

SYLLABUS

REGARDING THE QUALIFICATION CYCLE FROM 2024/2025 TO 2027/2028

ACADEMIC YEAR 2026/2027

1. BASIC COURSE/MODULE INFORMATION

Course/Module title	Distillery
Course/Module code *	-
Faculty (name of the unit offering the field of study)	Faculty of Technology and Life Sciences
Name of the unit running the course	Faculty of Technology and Life Sciences Institute of Food Technology and Nutrition Department of General Food Technology and Human Nutrition
Field of study	Food Technology and Human Nutrition
Qualification level	First grade
Profile	Academic
Study mode	Stationary
Year and semester of studies	III rd year, VI semester
Course type	specialized/ Fermentation processes in food production
Language of instruction	Polish
Coordinator	Dr hab. Ireneusz Kapusta, prof. UR
Course instructor	Lecture: dr hab. Ireneusz Kapusta Lab: Dr inż. Agata Pawłowska, dr inż. Paweł Hanus

* - as agreed at the faculty

1.1. Learning format – number of hours and ECTS credits

Semester (no.)	Lectures	Classes	Colloquia	Lab classes	Seminars	Practical classes	Internships	Others	ECTS credits
6	10			20					3

1.2. Course delivery methods

X conducted in a traditional way

- involving distance education methods and techniques

1.3. Course/Module assessment (exam, pass with a grade, pass without a grade)

EXAM

2. PREREQUISITES

biochemistry, microbiology, food analysis, general food technology
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3. OBJECTIVES, LEARNING OUTCOMES, COURSE CONTENT, AND INSTRUCTIONAL METHODS

3.1. Course/Module objectives

O ₁	Presentation of the technology of producing spirit and spirit products
O ₂	Presentation of the principles of preparing raw materials for the production of alcoholic fermentation products - spirit

3.2 COURSE/MODULE LEARNING OUTCOMES

Learning Outcome	The description of the learning outcome defined for the course/module	Relation to the degree programme outcomes
LO_01	Student knows and can characterize the raw materials used in the production of raw spirit, as well as technological operations and devices used at individual stages of its production	K_W11
LO_02	Student can independently prepare distillery mash and calculates the theoretical and practical efficiency of the fermentation process.	K_U08
LO_03	Student can assess the quality of the final product	K_U05
LO_04	Student can plan the technological process by selecting devices and equipment in the appropriate sequence	K_U11
LO_05	Student is aware of the technical and technological progress in distilling technology	K_K02
LO_06	Student notices the need to promote the Act on Education in Sobriety	K_K04

3.3 Course content

A. Lectures

Content outline
Outline of the history of distilling
Important distilling raw materials and their components
Technology of producing spirit from starch raw materials
Spirit distillation
Spirit rectification
Vodka production
Legal regulations in the production and distribution of spirit

B. Laboratory classes

Content outline
Technological calculations and practical methods of calculating the yield of spirit
Preparation of distillery mash and its physicochemical quality assessment
Simple distillation of ethanol
Determination of ethanol in decoction and lutryn
Ethanol rectification
Analysis of spirit quality

3.4 Methods of Instruction

Lecture supported by a multimedia presentation.

Laboratories: group work - accounting tasks, discussion, work in a laboratory, carrying out experiments, designing methods.

4. Assessment techniques and criteria

4.1 Methods of evaluating learning outcomes

Learning outcome	Methods of assessment of learning outcomes (e.g. test, oral exam, written exam, project, report, observation during classes)	Learning format (lectures, classes, ...)
LO-01	test, written exam	lectures, LABORATORIES
LO-02	test, written exam	lectures, LABORATORIES
LO-03	test, written exam	lectures, LABORATORIES
LO-04	test, written exam	Lectures, LABORATORIES
LO-05	project, report	LABORATORIES
LO-06	project, report	LABORATORIES

4.2 Course assessment criteria

Lecture: written exam The number of points obtained is decisive for the positive evaluation (> 50% of the maximum number of points): dst 51-59%, dst plus 60-69%, db 70-79%, db plus 80-89%, very good > 90%. Laboratories: passing with a grade Assessment determined on the basis of partial grades from the colloquium (knowledge check), presentation / report on the elaboration of the selected issue (skills), participation in the discussion, observation of activity during classes (social competences). The number of points obtained is decisive for the positive evaluation (> 50% of the maximum number of points): dst 51-59%, dst plus 60-69%, db 70-79%, db plus 80-89%, very good > 90%. The condition for completing the course is achieving all the assumed learning outcomes.
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**5. Total student workload needed to achieve the intended learning outcomes
– number of hours and ECTS credits**

Activity	Number of hours
Scheduled course contact hours	10+20/1
Other contact hours involving the teacher (consultation hours, examinations)	participation in consultations – 3/0,10 participation in the exam – 2/0,07
Non-contact hours - student's own work (preparation for classes or examinations, projects, etc.)	preparation for the exam – 30/1,0 preparation of a project/presentation – 25/0,83
Total number of hours	90
Total number of ECTS credits	3

* One ECTS point corresponds to 25-30 hours of total student workload

6. Internships related to the course/module

Number of hours	-
Internship regulations and procedures	-

7. Instructional materials

Compulsory literature:	
1.	Jarociński J., Jarosz K.: Gorzelnictwo - drożdżownictwo, WSZiP, W-wa 1980.
2.	Poradnik gorzelnika, NOT Sigma, W-wa 1995.
3.	Przewodnik do ćwiczeń z technologii fermentacji, Katedra Technologii Fermentacji i Mikrobiologii Technicznej AR, Kraków 2000
4.	Łączyński B., 1992r., "Skrócony kurs gorzelnictwa rolniczego", wyd. Sigma NOT
5.	BN-63-9101-01, Pasze — wywar gorzelniczy.
6.	Dziennik Ustaw Dz.U.02.166.1362, art. 122 z dnia 7 października 2002r. 3.
7.	Kreipe H.: Getreide und Kartoffelbrennerei, E. Ulmer, Stuttgart 1981.
8.	Pieper H.J., Bruchmann E.E., Kolb E.: Technologie der Obstbrennerei, Verlag E. Ulmer, Stuttgart 1993.
9.	PN-90- A-79528, Spirytus surowy. 7. PN-93-A-79528/04, Spirytus (alkohol etylowy). Metody badań. Oznaczanie zawartości związków karbonylowych.
10.	PN-93-A-79528/08, Spirytus (alkohol etylowy). Metody badań. Oznaczanie zawartości estrów.

11. PN-93-A-79529, Wódki gatunkowe. Pobieranie próbek i metody badań.
12. PN-A-79522, Spirytus rektyfikowany.
13. Wüstenfeld H., Haeseler G.: Trinkbranntweine und Liköre, P.Parey, Berlin 1964

Complementary literature:

1. BN-63-9101-01, PASZE — WYWAR GORZELNICZY.
2. DZIENNIK USTAW DZ.U.02.166.1362, ART. 122 Z DNIA 7 PAŹDZIERNIKA 2002R. 3.
3. KREIPE H.: GETREIDE UND KARTOFFELBRENNEREI, E. ULMER, STUTTGART 1981.
4. PIEPER H.J., BRUCHMANN E.E., KOLB E.: TECHNOLOGIE DER OBSTBRENNEREI, VERLAG E. ULMER, STUTTGART 1993.
5. PN-90-A-79528, SPIRYTUS SUROWY. 7. PN-93-A-79528/04, SPIRYTUS (ALKOHOL ETYLOWY). METODY BADAŃ. OZNACZANIE ZAWARTOŚCI ZWIĄZKÓW KARBONYLOWYCH.
6. PN-93-A-79528/08, SPIRYTUS (ALKOHOL ETYLOWY). METODY BADAŃ. OZNACZANIE ZAWARTOŚCI ESTRÓW.
7. PN-93-A-79529, WÓDKI GATUNKOWE. POBIERANIE PRÓBEK I METODY BADAŃ.
8. PN-A-79522, SPIRYTUS REKTYFIKOWANY.

Approved by the Head of the Department or an authorised person