

COURSE CODE	XO 405	SEMESTER	4th
COURSE TITLE	CHEMISTRY OF HETEROCYCLIC COMPOUNDS AND BIOMOLECULES		

<p>SUGGESTED TEXTBOOK IN ENGLISH (will be provided to the Erasmus students on loan by the library for the whole period of studies at Upatras)</p>	<p>Heterocyclic Chemistry, 5th Edition John A. Joule, Keith Mills ISBN: 978-1-405-13300-5 Wiley-Blackwell</p>
	<p>CHAPTERS covering the syllabus for Heterocyclic Chemistry:</p> <ol style="list-style-type: none"> 1. Heterocyclic nomenclature 3. Substitutions of aromatic heterocycles 5. Methods in heterocyclic chemistry 6. Ring synthesis of aromatic heterocycles 7. Typical reactivity of pyridines, quinolines and isoquinolines 8. Pyridines: reactions and synthesis 9. Quinolines and isoquinolines: reactions and synthesis 13. Typical reactivity of the diazines: pyridazine, pyrimidine and pyrazine 14. The diazines: pyridazine, pyrimidine, and pyrazine: reactions and synthesis 15. Typical reactivity of pyrroles, thiophenes, and furans 16. Pyrroles: reactions and synthesis 17. Thiophenes: reactions and synthesis 18. Furans: reactions and synthesis 20. Indoles: reactions and synthesis 23. Typical reactivity of 1,3- and 1,2-azoles and benzo-1,3- and -1,2-azoles 24. 1,3-Azoles: imidazoles, thiazoles, and oxazoles: reactions and synthesis 25. 1,2-Azoles: pyrazoles, isothiazoles, isoxazoles: reactions and synthesis 29. Heterocycles containing more than two heteroatoms 30. Saturated and partially unsaturated heterocyclic compounds: reactions and synthesis 33. Heterocycles in medicine <p>L.G. WADE Jr. "ORGANIC CHEMISTRY" 7th edition, Published by Pearson</p> <p>CHAPTERS covering the syllabus for Biomolecules:</p> <ol style="list-style-type: none"> 23. Carbohydrates and Nucleic acids 24. Amino acids peptides and proteins 25. Lipids