# AYDIN ADNAN MENDERES UNIVERSITY
# COURSE INFORMATION FORM

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|---|---|---|---|---|---|---|---|---|---|
| Course Title | Chemistry II | | | | | | | | |
| Course Code | FBÖ152 | | | Couse Level | | First Cycle (Bachelor's Degree) | | | |
| ECTS Credit | 3 | Workload | 75 *(Hours)* | Theory | 2 | Practice | 2 | Laboratory | 0 |
| Objectives of the Course | To give information about the basic topics of chemistry and application of the theorotical knowledge into experiments | | | | | | | | |
| Course Content | To give information about the basic topics of chemistry and application of the theorotical knowledge into experiments | | | | | | | | |
| Work Placement | N/A | | | | | | | | |
| Planned Learning Activities and Teaching Methods | Discussion, Project Based Study, Individual Study | | | | | | | | |
| Name of Lecturer(s) | | | | | | | | | |

| Assessment Methods and Criteria | | |
|---|---|---|
| Method | Quantity | Percentage (%) |
| Midterm Examination | 1 | 40 |
| Final Examination | 1 | 60 |

| Recommended or Required Reading | |
|---|---|
| 1 | [1] Sevinç,Vahdettin; Atabek Yiğit, Elif; ?Genel Kimya II Ders Notları?, www.sakarya.edu.tr/~eatabek sitesinden indirilebilir. |
| 2 | [2] Sevinç, Vahdettin; Aydın, Ali Osman; Şengil, İ.Ayhan; ?Temel Kimya?, Aşiyan Yayınları, Adapazarı, 2003. |
| 3 | [3] Chang, Raymond; Çev.Ed: Soydan, Bahatt |
| 4 | [4] Sayılkan F.,Emre F.B., 2007;Genel Kimya Laboratuvarı I-II,Pegem Akademi,Ankara |
| 5 | [5] Çolak, N. ve Özdemir, C. 2002; Genel Kimya Laboratuarı , ABC Matb |

| Week | Weekly Detailed Course Contents | |
|---|---|---|
| 1 | Theoretical | Chemical kinetics: rate laws, reaction rates and measuring raction rates |
| 2 | Practice | Chemical kinetics: rate laws, reaction rates and measuring raction rates |
| 3 | Theoretical | Chemical equilibrium: Basic principles, equilibrium constant equation, factors that affecting equilibrium |
| 4 | Practice | Chemical equilibrium: Basic principles, equilibrium constant equation, factors that affecting equilibrium |
| 5 | Theoretical | Chemical equilibrium: Basic principles, equilibrium constant equation, factors that affecting equilibrium |
| 6 | Theoretical | Acids and bases: Arrhenius definition, Brönsted-Lowry definition |
| 7 | Practice | Strong and weak acids and bases, reactions of acids and bases and hydrolysis |
| 8 | Intermediate Exam | Midterm |
| 9 | Theoretical | Solubility |
| 10 | Theoretical | Complex ion equilibrium, solubility constant |
| 11 | Practice | Precipitation reactions |
| 12 | Theoretical | First group elements I Metals: Alkaline metals, earth alkaline metals |
| 13 | Practice | First group elements II Ametals: Noble gases, halogens, oxygen and nitrogen, carbon, silisium, boron |
| 14 | Theoretical | Electrochemistry: Electrolysis and Cell |
| 15 | Theoretical | Review topics |
| 16 | Final Exam | Final |

| Workload Calculation | | | | |
|---|---|---|---|---|
| Activity | Quantity | Preparation | Duration | Total Workload |
| Lecture - Theory | 14 | 1 | 2 | 42 |
| Individual Work | 12 | 0 | 1 | 12 |
| Midterm Examination | 1 | 9 | 1 | 10 |

| | | | | |
|---|---|---|---|---|
| Final Examination | 1 | 10 | 1 | 11 |
| | | | Total Workload (Hours) | 75 |
| | | | [Total Workload (Hours) / 25*] = **ECTS** | 3 |
| **25 hour workload is accepted as 1 ECTS* | | | | |

| **Learning Outcomes** | |
|---|---|
| 1 | 1)He/She will be able to define and interpret kinetics of chemical reactions. |
| 2 | 2) He/She will be able to tell basic principles of chemical equilibrium and interpret the factors that effect it. |
| 3 | 3) He/She will be able to distinguish and interpret the basic terms of termochemistry such as enthalpy, entropy and internal energy. |
| 4 | 4) He/she will be able to explain acid-base definitions. |
| 5 | 5) He/She will be able to interpret solubility and the factors that effect it. |

| **Programme Outcomes** *(Science Teacher Education)* | |
|---|---|
| 1 | To be able to gain subject knowledge of profession in theory and practice in the learning process. |
| 2 | To be able to gain the competence of using the appropriate approach, strategy, method and technique for the instructional plans to be prepared in the learning process. |
| 3 | To be able to gain  the skills of the teaching profession in the learning process. |
| 4 | To be able to implement teaching profession knowledge, skills, attitudes and habits related to the subject-matter in a real teaching and learning environment in the learning process. |
| 5 | To be able to comprehend contemporary approaches of education and the philosophy they are based on. |
| 6 | To be able to gain the basic skills such as comprehending, expressing, commenting, evaluating, being aware and enterprising, communicating, acknowledging the individual related to the subject-matter. |
| 7 | To be able to become individuals faithful to the Principles and Revolutions of Ataturk, be modern democratic, secular, protecting and deveoping one's country, being alive to the nation, respecting human rights, preserving the nature, not being discriminatory, giving importance to the traditions and customs, protecting the values |
| 8 | To be able to improve oneself in terms of sport, art and culture. |
| 9 | To be able to become individuals believing in lifelong learning. |
| 10 | To be able to gain the vision of being individuals who keep up with developments in social, economic, technological and scientific areas, who investigate the main reasons of World problems and try to contribute to the solutions of these problems. |

**Contribution of Learning Outcomes to Programme Outcomes** *1:Very Low, 2:Low, 3:Medium, 4:High, 5:Very High*

| | L1 | L2 | L3 | L4 | L5 |
|---|---|---|---|---|---|
| P1 | 5 | 5 | 4 | 4 | 5 |
| P2 | 5 | 4 | 4 | 5 | 4 |
| P3 | 5 | 4 | 5 | 5 | 4 |
| P4 | 5 | 4 | 4 | 4 | 5 |
| P5 | 4 | 5 | 5 | 5 | 4 |
| P6 | 4 | 4 | 4 | 4 | 5 |
| P7 | 4 | 5 | 4 | 5 | 4 |
| P8 | 4 | 4 | | 4 | 5 |
| P9 | 5 | 5 | 5 | 5 | 4 |
| P10 | 4 | 4 | 4 | 4 | 5 |