# Food Technology Processes II

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***Text under revision. Not yet approved by academic staff.***

COURSE AIMS AND INTENDED LEARNING OUTCOMES

The course aims to provide students with a framework of the processes used by transformation industries to obtain liquid foods, providing the link between the target product, its composition and the technologies necessary to achieve the goal. The course also includes notes on the most frequent components involved in the chemical and biochemical processes of each specific transformation.

Through learning the process phases and parameters, equipment management methods, and the characteristics of raw materials and finished products, students will acquire the appropriate tools for intervening in the supply chain, optimising the processes, and suggesting innovations.

COURSE CONTENT

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| --- | --- |
|  | ECTS |
| Transformation processes and technologies |  |
| Composition of the raw materials and description of the processes for obtaining the desired foods according to the company objectives | 0.5 |
| Oils (from seeds, olive oil, palm oil) | 1.5 |
| Beer  | 1.0 |
| Infusions and instant drinks (coffee, tea) | 1.0 |
| Soft drinks and vegetable drinks | 0.5 |
| Juices and nectars  | 0.5 |
| Practical activities | 1.0 |

READING LIST

During the course, the presentations and supplementary materials (videos, catalogues, etc.) illustrated and discussed in class will be made available. For more in-depth study, the following texts are recommended:

Di Giovacchino L., “Tecnologie di lavorazione delle olive in frantoio”*,* Tecniche Nuove, Milan, 2010.

Capella P., Fedeli E., Bonaga G., Lercker G., “Il manuale degli oli e dei grassi”, Tecniche Nuove Milan, 1997.

Zangrando T. e Marconi M., “Il libro della birra”, Calderini Editore, Bologna, 2002.

Bazzara F. and M., “La Filiera del Caffè Espresso”, Bazzara Edizioni, Trieste, 2014.

Hui Y.H. e Evranus O., “Handbook of Plant-Based Fermented Food and Beverage Technology", Second Edition, CRC Press, 2012.

Ashurst P.R., “Chemistry and Technology of soft drinks and fruit juices”, Wiley Online Library, 2007.

TEACHING METHOD

* Theoretical frontal lectures in which the main topics of the course will be addressed.
* Guided practical sessions intended for the conducting of project work: with this aim, work groups will be organised to explore in depth some of the topics of interest covered in class. The results obtained will be presented jointly by the students at the end of the course.
* Seminars by experts on specific topics and/or participation in an educational visit.

ASSESSMENT METHOD AND CRITERIA

The exam will take place in different ways for those students attending lectures and those not attending lectures.

* For students attending classes, the assessment will be carried out at the conclusion of lectures by means of a written test. Students will be given 2 hours to answer open and closed theoretical questions on the course topics covered. Five open questions will be included (maximum 4 marks each depending on their completeness) and 10 closed questions of equal weight (1 mark each). In case of no answer, no marks will be awarded. Passing the written test exempts the student from preparing the corresponding part of the programme for the final exam.

In the event that group work is carried out during the scheduled practical activities hours (critical analysis of case studies), students will be assessed on their final PowerPoint presentation of this work (from 0 to 2 marks, depending on the completeness and clarity of the presentation).

The final mark will take into account both the written exam and the group work assessment.

Students who have not taken or have not passed the written test, or who do not intend to make use of the mark obtained in the aforementioned test, may nevertheless take the oral exam with the methods and contents indicated below for non-attending students.

* Those students not attending lectures will be required to take the oral exam on the entire course contents indicated in the degree programme Guide, and following the reading list indicated therein.

NOTES AND PREREQUISITES

There are no prerequisites for attending the course. However, we recommend revising the main notions learnt during the Food Industry Plants (Unit Operations) and Food Industry Processes I courses.

Should the current Covid-19 health emergency not allow face-to-face teaching, remote teaching and the carrying out of exams will be guaranteed using methods that will be communicated in good time to students.

Information on office hours available on the teacher's personal page at http://docenti.unicatt.it/.