



Victor Valley College

Spring 2015 SYLLABUS

Course Title: Principles of Heredity

Course No: Biology 118

Section No.: 50522

Room No.: 31-5

Units: 3.0

Instructor: Mrs. Gibbs

Day/Time: Th, 5:30-8:40 pm

Phone: 760-245-4271, x2213

Office: SL-28

Office Hours: M 3:00-5:00 pm; Tu 4:30-5:30 pm; Th 2:30-3:00 pm

e-mail: jgibbs_vvc_bio@yahoo.com or jessica.gibbs@vvc.edu

Instructor's class website: www.jgibbs-vvc-bio.com

Victor Valley College

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Victorville, CA 92392

Visit Victor Valley College Online at: www.vvc.edu

Spring Classes:

| | |
|-------------|------------------------|
| February 17 | Spring Semester Begins |
| April 3 | Spring Break Day |
| April 13-17 | Spring Break |
| May 25 | Memorial Day Holiday |
| June 13 | Spring Semester Ends |

Important Dates:

| | |
|--|--|
| 14 days from first class meeting- Last day to drop a 16-week class and be eligible to apply for a refund | |
| March 1 | Last day to drop a 16-week class without a "W" |
| April 3 | Last day to drop a 16-week class and receive a "W" |

STATEMENT OF ACCESS: Students with special needs are encouraged to meet with instructors to discuss the opportunity for academic accommodation and be referred to disabled student program and services per Administrative Procedure (AP 3440)

Course Description

A survey of Mendelian inheritance, quantitative traits and population genetics. Also includes sections on DNA technology, immune genetics and genetics of cancer. This course places special emphasis on human inheritance and family pedigree analysis and will stress development of critical thinking and problem solving skills. CSU, UC

Student Learning Outcomes

1. Identify and describe cellular structures and functions and explain steps of mitosis and meiosis for humans.
2. Apply laws of probability to genetic inheritance and solve Mendelian genetics problems.
3. Describe the dogma theory of biology and explain how it relates to genetic inheritance.
4. Analyze fundamental DNA techniques and applications.
5. Identify and describe the roles of both quantitative and population genetics.

Prerequisites

NONE.

Required Textbook(s)

Text: Human Genetics; Concepts and Applications, Lewis, 10th ed.

Optional (and strongly recommended): Human Genetics Lecture Notetaker, J Gibbs, 2014 120814 (available in Rams Bookstore only)

***Tape recorder if you feel you need one for lecture

NOTE: The instructor and the instructor's lecture MAY NOT be PHOTOGRAPHED OR VIDEO TAPED in any manner. These actions are subject to disciplinary action.

A successful student in this class:

- Is prepared for class each day and completes homework assignments.
- Is motivated to succeed not only in the class, but toward whatever goal makes this class necessary for the student.
- Is dedicated to hard work. College classes require a minimum of 3 hours of studying per week for every 1 hour of lecture to receive a satisfactory grade (see College Board and Cliffs Notes).
- Demonstrates mature and respectful conduct towards their instructor and their fellow students in class.
- Respects class and campus policy and California state laws regulating this classroom.

Attendance:

Attendance is required and is the responsibility of the student. If you do not attend the first class session the instructor will drop you from the course (pg. 42 Victor Valley College Catalog 2014-2015). If you are enrolled in the course and do not plan to attend, you must drop the course to avoid receiving and "F" grade. It is absolutely the responsibility of the student to arrive on time to each and every class period, and missed quizzes and laboratory participation points CANNOT be made up. **PLEASE NOTE:** Each class session is very important. Failure to attend class jeopardizes not only a student's grades but the learning potential of the other students who were unable to gain access to the class due to enrollment limits. **The instructor reserves the right to drop any student after being absent for more time than there is units for the course (Principles of Heredity is 3.0 units; pg. 42 Victor Valley College Catalog 2014-2015).**

(Class attendance is not a measure of performance or proficiency. Whether a student is just physically present in the class is not a valid basis for grading. Reference Title Section 55002 of the California Code of Regulations: (A) Grading Policy. The course provides for measurement of student performance in terms of stated course objectives and culminates in a formal, permanently recorded grade based upon uniform standards in accordance with section 55758 of this Division. The grade is based on demonstrated proficiency on the subject matter and the ability to demonstrate that proficiency, at least in part, by means of written

expression that may include essays, or, in courses where the curriculum committee deems them to be appropriate, by problem solving exercises or skills demonstrations by students.)

Withdrawal Policy:

It is the student's responsibility to officially withdraw from the course. **DO NOT** simply stop coming to class and expect the instructor to drop you. Not withdrawing from the course will result in an "F" grade in the course. If a "W" is taken, no course work will be carried over to the next semester. You must REPEAT the course. The last day to drop the class and receive a "W" is **April 3rd**.

Incomplete Incomplete (pg. 44 Victor Valley College Catalog 2014-2015)

If a student has completed 85% (14 weeks) or more of the course with a "C" grade or better overall, but is unable to complete the remainder of the course due to extenuating circumstances (see student handbook), they may elect to take an incomplete (INC) for the course. You will be allowed to make up all missing assignments, but you cannot repeat completed assignments. All missing assignments and exams MUST be completed the following semester or the grade will revert back to the one they would have earned at the end of the incomplete semester. ***It is the student's responsibility to initiate the request for an incomplete!*** This must be completed in writing on a special school form and signed by both the instructor and the student before the end of the school session.

Evaluation/Grades: Your performance relative to the following activities will be carefully evaluated.

| | |
|------------------------------------|---------------|
| Lecture Exams (5 @ 100 pts) | 500 |
| SLO Assessment | 20 |
| Homework Assignments (16 @ 10 pts) | 160 |
| In-class Activity (6 @ 20 pts) | 120 |
| Genetics Problems | 25 |
| <u>Genetics Project</u> | <u>50</u> |
| Total Possible Points: | 875pts |

Grades will be assigned on the basis of the following grading scale (100-90%=A, 89.9-80%=B, 79.9-70%=C, 69.9-60%=D, ≤59.9%=F). Grades in the course will NOT be curved, and there are no exceptions! Study for your grade.

Final grades are based on five lecture exams, one SLO Assessment, 6 in-class assignments, genetics problem set and one genetics project. ***Note: This is a college-level SCIENCE course and the integrity and level of expectation will be upheld by the instructor. There is to be NO begging or coercion of the instructor to lower these expectations and these actions are frowned upon by the instructor. The instructor does not claim that this is an "easy" course. The instructor will expect an attitude towards the course that reflects the importance of the college-level science requirement.***

Grades in this class are non-negotiable. Study for your grade. If you are not achieving the grade level that you are hoping for in the class, ask the instructor for help! All grades will be posted on <http://www.eClassInfo.com>. Your instructor will give you a password and ID number. It is advisable to keep your work that has been graded and handed back. Should there be any discrepancies in the logging of your grades, you will be asked to show the graded work(s) as proof or your grade will remain as is in the system. ***If you have questions about your grades, you must inform the instructor within 5 days of the grade posting, INCLUDING THE FINAL GRADE!***

Lecture:

Lecture will be fast paced. There is a great deal of information that will be covered in this course. The lecture format will include Power Point presentation of the course content as well as drawings on a tablet computer. These drawings will be available after lecture on the instructor's class website. If you cannot print them yourself, you may obtain them during the instructor's OFFICE HOURS (the instructor will not bring copies to class). VVC students can also print a certain number of pages per day with their ASB card in the ATC Mall.

A **Lecture Notetaker** will be available for you to use in lecture from the Rams Bookstore. This notetaker is not mandatory, but is highly recommended. It is suggested that this notetaker be used as a study guide and tool. It is a guide as to what material is emphasized in the course for examinations. It is a study tool in that it is an outline of what will be presented in lecture and should be used as a guide for reading through the chapter prior to coming to class. This way you have already become familiar with the material and can come to class with any questions you may have and the concepts can be reinforced in lecture by the instructor. **NOTE: It is a notetaker...you should be taking NOTES on what the instructor lectures on.** Anything outlined in this notetaker as well as the content of the lecture are fair game for examination.

Suggestion: if you feel you are missing some of the lecture due to the pace, a tape recorder (voice only) should be used.

Lecture Exams:

Lecture exams will be multiple choice and essay. **You will need to be prepared with a scantron (form 882-E) and a No. 2 pencil.** You will have approximately one minute per question on the multiple choice portion of the exam and 10 minutes to complete the essay portion. If you are late to the exam you will only be allowed the amount of time remaining from the start of the exam for the rest of the class, so BE ON TIME. The exams will be administered at the beginning of the lecture period. If you have any questions about your score bring it to the instructor's attention the day the exam is returned. Notes WILL NOT be allowed for the exams and they are never open book. Your scantron and essay will be returned in class. If you wish to review your exam, **you must do so in the instructor's office hours.** **NOTE:** You will not be allowed to leave the room before you finish the exam (i.e. to use the restroom). If you leave the room, your exam will be ended and collected by the instructor.

- ***NOTE: Exam Policy in this course is that cell phones and other electronic devices be POWERED DOWN during the examination. Cell phones ringing/vibrating during any exam will result in an automatic 20 point deduction from your score for failure to follow this policy. They distract your fellow students and have been used as a cheating device in educational institutions. Turn them OFF before entering the classroom. No leniency whatsoever will be granted on this policy. If your phone rings or makes any sound at all, even unintended or by mistake, 20 points WILL be deducted. If you try to beg for these points not to be removed, all of your extra credit for the course will be deducted.***
 - ***NOTE: Failure to comply with examination/laboratory practicum instructions/policy will result in academic discipline, and may include a formal report and referral to the Dean of Student Services.***
- ***NOTE: This is a once-per-week course, three hours each class meeting. There will be lecture following the exams. Come prepared with your materials for lecture. To accomplish the required course hours for credit units for this class you will not be sent home after your exam.***

Make up exams will be given on **Tuesday, June 2nd at 10:30 am** (this date and time is NOT flexible for any reason) and only for **extenuating** circumstances (death in the immediate family or hospitalization of you

or an immediate family member, in which case proof will be required). A student may only be granted **ONE MAKE UP EXAM**. It is the student's responsibility to inform the instructor of the circumstances **prior** to the exam that will be missed and be **approved** for the make-up exam. Make-up exams will not be granted for reasons such as: lack of child care, broken down car/bus, change in work schedule or an alarm clock did not go off to wake you up, family trips, etc. It is **absolutely the responsibility of the student** to attend the class during the scheduled time for which the student has enrolled.

Rebuttals for Exam

If you believe that you are correct for a question marked wrong on an exam, you may submit a ½ page, TYPED EXPLANATION OF YOUR answer AND the citation of the page number from the **CURRENT EDITION** of Lewis, or a **PRIMARY literature article (peer-reviewed science article) that argues Lewis**, that supports your answer. Written notes from a doctor or any other professional will not be accepted as proof of the correctness of your answer. Your instructor is happy to explain the answer to the test question, but will not argue any other answers without this formal rebuttal.

SLO Assessment:

Student Learning Outcome assessments will be administered during the actual lecture periods. These assessments are designed provide feedback in regards to the learning process for the student and the instructor. The assessment will be described and the date will be announced and worth 20 points.

In-Class Activities:

These activities are designed to reinforce the lecture material each period. The assignments will be done in groups and turned in for a grade. They will be administered at the beginning of the lecture period. These activities will most often be in worksheet format that will be provided for you. These activities require participation at the time they are administered. If you are not in class at the time the activities are administered ou will receive a zero grade.

Homework Assignments:

You will receive homework assignments after each lecture. The assignments are sets of questions that directly support the material taught in lecture that day. The assignments are due at the BEGINNING of the next class period, **at the start** of the class period. They will not be accepted after the start of the class, so be on time. If you will not be in class on the day it is due you are responsible for finding a way to get it turned in by the start of the class. No exceptions. **The two lowest scores ("lowest" can be a zero from a non-submission) will be dropped; - therefore, there are NO MAKE-UPS, NO EXCEPTIONS.** This is to cover unforeseen emergencies that may keep the student from participating in class/turning in the assignment on time. There are, therefore, **NO MAKE-UPS, NO EXCEPTIONS**. **It is the student's responsibility to attend and participate in ALL SCHEDULED CLASS PERIODS**. Furthermore, extra credit is given in this class. **DO NOT ask for make-ups if you miss any of these assignments. Period.**

Genetics Project: The Genetics Project must be completed independently of others. You will research a genetic disease or disorder and construct a pamphlet, such as those that are handed out in health offices. A handout describing the details of this assignment will be provided to you by the instructor. **The due date for this assignment is 5/21/15; 5 points will be deducted for each calendar date that it is submitted late.** *Note: Plagiarism is a form of cheating and will result in an "F" grade on the assignment and disciplinary action.*

POLICY ON CHEATING:

Cheating will not be tolerated in the class. This is a college course and it will be expected that the students enrolled in this course conduct themselves in a manner consistent with those outlined in the **Victor Valley College Catalog 2014-2015 (pg. 47-50)**- with the utmost academic integrity and respect for the campus policies. The VVC and its faculty consider cheating a very serious offense, and penalties can be as severe as expulsion from the College. Disciplinary action will be imposed on the first offense- an "F" grade will be assigned to the offending student for the **exam/assignment** and the student will be formally reported to the Dean of Student Services- you do not get a free cheat! It is your responsibility to read and sign the accompanying description of campus cheating policy and be aware of all of the activities that fall into this category. The signed description is due to the instructor on **February 26th**; **exams will not be administered to the student without it, nor can they be made up.** Ignorance of what constitutes cheating is not justification to cheat.

Authority of Instructors- This policy WILL be upheld by the instructor.

According to Education Code Section 76032, faculty members have the authority to manage their classes and classrooms and to maintain an acceptable level of conduct within each class.

Faculty may suspend students from class for up to two consecutive class meetings for misconduct which disrupts the class.

Students suspended from class may not return to class during the time they are suspended unless permission to return is granted by the instructor.

Instructors must complete an incident report on all suspensions and transmit the form to the appropriate administrator.

(Victor Valley College Catalog 2014-2015 p. 42)

Classroom Discipline (pg. 50 of Victor Valley College Catalog 2014-2015)

Instructors need to outline classroom rules and behavioral expectations on their syllabus. Examples may include a prohibition on the use of cell phones, the wearing of appropriate lab attire, etc. Faculty may suspend students from class for up to two consecutive class meetings for misconduct and/or class disruption. Instructors must complete an incident report on all suspensions and forward the form to the Dean of Student Services. An instructor may assign a failing grade on a particular assignment or examination if the student was found to have plagiarized in preparing that assignment or cheated on a particular examination. An instructor cannot automatically fail a student for the entire course where the student is only known to have cheated or plagiarized with respect to one of several assignments administratively drop a student for cheating or plagiarism. A student may only be involuntarily removed from a course due to excessive absences or as a result of a disciplinary action take pursuant to law or the student code of conduct.

Some Lecture Ground Rules:

- ❑ *EACH LECTURE (a discourse given before an audience or class especially for instruction) WILL BE FOLLOWED BY A QUESTION AND ANSWER PERIOD. **DO NOT** INTERRUPT THE LECTURER- **AT ALL**. COMMENTS DURING LECTURE TAKE THE FOCUS AWAY FROM CONTINUOUS FLOW OF THE LECTURE TOPIC AND THUS EASE OF LEARNING. DISRUPTION DURING THE LECTURE WILL RESULT IN THE DISMISSAL OF THE STUDENT FROM THE ROOM.*
- ❑ ***DO NOT TALK** DURING LECTURE. TALKING DURING LECTURE DISRUPTS/ DISTRACTS THE INSTRUCTOR AND YOUR FELLOW CLASSMATES AND WILL NOT BE TOLERATED IN*

THIS CLASS. DISRUPTION DURING THE LECTURE WILL RESULT IN THE DISMISSAL OF THE STUDENT FROM THE ROOM.

- ❑ **DO NOT TEXT/SURF THE INTERNET DURING LECTURE.** If the instructor sees either of these activities occurring in class the student will be suspended from the class for two class periods for interrupting the learning process in the classroom (see “Authority of Instructors” above).
- ❑ There is to be **NO EATING OR DRINKING IN THE LABORATORY. DO NOT leave drinks on the floor in the hallway outside of the lab either. Fair Warning- The instructor will dispose of them if they are left there.**
- ❑ **Turn off your cell phones and/or any other form of noise-maker** for the duration of the class period. Interrupting the lecture is unacceptable and if the instructor hears ringing, vibrating or the playing of any little ditty/chime in class the student will be suspended from the class for two class periods for interrupting the learning process in the classroom (see “Authority of Instructors” above).
- ❑ If you are not present in the room when assignments and handouts are passed out in class, or when exams are returned it is your responsibility to obtain them from the instructor **DURING OFFICE HOURS.**
- ❑ If you are unable to print study material from the instructor’s website you may come to OFFICE HOURS to have them printed for you. The instructor DOES NOT bring prints to class. If you need them you **MUST acquire them in office hours.** The ATC Mall allows students to print a certain number of pages per day per student with ASB card.
- ❑ It is the policy of Victor Valley College that children **NOT** attend class with their parents nor be left unattended on campus while their parents attend class. If you qualify, there is a day-care center on campus. If not, please make arrangements for a sitter. Your safety and the safety of others in the laboratory will be a top priority. Also, any person, student or otherwise, that is not enrolled on the section cannot be present in the classroom. Study hard and by all means ask the instructor if you have questions.

SOME EXAMINATION GROUND RULES:

****Failure to comply with the following will result in academic discipline of the offending student.****

- ***Exam Policy in this course is that cell phones and other electronic devices be POWERED DOWN during the examination. Cell phones ringing/vibrating during any exam will result in an automatic 20 point deduction from your score for failure to follow this policy. They distract your fellow students and have been used as a cheating device in educational institutions. Turn them OFF before entering the classroom. No leniency whatsoever will be granted on this policy. If your phone rings or makes any sound at all, even unintended or by mistake, 20 points WILL be deducted. If you try to beg for these points not to be removed, all of your extra credit for the course will be deducted. If the instructor sees any electronic devices during the exam/practicum the offending student will receive an “F” score and be referred for academic discipline.***
 - ***NOTE: Failure to comply with examination/laboratory practicum instructions/policy will result in academic discipline, and may include a formal report and referral to the Dean of Student Services.***

- **SCANTRONS MUST BE BLANK** at the start of any exam and turned in without any notations other than the student's name, VVC ID and pertinent examination information instructed by the instructor. Notes, scribbles or anything other than filled in bubbles will be assumed cheating, result in an "F" grade and referred for academic discipline. You will be able to write on the examination packet, **BUT NEVER THE SCANTRON.**
- Hands and forearm checks for writing will be done before each exam starts. Hats must be turned backwards and, obviously, no headphones will be allowed to be worn.
- Examination seating will be assigned by the instructor. DO NOT expect to sit where you typically sit for class time. Any student that refuses to sit where assigned will not receive an examination and an "F" grade will be given to that student.
- Examination packets are NEVER to be kept by the student. ALWAYS return them to the instructor immediately after viewing them.

A WORD ABOUT EXTRA CREDIT:

Everyone in class starts off with 15 points extra credit to cover unforeseen circumstances that may lead to a student missing an assignment/participation in a rare case.

It is everyone's responsibility to ensure respectful conduct during lecture. If the instructor HEARS A PHONE, SEES A PHONE OR SEES ANY TEXTING IN LECTURE, 5 POINTS WILL BE DEDUCTED FROM THE EVERYONE IN THE CLASS. Let me make this **VERY** clear, it is STRONGLY recommended that **students remind each other to turn off their phones** before class begins as well. It is everyone in the class' responsibility to ensure that their classmates' phones are OFF. Each lecture begins with a PPT slide reminding students to turn off their phones. If a classmate arrives to class late, remind them to shut off their phone.

Extra credit in this class *may* also be assigned by the instructor depending on the *attitude* of the class as a whole. Extra credit may be given in the form of an assignment or as bonus questions on an exam. Should extra credit be assigned it is to be turned in to the instructor on the due date at the beginning of the period. Late submissions will NOT be accepted for ANY reason. Don't even bother bringing it to the instructor if you are late or were absent that day. Remember, extra credit is a privilege, NOT something you are OWED. Complaints about extra credit, or requests for additional extra credit opportunities will result in termination of any possibility of being awarded any extra credit for the remainder of the semester as well as retraction of ALL extra credit earned to date (including the 15 points stated above) for the offending student.

NOTICE: IF ANYTHING IN THE LAB DISAPPEARS, CLASS EXTRA CREDIT WILL TOO!

CONTINUED ENROLLMENT IMPLIES ACCEPTANCE OF POLICIES AND GUIDELINES HEREIN.

NOTE: After each class session it is the responsibility of each student at each table to make sure the tabletop, floors, sink and drawers are clean. ***There will be a 10 point deduction for everyone sitting at a table whose area has been left messy! NO JOKE- have some respect for VVC and its students.***

Lecture Course Schedule (tentative and subject to change depending on pace of course):

| Week | Date | Lecture Focus | Required Reading |
|-------------|-------------|--|-------------------------|
| 1 | 2/19 | Syllabus; Introduction to Genetics | Chapter 1 |
| 2 | 2/26 | Chemical Basis of Biology; Cells and Cell Structure | Handout; Chapter 2 |
| 3 | 3/5 | Cells and Cell Structure; DNA and DNA Replication | Chapter 2; 9 |
| 4 | 3/12 | EXAM I (CH.1,2, CHEM); DNA and DNA Replication | Chapter 9 |
| 5 | 3/19 | Transcription and Translation; Transcription and Translation In-Class Activity | Chapter 10; Handout |
| 6 | 3/26 | Regulation of Gene Expression; Genetic Mutation | Chapter 11; 12 |
| 7 | 4/2 | Exam II (CH. 9-12); Cell Cycle, Mitosis and Meiosis | Chapter 2, 3 |
| 8 | 4/9 | Cell Cycle, Mitosis and Meiosis; Inheritance and Mendelian Genetics | Chapter 2, 3; 4 |
| -- | | <i>SPRING BREAK HOLIDAY</i> | -- |
| 9 | 4/23 | Beyond Mendelian Genetics; Mendelian Genetics In Class Activity | Chapter 5,6,7; Handout |
| 10 | 4/30 | Independent Assortment- In Class Activity; Genetics: Cancer and Immunity | Handout; Chapter 17,18 |
| 11 | 5/7 | EXAM III (CH. 2-7); Genetics: Cancer and Immunity | Chapter 17,18 |
| 12 | 5/14 | DNA Technology; Reproductive Technologies and Activity | Chapter 17, 18; 19; 21 |
| 13 | 5/21 | Genomics; Population Genetics (Genetics Project Due) | Chapter 22; 14 |
| 14 | 5/28 | Exam IV (CH. 17,18,19,21,22); Population Genetics; Population Genetics In Class Activity | Handout; Chapter 15 |
| 15 | 6/4 | Genetic Evolution; Genetics Video Activity | Chapter 16; Handout |
| 16 | 6/11 | FINAL EXAM (CH. 14-16) | -- |