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Syllabus

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| Name and code of the course | **PHA157 GENERAL CHEMISTRY I** |
| Instructors | PROF. DR. ERDAL DINC  PROF.DR. NEVIN ERK  ASSOC. PROF. DR. OZGUR USTUNDAG |
| Level | Undergraduate |
| Credit | 2 |
| Course Type | Must |
| Course Content | The course content is as follows: Atomic structure, theories, Electron energy levels, wave characteristics of electrons, electron spin, Quantum numbers, atomic radius, ionization potential, electron affinity, Chemical bonds: molecular geometry, hybridization, molecule orbitals, Stoichiometry: gram atom, equivalent gram concepts, empirical formula calculations, Chemical reactions; oxidation numbers, Redox: equilibration of chemical systems, chemical equations and calculations about this, Gases: gas laws (Boyle, Charles, Dalton laws), Avogadro's principle, Graham Law, equations of state, kinetic theory, real and ideal gases, liquefaction of gases, solubility of gases in liquids, Henry Law, problems, Mass spectrometry and Nuclear Magnetic Resonance (NMR) spectroscopy, spectrum sample analysis, Instrumental analysis methods and spectrum sample analysis of these methods, Liquids: general properties, equilibrium vapor pressure, boiling points, heating and coding curves, phase diagrams, problems, Solutions, concentration units, vapor pressure (Raoult Law), boiling and freezing points, electrolyte solutions, Percentage of resolution, affinity between ions, solubility, problems; solids: general properties, geometry and problems |
| Goals of the course | * The aim of the General Chemistry I, is to give informations to the students , about atomic structure , periodic system, structure of compounds and chemical bonds , stochiometry , states of the matters. |
| Weekly course hours | 3 hours/week |
| Language | ENGLISH |
| Prerequisite | - |
| Resources | * Chemistry A Conceptual Approach, Mortimer * Temel Kimya, Sienko and Plane |