**Ankara Üniversitesi
Kütüphane ve Dokümantasyon Daire Başkanlığı**

**Açık Ders Malzemeleri**

Ders izlence Formu

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| Dersin Kodu ve İsmi | CEN207 Physical Chemistry |
| Dersin Sorumlusu | Prof. Dr. Zeki Aktaş |
| Dersin Düzeyi | Lisans |
| Dersin Kredisi | 3 |
| Dersin Türü | Zorunlu |
| Dersin İçeriği | 1. **The properties of gases:** The perfect gas, The kinetic model
2. **The First Law**: Internal Energy, Enthalpy, Thermochemistry, State functions and exact differentials, Adiabatic changes
3. **The Second and Third Laws:** Entropy, Gibbs energy etc.
4. **Simple mixtures:** The thermodynamic description of mixtures, The properties of solutions, Activities.
5. **Chemical equilibrium:** The equilibrium constant, The response of equilibria to conditions, Electrochemical cells, Electrode potentials
6. **Chemical kinetics:** The rates of chemical reactions, Integrated rate laws, Arrhenius equation, Photochemistry.
7. **Processes at solid surfaces:** An introduction to solid surfaces, Adsorption and desorption, Processes at electrodes.
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| Dersin Amacı | It is aimed to apply to chemical engineering by examining general physical chemistry basic principles and laws. |
| Dersin Süresi | 3 saat/hafta |
| Eğitim Dili | İngilizce |
| Ön Koşul | - |
| Önerilen Kaynaklar | Text book: Atkins’ Physical Chemistry, Peter Atkins, Julio de Paula, James Keeler, 11th Edition, Oxford University Press.References. Physical Chemistry, [Robert J. Silbey](https://www.amazon.com/Robert-J-Silbey/e/B001HMTML8/ref%3Ddp_byline_cont_book_1), Robert A. Alberty[,](https://www.amazon.com/s/ref%3Ddp_byline_sr_book_3?ie=UTF8&field-author=Moungi+G.+Bawendi&text=Moungi+G.+Bawendi&sort=relevancerank&search-alias=books) [Moungi G. Bawendi](https://www.amazon.com/s/ref%3Ddp_byline_sr_book_3?ie=UTF8&field-author=Moungi+G.+Bawendi&text=Moungi+G.+Bawendi&sort=relevancerank&search-alias=books) . Physical Chemistry, Ira N. Levine  |
| Dersin Kredisi (AKTS) |  |
| Laboratuvar | - |
| Diğer-1 | - |