

Organic Chemistry Laboratory

1. **Course number and name:** 020PCONI4 Organic Chemistry Laboratory
2. **Credits and contact hours:** 2 ECTS credits, 1x1:15 contact hours
3. **Name(s) of instructor(s) or course coordinator(s):** Marie-Jose Zacca, Alexandre Monnier, Fadel Chamsseddine.
4. **Instructional materials:** Course handouts; lab experiments.

5. Specific course information

a. Catalog description:

This practical work allows students to master the methods of extraction, filtration, purification and synthesis of organic products. They apply the theories explained in the course by concretizing the reactions of organic chemistry such as the extraction of caffeine from tea, the synthesis of aspirin, the synthesis of dibenzalacetone (aldol condensation), the Cannizaro reaction, the chromic oxidation of menthol and the preparation of the isoamyl ester. In addition, column chromatography is explained.

b. Prerequisites: 020CORN13 Organic Chemistry

c. Required/Selected Elective/Open Elective: Required

6. Educational objectives for the course

a. Specific outcomes of instruction:

- Master organic synthesis methods (such as the extraction of caffeine from tea, the synthesis of aspirin, the synthesis of dibenzalacetone, the chromic oxidation of menthol and the preparation of isoamyl ester).
- Understand purification, extraction and filtration in organic chemistry.
- Know the methods of drying and characterization of organic products.

b. PI addressed by the course:

PI	5.1	6.1	7.1
Covered	x	x	x
Assessed	x	x	

7. Brief list of topics to be covered

- Lecture 1: Explanation of the techniques of the organic chemistry laboratory.
- Lecture 2: Extracting caffeine from tea.
- Lecture 3: The synthesis of aspirin.
- Lecture 4: The synthesis of dibenzalacetone (aldol condensation).
- Lecture 5: The chromic oxidation of menthol.

– Lecture 6: The preparation of the Isoamyl ester.