

BIOL 3200: Introductory Genetics (3 credit hours). CRN # 21979
Valdosta State University, Biology Department, College of Science & Math
Spring 2023: Laboratory Syllabus

Instructor: Dr. John G. Phillips (he/him): (Office: BC 2210):
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Lecture Times: **Mondays and Wednesdays: 3:30am–4:45pm – Bailey Science Center 1023**

Office (Student) hours **Tuesdays 1:45 PM – 2:45 PM** **Wednesday 2:30 PM – 3:30 PM**
Or by appointment (please send an email to my valdosta.edu account with
“appointment” in the subject line and I will accommodate as time permits).

Course Description: A survey of modern genetics, including Mendelian modes of heredity, extensions and variations on Mendelian genetics, chromosomal inheritance and variation, molecular properties of genes, and basic quantification of genetic diversity at the population level.

Pre- or Corequisites: BIOL 1107, 1107L, BIOL 1108, 1108L, and MATH 1112 or MATH 1113

Course Outcomes: Upon completion of this course the student should be able to:

- 1) Comprehend the basic terminology & principles of modern Mendelian Transmission Genetics from cellular meiosis to phenotype in the organism and relatedness to other sub-fields of genetics: **(BO2, BO3, GE4, GE7)**.
- 2) Extend upon basic Mendelian principles the understanding of chromosomal inheritance and how genes are regulated in an organism and quantified for a species within a population **(BO2, BO4, & GE4)**.
- 3) Solve basic and more complex Mendelian genetics in the form of ratios/probabilities, chi-square test, pedigrees, and quantitative population genetic problem sets **(BO1, BO4, BO5, GE3, GE5 & GE7)**.

VSU Biology Department Objectives:

BO1. Develop and test hypotheses, collect and analyze data, and present the results and conclusions in both written and oral format used in peer-reviewed journals and at scientific meetings.

BO2. Describe the evolutionary process responsible for biological diversity, explain the phylogenetic relationships among the other taxa of life, and provide illustrative examples.

BO3. Demonstrate an understanding of the cellular basis of life.

BO4. Relate the structure and function of DNA/RNA to the development of form and function of the organism and to heredity.

BO5. Interpret ecological data pertaining to the behavior of the indi

demonstrate competence in reading and listening.

GE5. Demonstrate knowledge of scientific and mathematical principles and proficiency in laboratory practices.

GE7.

Required Materials:

1) Benjamin A. Pierce. *Genetics Essentials: Concepts & Connections*. 2021. 5th Ed. W.H. Freeman & Company. ISBN-13 # 978-1-319-24492-7 OR 4rd Ed. ISBN-13 # 978-1-4641-9075-9 (very similar at least for a

Student identification: Students should always have their VSU student identification card. To verify the identification of students officially enrolled in the course, it is the instructor's prerogative to request official student photo identification cards at any time during lecture or during exams.

Privacy Act (FERPA): The Family Educational Rights and Privacy Act (FERPA) prohibit the public posting of grades by social security number or in any manner personally identifiable to the individual student. No grades can be given by email or over the telephone, as positive identification cannot be made by this manner. Grades will be posted through Blazeview course website.

Access Office: Students requesting classroom accommodations or modifications due to a documented disability must contact the Access Office for Stude