Medical Bacteriology CLSC 4370  
Department of Life Sciences  
Fall 2020

A. COURSE INFORMATION

Course number/section: CLSC 4370.W01  
Class meeting time: Lectures: MW 10:00-10:50 am;  
Labs M 11-11:50 am, 12:00-12:50 pm  
T 1:30-3:20 pm W 11:00-1:20 pm  
Class location: Lecture online, Lab TH-207  
Course Website: https://bb9.tamucc.edu/

B. INSTRUCTOR INFORMATION

Instructor: Qianqian Liu, Ph.D, MLS(ASCP) CM  
Office hours: By appointment  
Telephone: 361-825-2891 Tidal Hall #241  
E-mail: Qianqian.liu@tamucc.edu  
Appointments: Contact me at the above phone number, by email, or after class to make an appointment.

C. COURSE DESCRIPTION

Catalog Course Description  
Lecture and laboratory studies of common pathogenic bacteria. Emphasis is on staining, cultural, and differential biochemical characteristics, and methods of isolation from clinical specimens.

Extended Course Description  
This course consists of lectures and laboratory studies of human pathogenic bacteria. The lecture and laboratory studies are to familiarize the students with the morphology and biochemical characteristics of the pathogens and the diseases they cause.

D. PREREQUISITES AND COREQUISITES

Prerequisites  
Prerequisite or Co-requisite: BIMS 2421

E. REQUIRED TEXTBOOK(S), READINGS AND SUPPLIES

Required Textbook(s)  
Bailey and Scott’s Diagnostic Microbiology, 14th Edition, Author: Patricia M. Tille

F. STUDENT LEARNING OUTCOMES AND ASSESSMENT

Assessment is a process used by instructors to help improve learning. Assessment is essential
for effective learning because it provides feedback to both students and instructors. A critical step in this process is making clear the course’s student learning outcomes that describe what students are expected to learn to be successful in the course. The student learning outcomes for this course are listed below. By collecting data and sharing it with students on how well they are accomplishing these learning outcomes students can more efficiently and effectively focus their learning efforts. This information can also help instructors identify challenging areas for students and adjust their teaching approach to facilitate learning.

By the end of this course, students should be able to:

1. Evaluate the proper safety and quality control procedures used in the microbiological laboratory.
2. Describe the collection and proper preparation of routine specimens tested in the microbiological laboratory.
3. Summarize the type of culture media, and the principle of the biochemical tests used in the identification of the bacteria.
4. Describe the pathological significance, cultural requirements, colonial morphological characteristics, and technique for the isolation and identification of bacterial pathogens.
5. Evaluate the identification of human pathogenic bacteria using clinical microbiological methods and selected confirmatory procedures.
6. Evaluate the techniques, principles and instruments used in the diagnosis of bacteriological disease.
7. All examination questions are keyed to those objectives.

G. INSTRUCTIONAL METHODS AND ACTIVITIES

PowerPoint lectures, quizzes, and laboratory assignments will be used for instruction. Proficiency must be demonstrated in the laboratory at a minimum of 70%.

H. MAJOR COURSE REQUIREMENTS AND GRADING

The final grade will be based on the points scored on a comprehensive final examination, four term examinations, and graded laboratory and class evaluations.

<table>
<thead>
<tr>
<th></th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Exam 1</td>
<td>15%</td>
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<tr>
<td>Exam 2</td>
<td>15%</td>
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<tr>
<td>Exam 3</td>
<td>15%</td>
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<tr>
<td>Final exam</td>
<td>20%</td>
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<tr>
<td>Quiz and homework</td>
<td>10%</td>
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<tr>
<td>Laboratory</td>
<td>25%</td>
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 Unscheduled quizzes may be given during lecture and lab sessions and a zero will be given for a missed quiz.

All tests will be multiple choice and possibly some short answer, and identifications. All examination questions are keyed to the lecture and laboratory objectives. Examinations
may be taken only during the scheduled time. Documented proof of emergencies is required.

The following scale will be used to report grades:
- A - 90 - 100
- B - 80 - 89
- C - 70 - 79
- D - 60 - 69
- F - below 60

### I. COURSE CONTENT/SCHEDULE

<table>
<thead>
<tr>
<th>DATE</th>
<th>Lecture Mon/Wed 10:00-10:50 am</th>
<th>Lab (two sessions)</th>
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<tbody>
<tr>
<td>Aug 24-28</td>
<td>Staining, Cultivation, Biochemicals And Identification</td>
<td>Pure Culture Gram Stain, Microscopy and Colony Morphology</td>
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<tr>
<td>Aug 31-Sep 4</td>
<td>Staph, Strep And Similar Gram Positive Organisms</td>
<td>Gram Positive Culture Examination Unknown: Staph/Strep</td>
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<tr>
<td>Sep 8-11</td>
<td>Gram Positive Bacilli (1 Lecture)</td>
<td>Unknown: Staph/Strep/G Positive Bacilli and Yeast (One Lab Session)</td>
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<tr>
<td>Sep 14-18</td>
<td>Neisseria/Moraxella/Haemophilus; Exam 1</td>
<td>Unknown: Mixed Organism (Staph/Strep/GGR/Yeast/Neisseria/Moraxella/Haemophilus)</td>
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<tr>
<td>Sep 21-25</td>
<td>Enterobacteriaceae “Enteric” Part 1</td>
<td><strong>Lab Practical</strong>: Streak Plate/Gram Stain/Unknown Mixed Organisms</td>
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<tr>
<td>Sep 28-Oct 2</td>
<td>Enterobacteriaceae “Enteric” Part 2</td>
<td>Positive Blood Culture Gram stain; API practice; Gram Negative Bacterial identification</td>
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<tr>
<td>Oct 5-9</td>
<td>Vibrio, Campylobacter and Related Organisms; Nonfermentative GNR</td>
<td>Biochemical tests for GNR; Unknown mixed organism;</td>
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<tr>
<td>Oct 12-16</td>
<td>Fastidious, HACEK and miscellaneous GNR; Mycoplasma/ Spirillum/ Rickettsia/ Chlamydia</td>
<td>Biochemical tests for GNR; Unknown mixed organism;</td>
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<tr>
<td>Oct 19-23</td>
<td><strong>Exam 2</strong></td>
<td>Unknown mixed organism; Anaerobes</td>
</tr>
<tr>
<td>Oct 26-30</td>
<td>Anaerobes</td>
<td><strong>Lab Practical</strong>: biochemical test; unknown mixed organisms</td>
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<tr>
<td>Nov 2-6</td>
<td>Clinical culture: Respiratory Tract</td>
<td>Clinical culture unknowns</td>
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<tr>
<td>Date</td>
<td>Clinical Culture: Urinary/Urogenital/GI Infections</td>
<td>Clinical Culture Unknowns</td>
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<tr>
<td>Nov 9-13</td>
<td>Clinical culture: wound/ bloodstream/ CNS/ Miscellaneous</td>
<td>Clinical culture unknown</td>
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<tr>
<td>Nov 16-19</td>
<td>Review</td>
<td>Review for final</td>
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<tr>
<td>Nov 23-24</td>
<td>Final Exam</td>
<td>Final practical: clinical culture unknown</td>
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<td>Nov 30-Dec 4</td>
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Note: Changes in this course schedule may be necessary and will be announced to the class by the Instructor. The assignments and exams shown are directly related to the Student Learning Outcomes described in Section F.

J. COURSE POLICIES

**COVID-19**

**Face Coverings**—Face coverings (cloth face covering, surgical mask, etc.) must be properly worn in all non-private spaces including classrooms, teaching laboratories, common spaces such as lobbies and hallways, public study spaces, libraries, academic resource and support offices, and outdoor spaces where 6 feet of physical distancing is difficult to reliably maintain. Extra masks will be made available if needed.

**Attendance/Tardiness**
Attendance is expected and is included in the grading policy.

**Late Work and Make-up Exams**
No late work will be accepted and no exams made up without an excuse.

**Extra Credit**
No extra credit is offered.

**Cell Phone Use**
Cell phones will be turned off during class and laboratory meetings.

**Laptop Use**
Laptops are not required but can be used during class and lab meetings.

**Food in Class**
No eating in the classroom or laboratory.

**Missed Exam**
Any missed exams must be discussed with the instructor and a different exam may be
Participation
Participation is encouraged in the classroom and mandatory in the laboratory.

Others
Professionalism is practiced in the CLS program as students will be entering a professional environment in their clinical practicums and their careers.

K. COLLEGE AND UNIVERSITY POLICIES

- **Academic Integrity (University)**
  University students are expected to conduct themselves in accordance with the highest standards of academic honesty. Academic misconduct for which a student is subject to penalty includes all forms of cheating, such as illicit possession of examinations or examination materials, falsification, forgery, complicity or plagiarism. (Plagiarism is the presentation of the work of another as one’s own work.) In this class, academic misconduct or complicity in an act of academic misconduct on an assignment or test will result in a failing grade.

- **Classroom/Professional Behavior**
  Texas A&M University-Corpus Christi, as an academic community, requires that each individual respect the needs of others to study and learn in a peaceful atmosphere. Under Article III of the Student Code of Conduct, classroom behavior that interferes with either (a) the instructor’s ability to conduct the class or (b) the ability of other students to profit from the instructional program may be considered a breach of the peace and is subject to disciplinary sanction outlined in article VII of the Student Code of Conduct. Students engaging in unacceptable behavior may be instructed to leave the classroom. This prohibition applies to all instructional forums, including classrooms, electronic classrooms, labs, discussion groups, field trips, etc.

- **Statement of Civility**
  Texas A&M University-Corpus Christi has a diverse student population that represents the population of the state. Our goal is to provide you with a high quality educational experience that is free from repression. You are responsible for following the rules of the University, city, state and federal government. We expect that you will behave in a manner that is dignified, respectful and courteous to all people, regardless of sex, ethnic/racial origin, religious background, sexual orientation or disability. Behaviors that infringe on the rights of another individual will not be tolerated.

- **Deadline for Dropping a Course with a Grade of W (University)**
  I hope that you never find it necessary to drop this or any other class. However, events can sometimes occur that make dropping a course necessary or wise. Please consult with your academic advisor, the Financial Aid Office, and me, before you decide to drop this course. Should dropping the course be the best course of action, you must
initiate the process to drop the course by going to the Student Services Center and filling out a course drop form. Just stopping attendance and participation WILL NOT automatically result in your being dropped from the class. Please consult the Academic Calendar (http://www.tamucc.edu/academics/calendar/) for the last day to drop a course.

- **Grade Appeals (College of Science and Engineering)**
  As stated in University Procedure 13.02.99.C0.03, Student Grade Appeal Procedures, a student who believes that he or she has not been held to appropriate academic standards as outlined in the class syllabus, equitable evaluation procedures, or appropriate grading, may appeal the final grade given in the course. The burden of proof is upon the student to demonstrate the appropriateness of the appeal. A student with a complaint about a grade is required to first discuss the matter with the instructor. For complete details, including the responsibilities of the parties involved in the process and the number of days allowed for completing the steps in the process, see University Procedure 13.02.99.C0.03, Student Grade Appeal Procedures. These documents are accessible through the University Rules website at http://academicaffairs.tamucc.edu/rules_procedures/assets/13.02.99.c0.03_student_grade_appeals.pdf. For assistance and/or guidance in the grade appeal process, students may contact the chair or director of the appropriate department or school, the Office of the College of Science and Engineering Dean, or the Office of the Provost.

- **Disability Services**
  - The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please call (361) 825-5816 or visit Disability Services in Corpus Christi Hall 116.
  
  - If you are a returning veteran and are experiencing cognitive and/or physical access issues in the classroom or on campus, please contact the Disability Services office for assistance at (361) 825-5816. http://disabilityservices.tamucc.edu/

- **Civil Rights Complaints**
  Texas A&M University-Corpus Christi is committed to fostering a culture of caring and respect that is free from discrimination, relationship violence and sexual misconduct, and ensuring that all affected students have access to services. For information on reporting Civil Rights complaints, options and support resources (including pregnancy support accommodations) or university policies and procedures, please contact the University Title IX Coordinator, Sam Ramirez (Samuel.ramirez@tamucc.edu) or Deputy Title IX Coordinator, Rosie Ruiz (Rosie.Ruiz@tamucc.edu) x5826, or visit website at Title IX/Sexual Assault/Pregnancy.

**Limits to Confidentiality.** Essays, journals, and other materials submitted for this class are generally considered confidential pursuant to the University's student record policies. However, students should be aware that University employees, including instructors, are not able to maintain
confidentiality when it conflicts with their responsibility to report alleged or suspected civil rights discrimination that is observed by or made known to an employee in the course and scope of their employment. As the instructor, I must report allegations of civil rights discrimination, including sexual assault, relationship violence, stalking, or sexual harassment to the Title IX Coordinator if you share it with me.

These reports will trigger contact with you from the Civil Rights/Title IX Compliance office who will inform you of your options and resources regarding the incident that you have shared. If you would like to talk about these incidents in a **confidential** setting, you are encouraged to make an appointment with counselors in the University Counseling Center.

- **Statement of Academic Continuity**
  In the event of an unforeseen adverse event, such as a major hurricane and classes could not be held on the campus of Texas A&M University–Corpus Christi; this course would continue through the use of Blackboard and/or email. In addition, the syllabus and class activities may be modified to allow continuation of the course. Ideally, University facilities (i.e., emails, web sites, and Blackboard) will be operational within two days of the closing of the physical campus. However, students need to make certain that the course instructor has a primary and a secondary means
of contacting each student.

- The laboratory is an integral part of the course and must be completed before a student can move forward in the program, including unforeseen adverse events.

I. OTHER INFORMATION

- Academic Advising
  The College of Science & Engineering requires that students meet with an Academic Advisor as soon as they are ready to declare a major. The Academic Advisor will set up a degree plan, which must be signed by the student, a faculty mentor, and the department chair. Meetings are by appointment only; advisors do not take walk-ins. Please call or stop by the Advising Center to check availability and schedule an appointment. The College’s Academic Advising Center is located in Center for Instruction 350 or can be reached at (361) 825-3928.

GENERAL DISCLAIMER

I reserve the right to modify the information, schedule, assignments, deadlines, and course policies in this syllabus if and when necessary. I will announce such changes in a timely manner during regularly scheduled lecture periods.