COURSE TITLE: Molecular Approach to Genetics  COURSE NUMBER: PCB 3063

COURSE DESCRIPTION (with prerequisites): PCB 3063 is an introductory study of the principles of inheritance and the molecular genetics of prokaryotes and eukaryotes including gene regulation. This course addresses specific Sunshine State Standards, subject matter competencies and pedagogy pertinent to the discipline and required for teacher certification. Prerequisites: BSC 2010, CHM 1045, CHM 1046. 3 semester hours credit.

NAME(S) OF INSTRUCTORS: Vary from semester to semester

EFFECTIVE SEMESTER: Not currently offered

REQUIRED TEXTBOOKS AND INSTRUCTIONAL SUPPLIES: TBD

GRADING POLICY: The standing of a student in each course is expressed by one of the following letters and corresponding grading system:
A – 90 – 100
B – 80 – 89
C – 70 – 79
D – 60 – 69
F – 59 or less
The Chipola Catalog provides policies and procedures regarding the grading system. A student’s Grade Point Average is derived from the grading system/quality point scale.

ATTENDANCE AND WITHDRAWAL POLICIES: Chipola College expects regular attendance of all students. Students who are absent from classes for any reason other than official college activities must satisfy the instructor concerned that the absence was due to illness or other clearly unavoidable reasons. Otherwise, the student may suffer grade loss at the discretion of the instructor. Chipola policy allows each instructor to specify in the Instructor First Day Handout whether or not an absence is excusable and what affect the absence or tardy may have on the grade.
A student is allowed to repeat a course a maximum of three (3) times. **On the third attempt a student (1) must bear the full cost of instruction (unless waived by Student Services), (2) cannot withdraw, and (3) must receive a grade.**

**MAKE-UP POLICY:**
Chipola allows each instructor to specify in the Instructor First Day Handout the makeup policy.

**ACADEMIC HONOR CODE POLICY:**
Students are expected to uphold the Academic Honor Code. Chipola College’s Honor Code is based on the premise that each student has the responsibility to (1) uphold the highest standards of academic honesty in his/her own work; (2) refuse to tolerate academic dishonesty in the college community; and (3) foster a high sense of honor and social responsibility on the part of students. Further information regarding the Academic Honor Code may be found in the Chipola Catalog, Student Governance section.

**STUDENTS WITH DISABILITIES POLICY:**
Chipola College is committed to making all programs and facilities accessible to anyone with a disability. Chipola’s goal is for students to obtain maximum benefit from their educational experience and to effectively transition into the college environment. Students with disabilities are requested to voluntarily contact the Office of Students with Disabilities to complete the intake process and determine their eligibility for reasonable accommodations.

**LIBRARY AND ON-LINE REFERENCE MATERIALS:**
The library is a comprehensive learning resource center providing information in print, electronic, and multimedia format to support the educational objectives of the College. On-line catalogs, e-books and electronic databases can be accessed by using the LINCCWeb icon on the Chipola Library website at [www.chipola.edu/library](http://www.chipola.edu/library). If you have questions about database usage consult the “How to Use the Chipola Databases” on the Library website or call the Library at 850/718-2274 during regular hours. Library hours are posted each semester at the building entrance and on the Library website. See your Instructor First Day Handout for individual instructor recommendations and resources.

**TECHNOLOGY RESOURCES:**
The Information Technology Center, located in the library, is equipped with computer workstations. Lab hours are posted each semester at the building entrance and on the Library website. The ACE Lab, located in Building L, is available for tutoring and is equipped with computer workstations. Lab hours are posted each semester at the room entrance. The college’s learning management system is Desire 2 Learn (d2l). Classes become available on d2l on the first day of the semester. It is the student’s responsibility to log onto the d2l system the first day of class to establish the first day of attendance and to check announcements. For further information, contact your instructor or the Director of Online Learning.
**ELECTRONIC DEVICE USAGE:**
All electronic devices such as cell phones, beepers, pagers, and related devices are to be silenced prior to entering classrooms and/or laboratories to avoid disruption. Should it become necessary for a student to leave his/her “device” on to send or receive an emergency call and/or text message, the student must inform the instructor prior to class. If the student finds it necessary to send and/or receive an emergency call and/or text message during class/lab time, he/she is instructed to take all books and belongings and step outside the classroom to deal with the situation. To minimize classroom disruption and the distraction to classmates, the student will not be permitted to reenter the classroom during that class period. Any time a test is being administered, all such devices must be turned off and put away. If a device is seen or heard during an exam, a score of zero will be given for that exam. Initial and repeated infractions may result in disciplinary action.

**DISCIPLINE SPECIFIC COMPETENCIES / LEARNING OUTCOMES:**
PCB 3063 is not a general education course.

<table>
<thead>
<tr>
<th>STUDENT LEARNING OUTCOMES FOR PCB 3063</th>
<th>NGSSS/ NSES Standards</th>
<th>FEAPs (Discipline Outcomes)</th>
<th>FL Competencies and Skills:</th>
<th>Assessment Activities</th>
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<tbody>
<tr>
<td>1. The student will demonstrate an understanding of the principles and patterns of inheritance</td>
<td>1.1, 1.2, 1.4, 1.6, 3.3, 4.1, 4.2, 4.16, 5.2, 5.4, 5.5, 5.6, 5.7, 6.1, 6.4, 6.6, 6.7, 6.8, 6.9, 6.11, 6.14</td>
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<td>2. The student will demonstrate an understanding of DNA, genes and gene expression</td>
<td>1.1, 1.2, 1.4, 3.1, 3.4, 4.1, 4.2, 6.1, 6.2, 6.3, 6.4, 6.9, 6.11, 6.13, 6.14, 7.11</td>
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<td>3. The student will demonstrate an understanding of introductory information in the study of genomes</td>
<td>1.1, 1.2, 1.4, 3.1, 4.1, 4.2, 6.1, 6.4, 6.9, 6.13, 7.10</td>
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<td>4. The student will demonstrate an understanding of gene</td>
<td>1.1, 1.2, 1.4, 3.1, 4.1, 4.2</td>
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regulation, cell cycle regulation and the genetics of cancer

6.1, 6.4, 6.12, 6.14, 7.6

5. The student will demonstrate an understanding of population genetics, quantitative genetics and molecular evolution

1.1, 1.2, 1.4, 4.1, 4.2, 4.16, 6.1, 6.4, 6.10, 8.5, 9.2, 9.4, 9.7

**Assessment Codes**

T = Tests  
Pre/Post = Pre- and Post-Tests  
OT = Objective Tests  
UT = Unit Tests  
Q = Quizzes  
F = Final Examination  
CF = Cumulative Final  
EX = Departmental Exam  
SE = Nat’l or State Standardized Exam

RPT = Report/Presentation  
SP = Skills Performance  
SD = Skills Demonstration  
W = Writing Assignments  
E = Essays  
DE = Documented Essays  
RP = Research papers  
J = Jury  
R = Recital

Proj. = Projects  
Exp. = Experiments  
Cap. Proj. = Capstone Project  
Cap. Course = Capstone Course  
Prac. = Practicum  
Intern. = Internship  
H = Homework  
PS = Problem Solving  
DB = Discussion Board

BO = Behavioral Observation  
Clin. = Clinicals  
CS = Case Study  
CP = Case Plan  
Port. = Portfolio  
Obs. = Teacher Observation  
Sk. Check = Skills Check-off  
Curriculum Frameworks  
JP = Judged  
Performance/Exhibition

MEANS OF ACCOMPLISHING STUDENT LEARNING OUTCOMES:

The primary method of instruction in the classroom is the lecture based on the textbook, supplemented by other text books, reference books, and background involving cumulative knowledge, experience and general familiarity with the subject.

The student will be involved in oral communication through responses to questions. Discussions are encouraged and they may arise by a question to the class or by questions from students.

The instruction is further supplemented with board illustrations, charts, slides, filmstrips, films, computer software, and demonstrations.

ASSIGNMENT AND/OR COURSE OUTLINE

See your Instructor First Day Handout for individual instructor assignment schedule.