**Oenology**

**LT (60 Hours)**

**Course Description:**

This course provides an overview of production, origins, service of wines, spirits, and beer. It shows a broad study of the Lebanese and French wines, as well as the most important wine producing regions in the world. Moreover, this course combines a framework for understanding wine and making intelligent food pairing decisions. By emphasizing the basics of wine and the basics of food pairing techniques, it offers content that is relevant to novice and intermediate students and restaurateurs. Thoroughly class-tested, it includes classic pairing combinations and principles that can be used with "World Cuisine". Colorful maps, practice quizzes and pronunciation guides help demystify the subject and guide readers through the maze of wine information.

**Learning Outcomes:**

**At the end of the course, the student should be able to:**

* Discover the history and production of wine in the world.
* Analyze the alcoholic fermentation.
* Differentiate among the various types of wines: Red, White, Rosé, and other specialties.
* Different wine production methods
* Apply the principles and conditions of storage and conservation of wines.
* Determine the principles and apply the appropriate methods of wine tasting.
* Pertain the principles of wine and food harmony.
* Describe the major vineyards and wine production in Lebanon, France, Italy, Spain, Portugal, Germany, and other countries; name the main wines, identify their character, and explain their match with meals.
* Recognize beer, spirits, brandy, liqueurs, and other alcoholic beverages; explain their elaboration, origin, composition, commercial brands, characteristics, and service methods.
* Distinguish among the various types of non alcoholic beverages, waters and hot beverages.
* Apply the principles of management of wine cellars.

**Topics Covered:**

1. Introduction & History
2. At the vineyard
3. Alcoholic Fermentation
4. Vilification /Winemaking
5. Wine Storage
6. Wine tasting
7. Food & Wine Harmony
8. Wine & Law
9. Lebanese Wine
10. French Wine
11. Other wine producing countries
12. Beer
13. Wine based aperitifs & Bitters
14. Eaux de vie
15. Cereals and Herbs base aperitifs
16. Liqueurs
17. Non alcoholic beverages

**CHAPTER ONE**

**Introduction & History**

**Learning Objectives:**

After reading this chapter and completing the discussion questions and exercises, students should be able to:

1. Identify the history of wine and mention its great phases
2. Determine the importance of vineyards in the world, and explain production and consumption
3. Name the main wine-producing countries in the world and explain the (cépages), their types, classification, character and localization.

**Content:**

##### **History**

##### **Wine around the world**

##### **How wine is made**

##### **Principle grape vines**

**CHAPTER TWO**

**At the Vineyard**

**Learning Objectives:**

1. State the definitions of wine and oenology
2. Determine the knowledge about wines in the restaurant business
3. Studying the grapes, explain the composition of the (trèfle) and of the grain, specify the phases of maturity, determine the date of the grape-picking and the quality of the product
4. Determine factors influencing the quality of the wine, and explain those that are related on the one hand to the ground, to the climate, and to the orientation; and on the other hand those on which man can intervene.
5. State the definition and composition of (mout), and establish grape-picking improvement procedures.

**Content:**

##### **Oenology, vine yard & grape vine**

##### **Factors affecting the quality of wine**

##### **Natural Factors**

##### **Human factors**

* 1. **growing the grape vines**
  2. **the grape vine and the grapes**
     1. **The bunch**
     2. **The grape grain**
  3. **the grape juice** 
     1. **definition**
     2. **composition of the grape juice**
     3. **grape juice correction**
  4. **grape juice faults and correction** 
     1. **incomplete maturation**
     2. **high acidity**
     3. **complete maturation**

**CHAPTER THREE**

**Alcoholic Fermentation**

**Learning Objectives:**

1. **Determine the phenomenon of fermentation and explain its mechanism**
2. **Identify the origin, the structure, the reproduction, and the types of yeast and explain their action in an aerobic and anaerobic environment, as well as the agents affecting their lives.**
3. **Interpret the use of yeast.**
4. **Apply the principles of control and surveillance of fermentation**

**Content:**

* 1. **Definition of fermentation**
  2. **Fermentation Stages** 
     1. **Primary and secondary**
     2. **Aerobic and Anaerobic**
  3. **Fermentation control** 
     1. **Temperature Control**
     2. **Automated control**

**CHAPTER FOUR**

**Vinification/Winemaking**

**Learning Objectives:**

1. **Identify and analyze the common operations applied for different wine-making procedures.**
2. **Describe the techniques of de-stemming, crushing, pressing and sulfating applied for different operations of making red, white or rosé wines.**
3. **Interpret the advantages offered to wine-making by (ouillage), (collage), and (soutirage)**
4. **Demonstrate the special wine-making techniques applied for the production of naturally-sweet wines, of sweet, natural wines (V.D.N.), of liquor wines (V.D.L.), of frothy wines, of yellow wines and of straw wines.**

**Content:**

* 1. **What does vinification means?**
  2. **The common operations for different vindication** 
     1. **Selecting and de-stemming**
     2. **Crushing**
     3. **Pressing**
     4. **Sulfating**
     5. **Adding yeast**
  3. **Making red wine**
     1. **Ouillage**
     2. **Collage**
     3. **Soutirage**
  4. **Making white wine**
  5. **Making Rose wine**
  6. **Making natural sweet wine ( VDN)**
  7. **Making vin de liqueur ( VDL)**
  8. **Yellow wine**
  9. **Straw wine**
  10. **Sparkling wine**
  11. **Champagne**
      1. **The traditional method**
      2. **Metodo Italiano**
      3. **Transfer method**
      4. **Gas injection**

**CHAPTER FIVE**

**Wine Storage**

**Learning Objectives:**

1. **Determine the factors that intervene in wine storage**
2. **State the average storage degree of the main wines, and the influence of wood, cork, and wine-making during this period**
3. **Identify the vintage year (millésimes) and state their signification**
4. **Establish the conditions of storage and determine the characteristics of a good cellar**

**Content:**

* 1. **Principle factors in wine conservation**
  2. **Average duration of wine conservation and wine aging**
  3. **Why aging wine in oak barrels**
  4. **The use of the cork**
  5. **The vintage year**
  6. **The win cellar and its characteristics**

**CHAPTER SIX**

**Wine Tasting**

**Learning Objectives:**

1. **Identify wine-tasting and determine its objectives**
2. **Demonstrate how to prepare for a wine-tasting session.**
3. **Analyze the visual, olfactory and taste-related flavors**
4. **Apply the specific vocabulary of wine description.**
5. **State the essentials of tasting sparkling wine and champagne.**

**Content:**

* 1. **The tasting phases** 
     1. **Look**
     2. **Smell**
     3. **Taste**
  2. **Wine tasting terminology** 
     1. **Wine tasting score card**
  3. **How to taste sparkling wine**

**CHAPTER SEVEN**

**Food & Wine Harmony**

**Learning Objectives:**

1. **Determine the principles of marriage of wines with meals, and apply the rules to be respected.**
2. **State the choice criteria and represent the order of wine-serving.**

**Content:**

* 1. **Principle and rules of matching food style and suitable wines to be served with**
     1. **The ascending method to serve various types of wine with various kinds of food**
  2. **wine and food pairing**
  3. **wine serving temperature**

**CHAPTER EIGHT**

**Wine & Law**

**Learning Objectives:**

1. **Interpret the notion of name of origin and the search for quality wine**
2. **State the conditions applied to the manufacture of wines of name of origin**
3. **Determine the different categories of wines in France and in the E.E.C.: V.Q.P.R.D., A.O.C., A.O., V.D.Q.S., table wines.**
4. **Designate the mentions that prove the identity card of wine, describe the bottles and the containers.**
5. **Apply the ideal temperature for wine-serving.**

**Content:**

* 1. **Wine law**
  2. **AOC determinants** 
     1. **Appellation d’origine controlee ( AOC)**
  3. **Wine categories in France ( by law)**
     1. **The AOC system**
     2. **VDQS**
     3. **Vin de pays**
     4. **Table wine**
  4. **The wine label ( etiquette)** 
     1. **Obligatory mentions on the wine label**
     2. **Optional mentions**
  5. **Champagne and sparkling wine laws**
  6. **VDN and VDL**
  7. **Eau de vie**

**CHAPTER NINE**

**Lebanese Wine**

**Learning Objectives:**

1. **Determine the origin and summarize the history of Lebanese wines.**
2. **Situate the Lebanese vineyards, mention the main (crus), determine the character of wines, and apply the rules of their accord with meals: Musar, Ksara, Kefraya.**
3. **Identify the other wines of Lebanon**
4. **Draw the wine map of Lebanon.**

**Content:**

* 1. **Introduction**
  2. **Ksara Winery** 
     1. **Vineyards and their characteristics**
     2. **Main productions and their characteristics**
  3. **Kefraya Winery** 
     1. **Kefraya vineyards and their characteristics**
     2. **Main productions and their characteristics**
  4. **Musar Winery**
     1. **Musar vineyards and their characteristics**
     2. **Main productions and their characteristics**
  5. **Other Lebanese wineries**

**CHAPTER TEN**

**French Wine**

**Learning Objectives:**

1. **Demonstrate the importance of French vineyards and wines**
2. **Define the wine map of France and the detailed map of the following French regions: Bordeaux, Bourgogne, Champagne, Alsace, Jura, Cotes-du-Rhone, Vallée de la Loire**
3. **Identify the V.D.Q.S. and other French wines**
4. **Name the main (crus) of each region, determine their character and specify their adequate accord with meals.**

**Content:**

* 1. **Introduction**
  2. **Wine styles and terroir**
  3. **Main producing regions in France** 
     1. **Bordeaux**
     2. **Bourgogne/Burgundy**
     3. **Champagne**
     4. **Alsace**
     5. **Rhone valley**
     6. **Loire Valley**
     7. **Jura et savoie**
     8. **Languedoc-Rousillon**
  4. **Wine of Bordeaux**
     1. **Vineyard characteristics**
     2. **Main producing areas in Bordeaux**
     3. **Classification of Bordeaux wine**
     4. **Wine characteristics and harmony with food**
  5. **Wine of Bourgogne/Burgundy** 
     1. **Vineyard characteristics**
     2. **Main producing areas in Bourgogne**
     3. **Classification of Bourgogne wine**
     4. **Wine characteristics and harmony with food**
  6. **Wine of Champagne** 
     1. **Vineyard characteristics**
     2. **Main producing areas in Champagne**
     3. **Classification of Champagne wine**
     4. **Wine characteristics and harmony with food**
  7. **Wine of Alsace**
     1. **Vineyard characteristics**
     2. **Main producing areas in Alsace**
     3. **Classification of Alsace wine**
     4. **Wine characteristics and harmony with food**
  8. **Wine of Rhone Valley** 
     1. **Vineyard characteristics**
     2. **Main producing areas in Rhone**
     3. **Classification of Rhone wine**
     4. **Wine characteristics and harmony with food**
  9. **Wine of Loire Valley and the center**
     1. **Vineyard characteristics**
     2. **Main producing areas in Loire**
     3. **Wine characteristics and harmony with food**
  10. **Wine of Jura** 
      1. **Vineyard characteristics**
      2. **Main producing areas in Jura**
      3. **Wine characteristics and harmony with food**

**CHAPTER ELEVEN**

**Other wine producing countries**

**Learning Objectives:**

1. **Define the wine maps of Italy, Spain, Portugal, Germany**
2. **Name the main wines of each country, determine their importance and characteristics, and state the adequate accord with the meals.**
3. **Prove the importance of these wines in the restaurant business.**

**Content:**

* 1. **Italy** 
     1. **Main productions**
     2. **Wine characteristics and harmony with food**
     3. **Marsala wine**
  2. **Spain** 
     1. **Wine categories**
     2. **Main Productions**
     3. **Sherry wine**
     4. **Malaga wine**
  3. **Portugal**
     1. **Main productions**
     2. **Madere wine**
  4. **Germany** 
     1. **Main productions**
     2. **Characteristics and harmony with food**

**CHAPTER TWELVE**

**Beer**

**Learning Objectives:**

1. **Identify beer and analyze the different phases of its production.**
2. **Differentiate between light and dark beer**
3. **Name the main commercial brands of beer**
4. **State the method of storage and of serving beer, and adapt the adequate accord of beer with the meals**

**Content:**

* 1. **Introduction and history**
  2. **Beer basic ingredients**
     1. **Starch**
     2. **Water**
     3. **Hops**
     4. **Yeast**
     5. **Clarifying Agents**
  3. **Beer making process** 
     1. **Malting**
     2. **Mashing**
     3. **Adding hops**
     4. **Cooling**
     5. **Fermentation**
     6. **Packaging and bottling**
  4. **Beer varieties**
     1. **Pilsner or lager**
     2. **Stout**
     3. **Mild ale**
     4. **Wheat**
  5. **Commercial brands**
  6. **Harmony with food**
  7. **Service**

**CHAPTER THIRTEEN**

**Wine based Aperitifs & Bitters**

**Learning Objectives:**

1. **Distinguish among the various categories of wine based aperitifs and bitters: vermouths, bitters, aniseed, and Lebanese arak.**
2. **Determine the elaboration mode, the elements of their composition, the alcohol content , presentation and service of each.**
3. **Name the commercial brands and their countries of origin**

**Content:**

* 1. **Introduction**
  2. **Wine based aperitifs**
     1. **Vermouth**
     2. **Amere ( quinines)**
  3. **Bitters & Aniseed**
  4. **Bitters**
     1. **Bitters commercial brands**
  5. **Aniseed** 
     1. **Arak and other aniseeds around the world**
     2. **Lebanese arak production**
     3. **Lebanese arak commercial brands**

**CHAPTER FOURTEEN**

**Eaux de vie & Brandy**

**Learning Objectives:**

1. **Identify the main wine, cider, fruit, grain and cereal brandies; the (marc) brandies, the (lie) brandies, cognac, tequila and other eaux de vie.**
2. **State their elaboration, their content in alcohol, their presentation and the serving methods.**
3. **Name their classifications and the common brand in the market.**

**Content:**

* 1. **Introduction**
  2. **Brandy, cognac and Armagnac** 
     1. **Brandy elaboration**
     2. **Brandy commercial brands**
  3. **Cognac** 
     1. **Elaboration**
     2. **Grading**
     3. **Commercial brands**
  4. **Armagnac** 
     1. **Elaboration**
     2. **Commercial brands**
  5. **Fruits brandy**
     1. **Elaboration**
     2. **Commercial brands**
     3. **Calvados**
     4. **Kirsch**
     5. **Poire Williams**
  6. **Tequila and vino mezcal**
     1. **Elaboration**
     2. **Categories**
     3. **Commercial brands**

**CHAPTER FIFTEEN**

**Spirits : Cereal and herbs based**

**Learning Objectives:**

1. **Distinguish among the various categories of cereal and herbs based aperitifs such as whiskies, Gin, vodka and rum.**
2. **Determine the elaboration mode, the elements of their composition, the alcohol content, presentation and service of each.**
3. **Name the commercial brands and their countries of origin**

**Content:**

* 1. **Whiskies**
  2. **By region**
     1. **Scotch**
     2. **American**
     3. **Canadian**
     4. **Irish**
  3. **Vodka** 
     1. **Elaboration**
     2. **Categories**
     3. **Commercial brands**
     4. **Elaboration**
     5. **Categories**
     6. **Commercial brands**
  4. **Rum**
     1. **Elaboration**
     2. **Categories ( by region and types)**
     3. **Commercial brands**

**CHAPTER SIXTEEN**

**Liqueurs**

**Learning Objectives:**

1. **Identify fruit-based liqueurs and plant-based liqueurs**
2. **Describe the method of their elaboration and the elements of their composition.**
3. **Determine their alcohol content, presentation and the serving methods**
4. **Name their commercial brands**
5. **Differentiate among the different categories of liqueurs: courante, fine, extra-fine.**

**Content:**

* 1. **Generalities**
  2. **Production**
  3. **Main brands and brand names**
     1. **Bénédictine**
     2. **Chartreuse**
     3. **Cherry Heering**
     4. **Curacao**
     5. **Cointreau**
     6. **Drambuie**
     7. **Grand Marnier**
     8. **Apricot liquor**
     9. **Crème de bananes**
     10. **Crème de menthe**
     11. **Mandarin**
     12. **Maraschino**
     13. **Parfait amour**
     14. **Crème de cacao**
     15. **Irish mist**
     16. **Jagermeister**
     17. **Passao**
     18. **Coffee liquor**
     19. **Galliano**
     20. **Peach liquor**
     21. **Crème de cassis**
     22. **Anisette**
  4. **Presenting and serving liqueurs**

**CHAPTER SEVENTEEN**

**Non Alcoholic Beverages**

**Learning Objectives:**

1. **Determine fruit juices and fruit-based beverages, and explain their production methods**
2. **Name syrups and distinguish among different categories: fruit-based, extract-based.**
3. **Identify water, natural source water, mineral water and sparkling water.**
4. **Identify hot beverages, their types and service methods**

**Content:**

**17.1Fruit juices and fruit-based beverages**

* 1. **Syrups**
  2. **Water and sparkling water**
     1. **Water from source**
     2. **Mineral water**
     3. **Sparkling water: natural and manufactured**