**INDIAN RIVER STATE COLLEGE**

**MCB3023** **Lab – Tentative Syllabus**

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| **Week** | **Date** | **Topic** | **Lab Manual Exercise** |
| 1 | 08/29 | Introduction, Microscopy; Microbes in the Environment | 1, 3 |
| 2 | 09/05 | Wet Mounts; Smears and Simple Staining | 2, 5 |
| 3 | 09/12 | Gram Staining; Acid Fast Staining; Isolation of Bacteria | 7, 8, 11 |
| 4 | 09/19 | Carbohydrate Catabolism; Fermentation, Protein Catabolism Part 1 & 2  *\*Thursday lab observations\** | 13, 14, 15, 16 |
| 5 | 09/26 | **Practical 1 (Ex. 1 - 3, 5, 7, 8, 11, 13 - 16)** |  |
| 6 | 10/03 | Respiration; Special Media for Isolating Bacteria; Physical Methods of Control - UV Radiation | 17, 12, 23 |
| 7 | 10/10 | Oxygen and bacterial growth; Growth curves  **\*Take home Sabouraud agar plate.\*** | 19, 20 |
| 8 | 10/17 | Regulation of Gene expression; Transformation (handout - not exercise in lab manual); Fungi – Yeasts and Molds  *\*Thursday lab observations\** | 27, 29, 33 |
| 9 | 10/24 | **Practical 2 (Ex. 12, 17, 19, 20, 23, 27, 29, 33)**  **\*October 30th - Withdrawal Deadline\*** |  |
| 10 | 10/31 | Phototrophs; Protozoa;Start Koch’s Postulates | 34, 35, 40 |
| 11 | 11/07 | Microbes in Water (Multiple-Tube Technique); Microbes in Water (Membrane Filtration Technique); Koch’s Postulates Continued | 52, 53 |
| 12 | 11/14 | Microbes in Soil – N cycle; Bioremediation; Microbes in Water Continued; Koch’s Postulates Continued | 56, 57 |
| 13 | 11/21 | Microbes in Soil Continued; Bioremediation Continued; Finish Koch’s Postulates |  |
| 14 | 11/28 | **Practical 3 (Ex. 34, 35, 40, 52, 53, 57)** |  |

Professor: Megan Carroll

Office Hours: posted on Blackboard and outside office door (Pruitt campus S-208)

Phone/E-Mail: (772) 336-6261 / [mcarroll@irsc.edu](mailto:mcarroll@irsc.edu)

Laboratory Manual: *Laboratory Experiments in Microbiology* by Johnson and Case, 10th edition

Lecture Text: Brock Biology of Microorganisms by Madigan, et al. 14th edition

**Grades**

Grades for the semester are based on the average of three lab practicals. No extra credit will be offered. Grades are assigned on the following basis:

A: 90-100 B: 80-89 C: 70-79 D: 60-69 F: below 60

**Attendance**

Students are expected to be present for every lab in order to accomplish the learning goals for the lab practical

examinations.  **Three percentage points will be taken** **off students’ overall grade for EACH *lab class missed;***

***absences will be assessed* at the end of the** **course.  Students will receive 1 free absence *per semester*.** For

example, if you missedtwo lab classes duringthe semester and your practical exam average was 80%, then your

final average would be 77% and you would receive a C in the course.

To effectively utilize lab time, preparation is required on the part of the student.  The student should have read

the assigned laboratory exercises BEFORE arriving to lab to become familiar with the details for lab.  (NOTE: The

above schedule is only tentative and each student is responsible for knowing exact assignments.) If students continuously show up for lab unprepared, the instructor will start giving pre-laboratory quizzes that each student must pass (≥ 70%) in order to attend lab that day.

**Make-up Policy**

Students must take their lab exams with their lab section at the assigned time. Students unable to attend the

scheduled exam must notify their instructor within 24 hours in order to arrange a make-up exam. The

make-up exam will be offered on the last day of the semester, which will be the same day as the third practical. If

a student misses the third practical, they will be issued an incomplete for the course if they are currently passing

the course; if they are not currently passing the course, the missed final will count as a zero.

**Withdrawal**

Please contact the instructor if you feel that you need to withdraw. You will NOT be automatically withdrawn if you stop coming to class. Withdrawal requires that you submit an official IRSC form, which can be obtained at Educational Services or any site office. Students wanting to withdraw must do so by the withdrawal date listed in the course schedule. **(October 30th - Withdrawal Deadline)**

**Appropriate Laboratory Attire**

Close-toed and close-heeled shoes are required. If long sleeves are worn, they should fit tight to the wrists and be free of ruffles. Students should dress in a conservative manner. Lab instructors have the right to refuse admittance to any students improperly dressed.

Students are required to use lab coats in the Microbiology lab. Disposable lab coats are available for purchase at the IRSC bookstore. The coats will be used and stored in the lab, and then autoclaved and discarded at the end of the semester. If you wish to supply your own cloth lab coat, you will not be allowed to take the lab coat home at the end of the semester.

**Cheating**

Cheating of any kind WILL NOT be tolerated by this Department. Anyone caught cheating will automatically receive an F for that exam. Anyone who witnesses this inexcusable behavior, and does not report it, is also considered to be guilty of improper conduct. **Cell phone use during exams will be considered cheating.**

**Learning Outcome**

Apply problem solving, analytical, and communication skills based on the scientific method that will provide the foundation for lifelong learning and career development.

**Student Accessibility Services**

Indian River State College provides reasonable accommodations to students with documented disabilities through the Student Accessibility Services (SAS) 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. Students who wish to request an accommodation for a documented disability may contact Student Accessibility Services at 772-462-7808, 772-462-7782 or e-mail accessibilityservices@irsc.edu.

**Non-Discrimination and Non-Harassment Policy**

Indian River State College is committed to maintaining a fair and respectful employment and educational environment. In accordance with federal, state and local equal opportunity laws, Indian River State College prohibits discrimination on the basis of race, color, national origin, ethnicity, sex, religion, age, disability, sexual orientation, marital status, veteran status, or genetic information.

**Student Concerns**

If you are experiencing difficulty in your course, your first obligation is to work directly with 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, Jennifer Capers (jcapers@irsc.edu; 772-462-7556), who will assist you or advise you about contacting the Academic Dean, Paul Horton (phorton@irsc.edu; 772-462-7520) or Vice President Marta Cronin (mcronin@irsc.edu; 772-462-4702).