 the technical and creative aspects of the work; e.g., quality, focus, interest, writing
 - 6.1.3 areas of challenge/difficulty (if applicable)
 - 6.1.4 meeting school and community standards; e.g., appropriate language
 - 6.1.5 the use of tools and equipment
 - 6.2 participate in peer/teacher assessment
 - 6.3 add the story to a portfolio
- 7. apply consistent and appropriate work station routines**
 - 7.1 demonstrate good health and safety practices; e.g., posture, positioning of hardware and furniture
 - 7.2 demonstrate security for hardware, software, supplies and personal work

8. demonstrate basic competencies

- 8.1 demonstrate fundamental skills to:
 - 8.1.1 communicate
 - 8.1.2 manage information
 - 8.1.3 use numbers
 - 8.1.4 think and solve problems
- 8.2 demonstrate personal management skills to:
 - 8.2.1 demonstrate positive attitudes and behaviours
 - 8.2.2 be responsible
 - 8.2.3 be adaptable
 - 8.2.4 learn continuously
 - 8.2.5 work safely
- 8.3 demonstrate teamwork skills to:
 - 8.3.1 work with others
 - 8.3.2 participate in projects and tasks

9. create a transitional strategy to accommodate personal changes and build personal values

- 9.1 identify short-term and long-term goals
- 9.2 identify steps to achieve goals

COURSE COM3225: PHOTOGRAPHY – COLOUR

Level: Advanced

Prerequisite: COM1205: Photography – Introduction

Description: Students are introduced to various techniques used to create high-quality colour photographs through understanding the process, parameters and issues that arise when working on colour photographs.

Parameters: Access to a single-lens reflex (SLR) or Micro Four Thirds system camera with the ability to control aperture and shutter speed independently, and to colour-processing and display equipment.

Note: The term photograph refers to either a physical or digital representation, depending on equipment available to the student.

Outcomes: The student will:

1. identify and describe the additive and subtractive colour process

- 1.1 identify the primary and secondary colours as they apply to additive and subtractive colour theory
- 1.2 describe colour theory as it applies to colour spaces and channels; e.g., red, green and blue colour model (RGB), cyan, magenta, yellow and key black colour (CMYK), lab colour model (LAB)
- 1.3 explore and compare images created with alternative light sources (e.g., fluorescent, tungsten, halogen, natural, flash) to illustrate colour temperature and psychological effects
- 1.4 explore the issue of colour calibration as it relates to the transfer of an image from one medium to another; e.g., monitor to printer, use of a colourimeter
- 1.5 identify various file formats (e.g., not processed [raw], Joint Photographic Experts Group [JPEG], Tagged Image File Format [TIFF], Photoshop Document [PSD], Digital Negative [DNG]) with relation to colour management characteristics

2. capture images controlling a variety of colour parameters

- 2.1 modify white balance in given lighting circumstances to produce a variety of colour casts; e.g., utilize balancing filters if using a film camera
- 2.2 use alternative methods to affect colour capture; e.g., saturation level settings in cameras, colour lens filters, selective lighting

3. process images so that colour is properly displayed for the target medium

- 3.1 manage colour so that images render for a controlled result; e.g., channel control of saturation, brightness curves, balance, postproduction colour filters
- 3.2 review the work and make appropriate continuous adjustments to colour

4. present a selection of work completed in this course to an audience

- 4.1 create a display of photographs
- 4.2 assess each photograph regarding:
 - 4.2.1 the intent and the success in meeting it
 - 4.2.2 technical data; e.g., log sheet
 - 4.2.3 how the composition guidelines help facilitate good arrangement in his or her work
 - 4.2.4 the technical and creative aspects of the work; e.g., colour, quality, format, saturation
 - 4.2.5 areas of challenge/difficulty (if applicable)

- 4.2.6 meeting school and community standards; e.g., appropriate language
 - 4.2.7 the use of tools and equipment
- 4.3 participate in peer/teacher assessment
- 4.4 add the selected work to a portfolio
- 5. apply consistent and appropriate work station routines**
 - 5.1 demonstrate good health and safety practices; e.g., posture, positioning of hardware and furniture
 - 5.2 demonstrate security for hardware, software, supplies and personal work
- 6. demonstrate basic competencies**
 - 6.1 demonstrate fundamental skills to:
 - 6.1.1 communicate
 - 6.1.2 manage information
 - 6.1.3 use numbers
 - 6.1.4 think and solve problems
 - 6.2 demonstrate personal management skills to:
 - 6.2.1 demonstrate positive attitudes and behaviours
 - 6.2.2 be responsible
 - 6.2.3 be adaptable
 - 6.2.4 learn continuously
 - 6.2.5 work safely
 - 6.3 demonstrate teamwork skills to:
 - 6.3.1 work with others
 - 6.3.2 participate in projects and tasks
- 7. create a transitional strategy to accommodate personal changes and build personal values**
 - 7.1 identify short-term and long-term goals
 - 7.2 identify steps to achieve goals

COURSE COM3235: PHOTOGRAPHY – B/W DIGITAL TECHNIQUES

Level: Advanced

Prerequisite: COM1205: Photography – Introduction

Description: Students develop an understanding of various production and postproduction black-and-white digital techniques and the differences in mood and appeal between colour and monochrome.

Parameters: Access to a digital single-lens reflex (SLR) or Micro Four Thirds system camera with the ability to control aperture and shutter speed independently, and to processing and display equipment.

Note: The term photograph refers to either a physical or digital representation, depending on equipment available to the student.

Outcomes: The student will:

- 1. explain the differences between destructive and nondestructive black-and-white techniques**
 - 1.1 identify destructive black-and-white techniques inside the image-capture device; e.g., setting the device to capture only black-and-white, using specialized lenses such as infrared
 - 1.2 identify destructive black-and-white techniques inside the image-editing software; e.g., converting to grayscale colour space, desaturate command and changes to original image
 - 1.3 identify nondestructive techniques (e.g., not processed [raw] versus Joint Photographic Experts Group [JPEG]) inside the image-capture device
 - 1.4 identify nondestructive techniques inside the image-editing software e.g., include adjustment layers, duplicating original layers and compositing channels or images from separate sources
- 2. identify and describe the two main colour models (cyan, magenta, yellow and key black colour model) [CMYK] and red, green and blue colour model [RGB]**
 - 2.1 identify the purpose of each colour model in relationship to digital photography; e.g., print versus screen, no light versus addition of light
 - 2.2 identify how image-editing software reads and processes colour in the colour model; e.g., black, white and shades of gray
 - 2.3 identify the differences in black-and-white tonal qualities of individual channels—both in CMYK (four-channel) and RGB (three-channel) colour spaces
- 3. identify and demonstrate automatic black-and-white conversion techniques in image-editing software**
 - 3.1 identify the grayscale colour model and compare it to the main two colour models (CMYK and RGB)
 - 3.2 describe the advantages and disadvantages of using the grayscale colour space for black-and-white image conversion
 - 3.3 identify and compare the image software's default black-and-white conversion commands; e.g., grayscale, desaturate, channel mixer
- 4. identify and demonstrate manual techniques for black-and-white conversion in image-editing software**
 - 4.1 describe and demonstrate the infrared technique in image editing software
 - 4.2 describe and demonstrate manual channel selection to create, nondestructively, a finished black-and-white image
 - 4.3 describe and demonstrate layer blending modes in the image-editing software

- 5. present a selection of work completed in this course to an audience**
 - 5.1 create a display of photographs
 - 5.2 assess each photograph regarding:
 - 5.2.1 comparative examples of images that were produced using manual and automatic techniques
 - 5.2.2 the intent of the photographs and their success in meeting the intent
 - 5.2.3 the technical data; e.g., log sheet, picture properties
 - 5.2.4 how the composition guidelines help facilitate good arrangement in his or her work
 - 5.2.5 the technical and creative aspects of the work; e.g., quality, format, interest
 - 5.2.6 areas of challenge/difficulty (if applicable)
 - 5.2.7 meeting school and community standards; e.g., appropriate language
 - 5.2.8 the use of tools and equipment
 - 5.3 participate in peer/teacher assessment
 - 5.4 add the selected work to a portfolio
- 6. apply consistent and appropriate work station routines**
 - 6.1 demonstrate good health and safety practices; e.g., posture, positioning of hardware and furniture
 - 6.2 demonstrate security for hardware, software, supplies and personal work
- 7. demonstrate basic competencies**
 - 7.1 demonstrate fundamental skills to:
 - 7.1.1 communicate
 - 7.1.2 manage information
 - 7.1.3 use numbers
 - 7.1.4 think and solve problems
 - 7.2 demonstrate personal management skills to:
 - 7.2.1 demonstrate positive attitudes and behaviours
 - 7.2.2 be responsible
 - 7.2.3 be adaptable
 - 7.2.4 learn continuously
 - 7.2.5 work safely
 - 7.3 demonstrate teamwork skills to:
 - 7.3.1 work with others
 - 7.3.2 participate in projects and tasks
- 8. create a transitional strategy to accommodate personal changes and build personal values**
 - 8.1 identify short-term and long-term goals
 - 8.2 identify steps to achieve goals

COURSE COM3245: PHOTOGRAPHY – OUTDOOR

Level: Advanced

Prerequisite: COM1205: Photography – Introduction

Description: Students plan and respond to outdoor conditions to capture and produce high-quality outdoor images.

Parameters: Access to a single-lens reflex (SLR) or Micro Four Thirds system camera with the ability to control aperture and shutter speed independently, and to a variety of lens, processing and display equipment.

Note: The term photograph refers to either a physical or digital representation, depending on equipment available to the student.

Outcomes: The student will:

- 1. identify and describe risks and hazards to photographers and equipment in the outdoors**
 - 1.1 discuss common safety issues for a photographer when shooting outdoors (e.g., gravity, temperature, water, footing, wind, dust, wildlife, hunting season), and explore ways to prepare for and respond to them successfully
 - 1.2 discuss care issues for photographic equipment when shooting outdoors (e.g., inclement weather, battery and storage capacity, moisture and condensation) and ways to prepare for and respond to the conditions successfully
- 2. capture images in a variety of lighting conditions, making appropriate exposure decisions**
 - 2.1 capture images in different light conditions; e.g., high-key sunlight, low-key sunlight, clouded afternoon, naturally reflected light (sunrise, sunset, moonlight), artificially produced light (street lights, flash, windows)
 - 2.2 capture images where exposure is managed within the existing dynamic range; e.g., monitoring of the histogram, use of graduated neutral density filters, bracketing, high dynamic range (HDR)
- 3. create compelling creative images outdoors**
 - 3.1 create full-frame subjects in photograph; e.g., lens choice, camera proximity, camera angle, postproduction cropping
 - 3.2 manage horizon placement and other powerful aspects to suit the image; e.g., rule of thirds, use of diagonals, postproduction cropping, design elements and principles
 - 3.3 modify camera settings (e.g., aperture, shutter speed, ISO) to produce appropriate depth of field and image sharpness or blur
 - 3.4 discuss camera stabilization techniques; e.g., tripods, monopods, bean bags, gaffer tape, gorilla pods, clamps
- 4. present a selection of work completed in this course to an audience**
 - 4.1 create a display of photographs
 - 4.2 assess each photograph regarding:
 - 4.2.1 comparative examples of images that were produced using manual and automatic techniques
 - 4.2.2 the intent of the photographs and their success in meeting the intent
 - 4.2.3 the technical data; e.g., log sheet, picture properties
 - 4.2.4 how the composition guidelines help facilitate good arrangement in his or her work
 - 4.2.5 the technical and creative aspects of the work; e.g., colour, quality, format, interest

- 4.2.6 areas of challenge/difficulty (if applicable)
 - 4.2.7 meeting school and community standards; e.g., appropriate language
 - 4.2.8 the use of tools and equipment
- 4.3 participate in peer/teacher assessment
- 4.4 add the selected work to a portfolio
- 5. apply consistent and appropriate work station routines**
 - 5.1 demonstrate good health and safety practices; e.g., posture, positioning of hardware and furniture
 - 5.2 demonstrate security for hardware, software, supplies and personal work
- 6. demonstrate basic competencies**
 - 6.1 demonstrate fundamental skills to:
 - 6.1.1 communicate
 - 6.1.2 manage information
 - 6.1.3 use numbers
 - 6.1.4 think and solve problems
 - 6.2 demonstrate personal management skills to:
 - 6.2.1 demonstrate positive attitudes and behaviours
 - 6.2.2 be responsible
 - 6.2.3 be adaptable
 - 6.2.4 learn continuously
 - 6.2.5 work safely
 - 6.3 demonstrate teamwork skills to:
 - 6.3.1 work with others
 - 6.3.2 participate in projects and tasks
- 7. create a transitional strategy to accommodate personal changes and build personal values**
 - 7.1 identify short-term and long-term goals
 - 7.2 identify steps to achieve goals

COURSE COM3275: PHOTOGRAPHY – DIGITAL PROCESSING 2

Level: Advanced

Prerequisite: COM1275: Photography – Digital Processing 1

Description: Students acquire original digital images from a digital camera and extend and refine their knowledge of image-editing software. Students focus on composition principles and more advanced editing techniques to enhance images as well as ways to maintain and organize personal libraries.

Parameters: Access to a camera with the ability to control aperture and shutter speed independently, and to advanced processing software and display equipment.

Note: The term photograph refers to either a physical or digital representation, depending on equipment available to the student.

Supporting Courses: COM2035: Raster Graphics 1
COM2205: Photography – Composition
COM2215: Photography – Communication
COM2225: Photography – Darkroom Techniques
COM2235: Photography – Lenses
COM3035: Raster Graphics 2
COM3205: Photography – Lighting
COM3215: Photography – Photojournalism
COM3225: Photography – Colour
COM3235: Photography – B/W Digital Techniques
COM3245: Photography – Outdoor

Outcomes: The student will:

1. acquire and manage images from a digital camera

- 1.1 discuss current file formats and which is most appropriate, given particular situation; e.g., jpeg, raw, high dynamic range (HDR)
- 1.2 discuss destructive versus nondestructive manipulation
- 1.3 import and organize photographs
- 1.4 create image collections from main library; e.g., folders, smart collections
- 1.5 manage folders
- 1.6 work with and add metadata to photographs; e.g., flags, ratings, attributes, global positioning system (GPS), keywords
- 1.7 back up the library/catalogue

2. manipulate and edit original photographs to enhance composition

- 2.1 apply editing effects to develop interesting and aesthetically appealing compositions, based on composition guidelines, using:
 - 2.1.1 vignetting
 - 2.1.2 sharpening
 - 2.1.3 dodging and burning
 - 2.1.4 temperature adjustment
 - 2.1.5 colour management

- 2.1.6 exposure adjustment
- 2.1.7 lighting—white balance, black
- 2.1.8 brightness
- 2.1.9 contrast adjustment; e.g., light, mid-tone, shadow
- 2.1.10 lens correction
- 2.2 rotate, straighten, frame and crop images
- 2.3 stitch photographs; e.g., panorama
- 2.4 create a black-and-white photograph from a colour original
- 2.5 create a distressed/aged photograph from an original
- 2.6 fix backlit photographs
- 2.7 use camera calibration
- 2.8 apply batch correction
- 2.9 display proficiency using advanced image-editing software
- 3. publish edited photographs**
 - 3.1 create and deliver a digital gallery for presentation of the completed compositions, providing:
 - 3.1.1 thematic or stylistic unity
 - 3.1.2 information on how each finished composition was created; e.g., how solutions to problems were addressed
 - 3.1.3 customized gallery settings; e.g., background, music, stroke, overlays, titles, transitions, colour
 - 3.1.4 use of gallery templates
 - 3.2 print the photographs, considering:
 - 3.2.1 the set-up of photographs for printing
 - 3.2.2 the adjustment of print and colour management settings
 - 3.2.3 the 8-bit versus 16-bit printing
 - 3.2.4 the printing of multiple photographs on one page using templates; e.g., layout packages
 - 3.2.5 the print settings; e.g., cut lines, crop lines, guides, borders
- 4. present a selection of work completed in this course to an audience**
 - 4.1 discuss gallery and/or prints regarding:
 - 4.1.1 editing techniques used
 - 4.1.2 how the composition guidelines help facilitate good arrangement in his or her work
 - 4.1.3 the technical and creative aspects of the work; e.g., effect, focus, interest, music selection
 - 4.1.4 areas of challenge and solutions
 - 4.1.5 meeting school and community standards; e.g., appropriate language
 - 4.1.6 the use of tools and equipment
 - 4.2 participate in peer/teacher assessment
 - 4.3 add the selected work to a portfolio
- 5. apply consistent and appropriate work station routines**
 - 5.1 demonstrate good health and safety practices; e.g., posture, positioning of hardware and furniture
 - 5.2 demonstrate security for hardware, software, supplies and personal work
- 6. demonstrate basic competencies**
 - 6.1 demonstrate fundamental skills to:
 - 6.1.1 communicate
 - 6.1.2 manage information
 - 6.1.3 use numbers
 - 6.1.4 think and solve problems

- 6.2 demonstrate personal management skills to:
 - 6.2.1 demonstrate positive attitudes and behaviours
 - 6.2.2 be responsible
 - 6.2.3 be adaptable
 - 6.2.4 learn continuously
 - 6.2.5 work safely
- 6.3 demonstrate teamwork skills to:
 - 6.3.1 work with others
 - 6.3.2 participate in projects and tasks
- 7. create a transitional strategy to accommodate personal changes and build personal values**
 - 7.1 identify short-term and long-term goals
 - 7.2 identify steps to achieve goals

COURSE COM3285: COM TECH CLIENT SERVICES 2

Level: Advanced

Prerequisite: COM2285: Com Tech Client Services 1

Description: Students apply the principles and practices of client services.

Parameters: This course must be taught in conjunction with another specified Com Tech course.

Outcomes: The student will:

1. identify client needs and the scope of the project

- 1.1 communicate with client; e.g., interview
- 1.2 identify tasks to standards specified by work to be completed
- 1.3 identify factors affecting client satisfaction
- 1.4 identify all resources needed to perform a task, provide a service or complete a project related to selected work area

2. demonstrate and document the planning of a client project

- 2.1 utilize a documentation system for the purposes of accountability
- 2.2 prepare and present a draft proposal to the client for feedback
- 2.3 implement client feedback into the project plan

3. demonstrate professional production steps leading to satisfactory completion of a client project

- 3.1 prepare a project based on agreed proposal
- 3.2 track time and resources for the purposes of accountability
- 3.3 prepare final project deliverables for presentation to client
- 3.4 prepare feedback mechanism for client response
- 3.5 review client feedback and implement changes/improvements for future projects

4. identify copyright restrictions and permissions and put them into practice

5. demonstrate basic competencies

- 5.1 demonstrate fundamental skills to:
 - 5.1.1 communicate
 - 5.1.2 manage information
 - 5.1.3 use numbers
 - 5.1.4 think and solve problems
- 5.2 demonstrate personal management skills to:
 - 5.2.1 demonstrate positive attitudes and behaviours
 - 5.2.2 be responsible
 - 5.2.3 be adaptable
 - 5.2.4 learn continuously
 - 5.2.5 work safely
- 5.3 demonstrate teamwork skills to:
 - 5.3.1 work with others
 - 5.3.2 participate in projects and tasks

6. create a transitional strategy to accommodate personal changes and build personal values

- 6.1 identify short-term and long-term goals
- 6.2 identify steps to achieve goals

COURSE COM3910: COM PROJECT D

Level: Advanced

Prerequisite: None

Description: Students develop project design and management skills to extend and enhance competencies and skills in other CTS courses through contexts that are personally relevant.

Parameters: Advanced project courses must connect with a minimum of two CTS courses, one of which must be at the advanced level and be in the same occupational area as the project course. The other CTS course(s) must be at least at the intermediate level from any occupational area.

Project courses cannot be connected to other project courses or practicum courses.

All projects and/or performances, whether teacher- or student-led, must include a course outline or student proposal.

Outcomes:

The teacher/student will:

- 1. identify the connection between this project course and two or more CTS courses**
 - 1.1. identify the outcome(s) from each identified CTS course that support the project and/or performance deliverables
 - 1.2. explain how these outcomes are being connected to the project and/or performance deliverables
- 2. propose the project and/or performance**
 - 2.1. identify the project and/or performance by:
 - 2.1.1 preparing a plan
 - 2.1.2 clarifying the purposes
 - 2.1.3 defining the deliverables
 - 2.1.4 specifying time lines
 - 2.1.5 explaining terminology, tools and processes
 - 2.1.6 defining resources; e.g., materials, costs, staffing
 - 2.2. identify and comply with all related health and safety standards
 - 2.3. define assessment standards (indicators for success)
 - 2.4. present the proposal and obtain necessary approvals

The student will:

- 3. meet goals as defined within the plan**
 - 3.1. complete the project and/or performance as outlined
 - 3.2. monitor the project and/or performance and make necessary adjustments
 - 3.3. present the project and/or performance, indicating the:
 - 3.3.1 outcomes attained
 - 3.3.2 relationship of outcomes to goals originally set

- 3.4. evaluate the project and/or performance, indicating the:
 - 3.4.1 processes and strategies used
 - 3.4.2 recommendations on how the project and/or performance could have been improved
- 4. identify copyright restrictions and permissions and put them into practice**
- 5. demonstrate basic competencies**
 - 5.1. demonstrate fundamental skills to:
 - 5.1.1 communicate
 - 5.1.2 manage information
 - 5.1.3 use numbers
 - 5.1.4 think and solve problems
 - 5.2. demonstrate personal management skills to:
 - 5.2.1 demonstrate positive attitudes and behaviours
 - 5.2.2 be responsible
 - 5.2.3 be adaptable
 - 5.2.4 learn continuously
 - 5.2.5 work safely
 - 5.3. demonstrate teamwork skills to:
 - 5.3.1 work with others
 - 5.3.2 participate in projects and tasks
- 6. create a transitional strategy to accommodate personal changes and build personal values**
 - 6.1. identify short-term and long-term goals
 - 6.2. identify steps to achieve goals

COURSE COM3920: COM PROJECT E

Level: Advanced

Prerequisite: None

Description: Students develop project design and management skills to extend and enhance competencies and skills in other CTS courses through contexts that are personally relevant.

Parameters: Advanced project courses must connect with a minimum of two CTS courses, one of which must be at the advanced level and be in the same occupational area as the project course. The other CTS course(s) must be at least at the intermediate level from any occupational area.

Project courses cannot be connected to other project courses or practicum courses.

All projects and/or performances, whether teacher- or student-led, must include a course outline or student proposal.

Outcomes:

The teacher/student will:

- 1. identify the connection between this project course and two or more CTS courses**
 - 1.1 identify the outcome(s) from each identified CTS course that support the project and/or performance deliverables
 - 1.2 explain how these outcomes are being connected to the project and/or performance deliverables
- 2. propose the project and/or performance**
 - 2.1 identify the project and/or performance by:
 - 2.1.1 preparing a plan
 - 2.1.2 clarifying the purposes
 - 2.1.3 defining the deliverables
 - 2.1.4 specifying time lines
 - 2.1.5 explaining terminology, tools and processes
 - 2.1.6 defining resources; e.g., materials, costs, staffing
 - 2.2 identify and comply with all related health and safety standards
 - 2.3 define assessment standards (indicators for success)
 - 2.4 present the proposal and obtain necessary approvals

The student will:

- 3. meet goals as defined within the plan**
 - 3.1 complete the project and/or performance as outlined
 - 3.2 monitor the project and/or performance and make necessary adjustments
 - 3.3 present the project and/or performance, indicating the:
 - 3.3.1 outcomes attained
 - 3.3.2 relationship of outcomes to goals originally set

- 3.4 evaluate the project and/or performance, indicating the:
 - 3.4.1 processes and strategies used
 - 3.4.2 recommendations on how the project and/or performance could have been improved
- 4. identify copyright restrictions and permissions and put them into practice**
- 5. demonstrate basic competencies**
 - 5.1 demonstrate fundamental skills to:
 - 5.1.1 communicate
 - 5.1.2 manage information
 - 5.1.3 use numbers
 - 5.1.4 think and solve problems
 - 5.2 demonstrate personal management skills to:
 - 5.2.1 demonstrate positive attitudes and behaviours
 - 5.2.2 be responsible
 - 5.2.3 be adaptable
 - 5.2.4 learn continuously
 - 5.2.5 work safely
 - 5.3 demonstrate teamwork skills to:
 - 5.3.1 work with others
 - 5.3.2 participate in projects and tasks
- 6. create a transitional strategy to accommodate personal changes and build personal values**
 - 6.1 identify short-term and long-term goals
 - 6.2 identify steps to achieve goals

COURSE COM3950: COM ADVANCED PRACTICUM

Level: Advanced

Prerequisite: None

Description: Students apply prior learning and demonstrate the attitudes, skills and knowledge required by an external organization to achieve a credential/credentials or an articulation.

Parameters: This practicum course, which may be delivered on- or off-campus, should be accessed only by students continuing to work toward attaining a recognized credential/credentials or an articulation offered by an external organization. This course must be connected to at least one CTS course from the same occupational area and cannot be used in conjunction with any introductory (1XXX) level course. A practicum course cannot be delivered as a stand-alone course, cannot be combined with a CTS project course and cannot be used in conjunction with the Registered Apprenticeship Program or the Green Certificate Program.

Outcomes: The student will:

1. perform assigned tasks and responsibilities, as required by the organization granting the credential(s) or articulation

- 1.1 identify regulations and regulatory bodies related to the credential(s) or articulation
- 1.2 describe personal roles and responsibilities, including:
 - 1.2.1 key responsibilities
 - 1.2.2 support functions/responsibilities/expectations
 - 1.2.3 code of ethics and/or conduct
- 1.3 describe personal work responsibilities and categorize them as:
 - 1.3.1 routine tasks; e.g., daily, weekly, monthly, yearly
 - 1.3.2 non-routine tasks; e.g., emergencies
 - 1.3.3 tasks requiring personal judgement
 - 1.3.4 tasks requiring approval of a supervisor
- 1.4 demonstrate basic employability skills and perform assigned tasks and responsibilities related to the credential(s) or articulation

2. analyze personal performance in relation to established standards

- 2.1 evaluate application of the attitudes, skills and knowledge developed in related CTS courses
- 2.2 evaluate standards of performance in terms of:
 - 2.2.1 quality of work
 - 2.2.2 quantity of work
- 2.3 evaluate adherence to workplace legislation related to health and safety
- 2.4 evaluate the performance requirements of an individual who is trained, experienced and employed in a related occupation in terms of:
 - 2.4.1 training and certification
 - 2.4.2 interpersonal skills
 - 2.4.3 technical skills
 - 2.4.4 ethics

3. demonstrate basic competencies

- 3.1 demonstrate fundamental skills to:
 - 3.1.1 communicate
 - 3.1.2 manage information
 - 3.1.3 use numbers
 - 3.1.4 think and solve problems
- 3.2 demonstrate personal management skills to:
 - 3.2.1 demonstrate positive attitudes and behaviours
 - 3.2.2 be responsible
 - 3.2.3 be adaptable
 - 3.2.4 learn continuously
 - 3.2.5 work safely
- 3.3 demonstrate teamwork skills to:
 - 3.3.1 work with others
 - 3.3.2 participate in projects and tasks

4. create a transitional strategy to accommodate personal changes and build personal values

- 4.1 identify short-term and long-term goals
- 4.2 identify steps to achieve goals