



## SYLLABUS

### PALAZZI FLORENCE ASSOCIATION FOR INTERNATIONAL EDUCATION FLORENCE UNIVERSITY OF THE ARTS APICIUS - INTERNATIONAL SCHOOL OF HOSPITALITY

SCHOOL OF FOOD AND WINE STUDIES  
DEPARTMENT OF BAKING AND PASTRY  
**COURSE TITLE: BAKING TECHNIQUES I**  
**COURSE CODE: FWBPBT320**  
3 semester credits

#### 1. COURSE DESCRIPTION

Baking Techniques I is the first step of related courses that focus on baking and pastry fundamentals. The course introduces the features and functions of ingredients (eggs, flour, fats, sugar, dairy products), mixing methods, fermentation techniques, and cooking methods. The aim of the course is to give students solid bases in terms of both knowledge and practice for a better understanding of the basic skills necessary for future baking courses. Lessons focus on basic preparations such as pastry doughs, sponge cakes, pâte à choux, egg/butter-based basic creams, custards, and meringues.

#### 2. OBJECTIVE

This is a basic course of great importance for the future development of students knowledge and skills. It is one of the three steps of Baking Techniques courses for Career Students. The aim of course is to teach students the technical skills that will be applied in the future courses.

Upon successful completion of this course students will be able to:

Understand proper use of equipment, product identification, scaling and measuring techniques, temperatures in baking, use of proper mixing and cooking methods - Describe the properties and functions of various ingredients used in the production of pastry items - Identify different types of flours and understand their suitable applications to pastry - Identify different types of sweeteners and fats - Learn the features of butter and its importance in many of the processes - Learn the features of eggs and sugar, and their purposes in baking - Learn the basic mixing methods: creaming and foaming - Get confident with pastry fundamentals such as short crust pastry, eclairé paste, enriched yeast doughs, spongecakes and genoise which are the basics of pastry worldwide - Learn proper methods to produce stirred custards - Learn techniques to prepare italian, swiss and french meringue

#### 3. REQUIREMENTS

Open to culinary arts and baking & pastry majors or students who have taken previous coursework in the above fields.

#### 4. METHOD

This course consists of lectures, class discussions, demos, workshops and tastings. Mediums for instruction used will include, but are not limited to, interactive and hands-on activities which challenge thought processes, academic texts and studies, videos, slides, guided problem solving, and experiential and/or field learning activities where applicable.

Recipes will be explained by the Chef instructor. At the end of each class the group work will be evaluated by the instructor in order to foster learning and correct mistakes, if any.

Students are expected to complete all the assigned reading in time and to behave as professional (see Kitchen rules below).

Depending on seasonal availability, some ingredients and/or recipes might be subject to change.

## 5. TEXT BOOK AND ACADEMIC RESOURCES

Course text book: **On Baking: A textbook of baking and pastry fundamentals** - 3th edition - Pearson Labensky, Martel, Van Damme

Recommended bookstores: Paperback Exchange, Via delle Oche, 4R (Second-hand copies might also be available) or Feltrinelli International, Via Cavour 12

The text book is mandatory for the successful completion of the course.

One copy is available in the FUA library.

Where applicable, additional material, handouts and/or notes will be provided by the instructor.

### HIGHLY RECOMMENDED READINGS

Available in the FUA library

How Baking Works: Exploring the Fundamentals of Baking Science, Paula I. Figoni

Frinberg B. The Professional Pastry Chef, Wiley

Gisslen W. Professional Baking, 3rd Edition

Bruni Benson A. Solo Dolci: The Italian Dessert Cookbook

Galli F. The Fornaio Baking Book: Sweet and Savory Recipes from the Italian Kitchen

## LIBRARIES

### **The FUA library is located in Corso Tintori 21 .**

Please consult the posted schedules for official opening times. Please note that the library is consultation only and thus it is not possible to remove texts.

Students are encouraged to take advantage of Florence's libraries and research centers:

Biblioteca Palagio di Parte Guelfa - Located in Piazzetta di Parte Guelfa between P.za della Repubblica and Ponte Vecchio. Telephone: 055.261.6029. The library is open from Monday to Saturday. This library is open until 10:00pm during weekdays.

Biblioteca delle Oblate - Located in via dell'Oriuolo 26. Telephone: 055 261 6512. Please consult the website [www.bibliotecadelleoblate.it](http://www.bibliotecadelleoblate.it) for current opening times under "orario".

The Harold Acton Library at the British Institute of Florence - Located in Lungarno Guicciardini 9.

For opening times and student membership information: [www.britishinstitute.it/en](http://www.britishinstitute.it/en).

This is a fee-based membership library.

## 6. FIELD LEARNING

This course does not include a field learning activity

## 7. COURSE MATERIALS AND KITCHEN RULES

Career and Master students will be provided with a knives and utensils kit.

Should students wish to store materials or equipment, lockers are available at Apicius Via Guelfa, 85n with a 10 Euro deposit (given back after returning the key).

### **Professional cooking classes**

1. All students are strictly required to attend class bringing the provided kit and wearing a clean uniform: the jacket provided by the school, black pants, apron (color depending on the CA level), safety footwear, a white Chef's hat and a set of knives. Students with long hair should tie hair back before wearing the hat. Students are not allowed to wear rings, earrings or any other visible piercings, bracelets, watches and nail polish during lab hours. **Students who are not dressed properly will not be allowed in class.**
2. All students must attend class fully prepared and on time. Late students will not be accepted.
3. Carefully wash hands at the beginning of each class, before food is handled.

4. During professional cooking classes only small food tastings are allowed as the main purpose of these courses is to develop technical skills. Students are not allowed to take food out of the kitchen.
5. Students are also required to participate in a polite and responsible way.  
Students are not allowed to sit on the working stations.  
Students who disturb lessons or are disrespectful to the instructor or the other students will be asked to leave the class. **Serious infractions will be evaluated by the Academic Office.**
6. Cooking classes will include various tasks which all students must carry out.  
Classes will include all different types of recipes and students are expected to actively participate in all lessons regardless of personal likes or dislikes.
7. Each student is responsible for washing all utensils used during classes and keeping the working station clean and tidy, with all the utensils as listed in the stations inventory.  
Two students at a time will take turns each class to tidy up the kitchen common areas.
8. Students are responsible for kitchen utensils and maintenance of the equipment. The cost of a) any missing utensil b) damages due to students carelessness will be shared by all students.
9. No visits are allowed in class at any time.
10. **The use of cellular phones is not allowed within the school building.**

#### 8. COURSE FEES

Course fees cover course-related field learning activities, visits, and support the instructor's teaching methodologies. Book costs are not included in the course fee. The exact amount will be communicated by the instructor on the first day of class.

#### 9. EVALUATION AND GRADING SYSTEM

##### Final Grade Breakdown

10% Attendance	20% Assignments (paper, research, projects)
25% Class Participation	20% Final Exam
25% Evaluation of daily practical performances	

Please note that a detailed explanation of the above is found in Section 11 (Assignments, Term Papers and Exams).

##### Grading Scale

A – 100 – 92%	A – 92 – 80%	B+ – 80 – 70%	B – 76 – 70%
B – 72 – 60%	C+ – 70 – 60%	C – 66 – 60%	C – 62 – 50%
D = 69 – 60%	F = 59 – 0%	W = official withdrawal	W/F = failure to withdraw by the designated date

#### 10. ATTENDANCE - PARTICIPATION

##### Institutional Attendance Policy

Academic integrity and mutual respect between instructor and student are central to the FUA academic policy and reflected in the attendance regulations. Student presence is mandatory and counts toward the

final grade.

On the second absence the attendance and participation grade will be impacted. Please note that missing certain field learning activities may count for more than one absence.
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On the third absence the instructor may lower the final grade by one letter grade. (Example: Final grade average of 93% or A will become a B).
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The fourth absence constitutes automatic failure of the course. Students with excessive absences will be asked to withdraw with a W (if before the deadline) or leave the course with a WF.
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It is student's responsibility to know how many absences he or she has in a course. In case of doubt, speak with your instructor!

### **Late Arrival and Early Departure**

Arriving late or departing early from class is not acceptable.

Two late arrivals or early departures or a combination will result in an unexcused absence.

Travel is not an exceptional circumstance and never an excuse for absence from class.

### **Participation**

Satisfactory participation will be the result of contributing to class discussions by putting forth insightful and constructive questions, comments and observations. Overall effort, cooperation during group work and in-class activities, responsible behavior, and completion of assignments will be assessed. All of the above criteria also applies to Field Learning and site visits.

## **11. EXAMS, PAPERS, PROJECTS**

### **Assignments**

#### **a. Experiential Learning**

Front/back of the house shifts are mandatory in order to successfully complete the course.

Career programs students: one shift a week.

Service Management hours are assigned to students within the semester. The school will schedule the Service Management hours at the beginning of the session.

Dress code will be communicated by the instructors. Students with long hair should tie hair back.

#### **b. each student will have to develop a final project/paper following the instructions of the professor**

The paper should be 5 pages long plus bibliography and a detailed list of all sources.

The topic of the final project/paper will be discussed in class with the professor.

Deadline for the topic: lesson 5. The final project/paper is due by lesson 11.

<b>IMPORTANT</b> - As FUA is a paperless university, students' paper/projects are to be submitted electronically and printing is not required. For instructions please refer to the course addendum. Every delay or missing file will negatively impact the final evaluation.
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#### **c. in addition to those listed in the syllabus and addendum, other assignments can be given by the professor during the course**

For the material you will need to type please check the school computer facilities.

Make sure you can sort out any problem in good time before your presentation/paper is due.

### **Final Exam**

The final exam is cumulative and it will consist of both written and practical tests.

The written test will consist of 10 open questions on the subjects taught during the entire course. Students will have to give detailed answers using the proper technical vocabulary.

In the hands-on exam students will be evaluated on a single recipe given by the instructor: the recipe will abide by the objectives reached during the course.

**Hand writing should be clear, neat and legible.  
Blue or black pen are the only acceptable.**

**The date and time of the exams cannot be changed for any reason.**

## 12. LESSONS

Lesson 1	
Topic	<b>Introduction to the course</b> Introduction to equipments, tools and ingredients Mixing and cooking methods <b>Eggs 1: structure, proteins coagulation, foaming</b>
Lab	Teacher Demo
Objectives	Understand what is a pastry brigade - Learn to work in a professional environment Learn and follow the HACCP Protocol Understand main ingredients used in a kitchen and pastry lab Understand the features of eggs from the embryo stage to the coagulation process Learn the the only way to control coagulation is temperature control Knowing the mixing methods to obtain a good egg foaming (white and yolk)
Assignment	Textbook Ch. 1-2-3-4-5

Lesson 2	
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Topic	<b>Fats: focus on butter</b> History and cultural background of butter consumption Butter production process Differences among butters and other fats used in pastry The purpose of fats in baking and pastry
Lab	Teacher Demo
Objectives	Understand butter production process and the differences between different types of butters - Understand the evolution of butter for pastry purposes Understand the type of fats were used in the past - Understand evolution of pastry and ingredients - Get confident with the use of fats
Assignment	Textbook Ch. 4

Lesson 3	
Topic	<b>Sugar</b> History of sugar production and diffusion during middle ages thanks to the Arabs Structure, purpose, reactions with the other ingredients - Caramelization
Lab	Teacher Demo
Objectives	Learn the history of sugar diffusion - Understand sugar production process Understand the great influence sugar had on pastry and baking and the “taste” revolution when honey could be replaced - Become familiar with its structure
Assignment	Textbook Ch. 4

Lesson 4	
Topic	<b>Flour</b> Sources, production process and features of flour Differences between flours <b>Leaveners: yeast, baking soda, chemical leaveners</b>
Lab	Teacher Demo
Objectives	Know and recognize the various flours used for pastry and baking Learn the different structure of flours Know the ancient grains used in Italy and their possible applications Learn how to use and apply the various flours - Learn the features of new flours blends Define leavening agents available and understand which are those used in pastry and baking Apply different leavening agents to different preparations
Assignment	Textbook Ch. 3-4

Lesson 5	
Topic	<b>Dairy products &amp; Milk</b> Definition of dairy products: difference between fresh and fermented Structure, purposes and suitable use in pastry - Role of milk/cream in the baking process and in the preparation of creams and custards -
Lab	Teacher Demo
Objectives	Understand the classification of dairy products - Learn their purpose in baking and pastry and the interaction with eggs in creams/custards production - Know the history of dairy products and their diffusion - Learn about possible intolerances connected with dairy products and the suitable solutions
Assignment	Textbook Ch. 3-4

Lesson 6	
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Topic	<b>Stirred custards</b> Definition of stirred custards - Eggs coagulation when egg is mixed with a liquid - Pasteurization - Basic methods and techniques - Applications of stirred custards
Lab	Pastry Cream, Creme Anglaise, Zabaione
Objectives	Understand the definition and composition of stirred custards Learn and understand eggs coagulation when mixed with a liquid Understand the concept of pasteurization when applied to stirred custards Learn the purposes of stirred custards and all the possible applications Experience the production of various types of stirred custard and learn to solve problems in case of mistakes
Assignment	Textbook Ch. 3-4-14

Lesson 7	
	Mid-Term Exam

Lesson 8	
	Mid-Term Break

Lesson 9	
Topic	<b>Meringues</b> Definition of meringue - Soft & hard meringues - Egg white foaming: methods of incorporating sugar - Stabilizing meringues Focus on italian, french and swiss meringues and their possible applications
Lab	Italian, french and swiss meringue
Objectives	Define meringues and their applications in pastry Understand how to stabilize the whites foam Learn the method to incorporate sugar in different meringues Experience meringues baking: understand the temperature settings
Assignment	Textbook Ch. 3-4-12

Lesson 10	
Topic	<b>Basic doughs - Short crust pastry</b> Definition of short crust pastry: pate sucrée, brisée, sablée Mixing methods for different results - Focus on low gluten flours and the role of butter and sugar - Basic formulas and measurements
Lab	Pate Sucree, Pate Brisee, Pate Sablee - Production and cooking
Objectives	Define short crust pastry - Know which flours are suitable for the preparation - Understand the different mixing methods and the different purposes Learn the basic formulas for these doughs - Experience the production process and learn the order to follow when incorporating ingredients Know the proper cooking time for the different doughs in order to get the best results Know how to solve problems in case of mistakes
Assignment	Textbook Ch- 4-11

Lesson 11	
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Topic	<b>Basic doughs - Pate choux / Eclair paste</b> Definition and history of pate choux - Mixing and cooking methods - Why pate choux needs to be cooked twice - Focus on low gluten flours and the importance of starches gelatinization in the process - Role of ingredients in the preparation - Basic formula and measurements - Purposes of pate chou and applications in pastry
Lab	Eclairs and “bigne”
Objectives	Define pate choux and understand its structure - Understand the role of ingredients in the preparation - Understand why choux dough needs to be cooked two times Understand the starch gelatinization and learn how to deal with it Learn to cook beignets and understand the importance of size during cooking Figure out how long you can store beignets - Know the history and diffusion of pate choux
Assignment	Textbook Ch- 4-12

Lesson 12	
Topic	<b>Basic doughs</b> <b>The baking process - Mixing and cooking methods</b> <b>Cakes: foaming method - Spongecakes 1</b> Eggs foaming as one of the two main mixing methods - Purposes - Reaction of foamed eggs when heated - Cooking techniques - Role of ingredients in the process Focus on low gluten flours, eggs foaming with sugar and emulsification Differences between classic spongecake/pandispagna and genoise: foaming raw or heated eggs
Lab	Classic spongecake - Classic genoise
Objectives	Understand what is a “sponge” cake and its various applications in baking and pastry Understand the structure of spongecakes and the purpose of each ingredient in the process - Learn to respect the process to obtain a perfect sponge Understand the purpose of heating eggs before foaming in the classic genoise
Assignment	Textbook Ch. 3-4-13

Lesson 13	
Topic	<b>Basic doughs</b> <b>The baking process - Mixing and cooking methods</b> <b>Cakes: creaming method - Poundcake and similar</b> Butter creaming as one of the two main mixing methods - Purposes Focus on low gluten flours, butter creaming and emulsification of eggs, butter and sugar - Reaction of creamed butter to cooking - Role of ingredients in the process
Lab	Poundcake and similar
Objectives	Define creaming method and the reaction of ingredients in the process Understand the rules to obtain a good product - Learn how to choose flour to prepare a poundcake - Understand the concept of emulsification
Assignment	Textbook Ch.3-4-13

Lesson 14	
Topic	<b>Basic doughs - Enriched yeast doughs</b> Definition of enriched yeast doughs - Production process:mixing, forming, proofing and baking - Focus on high gluten flour, yeast and fermentation - Role of ingredients in the preparation - Application of the dough
Lab	Brioche - Deepfried donughts - Krapfen

Objectives	Define enriched yeast doughs - Learn the production process and the reason for the different steps - Understand the role of high gluten flour and of the other ingredients during the process - Understand the positive and negative effects that high gluten flour might have on a dough
Assignment	Textbook Ch. 4-8

Lesson 15	
	Final Exam