**Ankara Üniversitesi  
Kütüphane ve Dokümantasyon Daire Başkanlığı**

**Açık Ders Malzemeleri**

Ders izlence Formu

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| --- | --- |
| Dersin Kodu ve İsmi | **FDE330 FOOD BIOTECHNOLOGY** |
| Dersin Sorumlusu | ARŞ. GRV. DR. SİMEL BAĞDER ELMACI |
| Dersin Düzeyi | LİSANS |
| Dersin Kredisi | 2 |
| Dersin Türü | SEÇMELİ |
| Dersin İçeriği | 1. Recombinant DNA Technology (The Definition, History and Main Areas of Application of Biotechnology Food Biotechnology; Nucleic Acids; Genetic Recombination; Gene Cloning Methods; Recombinant DNA Technology; In vitro DNA Replication) 2. Bioprocess: Biotransformation (Bioprocess=Bioconversion=Biotransformation Methods; Bioreactors (Fermenters); Microbial Growth Kinetics; Batch and Continuous Fermentation; Stoichiometry of Microbial Growth and Product Formation; Effect of Environmental Conditions on Microbial Growth Kinetics; Methods of Microbial Growth Measurement; Starter Culture Preparation; Product Formation After Fermentation) |
| Dersin Amacı | * An ability to have a knowledge on the basic principles of biotechnology and food biotechnology. * An ability to understand the methods and principles behind the genetic modification of organisms. * An ability to have an understanding of the potential risks as well as benefits of food biotechnology. * An ability to learn microbial biotechnology in depth, emphasizing applications to the food industry and methods of large-scale cultivation of microbes and other cells. * An ability to have a knowledge on recent developments in food biotechnology |
| Dersin Süresi | 2+0 |
| Eğitim Dili | İNGİLİZCE |
| Ön Koşul | YOK |
| Önerilen Kaynaklar | * Johnson-Green, P. (2002). **Introduction to Food Biotechnology**. CRC Press, USA. * Lee, B.H. (2015). **Fundamentals of Food Biotechnology** (Second edition).Wiley & Sons, Ltd., UK. * Amarakoon, I.I., Hamilton, C.L., Mitchell, S.A., Tennant, P.F., Roye, M.E. (2017). **Biotechnology**. In: Pharmacognosy-Fundamentals, Applications and Strategies. Badal, S., Delgoda, R. (eds). Elsevier. * Gutiérrez-López, G.F., Barbosa-Cánovas, G.V. (2003). **Food Science and Food Biotechnology*.*** CRC Press, USA. * Waites M. J., Morgan, N. L., Rockey, J. S., Higton, G. (2001). **Industrial microbiology, An Introduction**. Blackwell Sci., Great Britain. * Okafor, N. (2007). **Modern Industrial Microbiology and Biotechnology.** Science Publishers, Enfield, NH, USA. * Aran, N. (2010). **Gıda Biyoteknolojisi**. Nobel Yayın Dağıtım, Ankara.(*in Turkish*). |
| Dersin Kredisi (AKTS) | 6 |
| Laboratuvar | - |
| Diğer-1 |  |