

# Excel4Pro

## Summer School

### Call Fact Sheet

<b>Title of Call</b>	Bioprocessing Approaches for Plant-Based Protein Systems
<b>Objective and Scope</b>	This summer school aims to provide participants with a strong theoretical information and practical skills in bioprocess technologies for plant-based protein systems
<b>Duration</b>	2 days hybrid theoretical lectures & 3 days hands-on training
<b>Date</b>	August 10-14, 2026
<b>Location</b>	Gebze Technical University, Institute of Biotechnology, Gebze, Türkiye (GMT+3) <a href="https://maps.app.goo.gl/e8zGiDrafeHGMfFY9">https://maps.app.goo.gl/e8zGiDrafeHGMfFY9</a>
<b>Industrial Contribution</b>	Sartorius
<b>Deadline for Application</b>	June 30, 2026
<b>Application Notification Date</b>	July 14, 2026
<b>Eligibility / Who Can Apply</b>	PhD students and Early-Stage researchers (up to 8 years after PhD graduation) from academia or industry
<b>Preferred Background</b>	Biotechnology, microbiology, food engineering, bioengineering, and related fields
<b>Prerequisites</b>	Basic industrial microbiology
<b>Application Fee</b>	Free
<b>Language</b>	English
<b>How to apply?</b>	Applicants must fill out the form at the <a href="#">link</a> provided at the <a href="#">website</a> .
<b>Other Requirements</b>	Upload your CV to the application form.
<b>Contact Information</b>	<a href="mailto:mugehosoglu@gtu.edu.tr">mugehosoglu@gtu.edu.tr</a>

## Detailed Program

### Day 1 (10<sup>th</sup> August 2026) – Hybrid Theoretical Lectures

Time	Session Title	Speaker
09:30 – 09:45	Opening Remarks & Introduction to Excel4Pro	GTU / Excel4Pro Team
09:45 – 10:30	Fermentation-Based Modification of Plant Protein Ingredients	Assoc. Prof. Dr. Müge İşleten Hoşoğlu
10:30 – 10:45	Discussion & Q&A	All Participants
10:45 – 11:15	Coffee Break & Sartorius Türkiye Technology Demonstration Area	
11:15 – 12:00	Microorganism Selection Strategies for Functional Fermentation	Assoc. Prof. Dr. Fatih Ortakçı
12:00 – 13:30	Lunch Break	
13:30 – 14:15	Scale Up with Sartorius – From Research and Lab to Pilot and Manufacturing-I	Charlotte Capelle, Sartorius
14:15 – 14:30	Discussion & Q&A	All Participants
14:30 – 15:00	Coffee Break & Networking, Sartorius Türkiye Technology Demonstration Area	
15:00 – 15:45	Scale Up with Sartorius – From Research and Lab to Pilot and Manufacturing-II	Charlotte Capelle, Sartorius
15:45 – 16:00	Closing Remarks	All Participants

\* Please note that there is a 1-hour time difference between Türkiye time (TRT, UTC+3) and Central European Summer Time (CEST, UTC+2).



## Day 2 (11<sup>th</sup> August 2026) – Hybrid Theoretical Lectures

Time	Session Title	Speaker
09:30 – 09:45	Opening of Day 2 & Recap of Day 1	Assoc. Prof. Dr. Müge İşleten Hoşoğlu
09:45 – 10:30	Experimental Design and Statistical Optimization in Plant-Based Protein Bioprocesses	Prof. Dr. Tuğba Keskin Gündoğdu
10:30 – 10:45	Discussion & Q&A	All Participants
10:45 – 11:15	Coffee Break	
11:15 – 12:00	Process Analytical Technologies (PAT) for Modern Bioprocess Monitoring	Dr. Hulki Özel, Pikolab Engineering
12:00 – 13:30	Lunch Break	
13:30 – 14:15	Systems Biology Approach in Industrial Biotechnology: from isolation to pilot scale production	Assoc. Prof. Dr. Emrah Nikerel
14:15 – 14:30	Discussion & Q&A	All Participants
14:30 – 14:45	Closing Remarks & Certificate Information (Only Theoretical Lecture Series)	All Participants

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### Day 3 (12<sup>th</sup> August 2026) – Hands-on Training

Time	Laboratory Safety and Upstream Processes
09:30 – 10:00	Introduction, Laboratory Safety and Bioprocess Workflow Overview
10:00 – 11:00	Fermentation Media Preparation from Plant-Based Protein
11:00 – 12:30	Preparing Bioreactor System for Sterilization and Operation
12:30 – 14:00	Lunch Break
14:00 – 15:00	Biosafety Cabinet Operations and Inoculum Preparation
15:00 – 15:30	Post-Sterilization Bioreactor Preparation & Process Discussion

### Day 4 (13<sup>th</sup> August 2026) – Hands-on Training

Time	Fermentation Operation and Monitoring
09:30 – 10:30	Process Initiation and Inoculation of Fermentation Media
10:30 – 12:30	Sampling and Monitoring during Fermentation
12:30 – 14:00	Lunch Break
14:00 – 15:30	Analytical Evaluation I: Monitoring Biochemical Changes during Fermentation
15:30 – 16:15	Analytical Evaluation II: Functional Characterization of Fermented Plant Proteins
16:15 – 16:30	Group Discussion & Reflection

### Day 5 (14<sup>th</sup> August 2026) – Hands-on Training

Time	Downstream Processing and Data Analysis
09:30 – 12:30	Harvesting and Downstream Processing: (Termination of the fermentation process, collection of fermentation samples while separating biomass, and concentration of supernatant using Sartoflow <sup>®</sup> Smart tangential flow filtration (TFF) system)
12:30 – 14:00	Lunch Break

Case Study & Group Presentations:

Participants will work in small interdisciplinary groups to evaluate real-world challenges encountered during fermentation-based modification of plant proteins.

14:00 – 16:00

Each group will analyze one case study, discuss potential causes and process-related limitations, and propose possible improvement strategies based on fermentation, microbiology, and bioprocess engineering perspectives.

16:00 – 16:30 Closing Remarks & Certificate Information

