Hacettepe Üniversitesi

Açık Ders Malzemeleri

Örnek Çalışma Planı (Çalışma Takvimi)

Haftalar	Yapılacak Etkinlikler (Konu Başlıkları ve Okuma Parçaları)
1	**Düğüm, link nedir? Düğüm diyagramları, düğüm izotopisi, temel kavramlar.**
	○ Adams, C. (2004). **The Knot book, an elementary introduction to the mathematical theory of knots,** American Mathematical Society. (Sayfa: 1-7)
	○ Rolfsen, D. (1976). **Knots and links**, Berkeley, California: Publish or Perish Press. (Sayfa: 9-11)
	○ Murasugi K. (1996). **Knot theory and its applications**, Birkhauser Boston. (Sayfa: 5-16)
2	**Düğüm bileşimleri, Reidemeister hareketleri, düğüm tablosu**
	○ Adams, C. (2004). **The Knot book, an elementary introduction to the mathematical theory of knots,** American Mathematical Society. (Sayfa: 8-17)
	○ Rolfsen, D. (1976). **Knots and links**, Berkeley, California: Publish or Perish Press. (Sayfa: 388-392)
	○ Reidemeister K. (1932). **Knotentheorie**, Berlin: Springer-Verlag.
	○ Murasugi K. (1996). **Knot theory and its applications**, Birkhauser Boston. (Sayfa: 48-55)
3	**Düğüm değişmezleri: Bağlanma Sayısı**
	○ Adams, C. (2004). **The Knot book, an elementary introduction to the mathematical theory of knots,** American Mathematical Society. (Sayfa: 17-21)
	○ Murasugi K. (1996). **Knot theory and its applications**, Birkhauser Boston. (Sayfa: 64-68)
4	**Düğüm değişmezleri: Üçlü renklendirme**
	○ Adams, C. (2004). **The Knot book, an elementary introduction to the mathematical theory of knots,** American Mathematical Society. (Bölüm 1.5 Sayfa: 22-27)
5	**Düğüm değişmezleri: Çaprazlama sayısı, çözümleme sayısı, köprü sayısı**
	○ Adams, C. (2004). **The Knot book, an elementary introduction to the mathematical theory of knots,** American Mathematical Society. (Bölüm 3 Sayfa: 57- 69)
	○ Kanenobu T., Murakami H. (1986). **Two-bridge knots with unknotting number one**, Proc. Amer. Math. Soc., 98(3), 499–502.
	○ Murasugi K. (1996). **Knot theory and its applications**, Birkhauser Boston. (Sayfa: 56-65)
	○ Scharlemann M. (1985). **Unnoting number one knots are prime**, Invent. Math., 82, 37–55.
6	**1. Ara Sınavı**
7	**Düğümler ve yüzeyler, Seifert yüzeyler, Euler karakteristiği**
	○ Adams, C. (2004). **The Knot book, an elementary introduction to the mathematical theory of knots,** American Mathematical Society. (Bölüm 4 Sayfa: 71-105)
	○ Murasugi K. (1996). **Knot theory and its applications**, Birkhauser Boston. (Sayfa: 76-82)
8	**Düğüm polinomları, klasik Alexander polinomu**
	○ Alexander, J.W. (1928). Topological Invariants of Knots and Links, Trans. Amer. Math. Soc. 30, 275–306.
	○ Murasugi K. (1996). Knot theory and its applications, Birkhauser Boston. (Sayfa: 105-108)
	○ http://www.cs.columbia.edu/~cs6204/files/Lec9b,10.pdf web adresi
9	**Alexander-Conway Polinomu**
	○ Adams, C. (2004). **The Knot book, an elementary introduction to the mathematical theory of knots,** American Mathematical Society. (Sayfa: 108-116)
	○ Murasugi K. (1996). **Knot theory and its applications**, Birkhauser Boston. (Sayfa: 108-115)
	○ Conway H. (1970). **An enumeration of knots and links, and some of their algebraic properties, Computational Problems in Abstract Algebra** (Proc. Conf., Oxford, 1967 : J. Leech, ed.), Pergamon Press, New York, 329–358.

Haftalar	Yapılacak Etkinlikler (Konu Başlıkları ve Okuma Parçaları)
10	**Kauffman braketi, Kauffman braket polinomu**
	○ Adams, C. (2004). **The Knot book, an elementary introduction to the mathematical theory of knots,** American Mathematical Society. (Sayfa: 147-155)
	○ Murasugi K. (1996). **Knot theory and its applications**, Birkhauser Boston. (Sayfa: 233-240)
	○ Kauffman L. H. (1995). **Knots and Applications**, River Edge, NJ: World Scientific.
11	**2. Ara Sınavı**
12	**Jones polinomu**
	○ Murasugi K. (1996). **Knot theory and its applications**, Birkhauser Boston. (Sayfa: 219-232).
	○ Jones, V.F.R. (1985). **A polynomial invariant for knots via von Neumann algebras**, Bull. Amer. Math. Soc., 12, 103–111.
13	**Düğüm tipleri: torus düğümleri, uydu düğümleri, hiperbolik düğümler**
	○ Adams, C. (2004). **The Knot book, an elementary introduction to the mathematical theory of knots,** American Mathematical Society. (Sayfa: 107-127)
14	**Düğüm teorisinin kısa tarihi**
	○ Colberg E. **A brief history of knot theory**, http://www.math.ucla.edu/~radko/191.1.05w/erin.pdf web adresi
	○ Przytycki J. (1991). **A History of Knot Theory from Vandermonde to Jones**, Proc. Mexican Nat. Congress Math., Nov.
	○ Przytycki J.R. (1998). **Classical roots of knot theory**, Chaos, Solutions & Fractals, 9(415), 531–545.