

Republic of the Philippines
TECHNICAL EDUCATION AND SKILLS DEVELOPMENT AUTHORITY
East Service Road, South Luzon Expressway, Taguig City

145th TESDA BOARD MEETING
13 November 2024, Wednesday, 1:00 P.M.
TESDA Board Room, 7th Floor,
TESDA Main Building, East Service Road,
Taguig City

Resolution No. 2024 - 15
(Page 1 of 3 pages)

**APPROVING AND PROMULGATING THE TRAINING REGULATIONS FOR BASIC
3D BUILDING INFORMATION MODELING III**

WHEREAS, TESDA Board Resolution No. 2019-0045 on "Prioritization of Building Information Modeling for Training Regulations (TR) Development" was issued on 10 September 2019 during the 115th TESDA Board Meeting;

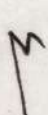
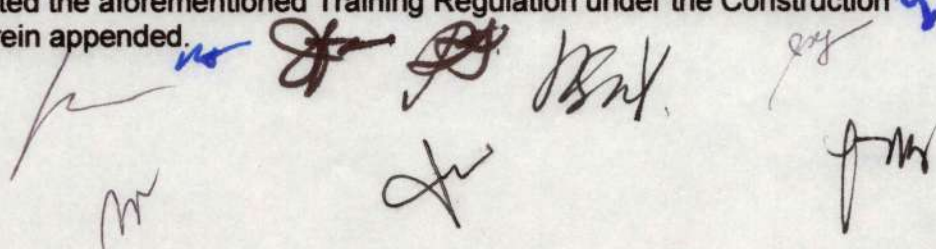
WHEREAS, Section 14 (b) of Republic Act No. 7796 mandates that TESDA shall develop and establish a national system of skills standardization, testing and certification and conduct research and development on various occupational areas in order to recommend policies, rules and regulations for effective and efficient skills standardization, testing and certification system in the country;

WHEREAS, the Philippine Constructors Association, Inc. initiated the development of Training Regulation for Basic 3D Building Information Modeling NC III;

WHEREAS, the scope of the work of the new TR for Basic 3D Building Information Modeling NC III involves modeling architectural layout and detail (structural, electrical/electronic, sanitary/plumbing, and mechanical) drawings, in which the industry experts and partners, headed by technical experts with the technical assistance of the Qualifications and Standards Office (QSO) of TESDA have developed the aforementioned TR and endorsed the same for TESDA Board approval;

WHEREAS, during the 173rd Standards Setting and Systems Development (SSSD) Committee Meeting held on 29 October 2024, the Committee deliberated upon and favorably recommended to the TESDA Board the promulgation of the abovementioned TR under the Construction Sector which is attached as "Annex A" and made integral part of this Resolution;

NOW, THEREFORE, BE IT RESOLVED AS IT IS HEREBY RESOLVED, that the TESDA Board in its meeting today, 13 November 2024 at 1:00 P.M., has approved and promulgated the aforementioned Training Regulation under the Construction Sector; as herein appended.



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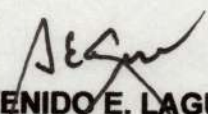
BE IT RESOLVED, FINALLY, that:

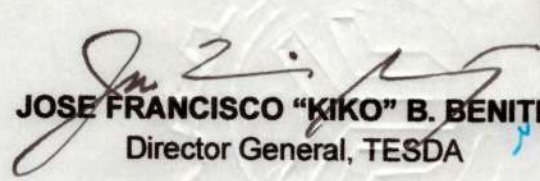
(1) Copy of this Resolution and the abovementioned Training Regulations be published in the Official Gazette or in a newspaper of general circulation, and disseminated to all concerned, and the same shall be effective fifteen (15) days upon publication;

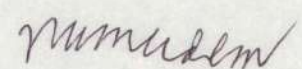
(2) All programs to be registered under this new Training Regulations must comply with the requirements of the aforementioned Training Regulations. The registration under this new Training Regulations shall commence on the date of effectivity as indicated in the Implementing Guidelines/TESDA Circular for the deployment of the Training Regulations to be issued by the TESDA Secretariat; and

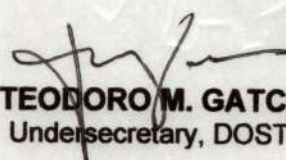
(3) Graduates of TVET programs covered by the aforementioned Training Regulations shall be required to undergo mandatory assessment under the national assessment and certification program.

Adopted this 13th day of November 2024.


SEC. BIENVENIDO E. LAGUESMA
DOLE Secretary and
TESDA Board Chairperson


JOSE FRANCISCO "KIKO" B. BENITEZ
Director General, TESDA


USEC. RAFAELITA M. ALDABA
Undersecretary, DTI

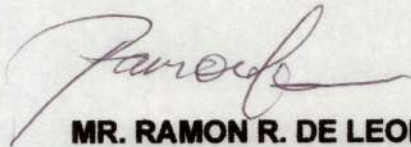

USEC. TEODORO M. GATCHALIAN
Undersecretary, DOST



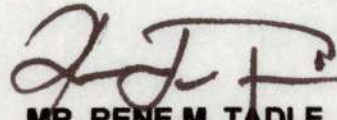
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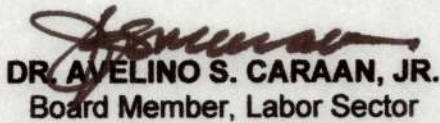
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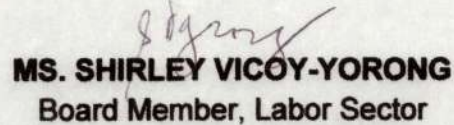
MR. RAMON R. DE LEON
Board Member, Labor Sector



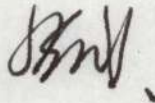
MR. RENE M. TADLE
Board Member, Labor Sector



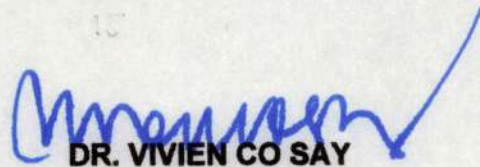
DR. AVELINO S. CARAAN, JR.
Board Member, Labor Sector



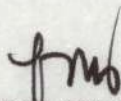
MS. SHIRLEY VICOY-YORONG
Board Member, Labor Sector



DR. LEONIDA BAYANI-ORTIZ
Board Member, Employer Sector



DR. VIVIEN CO SAY
Board Member, Employer Sector



MS. MA. FLORDELIZA CUSI LEONG
Board Member, Employer Sector

Prepared by:



ATTY. JAN MICHAEL P. JARO
TESDA Board Secretariat

ANNEX A

TRAINING REGULATIONS FOR BASIC 3D BUILDING INFORMATION MODELING NC III

Qualification Title
Basic 3D Building Information Modeling NC III
Job Title
<ul style="list-style-type: none">• BIM Modeler
Section 1 - Definition of the Qualification
The BASIC 3D BUILDING INFORMATION MODELLING NC III Qualification consists of competencies that a person must achieve to enable him/her to model architectural layout and detail (structural, electrical/electronic, sanitary/plumbing, and mechanical) drawings for vertical projects using Virtual Modeling methods like BIM Software.
Section 2- Competency Standards
<u>Basic Competencies</u> <ol style="list-style-type: none">1. Lead workplace communication2. Lead small teams3. Apply critical thinking and problem-solving techniques in the workplace4. Work in a diverse environment5. Propose methods of applying learning and innovation in the organization6. Use information systematically7. Evaluate occupational safety and health work practices8. Evaluate environmental work practices9. Facilitate entrepreneurial skills for micro-small-medium enterprises (MSMEs)
<u>Common Competencies</u> <ol style="list-style-type: none">1. Perform mensuration and calculations2. Interpret 2D drawings and plans3. Apply quality standards4. Operate personal computer
<u>Core Competencies</u> <ol style="list-style-type: none">1. Analyze completeness of drawing for basic 3D Building Information Modelling2. Create 3D Model of architectural layout and details3. Create 3D Model of structural layout and details4. Create 3D Model of electrical and electronic layout and details5. Create 3D Model of sanitary and plumbing layout and details6. Create 3D Model of mechanical layout and details

Section 3 - Training Arrangements

3.1 Curriculum Design

Nominal Training Duration

40 Hours (Basic Competencies)
36 Hours (Common Competencies)
128 Hours (Core Competencies)
204 Hours

102 Hrs. Supervised Industry Learning (SIL)

3.2 Training Delivery

1. The delivery of training shall adhere to the design of the curriculum. Delivery shall be guided by the principles of competency based TVET.
 - a. Course design is based on competency standards set by the industry or recognized industry sector; (**Learning system is driven by competencies written to industry standards**).
 - b. Training delivery is learner-centered and should accommodate individualized and self-paced learning strategies.
 - c. Training can be done on an actual workplace setting, simulation of a workplace and/or through adoption of modern technology.
 - d. Assessment is based in the collection of evidence of the performance of work to the industry required standards.
 - e. Assessment of competency takes the trainee's knowledge and attitude into account but requires evidence of actual performance of the competency as the primary source of evidence.
 - f. Training program allows for recognition of prior learning (RPL) or current competencies.
 - g. Training completion is based on satisfactory completion of all specified competencies not on the specified nominal duration of learning.
2. The competency-based TVET system recognizes various types of delivery modes, both on- and off-the-job if the learning is driven by the competency standards specified by the industry. The following training modalities and their variations/components may be adopted singly or in combination with other modalities when designing and delivering training programs:

2.1 Institution- Based:

- Dual Training System (DTS)/Dualized Training Program (DTP) which contain both in-school and in-industry training or fieldwork components. Details can be referred to the Implementing Rules and Regulations of the DTS Law and the TESDA Guidelines on the DTP.

- Distance learning is a formal education process in which majority of the instruction occurs when the students and instructor are not in the same place. Distance learning may employ correspondence study, audio, video, computer technologies or other modern technology that can be used to facilitate learning and formal and non-formal training. Specific guidelines on this mode shall be issued by the TESDA Secretariat.
- Supervised Industry Learning (SIL) or on-the-job training (OJT) is an approach in training designed to enhance the knowledge and skills of the trainee through actual experience in the workplace to acquire specific competencies as prescribed in the training regulations. It is imperative that the deployment of trainees in the workplace is adhered to training programs agreed by the institution and enterprise and status and progress of trainees are closely monitored by the training institutions to prevent opportunity for work exploitation.
- The classroom-based or in-center instruction uses of learner-centered methods as well as laboratory or field-work components.

2.2 Enterprise-Based:

- Formal Apprenticeship – Training within employment involving a contract between an apprentice and an enterprise on an approved apprenticeable occupation.
- Informal Apprenticeship - is based on a training (and working) agreement between an apprentice and a master craftsperson wherein the agreement may be written or oral and the master craftsperson commits to training the apprentice in all the skills relevant to his or her trade over a significant period of time, usually between one and four years, while the apprentice commits to contributing productively to the work of the business. Training is integrated into the production process and apprentices learn by working alongside the experienced craftsperson.
- Enterprise-based Training- where training is implemented within the company in accordance with the requirements of the specific company. Specific guidelines on this mode shall be issued by the TESDA Secretariat.

- 2.3 Community-Based** – Community-Based – short term programs conducted by non-government organizations (NGOs), LGUs, training centers and other TVET providers which are intended to address the specific needs of a community. Such programs can be conducted in informal settings such as barangay hall, basketball courts, etc. These programs can also be mobile training program (MTP).

3.3 Trainee Entry Requirements

Trainees or students who wants to entry into these qualifications should possess the following requirements:

- Must possess good communication skills.
- Can perform basic mathematical computation and mensuration
- Holder of National Certificate Level II in Technical Drafting or at least graduate of Senior High School Graduate with elective in drafting or with at least 1-year work experience as technical draftsman or AutoCAD Operator

3.4 List of Tools, Equipment and Materials

TOOLS		EQUIPMENT			MATERIALS	
QTY	ITEMS	QTY	HARDWARE	SOFTWARE	QTY	ITEMS
1	A3 Printer	21 sets	Quad-core multi-threaded CPU @ 3.5 GHz, 16 GB RAM (dual channel), dedicated video card with 4 GB VRAM and DX11 compatible, 256GB SSD/1TB HDD, 22in. full HD (1080p) display, keyboard and mouse.	Microsoft Windows 10, 64-bit Enterprise or Pro with Office Basic.	4 sets	Ink / Toner
1	60 "- Screen Monitor / Flat Smart TV	21 sets		BIM Authoring Tool Software for Architectural, Structural and MEPS	21 sets	32 GB - USB
					1 Ream	A3 Paper

3.5 Training Facilities

Based on a class intake of 20 students/trainees

<u>Space Requirement</u>	<u>Size in Meters</u>	<u>Area in Sq. Meters</u>	<u>Total Area in Sq. Meters</u>
Contextual Learning Area (Lecture Room)	<u>5x 10</u>	50	50
Distance Learning (Laboratory/Workshop/Activity Area)	<u>10 x 10</u>	100	100
Storage Area (Tool room & S/M storage area)	4 x 4	16	16
Learning Resource Area	5 x 6	30	30
Wash area / comfort room (Male, Female, PWD) / Circulation area	<u>4 x 5</u>	<u>20</u>	20
Circulation Area	<u>4 x 5</u>	<u>20</u>	<u>20</u>
TOTAL AREA			236

NOTE: Training Center may enter into Memorandum of Agreement (MOA) with industry for use of facilities and equipment

3.6 Trainer's Qualifications

- Must be a holder of National TVET Trainer Certificate (NTTC) Level I in Basic 3D Building Information Modeling
- Must have at least three (3) years industry experience in 3D Building Information Modeling for Mechanical, Electrical, Plumbing, and Sanitary (MEPS) or Architectural and Structural layout and details

3.7 Institutional Assessment

Institutional Assessment is gathering of evidences to determine the achievements of the requirements of the qualification to enable the trainer make judgement whether the trainee is competent or not competent.

Section 4. National Assessment and Certification Arrangements

Competency Assessment is the process of collecting evidence and making judgments whether competency has been achieved. The purpose of assessment is to confirm that an individual can perform to the standards expected at the workplace as expressed in relevant competency standards.

The assessment process is based on evidence or information gathered to prove achievement of competencies. The process may be applied to a full qualification or employable unit(s) of competency in partial fulfillment of the requirements of the national qualification.

4.1 NATIONAL ASSESSMENT AND CERTIFICATION ARRANGEMENTS

- 4.1.1 A National Certificate (NC) is issued when a candidate has demonstrated competence on all units of competency in a qualification with a promulgated Training Regulations.
- 4.1.2 Individuals wanting to be certified will have to be assessed in accordance with the requirements identified in the relevant unit/s of competency.
- 4.1.3 The industry shall determine assessment and certification requirements for each qualification with promulgated Training Regulations. It includes the following:
 - a. Entry requirements for candidates
 - b. Evidence gathering methods
 - c. Qualification requirements of competency assessors
 - d. Specific assessment and certification arrangements as identified by industry
- 4.1.4 Recognition of Prior Learning (RPL). Candidates who have gained competencies through informal training, previous work or life experiences may apply for recognition in a qualification through a recognition/ assessment process.

4.2 COMPETENCY ASSESSMENT REQUISITE

- 4.2.1 Self-Assessment Guide. The self-assessment guide (SAG) is accomplished by the candidate prior to actual competency assessment. SAG is a pre-assessment tool to help the candidate and the assessor determine what evidence is available, where gaps exist, including readiness for assessment.
This document can:
 - a. Identify the candidate's skills and knowledge
 - b. Highlight gaps in candidate's skills and knowledge
 - c. Provide critical guidance to the assessor and candidate on evidence that need to be presented
 - d. Assist the candidate to identify key areas in which practice is needed or additional information or skills that should be gained prior `
- 4.2.2 Accredited Assessment Center. Only Assessment Center accredited by TESDA is authorized to conduct competency assessment. Assessment centers undergo a quality assured procedure for accreditation before they are authorized by TESDA to manage the assessment for National Certification.
- 4.2.3 Accredited Competency Assessor. Only accredited competency assessors are authorized to conduct assessment of competence. Competency assessors undergo a quality assured system of accreditation procedure before they are authorized by TESDA to assess the competencies of candidates for National Certification.