Level 6 Advanced Diploma in Graphic Design (992) 153 Credits

Unit: Photography & Video Editing	**Guided Learning Hours:** 320
Exam Paper No.: 3	**Number of Credits:** 32
Prerequisites: Excellent keystroking ability.	**Corequisites:** A pass or better in Diploma in Graphic Design or equivalence.

Aim: The aim is to introduce both photography and video editing topics to learners.

Photography

The unit require learners to have access to a camera with exposure metering and manually adjustable f-stops and shutter speeds. Photographic principles combines theoretical analysis and practical application of photography. Digital Photography gives learners an introduction to the technical skills necessary to use computers, equipment, and software as a means of visually communicating photographic ideas. Learners continue the aesthetic and technical investigations of black-and-white photography. Photography introduces the aesthetics and technology of color photography; focusing on coordinating color theory with camera and darkroom experience. Including a variety of color photographic processes and materials. Studio photography introduces professional studio photography practices; utilisation of the large-format camera while introducing the potentials of the medium format; examining artificial lighting techniques and providing a context for exploration of the studio as a creative photographic environment.

Video Editing

Learners must have access to a digital camera. The unit explores techniques that can be applied in a range of non-linear editing programs. Other topics explored include: original image creation, photographic editing, scanning, printing, two-dimensional animation, sound digitising pens, mouse, and digital camera. Various applications and tools include image input and output devices such as cameras and displays, graphics hardware and software, input technologies and interactive techniques, typography and page layout, light and color representations, exposure and tone reproduction, image composition and imaging models, digital signal processing, sampling, aliasing and antialiasing, compression, two- and three-dimensional geometry and transformations, modeling techniques including curves and surfaces, reflection models and illumination algorithms, and basic methods of animation. Learners will explore digital capture and image editing techniques using such hardware devices as scanners, capture boards, digital cameras and video. Editing film and video is about movement, choreography, the play of light, color, and graphics. And beyond all that, it's all about psychology.
 (Centre can choose any editing program of their choice - including Final Cut Express if using Mac, Avid, or Premiere). The main focus is not just on developing software skills; it's on exploring the magic behind video modification. The digital video editing unit teaches learners the basic principles of good filmmaking as well as advanced techniques to give videos a professional touch. Challenging projects include editing a commercial, an interview, a narrative scene, a music video, a video diary, and a text title sequence. Hands-on exercises help learners explore how to apply time-honoured principles of film editing using today's digital technology. Whether learners goal is to make better "home movies" or submit production the "Local Film Festival", they will learn the digital video editing skills needed in the industry.

Required Materials: Recommended Learning Resources.	**Supplementary Materials:** Lecture notes and tutor extra reading recommendations.

Special Requirements: This is a hands-on course, hence practical use of computers is essential. Requires intensive lab work outside of class time.

Intended Learning Outcomes:	**Assessment Criteria:**
Photography	**Photography**
1. The roles of photography in society, detailing the challenges involved and skills needed to be successful; using photographic equipment correctly.	1.1 Define exposure 1.2 Analyse camera brands 1.3 Describe the role of photography in society 1.4 Explain job descriptions and

		responsibility photographers
	1.5	Analyse the photo imaging industry industry
	1.6	Explain the fundamental relationship between the photographic image and the effects of light intensity and duration.
	1.7	Define a camera
	1.7	Define the shutter
	1.9	Describe aperture
	1.10	Define exposure
2. The basic parts to a camera: the body, the viewing system, the capture plane, the aperture, the shutter, the lens, and storage.	2.1	Explain digital camera modes
	2.2	Demonstrate how to press the shutter button
	2.3	Describe autofocus
	2.4	Analyse light metering techniques
	2.5	Describe colour and white balance techniques
	2.6	Outline the fundamentals of exposure every camera uses to control exposure; the mechanism that controls the amount of light entering the camera and the speed at which it does so.
	2.7	Describe how to shoot sharp images
	2.8	Analyse shutter speed characteristics
	2.9	Demonstrate how to take control of shutter speed
	2.10	Define stop
	2.11	Distinguish shutter priority vs manual mode
	2.12	Identify and practice using shutter speed
	2.13	Define reciprocity
	2.14	Demonstrate how to control motion
	2.15	Analyse shutter speed sequences
3. The passive techniques for depth recovery and the factors that determine apparent sharpness.	3.1	Describe depth of field
	3.2	Explain how aperture is measured
	3.3	Describe aperture priority mode and how it works
	3.4	Define lens speed
	3.5	Demonstrate how to shoot deep depth of field
	3.6	Demonstrate how to shoot shallow depth of field
	3.7	Analyse the depth-of-field preview button
	3.8	Analyse and practice using aperture
	3. 9	Set the sensitivity of the imaging chip inside a digital camera.
	3.10	Outline ISO: The third exposure parameter
	3.11	Examine and assess camera's high ISO
	3.12	Demonstrate how to shoot in low light
	3.13	Demonstrate practicing shooting in low light
4. Setting a custom white balance in-camera rather than having Lightroom correct the white balance and metering modes telling the light meter to analyze the light in different ways.	4.1	Analyse the camera's white balance controls
	4.2	Describe to adjust white balance manually

	4.3	Distinguish shooting raw vs jpeg	
	4.4	Explain how light meters work	
	4.5	Describe why there are different modes?	
	4.6	Describe the metering modes	
	4.7	Explain the essential skills to help improve the use of light in photography and encourage visual expression.	
	4.8	Demonstrate how to use exposure compensation	
	4.9	Distinguish intentional overexposure vs intentional underexposure	
	4.10	Demonstrate how to control tone	
	4.11	Demonstrate how to use a camera's histogram	
	4.12	Describe tone and color enhancements	
	4.13	Demonstrate how to use auto exposure bracketing	
	4.14	Define and practice using exposure compensation	
5. How High Dynamic Range (HDR) photography overcomes technological limitations; manual exposure mode, advantages and disadvantages versus automated exposure mode.	5.1	Define dynamic range in digital photography	
	5.2	Analyse limited exposure latitude in the highlights	
	5.3	Define fill flash	
	5.4	Analyse manual mode camera settings	
	5.5	Explain manual mode and light meters	
	5.6	Examine and practice using the manual exposure	
	5.7	The features of a digital camera exposure mode control system; including the shutter speed, the aperture and the ISO setting.	
	5.8	Explain custom modes and A-DEP	
	5.9	Analyse the functions of program shift	
	5.10	Evaluate and identify exposure compensation with program shift	
	5.11	Practice how exposure reciprocity works	
	5.12	Explain scene modes and in-camera processing	
Video Editing	**Video Editing**		
6. The built-in editing feature; creating, splitting, combining and trimming video clips; the requirements needed to edit a video production, organising and trimming video clips and working with timeline tracks	6.1	Outline the Select Project window	
	6.2	Explain bins	
	6.3	Demonstrate customising user settings	
	6.4	Demonstrate how to set up and organise a project	
	6.5	Demonstrate practice saving and backing up the project	
	6.6	Describe the Composer Monitor and the Timeline	
	6.7	Outline and identify the Edit interface	
	6.8	Demonstrate how to use the splicing tool to add shots	
	6.9	Analyse splicing properties when added to non-linearly smoothers	
	6.10	Analyse photo recovery on overwritten shots	
	6.11	Demonstrate removing shots using	

		Extract and Lift
	6.12	Demonstrate how to use Segment mode (Extract/Splice) to switch shots
	6.13	Demonstrate how to use Segment mode (Lift/Overwrite) to move shots
	6.14	Demonstrate how to use Extract/Splice and Lift/Overwrite together
	6.15	Demonstrate manipulating the Timeline directly
	6.16	Demonstrate creating subclips and subsequences
	6.17	Demonstrate how to add multiple video and audio tracks
7. The basics of video editing, including refining edit points, capturing and transferring footage, applying transitions, mixing audio tracks.	7.1	Define trimming
	7.2	Demonstrate how to perform single-roller trims
	7.3	Demonstrate how to perform dual-roller trims
	7.4	Demonstrate how to use Ripple Trim and Overwrite Trim
	7.5	Define sync
	7.6	Demonstrate how to solve sync problems
	7.7	The demand of video customisation in today's world and how customisation can be achieved
	7.8	Demonstrate how to navigate and customise the editing program
	7.8	Outline navigation shortcuts
	7.10	Demonstrate how to use the Command palette
	7.11	Customise the Timeline
	7.12	Demonstrate how to use bin layouts
	7.13	Demonstrate how to use workspaces
	7.14	Demonstrate how to sort and sift clips
	7.15	Demonstrate how to use the Find tool
	7.16	Demonstrate how to use markers
	7.17	Demonstrate how to use PhraseFind
	7.18	Demonstrate how to use ScriptSync
8. Understand step-by-step instructions the different editing tasks and concepts within the video editing software applications; the DAW provides far more control over the soundtrack than the basic audio tools included in editing systems	8.1	Demonstrate how to trim
	8.2	Demonstrate how to perform slip edits
	8.3	Demonstrate how to perform Slide edits
	8.4	Demonstrate how to perform Replace edits
	8.5	Demonstrate how to read audio levels and pan
	8.6	Demonstrate how to use the audio mixer
	8.7	Demonstrate how to adjust or add audio keyframes
	8.8	Demonstrate how to record audio adjustments on the fly
	8.9	Combining video signals from two or more sources to perform wipes, keys, mattes
	8.10	Describe Quick Transition effects
	8.11	Analyse the Transition Manipulation tool
	8.12	Explain how to use the Effects palette and the Effect Editor
	8.13	Analyse Keyframing segment effects

		8.14	Describe nesting and auto-nesting
		8.15	Demonstrate how to save effect templates
		8.16	Demonstrate how to build basic composites using vertical effects
		8.17	Demonstrate how to be able to use the picture-in-picture (PIP) effect
		8.18	Demonstrate how to use the Color effect
		8.19	Demonstrate how to create basic motion effects
		8.20	Demonstrate how to use Timewarp
9.	The automated background processes that are activated whenever numerical calculations or transformations are performed by a computer application.	9.1	Describe system performance
		9.2	Demonstrate how to render intelligently
		9.3	Describe the different approaches and techniques developed for content-based video classification.
		9. 4	Describe how the color correction feature allows editors to separate and make individual adjustments to the various primary and secondary color components of the video signal.
		9.5	Analyse footage for problems
		9.6	Demonstrate how to use the Y-Waveform monitor to set whites and blacks
		9.7	Demonstrate how to use the RGB Parade to correct color casts
		9.8	Demonstrate how to use the Vectorscope to improve skin tones
		9.9	Demonstrate how to use auto color correction
		9.10	Using the generator Controls tab Create titles, creating more than just text with Avid's Title and Marquee tools.
		9.11	Demonstrate how to format and enhance text using Avid Marquee
		9.12	Demonstrate how to use Marquee to apply shapes and gradients
		9.13	Demonstrate how to use title templates
		9.14	Demonstrate how to bring the title into Media Composer
		9.15	Demonstrate how to edit and revise the title
		9.16	Demonstrate how to create rolling and crawling titles
		9.17	Demonstrate how to use AutoTitler
10.	Capturing, editing and importing media from other sources; how editing software supports importing either stills or video from a DSLR or (H) DSLR camera, a tape-based camera or deck connected via FireWire.	10.1	Analyse how to import files
		10.2	Demonstrate how to link to files using Avid Media Access (AMA)
		10.3	Demonstrate how to link to hi-resolution stills
		10.4	Demonstrate how to use the Avid Marketplace
		10.5	Demonstrate how to use the Capture tool
		10.6	Analyse ways to log and capture footage
		10.7	Demonstrate how to use batch capturing
		10.8	Analyse how to delete material from the bin

	10.9	Demonstrate how to use the Media tool
	10.10	Describe how to delete unreferenced clips
	10.11	Demonstrate splicing, sound dubbing, and color coordination for television.
	10.12	Explain outputting; including exporting a QuickTime file for the Web or for CD-ROM, creating an MPEG2 file for DVD authoring, or exporting a video frame as an image file for printing
	10.13	Outline how to prepare sequence for output
	10.14	Describe how to perform a digital cut
	10.16	Demonstrate how to export sequence as a file
	10.16	Demonstrate how to export to different technologies.
	10.17	Troubleshoot video-editing software problems; resolving crashing issues; Video editor problems (processing issues, bad video outcome).
	10.18	Outline solving offline media
	10.19	Demonstrate how to re-link media
	10.20	Demonstrate how to reset Avid settings
	10.21	Demonstrate how to use the Avid Attic

Methods of Evaluation: A 3-hour essay written paper with 5 questions, each carrying 20 marks. Candidates are required to answer all questions. Candidates also undertake project/coursework in Photography and Video Editing with a weighting of 100%.

Recommended Learning Resources: Photography and Video Editing

Text Books	• Collins Complete Photography Course by John Garrett and Graeme Harris ISBN-10: 0007279922 • The Digital Photography Book by Scott Kelby ISBN-10: 032147404X • Digital Video Editing: A User's Guide by Peter Wells ISBN-10: 1861269528 • The Really, Really, Really Easy Step-by-step Guide to Creating and Editing Digital Videos Using Your Computer by Christian Darkin ISBN-10: 1847734235
Study Manuals	BCE produced study packs
CD ROM	Power-point slides
Software	Avid or any Video Editing software of Centre choice