DESCRIPTION OF A STUDY COURSE – SYLLABUS

<table>
<tr><td>Title of a course</td><td colspan="5">Technology of strong alcoholic beverages</td></tr>
<tr><td>Head of course</td><td colspan="5">PhD Urška Kosić, Lecturer</td></tr>
<tr><td>Study programme</td><td colspan="5">Professional undergraduate study Winemaking</td></tr>
<tr><td>Status of a course</td><td colspan="5">Obligatory</td></tr>
<tr><td>Year of study</td><td>3</td><td>Semester</td><td>V</td><td>ECTS credits</td><td>5</td></tr>
<tr><td>Teaching plan
(L + E + S+ Pr)</td><td colspan="5">2+1+0+0</td></tr>
<tr><td colspan="6">Goals of a course</td></tr>
<tr><td colspan="6">Adopt technological processes of primary processing of raw materials for the production of strong alcoholic beverages. Adopt technological production process and basic chemical processes during the production of alcoholic beverages. Valorisation of different types of strong alcoholic beverages.</td></tr>
<tr><td colspan="6">Conditions for enrolling course</td></tr>
<tr><td colspan="6">No conditions</td></tr>
<tr><td colspan="6">Learning outcomes on a level of a study programme which includes course</td></tr>
<tr><td colspan="6">Outcome 5: Interpret the role of microorganisms and apply adequate cultures in wine production.
Outcome 7: Recommend and implement methods of eliminating disease and wine defects.
Outcome 8: Apply the appropriate vinification technology for white, rose and red wine with monitoring and determining technological processes, and carry out physic-chemical and biological stabilization of wine.
Outcome 10: Apply basic technologies in the production of sparkling wine, liqueur wine and dessert wine by selecting the appropriate equipment and packaging for the production, processing and finalization of these wines.
Outcome 11: Present the wine professionally, using professional terminology in describing and evaluating the wine, and lead wine tasting by interpreting the sensory experiences of the wine.
Outcome 12: Use the legislation (Act and Regulations on wine).</td></tr>
<tr><td colspan="6">Expected learning outcomes on a level of a course</td></tr>
<tr><td colspan="6">1. Adopt raw materials and primary processing for the production of alcoholic beverages.
2. Adopt the technological process of alcoholic beverages production.
3. Distinguish basic chemical processes during the production of alcoholic beverages.
4. Evaluate different types of strong alcoholic beverages.
5. Explain legislation.</td></tr>
<tr><td colspan="6">Content of a course</td></tr>
<tr><td colspan="6">Raw material for production of strong alcoholic beverages. Technological procedures of primary processing of raw material used for production of strong alcoholic beverages. Alcoholic fermentation, chemise and products of alcoholic fermentation. Preservation of residue. Distillation – basic principles, chemical changes, distillation equipment, columns. Procedures of standardisation (blending) of strong alcoholic beverages, preparation of water for diluting distillates, preparation of alcoholates, flavours and additives. Maturation and care of strong alcoholic beverages, physical-chemical processes during maturation. Technological procedures of production of strong alcoholic beverages. Production of grape brandies: grape brandy, wine-marc brandy, grape brandy from wine lees, wine-brandy. Wine distillate, distilled wine (cognac). Brandies with ‘traditional’ additives (honey, parts of plants and fruits - ruda, biska, medenica, etc.). Legal regulations on strong alcoholic beverages, importance of production of strong alcoholic beverages in the world and in Croatia.</td></tr>
<tr><td>Teaching modes</td><td colspan="2">☒ lectures
☐ auditory exercises
☒ seminars and workshops
☐ distance learning
☐ field classes</td><td colspan="3">☒ individual assignments
☐ multimedia and network
☐ laboratory
☐ supervisor’s work
☐ other _____</td></tr>
<tr><td>Comments</td><td colspan="5"></td></tr>
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Students' obligations

Grading, evaluation and monitoring of students' work continuously during lectures and exams

Grading is based upon evaluation of course's learning outcomes' adoption. Grading is performed continuously during lectures and/or during exam, in compliance with the provisions of Regulation on the assessment of students.

Continuous check-up:

Outcomes	Pre-exam I	Independent tasks	Correctness of computational tasks	Threshold	Max
Outcome 1	10 %			5 %	10 %
Outcome 2	10 %		20 %	15 %	30 %
Outcome 3	20 %			10 %	20 %
Outcome 4	15 %	15 %		15 %	30 %
Outcome 5	10 %			5 %	10 %
Percentage of ECTS	3,25	0,75	1,0	-	-
Total	65 %	15 %	20 %	50 %	100 %

A student has passed the exam if he has acquired a percentage of credits for each learning outcome higher or equal to defined threshold.

Exam term:

Outcomes	Written exam	Oral exam	Threshold	Max
Outcome 1	10 %		5 %	10 %
Outcome 2	10 %	20 %	15 %	30 %
Outcome 3	20 %		10 %	20 %
Outcome 4	15 %	15 %	15 %	30 %
Outcome 5	10 %		5 %	10 %
Percentage of ECTS	3,25	1,75	-	-
Total	65 %	20 %	50 %	100 %

A student has passed the exam if he has acquired a percentage of credits for each learning outcome higher or equal to defined threshold.

Grading:

A student has passed the exam if he has acquired at least 50% of anticipated credits of a specific learning outcome.

If a student has passed learning outcomes of all courses, the accomplished credits (percentages) of all passed learning outcomes are being added, while the final grade is defined upon following table:

Range of credits (percentages)	Numerical grade	ECTS grade
90,00 – 100,00	Excellent (5)	A
75,00 – 89,99	Very good(4)	B
60,00 – 74,99	Good(3)	C
50,00 – 59,99	Sufficient (2)	D
0,00 – 49,99	Insufficient (1)	F

Obligatory literature

1. Mujić I. ''Tehnologija proizvodnje jakih alkoholnih pića'' – Rijeka, 2010.
2. Mujić I. ''Praktikum iz tehnologije jakih alkoholnih pića
3. Lucić R. "Proizvodnja jakih alkoholnih pića" – Beograd, 1987.
4. Marić V. "Biotehnologija i sirovine" – Zagreb, 2000.

Additional literature
1. De Rosa T., Castagner R.: Technologie delle grappe e dei destilati d'uva - Edizioni Agricole, 1994 2. Dietary anticarcinigens and antimutagens: Chemical and biological aspects, Johnson, Fenwick 3. Processing fruits: Science and technology, Barrett, Somogyi, Ramaswamy