REPUBLIC OF KENYA

COMPETENCY BASED CURRICULUM

FOR

PROJECT MANAGEMENT

LEVEL 5

TVET CDACC
P.O. BOX 15745-00100
NAIROBI

FOREWORD

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

Reforms in the education sector are necessary for the achievement of Kenya Vision 2030 and meeting the provisions of the Constitution of Kenya 2010. The education sector had to be aligned to the Constitution and this resulted to the formulation of the Policy Framework for Reforming Education and Training. A key feature of this policy is the radical change in the design and delivery of the 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 mode of delivery allows 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.

It is my conviction that this curriculum will play a great role towards development of competent human resource for the Business sector's growth and sustainable development.

PRINCIPAL SECRETARY, VOCATIONAL AND TECHNICAL TRAINING MINISTRY OF EDUCATION

PREFACE

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

The Technical and Vocational Education and Training Act No. 29 of 2013 on Reforming Education and Training in Kenya, 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 Kenyan labour force.

TVET Curriculum Development, Assessment and Certification Council (TVET CDACC) in conjunction with Project Management Sector Skills Advisory Committee (SSAC) have developed this curriculum.

This curriculum has been developed following the CBET framework policy; the CBETA standards and guidelines provided by the TVET Authority and the Kenya National Qualification Framework designed by the Kenya National Qualification Authority.

The curriculum is designed and organized with an outline of learning outcomes; suggested delivery methods, training/learning resources and methods of assessing the trainee's achievement. The curriculum is competency-based and allows multiple entry and exit to the course.

I am grateful to the Council Members, Council Secretariat, Project Management SSAC, expert workers and all those who participated in the development of this curriculum.

CHAIRPERSON

TVET CDACC

ACKNOWLEDGEMENT

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 was received from various organizations.

I recognize with appreciation the role of the SSAC in ensuring that competencies required by the industry are addressed in this curriculum. I also thank all stakeholders in the project management sector for their valuable input and all those who participated in the process of developing this curriculum.

I am convinced that this curriculum will go a long way in ensuring that workers in Business sector will acquire competencies that will enable them to perform their work more efficiently.
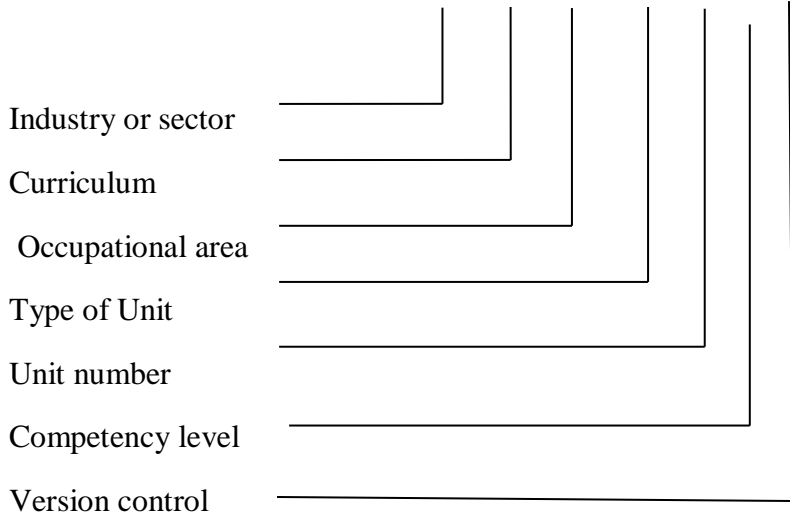
COUNCIL SECRETARY/CEO

TVET CDACC

TABLE OF CONTENTS

ABBREVIATIONS AND ACRONYMS

A   Version control

BC   Basic Competency

CDACC   Curriculum Development, Assessment and Certification Council

CPU   Central Processing Unit

CR   Core Competency

ICT   Information Communication Technology

KCPE   Kenya Certificate of Primary Education

KCSE   Kenya Certificate of secondary Education

KNQA   Kenya National Qualifications Authority

OS   Occupational Standards

OSHA   Occupation Safety and Health Act

OSHS   Occupation Safety and Health Standards

PC   Personal Computer

PPE   Personal Protective Equipment

SOPs   Standard Operating Procedures

SSAC   Sector Skills Advisory Committee

TVET   Technical and Vocational Education and Training

KEY TO UNIT CODE

BUS/ CU/ PM/BC/ 01 / 5/ A

Industry or sector

Curriculum

Occupational area

Type of Unit

Unit number

Competency level

Version control

COURSE OVERVIEW

Project Management Level 6 qualification consists of competencies that an individual must achieve to manage projects. It entails managing project inception phase, project design, project implementation, project risks, project financing, monitoring and evaluating projects, auditing and reviewing projects, managing project environment, project closure, project stakeholders and project scope.

This qualification consists of the following basic, common and core units of learning:

BASIC UNITS OF LEARNING

Unit Code	Unit Title	Duration in Hours	Credit factors
BUS/CU/PM/BC/01/5/A	Communication Skills	25	2.5
BUS/CU/PM/BC/02/5/A	Numeracy Skills	40	4
BUS/CU/PM/BC/03/5/A	Digital Literacy	45	4.5
BUS/CU/PM/BC/04/5/A	Entrepreneurial Skills	70	7
BUS/CU/PM/BC/05/5/A	Employability Skills	50	5
BUS/CU/PM/BC/06/5/A	Environmental Literacy	25	2.5
BUS/CU/PM/BC/07/5/A	Occupational Safety And Health Practices	25	2.5
Total		**280**	**28**

COMMON UNIT OF LEARNING

Unit Code	Unit title	Duration in hours	Credit factors
BUS/CU/PM/CC/01/5/A	Procurement of Goods, Work And Services	70	7
Total		**70**	**7**

CORE UNITS OF LEARNING

Unit Code	Unit Title	Duration in Hours	Credit factors

BUS/CU/PM/CR/01/5/A	Project inception	100	10
BUS/CU/PM/CR/02/5/A	Project implementation	90	9
BUS/CU/PM/CR/03/5/A	Project monitoring and evaluation	90	9
BUS/CU/PM/CR/04/5/A	Project audit and review	80	8
BUS/CU/PM/CR/05/5/A	Project environmental management	100	10
BUS/CU/PM/CR/06/5/A	Project closure	70	7
BUS/CU/PM/CR/07/5/A	Industrial attachment	360	36
Total		**890**	**89**
GRAND TOTAL		**1280**	**128**

The total duration of the course is 1280 hours, which include 360 Hours of industrial attachment.

Entry Requirements

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

a) Kenya Certificate of Secondary Education (KCSE) mean grade D(minus)

Or

b) Equivalent qualifications as determined by Kenya National Qualifications Authority (KNQA)

Industrial attachment

An individual enrolled in this course will be required to undergo an attachment for a period of three months. An individual enrolled in one of the core units of learning will be required to undergo a month's attachment.

Trainer qualification

A trainer for this course should have a higher qualification than the level of this course

Assessment

The course will be assessed at two levels: internally and externally. Internal assessment is continuous and is conducted by the trainer who is monitored by an accredited internal verifier while external assessment is the responsibility of TVET CDACC.

Certification

A candidate will be issued with a Certificate of Competency for each core unit of competency. To attain the National certificate for Project Management Level 5, the candidate must demonstrate competence in all the units of competency as given in qualification pack. TVET CDACC will issue these certificates in conjunction with training provider.

BASIC UNITS OF LEARNING

COMMUNICATION SKILLS

UNIT CODE: BUS/CU/PM/BC/01/5/A

Relationship to Occupational Standards
This unit addresses the Unit of Competency: Demonstrate Communication Skills

Duration of Unit: 25 hours

Unit Description
This unit covers the competencies required to demonstrate communication skills. It involves meeting communication needs of clients and colleagues, contributing to the development of communication strategies, conducting workplace interviews, facilitating group discussions and representing the organisation.

Summary of Learning Outcomes
1. Meet communication needs of clients and colleagues
2. Contribute to the development of communication strategies
3. Conduct interviews
4. Facilitate group discussions
5. Represent the organization

Learning Outcomes, Content and Methods of Assessment

Learning Outcome	Content	Methods of Assessment
1. Meet communication needs of clients and colleagues	- Communication process - Modes of communication - Medium of communication - Effective communication - Barriers to communication - Flow of communication - Sources of information - Organizational policies - Organization requirements for written and electronic communication methods - Report writing - Effective questioning techniques (clarifying and	- Interview - Third party reports - Written texts

	• probing) • Workplace etiquette • Ethical work practices in handling communication • Active listening • Feedback • Interpretation • Flexibility in communication	
2. Contribute to the development of communication strategies	• Dynamics of groups • Styles of group leadership • Openness and flexibility in communication • Communication skills relevant to client groups	• Written • Observation
3. Conduct interviews	• Types of interview • Establishing rapport • Facilitating resolution of issues • Developing action plans	• Written • Observation
4. Facilitate group discussions	• Identification of communication needs • Dynamics of groups • Styles of group leadership • Presentation of information • Encouraging group members participation • Evaluating group communication strategies	• Written • Observation
5. Represent the organization	• Presentation techniques • Development of a presentation • Multi-media utilization in presentation • Communication skills relevant to client groups	• Observation • Written

Suggested Methods of Instruction

- Role playing

- Viewing of related videos

Recommended Resources
- Desktop computers/laptops
- Internet connection
- Projectors
- Telephone

NUMERACY SKILLS

UNIT CODE: BUS/CU/PM/BC/02/5/A

Relationship to Occupational Standards:
This unit addresses the Unit of Competency: Demonstrate Numeracy Skills

Duration of Unit: 40 hours

Unit Description
This unit covers the competencies required to demonstrate numeracy skills. It involves calculating with whole numbers and familiar fractions, decimals, and percentages for work estimating, measuring, and calculating with routine metric measurements for work, using routine maps and plans for work, interpreting, drawing and constructing 2D and 3D shapes for work, interpreting routine tables, graphs and charts for work, collecting data and constructing routine tables and graphs for work and using basic functions of calculator

Summary of Learning Outcomes
1. Calculate with whole numbers and familiar fractions, decimals and percentages for work
2. Estimate, measure and calculate with routine metric measurements for work
3. Use routine maps and plans for work
4. Interpret, draw and construct 2D and 3D shapes for work
5. Interpret routine tables, graphs and charts for work
6. Collect data and construct routine tables and graphs for work
7. Use basic functions of calculator

Learning Outcomes, Content and Methods of Assessment

Learning Outcome	Content	Methods of Assessment
1. Calculate with whole numbers and familiar fractions, decimals and percentages for work	• Interpretation of whole numbers, fractions, decimals, percentages and rates • Calculations involving several steps • Calculation with whole numbers and routine or	• Written • Practical test • Observation

	familiar fractions, decimals and percentages • Conversion between equivalent forms of fractions, decimals and percentages • Application of order of operations to solve multi-step calculations • Application of problem solving strategies • Making estimations to check reasonableness of problem solving process, outcome and its appropriateness to the context and task • Use of formal and informal mathematical language and symbolism to communicate the result of a task	
2. Estimate, measure and calculate with routine metric measurements for work	• Selection and interpretation of measurement information in workplace tasks and texts • Identification and selection of routine measuring equipment • Estimation and making measurements using correct units • Estimation and calculation using routine measurements • Performing conversions between routinely used metric units	• Written • Practical test • Observation

		• Using problem solving processes to undertake tasks • Recording information using mathematical language and symbols	
3. Use routine maps and plans for work		• Identification of features in routine maps and plans • Symbols and keys used in routine maps and plans • Identification and interpretation of orientation of map to North • Demonstrate understanding of direction and location • Apply simple scale to estimate length of objects, or distance to location or object • Give and receive directions using both formal and informal language	• Written • Practical test • Observation
4. Interpret, draw and construct 2D and 3D shapes for work		• Identify two dimensional shapes and routine three-dimensional shapes in everyday objects and in different orientations • Explain the use and application of shapes • Use formal and informal mathematical language and symbols to describe and compare the features of two-dimensional shapes and routine three-	• Written • Practical test • Observation

	- dimensional shapes - Identify common angles - Estimate common angles in everyday objects - Use formal and informal mathematical language to describe and compare common angles - Use common geometric instruments to draw two dimensional shapes - Construct routine three-dimensional objects from given nets	
5. Interpret routine tables, graphs and charts for work	- Identify routine tables, graphs and charts in predominately familiar texts and contexts - Identify common types of graphs and their different uses - Identify features of tables, graphs and charts - Locate specific information - Perform calculations to interpret information - Explain how statistics can inform and persuade - Identify misleading statistical information - Discuss information relevant to the workplace	- Oral - Written - Practical test - Observation
6. Collect data and construct routine tables and graphs for work	- Identify features of common tables and graphs - Identify uses of **different tables and graphs**	- Written - Practical test - Observation

	• Determine data and variables to be collected • Determine audience • Select a method to collect data • Collect data • Collate information in a table • Determine suitable scale and axes • Draft and draw graph to present information • Check that data meets the expected results and context • Report or discuss information using formal and informal mathematical language	
7. Use basic functions of calculator	• Identify and use keys for basic functions on a calculator • Calculate using whole numbers, money and routine decimals and percentages • Calculate with routine fractions and percentages • Apply order of operations to solve multi-step calculations • Interpret display and record result • Make estimations to check reasonableness of problem solving process, outcome and its appropriateness to the	• Written • Practical test • Observation

	context and task • Use formal and informal mathematical language and appropriate symbolism and conventions to communicate the result of the task	

Suggested Methods of Instruction

- Demonstrations
- Role playing
- Viewing of related videos
- Discussion
- Assignments

Recommended resources

- Calculators
- Basic measuring instruments

DIGITAL LITERACY

UNIT CODE: BUS/CU/PM/BC/03/5/A

Relationship to Occupational Standards
This unit addresses the Unit of Competency: Demonstrate Digital Literacy

Duration of Unit: 45 hours

Unit Description
This unit covers the competencies required to demonstrate digital literacy. It involves identifying appropriate computer software and hardware, applying security measures to data, hardware, software in automated environment, applying computer software in solving tasks, applying internet and email in communication at workplace, applying desktop publishing in official assignment and preparing presentation packages.

Summary of Learning Outcomes
1. Identify computer software and hardware
2. Apply security measures to data, hardware, software in automated environment
3. Apply computer software in solving tasks
4. Apply internet and email in communication at workplace
5. Apply desktop publishing in official assignments
6. Prepare presentation packages

Learning Outcomes, Content and Methods of Assessment

Learning Outcome	Content	Methods of Assessment
1. Identify computer hardware and software	• Concepts of ICT • Functions of ICT • History of computers • Components of a computer • Classification of computers	• Written tests • Oral presentation • Observation
2. Apply security measures to data, hardware and software	• Data security and control • Security threats and control measures • Types of computer crimes • Detection and protection against computer crimes • Laws governing protection of ICT	• Written tests • Oral presentation • Observation • Project

3.	Apply computer software in solving tasks	• Operating system • Word processing • Spread sheets • Data base design and manipulation • Data manipulation, storage and retrieval	• Oral questioning • Observation • Project
4.	Apply internet and email in communication at workplace	• Computer networks • Network configurations • Uses of internet • Electronic mail (e-mail) concept	• Oral questioning • Observation • Oral presentation • Written report
5.	Apply desktop publishing in official assignments	• Concept of desktop publishing • Opening publication window • Identifying different tools and tool bars • Determining page layout • Opening, saving and closing files • Drawing various shapes using DTP • Using colour pellets to enhance a document • Inserting text frames • Importing and exporting text • Object linking and embedding • Designing of various publications • Printing of various publications	• Oral questioning • Observation • Oral presentation • Written report • Project
6.	Prepare presentation packages	• Types of presentation packages • Procedure of creating slides • Formatting slides • Presentation of slides • Procedure for editing objects	• Oral questioning • Observation • Oral presentation • Written report • Project

Suggested Methods of Instruction
- Demonstration
- Viewing of related videos
- Discussions
- Assignments
- Direct instructions

Recommended Resources

- Computers
- Other digital devices
- Printers
- Storage devices
- Internet access
- Computer software

ENTREPRENEURIAL SKILLS

UNIT CODE: BUS/CU/PM/BC/04/5/A

Relationship to Occupational Standards

This unit addresses the Unit of Competency: Demonstrate Entrepreneurship

Duration of unit: 70 hours

Unit Description

This unit covers the competencies required to demonstrate understanding of entrepreneurship. It involves demonstrating understanding of an entrepreneur, entrepreneurship and self-employment. It also involves identifying entrepreneurship opportunities, creating entrepreneurial awareness, applying entrepreneurial motivation and developing business innovative strategies.

Summary of Learning Outcomes

1. Demonstrate understanding of an entrepreneur
2. Demonstrate knowledge of entrepreneurship and self-employment
3. Identify entrepreneurship opportunities
4. Create entrepreneurial awareness
5. Apply entrepreneurial motivation
6. Develop innovative business strategies
7. Develop Business plan

Learning Outcomes, Content and Methods of Assessment

Learning Outcome	Content	Methods of Assessment
1. Demonstrate knowledge of entrepreneurship and self-employment	• Importance of self-employment • Requirements for entry into self-employment • Role of an Entrepreneur in business • Contributions of Entrepreneurs	• Individual/group assignments • Projects • Written tests • Oral questions • Third party report

2. Identify entrepreneurship opportunities	• Business ideas and opportunities • Sources of business ideas • Business life cycle • Legal aspects of business • Assessment of product demand • Business environment • Factors to consider when evaluating business environment	• Individual/group assignments • Projects • Written tests • Oral questions • Third party report • Interviews
3. Create entrepreneurial awareness	• Forms of businesses • Sources of business finance • Factors in selecting source of business finance • Governing policies on Small Scale Enterprises (SSEs) • Problems of starting and operating SSEs	• Individual/group assignments • Projects • Written tests • Oral questions • Third party report • Interviews
4. Apply entrepreneurial motivation	• Internal and external motivation • Motivational theories • Self-assessment • Entrepreneurial orientation • Effective communications in entrepreneurship • Principles of communication • Entrepreneurial motivation	• Case studies • Individual/group assignments • Projects • Written tests • Oral questions • Third party report • Interviews
5. Develop business innovative strategies	• Innovation in business • Small business Strategic Plan • Creativity in business development • Linkages with other entrepreneurs • ICT in business growth and development	• Case studies • Individual/group assignments • Projects • Written tests • Oral questions • Third party report • Interviews

6. Develop Business Plan	• Business description • Marketing plan • Organizational/Management • plan • Production/operation plan • Financial plan • Executive summary • Presentation of Business Plan	• Case studies • Individual/group assignments • Projects • Written tests • Oral questions • Third party report • Interviews

Suggested Methods of Instruction

- Direct instruction
- Project
- Case studies
- Field trips
- Discussions
- Demonstration
- Question and answer
- Problem solving
- Experiential
- Team training

Recommended Resources

- Case studies
- Business plan templates
- Computers
- Overhead projectors
- Internet
- Mobile phone
- Video clips
- Films
- Newspapers and Handouts
- Business Journals
- Writing materials

EMPLOYABILITY SKILLS

UNIT CODE: BUS/CU/PM/BC/05/5/A

Relationship to Occupational Standards
This unit addresses the Unit of Competency: Demonstrate Employability Skills

Duration of Unit: 50 hours

Unit Description
This unit covers competencies required to demonstrate employability skills. It involves conducting self-management, demonstrating interpersonal communication, critical safe work habits, leading a workplace team, planning and organizing work, maintaining professional growth and development, demonstrating workplace learning, problem solving skills and managing workplace ethics.

Summary of Learning Outcomes
1. Conduct self-management
2. Demonstrate interpersonal communication
3. Demonstrate critical safe work habits
4. Lead small teams
5. Plan and organize work
6. Maintain professional growth and development
7. Demonstrate workplace learning
8. Demonstrate problem solving skills
9. Demonstrate workplace ethics

Learning Outcomes, Content and Methods of Assessment

Learning Outcome	Content	Methods of Assessment
1. Conduct self-management	- Self-awareness - Formulating personal vision, mission and goals - Strategies for overcoming life challenges - Emotional intelligence - Assertiveness versus aggressiveness - Expressing personal	- Written tests - Oral questioning - Interviewing - Portfolio of evidence - Third party report

	thoughts, feelings and beliefs • Developing and maintaining high self-esteem • Developing and maintaining positive self-image • Articulating ideas and aspirations • Accountability and responsibility • Good work habits • Self-awareness • Self-development • Financial literacy • Healthy lifestyle practices	
2. Demonstrate interpersonal communication	• Meaning of interpersonal communication • Listening skills • Types of audience • Writing skills • Reading skills • Meaning of empathy • Understanding customers' needs • Establishing communication networks • Sharing information	• Written tests • Oral questioning • Interviewing • Portfolio of evidence • Third party report
3. Demonstrate critical safe work habits	• Stress and stress management • Punctuality and time consciousness • Leisure • Integrating personal objectives into organizational objectives • Resources utilization • Setting work priorities	• Written tests • Oral questioning • Interviewing • Portfolio of evidence • Third party report

		• HIV and AIDS • Drug and substance abuse • Handling emerging issues	
4.	Lead a small team	• Leadership qualities • Team building • Determination of team roles and objectives • Team performance indicators • Responsibilities in a team • Forms of communication • Complementing team activities • Gender and gender mainstreaming • Human rights • Maintaining relationships • Conflicts and conflict resolution	• Written tests • Oral questioning • Interviewing • Portfolio of evidence • Third party report

5.	Plan and organize work	• Functions of management
		  • Planning
		  • Organizing
		• Time management
		• Decision making process
		• Task allocation
		• Evaluating work activities
		• Resource utilization
		• Problem solving
		• Collecting and organising information
			• Written tests
			• Oral questioning
			• Interviewing
			• Portfolio of evidence
			• Third party report

6.	Maintain professional growth and development	• Opportunities for professional growth • Assessing training needs • Licenses and certifications for professional growth and development • Pursuing personal and organizational goals • Identifying work	• Written tests • Oral questioning • Interviewing • Portfolio of evidence • Third party report

		priorities • Recognizing career advancement	
7.	Demonstrate workplace learning	• Managing own learning • Contributing to the learning community at the workplace • Cultural aspects of work • Variety of learning context • Application of learning • Safe use of technology • Identifying opportunities • Generating new ideas • Workplace innovation • Performance improvement • Handling emerging issues • Future trends and concerns in learning	• Written tests • Oral questioning • Interviewing • Portfolio of evidence • Third party report
8.	Demonstrate problem solving skills	• Problem identification • Problem solving • Application of problem-solving strategies • Resolving customer concerns	• Written tests • Oral questioning • Interviewing • Portfolio of evidence • Third party report
9.	Demonstrate workplace ethics	• Meaning of ethics • Ethical perspectives • Principles of ethics • Values and beliefs • Ethical standards • Organization code of ethics • Common ethical dilemmas • Organization culture • Corruption, bribery and conflict of interest • Privacy and data protection • Diversity, harassment	• Written tests • Oral questioning • Interviewing • Portfolio of evidence • Third party report

	and mutual respect • Financial responsibility/accountability • Etiquette • Personal and professional integrity • Commitment to jurisdictional laws • Emerging issues in ethics	

Suggested Methods of Instruction
- Demonstrations
- Simulation/Role play
- Discussion
- Presentations
- Case studies
- Q&A

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

ENVIRONMENTAL LITERACY

UNIT CODE: BUS/CU/PM/BC/06/5/A

Relationship to Occupational Standards
This unit addresses the Unit of Competency: Demonstrate Environmental Literacy

Duration of Unit: 25 hours

Unit Description
This unit describes the competencies required to demonstrate understanding of environmental literacy. It involves controlling environmental hazard, controlling control environmental pollution, complying with workplace sustainable resource use, evaluating current practices in relation to resource usage, identifying environmental legislations/conventions for environmental concerns, implementing specific environmental programs and monitoring activities on environmental protection/programs.

Summary of Learning Outcomes
1. Control environmental hazards
2. Control environmental Pollution
3. Demonstrate sustainable use of resource
4. Evaluate current practices in relation to resource usage
5. Identify Environmental legislations/conventions for environmental concerns
6. Implement specific environmental programs
7. Monitor activities on Environmental protection/Programs

Learning Outcomes, Content and Methods of Assessment

Learning Outcome	Content	Methods of Assessment
1. Control environmental hazards	• Purposes and content of Environmental Management and Coordination Act 1999 • Purposes and content of Solid Waste Act • Storage methods for environmentally hazardous materials • Disposal methods of hazardous wastes • Types and uses of PPE in line with environmental regulations	• Written test • Oral questions • Observation

		• Occupational Safety and Health Standards (OSHS)	
2.	Control environmental Pollution control	• Types of pollution • Environmental pollution control measures • Types of solid wastes • Procedures for solid waste management • Different types of noise pollution • Methods for minimizing noise pollution	• Written test • Oral questions • Observation
3.	Demonstrate sustainable resource use	• Types of resources • Techniques in measuring current usage of resources • Calculating current usage of resources • Methods for minimizing wastage • Waste management procedures • Principles of 3Rs (Reduce, Reuse, Recycle) • Methods for economizing or reducing resource consumption	• Written test • Oral questions • Observation
4.	Evaluate current practices in relation to resource usage	• Collection of information on environmental and resource efficiency systems and procedures, • Measurement and recording of current resource usage • Analysis and recording of current purchasing strategies. • Analysis of current work processes to access information and data • Identification of areas for improvement	• Written test • Oral questions • Observation
5.	Identify Environmental legislations/conventions for environmental concerns	• Environmental issues/concerns • Environmental legislations /conventions and local ordinances • Industrial standard /environmental practices • International Environmental Protocols (Montreal, Kyoto) • Features of an environmental strategy	• Written questions • Oral questions • Observation

6. Implement specific environmental programs	• Community needs and expectations • Resource availability • 5 s of good housekeeping • Identification of programs/Activities • Setting of individual roles /responsibilities • Resolving problems /constraints encountered • Consultation with stakeholders	• Written questions • Oral questions • Observation
7. Monitor activities on Environmental protection/Programs	• Periodic monitoring and Evaluation of activities • Gathering feedback from stakeholders • Analysing data gathered • Documentation of recommendations and submission • Setting of management support systems to sustain and enhance the program • Monitoring and reporting of environmental incidents to concerned /proper authorities	• Oral questions • Written tests • Practical test • Observation

Suggested Methods of Instruction
- Instructor led facilitation of theory
- Demonstration by trainer
- Viewing of related videos
- Project
- Assignements
- Role play

Recommended Resources
- Standard operating and/or other workplace procedures manuals
- Specific job procedures manuals
- Environmental Management and Coordination Act 1999
- Machine/equipment manufacturer's specifications and instructions
- Personal Protective Equipment (PPE)
- ISO standards
- Ccompany environmental management systems (EMS)
- Montreal Protocol

- Kyoto Protocol

OCCUPATIONAL SAFETY AND HEALTH PRACTICES

UNIT CODE: BUS/CU/PM/BC/07/5/A

Relationship to Occupational Standards
This unit addresses the Unit of Competency: Demonstrate Occupational Safety and Health Practices

Duration of Unit: 25 hours

Unit Description
This unit specifies the competencies required to identify workplace hazards and risk, identify and implement appropriate control measures and implement OSH programs, procedures and policies/ guidelines

Summary of Learning Outcomes
1. Identify workplace hazards and risk
2. Control OSH hazards
3. Implement OSH programs

Learning Outcomes, Content and Methods of Assessment

Learning Outcome	Content	Methods of Assessment
1. Identify workplace hazards and risks	- Identification of hazards in the workplace and/or the indicators of their presence - Evaluation and/or work environment measurements of OSH hazards/risk existing in the workplace is conducted by - Authorized personnel or agency - Gathering of OHS issues and/or concerns raised	- Oral questions - Written tests - Portfolio of evidence - Third party report
2. Control OSH hazards	Prevention and control measures, including use of PPE (personal protective equipment) for specific hazards are identified and implemented	- Oral questions - Written tests - Portfolio of evidence - Third party report

	• Appropriate risk controls based on result of OSH hazard evaluation is recommended • Contingency measures, including emergency procedures during workplace incidents and emergencies are recognized and established in accordance with organization procedures		
3. Implement OSH programs	• Providing information to work team about company OHS program, procedures and policies/guidelines • Participating in implementation of OSH procedures and policies/ guidelines • Training of team members and advice on OSH standards and procedures • Implementation of procedures for maintaining OSH-related records	• Oral questions • Written tests • Portfolio of evidence • Third party report	

Suggested Methods of Instruction
- Assigments
- Discussion
- Q&A
- Role play
- Viewing of related videos

Recommended Resources
- Standard operating and/or other workplace procedures manuals
- Specific job procedures manuals
- Machine/equipment manufacturer's specifications and instructions
- Personal Protective Equipment (PPE) e.g.
  - Mask
  - Face mask/shield
  - Safety boots
  - Safety harness

- Arm/Hand guard, gloves
- Eye protection (goggles, shield)
- Hearing protection (ear muffs, ear plugs)
- Hair Net/cap/bonnet
- Hard hat
- Face protection (mask, shield)
- Apron/Gown/coverall/jump suit
- Anti-static suits
- High-visibility reflective vest

COMMON UNIT OF LEARNING

PROCUREMENT OF GOODS, WORK AND SERVICES

UNIT CODE: BUS/CU/PM/CC/01/5/A

Relationship to Occupational Standards
This unit addresses the unit of competency: Manage procurement for goods, works and services

Duration of Unit: 70 Hours

Unit Description
This unit describes the competencies required by a project manager to develop and prepare procurement plan and budget, participate in procurement procedures, contract negotiations, allocation and preparation of procurement report.

Summary of Learning Outcomes
1. Develop and prepare procurement plan and budget
2. Participate in procurement procedures, contract negotiations and allocation
3. Participate in preparation of procurement report

Learning Outcomes, Content and Methods of Assessment

Learning Outcome	Content	Methods of Assessment
1. Develop and prepare procurement plan and budget	- Meaning of procurement plan in project management - Organizational procedures and relevant legislations in procurement - Purpose and importance of procurement plan - Steps in the development of procurement plans - Factors to consider in procurement planning (goods, works and services) - Market survey and analysis - Technical specifications - Prices - Availability	- Oral questioning - Written tests - Case study

	• Meaning of procurement budget • Steps in preparation of procurement budget • Factors to consider in preparation of procurement budget • Use of ICT in procurement (e-procurement)	
2. Participate in procurement procedures, contract negotiations and allocation of goods, works and services	• Meaning of contract and tender in procurement • Types of procurement • Procurement process • Types of tenders • Preparation of expression of interest documents and proposals • Contract negotiation and awarding • Relevant regulations in tendering and procurement process • Bidding processes	• Oral questioning • Written tests • Case study
3. Participate in preparation of procurement evaluation report	• Meaning of procurement evaluation report • Steps in preparation of procurement report • Factors to consider in preparation of procurement report • Sources of information in procurement report • Dissemination of reports	• Oral questioning • Written tests • Case study

Suggested Methods of Instruction
- Instructor led facilitation of theory
- Demonstration by trainer
- Field work by the trainee
- Field trips
- Viewing of related videos
- Expert guest speakers
- Case studies

Recommended Resources

- Computers with relevant e-procurement software and applications
- Communication devices
- Recorders
- Internet
- Cameras
- Stationery
- Transport means
- Sample documents
  - Expression of interest documents
  - Proposals
  - Relevant legislations

CORE UNITS OF LEARNING

PROJECT INCEPTION

UNIT CODE: BUS/CU/PM/CR/01/5/A

Relationship to Occupational Standards
This unit addresses the unit of competency: Manage project inception phase

Duration of Unit: 100 Hours

Unit Description
This unit covers the competencies required to manage project inception phase. It involves performing situation analysis, developing concept note, developing business case, carrying out feasibility study, developing benefits management plan, preparing project proposal, seeking project approval and disseminate project approval report to relevant stakeholders, documenting source selection criteria and preparing project acceptance and closure criteria.

Summary of Learning Outcomes
1. Perform situation analysis
2. Develop concept note
3. Develop business case
4. Carry out feasibility study
5. Develop Benefits Management plan
6. Prepare project proposal
7. Seek project approval and disseminate project approval report to relevant stakeholders
8. Document Source Selection criteria
9. Prepare Project Acceptance and Closure criteria

Learning Outcomes, Content and Methods of Assessment

Learning Outcome	Content	Methods of Assessment

1. Perform situation analysis	• Importance of situational analysis
	 • Methods of situational analysis
	 • Process of situational analysis
	   ✓ select stakeholder target
	   ✓ conduct problem analysis
	   ✓ identify alternatives
	   ✓ situation analysis report
		• Oral questioning
		 • Written tests

2.	Develop concept note	• Meaning of a concept note • Format of a concept note • Components of a concept note • Development of a concept note • Project research	• Oral questioning • Written tests
3.	Develop business case	• Statement of the problem • Problem statement analysis • Alternative solutions • Cost benefit analysis	• Oral questioning • Written tests • Case study

4.	Carry out feasibility study	• The meaning of feasibility study
		• Importance of feasibility study in project management
		• Purpose of feasibility study
		• Selection of scope in feasibility study
		• Tools of carrying out feasibility study e.g.
		  • Questionnaire
		  • Statistics and data analysis
		• Methods of carrying out feasibility study e.g.
		  • Interviews
		  • Focus group discussion
		• Feasibility study report writing
			• Direct observation
			• Oral questioning
			• Written tests

5.	Develop Benefits Management plan	• Project benefits • Benefits owners • Benefit schedule • Benefit sustainability plan	• Oral questioning • Written tests
6.	Prepare project proposal	• Meaning of project proposal • Components of a project proposal • Format of project proposal • Factors to consider in proposal writing	• Oral questioning • Written tests
7.	Seek project approval and disseminate approval report to relevant	• Feasibility study report evaluation • Project approval by the relevant stakeholders • Feasibility study report	• Oral questioning • Written tests

stakeholders	dissemination methods e.g. Sending feasibility study analysis	
8. Prepare supplier selection criteria	• Supplier prequalification criteria • Process of supplier prequalification • Evaluation of suppliers	• Oral questioning • Written tests
9. Prepare Project Acceptance and Closure criteria	• Closure criteria • Acceptance criteria • Process of developing acceptance criteria • Process of developing closure criteria	• Oral questioning • Written tests

Suggested Methods of Instruction

- Instructor led facilitation of theory
- Demonstration by trainer
- Field work by the trainee
- Field trips
- Viewing of related videos

Recommended Resources

- Sample Questionnaires
- Computers
- Communication devices
- Recorders
- Internet
- Cameras
- Stationery
- Transport means
- Meeting venues

PROJECT IMPLEMENTATION

UNIT CODE: BUS/CU/PM/CR/02/5/A

Relationship to Occupational Standards
This unit addresses the unit of competency: Manage project implementation

Duration of Unit: 90 hours

Unit Description
This unit covers the competencies required manage project implementation .It involves identifying and managing project implementation team, acquiring and managing project resources, managing project stakeholders, project take off and commissioning, monitoring and controlling the project activities.

Summary of Learning Outcomes
1. Identify and manage project implementation team
2. Acquire and manage project resources
3. Manage project stakeholders
4. Project take off and Commissioning
5. Monitor and control the project activities

Learning Outcomes, Content and Methods of Assessment

Learning Outcome	Content	Methods of Assessment
1. Identify and manage project implementation team	• Meaning of a project implementation team • Purpose and importance of a project implementation team • Project implementation team organization e.g skilled, unskilled • Delegation and supervision of responsibilities • Project team feedback report • Project implementation team meetings co-ordination • Project implementation team training and motivation	• Oral questioning • Written tests • Case study
2. Acquire and	• meaning of project resources	• Oral questioning

manage project resources	• types of project resources • purpose and importance of project resources • resource management schedules • format • components	• Written tests • Case study

3. Manage project stakeholders	• Meaning of stakeholders
	• Identification of project stakeholders and their needs
	• Stakeholder communication plan
	   o Format
	   o Components
	   o Frequency
		• Oral questioning
		• Written tests
		• Case study

4. Project take off and commissioning	• Meaning of project take off and commissioning • Factors to consider in project take off and commissioning • Reasons of project commissioning	• Oral questioning • Written tests • Case study
5. Monitor and control project activities	• Meaning of project monitoring and control • Importance of project activities monitoring and control • Monitoring tools and methods o Development and use of Logical framework • Project activities classification and timelines e.g Work breakdown structure • Earned value analysis • Progressive quality and standards analysis • Project progressive reports	• Oral questioning • Written tests • Case study

Suggested Methods of Instruction
- Instructor led facilitation of theory
- Demonstration by trainer
- Case studies
- Group discussion

- Field trips
- Viewing of related videos and models
- Dual training

Recommended Resources
- Computers
- Projectors
- Communication devices
- Recorders
- Internet
- Cameras
- Stationery
- Transport means
- Meeting venues

PROJECT MONITORING AND EVALUATION

UNIT CODE: BUS/CU/PM/CR/03/5/A

Relationship to Occupational Standards
This unit addresses the unit of competency: Monitor and Evaluate Projects

Duration of Unit: 90 hours

Unit Description
This unit covers the competencies to monitor and evaluate projects. It involves reviewing project design, identifying performance indicators, developing M & E System, developing M&E methods and tools, budgeting for M&E, identifying M&E project team and conducting monitoring & Evaluation.

Summary of Learning Outcomes
1. Review project design
2. Identify performance indicators
3. Develop M & E System
4. Develop M&E methods and tools
5. Budget for M&E
6. Identify M&E project team
7. Conduct monitoring & Evaluation

Learning Outcomes, Content and Methods of Assessment

Learning Outcome	Content	Methods of Assessment
1. Review project design	• Methods of project design ✓ Theory of change ✓ Project design thinking • Types of log frames • Process of developing log frame	• Oral questioning • Written tests
2. Identify performance indicators	• Perfomance indicators • Types of indicators • Methods of measuring perfomance indicators • Process of developing indicators • Qualities of good indicators	• Oral questioning • Written tests
3. Develop M & E	• Assumptions and preconditions	• Oral questioning

System	• Components of M & E systems • Characteristics M & E systems		• Written tests

4. Develop M&E methods and tools	• Meaning of M&E tools
	• Types of M&E tools
	    ○ Questionnaires
	    ○ Interview guides
	    ○ Observation guidelines
	• Development of M&E tools
	• Application of M&E tools
			• Oral questioning
			• Written tests

5. Budget for M&E	• Meaning of budget • Budgetary/expenditure items • Criteria for allocation of funds • Budget preparation • Preparation of M&E expenditure report		• Oral questioning • Written tests
6. Identify M&E project team	• Preparation of job descriptions • Preparation of job specifications		• Oral questioning • Written tests
7. Conduct monitoring & Evaluation	• Elements of • Methods of conducting monitoring • Difference between monitoring and evaluation • Types of monitoring • Types of evaluation • Commissioning an evaluation and monitoring • Reporting and dissemination		•

Suggested Methods of Instruction
- Instructor led facilitation of theory
- Demonstration by trainer
- Field work by the trainee
- Field trips
- Viewing of related videos
- Expert guest speakers
- Case studies

Recommended Resources
- Computers with relevant software and applications
- Communication devices

- Recorders
- Internet
- Cameras
- Stationery
- Transport means
- Sample documents
  - Project plan
  - Proposals
  - Sample M&E reports
  - Relevant legislations and M&E guides

PROJECT AUDITING AND REVIEW

UNIT CODE: BUS/CU/PM/CR/04/5/A

Relationship to Occupational Standards
This unit addresses the unit of competency: audit and review Projects
Duration of Unit: 80 hours

Unit Description
This unit covers the competencies required to audit and review projects. It involves developing audit plan, developing audit tools, developing audit budget, conducting audit, following up on audit recommendations and conducting project review.

Summary of Learning Outcomes
1. Develop audit plan
2. Develop audit tools
3. Develop audit budget
4. Conduct audit
5. Follow-up on audit recommendations
6. Conduct project review

Learning Outcomes, Content and Methods of Assessment

Learning Outcome	Content	Methods of Assessment
1. Develop audit plan	• Components of audit plan • Format of audit plan	• Oral questioning • Written tests

2. Develop audit tools	• Meaning of audit tools
	• Types of audit tools
	   ○ Questionnaires
	   ○ Interview guides
	   ○ Observation guidelines
	   ○ Documentation templates
	• Development of audit tools
	• Application of audit tools
		• Oral questioning
		• Written tests
		• Case study

3. Develop audit budget	• Meaning of budget • Budgetary/expenditure items • Criteria for allocation of funds • Budget preparation • Preparation of audit budget versus actual analysis report	• Oral questioning • Written tests • Case study

Learning Outcome	Content	Methods of Assessment

4. Conduct audit	- Audit procedures
	  o Preliminary analytics
	  o Substantive procedures
	    ▪ Document review
	    ▪ Interviews
	  o Final analytics
	  o Close out procedures/ conclusion
	- Audit review meetings
	  o Entrance meetings
	  o Show-me meetings
	  o Progress meetings
	  o Exit meetings
	- Audit report writing
	  o Financial statements
	  o Audit opinion
	  o Management letter/ internal control report
		- Oral questioning
		- Written tests
		- Case study

5. Follow-up on audit recommendations	- Audit recommendation implementation schedule - Monitoring of implementation recommendation - Impact of implementations	- Oral questioning - Written tests - Case study

2. Conduct project review	- Types of project review
	- Project review parameters
	  ✓ Trends
	  ✓ Variances
	- Project review tools and methodology
	- Project review teams
		- Oral questioning
		- Written tests
		- Case study

Suggested Methods of Instruction
- Instructor led facilitation of theory
- Demonstration by trainer
- Field work by the trainee
- Field trips

- Viewing of related videos
- Expert guest speakers
- Case studies

Recommended Resources
- Computers with relevant software and applications
- Communication devices
- Recorders
- Internet
- Cameras
- Stationery
- Transport means
- Sample documents
  - Project plan
  - Proposals
  - Sample M&E reports
  - Relevant legislations and M&E guides

PROJECT ENVIRONMENTAL MANAGEMENT

UNIT CODE: BUS/CU/PM/CR/05/5/A

Relationship to Occupational Standards
This unit addresses the unit of competency: Manage project environment

Duration of Unit: 100 hours

Unit Description
This unit covers the competencies required to manage project environment. It involves identifying project environment, performing project environment analysis, developing project environment monitoring plan and monitoring project environment

Summary of Learning Outcomes
1. Identify project environment
2. Perform project environment analysis
3. Develop project environment monitoring plan
4. Monitor project environment

Learning Outcomes, Content and Methods of Assessment

Learning Outcome	Content	Methods of Assessment
1. Identify project environment	• Internal environmental factors • External environmental factors • Organisational process assets	• Oral questioning • Written tests • Case study
2. Perform project environment analysis	• Impact of environmental factors on the project • Impact of organisational process assets on the project	• Oral questioning • Written tests • Case study
3. Develop project environment monitoring plan	• Components of an environmental management plan • Tools for monitoring project environment • Methods of monitoring project environment	• Oral questioning • Written tests • Case study Case study
4. Monitor	• Monitoring tools	• Oral questioning

project environment	• Monitoring the environment • Monitoring report	• Written tests • Case study

Suggested Methods of Instruction

- Instructor led facilitation of theory
- Demonstration by trainer
- Group discussion
- Field trips
- Viewing of related videos and models
- Dual training

Recommended Resources

- Computers
- Projectors
- Communication devices
- Recorders
- Internet
- Cameras
- Stationery
- Transport means
- Meeting venues

PROJECT CLOSURE

UNIT CODE: BUS/CU/PM/CR/06/5/A

Relationship to Occupational Standards
This unit addresses the unit of competency: Manage project closure

Duration of Unit: 70 hours

Unit Description
This unit covers the competencies required to manage project closure. It involves, planning for project closure review meeting, completing documentation and signing off, reviewing project sustainability ,releasing resources, archiving project documents, preparing project closure reports, preparing project transition and celebrating success.

Summary of Learning Outcomes
1. Plan for Project Closure Review Meeting
2. Complete documentation and Signoff
3. Review project sustainability
4. Release Resources
5. Archive Project Documents
6. Prepare project closure reports
7. Prepare project transition
8. Celebrate Success

Learning Outcomes, Content and Methods of Assessment

Learning Outcome	Content	Methods of Assessment
1. Plan for project closure review meeting	• Project closure requirnments • Types of meetings • Methods of documentation of lessons learnt	• Oral questioning • Written tests
2. Complete documentation and signoff	• Documents required for project closure • Verification of closure documents • Handling claims and discrepanciess(delete 1.8 in os)	• Oral questioning • Written tests •
3. Review project sustainability plan	• Meaning of sustainability plan • Components of a sustainability	• Oral questioning • Written tests

	plan	•	
	• Format of a sustainability plan		
	• Preparation of a sustainability plan		
	• Application/ implementation of sustainability plan(exchange 2.3 and 2.4 in os)		
4. Release project resources	• Procedures for releasing project resources • Asset management procedure	• Oral questioning • Written tests •	
5. Archive project documents	• Record retention and data protection requirements • Core documents to be archeived • Methods of document archival • Access rights and user privileges	• Oral questioning • Written tests	
6. Prepare project closure reports	• Format of project closure report • Components of project closure report • Methods of dissemination of project closure report	• Oral questioning • Written tests	

7. Prepare project transition	• Transition plan
	• maintainance and support requirment plan
	   ✓ Service level agreement
	   ✓ Key perfomance indicators
	   ✓ Underpinning contract
	• Patent
	• Copyright
	• intelluctual property
		• Oral questioning
		• Written tests
		•	

8. Debrief project team	• Methods of debriefing project team • Benefits of debriefing project team	• Oral questioning • Written tests •	

Suggested Methods of Instruction
- Instructor led facilitation of theory
- Demonstration by trainer

- Group discussion
- Field trips
- Viewing of related videos and models
- Dual training

Recommended Resources
- Computers
- Projectors
- Communication devices
- Recorders
- Internet
- Cameras
- Stationery
- Transport means
- Meeting venues