



ADAMA

## סילבוס – כימיה אורגנית 1 מורחב לתלמידי ארכימדס 124708

1. Summary of General Chemistry and Introduction to organic Chemistry: Ionic, Covalent, Polar bonds. Representation of Structures, Introduction to Molecular Orbital Theory, overlapping of S orbitals, overlapping of p orbitals, hybridization, properties of acids and bases, conjugated acids and bases, Pka and pH, The effect of structure on pKa, Lewis acids and bases, Resonance, Delocalization of Electrons.
2. Alkanes: Properties, Nomenclature, Chemical Reactions of alkanes, rotation of the carbon-carbon-bonds, conformations of alkanes.
2. Stereochemistry: Isomers, Enantiomers, Diastereomers, chirality, optical activity
3. Meso compounds, plane symmetry
5. Thermodynamics and Kinetics
6. Alkyl Halides, Nomenclature, Physical Properties, Reactions of Alkyl Halides: SN1, SN2, E1, E2
7. Alkenes: Properties, Nomenclature, E-Z, cis-trans, Reactions of alkenes, Regioselectivity, Stereoselectivity, Carbocation Rearrangement
8. Alkynes: Properties, Nomenclature, Chemical Reactions
9. Introduction to Multistep Synthesis
10. Alcohols and Ethers: Properties, Nomenclature, Chemical Reactions/
11. NMR Spectroscopy: Shielding, <sup>1</sup>H-NMR signals, Chemical Shift, Splitting of the signals, solvents, Diamagnetic Anisotropy, Coupling Constant, <sup>13</sup>C-NMR Spectra