RESOLUTION OIV-ECO 563-2016

TRAINING PROGRAMS FOR OENOLOGISTS

THE GENERAL ASSEMBLY, based on the work of the FORMAT Expert' Group,

CONSIDERING the resolution OIV-ECO 492-2013 providing the definition of oenologist and of his role during the whole wine making process

CONSIDERING that universities providing training in the areas related to viticulture and oenology have different fields of expertise

CONSIDERING the Strategic Plan of the OIV 2015-2019,

DECIDES to withdraw the resolution OENO 2/91

DECIDES to adopt the following guidelines for the establishment of training programs for oenologists,

RECOMMENDATIONS FOR ESTABLISHMENT OF TRAINING PROGRAMS FOR OENOLOGISTS

Introduction

The oenologist training program should ensure that the oenologist is capable of working diligently in any of the five lines of work defined by the resolution OIV-ECO 492-2013, is able to handle the duties described and has in-depth and continually updated knowledge of all the practices to be carried out under their control.

The following program represents recommendations for oenologist training programmes.

Various universities and other institutions providing training in the area related to viticulture and oenology have different fields of expertise. Some might focus on viticulture, while others focus on biotechnology or oenology. The exact structure of the training should be decided by the university, taking into account the qualifications of oenologist and its role during in the wine making process, as defined by the resolution OIV-ECO 492-2013.

Levels of training programs

In accordance with the UNESCO International Standard Classification of Education (UNESCO ISCED 2011), oenologist training programmes are considered tertiary

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education and may be developed at the following levels:

- Short-cycle tertiary or equivalent level education programme with a cumulative theoretical duration of 3-4 years: ISCED 2011 level 665 (ISCED 1997 level 5A). This level requires a minimum of 180 credit points.
- Bachelor's or equivalent level programme with a cumulative theoretical duration of 4 or more years: ISCED 2011 level 666 (ISCED 1997 level 5B). This level requires a minimum of 240 credit points.
- Master's or equivalent level programme with a cumulative theoretical duration of at least 5 years: ISCED 2011 levels 766, 767 and 768. This level requires a minimum of 300 credit points.

Where 1 credit point is equivalent to 25-30 hours (lecture + self-studies and exam)

Core recommendations of an oenologist training programme

The oenologist training program should start with basic training enabling the student to acquire the level of knowledge required for sufficient understanding of oenology-specific matters and problems in the following subject areas:

i. Mathematics
ii. Physics
iii. Chemistry
iv. Biochemistry
v. Biology
vi. Microbiology
vii. Technology/Engineering
viii. Economy

The subjects to be covered by the training program and competencies to be acquired, according to the definition of the oenologist (resolution OIV-ECO 492-2013) are listed below.

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SPECIFIC TRAINING

For all the areas listed below, it is recommended to take into account the evolution of the sector, as they are discussed and considered within the OIV, in particular those related to climate change and the requirements for sustainable production.

A. VITICULTURE

This part of the program will enable the oenologist to participate in vineyard design, establishment and agronomic management, and to assess the harvest's composition and state of health. It should at least include the following:

1. Ampelography, vegetal material and vine varieties
2. Vine biology and physiology
3. Vine propagation
4. Edaphology and climatology; climate change
5. Ecology and terroir
6. Technics of vine cultivation
7. Pests and vine diseases; protection of vines

B. OENOLOGY

This part of the programme will enable the oenologist to actively participate in the planting of vineyards, evaluate grape maturity and decide on the opportune moment for harvesting, to control all winemaking, blending and maturation, as well as treatments and packaging and to perform all the analytical tests, interpret the results and ensure traceability in order to obtain quality products.

It should include the following subjects:

1. Technology

    - Composition and ripening of grapes
    - Treatments and pre-fermentation phenomena

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- Microbiology and biochemistry of fermentation
- Red winemaking
- White winemaking
- Rosé winemaking
- Sparkling wines
- Elaboration of special wines

2. Composition and evolution of wine

- Main components in wine
- Acidity and pH
- Sulphur dioxide and alternative products
- Oxidation-reduction phenomena
- Macromolecules and colloidal phenomena in wines
- Precipitation of physicochemical origin in wines
- Microbial alterations

3. Ageing, treatment and bottling of wine

- Maturation of wine, influence of wood
- Fining of wines
- Filtration of wines
- Physical treatments
- Other treatments
- Hygiene: of the premises, equipment and facilities.
- Packaging and bottling

4. Oenological engineering

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- Fluids and heat transmission
- Energy, motors, pumps, pipes, valves
- Different types of tanks and containers used in enological industries
- Materials in direct contact with wine used in wineries
- Eco-conception of the cellar

5. Other vitivinicultural products

This chapter will be principally oriented towards the production characteristics of the country where the training is conducted

- Preserved musts, concentrated musts, rectified concentrated musts, grape juice
- Aromatised wines and other wine-based beverages
- Products obtained by distillation of wine and of its sub-products
- Wine vinegar

6. Vitivinicultural by-products and waste and their management
7. Analysis and monitoring of must and wine

- Sensory analysis
- Analytical separation techniques
- Analytical techniques using chemical processes
- Analytical techniques using physical processes
- Enzymatic analysis
- Microbiological analysis
- OIV Methods of analysis
- Automated analytical methods: NIR spectroscopy, automated analyzer, sensors
- Quality control in the laboratory

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C. ECONOMICS, MANAGEMENT, LAW, MARKETING AND COMMUNICATION

This part of the program will enable the oenologist to conduct interventions and process with coherence and efficiency in terms of cost, formulate recommendations in the field of marketing and commercialization and to be aware of legislation in the wine sector required for the production of wine.

It should include the following subjects:

1. Wine and vine products in the human environment

   - Vine geography and history of vine and wine
   - Wines and vitivinicultural products in the world
   - World wine market (supply, demand, International trade)
   - Wine and health
   - Wine tourism

2. Wine and vitivinicultural Law

   - International reference organisations for the wine sector
   - Product categories definitions
   - Legislation concerning viticulture
   - Legislation concerning enological practices, vitivinicultural products requirements, storage and selling of wine and vitivinicultural products
   - Legislation related to Geographical Indications and Appellations of Origin
   - Legislation related to wine labelling
   - International trade regulations concerning technical and safety issues

3. Fundamentals of Management

   - Basics concepts of Management

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- Accounting
- Costs analysis and control
- Financial Management

4. Marketing

- Definition and functions
- Consumer behaviour
- Marketing research
- Strategic marketing: Planning, market segmentation, positioning, resource management
- Marketing mix: product, price, promotion and channels of distribution

5. Communication activities

- Communication in the vitivinicultural sector: structure and key actors
- Public Relations activities
- Interaction via Internet and social networks
- Vitivinicultural press
- Public speaking and presentation skills
- Responsible commercial communication

6. Information Technology

- Information systems for enterprises
- Software and procedure for supply chain management
- Database design and management

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A. QUALITY, FOOD SAFETY AND THE ENVIRONMENT

This part of the training program aims to enable the oenologist to take responsibility for quality management, to ensure traceability, food and sanitary safety as well as to manage the strategies for the respect of the environment the following subjects should be considered

- Quality management and communication
- Procedures and certification schemes related to quality: public and private standards
- Information to the consumer and labelling
- Food-safety management
- procedures and norms for traceability
- procedures and norms for risk management (HACCP)
- Food defence
- Environmental management and sustainability
- Environmental standards and schemes (for example: ISO 14001, EMAS)
- Standard related to specific production systems (organic, integrated, biodynamic)
- Standard related to Corporate Social Responsibility:
- Standards for environmental performance evaluation (life cycle analysis and unidimensional methods of evaluation)
- Sustainability standard and schemes

INTERNSHIP

Practical internships are desirable and should give students the opportunity to at least partially follow grape maturation, wine production, its analysis and the different stages prior to its commercialisation. A report of the internship should be written up, with its presentation being left to the initiative of each University.

These internships are an integral part of the course. They are included in the number

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of hours.

The organisation of the internship is left to the initiative of each University.

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