

# **Engineering Drawings**



#### EXPECTED LEARNING OUTCOMES OF PROGRAMME (PLOs)

#### General knowledge

PLO1Apply natural, social, technical and economic knowledge to solve<br/>problems in preservation, processing, testing, and research and<br/>development of food products.

#### **Professional knowledge**

**PLO 2** Formulate production procedures based on the analysis of technical

# **Course description:**

The module helps to equip students with basic knowledge about reading and understanding technical drawings, reference shapes of objects according to Vietnamese Standards (TCVN), how to use and configure drawing tools. and drawing tools. with AutoCAD software, technical drawing presentation standard; train students to have skills in analyzing, reading and understanding representations and conveying applied knowledge that can be learned to draw objects. Help students practice

factors to ensure and enhance product quality

 PLO 3
 Design quality management systems for processing plants to ensure food hygiene and safety.

## **Soft-skills**

| independently and effectively as a team leader or member       |       | Perform work planning, demonstrate creatively critical thinking, work |  |  |
|--|-------|---|--|--|
| Demonstrate communication skills and use encodinged Enclish in |       | independently and effectively as a team leader or member              |  |  |
| Demonstrate communication skins and use specialized English in |       | Demonstrate communication skills and use specialized English in       |  |  |
| food technology.   | PLO 5 | food technology.  |  |  |

## **Professional skills**

| PLO 6 | <b>O</b> Operate production equipment in food manufacture factories   |  |
|-------|---|--|
| PLO 7 | Analyse product quality criteria in food preservation and processing procedures.  |  |
| PLO 8 | Design research to address technological and regulatory problems in the food industry through the evaluation of information, scientific |  |
|       | data and information technology applications.   |  |

physical fitness and responsibility for their assigned work

| COURSE CONTENT   | CELOs              |
|--|--------------------|
| Chapter 1. Standards for drawing presentation -<br>Introduction to AutoCAD | CELO 1             |
| Chapter 2. Drawing Geometry  | CELO 1; 2          |
| Chapter 3. Object Performance  | CELO 2; 3; 4; 5    |
| Chapter 4. Measurement axis projection                                     | CELO 2; 3; 4; 5; 6 |

|        | EXPECTED LEARNING OUTCOME OF COURSE<br>(CELOs) | PLOs  |
|--------|--|-------|
|        | Knowledge                                      |       |
|        | Present the basic concepts of geometry, how    |       |
| CELO 1 | to present, read and understand a technical    | PLO 1 |
|        | drawing.                                       |       |

# Attitude

| PLO 9 | Work    | professionally,    | maintain     | professional     | ethics,   | social |
|-------|---------|--------------------|--------------|------------------|-----------|--------|
|       | respons | ibility, and demon | strate perso | nal physical dev | velopment |        |
|       |         |                    |              |                  |           |        |

PLO 10 Demonstrate the spirit of entrepreneurship and life-long learning



# **LEARNING CONTENT**

Students read reference materials before coming to class

| CELO 2 | Apply technical drawings in the food industry. | PLO 2 |
|--------|--|-------|
|--------|--|-------|

# **Professional skills**

| CELO 3 | Apply technical drawings to the food industry, apply AutoCAD software to draw on computers. | PLO 4;<br>6; 7 |
|--------|---|----------------|
| CELO 4 | Analyze problems related to drawings of mechanical, food, chemical, construction industries | PLO 6; 8       |
|        | Attitude  |                |
| CELO 5 | Follow the rules well during the learning process   | PLO 9          |
| CELO 6 | Solve problems during group work.   | PLO 9          |

| Sudents read reference materials before coming to class |     |
|---|-----|
| Lecturers give presentations using Power point.         | I   |
| Students interact, exchange group work in class         |     |
| Implement homework content on E-learning system.        | Fva |
| Practice on the computer and submit assignments         |     |
|   |     |

| LEARNING METHODS          | Course assessment | percentage% |  |
|---------------------------|-------------------|-------------|--|
|                           | learning attitude | 10%         |  |
| Evaluation of the process | Practical test on | 20%         |  |
| Evaluation of the process | machine           |             |  |
|                           | Practice report   | 20%         |  |
| End-of-course assessment  | Writing test      | 50%         |  |

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