**Ankara Üniversitesi  
Kütüphane ve Dokümantasyon Daire Başkanlığı**

**Açık Ders Malzemeleri**

Ders izlence Formu

|  |  |
| --- | --- |
| Dersin Kodu ve İsmi | **CHM 101 Basic Chemistry I** |
| Dersin Sorumlusu | Arş. Gör. Dr. Meryem Kalkan Erdoğan |
| Dersin Düzeyi | Lisans/Bachelors Degree |
| Dersin Kredisi | 3 kredi |
| Dersin Türü | Zorunlu/Compulsory |
| Dersin İçeriği | Nature of chemistry: its place among other natural sciences, branches, measurement, calculation and unit systems, matter and energy, Law of conservation of mass, Dalton’s atom theory, Law of constant composition, Law of multiple proportions. Chemical Calculations: Mole, finding chemical Formula, oxidation, reduction and oxidation number, balancing chemical equations, calculations based ob chemical reactions. Structure of atom: matter and energy, atomic structure, developments in atomic theory, electrical structure of matter, electron, proton, atomic nuclei, neutron. Periodic Table: atomic energy levels, electron configurations of elements. Structure of nuclei: Atomic nuclei, radioactive disintegration reactions,nuclear fission and fusion, isotopes. Chemical bonds: types of chemical bonds, properties, formation theories, Lewis structure, hybridization, resonance, formal charge, dipole moment. Gases: Physical properties of gases, effect of mole, volume, temperature and pressure on eachother, ideal gase law, kinetic molecular theory. |
| Dersin Amacı | The course aims to teach the basic concepts, laws and practices of chemistry, to develop the ability to think and solve problems about chemistry, and to reveal the relationships between chemistry and other fields of science. |
| Dersin Süresi | 4 saat/hafta |
| Eğitim Dili | İngilizce |
| Ön Koşul | yok |
| Önerilen Kaynaklar | Chemistry The Central Science, Theodore L. Brown, H. Eugene LeMay, Jr., Bruce E. Bursten, 10th edition, Pearson 2006.  Chemistry; R.E. Brady, J.R. Holum, John Wiley & Sons, Inc. New York, 1996.  Genel Kimya İlkeler ve Modern Uygulamaları Cilt I ve II; R.H. Petrucci, W.S. Harwood ve F.G. Herring, Çeviri Editörleri: T. Uyar ve S. Aksoy, Palme Yayıncılık, 2002.  Temel Kimya Cilt I ve II; P. Atkins, L. Jones, Çeviri Editörleri: E. Kılıç, F. Köseoğlu, H. Yılmaz, Bilim Yayıncılık, 2004.  Temel Kimyasal Hesaplamalar; Y. Sarıkaya ve M. Önal, Gazi Kitabevi, Ankara, 2006.  Temel Üniversite Kimyası; E. Erdik ve Y. Sarıkaya, Gazi Kitabevi, 2004. |
| Dersin Kredisi (AKTS) | 4 AKTS |
| Laboratuvar | yok |
| Diğer-1 |  |