

Office- N264**Email-** jyoungblom@.csustan.edu**Office phone-** 667-3950**Office Hours- Monday 12-1:30 pm; Tuesday 9:30-11:00; or by appt.**

Required Texts- 1) Concepts of Genetics by Klug, Cummings, Spencer, & Palladino, 11th ed., 2014
2) The Double Helix by James D. Watson (many different editions available)
3) Time, Love, Memory by Jonathon Weiner, Vintage Books, 2000

Introductory Genetics is a required course for all biology majors. Ideally it is taken early in your junior year. This class attempts to present an overview of three branches of genetics: Mendelian genetics (also called classical or transmission genetics), Molecular genetics (DNA replication, transcription, translation, etc.), and molecular biotechnology (gene cloning). Genetics is a subject now frequently in the news, and we will take the time to discuss some of the issues related to 21st century genetics. This class will usually consist of three 50 minute lectures each week. To do well you have to devote study time to this course each week- reading, reviewing your notes, and working problems. You won't do well if you wait until a couple of days before the exam to try to cram in all of the information.

Course Prerequisites- A year of college biology and a year of college chemistry.

I will accompany each lecture with PowerPoint lectures. These lectures are available for preview on BLACKBOARD (<http://blackboard.csustan.edu>). Each exam will be accompanied by a study guide that recommends readings from the lecture text and problems from the back of each chapter.

Dates to Remember-

Monday, Sept. 5- No classes, Labor Day

Tuesday, Sept. 6- Last day to add (without petition/fee)

Wednesday, Sept. 21- Last day to drop a course/Census Day

Wednesday, Oct. 12- No classes, Columbus Day

Friday, Nov. 11- No classes, Veteran's Day

Thursday and Friday- Nov. 24 and 25 - No classes, Thanksgiving break

Monday, Dec. 12- Last day of classes

Tuesday, Dec., 13- No classes, Reading Day

Exams/QuizzesMon. Sept. 19- **Exam #1 (50 pts)**Mon. Oct. 17 - **Exam #2 (60 pts)**Mon. Oct. 24- **Quiz on The Double Helix (20 pts)**Mon. Nov. 14- **Exam #3 (60 pts)**Fri. Dec. 16 at 8:30 am – **comprehensive Final Exam (100 pts)**

The **Quizzes on Time, Love, Memory** will be given in 3 parts (10 pts., 10 pts., 15 pts.), on 3 consecutive weeks- Mon. Sept. 26, Mon. Oct. 3, and Mon. Oct. 10. Quiz #1 covers part I of the book, quiz #2 covers part II of the book, and quiz #3 covers part III of the book.

Each exam will be a mixture of different types of questions (such as matching, true/false, multiple choice, problems, and short essay). Exams 1, 2, and 3 are not comprehensive. **No leaving** the classroom during exams. Student caught cheating are automatically awarded an F.

The exams will be based on lecture material, reading in Concepts of Genetics, and the recommended problems at the end of each chapter. You are not required to hand in the recommended problems, but they will be helpful in studying for the exams. **The answers to some problems are in the back of your textbook.** The final exam is comprehensive and will contain ~15-20 pts. from each of the first exams.

| Assessment | Date | Points | Percent of Final Grade |
|--------------------------------|--|----------|------------------------|
| Exam 1 | Sept. 19 | 50 pts. | 12.5% |
| Ti, Lv, Mem quiz 1 | Sept. 26 | 10 pts. | |
| Ti, Lv, Mem quiz 2 | Oct. 3 | 10 pts. | |
| Ti, Lv, Mem quiz 3 | Oct. 10 | 15 pts. | 8.75% |
| Exam 2 | Oct. 17 | 60 pts. | 15% |
| Double Helix quiz | Oct. 24 | 20 pts. | 5% |
| Exam 3 | Nov. 14 | 60 pts. | 15% |
| Wed. quizzes | Sept. 7, Sept. 28, Oct. 27, Nov. 2, Nov. 23, Dec. 7 | 25 pts. | 6.25% |
| Mastering Genetics Homework | Various due dates | 50 pts. | 12.5% |
| Final Exam | Dec. 16 | 100 pts. | 25% |
| | | 400 pts. | 100% |

Grading- I will utilize the +/- grading system; at the end of the term I will assign each student one of these grades- A, A-, B+, B, B-, C+, C, C-, D+, D, D-, or F. Students at or above 90% will be guaranteed an A- or higher, students at or above 80% will be guaranteed a B- or higher, students at or above 70% will be guaranteed a C- or higher, students at or above 60% will be guaranteed a D- or higher.

Grading Scale (%)

(these numbers will not be raised; they could be lowered slightly)

| <u>%</u> | <u>Grade</u> | <u>%</u> | <u>Grade</u> |
|----------|--------------|----------|--------------|
| 94-100 | A | 74-76 | C |
| 90-93 | A- | 70-73 | C- |
| 87-89 | B+ | 67-69 | D+ |
| 84-86 | B | 64-66 | D |
| 80-83 | B- | 60-63 | D- |
| 77-79 | C+ | 0-59 | F |

Bonus points- 2 x 5 pts. = 10 pts.

- 1) Any day in Sept., stop by my office (during office hours or at any other time) for at least 5 minutes to introduce yourself. No group visits for this assignment.
- 2) Attend Special Movie Presentation (in Naraghi Hall 334)- Monday Nov. 21 at 5:15 p.m. or on alternative date (TBA).

Alternative Activities:

Six designated Wednesdays will not have a traditional lecture. The lectures will only be available on Youtube. They will have the usual PowerPoint Slides, but in addition will have a narration for each slide (voice-over). You have to watch and listen to the lecture on your own. You are responsible for the material. If watching and listening to these lectures in a campus computer lab bring headphones to the lab so you can listen to the voiceover without disturbing others. On weeks in which the Wednesday lecture is only available on the internet, there will be two class activities in the lecture room. One is a short 5 pt. quiz from the PowerPoint lecture that you viewed and listened to. This quiz will be taken in class using remote control clickers. The clickers are provided. Students can earn up to 5 pts. (quiz) on each of these 6 Wednesdays. Your lowest Wednesday score will be dropped and up to 25 pts. can be applied to your class grade. In addition to the quizzes on these six Wednesdays there will be another activity- a class discussion on a current topic related to genetics. Most of these activities are not in the text book but may be included on the next exam. Wednesday activity days: Sept. 7, Sept. 28, Oct. 26, Nov. 2, Nov. 23, and Dec. 7. The topics may include Forensic DNA, Stem cells, Human Aging, Human Reproductive Technology, Personalized Medicine, and Human Gene Therapy.

Homework:

Homework assignments require the online tool Mastering Genetics (see <http://www.masteringgenetics.com/>).

Access codes are including in the cost of the text (new) or can be purchased alone or with an Ebook.

Here is the info. that you need to register.

Mastering Genetics course = BIOL 3350-Fall 2016-JimYoungblom

Mastering Genetics ID #- YOUNGBLOM2016

There will be a set of problems for each chapter covered. Individual problems are scored for 1, 2, 3, 4, or 5 pts. The final homework total will be scaled back so that 100% on the homework problems is equal to 50 pts. You can still do the homework after the due date but the homework points automatically decrease 20% per day after the due date. You need to keep an eye on the Mastering Genetics calendar to keep tabs on the due date. FYI- The first assignment (Chapter 2) is due at 11:59 pm on Sept. 7. Also you can rework completed items after the due date. This work **will not be saved** and will not affect your grade. It is just for extra practice.

How to do well in this class-

1. **COME TO CLASS-** take good notes, ask questions. Go over your notes, rewrite them, and think about them after each lecture.
2. Read the chapters accompanying each lecture (see the study guides). Ideally read them before they are discussed in class.
3. If material is unclear, come and see me in my office.
4. Work the problems at the end of each chapter. Turn in the Mastering Genetics homework on time. Use all of the resources available at MasteringGenetics.com.
5. Use YouTube and other sources to review important concepts.
6. Start early in the semester and stay on top of the material. Don't start studying the night before the exam.
7. Read "The Double Helix" by J.D. Watson.
8. Read "Time, Love, Memory" by J. Weiner.

Communication- When I need to communicate with the class I will send an email to your csustan account or put an announcement on the class Blackboard page. Students should communicate with me via e-mail, using the e-mail address provided on the first page of this syllabus. When writing me (or your other professors) an e-mail, please use the following rules of etiquette:

1. Address your professors as "Dr." or "Professor".
2. Write in complete, grammatically correct sentences. The decline in basic literacy among students in the past 20 years has been dramatic. Do not use "texting" style when contacting me.
3. Sign e-mails with your full name, particularly if your e-mail address does not include your full name.

Make-up- If you know you can not be in class on the day of an exam, please see me beforehand so we can discuss your situation. In some circumstances, I will allow a make-up exam. If something comes up unexpectedly on the day of an exam, please call me. If you leave a message, leave a phone number and I will contact you to discuss your situation. Don't 'let it ride' and plan on discussing it with me later. If your situation warrants a make-up exam, then schedule your make-up exam ASAP. If I don't hear from you soon enough, you will get a 0

Cheating- Students caught cheating are automatically awarded an F. If I obtain evidence of cheating on any quiz or exam, I will report the incident to the Department Chair and the Dean of Students for immediate disciplinary action. Students are no longer allowed in class. All electronic devices (including phones) & headphones must be kept in purses or backpacks during the exams and quizzes. No exceptions. You can use a real calculator and not the calculator function on a cell phone or PDA.

Taping Policy- Audiotaping of classes is permitted only with prior permission of the instructor; videotaping is not permitted under any circumstances. Authorized tapes are for the personal use of the student, and may not be distributed to others without the permission of the instructor.

Guest Policy- Guests are permitted in class but only with prior permission of the instructor.

Memorization is not the antithesis of creativity; it is *absolutely indispensable* to creativity. You can't possibly hope to have creative insights unless you have memorized all the relevant information. And you can't hope to have *really* creative insights unless you have memorized a *vast* amount of information, because you have no way of knowing what might turn out to be useful.

Rote memorization is a *choice*. If you remember facts and concepts as part of an integrated whole that expands your intellectual horizons, it won't be rote. If you merely remember things to get through the next exam, it will be rote, and a whole lot less interesting, too. But that is solely *your choice*.

I Studied for *Hours*

How many? A college credit is defined as *three hours' work per week*; one in class and two outside. That's why adding a three-hour lab to a class only results in one additional credit.

This means that 12 credits translates to an average of 36 hours' work a week. That's why 12 credits is considered full time; it's the equivalent of a full-time job.