

KAP Biology 114: Genetics and Development
2005-2006 School Year

Biology 114 will focus on the study of development (using the human and chick as examples), mechanisms of inheritance, advanced topics in genetics, biotechnology and bioethics. Reading and interpreting scientific literature, correct writing style, and a bioethical presentation will be integrated into this course.

Textbook: Human Genetics, Ricki Lewis, 6th Edition

There will be more articles than the those that are listed.

This is meant to be a **tentative** schedule for second semester. We will follow this **sequence** but may not always be on the projected date. The major assignments are in this syllabus.

You will be given a few other reading assignments as needed.

- Please read the **pages assigned and introductions** to each chapter. If you have the computer capabilities, take advantage of the online activities. .
- Tutorials for both courses are found on the Kenyon Website
- Website for your genetics book: <http://highered.mcgraw-hill.com/sites/0072846054>

Username: apstudent Password: mcgraw

M	1/23	Male hormone cycles; begin female; oogenesis
T	1/24	Ovarian cycle; hormones
W	1/25	Complete female; uterine, ovarian and hormone cycles
Th	1/26	Pass out Genetics book; Reading and bookwork
F	1/27	Film: The Nature of Sex
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M	1/30	Review male and female
T	1/31	Test chapter 19: male and female
W	2/1	Go over test; Chapter 20 notes; fertilization and blastocyst formation
Th	2/2	Implantation and membrane formation
F	2/3	Gastrulation and Neurulation
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M	2/6	Prep for quiz 1; complete neurulation
T	2/7	Quiz 1; Mesoderm notes and prep for embryo lab
W	2/8	Media Center
Th	2/9	Media Center
F	2/10	Mesoderm and membranes
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M	2/13	Complete embryo notes; prep for quiz 2
T	2/14	Quiz 2; Article: The good Egg
W	2/15	Media center
Th	2/16	Media center
F	2/17	Film: Thalidomide Survivors
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*M	2/20	President's Day No School
T	2/21	Chapter 1: Introduction to Genetics
W	2/22	Inborn errors of metabolism and genetic applications
Th	2/23	Complete chapter 1; bookwork
F	2/24	Chapter 2: Chemical level of inheritance
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M	2/27	Cell to cell interaction and faulty ion channels
T	2/28	Cell cycle and apoptosis
W	3/1	Complete cell cycle

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Th	3/2	Stem cells
F	3/3	Review and bookwork
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M	3/6	Test chapters 1 & 2
T	3/7	Chapter 4 Mendel and probability, terms and monohybrid crosses
W	3/8	Dihybrid crosses and pedigrees
Th	3/9	Pedigrees
F	3/10	Complete pedigrees; class group activity
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M	3/13	Chapter 5: Exceptions to Mendel's Laws
T	3/14	Maternal inheritance and linkage
W	3/15	Complete Chapter 5
Th	3/16	Chapter 6: Matters of sex, sexual development and phenotype forms
F	3/17	X-Linkage; Article: Why the Y
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M	3/20	X-inactivation; sex influenced traits, genomic imprinting
T	3/21	Complete Chapter 6; bookwork
W	3/22	Review Chapters 4, 5, & 6
Th	3/23	Film
F	3/24	Test
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M	3/27	Chapter 9: DNA structure
T	3/28	DNA continued
W	3/29	Complete DNA
*Th	3/30	No School
*F	3/31	No School
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M	4/3	Chapter 10: Gene action and transcription
T	4/4	Translation and protein folding
W	4/5	RNA processing
Th	4/6	Importance of Introns
F	4/7	Chapter 11: Control of gene expression
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M	4/10	Control of gene expression
T	4/11	Complete Chapter 11; Discuss group bioethical project
W	4/12	Library research for group project
Th	4/13	Chapter 12 mutation
*F: 4/14 - 23	Spring Break	
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M	4/24	Catch up
T	4/25	Complete mutations
W	4/26	Review 9-12
Th	4/27	Test 9-12
F	4/28	Group project; media center
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5/1 - the end of the year: Biotechnology, *GMO*, Gene therapy, biotech labs and procedures
Group Bioethical projects and Final Exam

Farewell to our beloved seniors! Good luck to future seniors! ☺