BIO 102 General Biology
Lecture Outline

Plant Reproduction

I. Sexual Reproduction in Angiosperms
- A. Heterosporous life cycle
  - Megaspores vs. microspores
  - Diploid vs. haploid
- B. Flower parts
  - Receptacle Sepals Petals (corolla)
  - Stamen = filament + anther (pollen producer)
  - Carpel = stigma + style + ovary (ovule producer)
- C. Carpels, ovaries, and ovules
  - Varying arrangements
  - Male & female flowers may be separate
- D. Gamete development & fertilization
  - Egg development
    - Ovule forms in ovary
    - Meiosis produces 4 megaspores
    - Nuclear mitosis yields 1 cell w/ 8 nuclei
    - 7 cell embryo sac, including endosperm (w/ 2 nuclei)
  - Sperm development
    - Spore-producing cells in anther
    - Meiosis produces 4 microspores
    - Mitosis yields 2-cell pollen grains
      - 1 cell → 2 sperm
      - 1 cell → pollen tube
  - Fertilization
    - Pollen → stigma→ style, pollen tube
    - Double fertilization
      - Embryo → seed
      - Endosperm
  - E. Classifying seeds and fruits
    - Origin
      - Simple fruit vs. aggregate fruit vs. multiple fruits
    - Which tissues comprise fruit
      - True fruits vs. accessory fruits
    - Composition of fruit
      - Dry vs. fleshy fruits

II. Asexual Reproduction

Runners	Rhizomes & cormes
Tubers	Bulbs
Parthenogenesis	Vegetative propagation