Code: **QO327**

Name: **Química Orgânica II (Engenharia Química)**

Name in English: **Organic Chemistry II (Chemical Engineering)**

Name in Spanish: **Química Orgánica II (Ingeniería Química)**

Subject type: Weekly

Approval Type: Grade and frequency

Characteristic: Regular

Frequency: **75%**

Period Type / Offering period: semi-annual/ Every period

Requires Final Exam: Yes

Vectors

T	L	P	O	PE	OE	SL	WEEKS	CREDITS
2	**4**	**-**	**2**	**-**	**-**	**6**	**15**	**8**

Occurrence on curriculum: **09, 39**

Pre requirement: **QO427**

Summary: Laboratory Techniques in Organic Chemistry. Differentiations between hydrocarbons. Obtaining alkenes, ketones, esters, alkyl halides, phenols and amines. Aldol condensation. Polymers. Dyes. Soap. Introduction to chromatography and absorption spectroscopy

Program:

1. Laboratory safety
2. Laboratory techniques used in Organic Chemistry: recrystallization, melting point, distillation, solvent extraction
3. Differentiation between hydrocarbons
4. Obtaining alkenes
5. Obtaining symmetrical ethers
6. Obtaining alkyl halides
7. Obtaining esters
8. Characterization reactions
9. Aldol condensation
10. Polymers
11. Introduction to chromatography: use in the identification and separation of organic compounds. 12. Introduction to absorption spectroscopy: use of infrared spectroscopy for the characterization of organic compounds.

Basic Bibliography

1) D. L. Pavia, G. M. Lampman, G. S. Kriz, R. G. Engel, "**Química Orgânica Experimental – Técnicas de Escala Pequena"**, 2ª. Edição, Bookman, 2009.
2) L. Tasic, **"Química em 50 ensaios"**, 1ª edição, Átomo, 2017.
3) A. I. Vogel, **"Química Orgânica: Análise Orgânica Qualitativa** – Volumes 1 e 2", Ao Livro Técnico S/A, Rio de Janeiro, 1971.

Supplementary Bibliography

1) C. H. Collins, G. L. Braga, P. S. Bonato, **"Fundamentos de Cromatografia"**, 1ª. edição, Editora da Unicamp, 2006.
2) T. W. G, Solomons, C. B. Fryhle**, "Química Orgânica** – Volumes 1 e 2", 10ª. edição, LTC, 2012.
3) P. Y. Bruice, **"Química Orgânica** – Volumes 1 e 2", 4ª. edição, Prentice Hall, 2006.
4) John Macmurry, **"Química Orgânica**", 3ª. Edição, Cengage Learning, 2016.
5) D. L. Pavia, G. M. Lampman, G. S. Kriz, J. Vyvyan, **"Introdução à espectroscopia"**, 2ª, edição, Cengage Learning, 2015.
