

National Technical University “Kharkiv Polytechnic Institute”
The Department of Technology
of Fats and Fermentation Products



Knowledge Area 18 «Production and Technology»

Occupation 181 «Food Technology»

Specializations:



Technologies of fats, fat substitutes and essential oils



Technologies of fermentation and winemaking products

Graduate programs:

Bachelor of Science in Food Technology

Master of Science in Food technology

Ph.D. in Food technology



Areas of studying:

The theory of technological processes and principles of hardware devices for the processing of agricultural raw materials with the view of a deep understanding of technology

Learning processes: purification, heat treatment, concentration, extraction of components, fractionation modification (deep processing) dispersing, emulsifying, preserving and storing foods.





Areas of studying:

Basics of food production and technical use of natural raw products and synthetic components:

- fats and oils emulsion of water and fat products, confectionery products, ethyl alcohol, alcoholic and soft drinks, meat, dairy and grain products;

- perfumes - cosmetic products, alternative motor fuels, lubricating oils and greases based on renewable raw materials, soaps and other surfactants.





Areas of studying:



Basics of innovative scientific and technological activities:

*Development of new and improvement of traditional technologies
by means of theoretical and experimental studies.*

*Information and communication informational technologies
in the industry.*





Areas of studying:



Technical-chemical and microbiological quality control of raw materials, semi-finished and finished product:

- organoleptic and physico-chemical analysis, determination of functional and consumer properties;*
- device principles and operation of specialized laboratory equipment and measuring instruments;*





Areas of studying:



*Design and modernization of production facilities
(production areas).*

*The use of information and management software for
designing processes using modern automated systems.
Development of design and normative documentation*

*Carrying out of technical and economic calculations.
Organization of the process, the basic concepts of
economics and logistics solutions for applications.*



Employment perspectives:

The enterprises of food, chemical, perfume and cosmetic industry .

Enterprises processing agricultural products: oil-pressing, oil extraction plants, fat plants and other enterprises of oil and fat complex .

Breweries and small breweries, alcohol, alcoholic beverage, wineries and other enterprises fermentation industry.



Employment perspectives:

Scientific departments and laboratories for food technologies, essential oils and perfumery-cosmetic products

*Companies and departments which design equipment
for the food industry*

Commercial firms and certification laboratory determination of food quality

Trading houses for the food sales



General academic disciplines for the students of our department (Bachelor degree)



General food technology

Fundamentals of physiology and nutrition

Methods of quality control of food products

Scientific and practical bases of fats and fat substitutes technologies

Scientific basis of fermentation technology

Water and water treatment technology of food production

Fundamentals of health improvement products

Technology of the industry

Process calculations, accounting and reporting in the field



General academic disciplines for the students of our department (Master of Science degree)

Actual problems and prospects of development of fats production technology

Topical issues of alcohol and alcoholic beverages technology

Environmental impact assessment of food production

Topical issues of brewing

Food surfactants technology

Engineering design technology

Modern technologies of wine and brandy

Technology of secondary products processing

Innovative technology for the processing of fats



Laboratory Practice Base



The students perform in labs educational and research works

For this purpose, the laboratories of the Department and its branch in the Ukrainian Scientific-Research Institute of oils and fats of the National Academy of Agrarian Sciences are being used

Laboratories are equipped with modern equipment that allows to control the synthesis processes, material handling and determination of the composition, the structure of the final products.

Including chromatographs, spectrophotometers, special tools for assessing the properties of substances and a wide range of accessories

Profesorsko teaching staff

Pavel Nekrasov - *Head of the department, Doctor of Technical Sciences, Professor*

Doctor of Technical Sciences, Professor:
Fyodor Gladkiy, Igor Demidov

Candidate of Engineering Sciences, Professor:
Perevalov Leonid, Timchenko Valentina, Chumak Olga, Piven Elena

Candidate of Engineering Sciences, Assistant Professor:
**Berezka Tetiana, Matyukhov Dmitry, Litvinenko Elena,
Anastasia Demidova, Arutiunian Tatiana**

Candidate of Engineering Sciences, Assistant:
Molchenko Svetlana, Averina Elena

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