**MCB2010 Microbiology for Health Sciences**

**MCB2010-20202-51-M-003**

**Spring 2020**

**M 400PM – 625PM**

**Pruitt Campus, Room S206**

**Posted online on Blackboard and Weebly**

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| **INSTRUCTOR**  **INFORMATION:** | Instructor: Dr. Christopher D. Krause  Office: N212, Main Campus  Phone: 772-462-7025  Email: [ckrause@irsc.edu](mailto:ckrause@irsc.edu) |

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| **OFFICE HOURS:**  **LOCATION AND TIMES SUBJECT TO CHANGE** | Mon: 1100AM - 330PM (virtual)  Tue: 100PM - 200PM, Main Campus, N212  Wed: 200PM - 600PM, Main Campus, N212  Thur: 200PM - 230PM (virtual)  Other times: by appointment (in person/Blackboard) |

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| **REQUIRED TEXTBOOK:** |
| *Microbiology with Diseases by Body System*, 5th ed., Bauman  ISBN 9780134477206 |
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| **COMPANION WEBSITES** (to be updated as the semester progresses)**:** |

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| * Blackboard website * Weebly: <http://ckrause-irsc.weebly.com> ; useful for those with mobile devices   My Weebly site can be found by searching for “IRSC” “Krause” and “weebly”. | | |
| **TENTATIVE ASSIGNMENT SCHEDULE: (DATES IN BLUE ARE QUIZ DATES!)** | | |
| |  |  |  | | --- | --- | --- | | **Week of** | **TENTATIVE Schedule – subject to change!!** | **Reading** | | (Jan 6),  Jan 8 | **Classes begin on January 8th**; Introduction; Microscopy | Ch. 1, 4 | | Microscopy; Microbial structure | Ch. 4, 3 | | **Jan 13**,  **Jan 15** | **1/14 - Last day to drop**; **Quiz 1 (Ch. 1, 4)**, Microbial Growth | Ch. 3, 6 | | Microbial Growth | Ch. 6 | | **Jan 20**,  Jan 22 | **MLK Day - NO CLASS (Mon)**, **Ex. I (online; Ch. 1, 3, 4, 6)** | Good luck! | | Microbial Genetics; Environmental Control of Microbial Growth; | Ch. 7, 9 | | **Jan 27**,  **Jan 29** | **Quiz 2 (Ch. 7, 9)**, Environmental Control of Microbial Growth;  Medical Control of Microbial Growth | Ch. 9, 10 | | Medical Control of Microbial Growth | Ch. 10 | | **Feb 3**,  Feb 5 | **Exam II (Ch. 7, 9, 10)** | Good luck! | | About Groups of Prokaryotes | Ch. 11 | | Feb 10,  Feb 12 | About Groups of Eukaryotes | Ch. 12 | | About Viruses | Ch. 13 | | **Feb 17**,  **Feb 19** | **Quiz 3 (Ch. 11, 12)**, About Viruses | Ch. 13 ,14 | | Terminology – Etiology and Epidemiology | Ch. 14 | | **Feb 24**,  Feb 26 | **Exam III (Ch. 11 - 14)** | Good luck! | | Innate Immunity | Ch. 15 | | **Mar 2**,  **Mar 4** | **Quiz 4 (Ch. 15)**, Innate immunity, Adaptive Immunity | Ch. 15, 16 | | Adaptive immunity | Ch. 16 | | **Mar 9**,  **Mar 11** | **Quiz 5 (Ch. 16)**, Adaptive Immunity; Immunization and Disease/Immune Testing | Ch. 16, 17 | | Immunization and Disease/Immune Testing | Ch. 17 | | Mar 16,  Mar 18 | **SPRING BREAK (school closed)** | Enjoy! | |  | Enjoy! | | **Mar 23**,  Mar 25 | **Exam IV (Ch. 15 - 17)** | Good luck! | | **3/25 - Last day to withdraw with a ‘W’** ; Immune System Diseases ;Wounds and Skin Microbial Diseases | Ch. 18, 19 | | **Mar 30**,  **Apr 1** | **Quiz 6 (Ch. 18, 19)** Microbial Diseases of the Nervous System | Ch. 19, 20 | | Microbial Diseases of the Cardiovascular System | Ch. 20, 21 | | **Apr 6**,  Apr 8 | **Exam V (Ch. 18 - 21)** | Good luck! | | Diseases of the Respiratory System | Ch. 22 | | **Apr 13**,  **Apr 15** | **Quiz 7 (Ch. 22, 23)**; Diseases of the Digestive System | Ch. 23 | | Diseases of the Urogenital System | Ch. 24 | | **Apr 20,**  **Apr 22** | **CUMULATIVE FINAL EXAM** | Good luck! | |  |  | | | |
| If class is cancelled due to inclement weather or the absence of the instructor and substitutes, a makeup lecture will be held through Blackboard Collaborate Ultra.   |  | | --- | | **GENERAL EDUCATION LEARNING OUTCOMES:** | | **Upon completion of the course, students will have the ability to**   * Use the scientific method, critically analyze, and evaluate scientific data and utilize analytical skills to solve problems relevant to microbiology | | **COURSE LEARNING OBJECTIVES:** | | |  | | --- | | 1. To acquire a basic understanding of microbial anatomy and physiology  2. To understand the infectious disease process and the host’s defense mechanisms  3. To understand how objectives 1 and 2 apply to clinical situations  4. To learn about basic microbiological techniques | | | | |
| |  | | --- | | **LEARNING OUTCOMES FOR MICROBIOLOGY HEALTH SCIENCE (MCB2010):** | | |  | | --- | | 1. To appreciate the key experiments and technologies that laid the foundations for microbiology as a scientific field 2. To understand the theory and implementation of various types of microscopy 3. To learn what molecules various microorganisms need to grow properly 4. To understand how traits of microbiological organisms are stored, propagated, and expressed 5. To understand and implement various chemical and biochemical methods to control micro-organism and viral growth 6. To classify and organize various microbiological organisms and viruses based on various biological properties 7. To familiarize oneself with various terminologies used to describe disease 8. To understand how the body protects itself from invading pathogens 9. To appreciate various strategies used to protect people or animals from potential infections, and to detect infections in the body 10. To learn the various types of diseases that infect the major organ systems of the body | |  |  | | --- | | **MEANS OF ACCOMPLISHING OUTCOMES:** | | Methods of instruction: Lecture, Class discussions and/or interactions when possible, Examinations, and Quizzes  Alignment of course assessments with Learning outcomes (LO’s):   |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | **Course assessment** | **LO1** | **LO2** | **LO3** | **LO4** | **LO5** | **LO6** | **LO7** | **LO8** | **LO9** | **LO10** | | Exam I | **X** | **X** | **X** |  |  |  |  |  |  |  | | Exam II |  |  |  | **X** | **X** |  |  |  |  |  | | Exam III |  |  |  |  |  | **X** | **X** |  |  |  | | Exam IV |  |  |  |  |  |  |  | **X** | **X** |  | | Exam V |  |  |  |  |  |  |  |  |  | **X** | | Quizzes | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | | Cum. final | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** |  |  | | --- | | **GRADING POLICIES** | | | | |
| **Exams (400 points):** There will be 5 exams (100 points each). Exam dates are indicated in boldface on the class schedule. The lowest 100-point exam score is dropped. The total of the remaining four exams (after the lowest 100-point exam score is dropped) will be worth 400 points of your total grade.  **Final Exam (150 points)**: On the last day of class (April 20 or 22), a cumulative final exam will be given. All students must take this exam, or receive a grade of incomplete (I) for the course, assuming their average going into the final exam is over 70%.  **Quizzes (50 points):** On seven weeks (indicated in blue on the class schedule above), there will be a short quiz (10 minutes), based on material covered in the previous week. There will be seven total quizzes. Each quiz will be worth 10 points. The lowest two quiz scores are dropped.  **Grades and Grading Scale** | | |
| |  |  |  | | --- | --- | --- | |  | **Earned Points** | **Possible Points** | | **Exam 1** |  | 100 | | **Exam 2** |  | 100 | | **Exam 3** |  | 100 | | **Exam 4** |  | 100 | | **Exam 5** |  | 100 | | **7 quizzes** |  | 70 | | **Cumulative Final** |  | 150 | |  | **Your total:** | **Total: 600 (100 +20 points dropped)** | |  | **Your average** | **Your total / 600** |   All course requirements must be completed before a grade is assigned. Students will be allowed to drop the lowest exam grade and the lowest two quiz grades. Grades for the semester are based on 600 points. Assignment of letter grades is based on a percentage of points earned. The letter grade will correspond with the following percentages.  440 — 600 = A (90% and up)  380 — 439 = B (80-89%)  320 — 379 = C (70-79%)  260 — 319 = D (60-69%)  Less than 260 = F (59% and lower)  The W deadline is Wednesday, March 25; please speak with me before you withdraw.  **INCOMPLETE POLICY:**  An incomplete grade (‘I’) will be given ONLY IF you are passing the class (>70%) but an emergency prevents your completing the class. I will not give an instructor withdrawl grade unless you **come and talk to me**. The student must arrange with the instructor a plan to finish the content.  If the instructor is not contacted by four months after the Spring 2020 semester ends (August 23, 2020) and the agreed-upon work is not completed, incomplete grades are automatically converted to failure grades (‘F’). | | |
| |  | | --- | |  | | **PRACTICE GOOD STUDY HABITS:** | | **Start early.**  Set aside exclusive study time. Plan on a **minimum** of *15-20* hours per  week of study time  **Study often** when well-rested in a quiet, comfortable location. *Don’t wait to cram.*  **FORM STUDY GROUPS!**  **Take notes** in class and get copies of instructor’s lecture notes. Video recordings of lectures are available to catch up on content not covered in current lectures.  **Read the assigned chapters** in the text before the lecture.  **YouTube videos or other class’ lectures** can help with difficult processes.  ***Recopy* notes** by hand.  Clarify confusing points using the text or asking instructor.  **Make Outlines and organize your thoughts:** Go back over slides and make a brief  outline/study guide  **Make flash cards** of terms to help learn vocabulary and definitions.  **Draw and label** **processes** and sequences of events for better visualization.  **Practice answering questions**.  Use questions at end of chapter, in study guide,  and on publisher’s website.  **Ask questions** during lecture, after lecture, or during instructor’s office hours.  **Other lectures** of this class are given; ask that professor for permission to listen in. | | | |
| |  | | --- | | **ATTENDANCE AND PROCEDURES:** | | **CLASS ANNOUNCEMENTS:** Any class announcements not made in lecture will be posted on blackboard. E-mails of these announcements are auto-generated and sent to IRSC e-mails. Take time to make sure your IRSC e-mail works! Please check blackboard frequently to keep abreast of any changes.  Students are responsible for material covered in each session and must be aware of any changes in exam schedule. Students are expected to access online information on a regular basis. Changes to the schedule are announced on Blackboard and it is the student’s responsibility to keep current.  **ATTENDANCE:** Students are expected to attend and be prepared in lecture sessions. Attendance will be taken in each class. If you contact me BEFORE CLASS and let me know you will be absent, you will receive credit for attending.  **MAKE-UP POLICY**: ***No make-up exams or quizzes will be given***. Students will be allowed to *drop one* 100-point exam score and two quizzes during the semester. This should cover any illnesses, emergencies, or other needs. You should bank these opportunities, and utilize the drops at your best condition (This raises the grades of most students from 2-5%, and is the major way borderline percentages are bumped to the next high grade level). Contact the instructor ***before*** an exam if you plan to miss receiving or turning in an exam so that arrangements can be made.  **EXTRA CREDIT**: No extra credit is given. Students need to spend their time on required material.  **SCANTRON:** If Scantrons are required for any assignments, students will supply their own Scantron answer sheets for exams. You must use a No. 2 pencil to mark your answers. You are responsible for ensuring that erasures are complete. By Department policy, Scantrons will not be re-graded after they have been given back to the student.  **TUTORING:** Tutoring is provided by the IRSC ASCs. It’s free! Check with the ASC for current operating hours. Tutoring is about problem-solving, **NOT LECTURING**! Tutoring is a one-on-one, highly interactive, problem-solving process. They will explain things in different ways than I do and that may help you considerably.  **CHEATING:** Cheating, including plagiarism, of ANY kind will not be tolerated by this department. Any student caught cheating will receive a grade of ‘0’ on the assignment in the course and may also receive an F in the course (no withdrawal allowed.) Any student witnessing an act of cheating who does not report it, or allows their answers to be copied, is considered guilty of this same inexcusable behavior.  However, students may re-seat themselves during an exam for any reason without penalizing themselves or their neighbors.  **CELL PHONE USE:** As stated on page 69 of the Indian River State College Student Handbook, the use of cell phones is **prohibited** during class at IRSC.  It has been demonstrated that even looking at a cell phone distracts from the class and hurts academic performance for everyone near that phone.  Thus, all phones, tablets, and smart watches must be set on silent or off during the class period.   During exams and quizzes, phones, tablets, and laptops will be turned off and placed in bags. Any student who uses a phone for any purpose other than IRSC emergency messages during class time **will be asked to leave and will be considered absent for that class**. I interpret cell phone use as your need and preference to be elsewhere other than in the classroom. No student has the right to disturb the teaching and learning process.  If you have an emergency that forces you to keep your cell-phone or laptop nearby, please let me beforehand, and arrangements can be made. | | | |
| **LIBRARY AND ON-LINE REFERENCE MATERIALS:** | | |
| The Miley Library serves as IRSC's main library, located in Fort Pierce. There are libraries located on each campus. The library is an information place providing professional assistance, library books and media, and access to the library's electronic resources. There is an extensive online database system also available through IRSC’s website [www.irsc.edu](http://www.irsc.edu). | |
| **STUDENTS WITH DISABILITIES POLICY:** | |
| Indian River State College provides reasonable accommodations to students with documented disabilities through the Educational Services Division / Student Disability Services Office. The rights of students with disabilities which pertain to post-secondary education are provided under **Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act (ADA) of 1990 and Title IX.** The Americans with Disabilities Act (ADA), Title IX and other federal laws require institutions to provide reasonable accommodations to qualifying students with disabilities, including disabilities related to pregnancy and childbirth.  Students who wish to request an accommodation for a documented disability may contact Student Disability Services at (777) 462-7808 or (772) 462-7782 or e-mail [irscdisabilityservice@irsc.edu](mailto:irscdisabilityservice@irsc.edu).  **Non-Discrimination and Non-Harassment Policy:** Indian River State College and its faculty are committed to supporting our students and seeking an environment that is free of bias, discrimination, and harassment. IRSC does not discriminate on the basis of race, color, national origin, ethnicity, sex (including pregnancy and childbirth), religion, age, disability, sexual orientation, marital status, veteran status or genetic information in its programs and activities.  If you have encountered any form of discrimination or harassment, including sexual misconduct (e.g. sexual assault, sexual harassment, stalking, and domestic or dating violence), we encourage you to report this to the Title IX Coordinator.  If you report such an incident of misconduct to a faculty member, that faculty member is required by law to notify the IRSC Title IX Coordinator. The following person has been designated to handle inquiries regarding non-discrimination and non-harassment policies: Adriene B. Jefferson, Equity Officer and Title IX Coordinator, 3209 Virginia Avenue, Fort Pierce, FL 34987; IRSC Main Campus, W Building, Room 207; (772) 462-7156; [ajeffers@irsc.edu](mailto:ajeffers@irsc.edu).  **Statement to Students:** If you are experiencing difficulty in your course, **your first obligation is to work directly with Dr. Krause, your instructor, to resolve the issue**. If you are unable to settle your concerns with the assistance of your instructor, you can contact the Department Chair (Dr. Jennifer Capers, 772-462-7556), who will assist you or advise you about contacting the Academic Dean (Dr. Anthony Dribben, 772-462-7503), or the Vice President of Academic Affairs (Dr. Heather Belmont, 772-462-7216). Be advised that they will confirm with Dr. Krause that you contacted him first. | |
| **Syllabus Disclaimer:** | |
| IRSC and the instructor view the course syllabus as an educational contract between the instructor and students. Every effort will be made to avoid changing the course schedule but the possibility exists that unforeseen events will make syllabus changes necessary. The instructor reserves the right to make changes to the syllabus as deemed necessary. Students will be notified in a timely manner of any syllabus changes in class, in Blackboard Announcements, or through school e-mail. | | |
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