

BIOL 103: Genetics and Development

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Spring, 2015; 11:35-12:50, OML 202

Textbook “*Life: The Science of Biology*” by Sadava, et al. (9th or 10th edition)

The course introduces principles of genetics and development by highlighting the intellectual process and experimental methods leading to the discoveries in these fields.

Mon Jan 12 Introduction to Genetics and Development

(Lecture 1) 9th Chapter 1, Chapter 47 (985-993)

Wed Jan 14 Central Concepts in Development (I)

(Lecture 2) 9th Chapter 19 (405-408), Chapter 44 (930-933)

***Fri Jan 16** Central Concepts in Development (II)

(Lecture 3) 9th Chapter 19 (419-423), Chapter 20 (427-429), Chapter 44 (935-938)

Wed Jan 21 Key Events in Development (Body Axes & Patterning)

(Lecture 4) 9th Chapter 19 (412-423), Chapter 44 (922-937); Quiz 1 (15 min)

Mon Jan 26 Key Events in Development (Gastrulation, Organogenesis & Cell Death)

(Lecture 5) 9th Chapter 11 (229-230), Chapter 44 (928-940)

Wed Jan 28 The Central Dogma Revisited

(Lecture 6) 9th Chapter 16 (356-362); Quiz 2 (15 min)

Mon Feb 2 Stem Cells

(Lecture 7) 9th Chapter 19 (408-412)

Wed Feb 4 Cancer

(Lecture 8) 9th Chapter 11 (230-232); Quiz 3 (15 min)

Mon Feb 9 Hormones & Homeostasis

(Lecture 9) 9th Chapter 40 (832-838), Chapter 41 (851-868)

Wed Feb 11 Meiosis & Sex Determination

(Lecture 10) 9th Chapter 11 (221-229), Chapter 12 (256-260); Quiz 4 (15 min)

Mon Feb 16 Genetic Analysis of Birth Defect and Disease

(Lecture 11) 9th Chapter 12 (236-256)

Wed Feb 18 Biotechnology & the ABCs of GMOs

(Lecture 12) 9th Chapter 18 (393-403); Quiz 5 (15 min)

Mon Feb 23 *In class EXAM (75 min)*