# COMPETENCY STANDARDS

# GENERATIVE ARTIFICIAL INTELLIGENCE (AI)

## INFORMATION AND COMMUNICATIONS TECHNOLOGY SECTOR

**TECHNICAL EDUCATION AND SKILLS DEVELOPMENT AUTHORITY**
East Service Road, South Luzon Expressway (SLEX), Taguig City, Metro Manila

Technical Education and Skills Development Act of 1994
(Republic Act No. 7796)

**Section 22, "Establishment and Administration of the National Trade Skills Standards" of the RA 7796 known as the TESDA Act mandates TESDA to establish national occupational skills standards. The Authority shall develop and implement a certification and accreditation program in which private industry group and trade associations are accredited to conduct approved trade tests, and the local government units to promote such trade testing activities in their respective areas in accordance with the guidelines to be set by the Authority.**

The Competency Standards (CS) serve as basis for the:

1. Competency-Based Curriculum;
2. Micro-Credential; and
3. Institutional Assessment Instruments

Each CS has two sections:

| | |
|---|---|
| Section 1 | **Definition of Qualification** describes the qualification and defines the competencies that comprise the qualification. |
| Section 2 | **Competency Standards** gives the specifications of competencies required for effective work performance. |

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## ICT SECTOR

## GENERATIVE ARTIFICIAL INTELLIGENCE (AI)

# COMPETENCY STANDARDS FOR GENERATIVE ARTIFICIAL INTELLIGENCE

## SECTION 1: DEFINITION OF QUALIFICATION

The micro-competencies of GENERATIVE ARTIFICIAL INTELLIGENCE (AI) provide the basic knowledge and skills in utilizing various generative AI tools and application.

The micro-competencies comprising Generative AI is:

| UNIT CODE | CORE COMPETENCIES |
|---|---|
| CS- ICT251121 | Utilize Generative Artificial Intelligence (AI) |

## SECTION 2: COMPETENCY STANDARDS

This section gives the details of the contents of the units of competency required in **UTILIZING GENERATIVE ARITIFICIAL INTELLIGENCE (AI).**

## CORE COMPETENCIES

**UNIT OF COMPETENCY: UTILIZE GENERATIVE ARTIFICIAL INTELLIGENCE (AI)**

**UNIT CODE:** **CS-ICT251121**

**UNIT DESCRIPTOR:** This unit covers the outcomes required in identifying generative AI, accessing generative AI, and interacting with generative AI.

| ELEMENT | PERFORMANCE CRITERIA<br>***Italicized terms*** are elaborated in the Range of Variables | Required Knowledge | Required Skills |
|---|---|---|---|
| 1. Identify generative AI | 1.1 ***Generative AI functions*** are determined based on the specific task to perform<br><br>1.2 ***Generative AI limitation*** are identified based in the terms of use<br><br>1.3 ***Ethical uses of generative AI*** are differentiated from ***unethical uses of generative AI***<br><br>1.4 Generative AI major characteristics are identified based on the terms of use<br><br>1.5 Appropriate type of ***generative AI*** is selected based on the job requirements | 1.1 RA 10173 (Data Privacy Act of 2012)<br><br>1.2 RA 8293 (Intellectual Property Code of the Philippines)<br><br>1.3 Basic knowledge of AI<br>• Different types of AI<br>• What is generative AI?<br>• How does gen AI work?<br><br>1.4 Basic knowledge on ethical use of AI<br><br>1.5 Environmental impact of generative AI | 1.1 Computer Operation skills<br><br>1.2 Research skills<br><br>1.3 Analytical skills<br><br>1.4 Critical thinking skill<br><br>1.4 Web browsing skill<br><br>1.5 Problem identification / solving skill<br><br>1.6 Decision making skills |

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|---|---|---|---|
| 2. Access generative AI | 2.1 User account is created on appropriate platform based on generative AI type and task requirements<br><br>2.2 Terms and condition were reviewed and agreed based on obtaining authorization to utilize generative AI tool<br><br>2.3 Login credentials are secured following ***best practices for cybersecurity and data privacy***<br><br>2.4 ***Social login*** was selected for user authentication, if applicable<br><br>2.5 Appropriate ***subscription type*** is selected for the specific generative AI | 2.1 Strong password selection, security measures, 2FA<br><br>2.2 Terms and condition<br><br>2.3 Account creation<br><br>2.4 Social Login<br><br>2.5 Knowledge on various subscription and payment | 2.1 Navigation skills<br><br>2.2 Creativity<br><br>2.3 Computer Operation skills<br><br>2.4 Analytical skills<br><br>2.5 Critical thinking skills<br><br>2.6 Web browsing skill<br><br>2.7 Digital fluency / internet fluency |
| 3. Interact with generative AI | 3.1 Appropriate ***prompt style*** **is** selected based on the desired outcome<br><br>3.2 Prompt was formulated based on the chosen prompt style<br><br>3.3 Various prompts were experimented to achieve desired outcomes<br><br>3.4 Generative AI output was reviewed and underwent a thorough accuracy and evaluation in accordance with the desired outcome<br><br>3.5 Feedback on the output is provided back to the generative AI application in accordance with the generative AI's functionalities | 3.1 Prompt engineering<br><br>3.2 Prompt libraries<br><br>3.3 Making prompts more efficient<br><br>3.4 Correct syntax and semantics<br><br>3.5 English grammar proficiency<br><br>3.6 Human-in-the loop | 3.1 Navigation skills<br><br>3.2 Computer Operation skills<br><br>3.3 Creativity<br><br>3.4 Analytical skills<br><br>3.5 Critical thinking skill<br><br>3.6 Verification and evaluation Skills<br><br>3.7 AI prompting skills<br><br>3.8 Communication skills |

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|---|---|---|---|
| | | | 3.9 Research skills |

**RANGE OF VARIABLES**

| VARIABLE | RANGE |
|---|---|
| 1. Generative AI | May include but not limited to:<br>1.1 Text generation tools<br>1.2 Image generation tools<br>1.3 Music generation tools<br>1.4 Code generation tools<br>1.5 Voice generation/synthesis tools<br>1.6 Video generation tools<br>1.7 AI chip design tool |
| 2. Generative AI Functions | May include but not limited to:<br>2.1 Written content augmentation and creation<br>2.2 Question answering and discovery<br>2.3 Summarization<br>2.4 Simplification<br>2.5 Classification of content for specific use cases<br>2.6 Chat bot performance improvement<br>2.7 Software coding |
| 3. Generative AI major characteristics | May include but not limited to:<br>3.1 Business<br>3.2 Technology<br>3.3 Process<br>3.4 People |
| 4. Generative AI limitation | May include but not limited to:<br>4.1 Biased<br>4.2 Inconsistent<br>4.3 Inaccurate<br>4.4 Deep fakes<br>4.5 Breach data privacy and security requirements<br>4.6 Breach copyright and intellectual property requirements |
| 5. Ethical uses of generative AI | May include but not limited to:<br>5.1 Validate the sources of information and check for accuracy.<br>5.2 Use AI to correct and stop the spread of misinformation and disinformation.<br>5.3 Exercise caution when using such tools in managing sensitive information<br>5.4 Recognize the limits of the technology and acknowledge the sophistication and expertise of personal knowledge |

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|---|---|
| 6. Unethical uses of generative AI | May include but not limited to:<br>6.1 Creating a fake account using AI<br>6.2 Create content with the intent of spreading disinformation<br>6.3 Uploading sensitive, proprietary, or confidential data such as personal health information and trade secrets<br>6.4 Unintentional bias may occur in generated content |
| 7. Prompt Style | May include but not limited to:<br>7.1 Completion Prompts<br>7.2 Question Prompts<br>7.3 Instruction Prompts<br>7.4 Comparison Prompts<br>7.5 Creative Prompts<br>7.6 Translation Prompts<br>7.7 Summarization Prompts<br>7.8 Dialogue Prompts |
| 8. Best practices for data privacy and cybersecurity | May include but not limited to:<br>8.1 Create Strong Passwords<br>8.2 Frequently Update Passwords<br>8.3 Do not share passwords with anyone<br>8.4 Always decline the use of the “Remember Password” feature of applications |
| 9. Social login | May include but not limited to:<br>9.1 Facebook<br>9.2 Google<br>9.3 LinkedIn<br>9.4 Microsoft<br>9.5 X (formerly Twitter) |
| 10. Subscription type | May include but not limited to:<br>10.1 free<br>10.2 freemium<br>10.3 premium |

**EVIDENCE GUIDE**

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|---|---|
| 1. Critical aspects of Competency | Assessment requires evidence that the candidate:<br>1.1. Identified generative AI<br>1.2. Accessed generative AI<br>1.3. Interacted with generative AI |
| 2. Resource Implications | The following resources should be provided:<br>2.1. Computer (desktop or laptop) or Mobile Device<br>2.2. Internet connection<br>2.3. Access to any generative AI tools and/or application |
| 3. Methods of Assessment | Competency in this unit must be assessed through but not limited to:<br>3.1. Demonstration<br>3.2. Oral questioning<br>3.3. Written test |
| 4. Context for Assessment | Competency may be assessed in the workplace or in simulated workplace environment |

| GLOSSARY OF TERMS | |
|---|---|
| 1. Artificial intelligence (AI) | Artificial intelligence is the simulation of human intelligence processes by machines, especially computer systems. Specific applications of AI include expert systems, natural language processing, speech recognition and machine vision. |
| 2. Freemium | Freemium is the practice of offering a basic set of services for free, and enhanced features and/or content for a fee. |
| 3. Login credentials | A user ID and password combination that allows users to access a website or application |
| 4. RA 10173 | Aims to protect personal data in information and communications systems both in the government and the private sector. |
| 5. RA 8293 | An act prescribing the intellectual property code and establishing the intellectual property office, providing for its powers and functions and for other purposes |
| 6. Social login | Uses information from social networking sites to facilitate logins on third-party applications and platforms |
| 7. Terms of condition | Refers to a set of rules for the use of a website or a software |
| 8. User account | Refers to an identity created for a person in a computer or computing system. |
| 9. Prompt | A natural language text that requests the generative AI to perform a specific task. |

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- **THE VALIDATORS COMMITTEE PANEL**

| | | |
|---|---|---|
| 1. | Mr. Sherwin M. Pelayo | Analytics & Artificial Intelligence Association of the Philippines |
| 2. | Dr. Deseree C. Dela Cruz | Sta Cruz Elementary School Antipolo City |
| 3. | Mr. Alvin L. Sibayan | Bureau of Immigration |
| 4. | Mr. Alwin S. Reclusado | Xavier School |
| 5. | Mr. Arjay N. Rosel | Gen AI Philippines |
| 6. | Mr. Brixter John R. Lumabi | Stratpoint / AAP |
| 7. | Mr. David Jensen G. Rosario, Jr | Katapult Digital |
| 8. | Mr. Dennis E. Ignacio | UNC |
| 9. | Mr. Harvy Josh N. Pitargue | University of the Philippines Open University |
| 10. | Mr. Jerich Yves S. Santos | Landbank |
| 11. | Mr. Jogar Baldescotosoc, Cese | Social Security System |
| 12. | Mr. June Arreb C. Danila | University of Nueva Caceres |
| 13. | Mr. Mark Anthony M. Hernandez | Gen AI Philippines & AAP |
| 14. | Mr. Michael John S. Rivera | Department of Science and Technology III |
| 15. | Mr. Ramir B. Mendoza | PWD |
| 16. | Mr. Ray Ferdinand Mm Gagani | Cebu Normal University |
| 17. | Mr. Richard T. Regidor | University Of Mindanao |
| 18. | Mr. Sean Rey Z. Bongayon | n/a |
| 19. | Mr. Simplicio D. Liwanag Iii | Joysis TVI |
| 20. | Ms. Aurefe A. Mendoza | PWD |
| 21. | Ms. Kim Narcisse Rowe Deraco | UA&P |
| 22. | Ms. Lourdes R. Requinta | University of Nueva Caceres |
| 23. | Ms. Marina A. Manaois | Gen AI Philippines |
| 24. | Ms. Mary Anne Cabiton | Gardenia Bakeries Philippines Inc |
| 25. | Ms. Renee Sigrid R. Cantollas | Gen AI Philippines |
| 26. | Ms. Shirley I. Legaspi | Standard Chartered Bank |
| 27. | Ms. Tala A. Nabong | Self-employed |

- **THE MANAGEMENT AND STAFF OF TESDA**

    - Qualifications and Standards Office (QSO)

        1. **Dir. El Cid H. Castillo** - QSO
        2. **Ms. Bernadette S. Audije** - QSO/CSDD
        3. **Mr. Adrian Brian C. Sabanal** - QSO/CSDD
        4. **Ms. Luz M. Vergara** - QSO/CPSDD
        5. **Ms. Kimberly C. Caballero** - QSO/CPSDD
        6. **Ms. Maria Sofia Jasmin A. Cea** - QSO/CPSDD

- **THE NATIONAL INDUSTRY BOARD (NIB)**

**ANALYTICS AND ARTIFICIAL INTELLIGENCE ASSOCIATION OF THE PHILIPPINES (AAP)**
**https://aap.ph/**

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