

QUALIFICATION FILE – Micro Credentials



Foundation of Generative AI & Prompt engineering

Public Private

Upskilling Dual/Flexi Qualification For ToT For ToA

General Multi-skill (MS) Cross Sectoral (CS) Future Skills OEM

NCrF/NSQF Level: 5

MC ID : HCLT/N0030/IT/2024

Submitted By:

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Section 1: Basic Details

1.	Micro Credential-Qualification Name	Foundation of Generative AI & Prompt engineering											
2.	Sector/s	IT Services											
3.	National Qualification Register (NQR) Code & Version <i>(Will be issued after NSQC approval.)</i>	NM-05-IT-02694-2024-V1-HCL	4. NCrF/NSQF Level: 5										
5.	Brief Description of the Micro Credential	As a prompt engineer, the responsibilities will include the understanding and designing prompts for industry and business applications.											
6.	Eligibility Criteria for Entry for Students/Trainee/Learner/Employee	<p style="text-align: center;">a. Entry Qualification & Relevant Experience</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">S. No.</th> <th style="width: 45%;">Academic/Skill Qualification (with specialization- if applicable)</th> <th style="width: 45%;">Relevant Experience (with specialization- if applicable)</th> </tr> </thead> <tbody> <tr> <td></td> <td>UG Diploma or equivalent in relevant field* 2nd year UG in relevant field* * Relevant filed - IT/CSE/EEE/ECE</td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> </tr> </tbody> </table> <p>b. Age: NA</p>			S. No.	Academic/Skill Qualification (with specialization- if applicable)	Relevant Experience (with specialization- if applicable)		UG Diploma or equivalent in relevant field* 2nd year UG in relevant field* * Relevant filed - IT/CSE/EEE/ECE				
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	UG Diploma or equivalent in relevant field* 2nd year UG in relevant field* * Relevant filed - IT/CSE/EEE/ECE												
7.	Credits Assigned to this Qualification, Subject to Assessment <i>(as per National Credit Framework (NCrF))</i>	1 Credit	8. Common Cost Norm Category (I/II/III) <i>(wherever applicable):</i> I										
9.	Any Licensing Requirements/ Pre-requisites for Undertaking Training <i>(wherever applicable)</i>	NA											
10.	Expected Outcomes of the Micro Credential	<p>Upon completion of the program, the individual must be able to:</p> <p>1.Apply the concepts of Prompt Engineering to generate solutions as relevant for specific domain-based problems statement.</p>											

		<p>2. Generate different types of outputs (viz. Text...etc.) with AI.</p> <p>3. Design prompts for content creation, summarization, and translation</p> <p>4. Apply Iterative refinement of prompts based on model responses.</p> <p>5. Gauge metrics & Benchmarking for Prompts</p>												
11.	<p>Training Duration by Modes of Training Delivery (Specify Total Duration as per selected training delivery modes and as per requirement of the qualification)</p>	<p><input type="checkbox"/> Offline Only <input checked="" type="checkbox"/> Online Only <input type="checkbox"/> Blended</p> <table border="1"> <thead> <tr> <th>Training Delivery Mode</th> <th>Theory (Hours)</th> <th>Practical (Hours)</th> <th>Total (Hours)</th> </tr> </thead> <tbody> <tr> <td>Classroom (offline)</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Online</td> <td>15</td> <td>15</td> <td>30</td> </tr> </tbody> </table> <p>(Refer Blended Learning Annexure for Details)</p>	Training Delivery Mode	Theory (Hours)	Practical (Hours)	Total (Hours)	Classroom (offline)				Online	15	15	30
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30	70			100	50%									
13.	<p>Is the Qualification Amenable to Persons with Disability</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No If “Yes”, specify applicable type of Disability:</p>												
14.	<p>How participation of women will be encouraged?</p>	<p>Almost all companies today have signed up improving gender diversity, as well as recruit women from rural India (ESG compliance). We believe that the industry relevant programs can build more confidence in women to apply to multi-national companies.</p> <p>The program has been designed to encourage candidates even from non-Engineering/non-Science backgrounds to embrace tech careers. Given the fact that globally including India, women participation in STEM careers is below 20%, we believe only such skilling programs can encourage gender diversity.</p>												

15.	Other Indian Languages in which the Micro Credential will be implemented.	Hindi and English	
16.	Is similar Micro Credential Qualification(s) available on NQR-if yes, justification for this qualification	<input type="checkbox"/> Yes <input type="checkbox"/> No URLs of similar Qualifications:	
17.	Name and Contact Details Submitting / Awarding Body SPOC	Name: Shanthi Venkatraman Designation: Global Lead - Customer Assurance Email: shanthi.venkatraman@hcl.com Contact No.: +91 9600122611 Website: https://www.hcltech.com/	
18.	NSQC Approval Date: 30 May 2024	19. Validity Duration: 3 YEARS	20. Next Review Date: 30 May 2024

Section 2: Training Related

1.	Trainer’s Qualification and experience in relevant sector (in years) (as per requirement and NCVET guidelines)	Minimum 3-5 years of experience in software development, particularly in AI, design thinking, and web application development
2.	Master Trainer’s Qualification and experience in relevant sector (in years) (as per requirement and NCVET guidelines)	Minimum of 7-10 years of experience.
3.	Tools and Equipment Required for Training	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (If “Yes”, details to be provided in Annexure)

Section 3: Assessment Related

1.	Assessor’s Qualification and experience in relevant sector (in years) (as per requirement and NCVET guidelines)	At least 3-5 years of experience in software development, AI technologies, and web application development.
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2.	Proctor’s Qualification and experience in relevant sector (in years) <i>(as per requirement and NCVET guidelines)</i>	Minimum of 2-3 years of experience in AI technologies, design thinking methodologies, and web application development.
3.	Lead Assessor’s/Proctor’s Qualification and experience in relevant sector (in years) <i>(as per requirement and NCVET guidelines)</i>	Minimum of 5-7 years of experience.
4.	Assessment Mode <i>(Specify the assessment mode)</i>	Mode: <input type="checkbox"/> Online Only <input type="checkbox"/> Offline Only <input type="checkbox"/> Blended
5.	Tools and Equipment Required for Assessment	<input type="checkbox"/> Same as for training <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>(details to be provided in Annexure-if it is different for Assessment)</i>

Section 4: Evidence of Need of the Micro Credential

As per the NCVET Guidelines for evidence of need, provide the required Annexure/Supporting documents.

1.	Government /Industry initiatives/ requirement (Yes/No): NA
2.	Number of Industry validation provided: NA
3.	Estimated number of people to be trained: Approx. 10,000 learners to be trained in the year 2024

Section 5: Annexure Check List

Specify Annexure Number and Name.

1.	Annexure: NCrf/NSQF level justification based on NCrf Level/NSQF descriptors <i>(Mandatory)</i>	Annexure: Evidence of Level
2.	Annexure: Learning Outcomes and Assessment Criteria <i>(Mandatory)</i>	Annexure: Detailed Assessment Criteria

3.	Annexure: Assessment Strategy (<i>Mandatory</i>)	Annexure: Assessment Strategy
4.	Annexure: List of tools and equipment relevant for qualification (<i>Mandatory – Except in case of online course</i>)	Annexure: Tools and Equipment
5.	Annexure: Blended Learning (<i>Mandatory in case selected mode of delivery is “Blended Learning”</i>)	Annexure: Blended Learning
6.	Annexure: Acronym and Glossary (<i>Optional</i>)	Annexure: Acronym and Glossary

Annexure: Evidence of Level

Annexure: Evidence of Level

NCrF/NSQF Level Descriptors	Key requirements of the job role/ outcome of the qualification	How the job role/ outcomes relate to the NCrF/NSQF level descriptor	NCrF/NSQF Level
Professional Theoretical Knowledge/Process	Proficient understanding of design thinking principles, AI algorithms, code optimization techniques, and web application enhancement strategies. Ability to apply theoretical knowledge to analyze problems, propose innovative solutions, and optimize code for performance and scalability.	Demonstrates comprehensive understanding and application of theoretical concepts and processes relevant to the job role, meeting the requirements of higher-level vocational qualifications.	Level 4.5
Professional and Technical Skills/ Expertise/ Professional Knowledge	Mastery of AI tools and technologies for design thinking, code optimization, and web application enhancement. Proficiency in using advanced AI	Exhibits advanced professional and technical skills and expertise equivalent to higher-level vocational qualifications. Demonstrates mastery in applying professional knowledge	Level 4.5

	algorithms, programming languages, and development frameworks to solve complex problems and optimize code for industry-specific solutions.	to develop innovative solutions and optimize code for industry needs.	
Employment Readiness & Entrepreneurship Skills & Mind-set/Professional Skill	Development of soft skills, employability skills, and entrepreneurial mindset necessary for effective collaboration, communication, problem-solving, and adaptability in the workplace. Ability to innovate, take initiative, and demonstrate leadership qualities in driving industry solutions.	Demonstrates readiness for employment and entrepreneurship through proficient professional skills and mindset, reflecting the expectations of higher-level vocational qualifications. Shows adaptability, creativity, and proactive approach towards addressing industry challenges.	Level 4.5
Broad Learning Outcomes/Core Skill	Ability to leverage AI tools for design thinking, code optimization, and web application enhancement to address industry-specific challenges and achieve desired outcomes. Demonstrates core skills in problem-solving, innovation, and technology integration, indicative of a higher level of competency and proficiency corresponding to advanced vocational qualifications.	Displays core skills in utilizing AI tools to drive innovation, optimize code, and enhance web applications, meeting the expectations of higher-level vocational qualifications. Upholds ethical standards and accountability.	Level 4.5
Responsibility	Takes ownership of AI-driven projects and initiatives, ensuring quality, efficiency, and adherence to ethical standards	Demonstrates a high level of responsibility and professionalism in managing AI-driven projects, meeting the expectations of higher-level vocational qualifications. Upholds	Level 4.5

	and industry best practices. Demonstrates accountability, professionalism, and ethical conduct in fulfilling job roles and responsibilities.	ethical standards, accountability, and integrity in all aspects of work.	
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Annexure: Learning Outcomes and Assessment Criteria

Detailed learning outcomes and assessment criteria for the qualification are as follows:

S. No.	Learning Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
1.	Prompt Engineering fundamentals	05	10		
2.	Crafting prompts, conditional prompts	10	20		
3.	Conversations using dialogues and Chatbots	10	20		
4.	Ethics, measuring Prompt Success	05	20		
Total Marks		30	70		

Annexure: Assessment Strategy

Specify the assessment strategy and plan to evaluate the Candidate on the required competencies of the qualification.

This section includes the processes involved in identifying, gathering, and interpreting information to evaluate the Candidate on the required competencies of the program.

1. Assessment System Overview & 2. Test Environment

#	Functions	Feature (Career Shaper™)	Career Shaper™ Feature Description
1	Test administration	Inbuilt Configuration manager	Examinee invitation, registration and slot scheduling with test monitoring controls
1a	User management	Inbuilt user management	User creation and assigning to user groups
1b	Assessment Management	Inbuilt assessment management	Assessment scheduling, setup and controls
1c	Realm management	Inbuilt Realm management	Institution (re-seller) creation and management
1d	Batch management	Inbuilt batch management	Slot creation and management with examinee assignment
2	Test launch	Inbuilt test launch	Online web-based test launch with secure window feature
3	Testing & proctoring	Inbuilt test taking and proctoring	Supports major test types and formats, Image and screen proctoring
4	Scoring	Inbuilt scoring	Customizable scoring system
5	Instant reporting	Inbuilt reports	Customizable test reports available instantly for end-users
6	Data warehouse reports	Inbuilt data warehouse reports	Reports Factory built on PowerBI
7	Certificate generation	Inbuilt certificates	Customizable certificate templates
8	Examinee Experience	Inbuilt EXP*	Seamless examinee experience and clean UX/UI
8a	Examinee Registration/ Profile updates	Inbuilt registration	Link based examinee registration, profile update.
8b	Examinee Test calendar & reschedule	Inbuilt Test calendar	Test and batch rescheduling
8c	Examinee onboarding & online assistant	Inbuilt examinee onboarding, AI based assistant (jordy)	Onboarding video and examinee user manual, Plugin available for online assistant

8d	Score Viewer & Download	Inbuilt result publishing	Instant Test score and report publishing to examinee
8e	Certificate Viewer & Download	Inbuilt certificate viewer and Download	Certificate publishing to examinee
8f	Skills & Job recommendation	Inbuilt recommendation engine	Skill & Assessment recommendation
9	Technical Helpdesk	End-user tech support	Plugin available for end-user online tech support
10	Assessment Development	Inbuilt assessment development	Assessment Item and pack development
10a	Item Creation & attribution	Inbuilt item creation	Assessment item creation and bulk item upload, classification & tagging
10b	Pack Creation & mapping	Inbuilt assessment pack creation	Assessment pre-packaging and test mapping configurations
10c	Randomization	Inbuilt randomisation	Assessment item randomization
10d	Assessment item statistics	Inbuilt assessment item statistics	Item level examinee attempt statistics

3. Assessment Quality Assurance levels/Framework:

Assessment Quality Assurance framework ensures that the end-to-end activities encompassing the assessment life cycle, consistently meet the intended objectives and meet the stakeholder satisfaction.

3.1 – Assessment Content Assurance

- o Assessments are crafted based on our Industry Expertise, in consultation with practitioners and Subject Matter Experts (SME)
- o The assessment methodology is based on scientific and well-established approaches to assessment design, development and validation. This is further validated using by external consultants, experts with assessment and domain related expertise.
- o Assessments are designed, piloted and outcomes analyzed to ensure Face Validity, Construct Validity and Criterion Validity
- o Sample QC checks are done on contents, to ensure alignment to outcomes.

3.2 - Assessment Platform Assurance

- o Independent Testing of the platform functionalities are regularly conducted, using standard test cases as and when enhancements and product bug fixes are implemented.

1.3 – Assessment Process Assurance

- o Quarterly independent audits are conducted to validate process adherence.
- Findings recorded for action and monitored for effectiveness

Note :- The content and platform dimensions are customizable.

4. Types of evidence or evidence-gathering protocol:

- Assessments are hosted and deployed digitally on our secure, tested platform which enables logging of all transactions and footprints of users and enables greater traceability and transparency.

5. Method of verification or validation:

- Through digital verification of identity, proctoring functionalities and logs of all transactions on the platform

6. Method for assessment documentation, archiving, and access

- All assessment reports are available in HCL Tech archives for agreed on duration.
- Digital logs for each activity of each role holder recorded and stored with privacy and confidentiality requirements taken care of.
- Individual and group reports generated for each assessment event.

Feedback taken from multiple stakeholders after assessment completion.

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Annexure: Tools and Equipment

List of Tools and Equipment

Batch Size:

S. No.	Tool / Equipment Name	Specification	Quantity for specified Batch size
1	Computers	High-performance PCs with AI software installed	[Number of students in the batch]
2	Internet Connectivity	High-speed internet connection for accessing online resources	[Accessible for instructor and students]
3	Design Thinking Software	Software tools for design thinking methodologies	[As required for student access]
4	Code Optimization Tools	AI-powered tools for code optimization	[As required for student access]
5	Web Development Frameworks	Frameworks for web application enhancement	[As required for student access]
6	AI Libraries and SDKs	Libraries and SDKs for AI development	[As required for student access]

Classroom Aids:

The aids required to conduct sessions in the classroom are:

1. Projector or MS Teams (for virtual) with Wi-Fi Connectivity
2. Computer system (1 per learner)

Annexure: Industry Validations Summary

**Not Applicable - vide Guidelines for Creditisation of Skilling and Training Courses
and Qualifications of MNCs and Leading Indian Enterprises**

Annexure: Training Details

Training Projections:

Year	Estimated Training # of Total Candidates	Estimated training # of Women	Estimated training # of People with Disability

Data to be provided year-wise for next 3 years.

Annexure: Blended Learning

Blended Learning Estimated Ratio & Recommended Tools:

Refer NCVET “Guidelines for Blended Learning for Vocational Education, Training & Skilling” available on:

<https://ncvet.gov.in/sites/default/files/Guidelines%20for%20Blended%20Learning%20for%20Vocational%20Education,%20Training%20&%20Skilling.pdf>

S. No.	Select the Components of the Qualification	List Recommended Tools – for all Selected Components	Offline: Online Ratio
1	<input type="checkbox"/> Theory/ Lectures - Imparting theoretical and conceptual knowledge	slides	50:50
2	<input type="checkbox"/> Imparting Soft Skills, Life Skills and Employability Skills /Mentorship to Learners	interactive modules	30:70
3	<input type="checkbox"/> Showing Practical Demonstrations to the learners	Recorded demonstrations, labs	20:80
4	<input type="checkbox"/> Imparting Practical Hands-on Skills/ Lab Work/ workshop/ shop floor training	lab environments, coding exercises, project-based learning	10:90
5	<input type="checkbox"/> Tutorials/ Assignments/ Drill/ Practice	coding platforms, practice quizzes	40:60
6	<input type="checkbox"/> Proctored Monitoring/ Assessment/ Evaluation/ Examinations	Online assessment platforms, video proctoring tools	20:80
7	<input type="checkbox"/> On the Job Training (OJT)/ Project Work Internship	Mentorship programs	0:100

Annexure: Acronym and Glossary

Acronym

Acronym	Description
AA	Assessment Agency
AB	Awarding Body
ISCO	International Standard Classification of Occupations
NCO	National Classification of Occupations
NCrF	National Credit Framework
NQR	National Qualification Register
NSQF	National Skills Qualifications Framework
OJT	On the Job Training

Glossary

Term	Description
Qualification	A formal outcome of an assessment and validation process which is obtained when a competent body determines that an individual has achieved learning outcomes to given standards
Qualification File	A Qualification File is a template designed to capture necessary information of a Qualification from the perspective of NSQF compliance. The Qualification File will be normally submitted by the awarding body for the qualification.
Sector	A grouping of professional activities based on their main economic function, product, service or technology.