

**K to12 BASIC EDUCATION CURRICULUM**  
**JUNIOR HIGH SCHOOL TECHNOLOGY AND LIVELIHOOD EDUCATION AND SENIOR HIGH SCHOOL TECHNICAL-VOCATIONAL-LIVELIHOOD TRACK**  
**INDUSTRIAL ARTS – TILE SETTING**

These are the list of specializations and their pre-requisites.

		<b>Specialization</b>	<b>Number of Hours</b>	<b>Pre-requisite</b>
1.	AGRI-FISHERY ARTS	Animal Production (NC II)	480 hours	
2.		Aquaculture (NC II)	320 hours	
3.		Artificial Insemination (Ruminants) (NC II)	160 hours	Animal Production
4.		Artificial Insemination (Swine) (NC II)	160 hours	Animal Production
5.		Crop Production (NC I)	320 hours	
6.		Fish Nursery Operation (NC II)	160 hours	
7.		Fish or Shrimp Grow Out Operation (Non NC)	160 hours	Aquaculture
8.		Fish Wharf Operation (NC I)	160 hours	Fish or Shrimp Grow Out Operation
9.		Food (Fish) Processing (NC II)	640 hours	
10.		Horticulture (NC II)	640 hours	
11.		Landscape Installation and Maintenance (NC II)	320 hours	Crop Production
12.		Organic Agriculture (NC II)	320 hours	Crop Production
13.		Pest Management (NC II)	320 hours	Crop Production
14.		Rice Machinery Operation (NC II)	320 hours	Crop Production
15.		Slaughtering Operation (NC II)	160 hours	Animal Production
1.	HOME ECONOMICS	Beauty/Nail Care (NC II)	160 hours	40 hours of the subject during exploratory Grade 7/8
2.		Attractions and Theme Parks (NC II)	160 hours	
3.		Bread and Pastry Production (NC II)	160 hours	
4.		Caregiving (NC II)	640 hours	40 hours of the subject during exploratory Grade 7/8
5.		Cookery (NC II)	320 hours	40 hours of the subject during exploratory Grade 7/8
6.		Dressmaking (NC II)	320 hours	
7.		Food and Beverage Services (NC II)	160 hours	
8.		Front Office Services (NC II)	160 hours	40 hours of the subject during exploratory Grade 7/8
9.		Hairdressing (NC II)	320 hours	
10.		Handicraft (Basketry, Macrame) (Non-NC)	160 hours	
11.		Handicraft (Fashion Accessories, Paper Craft) (Non-NC)	160 hours	
12.		Handicraft (Needlecraft) (Non-NC)	160 hours	
13.		Handicraft (Woodcraft, Leathercraft) (Non-NC)	160 hours	
14.		Household Services (NC II)	320 hours	40 hours of the subject during exploratory Grade 7/8
15.		Housekeeping (NC II)	160 hours	
16.		Tailoring (NC II)	320 hours	40 hours of the subject during exploratory Grade 7/8
17.		Tour Guiding Services (NC II)	160 hours	
18.		Tourism Promotion Services (NC II)	160 hours	
19.		Travel Services (NC II)	160 hours	
20.		Wellness Massage (NC II)	160 hours	

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	Specialization		Number of Hours	Pre-requisite
1.	ICT	Computer Hardware Servicing (NC II)	320 hours	
2.		Animation (NC II)	320 hours	
3.		Computer Programming (NC IV)	320 hours	
4.		Contact Center Services (NC II)	320 hours	
5.		Illustration (NC II)	320 hours	
6.		Medical Transcription (NC II)	320 hours	
7.		Technical Drafting (NC II)	320 hours	
1.	INDUSTRIAL ARTS	Automotive Servicing (NC I)	640 hours	
2.		Carpentry (NC II)	640 hours	
3.		Consumer Electronics Servicing (NC II)	640 hours	
4.		Electrical Installation and Maintenance (NC II)	640 hours	
5.		Masonry (NC II)	320 hours	
6.		Plumbing (NC I)	320 hours	
7.		Plumbing (NC II)	320 hours	Plumbing (NC I)
8.		Refrigeration and Airconditioning Servicing (NC II)	640 hours	
9.		Shielded Metal Arc Welding (NC I)	320 hours	
10.		Shielded Metal Arc Welding (NC II)	320 hours	Shielded Metal Arc Welding (NC I)
11.		Tile Setting (NC II)	320 hours	

(160 hours)

**Course Description:**

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**INDUSTRIAL ARTS – TILE SETTING**

This course consists of core competencies which lead to **Tile Setting**, National Certificate Level II (NC II). It covers **laying and repairing of wall and floor tiles**. This also covers the knowledge, skills and attitudes required by a high school student to lay and repair wall and floor tiles, and tile corners.

CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE
<b>Introduction</b> 1. Core concepts in tile setting 2. Relevance of the course 3. Business opportunities 4. Career opportunities	The learner demonstrates an understanding of the basic concepts and underlying theories in tile setting.	The learner independently demonstrates an understanding of the core competencies in tile setting as prescribed by TESDA Training Regulations.	1. Explain basic concepts in tile setting 2. Discuss the relevance of the course 3. Explore career opportunities in tile setting	
<b>LAY AND REPAIR WALL AND FLOOR TILES (FT)</b>				
1. Shop mathematics 2. Technical drawing and specifications 3. Materials identifications and classifications 4. Tools and equipment 5. Manufacturer's product specifications and instructions 6. Compliance with quality requirements, company rules and regulations 7. Types of tiles and adhesives 8. Tile surface cleaning and cutting procedures 9. Adhesive and grout mixing procedures	The learner demonstrates an understanding of the underlying principles in laying and repairing wall and floor tiles.	The learner independently lays and repairs wall and floor tiles based on job requirements.	<b>LO 1. PLAN FOR TILING WORKS</b> 1.1 Secure work instruction and interpret in line with job requirement 1.2 Identify tools, materials and equipment for tiling works	<b>TLE_IATS9-12FT-Ia-j-1</b>
			<b>LO 2. LAY FLOOR TILES</b> 2.1. Check area(s) to be tiled based on job requirement. 2.2. Select adhesive based on specifications, tile type and climatic condition 2.3. Clean surface from residue and protrusions 2.4. Cut tiles according to required specifications 2.5. Mix adhesives following manufacturer's instructions. 2.6. Lay-out tiles according to specifications. 2.7. Mix and apply grout to clean joints and surface according to instructions 2.8. Clean finished tile work according to instructions 2.9. Perform proper housekeeping (5S) 2.10. Observe safety precautions	<b>TLE_IATS9-12FT-Ia-j-2</b>

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**INDUSTRIAL ARTS – TILE SETTING**

CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE
10. Tile laying procedures and techniques 11. Procedure in installing wall tiles 12. Tile alignment techniques 13. Cement and grout mixing preparation and application 14. Tile finishing procedures 15. Procedure in installing wall tiles 16. Tile alignment techniques 17. Cement and grout mixing preparation and application 18. Procedures in removing old tiles 19. Procedures in fitting new tiles 20. Housekeeping practices			<b>LO 3. INSTALL WALL TILES</b> 3.1. Apply cement or cement based adhesive to tile / wall surface according to instructions 3.2. Install tiles to set level alignment 3.3. Check joint alignment and surface for straightness and flatness 3.4. Cut tiles according to required specifications 3.5. Install special pre-cut tile to create a square corner in accordance with specifications 3.6. Lay-out vertical tiles according to squareness 3.7. Fix paper-faced or mesh-backed mosaic tiles to background with tile adhesive 3.8. Maintain grout spaces in straight and uniform width 3.9. Maintain expansion gaps following specifications 3.10. Clean tiled surface 3.11. Perform Housekeeping	<b>TLE_IATS9-12FT-Ia-j-3</b>
			<b>LO 4. REPAIR TILE WORKS</b> 4.1. Remove damaged tile and clear old bedding 4.2. Perform repair of tiles 4.3. Apply grout following instruction 4.4. Clean excess grout 4.5. Clean tile surface 4.6. Perform housekeeping	<b>TLE_IATS11FT-IIa-j-4</b>
<b>TILE CORNERS (TC)</b>				
1. Plan and prepare for work 2. Measurements and trade mathematics	The learner demonstrates an understanding of the concepts and underlying	The learner independently lays tiles on the corners of a wall based on job requirements.	<b>LO 1. LAY / INSTALL TILE INTERNAL CORNERS</b> 1.1. Secure work instruction and interpret	<b>TLE_IATS9-12TC-IIIa-j-1</b>

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**INDUSTRIAL ARTS – TILE SETTING**

CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE
3. Technical drawings and plans specifications 4. Procedures for tiling internal corners 5. Occupational health and safety standards 6. Company rules and regulations 7. Quality of tile material	principles in laying tiles on corners of a wall.		layout 1.2. Secure tools, materials and equipment 1.3. Check internal corners for flatness of surfaces and straightness of grout lines 1.4. Fit and cut the required tiles 1.5. Install to one wall and maintain alignment 1.6. Make joints for butting tiles in accordance with designed margin for grouting or for expansion joint when applicable 1.7. Trim and finish alignment of tiles specifications 1.8. Clean tiled surface 1.9. Perform housekeeping	
8. Measurements and trade mathematics 9. Technical drawings and plans specifications 10. Procedures for tiling external corners 11. Occupational health and safety standards 12. Company rules and regulations 13. Quality of material tile			<b>LO 2. LAY / INSTALL TILE EXTERNAL CORNERS</b> 2.1. Check tiles for specified tolerance based on plumbness and levelness 2.2. Check external corners for flatness of surfaces and straightness of grout line 2.3. Install tile trim on both sides of the corner 2.4. Install tiles without voids in tile bed according to specifications 2.5. Maintain corners, square and finished to specifications 2.6. Clean tiled surface according to specifications 2.7. Perform Housekeeping	<b>TLE_IATS9-12TC-IVa-j-2</b>

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**INDUSTRIAL ARTS – TILE SETTING**  
(160 hours)

**Course Description:**

This course consists of core competencies which lead to **Tile Setting**, National Certificate Level II (NC II). It covers **tile corners and curved surfaces**. This also covers the knowledge, skills and attitudes required of a high school student to lay and repair wall and floor tiles, and tile corners.

CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE
<b>Introduction</b> 1. Core concepts in tile setting 2. Relevance of the course 3. Business opportunities 4. Career opportunities	The learner demonstrates an understanding of the basic concepts and underlying theories in tile setting.	The learner independently demonstrates an understanding of the core competencies in tile setting as prescribed by TESDA Training Regulations.	1. Explain basic concepts in tile setting 2. Discuss the relevance of the course 3. Explore career opportunities in tile setting	
<b>TILE CORNERS (TC)</b>				
1. Plan and prepare for work 2. Measurements and trade mathematics 3. Technical drawings and plans specifications 4. Procedures for tiling internal corners 5. Occupational health and safety standards 6. Company rules and regulations 7. Quality of tile material	The learner demonstrates an understanding of the concepts and underlying principles in laying tiles on corners of a wall.	The learner independently performs laying of tiles on corners of a wall based on job requirements.	<b>LO 1. LAY / INSTALL TILE INTERNAL CORNERS</b> 1.1. Secure work instruction and interpret layout 1.2. Secure tools, materials and equipment 1.3. Check internal corners for flatness of surfaces and straightness of grout lines 1.4. Fit and cut the required tiles. 1.5. Install to one wall and maintain alignment 1.6. Make joints for butting tiles in accordance with designed margin for grouting or for expansion joint 1.7. Trim and finish alignment of tiles based on specifications 1.8. Clean tiled surface 1.9. Perform housekeeping 1.10.	<b>TLE_IATS9-12TC-Ia-j-1</b>
8. Measurements and trade mathematics 9. Technical drawings and plans			<b>LO 2. LAY / INSTALL TILE EXTERNAL CORNERS</b> 2.1. Check tiles for specified tolerance based on plumbness and levelness	<b>TLE_IATS9-12TC-IIa-j-2</b>

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**INDUSTRIAL ARTS – TILE SETTING**

CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE
specifications 10. Procedures for tiling external corners 11. Occupational health and safety standards 12. Company rules and regulations 13. Quality of material tile			2.2. Check external corners for flatness of surfaces and straightness of grout line. 2.3. Install tile trim on both sides of the corner 2.4. Install tiles without voids in tile bed according to specifications 2.5. Maintain corners, square and finished to specifications. 2.6. Clean tiled surface according to specifications 2.7. Perform Housekeeping	
<b>TILING CURVED SURFACES (CS)</b>				
1. Measurements and trade mathematics 2. Occupational health and safety standards requirements 3. Procedures for tiling curved and floor surfaces 4. Procedures for tiling circular volume, wall and arches 5. Company standard operating procedures	The learner demonstrates an understanding of the concepts and procedures in tiling curve surfaces.	The learner independently tiles curved surfaces based on job requirements.	<b>LO 1. LAY / INSTALL TILES ON CURVED SURFACES</b> 1.1. Secure work instruction and interpreted in line with job requirements 1.2. Perform housekeeping 1.3. Set out level line around the wall marking using leveling device 1.4. Set out location of tiles to determine balanced design and cutting requirements, if necessary 1.5. Form accurate curve line to tiled surface around the wall 1.6. Prepare cement-based adhesive following manufacturer's specifications 1.7. Install guide board to level set out and template curve to specifications 1.8. Maintain minimum voids in mortar tile beds and tiles are fixed, plumb (wall), and flush 1.9. Lay out floor tiles to set out grid with perimeter tiles according to procedures 1.10. Prepare and apply tile grout according to manufacturer's instruction	<b>TLE_IATS9-12CS-IIIa-j-1</b>

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CONTENT	CONTENT STANDARD	PERFORMANCE STANDARD	LEARNING COMPETENCIES	CODE
			1.11. Clean tiled surface according to specifications 1.12. Perform housekeeping	
6. Measurements and trade mathematics 7. Occupational health and safety standards requirements 8. Procedures for installing mosaic tiles on a circular column 9. Company standard operating procedures			<b>LO 2. INSTALL MOSAIC TILES ON CURVED SURFACES</b> 2.1. Check surface for protrusions and plastering imperfections 2.2. Prepare template for column tiling diameter to specifications 2.3. Apply mortar evenly to the required tiling diameter thickness and finished to curve based on prepared template specifications 2.4. Install and position guide board to maintain level line 2.5. Install mosaic tiles to column, maintaining even spacing and level finish to specifications 2.6. Prepare and apply tile grout according to manufacturer's instructions 2.7. Clean tiled surface according to specifications 2.8. Perform housekeeping	<b>TLE_IATS9-12CS-IVa-j-2</b>



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**INDUSTRIAL ARTS – TILE SETTING**  
**Code Book Legend**

**Sample: TLE\_IATS9-12FT-Ia-j-1**

LEGEND		SAMPLE	
<b>First Entry</b>	Learning Area and Strand/ Subject or Specialization	Technology and Livelihood Education_Industrial Arts Tile Setting	<b>TLE_IA ES 9-12</b>
	Grade Level	Grade 9/10/11/12	
<b>Uppercase Letter/s</b>	Domain/Content/ Component/ Topic	Lay and Repair of Wall and Floor Tiles	<b>FT</b>
			<b>-</b>
<b>Roman Numeral</b> <i>*Zero if no specific quarter</i>	Quarter	First Quarter	<b>I</b>
<b>Lowercase Letter/s</b> <i>*Put a hyphen (-) in between letters to indicate more than a specific week</i>	Week	Week One to Ten	<b>a-j</b>
			<b>-</b>
<b>Arabic Number</b>	Competency	Plan for Tiling Works	<b>1</b>

DOMAIN/ COMPONENT	CODE
Lay and Repair of Wall and Floor Tiles	FT
Tile Corners	TC
Tiling Curved Surfaces	CS

Technology-Livelihood Education and Technical-Vocational Track specializations may be taken between Grades 9 to 12.

Schools may offer specializations from the four strands as long as the minimum number of hours for each specialization is met.

Please refer to the sample Curriculum Map on the next page for the number of semesters per Industrial Arts specialization and those that have pre-requisites. Curriculum Maps may be modified according to specializations offered by a school.

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**SAMPLE INDUSTRIAL ARTS CURRICULUM MAP**

No.	Grade 7/8	Grade 9	Grade 10	Grade 11	Grade 12	
1	EXPLORATORY	*Automotive Servicing (NC I)			8 sems	
2		*Carpentry (NC II)			8 sems	
3		*Consumer Electronics Servicing (NC II)			8 sems	
4		*Electrical Installation and Maintenance (NC II)			8 sems	
5		**Plumbing (NC I)	4 sems	**Plumbing (NC II)		
6				4 sems		
7		*Refrigeration and Airconditioning (NC II)			8 sems	
8		**Shielded Metal Arc Welding (NC I)		**Shielded Metal Arc Welding (NC II)		
9		4 sems		4 sems		
10		**Masonry (NC II)		**Tile Setting (NC II)		
11		4 sems		4 sems		

\* Students must complete four years to take the NC Exam.

\*\* Students must complete two years to take the NC Exam.