



**PROGRAMS AND BIBLIOGRAPHY**

| Subject |                      |
|---------|----------------------|
| Code    | Name                 |
| QO521   | Organic Chemistry II |

| Vector  |
|---|
| OF:S-5 T:006 P:000 L:000 O:000 D:000 HS:006 SL:006 C:006 AV:N EX:S FM:75% |

|                        |       |
|------------------------|-------|
| <b>Pre requirement</b> | QO321 |
|------------------------|-------|

| Summary  |
|--|
| This intermediate organic chemistry course focuses on the structure and reactivity of organic compounds. Topics include: Modern Concepts of Bonding and Aromaticity; Mechanism of Pericyclic Reactions and their Applications in Synthesis; Chemistry of Selected Functional Groups (Carbonyls, Carboxylic Acids, Amines, and their derivatives); Chemistry of Reactive Intermediates (Carbocations, Carbanions, Radicals, Carbenes, and Nitrenes) |

| Program  |
|--|
| Aldehydes and ketones. Carboxylic acids and derivatives. Conjugation, allylic systems, dienes and polyenes, unsaturated carbonyl compounds, Diels-Alder reactions. Benzene and aromatic rings, aromatic electrophilic substitution. Aryl halides and aromatic nucleophilic substitution. Phenols. Amines. Other nitrogen-based functions. In all cases, relationship between structure and reactivity will be analyzed, with emphasis in mechanisms and stereochemistry. Applications. |

| Bibliography   |
|--|
| McMurry, John. <i>Fundamentals of Organic Chemistry</i> . 6th ed. Pacific Grove, CA: Thomson-Brooks/Cole, 2006. ISBN: 9780495012030. |
| Clayden, J., et al. <i>Organic Chemistry</i> . Oxford, England: Oxford University Press, 2000. ISBN: 9780198503460.                  |
| Wade, L. G., Jr. <i>Organic Chemistry</i> . 5th ed. Upper Saddle River, NJ: Prentice Hall, 2002. ISBN: 9780130338327.                |

| Evaluation criteria  |
|--|
| For grading policy, see: Regimento Geral de Graduação, Seção I – Normas Gerais, Capítulo V – Da Avaliação do Aluno na Disciplina. Students are required to attend 75 % of the lectures. For further details, see: Regimento Geral de Graduação, capítulo VI, seção X, artigo 72. |