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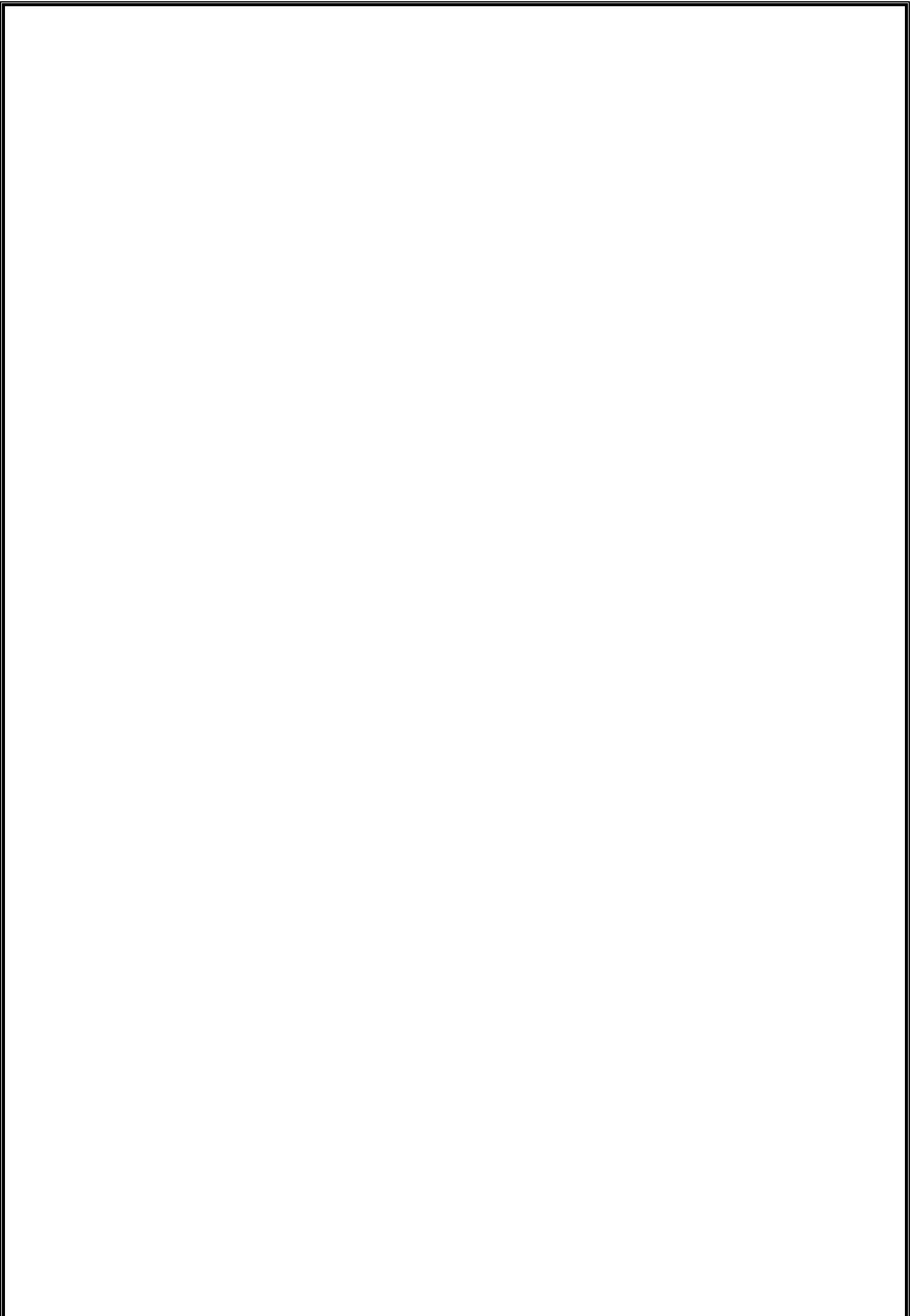
FOOD TECHNOLOGY

UTILIZATION OF GEOTHERMAL ENERGY THROUGH THE PROCESS OF DRIED FOOD PREPARATION

COURSE PROGRAMME



Ankara, 2021



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NAME OF PROGRAMME

Utilization of geothermal energy through the process of dried food preparation

BASIS

1. National Education Fundamental Law of 1739 published in official gazette number 14574 on 24.06.1973,
2. Ministry of National Education's Directorate of Lifelong Learning regulation published in official gazette number 30388 on 11.04.2018,
3. Non-formal Education Institutions' Framework Course Programme which was accepted by Turkish Board of Education dated 20.04.2016 and numbered 19,
4. Turkish Board of Education's decision dated 17.07.2017 and numbered 104 " Weekly Course Schedule and Framework Education Programmes regarding 53 Departments of Vocational Technical Anatolian High Schools",
5. Regulation regarding Amendment on Procedures and Principles of Workers Health and Safety Education published on official gazette dated 24.05.2018 and numbered 30430.

ENTRANCE REQUIREMENTS

1. Being literate
2. Over age 13
3. Having competence in order to execute predicted basic skills (physical, psycho-motor) by the course programme.

QUALIFICATIONS OF TRAINERS

Trainers shall be appointed in accordance with the below order of priority;

1. Having Food Technology education on "Teaching Fields, Table of Assigning and Teaching Principles" published by Turkish Education Board and preferably with industry experience;
 - a- Appointed as branch teacher,
 - b- Retired branch teachers,
 - c- Qualified to be appointed as branch teachers,
2. Academic member/members with regards to food technology branch
3. Authorized graduates of higher education or faculties on Food Technology education about "Teaching Fields, Table of Assigning and Teaching Principles" published by Turkish Education Board,
4. Being graduated with associate degree from food technology and proving at least 1 year of occupational experience,

5. Graduated from Food Technology Occupational and Technical secondary schools or having educated on at least fourth degree on this branch with provision of at least 3 years of occupational experience.
6. Those with know-how on Dehydrated food manufacture regardless of education degree shall be appointed as trainers.

OBJECTIVES

The individual who completes Utilization of Geothermal Energy Through the Process of Dehydrated Food Preparation is expected to: Have basic information on occupational health and safety,

- 1.
2. At geothermal food dehydration facilities,
3. Provide food, work environment and equipment hygiene in accordance with the national and international regulations where mass production of dried food,
4. Prepare necessary tools, equipment and materials for the production of dried food manufacturing,
5. Be able to dehydrate food proper materials and methods,
6. Preserve and protect dried food under proper conditions.

COMMENTS ON THE IMPLEMENTATION OF THE PROGRAMME

1. The aim of the individuals who completes the course programme of Utilization of Geothermal Energy Through the Process of Dehydrated Food Preparation, is to have know-how and skills on Utilization of Geothermal Energy Through the Process of Dehydrated Food Preparation by taking occupational health and safety measures.
2. The programme shall be executed mainly by using professional competence method and techniques. Among the educational approaches of expression, question and answer group study, brain storming, discussion, research, problem solving, demonstration and implementation, performing; Proper group/individual education method and techniques shall be applied.
3. Course programme has been prepared in cooperation with the Ministry of National Education's specialists, branch teachers and branch specialists.
4. The programme is performed within education institutions by Directorate of Lifelong Learning or other appropriate environments by other organizations.
5. When necessary, labor market's education opportunities may be utilized for the execution of the programme.

6. It has been aimed to provide and improve below mentioned merits for the attending individuals by targets, content and achievements of Utilization of Geothermal Energy Through the Process of Dehydrated Food Preparation programme.

VALUES
Following Rules
Patience
Responsibility
Contribution
Diligence

CREDITS

In accordance with “Vocational and Technical Education Credit Principles” accepted on 29.11.2013 numbered 135 by Turkish Board of Education, those who successfully complete the course is provided 8 (eight) credits.

DURATION AND CONTENTS

Course programme shall be planned to be maximum 8 periods per day. Course total duration is 146 periods. Trainers determine the theoretic and application durations.

MODULES AND SCHEDULE FOR THE UTILIZATION OF GEOTHERMAL ENERGY THROUGH THE PROCESS OF DRIED FOOD PREPARATION COURSE

MODULE NAME	ACHIEVEMENT	LEARNING ACHIEVEMENTS	DURATION
Occupational Health and Safety of Workers	Equipped to implement occupational health and safety principles.	<ul style="list-style-type: none"> Explains the purpose and importance of occupational health and safety. Recognizes the prevention methods of occupational accidents and diseases, and takes necessary measures. Takes necessary precautions against the risks that may arise from hazards. Takes necessary precautions in case of emergency. 	8
Utilization of Geothermal Energy Through the Process of Dried Food Preparation and its significance	Comprehends the Utilization of Geothermal Energy Through the Process of dried Food Preparation and its significance.	<ul style="list-style-type: none"> Prepares a file by collecting written and visual documents related to fields of usage for geothermal energy resources. Prepares a file by collecting written and visual documents related to fields of usage for 	12

		<p>geothermal energy resources in the world and in Turkey.</p> <ul style="list-style-type: none"> • Prepares a file by collecting written and visual documents related to facilities using geothermal energy resources for food dehydration. 	
Dehydration Methods	Recognizes dehydration methods.	<ul style="list-style-type: none"> • Recognizes dehydration methods. • Distinguishes drying methods in accordance with food. 	18
Dryer types	Recognizes dryer types.	<ul style="list-style-type: none"> • Recognizes dryer types used in geothermal dehydration facilities. • Operates dryer types used in geothermal dehydration facilities. • Recognizes dryers used in geothermal dehydration facilities. 	18
Necessary qualifications for the food to be dried	Recognizes necessary qualifications for the food to be dried and is equipped to perform.	<ul style="list-style-type: none"> • Recognizes necessary qualifications for the food to be dried. • Recognizes food to be dried. • Distinguishes necessary qualifications for food. 	6
Pre-treatment of food dehydration	Recognizes pre-treatment for the food to be dried and is equipped to perform.	<ul style="list-style-type: none"> • Recognizes pre-treatment for food. • Recognizes sequence of pre-treatment. • Is able to prime pre-treated food for dehydration. 	18
Determination of temperature and duration in accordance with the food types	Is equipped to regulate temperature and duration in accordance with food types.	<ul style="list-style-type: none"> • Determines the temperature to be applied. • Determines the drying period. 	6
Practicing dehydration methods	Is equipped to perform food dehydration.	<ul style="list-style-type: none"> • Recognizes how to prepare pre-treated products for production. • Prepares dryer. • Recognizes how to insert food into dryer. 	36
Final process of dried food	Recognizes process for the dried food and is equipped to perform.	<ul style="list-style-type: none"> • Prepares dried food for packing. • Recognizes how to pack dried food. • Performs packing. 	18

		<ul style="list-style-type: none"> • Is able to classify and store packed products. 	
Evaluation of drying process	Is equipped to evaluate drying activities.	<ul style="list-style-type: none"> • Is able to perform evaluation at the end of dehydration. 	6
TOTAL COURSE DURATION (Period)			146

GUIDELINES RELATED TO ASSESMENT AND EVALUATION

1. Evaluation shall be performed at the end of each module.
2. Success criteria shall be explained in terms of information, skills and competence.
3. Assessment and evaluation process shall be compatible with the targets and achievements of the course.
4. In accordance with the Non-Formal Education Institute Regulations,
 - All learning activities performed by trainee himself/herself,
 - Exams depending on the performance of trainee,
 - Written exams performed at the end of the course,
 100 Shall be evaluated on the scale of 100 (one hundred) points.
5. Evaluation shall be executed by the trainer in accordance with written, oral, applied exams, and/or homework-projects if available. During grading, the gravity of theoretical and applied proportion shall be determined by the trainer with regards to specifications of course programme. The score of the lesson evaluated by multiple assessment types shall be defined by the arithmetical average of assessments. This score or mark is considered to be the success score or mark.
6. Information technology may be used to asses and evaluate in accordance with the feature of the programmes.
7. Some evaluations are performed according to applicable situations where course attendees may experience health issues or physical disabilities.

EDUCATIONAL TOOLS AND MATERIALS

Within the process of programme implementation;

1. Materials published by the Ministry of Education shall be used as textbook.
2. When reference books, individual learning materials are not available, lecture notes prepared by teacher/trainer shall be used.
3. It is significant for the source tools and materials to comply with the qualifications of education, method and techniques.

4. Utilizable tools and materials:

- Projectors
- PC
- Teaching Materials
- Internet Environment
- Tools and Materials of the Facility
- Dryers
- Pre-treatment Tools and Materials
- Packing Tools and Materials

CERTIFICATION

Those who successfully complete course programme receive course completion certificate, transcript and if requested Europass Certificate Appendix. Those who quit before completing and those who may not accomplish all modules receive a transcript of achieved modules.