

## **57. Mechanobiology**

**1 unit, Morgan Huse, November 20, 2025**

- 1) Mechanical properties of cells and how to measure them
- 2) How cells transmit forces
- 3) Mechanosensing/mechanotransduction
- 4) Motility
- 5) Environmental forces
- 6) Cell-cell interactions

### **Discussion paper:**

De Belly H, Yan S, Borja da Rocha H, Ichbiah S, Town JP, Zager PJ, Estrada DC, Meyer K, Turlier H, Bustamante C, Weiner OD. Cell protrusions and contractions generate long-range membrane tension propagation. *Cell*. 2023 Jul 6;186(14):3049-3061.e15. doi: 10.1016/j.cell.2023.05.014. Epub 2023 Jun 12. PMID: 37311454; PMCID: PMC10330871.

### **Background Paper:**

Houk A, Jilkine A, Mejean C, et al., Membrane Tension Maintains Cell Polarity by Confining Signals to the Leading Edge during Neutrophil Migration. *Cell*, 2012, 148, 175-188.