

## 302003 – ADVANCED ORGANIC CHEMISTRY II

CREDITS: 04 (four) – 60 hours/class

### CONTENT:

Study of the synthesis and reactivity of organic substances. Transformation and protection of functional groups. Carbon nucleophiles: alkylation and attacks on carbonyl groups. Formation of carbon-carbon bonding, organometallic chemistry, aromatic substitution reactions, oxidation and reduction reactions. Radical reactions.

### SYLLABUS:

1. Study of the synthesis and reactivity of organic substances.
2. Transformation and protection of functional groups.
3. Carbon nucleophiles: alkylation and attacks on carbonyl groups.
4. Formation of carbon-carbon bonding, organometallic chemistry, aromatic substitution reactions, oxidation and reduction reactions.
5. Radical reactions.

### BIBLIOGRAPHY:

1. CAREY, F.A.; SUNDBERG, R.J. Advanced Organic Chemistry. 5.ed. Plenum Press, USA, 2007.
2. MARCH, J. Advanced Organic Chemistry: reactions, mechanisms and structure. 7.ed. McGraw-Hill, USA, 2013.
3. WUTS, Peter G. M.; GREENE, Theodora W. Greene's protective groups in organic synthesis. 4.ed. Wiley, EUA, 2007.
4. CLAYDEN, Jonathan; et al. Organic Chemistry. 2.ed. Oxford Press, 2008.
5. SMITH, Michael B. Organic Synthesis. 3.ed. Elsevier Academic Press, Inglaterra, 2011.