

How Food is Made: Understanding Food Processing Technologies

A short online course



Context

- The food processing industry is one of the largest manufacturing sectors in the world, representing about 16% of the world's GDP and having a significant impact on our daily lives.
- Many consumers do not realize that almost all foods currently consumed are processed, and there's a negative perception about processed food due to the mischaracterization of them as unnatural, unsafe or nutritionally inappropriate by some health professionals and the media.¹
- The lack of understanding about food processing technologies can lead to confusion and concern about the safety and nutritional value of the food we eat.
- However, sustainable food processing practices can help to reduce waste and greenhouse gas emissions, while also ensuring the availability of safe and nutritious food for future generations.
- There is a need for more education and information about the food processing industry to help consumers understand its effects in healthy, safety, quality and sustainability, so they can make informed decisions about the food they choose to eat.

Solution

- To address these challenges and equip the participants with the necessary skills and knowledge, EIT Food has developed this short online course where they will participants will explore the range of food processing techniques used in industry, the products they create and assess the importance of processing techniques to society in terms of health, safety, quality, and sustainability.
- The course title is “How Food is Made: Understanding Food Processing Technologies”. It is composed of 12 hours of learning broken down in 4 modules.
- On this course, learners will look at:
 - the challenges of feeding growing populations safely and sustainably
 - the principles of food processing
 - the traditional and modern industrial techniques
 - the EU law and regulations



Ambition

- Our mission is to equip participants with the knowledge and skills necessary to understand the complex processes involved in food production and processing, as well as the potential benefits and risks associated with various food processing techniques.
- We aim to empower individuals to make informed decisions about the food they eat and to become advocates for sustainable and safe food processing practices.



High level contributors

- This course has been designed for anyone interested in learning more about the food they eat and has been created by the German Institute of Food Technologies, DIL, with content provided by the University of Reading and European Food Information Council, EUFIC.



A modern approach to learning

- Fully online, short learning opportunity
- Course available 24/7 to fit with busy lifestyle
- Content accessible on any connected device
- Short lesson in a variety of formats: video, text, quizzes, etc
- Conversational learning: Learners are encourage to reflect and join discussions
- Additional content added to each steps to further explore the topic



Course Syllabus

Week 1: Why do we process food?

Welcome
What is food processing?
Why do we process food?
Reflections

Week 3: How is the food industry innovating?

Welcome to Week 3
Innovative techniques
Packaging
Reflections

Week 2: How do we process food?

Welcome to Week 2
Homogenisation, Pasteurisation, Canning
Drying and smoking
Reflections

Week 4: How does the EU ensure our food is safe, nutritious and sustainable?

Welcome to Week 4
How and why regulations are made
What do UK consumers think about food processing?
Do we need food processing?

Week 1: Why do we process food?

Welcome

Find out about what you will be learning, who will be guiding you and how the course is taught.



1.1 Which food do you trust the most? [ARTICLE](#)

1.2 Welcome to the course [ARTICLE](#)

1.3 Meet the team [ARTICLE](#)

1.4 Getting started [ARTICLE](#)

What is food processing?

Surface our presumptions about trustworthy food.



1.5 Are these apples processed? [POLL](#)

1.6 What is food processing? [ARTICLE](#)

1.7 Welcome to the Pilot Plant [VIDEO \(00:54\)](#)

1.8 The history of food processing and methods [ARTICLE](#)

Why do we process food?

The complexity of the food system



The history of food processing and methods

2 comments

Food has been processed for thousands, perhaps millions of years.^[1] Cooking, drying, fermenting, extraction of oils, and many other processes have long been used to process foods to transform them from the raw ingredient(s) into a final consumed product.

Food processing has developed over history to make your food safer, better tasting, longer lasting and more nutritious. Here are some of the advances that have introduced new ways to produce high quality, safe and nutritious foods.

1809 Canned foods to feed an army

Napoleon said that, 'An army marches on its stomach'. During the Napoleonic Wars of 1803-1815, the French Army covered a lot of miles and needed a lot of food! Nicolas Appert, a confectioner and brewer, noticed that food cooked inside a sealed jar did not spoil unless the seal was broken, and from this he devised the first

[View transcript](#)Download video: [standard](#) or [HD](#)

Pasteurisation

[1 comment](#)

We continue our exploration of frequently used, traditional food processing techniques with a look at pasteurisation. This is an extremely useful method of eliminating potentially harmful microorganisms and is used for a range of liquid products. The video mentions 'pathogens', which are a group of microorganisms that cause disease in humans



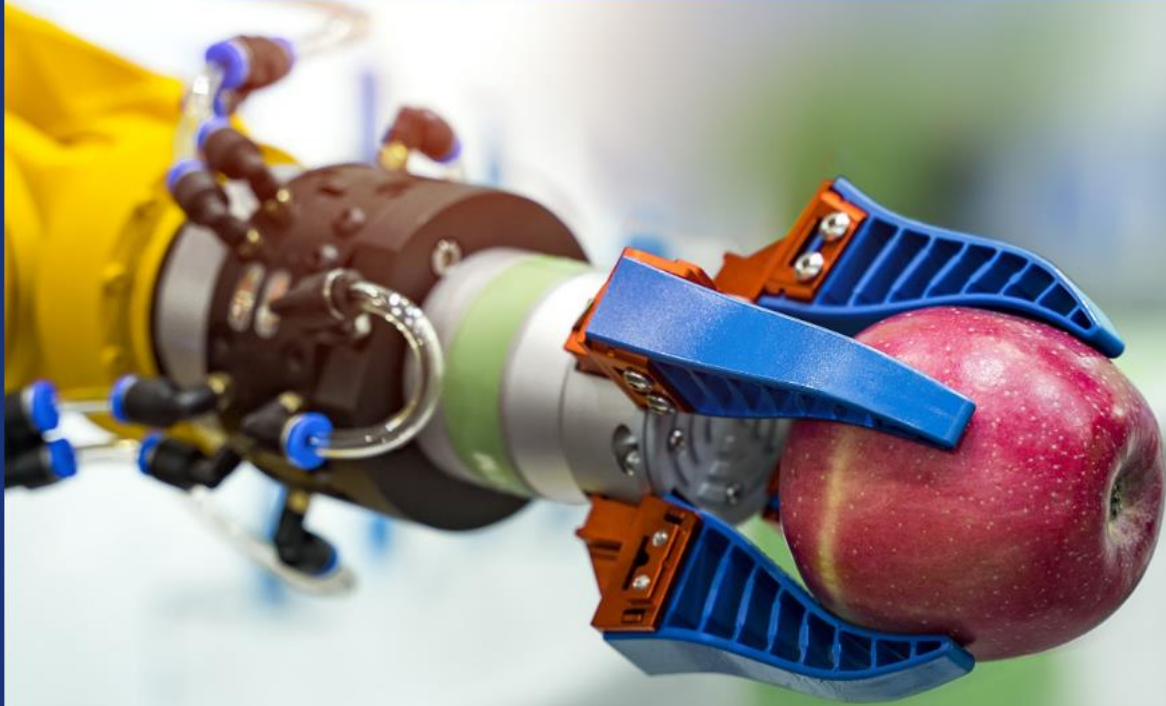
Image by Pavel Ilyukhin/ Shutterstock

Active and intelligent packaging

[1 comment](#)

Food packaging has many functions and in its most basic form it is used to prevent food from coming into contact with contaminants, whilst also making items easier to handle as they

HOW FOOD IS MADE: UNDERSTANDING FOOD PROCESSING TECHNOLOGIES



SHORT ONLINE COURSE



Co-funded by the
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- Course available on demand
- Link:
<https://www.futurelearn.com/courses/how-is-my-food-made>



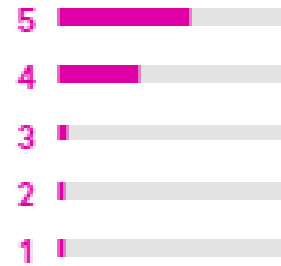
Learner reviews

Powered by 

4.4



46 Reviews





Natalia C. Verified learner

05/03/21



In this course I learnt what actually is processing the food and the advantages of it, some techniques were explained and most of them seek to be green or safest with the quality of the food, I also learnt that processing the food in these days is necessary to give the opportunity of have food options in all the areas of the world

The content of the course is accessible to anyone, even if it have many technical aspects, in the way they are explained is easygoing to understand them. The course is very contextualized and participative I really liked it.



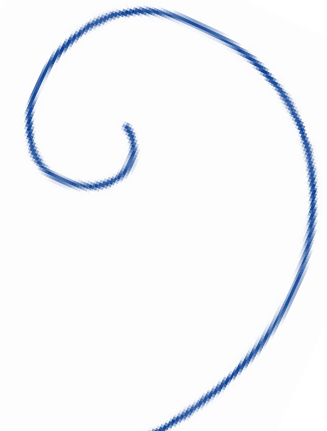
Linda M. Verified learner

13/02/21



How Food is Made. Understanding Food Processing Technologies

I enjoyed this course as it made me realise there is a lot more to food processing than I would have previously considered. Now when they say to try to reduce your intake of processed food, I will have a different idea all together.





Thank you!



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