COURSE TITLE: Microbiology  
COURSE NUMBER: MCB 2010L  

COURSE DESCRIPTION (with prerequisites):  
This course is an introduction to experimental techniques in microbiology. The exercises include cultivation and various staining techniques, isolation, identification, biochemical activities, antibiotic sensitivity tests and basic immunology. Two hours of laboratory per week. Corequisite or prerequisite: MCB 2010. 1 semester hour credit.  

NAME(S) OF INSTRUCTORS:  
Dr. Santine Cuccio, Terolyn Lay  

EFFECTIVE ACADEMIC YEAR:  
2018-2019  

REQUIRED TEXTBOOKS AND INSTRUCTIONAL MATERIALS:  

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, and all instructors record attendance daily. 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.

**NOTICE OF EQUAL ACCESS/EQUAL OPPORTUNITY AND NONDISCRIMINATION:**
Chipola College does not discriminate against any persons, employees, students, applicants or others affiliated with the college with regard to race, color, religion, ethnicity, national origin, age, veteran’s status, disability, gender, genetic information, marital status, pregnancy or any other protected class under applicable federal and state laws, in any college program, activity or employment.

Wendy Pippen, Associate Vice President of Human Resources, Equity Officer and Title IX Coordinator, 3094 Indian Circle, Marianna, FL 32446, Building A, Room 183C, 850-718-2269, pippenw@chipola.edu.

**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. 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 college’s learning management system is Canvas. Classes become available on Canvas on the first day of the semester. It is the student’s responsibility to log onto the Canvas system the first day of class to establish the first day of attendance and to check announcements. All official class communication must be through Canvas. For further information, contact your instructor or the Director of eLearning. The Canvas support hotline is available online in live chat and on the phone, toll-free, at 855-308-2812 for any issues in accessing or utilizing Canvas. The 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.

FREE TUTORING RESOURCES:
The Academic Center for Excellence (ACE) Lab, located in Building L, offers free tutoring from 8 a.m. to 5 p.m. and is equipped with computer workstations. ACE lab hours are posted each semester at the room entrance and on the website. Additionally, Chipola College has contracted Smarthinking, a Pearson Company, for online tutoring services, accessible especially from 5 p.m. to 8 a.m. and weekends. Smarthinking can be accessed through Canvas.

ELECTRONIC DEVICE USAGE STATEMENT:
Classrooms should be free of all unnecessary distractions from the task of learning. Therefore, as a general rule, students should silence and avoid use of all electronic devices (laptops, phones, tablets, etc.) not being used for coursework. Consult first-day handouts for any specific policies related to the use of electronic devices in the classroom, as they may vary depending upon the nature of the course or the guidelines of the instructor. Faculty reserve the right to regulate the use of electronic devices and their accessories in class.

DISCIPLINE SPECIFIC COMPETENCIES / LEARNING OUTCOMES:
Explore the History, Nature, Methods, and Limits of Science

NS-1 Use methods of scientific investigation.

NS-2 Apply scientific principles.

NS-3 Identify scientific ideas related to the history or nature of science and examine issues and problems facing modern science.

NS-4 Identify relationships between science and technology.
**LINKING COURSE-LEVEL STUDENT LEARNING OUTCOMES WITH DISCIPLINE-SPECIFIC COMPETENCIES, ASSESSMENT METHODS, AND ARTIFACTS**

<table>
<thead>
<tr>
<th>COURSE-LEVEL STUDENT LEARNING OUTCOMES FOR MCB 2010L</th>
<th>DISCIPLINE-SPECIFIC GENERAL EDUCATION COMPETENCIES</th>
<th>ASSESSMENT METHODS FOR COURSE LEVEL STUDENT LEARNING OUTCOMES</th>
<th>LEARNING ARTIFACTS FOR AA PROGRAM ASSESSMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Use the light microscope and each component, properly and carefully, in the identification of microbes.</td>
<td>NS-1, NS-4</td>
<td>UT, SP, W</td>
<td>Collect microbial specimens from the environment. Use techniques such as inoculating, isolating, sub culturing, and inspecting to identify the microbe(s) and formulate a researchable question and experiment with results and conclusions. Prepare a report of the findings to share with the class that includes data tables, graphs and charts.</td>
</tr>
<tr>
<td>• Perform techniques for inoculation, incubation, isolation, inspection and identification of microbes.</td>
<td>NS-1, NS-4</td>
<td>UT, SP, W</td>
<td></td>
</tr>
<tr>
<td>• Follow laboratory safety procedures which include handling and disposal of microbes and hazardous materials.</td>
<td>NS-4</td>
<td>UT, SP, W</td>
<td></td>
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<tr>
<td>• Determine the elements of a well-designed and controlled experiment, including interpretation of data, relationships between variables.</td>
<td>NS-1, NS-2, NS-3, NS-4</td>
<td>UT, SP, W, Proj., Exp., RPT</td>
<td></td>
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<tr>
<td>• Differentiate between qualitative and quantitative data in experimental and observational methods of research.</td>
<td>NS-1, NS-2, NS-3, NS-4</td>
<td>UT, W, Proj, Exp., RPT</td>
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**Assessment Codes**


**MEANS OF ACCOMPLISHING STUDENT LEARNING OUTCOMES:**

Lecture and practical application of skills are the primary methods of instruction. Students are expected to be attentive and are encouraged to ask questions. Lectures may be primarily from the textbook, and may be enhanced by the board illustrations, concept maps, power point presentations and overhead transparencies. Other teaching strategies may include: use of inquiry, science activities, demonstrations, problem solving, critical thinking, cooperative groups, process skills (describing relationships between variables, acquiring...
and processing your own data, analyzing investigations, constructing hypotheses, defining variables operationally, designing investigations, experimenting), class discussions, large and/or small group projects, service projects, oral presentations, read and report on subject matter articles from referred journals, reflective papers.

**ASSIGNMENT AND/OR COURSE OUTLINE**

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