

**Ankara Üniversitesi**  
**Kütüphane ve Dokümantasyon Daire Başkanlığı**  
**Açık Ders Malzemeleri**

**Ders izlence Formu**

<b>Dersin Kodu ve İsmi</b>	<b>FDE404 Process Control</b>
<b>Dersin Sorumlusu</b>	Doç. Dr. Aslı İŞÇİ YAKAN / Yrd. Doç. Dr. Özge ŞAKIYAN DEMİRKOL
<b>Dersin Düzeyi</b>	Lisans
<b>Dersin Kredisi</b>	2
<b>Dersin Türü</b>	Zorunlu
<b>Dersin İçeriği</b>	Importance of process control in the food industry, introduction to process control principles, definition of control objectives, disturbances, manipulated variables, basics of mathematical modeling, process control elements, definition of open and closed loop systems, transfer functions and block diagrams, types and selection of controllers, types and selection of control schemes. Process control of selected food engineering operations (bioreactors, blanching, pasteurization and sterilization, drying, freezing, evaporation and concentration, baking and extrusion).
<b>Dersin Amacı</b>	<ul style="list-style-type: none"><li>▶ To apply your knowledge of unit operations, mathematical modeling, food science and technology to control processes and equipment in the food industry</li><li>▶ Become aware of the relationship between process control and product quality in food industry.</li><li>▶ Gain awareness on the importance of selection and application of process control schemes in the food industry.</li><li>▶ To apply your knowledge of food science and engineering to optimize processing conditions and control them at their optima.</li><li>▶ Become aware of importance of process control in the food industry to manufacture products at optimum processing conditions.</li></ul>
<b>Dersin Süresi</b>	1 yarıyıl (haftada 2 saat)
<b>Eğitim Dili</b>	İngilizce
<b>Ön Koşul</b>	Yok
<b>Önerilen Kaynaklar</b>	Mittal G.S. 1997. Computerized Control Systems in the food Industry (Food Science and Technology). Brennan J.G. ve Grandison A.S. 2006. Food Processing Handbook. Moreira R.G. 2001. Automatic Control for Food Processing Systems. McFarlane I. 1995. Automatic Control of food Manufacturing. Berk Z. 2009. Food Process Engineering and Technology. Sung S.W., Jietae Lee, Lee I.B. 2009. Process Identification and PID Control. Stephanopoulos, G. 1984. Chemical Process Control. Seborg, D.E., Edgar, T.F., Mellichamp, D.A. 2004. Process Dynamics and Control. Alpbaz M., Hapoğlu H, Akay B. 2011. Proses Kontrol
<b>Dersin Kredisi</b>	2
<b>Laboratuvar</b>	Yok
<b>Diğer-1</b>	-