

**Ankara University  
Library & Documentation Department  
Open Course Materials**

**Course Syllabus Form**

<b>Course Code and Name</b>	<b>CHM0307–Inorganic Chemistry I</b>
<b>Instructor of the Course</b>	Prof. Dr. Selen BİLGE KOÇAK
<b>Course Level</b>	Bachelor
<b>Course Credit</b>	4
<b>Course Type</b>	Compulsory
<b>Course Content</b>	Structure of atom and atomic models, periodic properties of the atoms, intramolecular chemical bonds and structure of molecules, polarization theory and acids and bases
<b>Course Goals</b>	To acquire systematic and comprehensive basic information about atomic models, the structures of atoms and molecules, periodic properties of atoms, bond theories, hybridization, intermolecular interactions and acids and systematic and to develop the ability to think about Inorganic Chemistry
<b>Course Learning Outcomes</b>	<ol style="list-style-type: none"><li>1. He/She explains the similarities and differences in the properties of the elements in the same and / or different groups and blocks in the periodic table on the basis of the structure of the atom</li><li>2. He/She uses the library and other sources of information to obtain information about inorganic chemistry</li><li>3. He/She explains and compares the Bohr, Quantum and Vector atomic models related to atomic structure</li><li>4. He/She compares the quantum mechanical approaches for wave functions of single electron systems and multi electron systems.</li><li>5. He/She relates the macro properties of elements with electron configurations of atoms</li><li>6. He/She explains the bond types in compounds by using chemical bond theories</li><li>7. He/She discusses the geometry, magnetic and spectral properties of molecules using covalent bond theories</li><li>8. He/She relates the strong-weak and hard-soft properties of acids and bases with molecular structures</li><li>9. He/She estimates in which direction a chemical reaction will proceed</li></ol>
<b>Course Duration</b>	1 Semester, 14 weeks (total 4 hours a week)
<b>Education Language</b>	English
<b>Prerequisite</b>	None
<b>Recommended Sources</b>	Anorganik Kimya; D. F. Shriver and P. W. Atkins, üçüncü baskı, çeviri editörleri: S. Özkar, A. Gül and Y. Gök, Bilim Yayıncılık, 1999. İnorganik Kimya 1; Cemal Kaya, Palme Yayıncılık, 2008. İnorganik Kimya 2; Cemal Kaya, Palme Yayıncılık, 2008. İnorganik Kimya; G. L. Miessler and D. A. Tarr, ikinci baskı, çeviri editörleri: N. Karacan ve P. Gürkan, Palme Yayıncılık, 2002. Ölmez, H., Ölmez, H., Yılmaz, V. T. (2004). Anorganik Kimya. Otak Form-Ofset Basım-Samsun. Tunalı, N. K., Özkar, S. (2004). Anorganik Kimya. Gazi Yayınları-Ankara.
<b>Lab</b>	
<b>Other-1</b>	