

**BAŞKENT ÜNİVERSİTESİ**  
**MÜHENDİSLİK FAKÜLTESİ**  
**ELEKTRİK VE ELEKTRONİK MÜHENDİSLİĞİ BÖLÜMÜ**  
**2010-2011 AKADEMİK YILI GÜZ YARIYILI DERS İÇERİK FORMU**

**DERSİN KODU/ ADI** : EEM 301-01 Sinyaller ve Sistemler I

**ÖĞRETİM ELEMANI** : Prof Dr Alper Uraz (www.baskent.edu.tr/~auraz)

**DERS SAATLERİ** : Psi- 13.00 - 14.50 : Per-11.00 – 12.50

**OFİS SAATLERİ** : Sal-11.00-11.50 : Çar-16.00-16.50 Ofis: D410

**DERS KİTABI** : 1. Oppenheim, A. V., Willsky, A. S., “Signals and Systems”, Prentice-Hall, 2/e, 1997

**YARDIMCI KİTAPLAR** : 2. Buck-Daniel-Singer,”Signals and Systems using MATLAB”, Prentice Hall, 2/e, 2002  
3. Sinha, N. K.”Linear Systems”, Wiley,1991

**NOTLANDIRMA**

| Katılım | Kısa Sınav | Ödev | MATProje | Arasınav | Yarıyıl Sonu S. | Toplam |
|---------|------------|------|----------|----------|-----------------|--------|
| 3       | 14         | 4    | 4        | 35       | 40              | 100 %  |

| HAFTA | KONULAR                                                                                                          |
|-------|------------------------------------------------------------------------------------------------------------------|
| 1     | Classification of systems, differential equation models, p-operator, complementary function, particular integral |
| 2     | Difference equation models, q-operator,complementary solution, particular solution, stability                    |
| 3     | Classification of signals, periodic signals, complex exponential signals                                         |
| 4     | Some common signals, power and energy signals; impulse response of DT LTI systems,                               |
| 5     | Convolution sum for DT LTI systems, properties of convoluion sum                                                 |
| 6     | Impulse response of LTI system, convolution integral for CT LTI systems, properties of convolution integral      |
| 7     | Eigenfunctions, eigenvalues, Fourier series for CT periodic signals (CTFS)                                       |
| 8/9   | Midterm                                                                                                          |
| 9     | CTFS properties, periodic convolution, symmetry of signals                                                       |
| 10    | Fourier series for DT periodic signals (DTFS), DTFS and LTI systems, frequency selective filters                 |
| 11    | CT Fourier transform (CTFT), FT properties                                                                       |
| 12    | Frequency responses of LTI systems, duality                                                                      |
| 13    | DT Fourier transform (DTFT), properties, DT LTI systems                                                          |
| 14    | Magnitude and phase of FT, review                                                                                |

Tarih : 28. 09.2010

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