

REPUBLIC OF KENYA

COMPETENCY BASED MODULAR CURRICULUM

**FOR
ANIMATION AND DIGITAL MEDIA**

KNQF LEVEL 6

(CYCLE 3)

PROGRAMME ISCED CODE: 0211 654A



**TVET CDACC
P.O. BOX 15745-00100
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FOREWORD

The provision of quality education and training is fundamental to the Government's overall strategy for social and economic development. Quality education and training contribute to the achievement of Kenya's development blueprint and sustainable development goals.

Reforms in the education sector are necessary to achieve Kenya Vision 2030 and meet the provisions of the Constitution of Kenya 2010. The education sector had to be aligned to the Constitution, and this resulted in the formulation of the Policy Framework for Reforming Education and Training in Kenya (Sessional Paper No. 14 of 2012). A key feature of this policy is the radical change in the design and delivery of TVET training. This policy document requires that training in TVET be competency-based, curriculum development be industry-led, certification be based on demonstration of competence, and the mode of delivery allow for multiple entry and exit in TVET programmes.

These reforms demand that Industry takes a leading role in curriculum development to ensure the curriculum addresses its competence needs. It is against this background that this curriculum has been developed. For trainees to build their skills on foundational hands-on activities of the occupation, units of learning are grouped in modules. This has eliminated duplication of content and streamlined exemptions based on skills acquired as a trainee progresses in the up-skilling process, while at the same time allowing trainees to be employable in the shortest time possible through the acquisition of part qualifications.

It is my conviction that this curriculum will play a great role in developing competent human resources for the Media Sector's growth and development.

PRINCIPAL SECRETARY

STATE DEPARTMENT FOR TVET

MINISTRY OF EDUCATION

PREFACE

Kenya Vision 2030 aims to transform Kenya into a newly industrializing middle-income country, providing high-quality life to all its citizens by the year 2030. Kenya intends to create globally competitive and adaptive human resource base to meet the requirements of a rapidly industrializing economy through lifelong education and training. TVET has a responsibility to facilitate the process of inculcating knowledge, skills, and worker behaviour necessary for catapulting the nation to a globally competitive country, hence the paradigm shift to embrace Competency-Based Education and Training (CBET).

CAP 210A and Sessional Paper No. 1 of 2019 on Reforming Education and Training in Kenya for Sustainable Development emphasized the need to reform curriculum development, assessment, and certification. This called for a shift to CBET to address the mismatch between skills acquired through training and skills needed by industry, as well as increase the global competitiveness of the Kenyan labour force.

This curriculum has been developed in adherence to the Kenya National Qualifications Framework and CBETA standards and guidelines. The curriculum is designed and organized into Units of Learning with Learning Outcomes, suggested delivery methods, learning resources, and methods of assessing the trainee's achievement. In addition, the units of learning have been grouped in modules to concretize the skills acquisition process and streamline upskilling.

I am grateful to all expert trainers and everyone who played a role in translating the Occupational Standards into this competency-based modular curriculum.

**CHAIRPERSON
TVET CDACC**

ACKNOWLEDGMENT

This curriculum has been designed for competency-based training and has independent units of learning that allow the trainee flexibility in entry and exit. In developing the curriculum, significant involvement and support were received from expert trainers, institutions and organizations.

I recognize with appreciation the role of the Animation and Digital media National Sector Skills Committee (NSSC) in ensuring that competencies required by the industry are addressed in the curriculum. I also thank all stakeholders in the Animation and Digital Media sector for their valuable input and everyone who participated in developing this curriculum.

I am convinced that this curriculum will go a long way in ensuring that individuals aspiring to work in the Media Sector acquire competencies to perform their work more efficiently and effectively.

CHAIRPERSON

SECTOR SKILLS COMMITTEE (NSSC)

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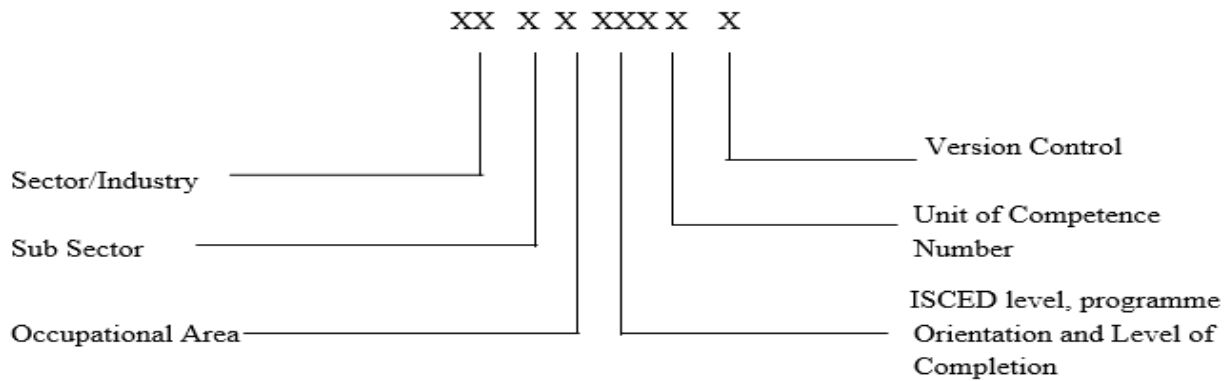
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ABBREVIATION AND ACRONYMS

AD	: Animation & Digital Media
BC	: Basic Competency
CDACC	: Curriculum Development, Assessment and Certification Council
CR	: Core Competency
ICT	: Information Communication Technology
MD	: Media
OS	: Occupational Standards
OSHA	: Occupation Safety and Health Act
OSHS	: Occupation Safety and Health Standards
PPE	: Personal Protective Equipment
SSAC	: Sector Skills Advisory Committee
TVET	: Technical and Vocational Education and Training

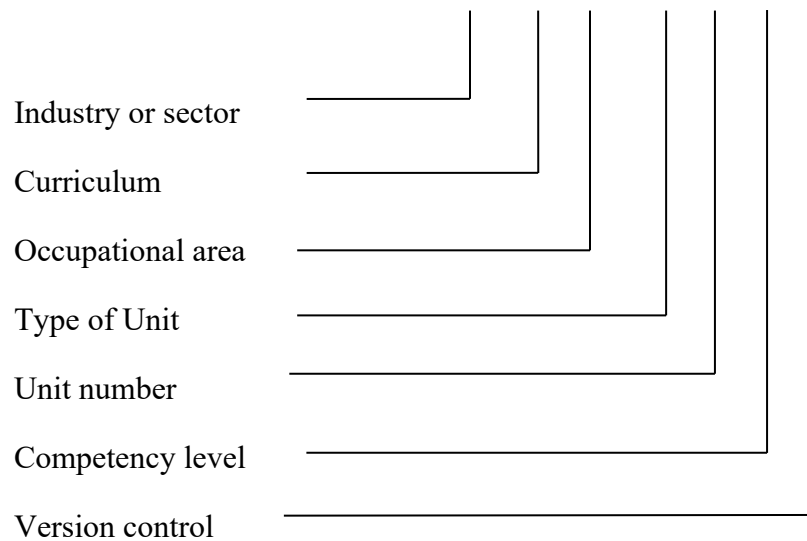
KEY TO UNIT CODE

KEY TO ISCED UNIT CODE



KEY TO TVET CDACC UNIT CODE

MD/CU /AN/BC/01 /06 /MA



COURSE OVERVIEW

Animation and Digital Media Level 6 qualification consists of competencies that an individual must achieve to animate. It entails creating animation script, performing hand drawing, develop animation audio, designing animation character(s), creating animation storyboard, preparing animation character, composing scene environments, developing 2D animation, modelling 3D characters, developing 3D animation, lighting and render 3D scenes, editing animation render, developing motion graphics, designing digital graphics and dramatizing animation characters.

Summary of Units of Learning

ISCED Unit Code	TVE CDACC Unit Code	Unit of Learning Title	Duration in Hours	Credit Factor
MODULE I				
0211 654 01A	MD/CU/AN/BC/01/6/MA	Digital Literacy	40	4
0211 654 02A	ME/CU/AN/CR/01/5/MA	Animation Script Writing	130	13
0211 654 03A	ME/CU/AN/CR/02/5/MA	Hand Drawing	150	15
		SUB TOTAL	320	32
MODULE II				
0211 654 04A	MD/CU/AN/BC/02/6/MA	Communication Skills	40	4
0211 654 05A	ME/CU/AN/CR/04/5/MA	Story Boarding	150	15
0211 654 06A	ME/CU/AN/CR/06/5/MA	2D Animation	130	13
		SUB TOTAL	320	32
MODULE III				
0211 654 07A	MD/CU/AN/BC/04/5/MA	Entrepreneurial Skills	40	4
0211 654 08A	ME/CU/AN/CR/07/5/MA	3D Character modelling	140	14
0211 654 09A	ME/CU/AN/CR/03/5/MA	Sound Design	130	13
		SUB TOTAL	310	31
MODULE IV				
0211 654 10A	MD/CU/AN/BC/03/5/MA	Work Ethics	40	4
0211 654 11A	ME/CU/AN/CR/05/5/MA	Background Compositing	150	15
0211 654 12A	ME/CU/AN/CR/09/5/MA	Digital Graphics	100	10
0211 654 13A	ME/CU/AN/CR/08/5/MA	Video Editing and Compositing	130	13

		SUB TOTAL	420	42
MODULE V				
0211 654 14A	MD/CU/AN/CR/01/6/MA	Character Design	150	15
0211 654 15A	MD/CU/AN/CR/02/6/MA	2D Character Set-up	120	12
0211 654 16A	MD/CU/AN/CR/03/6/MA	3D Character Rigging	100	10
0211 654 17A	MD/CU/AN/CR/04/6/MA	3D Animation	100	10
		SUB TOTAL	470	47
MODULE VI				
0211 654 18A	MD/CU/AN/BC/04/6/MA	Character Acting	110	11
0211 654 19A	MD/CU/AN/CR/05/6/MA	Motion Graphics	120	12
0211 654 20A	MD/CU/AN/CR/06/6/MA	Visual Effects (VFX)	110	11
0211 654 21A	MD/CU/AN/CR/07/6/MA	Lighting and Rendering	110	11
		SUB TOTAL	450	45
		Industry Training	480	48
		GRAND TOTAL	2770	277

Entry Requirements

An individual entering this course should have any of the following minimum requirements:

- a) Attained KCSE with a mean grade of C- (minus)

Or

- b) Animation & digital media or related Level 5 certificate

And/or

- c) Equivalent qualifications as determined by the relevant regulatory body

Trainer Qualifications

Qualifications of a trainer for Animation and Digital Media Level 6 include:

- a) Possession of a higher qualification than Digital Media Level 6 or in related trade area; and
- b) Licence by TVETA.

Industry Training

An individual enrolled in this course will be required to undergo Industry training for a minimum period of 480 hours in Animation and Digital Media sector. The industrial training may be taken after completion of all units for those pursuing the full qualification or be distributed equally in each unit for those pursuing part qualification. In the case of dual training model, industrial training shall be as guided by the dual training policy.

Assessment for levels 5 and 6 courses

The course shall be assessed formatively and summatively:

- a) During formative assessment all performance criteria shall be assessed based on performance criteria weighting.
- b) Number of formative assessments shall minimally be equal to the number of elements in a unit of competency.
- c) During summative assessment basic and common units may be integrated in the core units or assessed as discrete units.
- d) Theoretical and practical weighting for each unit of learning shall be as follows:
 - i) 30-70 for units in module I and module IV
 - ii) 40-60 for units in module V and VI
- e) Formative and summative assessments shall be weighted at 60% and 40% respectively in the overall unit of learning score
For a candidate to be declared competent in a unit of competency, the candidate must meet the following conditions:
 - i) Obtained at least 40% in theory assessment in formative and summative assessments.
 - ii) Obtained at least 60% in practical assessment in formative and summative assessment where applicable.
 - iii) Obtained at least 50% in the weighted results between formative assessment and summative assessment where the former constitutes 60% and the latter 40% of the overall score.

Assessment performance rating for each unit of competency shall be as follows:

MARKS	COMPETENCE RATING
80 -100	Attained Mastery
65 – 79	Proficient
50 – 64	Competent
49 and below	Not Yet Competent
Y	Assessment Malpractice/irregularities

- f) Assessment for Recognition of Prior Learning (RPL) may lead to award of part and/or full qualification.

Certification

A candidate will be issued with a Certificate of Competency upon demonstration of competence in a core Unit of Competency. To be issued with Kenya National TVET Certificate in Animation and Digital Media level 6, the candidate must demonstrate competence in all the Units of Competency as given in the qualification pack. Statement of Attainment certificate may be awarded upon demonstration of competence in certifiable element within a unit.

These certificates will be issued by TVET CDACC

MODULE 1

DIGITAL LITERACY

TVET CDACC UNIT CODE: MD/CU/AN/BC/01/5/MA

Relationship to Occupational Standards

This unit addresses the Unit of Competency: Apply Digital Literacy

Duration of Unit: 40 Hours

Unit Description

This unit covers the competencies required to demonstrate digital literacy. It involves operating computer devices, solving tasks using the Office suite, managing data and information, performing online communication and collaboration, applying cybersecurity skills and job entry techniques, and performing jobs online.

Summary of Learning Outcomes

ELEMENTS	DURATION(HOURS)
Operate computer devices	12
Solve tasks using Office suite	12
Manage Data and Information	5
Perform online communication and collaboration	3
Apply cybersecurity skills	2
Perform Online Jobs	4
Apply job entry techniques	2
Total hours	40

Learning Outcomes, Content, and Suggested Assessment Methods

Learning Outcome	Content	Suggested Assessment Methods
1. Operate computer devices	1.1. Meaning and importance of digital literacy 1.2. Functions and Uses of Computers 1.3. Classification of computers 1.4. Components of a computer system 1.5. Computer Hardware 1.5.1. The System Unit E.g. Motherboard, CPU, casing	<ul style="list-style-type: none">● Observation● Written assessment● Oral assessment● Practical assessment

Learning Outcome	Content	Suggested Assessment Methods
	<p>1.5.2. Input Devices e.g. Pointing, keying, scanning, voice/speech recognition, direct data capture devices.</p> <p>1.5.3. Output Devices e.g. hardcopy output and softcopy output</p> <p>1.5.4. Storage Devices e.g. main memory e.g. RAM, secondary storage (Solid state devices, Hard Drives, CDs & DVDs, Memory cards, Flash drives</p> <p>1.5.5. Computer Ports e.g. HDMI, DVI, VGA, USB type C etc.</p> <p>1.6. Classification of computer software</p> <p>1.7. Operating system functions</p> <p>1.8. Procedure for turning/off a computer</p> <p>1.9. Mouse use techniques</p> <p>1.10. Keyboard Parts and Use Techniques</p> <p>1.11. Desktop Customization</p> <p>1.12. File and Files Management using an operating system</p> <p>1.13. Computer Internet Connection Options</p> <p>1.13.1. Mobile Networks/Data Plans</p> <p>1.13.2. Wireless Hotspots</p> <p>1.13.3. Cabled (Ethernet/Fiber)</p> <p>1.13.4. Dial-Up</p> <p>1.13.5. Satellite</p> <p>1.14. Computer external devices management</p> <p>1.14.1 Device connections</p> <p>1.14.2 Device controls (volume controls and display properties)</p>	

Learning Outcome	Content	Suggested Assessment Methods
2. Solve tasks using Office suite	2.1. Meaning and Importance of Word Processing 2.2. Examples of Word Processors 2.3. Working with word documents 2.3.1 Open and close word processor 2.3.2 Create a new document 2.3.3 Save a document 2.3.4 Switch between open documents 2.4. Enhancing productivity 2.4.1 Set basic options/preferences 2.4.2 Help resources 2.4.3 Use magnification/zoom tools 2.4.4 Display, hide built-in tool bar 2.4.5 Using navigation tools 2.5. Typing Text 2.6. Document editing (copy, cut, paste commands, spelling and Grammar check) 2.7. Document formatting 2.7.1 Formatting text 2.7.2 Formatting paragraph 2.7.3 Formatting styles 2.7.4 Alignment 2.7.5 Creating tables 2.7.6 Formatting tables 2.8. Graphical objects 2.8.1 Insert object (picture, drawn object) 2.8.2 Select an object 2.8.3 Edit an object 2.8.4 Format an object 2.9. Document Print setup 2.9.1 Page layout, 2.9.2 Margins set up 2.9.3 Orientation. 2.10. Word Document Printing	<ul style="list-style-type: none"> ● Observation ● Portfolio of Evidence ● Project ● Written assessment ● Practical assessment ● Oral assessment

Learning Outcome	Content	Suggested Assessment Methods
	<p>2.11. Meaning & Importance of electronic spreadsheets</p> <p>2.12. Components of Spreadsheets</p> <p>2.13. Application areas of spreadsheets</p> <p>2.14. Using spreadsheet application</p> <p>2.14.1 Parts of Excel screen: ribbon, formula bar, active cell, name box, column letter,row number, Quick Access Toolbar.</p> <p>2.14.2 Cell Data Types</p> <p>2.14.3 Block operations</p> <p>2.14.4 Arithmetic operators (formula bar (-, +, *, /).</p> <p>2.14.5 Cell Referencing</p> <p>2.15. Data Manipulation</p> <p>2.15.1 Using Functions (Sum, Average, SumIF, Count, Max, Max, IF, Rank, Product, mode etc)</p> <p>2.15.2 Using Formulae</p> <p>2.15.3 Sorting data</p> <p>2.15.4 Filtering data</p> <p>2.15.5 Visual representation using charts</p> <p>2.16. Worksheet printing</p> <p>2.17. Electronic Presentations</p> <p>2.18. Meaning and Importance of electronic presentations</p> <p>2.19. Examples of Presentation Software</p> <p>2.20. Using the electronic presentation application</p> <p>2.20.1 Parts of the PowerPoint screen (slide navigation pane, slide pane, notes, the ribbon, quick access toolbar, and scroll bars).</p> <p>2.20.2 Open and close presentations</p>	

Learning Outcome	Content	Suggested Assessment Methods
	<p>2.20.3 Creating Slides (Insert new slides, duplicate, or reuse slides.)</p> <p>2.20.4 Text Management (insert, delete, copy, cut and paste, drag and drop, format, and use spell check).</p> <p>2.20.5 Use magnification/zoom tools</p> <p>2.20.6 Apply or change a theme.</p> <p>2.20.7 Save a presentations</p> <p>2.20.8 Switch between open presentations</p> <p>2.21. Developing a presentation</p> <p>2.21.1 Presentation views</p> <p>2.21.2 Slides</p> <p>2.21.3 Master slide</p> <p>2.22. Text</p> <p>2.22.1 Editing text</p> <p>2.22.2 Formatting</p> <p>2.22.3 Tables</p> <p>2.23. Charts</p> <p>2.23.1 Using charts</p> <p>2.23.2 Organization charts</p> <p>2.24. Graphical objects</p> <p>2.24.1 Insert, manipulate</p> <p>2.24.2 Drawings</p> <p>2.25. Prepare outputs</p> <p>2.25.1 Applying slide effects and transitions</p> <p>2.25.2 Check and deliver</p> <p>2.26. Spell check a presentation</p> <p>2.27. Slide orientation</p> <p>2.28. Slide shows, navigation</p> <p>2.29. Print presentations (slides and handouts)</p>	

Learning Outcome	Content	Suggested Assessment Methods
3. Manage Data and Information	3.1 Meaning of Data and information 3.2 Importance and Uses of data and information 3.3 Types of internet services 3.4 Communication Services 3.5 Information Retrieval Services 3.6 File Transfer 3.7 World Wide Web Services 3.8 Web Services 3.9 Automatic Network Address Configuration 3.10 NewsGroup 3.11 Ecommerce 3.12 Types of Internet Access Applications 3.13 Web browsing concepts 3.13.1 Key concepts 3.13.2 Security and safety 3.13.3 Web browsing 3.13.4 Using the web browser 3.13.5 Tools and settings 3.13.6 Clearing Cache and cookies 3.13.7 URIs 3.13.8 Bookmarks 3.13.9 Web outputs 3.13.10 Web based information 3.13.11 Search 3.13.12 Critical evaluation of information 3.13.13 3.14 Copyright, data protection 3.15 Downloads Management 3.16 Performing Digital Data Backup (Online and Offline) 3.17 Emerging issues in internet	<ul style="list-style-type: none"> • Observation • Portfolio of Evidence • Project • Written assessment • Practical assessment • Oral assessment

Learning Outcome	Content	Suggested Assessment Methods
4. Perform online communication and collaboration	4.1 Netiquette principles 4.2 Communication concepts 4.2.1 Online communities 4.2.2 Communication tools 4.2.3 Email concepts 4.2.4 Using email 4.2.5 Sending email 4.2.6 Receiving email 4.3 Tools and settings 4.4 Organizing email 4.5 Digital content copyright and licenses 4.6 Online collaboration tools 4.7 Online Storage (Google Drive) 4.8 Online productivity applications (Google Docs & Forms) 4.9 Online meetings (Google Meet/Zoom) 4.10 Online learning environments 4.11 Online calendars (Google Calendars) 4.12 Social networks (Facebook/Twitter - Settings & Privacy) 4.13 Preparation for online collaboration 4.14 Common setup features 4.15 Setup 4.16 Mobile collaboration 4.17 Key concepts 4.18 Using mobile devices 4.19 Applications 4.20 Synchronization	<ul style="list-style-type: none"> • Observation • Portfolio of Evidence • Project • Written assessment • Practical assessment • Oral assessment
5. Apply cybersecurity skills	5.1 Data protection and privacy 5.1.1 Confidentiality of data/information 5.1.2 Integrity of data/information 5.1.3 Availability of data/information 5.2 Internet security threats 5.2.1 Malware attacks 5.2.2 Social engineering attacks 5.2.3 Distributed denial of service	<ul style="list-style-type: none"> • Observation • Portfolio of Evidence • Project • Written assessment • Practical

Learning Outcome	Content	Suggested Assessment Methods
	(DDoS) 5.2.4 Man-in-the-middle attack (MitM) 5.2.5 Password attacks 5.2.6 IoT Attacks 5.2.7 Phishing Attacks 5.2.8 Ransomware 5.3 Computer threats and crimes 5.4 Cybersecurity control measures 5.4.1 Physical Controls 5.4.2 Technical/Logical Controls (Passwords,PINs, Biometrics) 5.4.3 Operational Controls 5.5 Laws governing protection of ICT in Kenya 5.6 The Computer Misuse and Cybercrimes Act No. 5 of 2018 5.7 The Data Protection Act No. 24 Of 2019	assessment <ul style="list-style-type: none"> • Oral assessment
6. Perform Online Jobs	6.1 Introduction to online working 6.2 Types of online Jobs 6.3 Online job platforms 6.3.1 Remotask 6.3.2 Data annotation tech 6.3.3 Cloud worker 6.3.4 Upwork 6.3.5 Oneforma 6.3.6 Appen 6.4 Online account and profile management 6.5 Identifying online jobs/job bidding 6.6 Online digital identity 6.7 Executing online tasks 6.8 Management of online payment accounts.	<ul style="list-style-type: none"> • Observation • Portfolio of Evidence • Project • Written assessment • Practical assessment • Oral assessment
7. Apply job entry techniques	7.1 Types of job opportunities 7.1.1 Self employment 7.1.2 Service provision	<ul style="list-style-type: none"> • Observation • Oral assessment

Learning Outcome	Content	Suggested Assessment Methods
	7.1.3 product development 7.2 salaried employment 7.3 Sources of job opportunities 7.4 Resume/ curriculum vitae 7.4.1 What is a CV 7.4.2 How long should a CV be 7.4.3 What to include in a CV 7.4.4 Format of CV 7.4.5 How to write a good CV 7.4.6 Don'ts of writing a CV 7.5 Job application letter 7.5.1 What to include 7.5.2 Addressing a cover letter 7.5.3 Signing off a cover letter 7.6 Portfolio of Evidence 7.6.1 Academic credentials 7.6.2 Letters of commendations 7.6.3 Certification of participations 7.6.4 Awards and decorations 7.8 Interview skills 7.8.1 Listening skills 7.8.2 Grooming 7.8.3 Language command 7.8.4 Articulation of issues 7.8.5 Body language 7.8.6 Time management 7.8.7 Honesty 7.9 Generally knowledgeable in current affairs and technical area	<ul style="list-style-type: none"> • Portfolio of evidence • Third party report • Written assessment

Suggested Methods Instruction

- Instructor-led facilitation using active learning strategies
- Demonstration by trainer
- Practical work by trainees

- Viewing of related videos
- Group discussions
- Project
- Role play
- Case study

Recommended Resources for 25 Trainees

- 25 computers with the following software:
 - 7.10 Windows/Linux/Macintosh Operating System
 - 7.11 Microsoft Office Software
 - 7.12 Google Workspace Account
 - 7.13 Antivirus Software
- 2 Printers
- Printing Papers
- External storage media
- 1 Projector
- 1 Whiteboard
- 1 Smartboard/Smart TV (Where applicable)
- Assorted whiteboard markers
- Internet connection
- 5 samples of CVs
- 5 samples of job applications

ANIMATION SCRIPT WRITING

TVET CDACC UNIT CODE: ME/CU/AN/CR/01/5/MA

Relationship to Occupational Standards

This unit addresses the Unit of Competency: create animation script

Duration of Unit: 130 hours

Unit Description

This unit specifies the competencies required to create animation script. It involves formulating animation idea, writing animation synopsis, developing scene treatment, developing character profile and developing animation script.

Summary of Learning Outcomes

Elements	Duration (Hours)
Formulate animation idea	18
Write animation synopsis	20
Develop scene treatment	26
Develop character profile	22
Develop animation script	44
Total hours	130

Learning Outcomes, Content and Suggested Assessment Methods

Learning Outcome	Content	Suggested Assessment Methods
1. Formulate animation idea	1.1 Introduction to field of animation. 1.2 Meaning of terms in animation. 1.3 Introduction to Traditional animation techniques. 1.4 Introduction to digital animation. 1.5 Animation ideas research. 1.6 Concepts development. 1.7 Inspiration board. 1.8 Narrative and structural framework. 1.9 Animation log-lines. 1.10 Log-lines development 1.11 Log-lines approved.	<ul style="list-style-type: none">• Written tests• Observation• Oral questions• Third party report• Interviewing• Project and report writing

2. Write animation synopsis	2.1 Story structure 2.2.1 Introduction of the story 2.2.2 Story conflict Story resolution 2.2.3 Story ending 2.2 Genres 2.3 Narrative plot development 2.4 Narrative setting 2.5 Writing Animation synopsis	<ul style="list-style-type: none"> • Written tests • Observation • Oral questions • Third party report • Interviewing • Project and report writing
3. Develop scene treatment	3.1 Scene breakdown 3.2 Story sub-plot 3.3 Character dialogues 3.4 Scene action 3.5 Scene setting	<ul style="list-style-type: none"> • Written tests • Observation • Oral questions • Third party report • Interviewing • Project and report writing
4. Develop character profile	4.1 Introduction to animation characters 4.2 Character types 4.3 Character traits 4.4 Character dynamics	<ul style="list-style-type: none"> • Written tests • Observation • Oral questions • Third party report • Interviewing • Project and report writing
5. Develop animation script	5.1 Introduction script writing 5.2 Script writing format 5.3 Script components 5.4 Index cards 5.5 Script Generation 5.6 Draft script 5.7 Final script	<ul style="list-style-type: none"> • Written tests • Observation • Oral questions • Third party report • Interviewing

Suggested Methods of Instruction

- Project
- Demonstration by trainer
- Practice by the trainee
- Discussions
- Direct instruction
- Case study
- Audio –visual aids

Recommended Resources

- Computers
- Internet
- Magazines
- Animation films
- Course books
- Computer software

HAND DRAWING

TVET CDACC UNIT CODE: MD/CU/AN/CR/02/6/MA

Relationship to Occupational Standards

This unit addresses the unit of competency: perform hand drawing

Duration of Unit: 150 hours

Unit Description

This unit specifies the competencies required to perform hand drawing. It involves drawing hand lines and shapes, creating pencil shades and patterns, creating perspective points, drawing human figure poses, creating still-life drawings and creating composition drawings.

Summary of Learning Outcomes

Elements	Duration (Hours)
Draw hand lines and shapes	20
Create pencil shades and patterns	22
Draw human figure	28
Create still-life drawings	28
Create perspective points	26
Create composition drawings	26
Total hours	150

Learning Outcomes, Content and Suggested Assessment Methods

Learning Outcome	Content	Suggested Assessment Methods
1. Draw hand lines and shapes	1.1 Introduction to hand drawing 1.2 Drawing tools and techniques 1.3 Drawing lines and shapes 1.4 Solid drawing	<ul style="list-style-type: none">• Observation• Oral questions• Third party report• Interviewing• Project and report writing
2. Create pencil shades and patterns	2.1 Stippling gradients 2.2 Hatching gradients 2.3 Cross-hatching gradients 2.4 Shaded gradients. 2.5 Stumping gradients. 2.6 Shades and patterns	<ul style="list-style-type: none">• Observation• Oral questions• Third party report• Interviewing• Project and report writing

3. Draw human figure	3.1 Introduction to human figure drawing 3.2 Human anatomy. 3.3 Solid flexible model 3.4 Body postures.	<ul style="list-style-type: none"> • Observation • Oral questions • Third party report • Interviewing • Project and report writing
5 Create still-life drawings	5.1 Real-life sketches. 5.2 Gestural sketches 5.3 Speed sketching 5.4 proportion drawing	<ul style="list-style-type: none"> • Observation • Oral questions • Third party report • Interviewing • Project and report writing
5. Create perspective points	5.1 Introduction of perspective drawing 5.2 One-point perspective drawing 5.3 Two-point perspective drawing 5.4 Three-point perspective drawing. 5.5 Forced perspective drawing.	<ul style="list-style-type: none"> • Observation • Oral questions • Third party report • Interviewing
6. Create composition drawings	5.1 Imaginative drawing 5.2 Landscape drawing 5.3 Architectural drawings 5.4 Scene composition 5.5 Media law	<ul style="list-style-type: none"> • Observation • Oral questions • Third party report • Interviewing

Suggested Methods of Instruction

- Project
- Demonstration by trainer
- Practice by the trainee
- Discussions
- Direct instruction
- Case study
- Audio –visual aids

Recommended Resources

- Computers
- Water Colour

- Sketch Pad
- Internet
- Digital Cameras
- Magazines
- Animation films
- Text books
- Computer software
- Drawing sets
- Drawing tables
- A4 Colour scanner
- Stereo studio headset
- Digital drawing tablet
- Flash drives
- Sketch pencils (6B – 6H)
- Kneading eraser
- Water colour paper (cotton fiber paper)

MODULE II

COMMUNICATION SKILLS

TVET CDACC UNIT CODE: MD/CU/AN/BC/02/5/MA

Relationship to Occupational Standards

This unit addresses the Unit of Competency: Apply Communication Skills

Duration of Unit: 40 hours

Unit Description

This unit covers the competencies required to apply communication skills. It involves applying communication channels, written, non-verbal, oral, and group communication skills.

Summary of Learning Outcomes

Elements	Duration (Hours)
Apply communication channels	6
Apply written communication skills	8
Apply non-verbal skills	8
Apply oral communication skills	9
Apply group communication skills	9
Total hours	40

Learning Outcomes, Content, and Suggested Assessment Methods

Learning Outcome	Content	Suggested Assessment Methods
1. Apply communication channels	1.2 Communication process 1.3 Principles of effective communication 1.4 Channels/medium/modes of communication 1.5 Factors to consider when selecting a channel of communication 1.6 Barriers to effective communication 1.7 Flow/patterns of communication 1.8 Sources of information 1.9 Organizational policies	<ul style="list-style-type: none">• Oral questions• Written assessment• Observation• Portfolio of Evidence• Practical assessment• Third party report

Learning Outcome	Content	Suggested Assessment Methods
2. Apply written communication skills	2.1 Types of written communication 2.2 Elements of communication 2.3 Organization requirements for written communication 2.4 written communication	<ul style="list-style-type: none"> • Oral assessment • Written assessment • Observation • Portfolio of Evidence • Practical assessment • Third party report
3. Apply non-verbal communication skills	3.1 Utilize body language and 3.2 Gestures 3.3 Apply body posture 3.4 Apply workplace dressing code	<ul style="list-style-type: none"> • Oral assessment • Written assessment • Observation • Portfolio of Evidence • Practical assessment • Third party report
4. Apply oral communication skills	4.1 Types of oral communication pathways 4.2 Effective questioning techniques 4.3 Workplace etiquette 4.4 Active listening	<ul style="list-style-type: none"> • Oral assessment • Written assessment • Observation • Portfolio of Evidence • Practical assessment • Third party report
5. Apply group discussion skills	4.5 Establishing rapport 4.6 Facilitating resolution of issues 4.7 Developing action plans 4.8 Group organization techniques 4.9 Turn-taking techniques 4.10 Conflict resolution techniques 4.11 Team-work	<ul style="list-style-type: none"> • Oral assessment • Written assessment • Observation • Portfolio of Evidence • Practical assessment

Suggested Methods of Instruction

- Discussion
- Roleplaying
- Simulation
- Direct instruction

- Demonstration
- Field trips

Recommended Resources for 25 trainees

General Resources	Tools and Equipment	Materials and Supplies
<ul style="list-style-type: none"> • 25 Desktop computers/laptops 	Mobile phones	Flashcards
<ul style="list-style-type: none"> • Internet connection 		Flip charts
<ul style="list-style-type: none"> • 1 Projector • 1 Printer 		2 packets of assorted colors of whiteboard marker pens
<ul style="list-style-type: none"> • 1 Whiteboard 		Printing papers
<ul style="list-style-type: none"> • Report writing templates 		

STORY BOARDING

TVET CDACC UNIT CODE: ME/CU/AN/CR/04/5/MA

Relationship to Occupational Standards

This unit addresses the unit of competency: create animation storyboard

Duration of Unit: 150 hours

Unit Description

This unit specifies the competencies required to create animation storyboard. It involves setting script scenes, preparing shot list, drawing draft storyboard, drawing final storyboard, developing soft copy storyboard, developing storyboard animation and creating animatic.

Summary of Learning Outcomes

Elements	Duration (Hours)
Set script scenes	25
Prepare shot list	23
Draw draft storyboard	32
Draw final story board	35
Create animatic	35
Total hours	150

Learning Outcomes, Content and Suggested Assessment Methods

Learning Outcome	Content	Suggested Assessment Methods
1. Set script scenes	1.1 Introduction to storyboarding 1.2 Elements of a storyboard 1.3 Scene analysis	<ul style="list-style-type: none">• Observation• Oral questions• Third party report• Interviewing• Project and report writing
2. Prepare shot list	2.1 Camera techniques 2.1.1 Camera shots 2.1.2 Camera angles 2.1.3 Camera movements 2.2 Shot list 2.3 Shot timing	<ul style="list-style-type: none">• Observation• Oral questions• Third party report• Interviewing• Project and report writing

3. Draw draft storyboard	3.1 Frame dimensions 3.2 Storyboard layout 3.3 Storyboard panels 3.4 Storyboarding tools 3.5 Draft sketching	<ul style="list-style-type: none"> • Observation • Oral questions • Third party report • Interviewing • Project and report writing
4. Draw final storyboard	4.1 Analysis of draft storyboard 4.2 Storyboard refining 4.3 Storyboard clean-up 4.4 Storyboard colouring	<ul style="list-style-type: none"> • Observation • Oral questions • Third party report • Interviewing • Project and report writing
5. Create animatic	5.1 Introduction to editing software 5.2 Preparation of Digital frames and dialogue 5.3 Pencil test 5.4 Audio integration 5.5 Subtle movements and compositing 5.6 Animatic rendering	<ul style="list-style-type: none"> • Observation • Oral questions • Third party report • Interviewing

Suggested Methods of Instruction

- Project
- Demonstration by trainer
- Practice by the trainee
- Discussions
- Direct instruction
- Case study
- Audio –visual aids

Recommended Resources

- Computers
- Audio recorder
- Internet
- Digital Cameras
- Magazines
- Testing books
- Animation films
- Text books

- Editing & recording studio
- Computer software
- Television
- Drawing sets
- Drawing tables
- A4 Colour scanner
- Stereo studio headset
- Digital Drawing Tablet
- Flash drives

2D ANIMATION

TVET CDACC UNIT CODE: ME/CU/AN/CR/06/5/MA

Relationship to Occupational Standards

This unit addresses the unit of competency: develop 2D animation

Duration of Unit: 130 hours

Unit Description

This unit specifies the competencies required to develop 2D animation. It involves setting scene character, creating exposure sheet, creating pose to pose character animation, animating cut-out characters, creating in-between poses animation, cleaning animation poses, and directing camera techniques.

Summary of Learning Outcomes

Elements	Duration (Hours)
Set scene character	15
Create exposure sheet	12
Create pose to pose character animation	26
Create in-between character poses	20
Animate cut-out characters	20
Clean animation poses	17
Direct camera techniques	20
Total hours	130

Learning Outcomes, Content and Suggested Assessment Methods

Learning Outcome	Content	Suggested Assessment Methods
1. Set scene character	1.1 Introduction to 2D animation 1.2 Principles of animation 1.3 2D animation software user interface 1.4 Library of props 1.5 Character library 1.6 Composition setting	<ul style="list-style-type: none">• Observation• Oral questions• Third party report• Interviewing• Project and report writing•
2. Create exposure sheet	2.1 Animatic analysis 2.2 Exposure sheet layout	<ul style="list-style-type: none">• Observation• Oral questions

	2.2.1 Action 2.2.2 Audio 2.2.3 Timing 2.2.4 Cell levels 2.2.5 Camera instructions	<ul style="list-style-type: none"> • Third party report • Interviewing • Project and report writing
3. Create pose to pose character animation	3.1 Frame-frame animation 3.2 Pose-pose animation 3.3 Timing 3.4 Key frames drawings	<ul style="list-style-type: none"> • Observation • Oral questions • Third party report • Interviewing • Project and report writing
4. Create in-between character poses	4.1 Extreme poses 4.2 Key poses 4.3 Passing position poses 4.4 Breakdown poses 4.5 In-between poses	<ul style="list-style-type: none"> • Observation • Oral questions • Third party report • Interviewing • Project and report writing
5. Animate cut-out characters	5.1 Setting key frames on time-line 5.2 Extreme key-key frames 5.3 Key position key frames 5.4 Passing position key frames 5.5 Breakdown key frames 5.6 In-between poses 5.7 Set keys and motion keys 5.8 Motion curves	<ul style="list-style-type: none"> • Observation • Oral questions • Third party report • Interviewing • Project and report writing
6. Clean animation poses	6.1 Animation charts. 6.2 Character silhouettes 6.3 Animation background 6.4 Lip-syncing 6.5 Sound syncing 6.6 Validation of principles of animation	<ul style="list-style-type: none"> • Observation • Oral questions • Third party report • Interviewing • Project and report writing

7. Direct Camera techniques	1.1 Camera parameters 1.2 Camera shots 1.3 Camera movements. 1.4 Camera angles 1.5 Staging	<ul style="list-style-type: none"> • Observation • Oral questions • Third party report • Interviewing • Project and report writing
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Suggested Methods of Delivery

- Project
- Demonstration by trainer
- Practice by the trainee
- Discussions
- Direct instruction
- Case study
- Audio –visual aids

Recommended Resources

- Computers
- Audio recorder
- Internet
- Digital Cameras
- Magazines
- Testing books
- Animation films
- Text books
- Editing & recording studio
- Computer software
- Television
- Drawing sets
- Drawing tables
- A4 Colour scanner
- Stereo studio headset
- Digital Drawing Tablet
- Flash drives

MODULE III

ENTREPRENEURIAL SKILLS

TVET CDACC UNIT CODE: MD/CU/AN/BC/04/5/MA

Relationship to occupational standards

This unit addresses the unit of competency: Apply Entrepreneurial skills.

Duration of unit: 40 hours

Unit Description:

This unit covers the competencies required to demonstrate an understanding of entrepreneurship. It involves demonstrating an understanding of financial literacy, applying entrepreneurial concepts identifying entrepreneurship opportunities, applying business legal aspects, and developing business innovative strategies and business plans.

Summary of Learning Outcomes

ELEMENTS	DURATION (HOURS)
Apply financial literacy	6
Apply entrepreneurial concept	6
Identify entrepreneurship opportunities	6
Apply business legal aspects	7
Innovate business Strategies	7
Develop Business Plan	8
Total hours	40

Learning Outcomes, Content and Suggested Assessment Methods

Learning Outcome	Content	Suggested Assessment Methods
1. Apply financial literacy	1.6 Personal finance management 1.7 Balancing between needs and wants 1.8 Budget Preparation 1.9 Saving management 1.10 Factors to consider when deciding where to save 1.11 Debt management 1.12 Factors to consider before taking a loan 1.13 Investment decisions 1.14 Types of investments	<ul style="list-style-type: none">• Observation• Project• Written assessment• Oral assessment• Third party report• Interviews

Learning Outcome	Content	Suggested Assessment Methods
	1.15 Factors to consider when investing money 1.16 Insurance services 1.17 insurance products available in the market 1.18 Insurable risks	
2.Apply entrepreneurial concept	2.1 Difference between Entrepreneurs and Business persons 2.2 Types of entrepreneurs 2.3 Ways of becoming an entrepreneur 2.4 Characteristics of Entrepreneurs 2.5 salaried employment and self-employment 2.6 Requirements for entry into self-employment 2.7 Roles of an Entrepreneur in an enterprise 2.8 Contributions of Entrepreneurship	<ul style="list-style-type: none"> • Observation • Project • Written assessment • Oral assessment • Third party report
3.Identify entrepreneurship opportunities	3.1 Sources of business ideas 3.2 Factors to consider when evaluating business opportunity 3.3 Business life cycle	<ul style="list-style-type: none"> • Observation • Project • Written assessment • Oral assessment • Third party report
4.Apply business legal aspects	4.1 Forms of business ownership 4.2 Business registration and licensing processing 4.3 Types of contracts and agreements Employment laws 4.4 Taxation laws	<ul style="list-style-type: none"> • Observation • Project • Written assessment • Oral assessment • Third party report
5.Innovate business	5.1 Creativity in business	<ul style="list-style-type: none"> • Observation

Learning Outcome	Content	Suggested Assessment Methods
Strategies	5.2 Innovative business strategies 5.3 Entrepreneurial Linkages 5.4 ICT in business growth and development	<ul style="list-style-type: none"> • Project • Written assessment • Oral assessment • Third party report
6.Develop Business Plan	6.1 Business description 6.2 Marketing plan 6.3 Organizational/Management 6.4 plan 6.5 Production/operation plan 6.6 Financial plan 6.7 Executive summary 6.8 Business plan presentation 6.9 Business idea incubation	<ul style="list-style-type: none"> • Observation • Written assessment • Project • Oral assessment • Third party report

Suggested Methods of Instruction

- Direct instruction with active learning strategies
- Project (Business plan)
- Case studies
- Field trips
- Group Discussions
- Demonstration
- Question and answer
- Problem solving
- Experiential
- Team training
- Guest speakers

Recommended Resources for 25 Trainees

- 5 Case studies
- 5 Business plan templates
- 10 Computers
- 1 Overhead projectors
- Internet
- Video clips
- 5 Newspapers and Handouts
- 5 Business Journals

- 25 sets of Writing materials

SOUND DESIGN

TVET CDACC UNIT CODE: ME/CU/AN/CR/03/5/MA

Relationship to Occupational Standards

This unit addresses the unit of competency: develop animation audio

Duration of Unit: 130 hours

Unit Description

This unit specifies the competencies required to develop animation audio. It involves auditioning animation voice artist, recording animation dialogue, creating animation jingles, recording animation Foleys, record sound track, composing sound track and mastering audio elements.

Summary of Learning Outcomes

Elements	Duration (Hours)
Audition animation voice artist	12
Record animation dialogue	18
Create animation jingles	25
Record animation Foleys	15
Compose sound track	18
Record sound track	18
Master audio elements	24
Total hours	130

Learning Outcomes, Content and Suggested Assessment Methods

Learning Outcome	Content	Suggested Assessment Methods
1. Audition animation Voice artist	1.1 Introduction to sound design 1.2 Sound production equipment 1.3 Animation script analysis 1.4 Audio script development 1.5 Voices profiles 1.6 Audition briefs 1.7 Audition calls 1.8 Voice casting	<ul style="list-style-type: none">• Written tests• Observation• Oral questions• Third party report• Interviewing• Project and report writing
2. Record animation dialogue	2.1 Introduction to voice acting 2.2 Artist briefing 2.3 Voice directing 2.4 Rehearsals process 2.5 Dry- run recording 2.6 Audio recording	<ul style="list-style-type: none">• Observation• Oral questions• Third party report• Interviewing• Project and report writing

3. Create animation Jingles	3.1 Introduction to music theory 3.2 Animation jingles 3.3 Chords progression 3.4 Mood and tempo 3.5 Mastering of Animation Jingles	<ul style="list-style-type: none"> • Observation • Oral questions • Third party report • Interviewing • Project and report writing
4. Record animation Foleys	4.1 Animation Foleys 4.2 Elements of animation Foleys 4.3 Foleys creation 4.4 Recording of Foleys. 4.5 Mastering of Foleys	<ul style="list-style-type: none"> • Observation • Oral questions • Third party report • Interviewing • Project and report writing
5. Compose sound track	5.5 Introduction to scoring for animation 5.6 Sound tracks analysis 5.7 Writing music for animation	<ul style="list-style-type: none"> • Written tests • Observation • Oral questions • Third party report • Interviewing
6. Record sound track	6.1 Music recording basics 6.2 Recording sound tracks 6.3 Mastering of Sound tracks.	<ul style="list-style-type: none"> • Written tests • Observation • Oral questions • Third party report • Interviewing
7. Master audio elements	2.7 Introduction of audio elements 2.8 Sound editing 2.9 Audio compositing 2.10 levelling and balancing audio 2.11 exporting the sound track	<ul style="list-style-type: none"> • Written tests • Observation • Oral questions • Third party report • Interviewing

Suggested Methods of Instruction

- Project
- Demonstration by trainer
- Practice by the trainee
- Discussions
- Direct instruction
- Case study

- Audio –visual aids

Recommended Resources

- Computers
- Audio recorder
- Internet
- Digital Cameras
- Magazines
- Testing books
- Animation films
- Text books
- Editing & recording studio
- Computer software
- Stereo studio headset
- Flash drives

3D CHARACTER MODELLING

TVET CDACC UNIT CODE: ME/CU/AN/CR/07/5/MA

Relationship to Occupational Standards

This unit addresses the unit of competency: model 3D characters

Duration of Unit: 140 hours

Unit Description

This unit specifies the competencies required to model 3D characters. It involves analysing character bible, developing animation theme, preparing character T or A poses, unwrapping 3D characters and texturing 3D characters.

Summary of Learning Outcomes

ELEMENTS	DURATION(HOURS)
Analyse character bible	12
Develop animation theme	12
Prepare character T and A poses	18
Model 3D characters	40
Unwrap 3D characters	28
Texture 3D characters	30
Total hours	140

Learning Outcomes, Content and Suggested Assessment Methods

Learning Outcome	Content	Suggested Assessment Methods
1. Analyse character bible	1.1 Introduction of character design 1.2 Character analysis 1.3 Character profile 1.4 Character theme and style	<ul style="list-style-type: none">• Observation• Oral questions• Third party report• Interviewing• Project and report writing
2. Develop animation theme	2.1 3D modelling user interface software 2.2 Modelling techniques	<ul style="list-style-type: none">• Observation• Oral questions• Third party report

	2.3 Colour schemes 2.4 Character costume design 2.5 3D rig method	<ul style="list-style-type: none"> • Interviewing • Project and report writing
3. Prepare character T poses	3.1 Character blue prints set-up 3.2 Character front view 3.3 Character side view. 3.4 Character back view. 3.5 Character top view.	<ul style="list-style-type: none"> • Observation • Oral questions • Third party report • Interviewing • Project and report writing
4. Model 3D character	4.1 Mesh model selection 4.2 Mesh- model formation 4.3 Quadrilaterals 4.4 Edge loops 4.5 Topology 4.6 Facial loops development 4.7 Body joint loops development 4.8 Appendages modelling 4.9 Character costumes 4.10 Mesh- model refining	<ul style="list-style-type: none"> • Observation • Oral questions • Third party report • Interviewing • Project and report writing
5. Unwrap 3D characters	5.1 UVW unwrap modifier 5.2 Defining the seam-lines 5.3 Planar mapping 5.4 Textured character UVW maps 5.5 Character texture details	<ul style="list-style-type: none"> • Observation • Oral questions • Third party report • Interviewing • Project and report writing
6. Texture 3D character	6.1 Skin maps 6.2 Bump maps 6.3 Hair and fur 6.4 Eye materials 6.5 Tongue materials and maps. 6.6 Teeth materials	<ul style="list-style-type: none"> • Observation • Oral questions • Third party report • Interviewing • Project and report writing

Suggested Methods of Delivery

- Project
- Demonstration by trainer
- Practice by the trainee

- Discussions
- Direct instruction
- Case study
- Audio –visual aids

Recommended Resources

- Computers
- Internet
- Digital Cameras
- Magazines
- Animation films
- Text books
- Computer software
- Drawing set
- Stereo studio headset
- Digital Drawing Tablet
- Flash drives

MODULE IV

WORK ETHICS AND PRACTICES

TVET CDACC UNIT CODE: MD/CU/AN/BC/03/5/MA

Relationship to Occupational Standards

This unit addresses the Unit of Competency: Apply work ethics and practices.

Duration of Unit: 40 hours

Unit Description

This unit covers competencies required to demonstrate employability skills. It involves the ability to: conduct self-management, promote ethical work practices and values, promote teamwork, manage workplace conflicts, maintain professional and personal development, apply problem-solving, and promote customer care.

Summary of Learning Outcomes

ELEMENTS	DURATION (HOURS)
Apply self-management skills	6
Promote ethical work practices and values	6
Promote teamwork	6
Maintain professional and personal development	6
Apply problem solving skills	8
Promote customer care	8
Total hours	40

Learning Outcomes, Content, and Suggested Assessment Methods

Learning Outcome	Content	Suggested Assessment Methods
1. Apply self-management skills	1.1 Self-awareness 1.2 Formulating personal vision, mission, and goals 1.3 Healthy lifestyle practices 1.4 Strategies for overcoming work challenges 1.5 Emotional intelligence 1.6 Coping with Work Stress. 1.7 Assertiveness versus aggressiveness and passiveness	<ul style="list-style-type: none">● Observation● Written assessment● Oral assessment● Third party reports● Portfolio of evidence● Project● Practical

Learning Outcome	Content	Suggested Assessment Methods
	1.8 Developing and maintaining high self-esteem 1.9 Developing and maintaining positive self-image 1.10 Time management 1.11 Setting performance targets 1.12 Monitoring and evaluating performance targets	
2. Promote ethical work practices and values	2.1 Integrity 2.2 Core Values, ethics and beliefs 2.3 Patriotism 2.4 Professionalism 2.5 Organizational codes of conduct 2.6 Industry policies and procedures	<ul style="list-style-type: none"> ● Observation ● Written assessment ● Oral assessment ● Third party reports ● Portfolio of evidence ● Project ● Practical
3. Promote Teamwork	3.1 Types of teams 3.2 Team building 3.3 Individual responsibilities in a team 3.4 Determination of team roles and objectives 3.5 Team parameters and relationships 3.6 Benefits of teamwork 3.7 Qualities of a team player 3.8 Leading a team 3.9 Team performance and evaluation 3.10 Conflicts and conflict resolution 3.11 Gender and diversity mainstreaming	<ul style="list-style-type: none"> ● Observation ● Written assessment ● Oral assessment ● Third party reports ● Portfolio of evidence ● Project ● Practical

Learning Outcome	Content	Suggested Assessment Methods
	3.12 Developing Healthy workplace relationships 3.13 Adaptability and flexibility 3.14 Coaching and mentoring skills	
4. Maintain professional and personal development	4.1 Personal vs professional development and growth 4.2 Avenues for professional growth 4.3 Recognizing career advancement 4.4 Training and career opportunities 4.5 Assessing training needs 4.6 Mobilizing training resources 4.7 Licenses and certifications for professional growth and development 4.8 Pursuing personal and organizational goals 4.9 Managing work priorities and commitments <ul style="list-style-type: none"> • Dynamism and on-the-job learning 	<ul style="list-style-type: none"> • Observation • Written assessment • Oral assessment • Third party reports • Portfolio of evidence • Project • Practical
5. Apply Problem-solving skills	5.1 Causes of problems 5.2 Methods of solving problems 5.3 Problem-solving process 5.4 Decision making 5.5 Creative thinking and critical thinking process in development of innovative and practical solutions	<ul style="list-style-type: none"> • Observation • Written assessment • Oral assessment • Third party reports • Portfolio of evidence • Project • Practical
6. Promote Customer Care	6.1 Identifying customer needs 6.2 Qualities of good customer service 6.3 Customer feedback methods 6.4 Resolving customer concerns	<ul style="list-style-type: none"> • Observation • Written assessment • Oral assessment • Third party reports • Portfolio of evidence

Learning Outcome	Content	Suggested Assessment Methods
	6.5 Customer outreach programs 6.6 Customer retention	<ul style="list-style-type: none"> ● Project ● Practical

Suggested Methods of Instruction

- Instructor lead facilitation of theory using active learning strategies.
- Demonstrations
- Simulation/Role play
- Group Discussion
- Presentations
- Projects
- Case studies
- Assignments

Recommended Resources for 25 Trainees

- Computers
- Stationery
- Charts
- Video clips
- Audio tapes
- Radio sets
- TV sets
- LCD projectors

BACKGROUND AND ENVIRONMENT DESIGN

TVET CDACC UNIT CODE: ME/CU/AN/CR/05/5/MA

Relationship to Occupational Standards

This unit addresses the unit of competency: compose scene environments

Duration of Unit: 150 hours

Unit Description

This unit specifies the competencies required to compose scene environments. It involves developing scene theme, selecting storyboard props scenes, designing scene props, drawing scene environment shots and populating scene environment.

Summary of Learning Outcomes

Elements	Duration (Hours)
Develop scene theme	20
Select storyboard props scene assets	25
Design scene props	35
Populate scene environment	45
Test scene environment shots	25
Total hours	150

Learning Outcomes,

Content and Suggested Assessment Methods

Learning Outcome	Content	Suggested Assessment Methods
1. Develop scene theme	1.1 Animation script analysis. 1.2 Scene theme development 1.3 Animation colour scheme 1.4 Animation styles	<ul style="list-style-type: none">• Observation• Oral questions• Third party report• Interviewing• Project and report writing
2. Select storyboard props scene assets	2.1 Props scenes analysis 2.2 Scene assets libraries 2.3 Props libraries	<ul style="list-style-type: none">• Written tests• Observation• Oral questions• Third party report• Interviewing

		<ul style="list-style-type: none"> • Project and report writing
3. Design scene props	3.1 2D background assets 3.2 3D Hard surface modelling 3.3 Architectural modelling 3.4 Industrial products modelling 3.5 3D Organic modelling 3.5.1 Textile 3.5.2 Plants 3.5.3 Animals 3.6 Textures and maps 3.7 HDRI setup 3.8 Working with layers 3.9 Unwrapping 3D models 3.10 Particle systems 3.11 Atmospheric effects 3.12 Water simulations 3.13 Geographical features 3.14 Mountains 3.15 Water bodies 3.16 Scene Hierarchies and grouping	<ul style="list-style-type: none"> • Written tests • Observation • Oral questions • Third party report • Interviewing • Project and report writing
4. Populate scene environment	4.1 2D background development 4.1.1 Perspective grid 4.1.2 Multi-plane backgrounds 4.1.3 Background layers 4.2 3D background development 4.2.1 Merging environment assets 4.2.2 Scales and proportions 4.2.3 Scene lighting 4.2.4 Scene cameras	<ul style="list-style-type: none"> • Written tests • Observation • Oral questions • Third party report • Interviewing • Project and report writing
5. Test scene environment shots	5.1 Camera parameters. 5.2 Camera views 5.3 Props and backgrounds view and storyboard 5.4 Rendering	<ul style="list-style-type: none"> • Written tests • Observation • Oral questions • Third party report • Interviewing • Project and report writing

Suggested Methods of Instruction

- Project
- Demonstration by trainer
- Practice by the trainee
- Discussions
- Direct instruction
- Case study
- Audio –visual aids

Recommended Resources

- Computers
- Audio recorder
- Internet
- Digital Cameras
- Magazines
- Animation films
- Text books
- Editing & recording studio
- Computer software
- Television
- Drawing sets
- Drawing tables
- A4 Colour scanner
- Stereo studio headset
- Digital Drawing Tablet
- Flash drives

DIGITAL GRAPHICS

TVET CDACC UNIT CODE: ME/CU/AN/CR/09/5/MA

Relationship to Occupational Standards

This unit addresses the unit of competency: design digital graphics

Duration of Unit: 100 hours

Unit Description

This unit specifies the competencies required to design digital graphics. It involves preparing project brief, creating scrap book, designing layout draft, developing sketch graphics transferring computer sketch, creating digital graphic and generating print media.

Summary of Learning Outcomes

ELEMENTS	DURATION (HOURS)
Prepare project brief	10
Create scrap book	16
Design layout draft	18
Develop sketch graphic	26
Generate print media	30
Total hours	100

Learning Outcomes, Content and Suggested Assessment Methods

Learning Outcome	Content	Suggested Assessment Methods
1. Prepare project brief	1.1 Introduction to Graphic Design 1.2 Elements and Principles of design 1.3 Graphic Design Projects 1.3.1 Branding 1.3.2 Corporate identity 1.3.3 Package Design 1.3.4 Publishing 1.3.5 Advertising 1.4 Creating a project brief 1.4.1 Project description 1.4.2 Deliverables 1.4.3 Scope 1.4.4 Timelines	<ul style="list-style-type: none">• Written tests• Observation• Oral questions• Third party report• Interviewing• Project and report writing

2. Create scrap Book	2.1 Project brief analysis and budget preparation 2.2 Concept development 2.2.1 Research 2.2.2 Doodles creation. 2.2.3 Thumb nail sketches 2.2.4 Sketch variations 2.3 Design parameter 2.3.1 Style and techniques 2.3.2 Themes 2.3.3 Colour schemes	<ul style="list-style-type: none"> • Observation • Oral questions • Third party report • Interviewing • Project and report writing
3. Design layout draft	3.1 Adoption/customization of design layout 3.2 Grid layout 3.3 Scales and dimensions 3.4 Bleeding 3.5 Content placement	<ul style="list-style-type: none"> • Observation • Oral questions • Third party report • Interviewing • Project and report writing
4. Develop Sketch graphics	4.1 Final design prototype 4.2 Final sketch out-line 4.3 Colour testing and validation	<ul style="list-style-type: none"> • Observation • Oral questions • Third party report • Interviewing • Project and report writing
5. Create digital graphic	5.1 Introduction to digital graphics 5.2 Graphic Design user interface 5.2.1 Vector graphics 5.2.2 Raster graphics 5.3 Sketch graphics digitisation 5.3.1 Scanning 5.3.2 Digital tracing 5.4 Digital colour schemes 5.4.1 CMYK 5.4.2 RGB 5.4.3 Typography design	<ul style="list-style-type: none"> • Written tests • Observation • Oral questions • Third party report • Interviewing • Project and report writing

6. Generate print media	6.1 File formats 6.2 Digital grid layout and set up. 6.3 Colour formatting 6.4 Spreads 6.5 Text formatting	<ul style="list-style-type: none"> • Written tests • Observation • Oral questions • Third party report • Interviewing • Project and report writing
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Suggested Methods of Delivery

- Project
- Demonstration by trainer
- Practice by the trainee
- Discussions
- Direct instruction
- Audio –visual aids

Recommended Resources

- Computers
- Internet
- Magazines
- Text books
- Computer software
- Drawing sets
- Drawing tables
- A4 Colour scanner
- Digital Drawing Tablet
- Flash drives

VIDEO EDITING AND COMPOSITING

TVET CDACC UNIT CODE: ME/CU/AN/CR/08/5/MA

Relationship to Occupational Standards

This unit addresses the unit of competency: edit and compose videos

Duration of Unit: 130 hours

Unit Description

This unit specifies the competencies required to edit animation render. It involves: compositing animation shots, modifying animation footage, generating animation effects, developing colour grading, synchronizing audio elements, generating animation credits and rendering final animation.

Summary of Learning Outcomes

Elements	Duration (Hours)
Composite animation shots	25
Modify animation footage	15
Generate animation effects	25
Develop color grading	20
Synchronize audio elements	15
Generate animation credits	10
Render final animation	20
Total hours	130

Learning Outcomes, Content and Suggested Assessment Methods

Learning Outcome	Content	Suggested Assessment Methods
1. Composite animation shots	1.1 Introduction to compositing. 1.2 Video compositing user interface 1.3 Project settings and parameters 1.4 Importing files 1.5 Project layers 1.6 Visual effects application	<ul style="list-style-type: none">• Written tests• Observation• Oral questions• Third party report• Interviewing• Project and report writing
2. Modify animation footage	2.1 Introduction to Video editing 2.2 Video editing software user interface 2.3 Importing and sorting project files 2.4 Assembling footage	<ul style="list-style-type: none">• Observation• Oral questions• Third party report• Interviewing

	2.5 Cutting and trimming of timeline files	<ul style="list-style-type: none"> • Project and report writing
3. Generate animation effects	3.1 Transitions 3.2 Digital zooming 3.3 Opacity 3.4 Lower thirds 3.5 Text animation	<ul style="list-style-type: none"> • Observation • Oral questions • Third party report • Interviewing • Project and report writing
4. Develop colour grading	4.1 Colour temperature 4.2 Footage analysis 4.3 Creating Colour profile 4.4 Colour timing 4.5 Colour correction	<ul style="list-style-type: none"> • Written tests • Observation • Oral questions • Third party report • Interviewing • Project and report writing
5. Synchronize audio elements	5.1 Audio analysis 5.2 Audio editing and synchronisation 5.3 Audio balancing and levelling	<ul style="list-style-type: none"> • Observation • Oral questions • Third party report • Interviewing • Project and report writing
6. Generate animation credits	6.1 Time-line analysis 6.2 Creating Intros and Outros sequences 6.3 Credits formatting 6.4 Animating credits 6.5 Positioning credit slides	<ul style="list-style-type: none"> • Observation • Oral questions • Third party report • Interviewing • Project and report writing
7. Render final animation	7.1 Timeline analysis 7.2 Rendering software interface 7.3 Rendering settings 7.4 Render versions 7.5 Portfolio development	<ul style="list-style-type: none"> • Observation • Oral questions • Third party report • Interviewing • Project and report writing

Suggested Methods of Instruction

- Project
- Demonstration by trainer
- Practice by the trainee

- Discussions
- Direct instruction
- Case study
- Audio –visual aids

Recommended Resources

- Computers
- Audio recorder
- Internet
- Digital Cameras
- Animation films
- Text books
- Editing & recording studio
- Computer software
- Stereo studio headset
- Flash drives

MODULE V

CHARACTER DESIGN

TVET CDACC UNIT CODE: MD/CU/AN/CR/04/6/MA

Relationship to Occupational Standards

This unit addresses the unit of competency: design animation character(s)

Duration of Unit: 150 hours

Unit Description

This unit specifies the competencies required to design animation character. It involves developing character bible, developing character theme design, drawing character poses, drawing character style sheets and developing character facial poses.

Summary of Learning Outcomes

Elements	Duration (Hours)
Develop character bible	25
Develop character theme design	25
Draw character style sheets	35
Draw character poses	35
Develop character facial expressions	30
Total hours	150

Learning Outcomes, Content and Suggested Assessment Methods

Learning Outcome	Content	Suggested Assessment Methods
1. Develop character bible	1.1 Introduction of character design 1.2 Principles of solid drawing and appeal. 1.3 Character analysis 1.4 Character profile 1.5 Animation design theme 1.6 Character theme and style	<ul style="list-style-type: none">• Observation• Oral questions• Third party report• Interviewing• Project and report writing
2. Develop character theme design	2.2 Character features. 2.3 Theme for character design 2.4 Character costumes and props	<ul style="list-style-type: none">• Observation• Oral questions• Third party report• Interviewing• Project and report writing

3. Draw character style sheets	3.1 Character turn-around 3.2 Character blueprints 3.3 Size relation sheet	<ul style="list-style-type: none"> • Written tests • Observation • Oral questions • Third party report • Interviewing • Project and report writing
4. Draw character poses	4.1 Solid-flexible models. 4.2 Gestural drawing 4.2.1 Body posture 4.2.2 Body language	<ul style="list-style-type: none"> • Observation • Oral questions • Third party report • Interviewing • Project and report writing
5. Develop Character Facial expressions	5.1 The principle of squash and stretch 5.2 Principle of Exaggeration 5.3 Expression charts 5.4 Mouth phonemic chart	<ul style="list-style-type: none"> • Observation • Oral questions • Third party report • Interviewing • Project and report writing

Suggested Methods of Instruction

- Project
- Demonstration by trainer
- Practice by the trainee
- Discussions
- Direct instruction
- Case study
- Audio –visual aids

Recommended Resources

- Computers
- Internet
- Digital Cameras
- Magazines
- Animation films
- Text books
- Computer software

- Drawing sets
- Drawing tables
- A4 Color scanner
- Digital Drawing Tablet
- Flash drives

2D CHARACTER SET-UP

TVET CDACC UNIT CODE: MD/CU/AN/CR/06/6/MA

Relationship to Occupational Standards

This unit addresses the unit of competency: prepare 2D animation character

Duration of Unit: 120 hours

Unit Description

This unit specifies the competencies required to prepare 2D animation character. It involves selecting character rig, developing character rig, testing character rig, skinning 2D character with the rig and testing rigged 2D character.

Summary of Learning Outcomes

Elements	Duration (Hours)
Select character rig	20
Develop character rig	40
Test character rig	30
Test rigged 2D character	30
Total hours	120

Learning Outcomes, Content and Suggested Assessment Methods

Learning Outcome	Content	Suggested Assessment Methods
1. Select character rig	1.1 Introduction to 2D animation 1.2 2D animation user interface 1.3 Types of rigs 1.3.1 Cut-out rigs 1.3.2 Bone rigs 1.3.3 Hierarchy rig 1.3.4 Deformations	<ul style="list-style-type: none">• Observation• Oral questions• Third party report• Interviewing• Project and report writing
2. Develop character rig	2.1 Importing 2D character 2.2 Hierarchy set up 2.3 Setting pivots 2.4 Joints creation 2.5 Character rig constraints. 2.6 Character rig controls	<ul style="list-style-type: none">• Observation• Oral questions• Third party report• Interviewing• Project and report writing

3. Test character rig	3.1 Character joints testing 3.2 Character rig control testing 3.3 Character rig constraints testing	<ul style="list-style-type: none"> • Observation • Oral questions • Third party report • Interviewing • Project and report writing
4. Test rigged 2D character	4.1 Testing of facial deformation 4.2 Limbs deformation 4.3 Body torso deformation 4.4 Test character animation	<ul style="list-style-type: none"> • Observation • Oral questions • Third party report • Interviewing • Project and report writing

Suggested Methods of Instruction

- Project
- Demonstration by trainer
- Practice by the trainee
- Discussions
- Direct instruction
- Case study
- Audio –visual aids

Recommended Resources

- Computers
- Audio recorder
- Internet
- Digital Cameras
- Magazines
- Animation films
- Text books
- Editing & recording studio
- Computer software
- Drawing sets
- Drawing tables
- A4 Colour scanner
- Stereo studio headset

- Digital Drawing Tablet
- Flash drives

3D CHARACTER RIGGING

TVET CDACC UNIT CODE: MD/CU/AN/CR/10/6/MA

Relationship to Occupational Standards

This unit addresses the unit of competency: prepare 3D animation character

Duration of Unit: 100 hours

Unit Description

This unit specifies the competencies required to prepare animation character. It involves selecting character rig, developing character rig, testing character rig, skinning 3D character with the rig and testing rigged 3D character.

Summary of Learning Outcomes

Elements	Duration (Hours)
Select character rig	18
Develop character rig	18
Test character rig	12
Skinning 3D character	20
Test rigged 3D character	32
Total hours	100

Learning Outcomes, Content and Suggested Assessment Methods

Learning Outcome	Content	Suggested Assessment Methods
1. Select character rig	1.1 Introduction to rigging 1.2 3D software user interface 1.3 3D character analysis 1.4 Types of character rig	<ul style="list-style-type: none">• Observation• Oral questions• Third party report• Interviewing• Project and report writing
2. Develop character rig	2.1 Automated character rigs 2.2 Customized Character rigs 2.3 Bone set up 2.4 Forward kinematics 2.5 Inverse kinematics 2.6 Character rig controllers 2.7 Character rig constraints	<ul style="list-style-type: none">• Observation• Oral questions• Third party report• Interviewing• Project and report writing

3. Test character rig	3.1 Testing character rig controllers 3.2 Testing character rig constraints 3.3 Character full rig controls and integration	<ul style="list-style-type: none"> • Observation • Oral questions • Third party report • Interviewing • Project and report writing
4. Skinning 3D character	4.1 Character rig and character model integration(skinning) 4.2 weighing vertices absolute effect	<ul style="list-style-type: none"> • Observation • Oral questions • Third party report • Interviewing • Project and report writing
5. Test rigged 3D character	5.1 Testing Facial deformation 5.2 Testing Limbs deformation 5.3 Testing body torso deformation 5.4 Test character animation.	<ul style="list-style-type: none"> • Observation • Oral questions • Third party report • Interviewing • Project and report writing

Suggested Methods of Delivery

- Project
- Demonstration by trainer
- Practice by the trainee
- Discussions
- Direct instruction
- Case study
- Audio –visual aids

Recommended Resources

- Computers
- Internet
- Animation films
- Text books
- Computer software
- Flash drives

3D ANIMATION

TVET CDACC UNIT CODE: MD/CU/AN/CR/12/6/MA

Relationship to Occupational Standards

This unit addresses the unit of competency: develop 3D animation

Duration of Unit: 100 hours

Unit Description

This unit specifies the competencies required to develop 3D animation. It involves setting up character scene, creating exposure sheet, creating pose to pose character animation, cleaning animation poses and directing camera techniques.

Summary of Learning Outcomes

Elements	Duration (Hours)
Set up character scene	16
Create exposure sheet	12
Create pose to pose character animation	28
Clean animation poses	20
Direct camera techniques	24
Total hours	100

Learning Outcomes, Content and Suggested Assessment Methods

Learning Outcome	Content	Suggested Assessment Methods
1. Set up character scene	1.1 Introduction to 3D animation 1.2 Importation of 3D assets is into 3D software. 1.3 Scene parameters setting 1.4 Character integration in the scene	<ul style="list-style-type: none">• Observation• Oral questions• Third party report• Interviewing• Project and report writing
2. Create exposure sheet	2.1 Animatic analysis 2.2 Exposure sheet layout 2.2.1 Action 2.2.2 Audio 2.2.3 Timing	<ul style="list-style-type: none">• Observation• Oral questions• Third party report• Interviewing

	2.2.4 Camera instructions 2.2.5 Backgrounds	<ul style="list-style-type: none"> • Project and report writing
3. Create pose to pose character animation	3.1 Setting key frames on time-line 3.2 Extreme key-key frames 3.3 Key position key frames 3.4 Passing position key frames 3.5 Breakdown key frames 3.6 In-between poses 3.7 Motion curves 3.8 Animation layers	<ul style="list-style-type: none"> • Observation • Oral questions • Third party report • Interviewing • Project and report writing
4. Clean animation poses	4.1 Animation charts. 4.2 Character silhouettes 4.3 Animation background 4.4 Lip-syncing 4.5 Sound syncing 4.6 Validation of principles of animation	<ul style="list-style-type: none"> • Observation • Oral questions • Third party report • Interviewing • Project and report writing
5. Direct Camera techniques	5.1 Render engine. 5.2 Camera parameters setting. 5.3 Camera positioning. 5.4 Camera movement techniques. 5.5 Camera motion curves 5.6 Camera framings	<ul style="list-style-type: none"> • Observation • Oral questions • Third party report • Interviewing • Project and report writing

Suggested Methods of Delivery

- Project
- Demonstration by trainer
- Practice by the trainee
- Discussions
- Direct instruction
- Case study
- Audio –visual aids

Recommended Resources

- Computers
- Internet

- Digital Cameras
- Animation films
- Text books
- Computer software

MODULE VI

CHARACTER ACTING

TVET CDACC UNIT CODE: MD/CU/AN/BC/04/6/MA

Relationship to Occupational Standards

This unit addresses the unit of competency: dramatize animation characters

Duration of Unit: 110 hours

Unit Description

This unit specifies the competencies required to dramatize animation characters. It involves: performing character facial gestures developing enacted lip-synch, creating character movement cycles, deforming appendices movements and performing complex character action.

Summary of Learning Outcomes

Elements	Duration (Hours)
Create character movement cycle	25
Develop enacted lip-synch	20
Perform character facial gestures	15
Perform appendices movements	20
Perform complex character action	30
Total hours	110

Learning Outcomes,

Content and Suggested Assessment Methods

Learning Outcome	Content	Suggested Assessment Methods
1. Create Character Movement cycles	1.1 Application of animation principles 1.2 Curve editor 1.3 Exposure sheet 1.4 Animation layers 1.5 Introduction to character movement 1.5.1 Walk cycle 1.5.2 Run cycle 1.5.3 Jumps 1.5.4 Dance movements	<ul style="list-style-type: none">• Observation• Oral questions• Third party report• Interviewing• Project and report writing
2. Develop Enacted lip-synch	2.1 Introduction to character acting 2.2 Phonemes and mouth blend shapes 2.3 Lip-synchronization	<ul style="list-style-type: none">• Observation• Oral questions• Third party report• Interviewing

		<ul style="list-style-type: none"> • Project and report writing
3. Perform Character facial Gestures	3.1 Squash stretch 3.2 Character emotions 3.3 Facial expressions 3.4 Dialogue	<ul style="list-style-type: none"> • Observation • Oral questions • Third party report • Interviewing • Project and report writing
4. Perform Appendices movements	4.1 Appendices movements 4.1.1 Overlapping action 4.1.2 Secondary movement 4.2 Motion curves application	<ul style="list-style-type: none"> • Observation • Oral questions • Third party report • Interviewing • Project and report writing
5. Perform complex Character Action	5.1 Coordinating movements 5.2 Timing 5.3 Staging 5.4 Action exaggeration 5.5 Oscillation movements 5.6 Action Considerations	<ul style="list-style-type: none"> • Observation • Oral questions • Third party report • Interviewing • Project and report writing

Suggested Methods of Delivery

- Project
- Demonstration by trainer
- Practice by the trainee
- Discussions
- Direct instruction
- Case study
- Audio –visual aids

Recommended Resources

- Computers
- Audio recorder
- Internet
- Digital Cameras
- Magazines

- Testing books
- Animation films
- Text books
- Editing & recording studio
- Computer software
- Television
- A4 Colour scanner
- Stereo studio headset
- Digital Drawing Tablet
- Flash drives

MOTION GRAPHICS

TVET CDACC UNIT CODE: MD/CU/AN/CR/15/6/MA

Relationship to Occupational Standards

This unit addresses the unit of competency: develop motion design

Duration of Unit: 120 hours

Unit Description

This unit specifies the competencies required to develop motion design. It involves: preparing project brief, developing audio-visual script, preparing animation assets, developing audio elements and compiling motion graphics.

Summary of Learning Outcomes

Elements	Duration (Hours)
Prepare project brief	14
Develop audio visual script	16
Prepare animation assets	28
Develop audio elements	22
Compile motion graphics	40
Total hours	120

Learning Outcomes, Content and Suggested Assessment Methods

Learning Outcome	Content	Suggested Assessment Methods
1. Prepare project brief	1.1.Introduction to Motion Design 1.2.Principles of animation 1.3.Motion Design Projects 1.3.1 Advertising 1.3.2 Kinetic Typography 1.3.3 Info-graphics 1.3.4 Idents 1.4.Creating a project brief 1.4.1 Project description 1.4.2 Deliverables 1.4.3 Scope 1.4.4 Timelines	<ul style="list-style-type: none">• Written tests• Observation• Oral questions• Third party report• Interviewing• Project and report writing• Case study

2. Develop audio-visual script	2.1 Script writing for motion graphics 2.2 Motion Graphic themes 2.3 Conceptualization 2.4 Audio Visual script format	<ul style="list-style-type: none"> • Observation • Oral questions • Third party report • Interviewing • Project and report writing
3. Prepare animation assets	3.1.Elements of Motion graphics <ul style="list-style-type: none"> 3.1.1 Text 3.1.2 Video 3.1.3 Images 3.1.4 audio 3.2.Creating and saving assets 3.3.Layering	<ul style="list-style-type: none"> • Written tests • Observation • Oral questions • Third party report • Interviewing • Project and report writing
4. Develop audio elements	4.1.Audio- visual script analysis 4.2.Audio recording and generation <ul style="list-style-type: none"> 4.2.1. Jingles 4.2.2. Voice over 4.2.3. Sound effects 4.2.4. Music 4.3.Audio editing and mastering	<ul style="list-style-type: none"> • Written tests • Observation • Oral questions • Third party report • Interviewing • Project and report writing
5. Compile motion graphics	5.1. Introduction to motion graphics user interface 5.2. Composition settings 5.3. Importing motion graphics elements 5.4. Compositing, animation and editing <ul style="list-style-type: none"> 5.4.1 Tweening 5.4.2 Coded scripts and expressions 5.4.3 Audio synchronisation 5.4.4 Visual effects 5.4.5 Transitions 5.5. Exporting and rendering	<ul style="list-style-type: none"> • Written tests • Observation • Oral questions • Third party report • Interviewing • Project and report writing

Suggested Methods of Delivery

- Project
- Demonstration by trainer
- Practice by the trainee

- Discussions
- Direct instruction
- Case study
- Audio –visual aids

Recommended Resources

- Computers
- Audio recorder
- Internet
- Digital Cameras
- Animation films
- Text books
- Editing & recording studio
- Computer software
- Stereo studio headset
- Digital Drawing Tablet
- Flash drives

VISUAL EFFECTS (VFX)

TVET CDACC UNIT CODE: MD/CU/AN/CR/16/6/MA

Relationship to Occupational Standards

This unit addresses the unit of competency: design animation visual effects (VFX)

Duration of Unit: 110 hours

Unit Description

This unit specifies the competencies required to develop animation visual effects (VFX). It involves: preparing visual effects project brief, analysing animation project, analysing visual effects elements, developing visual effects elements, compiling the visual effects and integrating visual effects to animation project.

Summary of Learning Outcomes

Elements	Duration (Hours)
Prepare visual effects project brief	12
Analyse animation project	16
Analyse visual effects elements	18
Develop visual effects elements	32
Compile visual effects	32
Total hours	110

Learning Outcomes, Content and Suggested Assessment Methods

Learning Outcome	Content	Suggested Assessment Methods
1. Prepare visual effects project brief	1.1 Introduction to Visual effects 1.2 Categories of visual effects 1.2.1 Simulations 1.2.2 Computer generated imagery 1.2.3 Matte painting 1.2.4 Keying 1.3 VFX projects 1.3.1 2D VFX 1.3.2 3D VFX 1.3.3 Film VFX 1.4 Creating a project brief 1.4.1 Project description 1.4.2 Deliverables	<ul style="list-style-type: none">• Written tests• Observation• Oral questions• Third party report• Interviewing• Project and report writing

	1.4.3 Scope 1.4.4 timelines	
2. Analyse animation project	1.5 Brief analysis 1.6 Animation theme design 1.7 Visual effects techniques	<ul style="list-style-type: none"> • Observation • Oral questions • Third party report • Interviewing • Project and report writing
3. Analyse visual effects elements	3.1 2D visual effects elements 3.2 3D visual effects elements 3.3 Post-production visual effects elements	<ul style="list-style-type: none"> • Observation • Oral questions • Third party report • Interviewing • Project and report writing
4. Develop visual effects elements	4.1 Matte painting 4.2 Develop 2D assets 4.3 Model 3D assets 4.4 Rig 3D assets 4.5 Particle simulation 4.6 Environment simulation 4.7 Lighting effects	<ul style="list-style-type: none"> • Observation • Oral questions • Third party report • Interviewing • Project and report writing • Case study
5. Compile visual effects	5.1 Integrating VFX elements 5.2 Rotoscoping 5.3 Motion capture 5.4 Visual effects synchronization	<ul style="list-style-type: none"> • Observation • Oral questions • Third party report • Interviewing • Project and report writing
6. Integrate visual effects to the animation project	6.1 Visual effects compositing 6.2 Final animation is rendering.	<ul style="list-style-type: none"> • Observation • Oral questions • Third party report • Interviewing • Project and report writing

Suggested Methods of Instruction

- Project
- Demonstration by trainer

- Practice by the trainee
- Discussions
- Direct instruction
- Case study
- Audio –visual aids

Recommended Resources

- Computers
- Audio recorder
- Internet
- Digital Cameras
- Animation films
- Text books
- Editing & recording studio
- Computer software
- Stereo studio headset
- Digital Drawing Tablet
- Flash drives

LIGHTING AND RENDERING

TVET CDACC UNIT CODE: MD/CU/AN/CR/13/6/MA

Relationship to Occupational Standards

This unit addresses the unit of competency: light and render 3D scenes

Duration of Unit: 110 hours

Unit Description

This unit specifies the competencies required to light and render 3D scenes. It involves setting render engine, setting 3D lights, and testing 3D lighting and rendering 3D scenes.

Summary of Learning Outcomes

Elements	Duration (Hours)
Set render engine	40
Set 3D lighting	30
Test 3D lighting	24
Render 3D scenes	16
Total hours	110

Learning Outcomes, Content and Suggested Assessment Methods

Learning Outcome	Content	Suggested Assessment Methods
1. Set render engine	1.1 Introduction to rendering 1.2 Render engines 1.3 Environment and engine compatibility 1.4 Render techniques	<ul style="list-style-type: none">• Observation• Oral questions• Third party report• Interviewing• Project and report writing
2. Set 3D lighting	2.1 Introduction to lighting 2.2 Lighting renderers 2.3 Cinematic lighting 2.4 Photo realistic lighting 2.5 Lighting techniques 2.5.1 Spotlighting 2.5.2 3 point lighting 2.6 Light set-up in 3D scene	<ul style="list-style-type: none">• Observation• Oral questions• Third party report• Interviewing• Project and report writing• Written tests

	2.6.1 Exterior lighting 2.6.2 Interior lighting 2.6.3 Daytime lighting 2.6.4 Night time lighting 2.6.5 Camera parameters on lighting	
3. Test 3D lighting	3.1 3D multi-camera views setting 3.2 Render settings 3.3.1 Render passes 3.3.2 Frame rates	<ul style="list-style-type: none"> • Observation • Oral questions • Third party report • Interviewing • Project and report writing
4. Render 3D scenes	4.1 Exportation of Render engines 4.2 Camera render setup 4.3 File formats	<ul style="list-style-type: none"> • Observation • Oral questions • Third party report • Interviewing • Project and report writing

Suggested Methods of Delivery

- Project
- Demonstration by trainer
- Practice by the trainee
- Discussions
- Direct instruction
- Audio –visual aids

Recommended Resources

- Computers
- Internet
- Digital Cameras
- Magazines
- Animation films
- Text books
- Computer software
- Television
- Digital Drawing Tablet
- Flash drives

