National Vocational Certificate
Level 4 in
Information & Communication Technology
(Computer Graphics -Motion)

Competency Standard

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NAVTTC نیوٹک

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Competency Standards: Graphics Design (Motion)

Title A: Familiarization with Terminologies and Tools

Overview: These competency standards will ensure that the trainee will be competent in developing general knowledge, skills and understanding of the basics of creating art work. This module also provides training of graphics software.

Competency Unit	Performance Criteria	Knowledge and Understanding
A1: Learn to use the elements of design.	**P1**. Select respective elements of designs, all designs will contain most if not all the elements **P2**. Produce designs concept for any given product or service appropriately	**K1**. Understand the elements of design and their application in different pattern **K2**. Get to know color theory and composition **K3:** Get to know categories of Shapes in a painting automatically create a negative shape. **K4:** Understand direction of lines, which can be Horizontal, Vertical or Oblique; Horizontal suggests calmness, stability. Vertical gives a feeling of balance, formality and alertness. Oblique suggests movement and action. **K5:** Understand the size relationship of the area occupied by one shape to that of another. **K6:** Understand the texture can be physical (tactile) or visual. **K7:** Get to know the value/ tone which is the lightness or darkness of a color. Identify Positive/negative space.

A2: Build the concept of design.	**P1**. Use design principles (most of them if not all) to help make visual layout pleasing and interesting for a product or service	**K1**.Understand the design principles and the difference in a good or not good design
A3: understand the concept of perspective	**P1**: Use perspective to introduce the illusion of depth in an image **P2**: Use perspective in a design to make the design appear real by altering of size, location of objects on a canvas **P3**: Use perspective to draw attention to certain objects of interest or concept	**K1**: Perspective is a learned meaning of the relationship between different objects seen in space. E.g. Is the dark rectangle in front of a circle. **K2**: Perspective is created through the arrangement of objects in two-dimensional space to look like they appear in real life. **K3**: Perspective can be used to draw the audience into a visual. **K4**: Perception can be achieved through the use of relative sizes of objects, overlapping objects, and blurring or sharpening objects
A4: Understand the color theory and its relevance in design	**P1**: Check how to change the hue or saturation of a color can evoke a completely different feeling **P2**: Interpret importance of certain colors with respect to culture and mood depiction **P3**: Use appropriate color combination **P4**: Select and apply relevant color scheme and theme	**K1**: Understand how color in a design is very subjective. **K2**: Get Knowledge of colors, Warm colors includes red, orange, yellow warm colors reflect passion, happiness, and energy.

	P5: Apply appropriate color for the job of printing	
A5: Learn the typography	**P1**: Choose appropriate fonts relating or reflecting the design concept **P2**: choose the figure of Typeface	**K1**: Typography Anatomy, the expression of different fonts, their families and its use in design graphics **K2**: The choice of typeface and how you make it work with the layout, grid, color scheme, design theme
A6: Learn the tools for the graphics, audio, and video creations	**P1**: make use of graphics development software **P2**: make use of sound editing software **P3**: Study and make use of video	**K1**: Understand and learn the use of tools in Adobe Photoshop for creating and editing images, graphics, and pictures. **K2**: Understand and learn the use of tools in Adobe Illustrator for creating and editing type, and text. **K3**: Understand and learn the use of tools in Adobe Premiere for creating and editing videos **K4**: Understand and learn the use of tools in Adobe After Effects for creating videos in 3D view **K5**: Understand and learn the use of tools in Sound Forge for editing and creating audio files **K6**: Introduction to tools in Corel Draw and Final Cut Pro.

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Title B: Build Design Concept

Overview: These competency standards will ensure that the trainee will be competent to provide the concepts of a project from identifying its USP to creating the video sequence.

Competency Unit	Performance Criteria	Knowledge and Understanding
B1: Learn the use of Unique Selling Point (USP) of Product/ Service.	**P1**: Extract USP of a given product/ service by analyzing product characteristics, price structure, placement strategy or promotional strategy **P2**: Analyze requirements/ needs of target market/ audience **P3**: To know what motivates your customers' behavior and buying decisions. **P4**. Create design about your unique product or service.	**K1**: Have an understanding of requirements and needs of target market. **K2**: Identify the unique selling point of product or service. **K3**: Express implement the idea in visual forms design and video depending on client's requirement **K4**: Identify aspects of your product or service that your competitors cannot imitate
B2: Get to know branding guidelines and themes	**P1**: Design effective brand guidelines **P2**: Develop color themes based on brand guidelines **P3**: Use of brand guidelines in their design creation	**K1**: Pick up the big idea which permeates the brand, design the guidelines in the look and feel of the new brand design **K2**: Understand the knowledge of elements, principles of elements, storyboarding for creating brand guidelines, brand manual and themes

B3: To check layout the concept of brand guidelines	**P1**: Develop concept of products and services **P2**: Create and design the page or canvas layout based on brand guidelines **P3**: Create and design the page or canvas layout based on brand guidelines **P4**: Develop thumbnail sketches of objects and design	**K1**: Analyze concepts in order to develop thumbnails sketches **K2**: Learn the design to develop the sketches

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Title C: Analyze Cost Effective Solution

Overview: These competency standards will ensure that the trainee will be competent to calculate the optimal solution based on client requirements and designers experience.

Competency Unit	Performance Criteria	Knowledge and Understanding
C1: Check the time duration of video sequence	**P1**: Add time in seconds to individual scenes of video sequence	**K1**: Learn the calculation of time based on narration and audio in the scenes as well visuals **K2**: Understand the length in seconds of audio clip for each particular scene for dialogues use **K3**: Understand the synchronization of music in scenes, and computing of time duration accordingly of scenes.
C2: Learn the output format of video file.	**P1**: Choose the output file format, container, codec for motion video	**K1**: Understand the anatomy of a video file **K2**: Understand the characteristics of a video signal **K3**: Study the file formats concepts **K4**: Get knowledge of most common containers/ wrappers used (i.e. AVI, MPEG-4, MOV, OGG, etc) **K5**: Understand the codecs available and compatibility **K6**: Get Knowledge of common codecs (MPEG, MPEG, etc)

		K7: Examine video sampling bit rates and quality
		K8: Understand the process of transcoding part of a video sequence
		K9: Understand the difference between compressed and uncompressed videos
		K10: Get Knowledge of digital storage space or size of footage required
		K11: Get Knowledge of recording device and its quality in use on final product
C3: Learn the Ratio between Quality and Sizes	**P1**: Set optimal compression ratio for video file **P2**: Select output size of video file **P3**: Set resolution of video **P4**: Select optimal frame rate for playback **P5**: Describe frames per seconds as fps and its effect with increasing and decreasing fps on video file- increasing frame rate makes the video smother	**K1**: Get Information of compression methods available for media types **K2**: Get Knowledge of transmission and playback **K3**: Get Information for Resolution of video as defined by number of pixels present in the image.

Competency Standards: Graphics Design (Motion)

Title D: Photo Editing and Graphics Designing

Overview: These competency standards will ensure that the trainee will be competent to develop various editing techniques and skills in order to capture the essence of people, places, or objects for images to stand out those parts must be edited.

Competency Unit	Performance Criteria	Knowledge and Understanding
D1: Learn photo editing and scanning	**P1**: Edit photos through different editing software , tools and techniques available **P2**: Apply visual effects such as filters to a photo to enhance it **P3**: Merge different photos to create one single photo Scan and use photos **P4**: Use different color correction techniques for images Adjust brightness, contrast, color tint, color saturation of the image as a whole **P5**: Select sharpening, retouching, removing dust specks and scratches **P6**: Use transformation and styles Correct lens aberrations (barrel and pincushion), chromatic aberrations and light falloff in wide angle lens **P7**: Adjust the geometry by crop, rotate, correct perspective, distortion	**K1**: Understand and practice use of visual effects **K2**: Understand how two or more photos can be merged together to form one photo

| | **P8**: Use photo enhancement through the use of filters

P9: Import photos through scanning them in a layout | |

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Title E: Video Editing and Motion Design

Overview: These competency standards will ensure that the trainee will be competent to develop various video editing techniques and skills in order to capture the essence of people

Competency Unit	Performance Criteria	Knowledge and Understanding
E1: Learn the Color Correction	**P1**: apply color correction to the video using filters	**K1**: Get to know filters types for applying color correction to videos **K2**: Knowledge of color correction in order to convey message, e.g. white balance or unbalance to convey a feeling or emotion
E2: Learn visual effects and transitions	**P1**: Use filters to enhance video **P2**: Add effects and transitions with creativity to convey message to audience **P3**: Use built in transition to move from one scene to another. A transition gives the viewer sense of continuality. **P4**: Use different effects to produce results that cannot be achieved by normal techniques	**K1**: Understand the use of built in filters for adding visual effects. Different filters can be used to convey different messages **K2**: Understand other effects such as deleting unnecessary audio clip, or part of a scene **K3**: Get Know to create title slides for credits

E3: How to Embed video Clips	**P1**: Import and embed media assets into the project **P2**: Import edited pictures, images, and other graphics material edited using Photoshop into project **P3**: Import other video clips to be used into the project	**K1**: Learn to import audio files, voice over into computer from recording device **K2**: Understand how to edit and export audio files into suitable format for the project **K3**: Learn and understand the use of timeline for arranging and placing media elements for the project **K4**: Get the Knowledge of various settings for importing different media elements
E4: Learn the motion media	**P1**: Create motion media	**K1**: Understand the creation of motion using a video editing **K2**: Understand the settings, properties, preferences for creating motion

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Title F: Rendering Process

Overview: These competency standards will ensure that the trainee will be competent to understand the requirements of Final project and story.

Competency Unit	Performance Criteria	Knowledge and Understanding
F1: Learn the rendering process using Adobe Premiere	**P1**: Export final project or story using Adobe Premiere **P2**: Export final project out of Adobe Premiere into a format that can be viewed by others **P3**: Prepare and burn the project which allows playback on regular DVD players **P4**: Prepare and burn the source files for Backup and to use later.	**K1**: learn how to burn the data/source file **K2**: learn how to burn the projects **K3**: learn how to save projects using adobe premiere
F2: Learn the rendering using Final Cut Pro	**P1**: Export final project story using Final Cut Pro **P2**: Export final project out of Final Cut Pro into a format that can be viewed by others **P3**: Preparation and burning of a performance disk which allows playback on regular DVD players **P4**: Preparation and burning of a data disk (CD) to store all source files used to create project.	**K1**: learn how to burn the data or source file **K2**: learn how to burn the projects **K3**: learn how to save projects using adobe Final Cut Pro

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Title G: Software and Hardware Maintenance

> **Overview**: These competency standards will ensure that the trainee will be competent to understand the computer for a designer. It gives the trainee introduction to the computers and its usage

Competency Unit	Performance Criteria	Knowledge and Understanding
G1: Learn how to Install Graphics Software's	**P1**: Install relevant graphics software **P2**: Uninstall relevant graphics software	**K1**: Learn the Method of installing graphics software's **K2**: Learn the configuration required by software **K3**: Describe work environment of different software for designing artwork **K4**: Learn the Corel Draw and Final Cut Pro
G2: Learn the Operating System installation & Format	**P1**: Install relevant Operating System (Windows and Mac OS) **P2**: Format relevant Operating System (Windows and Mac OS)	**K1**: Get the knowledge of Operating System installation on computer. **K2**: Learn how to format a system/computer **K3**: Check operating systems upgrades and configuration.
G3: Devices & Peripherals Drivers installation	**P1**: Install and configure required drivers **P2**: Install and configure Peripherals devices	**K1**: Learn installation of software and configuration of drivers **K2**: Learn installation and configuration of Peripherals devices **K3**: Get to know about plug and play devices

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Title H: Communication with Others

>   **Overview**: These competency standards will ensure that the trainee will be competent to communicate efficiently and gather requirements from the client for product and services.

Competency Unit	Performance Criteria	Knowledge and Understanding
H1: Learn the Operating System installation & Format	**P1**: Install relevant Operating System (Windows and Mac OS) **P2:** Format relevant Operating System (Windows and Mac OS)	**K1**: Get the knowledge of Operating System installation on computer. **K2**: Learn how to format a system/computer **K3:** Check operating systems upgrades and configuration.
H2: Learn to Communicate with Senior/Junior/ Peers	**P1:** Interact with other professionals through effective teamwork **P2:** Communicate effectively with colleagues, peers, the community, other related personals to exchange information over an extended period of time	**K1** Develop a strategy for using communication skills **K2:** Learn & Monitor use of your communication skills, adapting your strategy as necessary, to produce the quality of outcomes required

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Title I: Duties and Rights at Work Place

Overview: These competency standards will ensure that the trainee will be competent to develop code of ethics and professional conduct, improve planning capabilities, and awareness to provision of employment rights.

Competency Unit	Performance Criteria	Knowledge and Understanding
I1: Learn to improve Ethics and professional conduct	**P1**: Perform the mandatory standard for Responsibility, Respect, Fairness, & Honesty	**K1**: Observe the role play of responsibility to take ownership for the decisions and actions which can cause the consequences. **K2**: Learn the accountability, subordinates, tangible, and assets. **K3:** Learn the responsibility to make decisions through case studies & white papers. **K4:** Understand the truth and act in truthful manner in conduct and communication
I2: Learn to plan the business process activities	**P1:** Define milestones, and learn optimal utilization of resource **P2:** Provide assistance to in-line manager **P3:** Create and keep documentations **P4:** Validate applicable company defined standards **P5:** Define daily activities	**K1**: Identification of tasks & their schedule **K2:** Understand the documentation methods

	P6: Achieve work breakdowns, divide module in smaller and more manageable components	
I3: Awareness of Rights	**P1:** Report illegal conduct or illegitimate action to appropriate management. **P2:** Protect propriety or confidential information	**K1:** Recognize the aspirational requirements of human rights in employment context **K2:** Get information about policies, rules and regulations that govern the work and workplace
I4: Understanding of copyrights and piracy	**P1:** Create a policy about what and what cannot be used from internet or other resources	**K1:** Understand the legal right granted to artist's work **K2:** Understand that unauthorized use or reproduction of copyright or patented material is illegal **K3:** Understanding the royalty free content.

Tools and Equipment

Sr. No.	Name of Item/ Equipment / Tools	Quantity
1.	**Computer Systems** Intel® 3rd gen. Core i7 3770 3.4GHz 8GB DDR3-1600 memory 1TB SATA hard drive internal SATA DVD & CD writer 2GB dedicated graphic card (256bit - GDDR 5, mini display port - HDMI - dual-link DVI) 5.1-channel surround sound support system true 750W power supply 4 way cooling chassis front USB 3.0,USB 2.0 ports up to 1GB LAN support Casing Intel approved, with rear and front USB ports and audio jacks Optical mouse (wireless) Multimedia keyboard (wireless)	20
2.	LCD Display 17"	20
3.	HP Laser Jet Printer – Black	01
4.	HP Laser Jet Printer- Color	01
5.	Flat bed Scanner	01
6.	Graphics Tablet	01
7.	USB Flash Drive	01
8.	Multimedia Projector	01
9.	Multimedia Projector Screen / Display Devices (Monitor's/LCD's)	01
10.	White Board	01
11.	Cables Display Cables (VGA/DVI/S-Video/HDMI)	

	LAN Cables & Connectors (RJ-45/STP-6)	
12.	Computer Tables & Chairs – Lab	20
13.	Study Tables & Chairs – Classroom	20
14.	Licensed Graphics Software Adobe Photoshop Adobe Lightroom Adobe Premiere Corel Draw Final Cut Pro Sound forge	20
15.	Licensed Microsoft Office Suite	20
16.	Licensed Nero Burning Software	20
17.	Licensed Operating System	20
18.	3000 VA UPS AMP Batteries Led AGS Reconditioned OR Generator to support a lab of 20 systems	10
19.	3KVA Stabilizer	20

List of Consumable Supplies

Sr. No.	Name of Consumable Supplies	Quantity
1.	Offset Paper A4 size (90 gm)	10 Rims
2.	Offset Paper Legal size	06 Rims
3.	White Board Markers	04 Dozen
4.	White Board Eraser	03
5.	Toner Black: Laser Printer	01
6.	Toner Colored: Laser Printer	01
7.	CD's/ DVD's (RW)	04 Dozen
8.	Ball Point Pens (blue)	1 dozen
9.	Ball Point Pens (blue)	1 dozen
10.	Office Files	20
11.	Office Box Files	05
12.	Notepads	05
13.	Pencils	1 dozen
14.	Office Stationary Set	01
15.	Air Freshener	01