

課程名稱：BMES421200分子細胞生物學 (100學年度上學期)

學分數：3

時間：Monday 7, 8, 9

地點：醫環系R401

授課老師：張建文 (C.W. Chang)

Goal: To provide students with knowledge on the fundamental of cell biology and its linking to biomedical engineering applications. Specifically, this course will cover: (1) structure and function of cellular components; (2) cellular transport and (3) cell communication.

Schedule

L1 Introduction to cells

L2 Chemical components of cells/methods to study cell

L3 Membrane structure/transport

L4 Intracellular compartments (organelles) and transport part 1

L5 Intracellular compartments (organelles) and transport part 2

L6 Cytoskeleton part 1: microfilaments

L7 Cytoskeleton part 2: microtubules and intermediate filaments

Mid-term exam

L8 The cell division cycle

L9 Control of gene expression

L10 Cell communication

L11 Cellular communities: tissues, stem cells, and cancer

L12 Special topics: cell biology for tissue engineering and regenerative medicine

Final exam