

Gazi University  
Department of Chemical Engineering  
CHE321 Heat Transfer  
Doç.Dr.Funda TURGUT BAŞOĞLU

## Homework 2

Due date: 14. Dec.2021

Water at 60 °C enters a tube of 1-in (2.54 cm) diameter at a mean flow velocity of 2 cm/sec. Calculate the exit water temperature if the tube length is 3m. and the wall temperature is constant at 80 °C. The properties of water at 60 °C are;

$$\rho = 985 \text{ kg/cm}^3, \quad C_p = 4.18 \text{ kJ/kg } ^\circ\text{C}, \quad k = 0.651 \text{ W/m}^\circ\text{C}, \quad \mu = 4.71 \times 10^{-4} \text{ kg/ms}$$