BIOL6342 - Stem Cell Biology in Development, Regeneration, and Cancer

BIOL 6342 Stem Cell Biology in Development, Regeneration, and Cancer (3 semester credit hours) Stem cells are present throughout the tree of life and play integral roles in development, tissue homeostasis, regeneration, and disease. The course will introduce students to key concepts and advances in the stem cell field. It will cover principles of stem cell biology (properties, potency, cell division, stem cell niche, molecular mechanisms), different stem cell types and their roles (embryonic, adult, iPSCs), various tools/technologies for studying stem cells, applications of stem cells in understanding/treating medical conditions (cancer, injury, autoimmune diseases) and ethical considerations. The course will consist of lectures, journal club classes, and interactive discussions. Department consent required. (3-0) Y