



Jabatan Pembangunan Kemahiran  
Kementerian Sumber Manusia, Malaysia

NATIONAL OCCUPATIONAL SKILLS STANDARD  
(*STANDARD KEMAHIRAN PEKERJAAN KEBANGSAAN*)

J582-001-3:2019

INTERACTIVE MULTIMEDIA DESIGN

*REKABENTUK MULTIMEDIA INTERAKTIF*

LEVEL 3

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Department of Skills Development (DSD)  
Federal Government Administrative Centre  
62530 PUTRAJAYA, MALAYSIA

NATIONAL OCCUPATIONAL SKILLS STANDARD

**INTERACTIVE MULTIMEDIA DESIGN**

***REKABENTUK MULTIMEDIA INTERAKTIF***

**LEVEL 3**

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## Preface

### **Standard Definition**

The National Occupational Skills Standard (NOSS) is a Standard document that outlines the **minimum** competencies required by a skilled worker working in Malaysia for a particular area and level of occupational, also the path to achieve the competencies. The competencies are based on the needs of employment, according to the career structure for the occupational area and developed by industry experts and skilled workers.

The National Competency Standard (NCS) is a Standard document that outlines the competencies required by a skilled worker in Malaysia.

### **Description of Standard Components**

The document is divided into three (3) components which includes: -

#### **Component I    Standard Practice**

This component is about the information related to occupational area including introduction to the industry, Standard requirements, occupational structure, levelling of competency, authority and industry requirements as a whole.

#### **Component II    Standard Content**

This component is a reference to industry employers in assessing and improving the competencies that is required for a skilled worker. The competencies are specific to the occupational area. The component is divided into two (2) section which are the chart (Competency Profile Chart, CPC) and details of the competencies (Competency Profile, CP).

#### **Component III    Curriculum of Competency Unit**

This component is a reference for the training personnel to identify training requirements, design the curriculum, and develop assessment. The training hours that included in this component is based on the recommendations by the Standard Development Committee (SDC). If there are modifications to the training hours, the Department provides the medium for discussion and consideration for the matter.

**Abbreviation**

1	2D	Two Dimensional.
2	3D	Three Dimensional.
3	5R	Reduce, Reuse, Recycle, Refuse and Recover
4	ASWARA	National Academy of Arts Culture and Heritage.
5	AVI	Audio Video Interleaved.
6	dB	Decibel.
7	FLV	Flash Video.
8	MDEC	Multimedia Digital Economy Corporation.
9	MMU	Multimedia University.
10	MSC	Multimedia Super Corridor.
11	MP4	Moving Picture Expert Group – 4.
12	MOV	Quicktime Movie.
13	PERGRAKAN	National Graphic Design Organization.
14	SFX	Sound Effects.
15	SOP	Standard Operating Procedure.
16	VFX	Visual Effects.
17	VO	Voice Over.
18	WMV	Windows Media Video.

## Glossary

- 1 Appraisal Professional examination personal performance in organisation.
- 2 Gantt chart Type of bar chart that illustrates a project schedule.
- 3 In-house training Training program for learning opportunities developed by the organization in which they are used.
- 4 Job sheet Document (usually just a page) containing instructions to help a worker do his job.
- 5 Pipeline Describe the streamlined process of multimedia development or production on every stage.
- 6 Skill matrix Grid or table that clearly and visibly illustrates the technical, generic skills and competence held by individuals within a team.
- 7 Skills set Particular category of knowledge, abilities, and experience necessary to perform a job.
- 8 Task analysis Process of breaking a skill down into smaller, more manageable components.
- 9 Training module kit Learning materials for standardised or self-contained segment that with other such segments constitutes an educational course or training program.

**List of Figure**

- Figure 1 Occupational Structure for Interactive Multimedia.  
Figure 2 Occupational Area Structure for Interactive Multimedia.

**List of Table**

Not Available

**List of Appendix**

Not Available



### **Acknowledgement**

Director General of Department of Skills Development (DSD) would like to extend his gratitude to the National Skills Development Council (MPKK), Standard Technical Committee (JTS), Standard Technical Evaluation Committee (JTPS), Standard Development Committee (JPS), and organisation and individuals who have been involved directly or indirectly for the contribution, persistence and support in the development of this Standard until it is completed.

The Director General of DSD also would like to expresses his sincere thanks to the support and involvement of the Malaysia Digital Economy Corporation (MDEC), Multimedia University (MMU), National Academy of Arts Culture and Heritage (ASWARA) and National Graphic Design Organization (PERGRAKAN) as a major contributor, and effort in developing this Standard successfully, Siti Fauziah binti Jumadi for supervision of development sessions and also Jeffery bin Mohd Yusof Azaldin as documenter for the whole sessions.

**STANDARD PRACTICE**  
**NATIONAL OCCUPATIONAL SKILLS STANDARD (NOSS) FOR:**  
**INTERACTIVE MULTIMEDIA DESIGN**  
**LEVEL 3**

## 1. Introduction

### 1.1. Occupation Overview

The Multimedia Super Corridor (MSC) Malaysia program was officially launched to transform Malaysia into a modern nation, nurturing a knowledge-based society and to create a hub for innovative producers and users of multimedia technology. It was shaped to provide the best environment to cultivate the full potential of the multimedia industry without any limitations.

Multimedia is about making information fun and interactive to acquire. It is a digital interactive presentation featuring text, graphic, audio, animation and video contents to educate a certain topic through multiple platforms via online or offline devices. The outcome of an interactive multimedia presentation can be in the form of slides presentation, information kiosk, websites, movies/channels selection and mobile applications.

Interactive multimedia application is developed to make learning entertaining involving the actions or input of a user. It is widely used for training purposes, courseware, simulation, games and digital entertainment applications. An interactive multimedia application is applicable to all and any types of industry in the world. Whenever there is a teaching and learning process is involved, interactive multimedia application is the exact medium to deliver the tasks.

To produce a sufficient amount of interactive multimedia artist and designers in this ever-growing industry is through constant training and recruitment that meets the industrial requirement for the multimedia industry. Therefore, the educational and training modules must be aligned with the skills needed based on the industrial job scope.

Realising the great demand for skilled interactive multimedia application artist and designers in the multimedia industry, the Department of Skills Development (DSD) have made the required initiative to produce a National Occupational Skills Standard (NOSS) that outlines the dexterity required of an interactive multimedia application artist and designers prepared by the industry experts in the country.

This NOSS features the fundamental guidelines and primary rules or principle of an interactive multimedia application artist and designers working in Malaysia following the career structure suggested by the multimedia industry. It is with great hopes that the outcome of this NOSS will produce highly skilled interactive multimedia artist and designers to succeed in their career path.

## 1.2. Rationale of NOSS Development

This document is the result of a revision NOSS document that incorporates the skills set from the following NOSS document:

- a) IT-070-2 – Multimedia Artist Authoring and IT-070-3 – Multimedia Designer Authoring previously developed in 2000 and 2008;
- b) IT-060-3 – Multimedia Designer – Animation and Visual previously developed in 2000 and 2008;
- c) IT-050-2 – Multimedia Artist – Visual previously developed in 2000 and 2008; and
- d) IT-040-2 – Multimedia Artist Animator previously developed in 2000 and 2008.

The rationale and objectives of reviewing this NOSS is to furnish the essential enquiry for benchmarking and most of all, for conducting a much more comprehensive training for the future generation of Interactive Multimedia Artist and Interactive Multimedia Designer. This NOSS enhanced version incorporates the element of latest technology advancement in the multimedia industry in order to produce a quality, professional and well-trained Interactive Multimedia Artist and Designer for Malaysian multimedia industry.

## 1.3. Rationale of Occupational Structure and Occupational Area Structure

The Occupational Structure of Interactive Multimedia starts at Level 2 as shown in Figure 1. There are no level 1 personnel in the job structure since the job for Interactive Multimedia is carried out in a significant range of varied work activities, performed in a variety of context and requires individual responsibility and autonomy. As for Occupational Area Structure the panel of experts concluded to develop this NOSS starting at level 3 for Interactive Multimedia Design justifying that the job scope requires a combined skill set from level 2 in making decision to perform a complete work cycle.

## 1.4. Regulatory/Statutory Body Requirements Related to Occupation

All Interactive Multimedia Designer and Artist occupational activities falls under the purview of the following Laws of Malaysia:

- a) Department of Environment (DOE).
  - i) Environmental Quality Act 1974 (Act 127)
- b) Department of Safety and Health (DOSH).
  - i) Occupational Safety and Health Act 1994 (Act 514)

## 1.5. Occupational Prerequisite

No prerequisite.

### **1.6. General Training Prerequisite for Malaysian Skills Certification System**

Candidates for this NOSS program should fulfil all the requirements as stated below.

The minimum requirements set forth before registering for this program are:

- a) Able to read and write in Bahasa Malaysia and English; and
- b) Computer literate.

## 2. Occupational Structure (OS)

Section	(J) Information and Communication
Group	(582) Software Publishing
Area	Interactive Multimedia
Level 5	Interactive Multimedia Director
Level 4	Interactive Multimedia Developer
Level 3	Interactive Multimedia Designer
Level 2	Interactive Multimedia Artist
Level 1	No Level

Figure 1: Occupational Structure for Interactive Multimedia.

## 3. Occupational Area Structure (OAS)

Section	(J) Information and Communication
Group	(582) Software Publishing
Area	Interactive Multimedia
Level 5	Interactive Multimedia Direction
Level 4	Interactive Multimedia Development
Level 3	Interactive Multimedia Design
Level 2	Embedded to Level 3
Level 1	No Level

Figure 2: Occupational Area Structure for Interactive Multimedia.

#### 4. Definition of Competency Levels

The NOSS is developed for various occupational areas. Below is a guideline of each NOSS Level as defined by the Department of Skills Development, Ministry of Human Resources, Malaysia.

- Level 1: Competent in performing a range of varied work activities, most of which are routine and predictable.
- Level 2: Competent in performing a significant range of varied work activities, performed in a variety of contexts. Some of the activities are non-routine and required individual responsibility and autonomy.
- Level 3: Competent in performing a broad range of varied work activities, performed in a variety of contexts, most of which are complex and non-routine. There is considerable responsibility and autonomy and control or guidance of others is often required.
- Level 4: Competent in performing a broad range of complex technical or professional work activities performed in a wide variety of contexts and with a substantial degree of personal responsibility and autonomy. Responsibility for the work of others and allocation of resources is often present.
- Level 5: Competent in applying a significant range of fundamental principles and complex techniques across a wide and often unpredictable variety of contexts. Very substantial personal autonomy and often significant responsibility for the work of others and for the allocation of substantial resources features strongly, as do personal accountabilities for analysis, diagnosis, planning, execution and evaluation.

## 5. Award of Certificate

The Director General may award, to any person upon conforming to the Standards the following skills qualifications as stipulated under the National Skills Development Act 2006 (Act 652):

- a) Malaysian Skills Certificate (MSC); or
- b) Statements of Achievement.

## 6. Occupational Competencies

The Interactive Multimedia Design Level 3 personnel are competent in performing the following core competencies:

- a) Graphic Interface Production;
- b) Audio & Video Production;
- c) Interactive Application Development;
- d) Interactive Multimedia Technical Support; and
- e) Interactive Multimedia Design Supervision.

## 7. Work Conditions

Generally, Interactive Multimedia Designer work in a team with the Multimedia Developer and other Multimedia Specialists, such as animators and video producers who creates the multimedia features. Because of the size and complexity of some applications, there may be several designers working on one or more aspects of the application. In smaller projects, the designer may take on other roles, such as animation, depending on his or her expertise. Interactive Multimedia Designer typically spend the majority of their time in front of a computer terminal, and work in clean, comfortable offices. Most Interactive Multimedia Designer work about 40 hours per week. Long hours or weekend work may be required, however, to meet deadlines or fix unexpected technical problems.

## 8. Employment Prospects

Employment growth for these Interactive Multimedia Designer is on the rise. In view of the political stability, economic growth and the Industrial Revolution 4.0, there is a big and growing demand for Interactive Multimedia Designer. The future demand and prospects for Interactive Multimedia Designer is promising and it is also a pathway to a flourishing and rewarding career of being an entrepreneur.

Some other related industries where the Interactive Multimedia Designer can venture into includes:

- a) Advertising firms;
- b) Movie studios;
- c) Television production; and
- d) Software business.



## **9. Up Skilling Opportunities**

Skills and knowledge requirements move on very quickly in multimedia and consequently the most important training consideration for designer is to keep their skills up to date with new developments. In most cases this will mean adapting existing skills to a new package, learning a new programming language or working with a new platform. This can be achieved by learning from other members of a team, attending short courses, keeping up to date via newsgroups, keeping an eye on websites which showcase the newest ideas, and reading specialist journals. Designer may remain focused on the production of multimedia or, with experience, move into middle management roles, such as team leader, project manager or production manager.

## 10. Organisation Reference for Sources of Additional Information

The following organisations can be referred as sources of additional information which can assist in defining the document's contents.

- a) Malaysia Digital Economy Corporation (MDEC) Sdn Bhd  
2360 Persiaran APEC,  
63000 Cyberjaya,  
Selangor Darul Ehsan.  
Tel: +1 800-88-8338  
<https://www.mdec.my>  
[cllc@mdec.com.my](mailto:cllc@mdec.com.my)
  
- b) National Academy of Arts Culture and Heritage (ASWARA)  
464 Jalan Tun Ismail,  
50480 Kuala Lumpur.  
Tel: +603 – 2278 5999  
<http://www.aswara.edu.my>  
[info@aswara.edu.my](mailto:info@aswara.edu.my)
  
- c) Multimedia University (MMU)  
Persiaran Multimedia,  
63100 Cyberjaya,  
Selangor Darul Ehsan.  
Tel: +1 300 800 668  
<https://www.mmu.edu.my>
  
- d) National Graphic Design Organisation (PERGRAKAN)  
5-3F Setia Perdana BE,  
U13/BE Setia Alam,  
40170 Shah Alam,  
Selangor Darul Ehsan.  
Tel: +603-5892 4704  
<http://www.pergrakan.org>  
[pergrakan@gmail.com](mailto:pergrakan@gmail.com)

**11. Standard Technical Evaluation Committee**

NO	NAME	POSITION & ORGANISATION
<b>CHAIRMAN</b>		
1	Zaid bin Mat San	Principal Assistant Director Department of Skills Development (DSD)
<b>EVALUATION PANEL</b>		
1	Dr. Ahmad Hisham bin Zainal Abidin	Dean School of Creative Industry Management & Performing Arts (SCIMPA) Universiti Utara Malaysia (UUM)
2	Muhammad Nizam bin Zainuddin	Senior Lecturer Faculty of Management Multimedia University (MMU)
3	Bazil Akmal bin Bidin	Incubator Manager @ LEVEL UP Inc Malaysia Digital Economy Corporation (MDEC)
4	Sharif Zulkepele bin Sharif Harun	Chief Executive Officer (CEO) Infra Minda Sdn Bhd
5	Syamsul Rizal bin Abdul Halim	Web Developer and Digital Marketer TIME Dot Com Sdn Bhd
<b>SECRETARIAT</b>		
1	Mahazrul bin Kamarrudin	Senior Assistant Director Department of Skills Development (DSD)

**12. Standard Development Committee****INTERACTIVE MULTIMEDIA DESIGN****LEVEL 3**

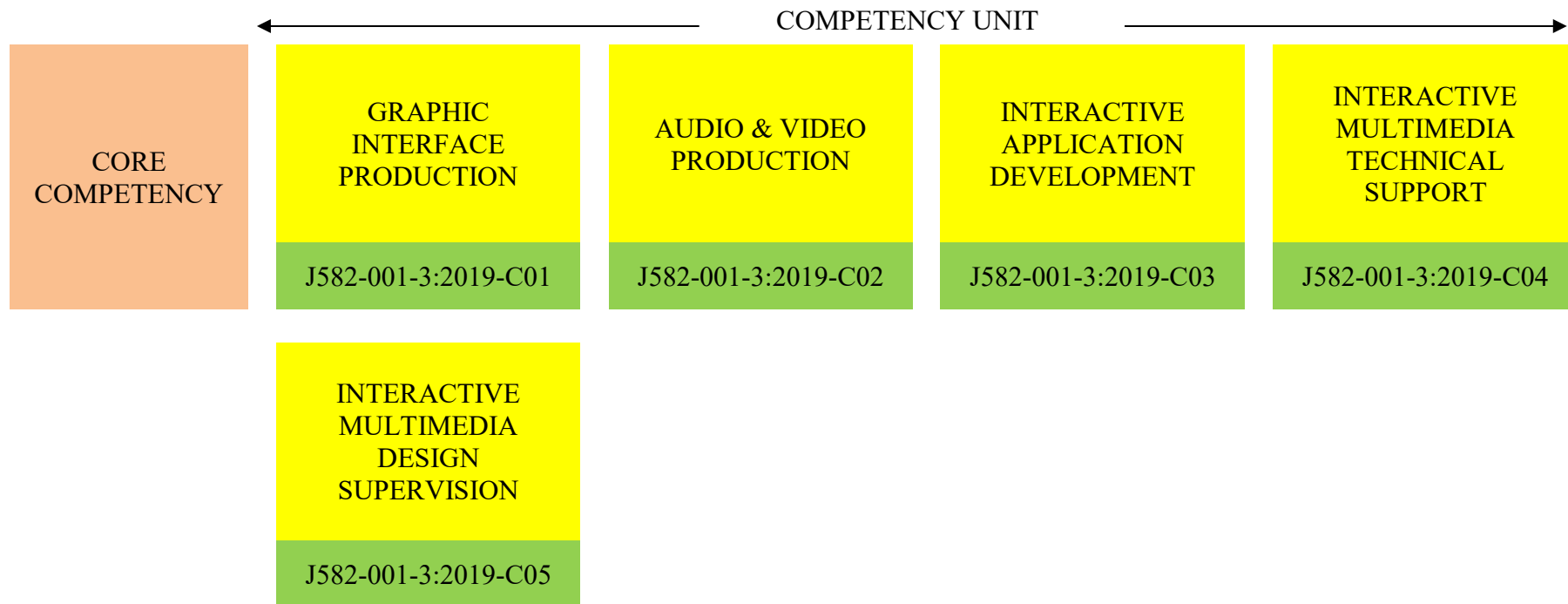
NO	NAME	POSITION & ORGANISATION
DEVELOPMENT PANEL		
1	Affizie bin Abu Kasim	Vocational Training Officer National Youth Skills Institute (IKBN) Kuala Langat
2	Hazleen binti Ahmad	Vocational Training Officer Industrial Training Institute (ILP) Kuala Langat
3	Tengku Muzlina Hanim binti Tengku Semara	Vocational Training Officer Industrial Training Institute (ILP) Kuala Langat
4	Jazmi Izwan bin Jamal	Dean Faculty of Animation and Multimedia National Academy of Arts Culture and Heritage (ASWARA)
5	Khalil bin Zulkifflee	Managing Director CPROFILES
6	Mohd. Fuad Mahadi bin Ya'akob	Managing Director Adi Karya Sdn Bhd
7	Muhamad Fadlishah bin Rusli	Managing Director Akar Digital Sdn Bhd
8	Muhammad Firdaus bin Amairudin	Director Rekapedia Solution
9	Nik Shahrinin bin Wan Mohd Yusoff	Director CEKNEK PRODUCTION
10	Haizal Izham bin Abd. Rahman	Manager Colours Pro Resources
11	MD. Rihdwan bin Amran	Manager Fayyadh Design
12	Mohd. Faizal bin Mukhtar	Manager Mantera Media Enterprise

NO	NAME	POSITION & ORGANISATION
DEVELOPMENT PANEL		
13	Siti Fairuz binti Mohd Rawi	Manager KRU Academy Sdn Bhd
14	Azleen binti Ismail	Application Support Executive Insoft (M) Sdn Bhd
15	Fazreen Ferdianshah bin Mohd. Fauzi	Designer Elyzian Interactive PLT
FACILITATOR		
1	Razalee bin Che Ros	CIAST/PPL/FDS-0016-2012 Insource Solutions

**STANDARD CONTENT**  
**NATIONAL OCCUPATIONAL SKILLS STANDARD (NOSS) FOR:**  
**INTERACTIVE MULTIMEDIA DESIGN**  
**LEVEL 3**

**13. Competency Profile Chart (CPC)**

SECTION	(J) INFORMATION AND COMMUNICATION		
GROUP	(582) SOFTWARE PUBLISHING		
AREA	INTERACTIVE MULTIMEDIA		
NOSS TITLE	INTERACTIVE MULTIMEDIA DESIGN		
NOSS LEVEL	THREE (3)	NOSS CODE	J582-001-3:2019



#### 14. Competency Profile (CP)

SECTION	(J) Information and Communication		
GROUP	(582) Software Publishing		
AREA	Interactive Multimedia		
NOSS TITLE	Interactive Multimedia Design		
NOSS LEVEL	Three (3)	NOSS CODE	J582-001-3:2019

CU TITLE & CU CODE	CU DESCRIPTOR	WORK ACTIVITIES	PERFORMANCE CRITERIA
1 Graphic Interface Production  J582-001-3:2019-C01	Graphic Interface Production describes the competency in producing text, write-up, graphic/image and motion. To perform this competency unit, the person is required to comprehend about the literature content, vector and raster image, image sequence clip and slide video, 2D and 3D motion. The initial process translates the idea into visual and relates with the multimedia content.  The person who is competent in this CU should be able to illustrate text and typography, prepare content write-up, prepare graphic and image, produce motion files and evaluate content production.	1. Illustrate text and typography.	1.1 Job instruction interpreted in accordance with company procedure. 1.2 Font selected in accordance with job instruction. 1.3 Character type in proportion with client requirements. 1.4 Text produced in accordance with client requirements.
		2. Prepare content write-up.	2.1 Job instruction interpreted in accordance with company procedure. 2.2 Content created in accordance with job specification. 2.3 Content write-up drafted in accordance with client specification. 2.4 Endorsement obtained from superior in accordance with company specification.



CU TITLE & CU CODE	CU DESCRIPTOR	WORK ACTIVITIES	PERFORMANCE CRITERIA
	<p>The outcome of this CU is motion graphic content production meets the expectation in term of informative, attractive and presentable in compliance with client needs.</p>	<p>3. Prepare graphic and image.</p>	<p>3.1 Job instruction interpreted in accordance with company procedure.                      3.2 Image source confirmed in accordance with client requirements.                      3.3 Story board prepared in accordance with client requirements.                      3.4 Image and graphic files endorsed in accordance with company SOP.                      3.5 Image and graphic files record submitted to video director.</p>
<p>4. Produce motion files.</p>		<p>4.1 Job instruction interpreted in accordance with company procedure.                      4.2 Motion files production requirements confirmed in accordance with job specification.                      4.3 Emerging technology (3D virtual) element implemented in accordance with company specification.                      4.4 Motion file rendering which includes duration, audio/video, format and encode process implemented in accordance with job specification.</p>	

CU TITLE & CU CODE	CU DESCRIPTOR	WORK ACTIVITIES	PERFORMANCE CRITERIA
		5. Evaluate content production.	5.1 Selected checklist acquired in accordance with company specification. 5.2 Multimedia content presented and verified by superior. 5.3 Content improvement in line with project direction in accordance with client specification. 5.4 Endorsement obtained from superior in accordance with company specification.
2 Audio & Video Production  J582-001-3:2019-C02	Audio & Video Production describes the competency in producing text, write-up, graphic/image, audio, video, and motion. To perform this competency unit, the person is required to comprehend about the literature content, and raster image, sound/music, footage clip and slide video. The initial process translates the idea into visual and relates with the multimedia content.  The person who is competent in this CU should be able to prepare content write-up, prepare graphic and image, prepare audio files,	1. Prepare content write-up.  2. Prepare graphic and image.	1.1 Job instruction interpreted in accordance with company procedure. 1.2 Content write-up drafted in accordance with client specification. 1.3 Content write up created in accordance with job specification. 1.4 Endorsement obtained from superior in accordance with company specification.  2.1 Job instruction interpreted in accordance with company procedure. 2.2 Image source confirmed in accordance with client requirements. 2.3 Story board prepared in accordance with client requirements.

CU TITLE & CU CODE	CU DESCRIPTOR	WORK ACTIVITIES	PERFORMANCE CRITERIA
	<p>prepare video files and evaluate content production.</p> <p>The outcome of this CU is audio / video content production meets the expectation in term of informative, attractive and presentable in compliance with client needs.</p>		<p>2.4 Image and graphic files endorsed in accordance with company SOP.</p> <p>2.5 Image and graphic files record submitted to superior.</p>
		<p>3. Prepare audio files.</p>	<p>3.1 Job instruction interpreted in accordance with company procedure.</p> <p>3.2 Audio source confirmed in accordance with client requirements.</p> <p>3.3 Audio sample composed in accordance with client requirements.</p> <p>3.4 Audio files matched with job description in accordance with client requirements.</p> <p>3.5 Audio files record submitted to superior.</p>
		<p>4. Prepare video files.</p>	<p>4.1 Job instruction interpreted in accordance with company procedure.</p> <p>4.2 Video pre-production requirements listed in accordance with company guideline.</p> <p>4.3 Video footage produced in accordance with job specification.</p> <p>4.4 Select clip footage by frame duration in accordance from video director.</p>

CU TITLE & CU CODE	CU DESCRIPTOR	WORK ACTIVITIES	PERFORMANCE CRITERIA
			4.5 Video edited in accordance with job specification. 4.6 Video files endorsed in accordance by video director. 4.7 Video files production record and submitted to video director.
		5. Evaluate content production.	5.1 Selected checklist acquired in accordance with company specification. 5.2 Multimedia content presented and verified by superior. 5.3 Content improvement in line with project direction in accordance with client specification. 5.4 Endorsement obtained from superior in accordance with company specification.
3 Interactive Application Development  J582-001-3:2019-C03	Interactive Application Development describes the competency of designing and creating multimedia application that combine the contents comprising of text, images/graphic, audio, video and animation/motion files (digital media). To perform this competency unit the person is	1. Prepare proposal design.	1.1 Work order interpreted in accordance with job specification. 1.2 Layout sketch produced in accordance with job specification. 1.3 Layout design demonstrated to superior. 1.4 Layout design approved in accordance with job description.

CU TITLE & CU CODE	CU DESCRIPTOR	WORK ACTIVITIES	PERFORMANCE CRITERIA
	<p>required to have an artistic and design skills together with the ability of using interactive multimedia application development software</p> <p>The person who is competent in this CU should be able to prepare proposal design, setup application platform, prepare application workflow, develop interactive application, evaluate product application and submit final application.</p> <p>The outcome of this CU is a fully function interactive multimedia application on multiple output and devices of end-user in accordance with the client requirements.</p>	<p>2. Setup application platform.</p>	<p>2.1 Offline/online application output confirmed in accordance with client specification.</p> <p>2.2 Compatible cross-platform on various device confirmed in accordance with client specification.</p> <p>2.3 Required software and hardware are installed in accordance with manufacturers specification.</p>
		<p>3. Prepare application workflow.</p>	<p>3.1 Required visual navigation (wireframe) designed in accordance with job specification.</p> <p>3.2 Navigation flow chart (diagram)organised in accordance with job specification.</p> <p>3.3 Flow chart and navigation in line in accordance with job specification.</p> <p>3.4 Endorsement obtained from superior in accordance with company specification.</p>
		<p>4. Develop interactive application.</p>	<p>4.1 Content layout authored in accordance with job specification.</p> <p>4.2 Interactive functional features run as required in accordance with application requirements.</p> <p>4.3 Multimedia application compatible with required output and device.</p>

CU TITLE & CU CODE	CU DESCRIPTOR	WORK ACTIVITIES	PERFORMANCE CRITERIA
			<p>4.4 Codes implemented with multimedia content.</p> <p>4.5 Fully function application endorsed for presentation.</p> <p>5. Evaluate product application.</p> <p>5.1 Notification to client and method of presentation confirmed.</p> <p>5.2 Application presentation delivered in accordance with job specification.</p> <p>5.3 Client experience on application acknowledged.</p> <p>5.4 Solution provided to client.</p> <p>5.5 Application produced as per client endorsement.</p> <p>6. Submit final application.</p> <p>6.1 Final application published in accordance with job requirement.</p> <p>6.2 Final application submitted to the client in accordance with SOP.</p> <p>6.3 Project sign-off documentation completed in accordance with SOP.</p>
<p>4 Interactive Multimedia Technical Support</p> <p>J582-001-3:2019-C04</p>	<p>Interactive Multimedia Technical Support describes the competency in providing technical support services which includes issues resolution and new multimedia installation services.</p>	<p>1. Identify interactive multimedia technical support requirements.</p>	<p>1.1 Scope of work technical requirements identified based on new installation/ existing.</p> <p>1.2 Platform/hardware (pc/mobile/tv/kiosk/hosting/server) identified.</p> <p>1.3 Software/ application version identified.</p>

CU TITLE & CU CODE	CU DESCRIPTOR	WORK ACTIVITIES	PERFORMANCE CRITERIA
	<p>The person who is competent in this CU should be able to identify interactive multimedia technical support requirements, perform technical works and troubleshoot application error.</p> <p>The outcome of this CU is all multimedia hardware and software are running with the latest release and valid license, data safely back-up, problem/issues analysed and resolved in accordance with technical requirements.</p>	<p>2. Perform technical works.</p> <p>3. Troubleshoot application error.</p>	<p>1.4 Physical condition of hardware components functioned in accordance with manufacturers specification.</p> <p>1.5 Subscription license status confirmed.</p> <p>1.6 Technical checklist report produced in accordance with technical requirement.</p> <p>2.1 Technical checklist report obtained.</p> <p>2.2 Maintenance report interpreted.</p> <p>2.3 Backup software/application performed on media storage.</p> <p>2.4 Software/application installed on platform/hardware.</p> <p>2.5 Test run software/application performed in accordance with application specification.</p> <p>2.6 Client's feedback/approval obtained and documented.</p> <p>3.1 Case retrieved from client/superior complaint.</p> <p>3.2 Case category identified.</p> <p>3.3 Online support performed.</p> <p>3.4 Onsite physical support performed.</p> <p>3.5 Resolution report submitted to client/superior.</p>

CU TITLE & CU CODE	CU DESCRIPTOR	WORK ACTIVITIES	PERFORMANCE CRITERIA
5 Interactive Multimedia Design Supervision  J582-001-3:2019-C05	<p>Interactive Multimedia Design Supervision describes the competency in coordinating a team as part of the work process in people's administration. This competency unit outline works scope of supervisory functions as stipulated in company description and SOP.</p> <p>The person who is competent in this CU should be able to coordinate job delegation, prepare job assignment, supervise work progress, assess staff performance, prepare section meeting, conduct in-house training, prepare project report and optimise equipment utilization.</p> <p>The outcome of this CU is the establishment of a conducive work environment, a disciplined and knowledgeable workforce with regards to quality and productivity in accordance with company objectives and targets.</p>	1. Coordinate job delegation.	1.1 Skill set of team member established. 1.2 Requirement and specification listed. 1.3 Timeline planning confirmed in accordance with project schedule. 1.4 Team job assignment aligned with project timeline. 1.5 Cost of project mobilisation determined in accordance with SOP. 1.6 Job delegation record documented as monitoring references in accordance with SOP. 1.7 Documentation and project operation details prepared in accordance with SOP.
		2. Prepare job assignment.	2.1 Job tasks identified and prioritised according to timeline, manpower and equipment. 2.2 Job task specification and requirement communicated in accordance with scope of works. 2.3 Job assignment prepared and communicated to team according to priority. 2.4 Changes on schedules communicated to team and reported to immediate superior in accordance with SOP.



CU TITLE & CU CODE	CU DESCRIPTOR	WORK ACTIVITIES	PERFORMANCE CRITERIA
		3. Supervise work progress.	3.1 Team member target performance meet with project timeline. 3.2 Clear instruction and constructive feedback communicated to team member timely to support achievement. 3.3 Immediate corrective action taken according to project requirements. 3.4 Changes related problems and addressed to team and updated according to supervisory structure and line of project progress.
		4. Assess staff performance.	4.1 Appraisal requirements for personnel identified in accordance with job specifications. 4.2 Scoring method used for appraisal explained. 4.3 Reporting format used explained. 4.4 Communication skills applied in appraisal explained. 4.5 Compilation of reports and documents performed. 4.6 Staff performance assessment process explained.
		5. Prepare section meeting.	5.1 Meeting facilities determined in accordance with company procedures.

CU TITLE & CU CODE	CU DESCRIPTOR	WORK ACTIVITIES	PERFORMANCE CRITERIA
			5.2 Meeting materials arranged in accordance with company procedures. 5.3 Minutes of meeting recorded in accordance with section meeting requirements. 5.4 Meetings outcome distributed in accordance with company procedures.
		6. Conduct in-house training.	6.1 Training schedule prepared in accordance with organisation requirements. 6.2 Training budget requirements prepared in accordance with organisation requirements. 6.3 Selected training participants invited in accordance with training schedule. 6.4 Training assessment report prepared in accordance with organisation requirements.
		7. Prepare project report.	7.1 Latest project update and documentations collected from team members. 7.2 Project records updated in accordance with report format.

CU TITLE & CU CODE	CU DESCRIPTOR	WORK ACTIVITIES	PERFORMANCE CRITERIA
			7.3 Reports are submitted to management according to company procedures.
		8. Optimise equipment utilisation.	8.1 Equipment record assessed in accordance with utilisation/company policy. 8.2 Maintenance record verified in accordance with SOP. 8.3 Health Safety Environment (HSE) Compliance Standard Policy verified.

**CURRICULUM OF COMPETENCY UNIT**  
**NATIONAL OCCUPATIONAL SKILLS STANDARD (NOSS) FOR:**  
**INTERACTIVE MULTIMEDIA DESIGN**  
**LEVEL 3**

**15. Curriculum of Competency Unit**  
**15.1. Graphic Interface Production**

SECTION	(J) Information and Communication		
GROUP	(582) Software Publishing		
AREA	Interactive Multimedia		
NOSS TITLE	Interactive Multimedia Design		
COMPETENCY UNIT TITLE	Graphic Interface Production		
LEARNING OUTCOMES	<p>The learning outcome of this competency unit is motion graphic content production meets the expectation in terms of informative, attractive and presentable in compliance with client needs.</p> <p>Upon completion of this competency unit, trainees should be able to:</p> <ol style="list-style-type: none"> <li>1. Illustrate text and typography.</li> <li>2. Prepare content write-up.</li> <li>3. Prepare graphic and image.</li> <li>4. Produce motion files.</li> <li>5. Evaluate content production.</li> </ol>		
TRAINING PREREQUISITE (SPECIFIC)	Not Available		
CU CODE	J582-001-3:2019-C01	NOSS LEVEL	Three (3)

WORK ACTIVITIES	RELATED KNOWLEDGE	RELATED SKILLS	ATTITUDE/ SAFETY/ ENVIRONMENT	ASSESSMENT CRITERIA
1. Illustrate text and typography.	1.1 Job sheet details. <ul style="list-style-type: none"> <li>• Client information</li> <li>• Date of issue</li> <li>• Date of completion</li> </ul>	1.1 Receive job instruction. 1.2 Identify font. 1.3 Adjust character type.	<u>ATTITUDE</u> 1.1 Comply with job assignment. 1.2 Implement with type setting and design type.	1.1 Job instruction confirmed as per job description. 1.2 Font selected in accordance with job description.

WORK ACTIVITIES	RELATED KNOWLEDGE	RELATED SKILLS	ATTITUDE/ SAFETY/ ENVIRONMENT	ASSESSMENT CRITERIA
	<ul style="list-style-type: none"> <li>• Job description</li> <li>• Equipment/ tools</li> <li>• Job assignment</li> <li>• Job approval</li> <li>• Scope</li> <li>• Concept</li> <li>• Content</li> </ul> <p>1.2 Font selections.</p> <ul style="list-style-type: none"> <li>• Character of font</li> <li>• Family type</li> </ul> <p>1.3 Typo anatomy.</p> <ul style="list-style-type: none"> <li>• Serif and san serif</li> <li>• Tracking</li> <li>• Leading</li> <li>• Kerning</li> <li>• Type size</li> <li>• Style</li> </ul> <p>1.4 Text creation.</p> <ul style="list-style-type: none"> <li>• Description</li> <li>• Icon</li> </ul> <p>1.5 Creative commons.</p>	<p>1.4 Create text and typography.</p>	<p><u>SAFETY</u> Not Available</p> <p><u>ENVIRONMENT</u> 1.1 Practice 5R (Reduce, Reuse, Recycle, Refuse and Recover).</p>	<p>1.3 Character type confirmed in proportion with job requirements.</p> <p>1.4 Text produced in accordance with job requirements.</p> <p>1.5 Text and typography illustrations process described.</p> <p>1.6 Types of fonts and selections criteria explained.</p> <p>1.7 Types of fonts anatomy and text creation listed.</p>

WORK ACTIVITIES	RELATED KNOWLEDGE	RELATED SKILLS	ATTITUDE/ SAFETY/ ENVIRONMENT	ASSESSMENT CRITERIA
<p>2. Prepare content write-up.</p>	<p>2.1 Job sheet details.                      2.2 Concept ideas.                          • Concept definition                          • Problem identification                          • Proposal implementation                          • Approval and endorsement                      2.3 Creative content.                          • Listing of topics                          • Storyline                          • Treatment plot                          • Script                      2.4 Proposal development.                          • Format                          • Introduction                          • Objective                          • Structure                          • Content                      2.5 Material research.                      2.6 Compilation process.</p>	<p>2.1 Receive job instruction.                      2.2 Brainstorm ideas with team/individual.                      2.3 Organize topics.                      2.4 Develop proposal write-up.                      2.5 Collect research material.                      2.6 Compile write-up.</p>	<p><u>ATTITUDE</u>                      2.1 Compliance with job assignment.                      2.2 Discuss ideas and examine topic.                      2.3 Identify proposal and recognize write up material.</p> <p><u>SAFETY</u>                      2.1 Document saved as confidential.</p> <p><u>ENVIRONMENT</u>                      2.1 Practice 5R (Reduce, Reuse, Recycle, Refuse and Recover).</p>	<p>2.1 Job instruction confirmed as per job description.                      2.2 Content write-up created in accordance with job specification.                      2.3 Draft content write-up produced in accordance with job specification.                      2.4 Content write-up checked and endorsed according to job requirements.                      2.5 Content write-up preparation procedure described.</p>

WORK ACTIVITIES	RELATED KNOWLEDGE	RELATED SKILLS	ATTITUDE/ SAFETY/ ENVIRONMENT	ASSESSMENT CRITERIA
3. Prepare graphic and image.	3.1 Job sheet details. 3.2 Type of visual raster and vector. 3.3 Drawing sketches. <ul style="list-style-type: none"> <li>• Brainstorming</li> <li>• Thumbnail</li> <li>• Comprehensive</li> </ul> 3.4 Photo and graphic editing. <ul style="list-style-type: none"> <li>• Colour balance</li> <li>• Tone and curve</li> <li>• Hue saturation and luminance</li> <li>• Sharpen</li> </ul> 3.5 Image and graphic files creation. <ul style="list-style-type: none"> <li>• Photography</li> <li>• Image manipulation</li> <li>• Vector drawing</li> </ul> 3.6 File extension and directory. <ul style="list-style-type: none"> <li>• File name</li> <li>• Resolution</li> <li>• Extension</li> <li>• Back up files</li> </ul>	3.1 Receive job instruction. 3.2 Identify image source. 3.3 Visualise image/graphic ideas. 3.4 Edit image and graphic. 3.5 Produce image and graphic files. 3.6 Save image and graphic files.	<u>ATTITUDE</u> 3.1 Comply with job assignment. 3.2 Meticulous in image graphic source and ideas in design.  <u>SAFETY</u> 3.1 Implement file directory and back up files.  <u>ENVIRONMENT</u> 3.1 Practice 5R (Reduce, Reuse, Recycle, Refuse and Recover).	3.1 Job instruction confirmed in accordance with job description. 3.2 Image source confirmed in accordance with job requirements. 3.3 Story board produced in accordance with job requirements. 3.4 Image and graphic files confirmed in accordance with job requirements. 3.5 Image and graphic files record submitted for verification. 3.6 Graphic/image preparation process explained.



WORK ACTIVITIES	RELATED KNOWLEDGE	RELATED SKILLS	ATTITUDE/ SAFETY/ ENVIRONMENT	ASSESSMENT CRITERIA
4. Produce motion files.	4.1 Job sheet details. 4.2 Motion file pre-production. <ul style="list-style-type: none"> <li>• Concept &amp; Ideas</li> <li>• Storyboard</li> <li>• Animatic</li> </ul> 4.3 Motion file production. <ul style="list-style-type: none"> <li>• Motion frame</li> <li>• Editing</li> </ul> 4.4 Motion file post-production. <ul style="list-style-type: none"> <li>• Compositing</li> <li>• Render</li> <li>• Encoder</li> </ul>	4.1 Receive job instruction. 4.2 Prepare motion pre-production. 4.3 Prepare motion compositing (offline). 4.4 Select visual narrative (online). 4.5 Render motion files. 4.6 Perform video compression.	<u>ATTITUDE</u> 4.1 Comply with job assignment. 4.2 Punctual in time management. 4.3 Compliance with company SOP and meet client needs.  <u>SAFETY</u> 4.1 Aware of excessive computer usage.  <u>ENVIRONMENT</u> 4.1 Practice 5R (Reduce, Reuse, Recycle, Refuse and Recover).	4.1 Job instruction confirmed in accordance with job description. 4.2 Motion files production requirements confirmed in accordance with job requirements. 4.3 Emerging technology (3D virtual) element implemented in accordance with job specification. 4.4 Motion file rendering which includes duration, audio/video, format and encode process implemented in accordance with job specification. 4.5 Motion files production process explained.
5. Evaluate content production.	5.1 Fundamentals of evaluation form. <ul style="list-style-type: none"> <li>• Quality of technical work</li> <li>• Commitment to project</li> <li>• Responsibility</li> </ul>	5.1 Obtain job checklist. 5.2 Review multimedia content. 5.3 Check content improvement. 5.4 Check multimedia assets free from	<u>ATTITUDE</u> 5.1 Comply with job assignment  <u>SAFETY</u> Not Available	5.1 Selected checklist acquired in accordance with job specification. 5.2 Multimedia content presented and verified in accordance with job requirements. 5.3 Content improvement in line with project direction in

WORK ACTIVITIES	RELATED KNOWLEDGE	RELATED SKILLS	ATTITUDE/ SAFETY/ ENVIRONMENT	ASSESSMENT CRITERIA
	<p>5.2 Multimedia content requirements.</p> <ul style="list-style-type: none"> <li>• Information management</li> <li>• Production technique</li> </ul> <p>5.3 Content enhancement.</p> <ul style="list-style-type: none"> <li>• Comment and critic</li> <li>• Multimedia content improvement</li> </ul> <p>5.4 Copyright awareness.</p> <ul style="list-style-type: none"> <li>• Intellectual property</li> <li>• Trademark and copyright</li> <li>• Patent</li> </ul> <p>5.5 Delivery order.</p> <ul style="list-style-type: none"> <li>• Client information</li> <li>• Date order</li> <li>• Mode of payment</li> </ul>	<p>copyright infringement.</p> <p>5.5 Obtain superior approval.</p>	<p><u>ENVIRONMENT</u></p> <p>5.1 Practice 5R (Reduce, Reuse, Recycle, Refuse and Recover).</p>	<p>accordance with job specification.</p> <p>5.4 Content production checked and endorsed in accordance with company specification.</p> <p>5.5 Content production evaluation process explained.</p>

WORK ACTIVITIES	RELATED KNOWLEDGE	RELATED SKILLS	ATTITUDE/ SAFETY/ ENVIRONMENT	ASSESSMENT CRITERIA
	<ul style="list-style-type: none"> <li>• Terms of agreement</li> </ul>			

## Employability Skills

### Core Abilities

- Please refer NCS- Core Abilities latest edition.

### Social Values & Social Skills

- Please refer Handbook on Social Skills and Social Values in Technical Education and Vocational Training.

## References for Learning Material Development

- 1 Gyncild, Brie / Fridsma, Lisa. 2018/12. Adobe after Effects Cc Classroom in a Book 2019 Release (Classroom in a Book). Adobe Pr (US). ISBN-EAN 9780135298640
- 2 Ivey, Jerry. 2015/01. Photo Editing in Photoshop: A Beginners Guide to Making Pictures Perfect Using Photoshop. Createspace Independent Pub (US). ISBN-EAN 9781507529935
- 3 Jackson, W. 2016/01. Digital Audio Editing Fundamentals. Springer (DE). ISBN-EAN 9781484216477
- 4 Goodman, Robert M. / McGrath, Patrick. 2002/09. Editing Digital Video: The Complete Creative and Technical Guide (Digital Video and Audio Series). Tab Books (US). ISBN-EAN 9780071406352
- 5 Wood, Brian. 2019/01. Adobe Illustrator CC-2019 Release: The Official Training Workbook from Adobe. Adobe Pr (US). ISBN-EAN 9780135262160

## 15.2. Audio & Video Production

SECTION	(J) Information and Communication		
GROUP	(582) Software Publishing		
AREA	Interactive Multimedia		
NOSS TITLE	Interactive Multimedia Design		
COMPETENCY UNIT TITLE	Audio & Video Production		
LEARNING OUTCOMES	<p>The learning outcome of this competency unit is audio/video content production meets the expectation in term of informative, attractive and presentable in compliance with client needs.</p> <p>Upon completion of this competency unit, trainees should be able to:</p> <ol style="list-style-type: none"> <li>1. Prepare content write-up.</li> <li>2. Prepare graphic and image.</li> <li>3. Prepare audio files.</li> <li>4. Prepare video files.</li> <li>5. Evaluate content production.</li> </ol>		
TRAINING PREREQUISITE (SPECIFIC)	Not Available		
CU CODE	J582-001-3:2019-C02	NOSS LEVEL	Three (3)

WORK ACTIVITIES	RELATED KNOWLEDGE	RELATED SKILLS	ATTITUDE/ SAFETY/ ENVIRONMENT	ASSESSMENT CRITERIA
1. Prepare content write-up.	1.1 Job sheet details. 1.2 Concept ideas. <ul style="list-style-type: none"> <li>• Concept definition</li> <li>• Problem identification</li> </ul>	1.1 Receive job instruction. 1.2 Brainstorm ideas with team/individual. 1.3 Organize content topics.	<u>ATTITUDE</u> 1.1 Compliance with job assignment. 1.2 Accuracy in giving an idea for proposal and write up material.	1.1 Job instruction confirmed in accordance with job description. 1.2 Brainstorming sessions conducted. 1.3 Content topics arranged.

WORK ACTIVITIES	RELATED KNOWLEDGE	RELATED SKILLS	ATTITUDE/ SAFETY/ ENVIRONMENT	ASSESSMENT CRITERIA
	<ul style="list-style-type: none"> <li>• Proposal implementation</li> <li>• Approval and endorsement</li> </ul> 1.3 Creative content. <ul style="list-style-type: none"> <li>• Listing of topics</li> <li>• Storyline</li> <li>• Treatment plot</li> <li>• Script</li> </ul> 1.4 Proposal development. <ul style="list-style-type: none"> <li>• Format</li> <li>• Introduction</li> <li>• Objective</li> <li>• Structure</li> <li>• Content</li> </ul> 1.5 Material research. 1.6 Compilation process.	1.4 Collect research material. 1.5 Develop proposal write-up. 1.6 Compile content write-up.	<u>SAFETY</u> 1.1 Document saved as confidential.  <u>ENVIRONMENT</u> 1.1 Practice 5R (Reduce, Reuse, Recycle, Refuse and Recover).	1.4 Content write-up created in accordance with job description. 1.5 Proposal write-up research material compiled. 1.6 Proposal write-up produced in accordance with job description. 1.7 Content write-up preparation process described.
2. Prepare graphic and image.	2.1 Job sheet details. 2.2 Type of visual raster and vector. 2.3 Drawing sketches. <ul style="list-style-type: none"> <li>• Brainstorming</li> <li>• Thumbnail</li> <li>• Comprehensive</li> </ul>	2.1 Receive job instruction. 2.2 Identify image source. 2.3 Visualise image/graphic ideas.	<u>ATTITUDE</u> 2.1 Compliance with job assignment. 2.2 Meticulous in image graphic source and ideas in design.	2.1 Job instruction confirmed in accordance with job description. 2.2 Image source confirmed in accordance with client requirements.

WORK ACTIVITIES	RELATED KNOWLEDGE	RELATED SKILLS	ATTITUDE/ SAFETY/ ENVIRONMENT	ASSESSMENT CRITERIA
	2.4 Photo and graphic editing. <ul style="list-style-type: none"> <li>• Colour balance</li> <li>• Tone and curve</li> <li>• Hue saturation and luminance</li> <li>• Sharpen</li> </ul> 2.5 Image and graphic files creation. <ul style="list-style-type: none"> <li>• Photography</li> <li>• Image manipulation</li> <li>• Vector drawing</li> </ul> 2.6 File extension and directory. <ul style="list-style-type: none"> <li>• File name</li> <li>• Resolution</li> <li>• Extension</li> <li>• Back up files</li> </ul>	2.4 Edit image and graphic. 2.5 Produce image and graphic files. 2.6 Save image and graphic files.	<u>SAFETY</u> 2.1 Implement file directory and back up files.  <u>ENVIRONMENT</u> 2.1 Practice 5R (Reduce, Reuse, Recycle, Refuse and Recover).	2.3 Story board produced in accordance with job specifications. 2.4 Raster image edited and manipulated as per job specifications. 2.5 Vector image illustrated as per job instruction. 2.6 Graphic file saved in project library. 2.7 Graphic/image preparation process explained.
3. Prepare audio files.	3.1 Job sheet details. 3.2 Fundamental of audio recording. <ul style="list-style-type: none"> <li>• Type of audio</li> <li>• Introduction to decibels</li> <li>• Type of microphones</li> </ul>	3.1 Receive job instruction. 3.2 Identify audio source. 3.3 Produce audio samples. 3.4 Edit audio file.	<u>ATTITUDE</u> 3.1 Compliance with job assignment. 3.2 Well organized. 3.3 Compliance with company SOP and meet superior / client needs.	3.1 Job instruction confirmed in accordance with job description. 3.2 Audio source confirmed in accordance with job requirements. 3.3 Audio and SFX (sound effects) sample files produced.

WORK ACTIVITIES	RELATED KNOWLEDGE	RELATED SKILLS	ATTITUDE/ SAFETY/ ENVIRONMENT	ASSESSMENT CRITERIA
	<ul style="list-style-type: none"> <li>• Introduction to alignment tone</li> <li>• Introduction to equalizer</li> </ul> 3.3 Introduction to Foley technique and SFX (sound effects). 3.4 Audio composition.	3.5 Produce audio files.	<u>SAFETY</u> 3.1 Make sure the workplace is in good condition and safe.  <u>ENVIRONMENT</u> 3.1 Practise with 5R (Reduce, Reuse, Recycle, Refuse and Recover).	3.4 Audio and SFX (sound effects) files edited. 3.5 Fundamental of audio recording process described. 3.6 Audio files preparation process explained.
4. Prepare video files.	4.1 Job sheet details. 4.2 Video files pre-production. <ul style="list-style-type: none"> <li>• Method of setting shooting cost</li> <li>• Preparation of shooting schedule</li> <li>• Shooting location and logistic planning</li> </ul>	4.1 Receive job instruction. 4.2 Arrange video pre-production. 4.3 Develop video production. 4.4 Arrange video post-production. 4.5 Produce publish video files.	<u>ATITUDE</u> 4.1 Compliance with job assignment. 4.2 Punctual in time management. 4.3 Compliance with company SOP and meet client needs.  <u>SAFETY</u> 4.1 Aware with equipment used.	4.1 Job instruction confirmed in accordance with job description. 4.2 Video pre-production requirements listed. 4.3 Video footage produced in accordance with job specification. 4.4 Clip footage by frame duration selected in accordance from video director. 4.5 Production process published. 4.6 Post-production video compositing produced.



WORK ACTIVITIES	RELATED KNOWLEDGE	RELATED SKILLS	ATTITUDE/ SAFETY/ ENVIRONMENT	ASSESSMENT CRITERIA
	<ul style="list-style-type: none"> <li>• Resources shooting crew, equipment and logistic planning</li> <li>• Overview of Consent Agreement</li> </ul> <p>4.3 Video files production.</p> <ul style="list-style-type: none"> <li>• Introduction to video shooting and shooting technique</li> <li>• List of video shooting equipment</li> <li>• Camera shots, angles and movement</li> </ul> <p>4.4 Video files post-production.</p> <ul style="list-style-type: none"> <li>• Video editing and transitions techniques</li> <li>• Visual special effect</li> </ul>		<p><u>ENVIRONMENT</u></p> <p>4.1 Practice 5R (Reduce, Reuse, Recycle, Refuse and Recover).</p>	<p>4.7 Video file preparation process explained.</p>

WORK ACTIVITIES	RELATED KNOWLEDGE	RELATED SKILLS	ATTITUDE/ SAFETY/ ENVIRONMENT	ASSESSMENT CRITERIA
5. Evaluate content production.	5.1 Introduction to evaluation form. <ul style="list-style-type: none"> <li>• Quality of technical work</li> <li>• Commitment to project</li> <li>• Responsibility</li> </ul> 5.2 Multimedia content requirements. <ul style="list-style-type: none"> <li>• Information management</li> <li>• Production technique</li> </ul> 5.3 Content enhancement. <ul style="list-style-type: none"> <li>• Comment and critic</li> <li>• Multimedia content improvement</li> </ul> 5.4 Copyright awareness. <ul style="list-style-type: none"> <li>• Intellectual property</li> <li>• Trademark and copyright</li> <li>• Patent</li> </ul>	5.1 Obtain job checklist. 5.2 Review multimedia content. 5.3 Check content improvement. 5.4 Check multimedia assets free from copyright infringement. 5.5 Obtain superior approval.	<u>ATTITUDE</u> 5.1 Compliance with job assignment.  <u>SAFETY</u> Not Available.  <u>ENVIRONMENT</u> 5.1 Practice 5R (Reduce, Reuse, Recycle, Refuse and Recover).	5.1 Job checklist acquired in accordance with job specification. 5.2 Multimedia content examined. 5.3 Multimedia content improvement confirmed. 5.4 Multimedia content free from copyright infringement checked and confirmed. 5.5 Multimedia content endorsed. 5.6 Content production evaluation process explained.

WORK ACTIVITIES	RELATED KNOWLEDGE	RELATED SKILLS	ATTITUDE/ SAFETY/ ENVIRONMENT	ASSESSMENT CRITERIA
	5.5 Delivery order. <ul style="list-style-type: none"><li>• Client information</li><li>• Date order</li><li>• Mode of payment</li><li>• Terms of agreement</li></ul>			

## Employability Skills

### Core Abilities

- Please refer NCS- Core Abilities latest edition.

### Social Values & Social Skills

- Please refer Handbook on Social Skills and Social Values in Technical Education and Vocational Training.

## References for Learning Material Development

- 1 Gyncild, Brie / Fridsma, Lisa. 2018/12. Adobe after Effects Cc Classroom in a Book 2019 Release (Classroom in a Book). Adobe Pr (US). ISBN-EAN 9780135298640
- 2 Ivey, Jerry. 2015/01. Photo Editing in Photoshop: A Beginners Guide to Making Pictures Perfect Using Photoshop. Createspace Independent Pub (US). ISBN-EAN 9781507529935
- 3 Jackson, W. 2016/01. Digital Audio Editing Fundamentals. Springer (DE). ISBN-EAN 9781484216477
- 4 Goodman, Robert M. / McGrath, Patrick. 2002/09. Editing Digital Video: The Complete Creative and Technical Guide (Digital Video and Audio Series). Tab Books (US). ISBN-EAN 9780071406352
- 5 Wood, Brian. 2019/01. Adobe Illustrator CC-2019 Release: The Official Training Workbook from Adobe. Adobe Pr (US). ISBN-EAN 9780135262160

### 15.3. Interactive Application Development

SECTION	(J) Information and Communication		
GROUP	(582) Software Publishing		
AREA	Interactive Multimedia		
NOSS TITLE	Interactive Multimedia Design		
COMPETENCY UNIT TITLE	Interactive Application Development		
LEARNING OUTCOMES	<p>The learning outcome of this competency unit is a fully function interactive multimedia application on multiple output and devices of end-user in accordance with the client requirements.</p> <p>Upon completion of this competency unit, trainees should be able to:</p> <ol style="list-style-type: none"> <li>1. Prepare proposal design.</li> <li>2. Setup application platform.</li> <li>3. Prepare application workflow.</li> <li>4. Develop interactive application.</li> <li>5. Evaluate product application.</li> <li>6. Submit final application.</li> </ol>		
TRAINING PREREQUISITE (SPECIFIC)	Not Available		
CU CODE	J582-001-3:2019-C03	NOSS LEVEL	Three (3)

WORK ACTIVITIES	RELATED KNOWLEDGE	RELATED SKILLS	ATTITUDE/ SAFETY/ ENVIRONMENT	ASSESSMENT CRITERIA
1. Prepare proposal design.	1.1 Job sheet details. <ul style="list-style-type: none"> <li>• Job instruction</li> <li>• Job requirement</li> </ul>	1.1 Receive job assignment. 1.2 Design interface layout – produced visual layout.	<u>ATTITUDE</u> 1.1 Responsible to job assigned.	1.1 Work order confirmed in accordance to job assignment. 1.2 Visual layout design produced in accordance with job description.

WORK ACTIVITIES	RELATED KNOWLEDGE	RELATED SKILLS	ATTITUDE/ SAFETY/ ENVIRONMENT	ASSESSMENT CRITERIA
	1.2 Application user experience and interface. <ul style="list-style-type: none"> <li>• User Experience</li> <li>• User Interface</li> </ul> 1.3 Proposal documentation. <ul style="list-style-type: none"> <li>• Format writing</li> <li>• Revision</li> <li>• Approval process</li> </ul>	1.3 Design navigation flow. 1.4 Present to superior. 1.5 Endorse proposal design.	<u>SAFETY</u> Not Available  <u>ENVIRONMENT</u> 1.1 Practice 5R (Reduce, Reuse, Recycle, Refuse and Recover).	1.3 Navigation flow design produced in accordance with job description. 1.4 Layout design presentation demonstrated. 1.5 Layout design approved in accordance with job description. 1.6 User Experience and User Interface explained. 1.7 Proposal design preparation explained.
2. Setup application platform.	2.1 Application output not limited to: <ul style="list-style-type: none"> <li>• Website</li> <li>• Mobile application</li> <li>• Courseware</li> <li>• Kiosk applications</li> <li>• Slide presentation</li> <li>• Emerging application</li> </ul> 2.2 Cross platform device.	2.1 Identify application output. 2.2 Identify cross-platform device. 2.3 Prepare application development software.	<u>ATTITUDE</u> 2.1 Awareness to licenses software for copyright issue.  <u>SAFETY</u> Not Available  <u>ENVIRONMENT</u> 2.1 Practice 5R (Reduce, Reuse, Recycle, Refuse and Recover).	2.1 Offline/online application output confirmed. 2.2 Compatibility on cross-platform devices confirmed. 2.3 Required software and hardware installed. 2.4 Application output explained. 2.5 Cross-platform device described. 2.6 Application development software explained. 2.7 Hardware requirement described.

WORK ACTIVITIES	RELATED KNOWLEDGE	RELATED SKILLS	ATTITUDE/ SAFETY/ ENVIRONMENT	ASSESSMENT CRITERIA
	<ul style="list-style-type: none"> <li>• Kiosk</li> <li>• TV/Screen</li> <li>• Smart Phone</li> <li>• Tablet</li> <li>• PC</li> <li>• Laptop</li> <li>• Emerging device</li> </ul> <p>2.3 Application development software.</p> <ul style="list-style-type: none"> <li>• Open-Source Software</li> <li>• Licence Software</li> <li>• Software Installation</li> </ul> <p>2.4 Hardware requirement.</p> <ul style="list-style-type: none"> <li>• Compatibility to software</li> <li>• Internet access</li> </ul>			

WORK ACTIVITIES	RELATED KNOWLEDGE	RELATED SKILLS	ATTITUDE/ SAFETY/ ENVIRONMENT	ASSESSMENT CRITERIA
3. Prepare application workflow.	3.1 Design guideline. <ul style="list-style-type: none"> <li>• Concept</li> <li>• Theme</li> <li>• Colour</li> </ul> 3.2 Wireframe. <ul style="list-style-type: none"> <li>• User Experience</li> <li>• Interface Experience</li> </ul> 3.3 Application flowchart. <ul style="list-style-type: none"> <li>• Overview</li> <li>• workflow</li> </ul>	3.1 Retrieve UI/UX proposal document. 3.2 Design user interface components. 3.3 Design user interface navigation flow. 3.4 Obtain user interface and navigation flow design approval. 3.5 Store design files to library folder.	<u>ATTITUDE</u> 3.1 Proactive in back-up data regularly. 3.2 Punctual in finishing task on schedule.  <u>SAFETY</u> 3.1 Ensure physical ergonomic and eye care while using computer.  <u>ENVIRONMENT</u> 3.1 Practice 5R (Reduce, Reuse, Recycle, Refuse and Recover).	3.1 User Interface and User Experience proposal document received. 3.2 User interface component endorsed. 3.3 User interface design navigation confirmed. 3.4 Application workflow endorsement obtained. 3.5 User interface design process described. 3.6 User experience navigation design process described.
4. Develop interactive application.	4.1 Software setup and functionality. <ul style="list-style-type: none"> <li>• Screen resolution</li> <li>• Files size</li> <li>• Content files</li> <li>• Menu functions</li> </ul>	4.1 Author content multimedia application. 4.2 Carry out coding/logic process. 4.3 Compile executable file. 4.4 Test run multimedia	<u>ATTITUDE</u> 4.1 Proactive in back-up data regularly. 4.2 Punctual in finishing task on schedule.  <u>SAFETY</u> 4.1 Ensure physical ergonomic and eye	4.1 Content layout produced in accordance with job specification. 4.2 Codes/logic process implemented according to multimedia content. 4.3 Interactive functional features tested as required in accordance with application requirements.



WORK ACTIVITIES	RELATED KNOWLEDGE	RELATED SKILLS	ATTITUDE/ SAFETY/ ENVIRONMENT	ASSESSMENT CRITERIA
	<p>4.2 Software coding/logic.</p> <ul style="list-style-type: none"> <li>• Fundamental of coding languages</li> <li>• Applications plug-ins</li> </ul> <p>4.3 Application execution.</p> <ul style="list-style-type: none"> <li>• Execution file format</li> <li>• troubleshoot</li> </ul>	<p>application on output and device.</p> <p>4.5 Prepare application for demonstration to superior.</p>	<p>care while using computer.</p> <p><u>ENVIRONMENT</u></p> <p>4.1 Practice 5R (Reduce, Reuse, Recycle, Refuse and Recover).</p>	<p>4.4 Multimedia application compatibility confirmed.</p> <p>4.5 Website developed in accordance with job specifications.</p> <p>4.6 Mobile application developed in accordance with job specifications.</p> <p>4.7 Courseware developed in accordance with job specifications.</p> <p>4.8 Kiosk application developed in accordance with job specifications.</p> <p>4.9 Slide presentation developed in accordance with job specifications.</p> <p>4.10 Fully function application confirmed for presentation.</p> <p>4.11 Software set up and functionality explained.</p> <p>4.12 Software coding/logic described.</p> <p>4.13 Application execution defined.</p> <p>4.14 Interactive application development process explained.</p>

WORK ACTIVITIES	RELATED KNOWLEDGE	RELATED SKILLS	ATTITUDE/ SAFETY/ ENVIRONMENT	ASSESSMENT CRITERIA
5. Evaluate product application.	5.1 Project documentation. <ul style="list-style-type: none"> <li>• Project scope</li> <li>• Milestone</li> <li>• Application functionality</li> <li>• User Acceptance test</li> </ul> 5.2 Client feedback documentation. <ul style="list-style-type: none"> <li>• Verbal</li> <li>• Written</li> <li>• Official Minutes</li> </ul>	5.1 Prepare checklist for user acceptance test. 5.2 Obtain client feedback. 5.3 Update remedial action.	<u>ATTITUDE</u> 5.1 Willing to accept criticism with positive outlook.  <u>SAFETY</u> Not Available  <u>ENVIRONMENT</u> 5.1 Practice 5R (Reduce, Reuse, Recycle, Refuse and Recover).	5.1 User Acceptance Test checklist produced. 5.2 Client experience on application acknowledged in accordance to checklist. 5.3 Product application solution presented. 5.4 Application produced as per job requirements. 5.5 Project documentation explained. 5.6 Client feedback documentation described. 5.7 Product application evaluation process explained.
6. Submit final application.	6.1 Final application publication. <ul style="list-style-type: none"> <li>• Application output platform</li> <li>• Application output files</li> <li>• Application manual</li> <li>• Application packaging</li> </ul>	6.1 Publish final application. 6.2 Prepare application packaging. 6.3 Hand-over final application.	<u>ATTITUDE</u> 6.1 Confident with final product.  <u>SAFETY</u> 6.1 Ensure back-up copy of final product.	6.1 Final application published in accordance with job requirement. 6.2 Final application submitted. 6.3 Project sign-off documentation completed. 6.4 Final application publication defined. 6.5 Project completion sign-off explained. 6.6 Final application submission process described.

WORK ACTIVITIES	RELATED KNOWLEDGE	RELATED SKILLS	ATTITUDE/ SAFETY/ ENVIRONMENT	ASSESSMENT CRITERIA
	6.2 Project completion sign-off letter.		<u>ENVIRONMENT</u> 6.1 Practice 5R (Reduce, Reuse, Recycle, Refuse and Recover).	

## Employability Skills

### Core Abilities

- Please refer NCS- Core Abilities latest edition.

### Social Values & Social Skills

- Please refer Handbook on Social Skills and Social Values in Technical Education and Vocational Training.

## References for Learning Material Development

- 1 Beard, Jason. George, James. 2014. The Principles of Beautiful Web Design: Designing Great Web Sites is Not Rocket Science! 3rd Edition: SitePoint. ISBN-EAN 13 978-0992279448
- 2 Elkins, Diane; Pinder, Desiree. 2012. E-Learning Uncovered: Adobe Captivate 6: CreateSpace. ISBN Code 9781479169719
- 3 Burton. 2015. Android App Development for Dummies, 3E: John Wiley. ISBN 9781119017929
- 4 Layon, Kristofer. 2010. Web Designer's Guide to iOS Apps, Create iPhone, iPod touch, and iPad apps with Web Standards (HTML5, CSS3, and JavaScript), Pearson Education India ISBN 9780321732989
- 5 Adobe Systems. 2019. Adobe Captivate Tutorials.  
<https://elearning.adobe.com/adobe-captivate-tutorials> [01/05/2019:12.30pm]

#### 15.4. Interactive Multimedia Technical Support

SECTION	(J) Information and Communication		
GROUP	(582) Software Publishing		
AREA	Interactive Multimedia		
NOSS TITLE	Interactive Multimedia Design		
COMPETENCY UNIT TITLE	Interactive Multimedia Technical Support		
LEARNING OUTCOMES	<p>The learning outcome of this competency unit is all multimedia hardware and software are running with the latest release and valid license, data safely back-up, problem/issues analysed and resolved in accordance with technical requirements.</p> <p>Upon completion of this competency unit, trainees should be able to:</p> <ol style="list-style-type: none"> <li>1. Identify interactive multimedia technical support requirements.</li> <li>2. Perform technical works.</li> <li>3. Troubleshoot application error.</li> </ol>		
TRAINING PREREQUISITE (SPECIFIC)	Not Available		
CU CODE	J582-001-3:2019-C04	NOSS LEVEL	Three (3)

WORK ACTIVITIES	RELATED KNOWLEDGE	RELATED SKILLS	ATTITUDE/ SAFETY/ ENVIRONMENT	ASSESSMENT CRITERIA
1. Identify interactive multimedia technical support requirements.	1.1 Introduction to Multimedia Technical Support. <ul style="list-style-type: none"> <li>• Overview of Multimedia Technical Support</li> </ul>	1.1 Obtain deployment, support and maintenance job assignment. 1.2 Check hardware /platform.	<u>ATTITUDE</u> 1.1 Compliance to work instruction. 1.2 Detail oriented in identifying deployment, support & maintenance requirements.	1.1 Job assignment and work instruction obtained. 1.2 Work instruction document confirmed. 1.3 Scope of work technical requirements confirmed.

WORK ACTIVITIES	RELATED KNOWLEDGE	RELATED SKILLS	ATTITUDE/ SAFETY/ ENVIRONMENT	ASSESSMENT CRITERIA
	<ul style="list-style-type: none"> <li>• Scope of work (Installation, upgrading, troubleshoot, error &amp; debugging and report preparation)</li> </ul> <p>1.2 Hardware/ Platform in Multimedia.</p> <ul style="list-style-type: none"> <li>• Type of hardware (PC, media player, mobile, tv, kiosk &amp; other related hardware including cable, splitter and wireless connectivity)</li> <li>• Type of platform (mobile apps, web browser, kiosk and display panel)</li> </ul> <p>1.3 Type of software.</p>	<p>1.3 Check software /application version.</p> <p>1.4 Check licensing status.</p> <p>1.5 Confirm deployment, support &amp; maintenance work instruction.</p>	<p><u>SAFETY</u> Not Available</p> <p><u>ENVIRONMENT</u> 1.1 Practice 5R (Reduce, Reuse, Recycle, Refuse and Recover).</p>	<p>1.4 Platform/hardware (pc/mobile/tv/kiosk/server) determined.</p> <p>1.5 Software/application determined.</p> <p>1.6 Subscription license status determined.</p> <p>1.7 Multimedia technical support identification and scope of works explained.</p> <p>1.8 Types of hardware, platform, software, and licenses in multimedia technical support explained.</p> <p>1.9 Deployment, support and maintenance support document described.</p>

WORK ACTIVITIES	RELATED KNOWLEDGE	RELATED SKILLS	ATTITUDE/ SAFETY/ ENVIRONMENT	ASSESSMENT CRITERIA
	<ul style="list-style-type: none"><li>• Operating System (Windows, Linux, Android and iOS)</li><li>• Multimedia development software.</li></ul> <p>1.4 Type of licensing.</p> <ul style="list-style-type: none"><li>• Subscription License (Application)</li><li>• Warranty License</li><li>• Hardware, software</li></ul> <p>1.5 Deployment, Support &amp; Maintenance document.</p> <ul style="list-style-type: none"><li>• Form (complaint/ feedback and installation)</li><li>• Checklist</li></ul>			

WORK ACTIVITIES	RELATED KNOWLEDGE	RELATED SKILLS	ATTITUDE/ SAFETY/ ENVIRONMENT	ASSESSMENT CRITERIA
2. Perform technical works.	2.1 Deployment, support & maintenance document. <ul style="list-style-type: none"> <li>• Forms (complaint/ feedback and installation)</li> <li>• Checklist</li> </ul> 2.2 Media back up. <ul style="list-style-type: none"> <li>• Type – media, file and database.</li> <li>• Storage medium – hard disk, USB and cloud</li> <li>• Media backup technique – files and folder archiving.</li> </ul> 2.3 Software installation. <ul style="list-style-type: none"> <li>• Operating System</li> <li>• Developer Application (in house)</li> </ul>	2.1 Interpret work instruction document. 2.2 Implement media back up. 2.3 Implement installation/ upgrading software/ application. 2.4 Test run application on platform. 2.5 Obtain client's feedback/ approval	<u>ATTITUDE</u> 2.1 Confidence & detail in performing technical works. 2.2 Systematic in performing media backup. 2.3 Maintain a good communication and public relation.  <u>SAFETY</u> 2.1 Wear safety equipment in accordance with work instruction.  <u>ENVIRONMENT</u> 2.1 Practice 5R (Reduce, Reuse, Recycle, Refuse and Recover).	2.1 Technical checklist report determined. 2.2 Work instruction document determined. 2.3 Backup software/application performed systematically on media storage. 2.4 Software/application installed on platform/hardware. 2.5 Test run software/application performed. 2.6 Software/application comments and feedback obtained and documented. 2.7 Deployment, support and maintenance document explained. 2.8 Media back up used in multimedia, software installation and basic application testing explained. 2.9 Content of client approval document described. 2.10 Technical works process explained.



WORK ACTIVITIES	RELATED KNOWLEDGE	RELATED SKILLS	ATTITUDE/ SAFETY/ ENVIRONMENT	ASSESSMENT CRITERIA
	<ul style="list-style-type: none"> <li>• Interactive Application (client)</li> </ul> 2.4 The basic of application testing. <ul style="list-style-type: none"> <li>• Application testing category</li> <li>• Application testing methodologies</li> <li>• Application testing tools</li> </ul> 2.5 Client approval document.			
3. Troubleshoot application error.	3.1 Tips for troubleshooting & problem solving. 3.2 Troubleshooting and debugging. <ul style="list-style-type: none"> <li>• Different</li> <li>• Best Practices</li> <li>• Remote management</li> </ul>	3.1 Retrieve case ID. 3.2 Identify problem category. 3.3 Perform online/onsite support. 3.4 Prepare resolution report.	<u>ATTITUDE</u> 3.1 Critical thinking in identifying application error. 3.2 Problem solving in troubleshoot. 3.3 Detail in preparing report.	3.1 Complaint case ID obtained. 3.2 Case category determined. (network, software, application, hardware or others). 3.3 Online troubleshooting support performed. (email, phone, FAQ checklist) 3.4 Onsite troubleshooting physical support performed. 3.5 Resolution report produced.

WORK ACTIVITIES	RELATED KNOWLEDGE	RELATED SKILLS	ATTITUDE/ SAFETY/ ENVIRONMENT	ASSESSMENT CRITERIA
	<p>3.3 Troubleshoot a crashing application on operating system.</p> <ul style="list-style-type: none"> <li>• Windows</li> <li>• MacOS</li> <li>• Android</li> <li>• iOS</li> <li>• Others</li> </ul> <p>3.4 Resolution report writing.</p>		<p><u>SAFETY</u></p> <p>3.1 Compliance to application privacy policy.</p> <p>3.2 Wear safety equipment in accordance with work instructions.</p> <p><u>ENVIRONMENT</u></p> <p>3.1 Practice 5R (Reduce, Reuse, Recycle, Refuse and Recover).</p>	<p>3.6 Troubleshooting and problem-solving tips described.</p> <p>3.7 Troubleshooting and debugging explained.</p> <p>3.8 Troubleshoot a crashing application described.</p> <p>3.9 Content of resolution report described.</p> <p>3.10 Application error troubleshooting process explained.</p>

## Employability Skills

### Core Abilities

- Please refer NCS- Core Abilities latest edition.

### Social Values & Social Skills

- Please refer Handbook on Social Skills and Social Values in Technical Education and Vocational Training.

## References for Learning Material Development

- 1 Meyers, Mike. 2016. Mike Meyers' CompTIA A+ Guide to Managing and Troubleshooting PCs, Fifth Edition, Osborne. ISBN 9781259589546
- 2 Andrews, Jean / Dark, Joy / West, Jill. 2019. CompTIA A+ Guide to IT Technical Support (10th). Cengage Learning (US). ISBN 9780357108291
- 3 Joel Rosenthal, Kevin Irwin. 2007. PC Repair and Maintenance: A Practical Guide. Laxmi Publications Pvt Limited. ISBN 9788131800522
- 4 Colin Grimston. 1997. PC Maintenance: An Introduction to Upgrade and Repair. Arnold Publications. ISBN 9780340645451
- 5 Mark Minasi. 2005. The Complete PC Upgrade and Maintenance Guide. Wiley India Pvt Limited. ISBN 9788126506279

### 15.5. Interactive Multimedia Design Supervision

SECTION	(J) Information and Communication		
GROUP	(582) Software Publishing		
AREA	Interactive Multimedia		
NOSS TITLE	Interactive Multimedia Design		
COMPETENCY UNIT TITLE	Interactive Multimedia Design Supervision		
LEARNING OUTCOMES	<p>The learning outcome of this competency unit is the establishment of a conducive work environment, a disciplined and knowledgeable workforce with regards to quality and productivity in accordance with company objectives and targets.</p> <p>Upon completion of this competency unit, trainees should be able to:</p> <ol style="list-style-type: none"> <li>1. Coordinate job delegation.</li> <li>2. Prepare job assignment.</li> <li>3. Supervise work progress.</li> <li>4. Assess staff performance.</li> <li>5. Prepare section meeting.</li> <li>6. Conduct in-house training.</li> <li>7. Prepare project report.</li> <li>8. Optimise equipment utilisation.</li> </ol>		
TRAINING PREREQUISITE (SPECIFIC)	Not Available		
CU CODE	J582-001-3:2019-C05	NOSS LEVEL	Three (3)

WORK ACTIVITIES	RELATED KNOWLEDGE	RELATED SKILLS	ATTITUDE/ SAFETY/ ENVIRONMENT	ASSESSMENT CRITERIA
1. Coordinate job delegation.	1.1 Interactive multimedia	1.1 Identify manpower requirements.	<u>ATTITUDE</u> 1.1 Objective-driven in selecting team	1.1 Manpower requirement with specific skill set of team members confirmed.

WORK ACTIVITIES	RELATED KNOWLEDGE	RELATED SKILLS	ATTITUDE/ SAFETY/ ENVIRONMENT	ASSESSMENT CRITERIA
	<p>production pipeline.</p> <p>1.2 Interactive multimedia skill sets.</p> <ul style="list-style-type: none"> <li>• Project Manager</li> <li>• Multimedia Designer</li> <li>• Interface Designer</li> <li>• Multimedia Programmer</li> <li>• Hardware Technician</li> <li>• Back-end Programmer</li> <li>• Multimedia Writer</li> <li>• Video Specialist</li> <li>• Audio Specialist</li> <li>• Producer for the interactive app/ web</li> </ul> <p>1.3 Interactive multimedia organisational structure.</p>	<p>1.2 Obtain timeline planning from superior.</p> <p>1.3 Brief team member for job implementation.</p> <p>1.4 Brief project milestone to delegate job.</p> <p>1.5 Update documents and meeting records.</p>	<p>members and delegating task</p> <p>1.2 Adhere to work schedule.</p> <p><u>SAFETY</u> Not Available</p> <p><u>ENVIRONMENT</u> 1.1 Practice 5R (Reduce, Reuse, Recycle, Refuse and Recover).</p>	<p>1.2 Job delegation requirements and specification listed.</p> <p>1.3 Timeline planning obtained.</p> <p>1.4 Team job assignment aligned with project timeline.</p> <p>1.5 Job implementation briefed for respective team members.</p> <p>1.6 Job delegation record documented.</p> <p>1.7 Documentation and project operation details prepared.</p> <p>1.8 Project milestone and Gantt Chart planning explained.</p> <p>1.9 Job delegation coordination work and process described.</p>

WORK ACTIVITIES	RELATED KNOWLEDGE	RELATED SKILLS	ATTITUDE/ SAFETY/ ENVIRONMENT	ASSESSMENT CRITERIA
	1.4 Project milestone and Gantt Chart planning. 1.5 Interactive multimedia project task analysis.			
2. Prepare job assignment.	2.1 Checklist for document development. 2.2 Type of form documents. 2.3 Job sheet document development. 2.4 Assignment description.	2.1 Obtain job delegation documents (Job sheet, checklist etc.) 2.2 Brief project progress. 2.3 Update and compile project progress report.	<u>ATTITUDE</u> 2.1 Articulation in form and document writing.  <u>SAFETY</u> Not Available  <u>ENVIRONMENT</u> 2.1 Practice 5R (Reduce, Reuse, Recycle, Refuse and Recover).	2.1 Job tasks determined and prioritised according to timeline, manpower and equipment 2.2 Job task specification and requirement confirmed in accordance with scope of works. 2.3 Project progress briefed to respective team members. 2.4 Update information on schedules reported. 2.5 Job assignment and delegation implemented. 2.6 Job assignment preparation works explained.

WORK ACTIVITIES	RELATED KNOWLEDGE	RELATED SKILLS	ATTITUDE/ SAFETY/ ENVIRONMENT	ASSESSMENT CRITERIA
3. Supervise work progress.	3.1 Supervisor roles and responsibilities. 3.2 Supervision activities. 3.3 Supervision checklist. 3.4 Logbook (daily/weekly report). <ul style="list-style-type: none"> <li>• Digital logbook</li> <li>• Physical logbook</li> </ul>	3.1 Obtain project documentation record. 3.2 Brief project outcome and timeline in order. 3.3 Update current project progress.	<u>ATTITUDE</u> 3.1 Time management. 3.2 Negotiation skills. 3.3 Communicate ideas clearly and concisely. 3.4 Innovative problem solving.  <u>SAFETY</u> Not Available  <u>ENVIRONMENT</u> 3.1 Practice 5R (Reduce, Reuse, Recycle, Refuse and Recover).	3.1 Team member work progress confirmed with project timeline. 3.2 Immediate constructive feedback and corrective action communicated clearly and constructively. 3.3 Corrective action implemented in accordance to project requirements. 3.4 Supervision activities, rules and responsibilities explained. 3.5 Skills of time management, negotiation and communication demonstrated. 3.6 Work progress supervision process explained.
4. Assess staff performance.	4.1 Multimedia project key performance indicators (KPIs). 4.2 Performance evaluation scoring method. 4.3 Appraisal workflow.	4.1 Obtain assessment documentation. 4.2 Evaluate team member. 4.3 Summarise appraisal report for	<u>ATTITUDE</u> 4.1 Integrity in assessing team members. 4.2 Intrapersonal skills. 4.3 Ethical use of digital documentations.	4.1 Appraisal requirements for personnel determined. 4.2 Scoring method used for appraisal determined. 4.3 Reporting format used confirmed. 4.4 Staff performance reports compiled.

WORK ACTIVITIES	RELATED KNOWLEDGE	RELATED SKILLS	ATTITUDE/ SAFETY/ ENVIRONMENT	ASSESSMENT CRITERIA
	4.4 Appraisal documentation.	recommendation . 4.4 Submit report to superior.	<u>SAFETY</u> Not Available  <u>ENVIRONMENT</u> 4.1 Practice 5R (Reduce, Reuse, Recycle, Refuse and Recover).	4.5 Staff performance reports compiled. 4.6 Staff performance assessment process explained. 4.7 Key Performance Indicators for interactive multimedia project explained.
5. Prepare section meeting.	5.1 Project activities and requirements. 5.2 Meeting coordination. 5.3 Meeting notice. 5.4 Meeting agenda. 5.5 Basic memo writing. 5.6 Meeting minutes writing.	5.1 Identify section meeting requirements. 5.2 Arrange section meeting agenda. 5.3 Circulate section meeting memos. 5.4 Coordinate section meeting. 5.5 Update section meeting outcomes.	<u>ATTITUDE</u> 5.1 Meeting etiquette and protocol. 5.2 Ethical use of digital documentations. 5.3 Confidentiality and integrity information awareness.  <u>SAFETY</u> 5.1 Safe discussion area.  <u>ENVIRONMENT</u> 5.1 Practice 5R (Reduce, Reuse, Recycle, Refuse and Recover).	5.1 Meeting facilities determined in accordance with meeting requirements. 5.2 Meeting agenda confirmed. 5.3 Meeting materials arranged. 5.4 Minutes of meeting recorded. 5.5 Meetings outcome distributed. 5.6 Section meeting activities coordinated. 5.7 Section meeting outcomes updated to all meeting participants. 5.8 Meeting etiquette, protocol, ethical and confidentiality of information described. 5.9 Section meeting preparation process explained.



WORK ACTIVITIES	RELATED KNOWLEDGE	RELATED SKILLS	ATTITUDE/ SAFETY/ ENVIRONMENT	ASSESSMENT CRITERIA
6. Conduct in-house training.	6.1 Training module kit development. 6.2 Fundamental teaching/training learning conduct. 6.3 Skill matrix. 6.4 Documents for in-house training. 6.5 Training feedback form.	6.1 Identify skill set required. 6.2 Organise in-house training. 6.3 Demonstrate skill set. 6.4 Assess learning progress. 6.5 Provide training feedback. 6.6 Update skills matrix.	<u>ATTITUDE</u> 6.1 Well-organized and meticulous in project documentation. 6.2 Professional appearance and pleasant characteristics.  <u>SAFETY</u> 6.1 Safe training area.  <u>ENVIRONMENT</u> 6.1 Practice 5R (Reduce, Reuse, Recycle, Refuse and Recover).	6.1 Staff Training Need Analysis (TNA) activities conducted. 6.2 In-house training schedule prepared in accordance with training specifications. 6.3 Training budget requirements prepared. 6.4 Selected training participants invited for training sessions. 6.5 Training assessment report prepared. 6.6 In-house training process explained.
7. Prepare project report.	7.1 Project schedule and status. 7.2 Project issues and challenges statement. 7.3 Overview Gantt chart and project specification progress.	7.1 Update report on current progress. 7.2 Submit project report. 7.3 Obtain documentation (checklist record and project report).	<u>ATTITUDE</u> 7.1 Articulation in writing report.  <u>SAFETY</u> Not Available	7.1 Latest project report documentations obtained. 7.2 Project report format updated. 7.3 Final project report produced. 7.4 Project report documentation checklist confirmed. 7.5 Project report documentation submitted.

WORK ACTIVITIES	RELATED KNOWLEDGE	RELATED SKILLS	ATTITUDE/ SAFETY/ ENVIRONMENT	ASSESSMENT CRITERIA
	7.4 Documentation analysis (checklist record, project report, supervisory checklist and etc). 7.5 Project report writing.		<u>ENVIRONMENT</u> 7.1 Practise 5R (Reduce, Reuse, Recycle, Refuse and Recover).	7.6 Project report preparation process explained.
8. Optimise equipment utilisation.	8.1 Equipment functions. 8.2 Utility optimisation checklist. 8.3 Application and equipment utilization document.	8.1 Obtain equipment maintenance record. 8.2 Check capability and performance of equipment. 8.3 Record testing result in checklist. 8.4 Produce equipment utilisation report.	<u>ATTITUDE</u> 8.1 Systematic in documentation 8.2 Adhere to work schedule  <u>SAFETY</u> Not Available  <u>ENVIRONMENT</u> 8.1 Practice 5R (Reduce, Reuse, Recycle, Refuse and Recover).	8.1 Equipment maintenance record obtained. 8.3 Equipment maintenance record confirmed in accordance with SOP. 8.4 Equipment usage regulations including Health Safety Environment (HSE) Compliance Standard Policy complied. 8.5 Equipment utilisation report produced. 8.6 Equipment utilisation optimisation process described.

## Employability Skills

### Core Abilities

- Please refer NCS- Core Abilities latest edition.

### Social Values & Social Skills

- Please refer Handbook on Social Skills and Social Values in Technical Education and Vocational Training.

## References for Learning Material Development

- 1 Vaughan, Tay. 2014. Multimedia: Making It Work (9th). City of Publish: Pennsylvania,US. Publisher: McGraw-Hill Osborne Media. ISBN-9780071832885
- 2 David Evans. 2004. Supervisory Management: Principles and Practice 5<sup>th</sup> Edition. London: Thompson Learning. ISBN-EAN 978-0-82645-733-2.
- 3 Noel Harvey. 1997. The Challenge of Supervisory Management. Dublin: Oak Tree Press. ISBN 1-86076-077-5
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## 16. Delivery Mode

The following are the **recommended** training delivery modes: -

KNOWLEDGE	SKILL
<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Group discussion</li> <li>• E-learning, self-paced</li> <li>• E-learning, facilitate</li> <li>• Case study or Problem based learning (PBL)</li> <li>• Self-paced learning, non-electronic</li> <li>• One-on-one tutorial</li> <li>• Shop talk</li> <li>• Seminar</li> </ul>	<ul style="list-style-type: none"> <li>• Demonstration</li> <li>• Simulation</li> <li>• Project</li> <li>• Scenario based training (SBT)</li> <li>• Role play</li> <li>• Coaching</li> <li>• Observation</li> <li>• Mentoring</li> </ul>

Skills training and skills assessment of trainees should be implemented in accordance with TEM requirements and actual situation.

## 17. Tools, Equipment and Materials (TEM)

## INTERACTIVE MULTIMEDIA DESIGN

## LEVEL 3

CU	CU CODE	COMPETENCY UNIT TITLE
C01	J582-001-3:2019-C01	Graphic Interface Production
C02	J582-001-3:2019-C02	Audio & Video Production
C03	J582-001-3:2019-C03	Interactive Application Development
C04	J582-001-3:2019-C04	Interactive Multimedia Technical Support
C05	J582-001-3:2019-C05	Interactive Multimedia Design Supervision

\* Items listed refer to TEM's **minimum requirement** for skills delivery only.

NO.	ITEM*	RATIO (TEM : Trainees or AR = As Required)				
		C01	C02	C03	C04	C05
<b>A. Tools</b>						
1	Graphic Software (ie Adobe/Affinity)	1:1	1:1	1:1		
2	Video and Audio Software	1:1	1:1			
3	Application Development Software			1:1		
4	Office Suite Software	1:1	1:1	1:1	1:1	1:1
5	Web Browsers	1:1	1:1	1:1	1:1	1:1
6	Operating System Software				1:1	
7	Backup Software				1:1	
8	Cable Network Tester				1:5	
9	HDMI cable		1:5		1:5	
10	USB cable	1:5	1:5		1:5	
11	Audio cable				1:5	
12	Analog Cable (RGB/VGA cable)				1:5	
13	Digital Cable (DVI)				1:5	

14	Splitter				1:5	
15	External storage	1:5	1:5	1:5	1:5	
<b>B. Equipment</b>						
1	Computer and peripherals with application development specification	1:1	1:1	1:1	1:1	1:1
2	Digital Camera (DSLR with basic kit lens)	1:5	1:5			
3	3 Lighting Studio (1 Set)	1:25	1:25			
4	Back Drop	1:25	1:25			
5	Display unit (TV/LCD Projector/Multiple Screen)	1:25	1:25		1:25	
6	Microphone (Clip/Shotgun/Mono Mic/Condenser)		1:5			
7	Headphones	1:1	1:1			
8	Speakers		1:25			
9	Speed Light		1:5			
10	Tripod/Gimbal		1:5			
11	Computer (Mac OS)			1:25		
12	Touch screen monitor			1:25	1:25	
13	Android Tablet			1:25	1:25	
14	IOS Tablet			1:25	1:25	
15	Smart Phone (Android)			1:25	1:25	
16	Smart Phone (IOS)			1:25	1:25	
17	Virtual Reality Goggle			1:25		
18	Application Server				1:25	
19	Web Server				1:25	
20	Media Player				1:10	
21	Printer					1:25
22	Scanner	1:25				1:25
<b>C. Materials</b>						
1	Stationary	AR	AR	AR	AR	AR
2	CD/DVD ROM			AR	AR	

## 18. Competency Weightage

The following table shows the percentage of training priorities based on consensus made by the Standard Development Committee (SDC).

### INTERACTIVE MULTIMEDIA DESIGN

#### LEVEL 3

CU CODE	COMPETENCY UNIT TITLE	COMPETENCY UNIT WEIGHTAGE	WORK ACTIVITIES	WORK ACTIVITIES WEIGHTAGE
J582-001-3:2019-C01	Graphic Interface Production	20%	1. Illustrate text and typography.	20%
			2. Prepare content write-up.	20%
			3. Prepare graphic and image.	20%
			4. Produce motion files.	30%
			5. Evaluate content production.	10%
J582-001-3:2019-C02	Audio & Video Production	25%	1. Prepare content write-up.	20%
			2. Prepare graphic and image	20%
			3. Prepare audio files.	20%
			4. Prepare video files.	30%
			5. Evaluate content production.	10%
J582-001-3:2019-C03	Interactive Application Development	35%	1. Prepare proposal design.	15%
			2. Setup application platform.	5%
			3. Prepare application workflow.	15%
			4. Develop interactive application.	40%
			5. Evaluate product application.	15%
			6. Submit final application.	10%
J582-001-3:2019-C04	Interactive Multimedia Technical Support	15%	1. Identify interactive multimedia technical support requirements.	35%
			2. Perform technical works	50%
			3. Troubleshoot application error	15%

CU CODE	COMPETENCY UNIT TITLE	COMPETENCY UNIT WEIGHTAGE	WORK ACTIVITIES	WORK ACTIVITIES WEIGHTAGE
J582-001-3:2019-C05	Interactive Multimedia Design Supervision	5%	1. Coordinate job delegation.	5%
			2. Prepare job assignment.	10%
			3. Supervise work progress.	15%
			4. Assess staff performance.	20%
			5. Prepare section meeting.	15%
			6. Conduct in-house training.	20%
			7. Prepare project report.	10%
			8. Optimise equipment utilisation.	5%
TOTAL PERCENTAGE (CORE COMPETENCY)		100%		



### Sample Calculation for Summary of Training Hours

The following table shows the nominal training hours based on recommendations made by the Standard Development Committee (SDC). For purpose of Malaysian Skills Certification through accredited centre training, the program duration is subject to Malaysian Skills Certification System.

### INTERACTIVE MULTIMEDIA DESIGN

#### LEVEL 3

CU CODE	COMPETENCY UNIT TITLE	WORK ACTIVITY	WORK ACTIVITY TRAINING DURATION (HOURS)		TRAINING DURATION (HOURS)	SKILLS CREDIT
			KNOWLEDGE	SKILLS		
J582-001-3:2019-C01	Graphic Interface Production	1. Illustrate text and typography.	27	63	450	45
		2. Prepare content write-up.	27	63		
		3. Prepare graphic and image.	27	63		
		4. Produce motion files.	40	94		
		5. Evaluate content production.	13	33		
J582-001-3:2019-C02	Audio & Video Production	1. Prepare content write-up.	34	78	560	56
		2. Prepare graphic and image	34	78		
		3. Prepare audio files.	34	78		
		4. Prepare video files.	50	118		

CU CODE	COMPETENCY UNIT TITLE	WORK ACTIVITY	WORK ACTIVITY TRAINING DURATION (HOURS)		TRAINING DURATION (HOURS)	SKILLS CREDIT
			KNOWLEDGE	SKILLS		
		5. Evaluate content production.	17	39		
J582-001-3:2019-C03	Interactive Application Development	1. Prepare proposal design.	35	83	780	78
		2. Setup application platform.	12	25		
		3. Prepare application workflow.	35	83		
		4. Develop interactive application.	94	220		
		5. Evaluate product application.	35	83		
		6. Submit final application.	23	52		
J582-001-3:2019-C04	Interactive Multimedia Technical Support	1. Identify interactive multimedia technical support requirements.	35	84	340	34
		2. Perform technical works	50	120		
		3. Troubleshoot application error	15	36		

CU CODE	COMPETENCY UNIT TITLE	WORK ACTIVITY	WORK ACTIVITY TRAINING DURATION (HOURS)		TRAINING DURATION (HOURS)	SKILLS CREDIT
			KNOWLEDGE	SKILLS		
J582-001-3:2019-C05	Interactive Multimedia Design Supervision	1. Coordinate job delegation.	2	5	110	11
		2. Prepare job assignment.	4	8		
		3. Supervise work progress.	4	12		
		4. Assess staff performance.	6	15		
		5. Prepare section meeting.	4	12		
		6. Conduct in-house training.	6	15		
		7. Prepare project report.	4	7		
		8. Optimise equipment utilisation.	2	4		
TOTAL HOURS (CORE COMPETENCY)			671	1569	2240	224
TOTAL HOURS OF COMPETENCY UNIT					2240	
TOTAL HOURS OF CORE ABILITIES					160	
TOTAL HOURS TRAINING DURATION					2400	

The sample calculations performed are based on table in section 18 for delivery of level 3 training program at 2240 hours excluding delivery of core abilities.