

SKILLS PROGRAMME DOCUMENT



Skills Programme Title		Hypertext Markup Language (HTML) Programmer			
NQF Level	4	Credits	60	Duration in days	75
Skills Programme ID		SP- 230372			
Skills Programme Status	Approved	Start Date	End Date		
		11/03/2022	11/03/2027		
Last date for enrolment	11/03/2028	Last date for achievement	11/03/2031		

SKILLS PROGRAMME DETAIL

1	Title	HTML (Hypertext Markup Language) Programmer
2	Subtitle	OFO Title: Software developer OFO Code: 251201
3	NQF Level	NQF Level 4
4	Duration	75 Days
5	Credits	60
6	Quality Assuring Body	Quality Council for Trades and Occupations (QCTO)
7	Skills Programme Rationale	<p>South Africa has a scarcity of programmers and there is a clear need for a skills programme focusing specifically on the training and education of HTML (Hypertext Markup Language) Programming, language, application and use to address the demand for business digitalisation.</p> <p>Realising the importance and future impact of the 4IR on the economy of South Africa and its competitiveness, the Minister of Communications gazetted the Presidential Commission on the Fourth Industrial Revolution (PC4IR) on 9 April 2019. By March 2020 this Commission delivered a report with wide ranging recommendations for Human Capital Development that will drive the 4IR forward.</p> <p>This report clearly indicated the speed at which companies will have to invest in big data analysis, web-enabled market investment and the use of cloud computing and machine learning. Programming skills and being competent in the use of programming languages such as Hypertext Markup Language are central to these government initiatives.</p> <p>The development of this HTML Programmer Skills Programme is also in line with the drivers for economic recovery as stated in the Economic Reconstruction and Recovery Plan (ERRP) and the subsequent Economic Reconstruction and Recovery Skills Strategy.</p> <p>In South Africa, according to the 2020 list of occupations in high demand: Technical Report (Department of Higher Education and Training) published in 2021 the role of the programmer and its derived skills programmes have been identified as pivotal by several Sector Education and Training Bodies (SETAs) as well as being in critical need by industry and academia alike. With so much job growth on the horizon, prospective HTML Programmers stand to see a bright future ahead of them. Those with proper training and education not only have great job security and a range of options but a high-paying, rewarding career path. Responding to the rapid skills demand by supplying HTML programmers will thus have a positive impact on the economy.</p> <p>It is also important to note that there are great opportunities to become self-employed and the entrepreneurial orientated HTML programmer will form new companies (with the employment creation associated to it). There is also an abundance of international research that points to the phenomenal growth in the need for qualified programmers, including HTML Programmers, since HTML is a very popular programming language that has a number of application possibilities, e.g. mobile applications, artificial intelligence, web design, etc. The growth in new companies in an</p>

		<p>environment where digitisation is becoming more and more important, will have a positive impact on society, not only in terms of connectivity, ICT savvy, communications and the likes, but also, as a new industry, there will be creation of jobs.</p> <p>Typical learners include school leavers and persons who want to enter the ICT sector with programming skills. Minimum requirements are a Gr 11 with Maths Lit and English.</p> <p>No formal registration is required to function as a HTML Programmer.</p> <p>Typical occupations include mobile applications designers, artificial intelligence software developers and web designers with employment opportunities in any economic sector, e.g. finance, insurance, healthcare, energy, environmental, government, transportation, agriculture and food.</p>	
8	Related registered qualification(s)	<ul style="list-style-type: none"> • Occupational Certificate: Artificial Intelligence Software Developer, NQF Level 05, 209 Credits • Occupational Certificate: Cloud Administrator, NQF Level 04, 149 Credits • Occupational Certificate: Cybersecurity Analyst, NQF Level 05, 173 Credits • Occupational Certificate: Data Science Practitioner, NQF Level 05, 185 Credits • Occupational Certificate: Quality Test Automator, NQF Level 05, 179 Credits • Occupational Certificate: Software Developer, NQF Level 05, 220 Credits 	
9	Purpose	<p>A HTML Programmer will be able to implement solutions to solve real life problems in an efficient manner applying a knowledge and understanding of the principles of programming with Hypertext Markup Language (HTML) and applicable tools.</p> <ul style="list-style-type: none"> • Create well-written and readable HTML programs, using a disciplined coding style • Work collaboratively in a team and execute version control 	
10	Content	<p><u>Knowledge Component</u></p> <ul style="list-style-type: none"> • 900218-000-00-KM-01, Hypertext Markup Language (HTML) basics, NQF Level 4, Credits 2 • 900218-000-00-KM-02, HTML Programming Principles, NQF Level 4, Credits 6 • 900218-000-00-KM-03, HTML and Cascading Style Sheets (CSS) Styling Principles, NQF Level 4, Credits 5 • 900218-000-00-KM-04, Principles of HTML 	<p><u>Application Component</u></p> <ul style="list-style-type: none"> • 900218-000-00-PM-01, Getting started with Hypertext Markup Language (HTML), NQF Level 4, Credits 3 • 900218-000-00-PM-02, Program with HTML, NQF Level 4, Credits 4 • 900218-000-00-PM-03, Style Webpages with HTML and Cascading Style Sheets (CSS), NQF Level 4, Credits 8 • 900218-000-00-PM-04, Use Intermediate HTML

		<p>Intermediate Programming Functionalities, NQF Level 4, Credits 4</p> <ul style="list-style-type: none"> • 900218-000-00-KM-05, Advanced Graphics, Animation and Styling, NQF Level 4, Credits 3 <p>Total number of credits for Knowledge Modules:20</p>	<p>Programming Functionalities, NQF Level 4, Credits 7</p> <ul style="list-style-type: none"> • 900218-000-00-PM-05, Apply Advanced Graphics, Animation and Styling, NQF Level 4, Credits 7 • 900218-000-00-PM-06, Projects with HTML, NQF Level 4, Credits 11 <p>Total number of credits for Application Modules:40</p>
11	Minimum entry requirements	<p>NQF Level 3 with Maths Lit and English. Access to equipment, internet connectivity and how to work remotely</p>	
12	Exit Level Outcomes and Associated Assessment Criteria	<p>Exit Level Outcomes (ELO) 1 Describe the basics of Hypertext Markup Language (HTML) Programming Associated Assessment Criteria</p> <ul style="list-style-type: none"> • The fundamentals of the HTML programming language are described. • The development life cycle as a means of creating HTML websites and other front-end applications is described. • An understanding of applicable frameworks such as a text editor, GitHub and Cascading Style Sheets (CSS), etc. is demonstrated. <p>Exit Level Outcomes (ELO) 2 Build front-end software solutions using the HTML programming language Associated Assessment Criteria</p> <ul style="list-style-type: none"> • The use of HTML syntax to create neat and concise coding including documentation and indentation standards is demonstrated. • HTML and CSS functionalities is used to format the text, images, and other media that make up a web page. • Interactive pages that are aesthetically pleasing, responsive, fast and communicate with web servers are created and styled. • A table of data is displayed and forms for receiving and validating user input are incorporated. • Graphics, media and animate web pages are included into web applications. • A web page debugged and profiled. <p>Exit Level Outcomes (ELO) 3 Work collaboratively in a team using the GitHub platform Associated Assessment Criteria</p> <ul style="list-style-type: none"> • An ability to work with Git and GitHub functionalities is applied. • The ability to work collaboratively in a team using Git is demonstrated. • Version control is executed using Git functionalities such as repositories, branches, commits and pull requests. 	

13	<p>Continuous Assessment and Final Integrated Supervised Assessment (FISA)</p>	<p>Continuous Assessment</p> <p>The SDP must ensure that all learners are enrolled with the QCTO at the start of training (within 5 days) in the format required by the QCTO. Continuous assessments are set by the SDP in accordance with the outcomes provided.</p> <p>This may consist of a variety of methods, e.g. practical or written assessments, assignments, projects, demonstrations, presentations or any other form of assessment to assist the learner in the learning process. During training, it is mandatory for formal summative assessments to take place at the end of each module/topic. These results must be formally recorded, and be available for monitoring and/or evaluation by the QCTO.</p> <p>Final Integrated Supervised Assessment (FISA)</p> <p>All learners gain entrance to the Final Integrated Supervised Assessment by successfully completing all formal summative assessments conducted by the SDP.</p> <p>Format of FISA: A practical assessment integrating the relevant Exit Level outcomes, with simultaneous verbal assessment of embedded knowledge by the assessor before, during or after the FISA.</p> <p>All FISAs must be supervised, and virtual FISAs must be recorded throughout the assessment.</p> <p>All Exit Level Outcomes must be covered in the FISA. In the FISA, the learner must demonstrate applied knowledge and skills to prove that the competencies of the Skills Programme have been achieved.</p> <p>The FISA may not contain any assessments used in the "Continuous Assessment" process (thus no re-assessment).</p> <p>Special considerations should be made for candidates with special learning needs.</p> <p>Standards for Final Integrated Supervised Assessment (FISA):</p> <p>The learner should be provided with a brief/job card/task to demonstrate what the learner should show, know or produce in a product, relevant to the Exit Level Outcomes. This is the section where the learner must show applied competency (what the learner must be able to do, and to what expected standard)</p> <p>The FISA INSTRUMENT (Written case study, scenario or brief/task [similar to a job card]) must be developed and moderated by the SDP and conducted in a supervised environment. It is assessed by means of a RUBRIC developed by the SDP for this purpose:</p> <p>A candidate must demonstrate that they are competent at using appropriate toolkit, accessing programming building blocks and work within a repository and create a well-written and readable HTML programme.</p> <p>The candidate must be given access to internet connection, applicable software and hardware as well as a simulated platform or lab environment with applicable toolkit and virtual machines with access to sufficient information. Candidates must be provided with a scenario or customer brief related to the company for writing a programme at beginner's level.</p> <ol style="list-style-type: none"> 1. Create a well-written and readable HTML program, using a disciplined coding style, including documentation and indentation standards.
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14	Recognition of Prior Learning	<ul style="list-style-type: none"> • Learners will gain access to the skills programme through RPL for access as provided for in the QCTO RPL Policy. RPL for access is conducted by accredited education institution, skills development provider or workplace accredited to offer that specific skills programme. • Learners who have acquired competencies in skills programme will be credited for such topics through RPL. • RPL for access to the Final Supervised Assessment: Accredited providers and approved workplaces must apply the internal assessment criteria specified in the skills programme document to establish and confirm prior learning and achievement of required competencies for the skills programme.
15	Work Opportunities / Further Learning	<p>Employment opportunities:</p> <ul style="list-style-type: none"> • Self-employed, • Working remotely,

		<ul style="list-style-type: none"> • Programming companies, • Any industry. <p>Further learning opportunities:</p> <ul style="list-style-type: none"> • Occupational Certificate: Artificial Intelligence Software Developer, NQF Level 05, 209 Credits • Occupational Certificate: Cloud Administrator, NQF Level 04, 149 Credits • Occupational Certificate: Cybersecurity Analyst, NQF Level 05, 173 Credits • Occupational Certificate: Data Science Practitioner, NQF Level 05, 185 Credits • Occupational Certificate: Quality Test Automator, NQF Level 05, 179 Credits • Occupational Certificate: Software Developer, NQF Level 05, 220 Credits
16	Skills Development Provider Accreditation Requirements	<p>Knowledge Modules</p> <p><i>Physical Requirements:</i></p> <ul style="list-style-type: none"> • The provider must have lesson plans and structured learning material or provide learners with access to structured learning material that addresses all the topics in all the knowledge modules as well as the applied knowledge in the application. • QCTO/ MICT SETA requirements <p><i>Human Resource Requirements:</i></p> <ul style="list-style-type: none"> • Lecturer/learner ratio of 1:20 (Maximum) • Qualification of lecturer (SME): <ul style="list-style-type: none"> ○ NQF 5 qualified in industry recognised qualifications with 1-year experience in the IT industry ○ Cybersecurity vendor certification • Assessors and moderators: accredited by the MICT SETA <p><i>Legal Requirements:</i></p> <ul style="list-style-type: none"> • Legal (product) licences to use the software for learning and training • OHS compliance certificate <p>Application Modules</p> <p><i>Physical Requirements:</i></p> <ul style="list-style-type: none"> • Valid licenses software and application, including OS. • Internet connection and hardware availability.

		<ul style="list-style-type: none"> • Examples and information specified in the scope statement and all the case studies, scenarios and access to hardware and software implied in the scope statements of the modules. • Remote learners: Provider must provide business IT simulation system (e.g. invoice processing). <p><i>Human Resource Requirements:</i></p> <ul style="list-style-type: none"> • Qualification of lecturer (SME): <ul style="list-style-type: none"> ○ NQF 5 industry recognised qualification with 1 year relevant experience • Assessors and moderators: accredited by the MICT SETA <p><i>Legal Requirements:</i></p> <ul style="list-style-type: none"> • Legal (product) licences to use the software for learning and training • OHS compliance certificate • Ethical clearance (where necessary)
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