**DESCRIPTION OF A STUDY COURSE – SYLLABUS**

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| **Title of a course** | **Grape quality management** | | | | |
| **Study programme** | **Specialist Professional Study of Winemaking** | | | | |
| **Status of a course** | Obligatory | | | | |
| **Year of study** | 1 | **Semester** | S | **ECTS credits** | 7 |
| **Goals of a course** | | | | | |
| Educate students to know the procedures of growing grapes for certain types of wine. Knowing the procedure of vine cultivation. Distinguish yield and grape quality specifics. Being familiar with vineyard fertilization procedures and harvesting time. Choosing the right viticulture technology. | | | | | |
| **Conditions for enrolling course i** | | | | | |
| No conditions | | | | | |
| **Learning outcomes on a level of a study programme which includes course** | | | | | |
| Outcome 1: Assess the impact of physiological processes, ampelotechnical and meliorative treatments on the nature and quality of grapes.  Outcome 2: Evaluate the impact of the *terroir*, technological maturity and harvesting technology to achieve the targeted quality of grapes and wine.  Outcome 7: Choose a specific production technology of autochthonous wine in order to preserve the variety specificities.  Outcome 8: Substantiate the influence of significant factors on the processes and concentration of the most significant wine components.  Outcome 10: Define individual groups of chemical compounds and explain their influence on the characteristics and quality of wine. | | | | | |
| **Expected learning outcomes on a level of a course** | | | | | |
| 1. Grow grapes for targeted (different) types of wine and describe the stages of berry development and changes in grape composition from fertilization to maturity phase. 2. Choose suitable ampelo-technical winter and summer pruning, cultivation vine form and planting intervals according to the target wine type. 3. Interpret the relationship between yield and grape quality and determine the adequate level of yield for the target quality level of wine. 4. Determine the required quantities of mineral and organic fertilizers for vineyard fertilization, the required quantities of water for irrigation and the manner of soil maintenance in vineyards in order to achieve the targeted quality of the grapes, and interpret the importance of the position, variety and clone for the production of high-quality grapes and wine. 5. Determine the technological maturity of grapes and the appropriate harvesting time and method for the production of different types of wine, and interpret the characteristics and possibilities of applying precision viticulture technologies. | | | | | |
| **Content of a course** | | | | | |
| Development of berry from fertilization till over-maturity. Physiological processes during grapevine aging. Grapevine structure and its quality. Sources of grapevine quality variability. Phenol aging of grapevine. Development of aromatic profile of grapevine during maturation. Grapevine cultivation for specific (different) sorts of wine. Influence of ampelo-technical interventions of mature cut and immature cut on fertility and quality of grapevine. Physiological aspects of pruning. Selection of training and seeding periods regarding the specific sort of wine. Relation between crop and grapevine quality. Concept of ideal vine from the aspect of grapevine high quality. Fertile potential of vines. Maintaining soil and fertilization for the purpose of reaching desired quality of vine. Irrigation application in wine growing. Importance of location in grapevine cultivation. Sorts and clones of grapevine as quality indicators of grapes and vine. Indicators of grape maturity and setting the date of harvest. Sensory evaluation of grapes’ quality and level of its maturity. Technology of harvest and grapes’ quality. New technologies in wine growing: usage of sensors and GPS technologies (precise wine growing). | | | | | |
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