MICROBIOLOGY LAB

BIOL 2120
SYLLABUS HANDOUT

FALL 2017
Wed 6-10 pm Central Campus
CRN# 35312

“ANY STUDENT WHO FACES CHALLENGES SECURING THEIR FOOD OR HOUSING AND BELIEVES THIS MAY AFFECT THEIR PERFORMANCE IN THE COURSE IS URGED TO CONTACT THE DEAN OF STUDENTS FOR SUPPORT. FURTHERMORE, PLEASE NOTIFY THE PROFESSOR IF YOU ARE COMFORTABLE IN DOING SO.”

INSTRUCTOR
MILIND SURAOKAR, PH.D.
Email: milind.suraokar@hccs.edu

Dept. of Physical Sciences & Biology
Houston Community College
Central College
1300 Holman, Houston, TX 77004
Instructor: Milind Suraokar, Ph.D.
Office: Central Campus LHBS 401 Phone: 7137182545
Office Hours: (Central LHBS 401: Mon-Wed 10-11)
Email: milind.suraokar@hccs.edu

Your progress in my class is very important to me and I want you to be extremely proactive about it.

I am available to meet with you to address any queries regarding the course work as well as tutoring help during office hours. Please e-mail me to make an appointment at milind.suraokar@hccs.edu

I will only respond to student emails originating from hcc system. Also I will use the email provided by you in HCC system to contact you. It is your responsibility to keep checking it for information/announcements.

Prerequisites:
Math 0106 or higher placement by testing, must be placed in college level reading.

Course Description:
The microbiology (BIOL 2120) course includes laboratory training. The lab training includes hands-on experience on handling live microorganisms using aseptic techniques and applying various staining/growth procedures used for identification of bacteria.

Overall Course Objectives:
The goal of this course is for the students to develop a comprehensive understanding of handling and analysis of microorganisms. The following CSLO’s are not all inclusive and their completion, along with other assessment devices, help in the determination of the student's final course grade but their completion DOES NOT and WILL NOT guarantee the student that final course grade at the end of the semester.

Program Student Learning Outcomes (PSLOs) for BIOLOGY DISCIPLINE:

1. Will display an understanding of biological systems and evolutionary processes spanning all ranges of biological complexity, including atoms, molecules, genes, cells, and organisms.
2. Will integrate factual and conceptual information into an understanding of scientific data by written, oral and/or visual communication. (This may include successful completion of a course-specific research project or a case study module).
3. Will demonstrate proficiency and safe practices in the use of laboratory equipment and basic laboratory techniques.
4. Will apply principles of the scientific method to problems in biology in the collection, recording, quantitative measurement, analysis and reporting of scientific data.

Course Student Learning Outcomes (CSLO) for BIOL 2120: (LABORATORY)

1) Use and comply with laboratory safety rules, procedures, and universal precautions.
2) Demonstrate proficient use of a compound light microscope.
3) Describe and prepare widely used stains and wet mounts, and discuss their significance in identification of microorganisms.
4) Perform basic microbiology procedures using aseptic techniques for transfer, isolation and observation of commonly encountered, clinically significant bacteria.
5) Perform basic bacterial identification procedures using biochemical tests.
6) Estimate the number of microorganisms in a sample using methods such as direct counts, viable plate counts, or spectrophotometric measurements.
7) Demonstrate basic identification protocols based on microscopic morphology of some common fungi and parasites.

Additional Instructor-recommended Learning Outcomes.
8) Use critical thinking and scientific problem-solving to make informed decisions in the laboratory.
9) Apply scientific reasoning to investigate questions and utilize scientific tools such as microscopes and laboratory equipment to collect and analyze data.

HCC is a learner-centered college, which means that instructors don't just lecture, but include the students in the learning process. This can happen in many ways, including questioning, activities, and student discovery strategies. Students who are engaged gain a deeper understanding of the material. There is a major movement in higher education called “the learning college” movement or community-centered learning. Learning has become learner, or student-centered rather than instructor-centered.

Laboratory Course Requirements: The lab experiments require the use of the following lab manual

Microbiology: Lab Manual for Biology 2420, HCCS, 2006, Ed. 5.5 OR 6.0 - Edited by: Dr(s) Donna S. Wireman and Pramila Sen.

Lab manual should be brought for each class.

Instructional Methods and Access to Course Materials:
The course includes laboratory sessions. The laboratory exercises are designed to help with understanding the course material. You MUST READ independently for the scheduled labs the day before coming to lab. Lab manual will be checked many times during the semester especially during lab exams (indicated on schedule). Completed exercises and reports with correct information (after results were read) will get full points. Lab participation will also be assessed by instructor-assessment and peer-review (forms will be handed out during lab exams). Instructor-assessment will be final and may or may not include input from peer-review.

Learning Web: Assignments and other necessary course materials will be posted on the Learning Web found at the following link: https://learning.hccs.edu/faculty/milind.suraokar/

The lab study pages for review are also available at the following site.
http://imc02.hccs.edu/BiologyLabs/index.html
http://www.hccs.edu/biologylabs

Tips to succeed
1. Read the chapters/lab exercises before coming to class and review after class is complete.
2. Prepare for pre-class quiz.
3. Access other resources from the publisher of the textbook for microbiology.
4. Form study groups – could be the same as lab groups.
5. Regular attendance and Timely submission of Homework.
6. Pay close attention to lab techniques and understand the advantages and pitfalls of different steps.
7. Be well-aware of the different reagents and equipment used during each lab exercise.
# Course Schedule

## Course Information

(CE-WED 6-10PM) COURSE (CRN# 35312) FALL 2017 TERM SCHEDULE*

*Note: I will make every effort to adhere to the syllabus during the semester. However I reserve the right to make any necessary changes to the Syllabus and exam dates. Students will be notified in a timely manner of any changes to the course during the class and/or by e-mail.

<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Lab Exercises</th>
<th>Homework/EC due DATES</th>
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<td></td>
<td>2017 FALL Second Start BEGINS</td>
<td>HW1 (Ex. 1 – 4): Oct 11 HARD COPY IN PERSON</td>
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<td><strong>September 25</strong></td>
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<tr>
<td>1</td>
<td>September 27</td>
<td>Syllabus, Course, Class - Introduction</td>
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<td>Lab orientation (1) Care and Use of the Microscope</td>
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<td>October 4</td>
<td>QUIZ 2</td>
<td>HW2 (Ex. 9 – 13): Nov 8 HARD COPY IN PERSON</td>
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<td>2017 FALL Second Start BEGINS</td>
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<td><strong>October 11</strong></td>
<td>HW2 (Ex. 9 – 13): Nov 8 HARD COPY IN PERSON</td>
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<td>QUIZ 3, HW1 DUE</td>
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<td>October 18</td>
<td>QUIZ 4</td>
<td>HW2 (Ex. 9 – 13): Nov 8 HARD COPY IN PERSON</td>
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<td>LAB EXAM 1 (Exercise 1 to 8)</td>
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<td>Exercise 1 to 8 LAB Reports due</td>
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<td>(11) Setup Gas Requirements for Bacterial Growth</td>
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<td>October 25</td>
<td>QUIZ 5</td>
<td>HW3 (Ex. 14-17, 21): Nov 29 HARD COPY IN PERSON</td>
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<td>QUIZ 5</td>
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<td>November 8</td>
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<td>EC1 DUE</td>
<td>HW3 (Ex. 14-17, 21): Nov 29 HARD COPY IN PERSON</td>
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<td>November 15</td>
<td>LAB EXAM 2 (Exercise 9 to 13)</td>
<td>HW3 (Ex. 14-17, 21): Nov 29 HARD COPY IN PERSON</td>
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<td>Exercise 9 to 13 LAB Reports due</td>
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<td>(15)/(17) Carbohydrate Fermentation Test</td>
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<td>(16)/(18) Triple-Sugar-Iron (TSI) Fermentn Test</td>
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<td>November 22</td>
<td>QUIZ 6</td>
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<td>November 29</td>
<td>QUIZ 7</td>
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<td>HW3 DUE</td>
<td>HW3 (Ex. 14-17, 21): Nov 29 HARD COPY IN PERSON</td>
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<td>(18)/(22) Rapid Id Bacteria</td>
<td>HW3 (Ex. 14-17, 21): Nov 29 HARD COPY IN PERSON</td>
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<td>11</td>
<td>Dec 6</td>
<td>LAB EXAM 3 (Exercise 14 to 22)</td>
<td>HW3 (Ex. 14-17, 21): Nov 29 HARD COPY IN PERSON</td>
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<td>Exercise 14 to 22 LAB Reports due</td>
<td>HW3 (Ex. 14-17, 21): Nov 29 HARD COPY IN PERSON</td>
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**IMPORTANT DATES:**

<table>
<thead>
<tr>
<th>Date</th>
<th>What happens</th>
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<tr>
<td>Sep 25th 2017</td>
<td>Classes Begin</td>
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<tr>
<td>Oct 5th 2017</td>
<td>Official Day of Attendance Record</td>
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<tr>
<td>Nov 13th, 2017, 4:30 pm</td>
<td>Dead line for Administrative and Student Withdrawal</td>
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<tr>
<td>Dec 18th 2017</td>
<td>Grades available to students</td>
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**GRADING**

- 3 Mandatory Lab exams: 25 % each 75%
- Lab Reports/Participation: 15%
- Attendance/Class Conduct: ~2.5%
- Comprehensive Case Study Script (SAVE BUGGS): ~7.5%
- plus Class Quiz/Discussion/Activities/Challenges – (includes 7 QUIZ/3 HW)

**TOTAL** 100% (500 points)

**Extra Credit Homework:**
- EC homework1 1.0%

Includes Virtual Research Project Modules (Scientific Method/Application/Debate Assignment)

All Homework due in person and hardcopy – could be handwritten or typewritten.

**GRADING SCALE %**

- A = 100- 90: 4 points per semester hour
- B = 89 - 80: 3 points per semester hour
- C = 79 - 70: 2 points per semester hour
- D = 69 - 60: 1 point per semester hour
- 59 and below = F: 0 points per semester hour
- FX (Failure due to non-attendance): 0 points per semester hour
- IP (In Progress): 0 points per semester hour
- W (Withdrawn): 0 points per semester hour
- I (Incomplete)/AUD(audit): 0 points per semester hour

Final Grades will be posted online at the end of the semester. You can access them via Internet by logging on to HCC student sign-in system. Exam grades will be provided during exam reviews in the class but not posted online. Please note them down and follow your progress using the spreadsheet that I will provide.

**Course Exams and Grading**

No exam material is to be kept by the student and exam question paper will be collected as a permanent record of the student’s performance.

**Laboratory Exams**: Laboratory exams can include anything and everything that is covered during the lab sessions.

**There is absolutely no make up for the lab exam.**

**DO NOT take photos of or copy any class Quizzes or Exams**

If you arrive **late for an exam**, you will have only the time remaining from the official start of the exam. On a test day, once someone has finished the exam, no other student may enter and start that exam. So, if you are late for class on a test day, you may be prohibited from taking the test.
**Class Attendance:** Counts as points for your final grade. Attending class regularly is the best way to succeed in this class. You are expected to attend all lecture and labs regularly. **You are responsible for materials covered during your absences. You should check with your colleagues to see what you missed.** If you have a valid reason not to attend, you need to notify the instructor prior to missing a class and submit documentation. It is your responsibility to initiate a withdrawal from this course. **Attendance will be called at the end of each class meeting.** Please answer when your name is called. If you are not paying attention and miss your roll call you may be marked absent. The roll call will be taken only once.

**Arriving Late or Leaving Early:** Talking and moving during class time is a distraction to your classmates and to your instructor. So please plan to attend class on time and to leave only at the end of the period. Understandably, emergencies can happen that result in your tardiness or early departure. Please speak to me in this regard so that you can be excused for your late arrival or early departure on a particular day. **However, please do not make a habit of being tardy or leaving early since this will be reflected as an unexcused absence from class and cost attendance points.** If you are going to be regularly late or eave early for some unavoidable reason then you need to talk to the instructor to get permission and avoid losing any points. **Class will begin at the scheduled time. There may be class quizzes at the beginning of a class so do not miss the beginning of class.**

**Attendance/performance ALERT:** HCC has instituted an Early Alert process by which your professor may “alert” you and DE counselors that you might fail a class because of excessive absences and/or poor academic performance. Students with more than **four unexcused absences** may result in an administrative withdrawal.

There are points for all your class work and behavior. Overall I **MAY** (at my discretion) allow a few violations (depending on the reason for being late) without deducting points.

**HCC Course withdrawal and Attendance Policy:**
An Instructor can no longer give any student a grade of **W** after the official drop date. The Texas Legislature passed a law limiting first time entering freshmen to no more than **SIX** total course withdrawals **throughout** their educational career in obtaining a certificate and/or degree. If you feel that you cannot complete this course; you will need to withdraw from the course prior to the withdrawal deadline to receive a “W” on your transcript. Before, you withdraw from your course; please take the time to meet with the instructor and/or counselor to discuss why you feel it is necessary to do so. Remember to allow a 24-hour response time when communicating via email and/or telephone with a professor and/or counselor. The instructor/counselor may be able to provide you with suggestions that would enable you to complete the course. Your success is very important. To help students avoid having to drop/withdraw from any class, HCC has instituted an Early Alert process by which your professor **may** “alert” you and HCC counselors that you might fail a class because of excessive absences and/or poor academic performance. It is your responsibility to visit with your professor or a counselor to learn about what, if any, HCC interventions might be available to assist you – online tutoring, child care, financial aid, job placement, etc. – to stay in class and improve your academic performance.

**Withdrawal procedure:** An Instructor cannot drop or withdraw a student for excessive absences, **it is the student’s responsibility to withdraw themselves before the official drop deadline if that is their decision.** The student can drop online without having to see a faculty member prior to the deadline through their HCC Student Center.

**Class Conduct:**
As with on-campus classes, all students in HCC Distance Education courses are required to follow all HCC Policies & Procedures, the Student Code of Conduct, the Student Handbook, and relevant sections of the Texas Education Code when interacting and communicating in a virtual classroom with faculty and fellow students. Students who violate these policies and guidelines will be subject to disciplinary action that could
include denial of access to course-related email, discussion groups, and chat rooms or being removed from the class.

Use of Camera, Cell phones, Pagers and any Electronic Devices is prohibited in class. As a student active in the learning community of this course, it is your responsibility to be respectful of the learning atmosphere in your classroom. To show respect of your fellow students and instructor, you will turn off your phone and other electronic devices, and will not use these devices in the classroom unless you receive permission from the instructor. All electronic devices including cell phones, pagers, BlackBerrys or iPods should be switched OFF (NOT on vibrate) and PUT AWAY and NOT ON DESK during class time and during all exams.

Answering cell phones and texting are not permitted during class time. Texting during class indicates that you are not actively involved in the learning process, and will earn you an absence for that class. Please remove ear buds during class. If you anticipate a potential emergency situation, please talk to me before class starts so that we can make the necessary arrangements for that particular day.

Use of recording devices, including camera phones and tape recorders, is prohibited in classrooms, laboratories, faculty offices, and other locations where instruction, tutoring, or testing occurs. If a student needs to use these devices then they need to get permission from the instructor before they use such devices. Students with disabilities who need to use a recording device as a reasonable accommodation should contact the Office for Students with Disabilities for information regarding reasonable accommodations.

If you need to access eText or lecture slides you need to speak with the instructor before you use any electronic devices. Improper use of these devices will result in losing the privilege to use them in the class.

Special Class Rules:
Eating, drinking or smoking is strictly prohibited in the class. On repeated violations of these rules there could be expulsion from class or deductions of points. Children or anyone who is not officially enrolled in the course will not be allowed in the class or laboratory.

------------------------------------------X-------------------------------------------X------------------------------------------

Academic Integrity and Exam Conduct:
Under no circumstances should any electronic devices be out or used during the exams. Anyone found using these devices or cheating using other means will have their exam taken up, and will receive a score of “0” for the test or a grade of “F” in the course.

A student who is academically dishonest is, by definition, not showing that the coursework has been learned, and that student is claiming an advantage not available to other students. The instructor is responsible for measuring each student's individual achievements and also for ensuring that all students compete on a level playing field. Thus, in our system, the instructor has teaching, grading, and enforcement roles.

You are expected to be familiar with the University's Policy on Academic Honesty, found in the catalog. What that means is: If you are charged with an offense, pleading ignorance of the rules will not help you. Students are responsible for conducting themselves with honor and integrity in fulfilling course requirements. Penalties and/or disciplinary proceedings may be initiated by College System officials against a student accused of scholastic dishonesty. "Scholastic dishonesty": includes, but is not limited to, cheating on a test, plagiarism, and collusion. Cheating on a test includes: Copying from another students’ test paper; Using materials not authorized by the person giving the test; Collaborating with another student during a test without authorization; Knowingly using, buying, selling, stealing, transporting, or soliciting in whole or part the contents of a test that has not been administered; Bribing another person to obtain a test that is to be administered. Plagiarism means the appropriation of another’s work and the unacknowledged incorporation of that work in one’s own written work offered for credit. Collusion means the unauthorized collaboration with another person in preparing written work offered for credit. Possible punishments for academic
dishonesty may include a grade of 0 or F in the particular assignment, failure in the course, and/or recommendation for probation or dismissal from the College System. (See the Student Handbook)

Other Resources/Services/Guidelines:
1) Free Biology Online Tutoring: HCC provides free online tutoring in writing, math, science, and other subjects. Click here to access Upswing Online Tutoring (https://hccs.upswing.io/). Use your student ID or HCC e-mail address to create an account.

2) Computer Labs/Libraries at HCC Campuses.

3) STEM Information and Resources: www.hccs.edu/stem

4) International Students: Contact the International Student Office at 713-718-8520 if you have questions about your visa status or other issues.

5) Course Repeater Policy: Beginning in the fall 2006, students who repeat a course for a third or more times will face significant tuition/fee increases at HCC and other Texas public colleges and universities. Please ask your instructor and/or counselor about opportunities for tutoring/other assistance prior to considering course withdrawal or if you are not receiving passing grades.

6) Student with Disabilities: Any student with a documented disability (e.g. physical, learning, psychiatric, vision, hearing, etc.) who needs to arrange reasonable accommodations must contact the appropriate HCC Disability Support Service (DSS) Counselor at the beginning of each semester. Instructors need to be notified on first day of class by the student and are authorized to provide only the HCC DSSO approved accommodations.

DISABILITY SUPPORT SERVICES OFFICES:
District ADA Coordinator – Donna Price – 713.718.5165
System: 713.718.5165
Central: 713.718.6164

7) Education advising and Counseling Services. Advising or counseling can be accomplished through our online request form AskDECounseling (quickest and recommended), by telephone at 713/718-5275 - option # 4, or via email at decounseling@hccs.edu. Counselors and Student Services Associates (SSA) can assist students with admissions, registration, entrance testing requirements, degree planning, transfer issues, and career counseling. In-person, confidential sessions, can also be scheduled to provide brief counseling and community referrals to address personal concerns impacting academic success.

8) Title IX and Sex Discrimination. HCC is committed to provide a learning and working environment that is free from discrimination on the basis of sex which includes all forms of sexual misconduct. Title IX of the Education Amendments of 1972 requires that when a complaint is filed, a prompt and thorough investigation is initiated. Complaints may be filed with the HCC Title IX Coordinator available at 713 718-8271 or email at oie@hccs.edu

9) EGLS3 - Evaluation for Greater Learning Student Survey System. At Houston Community College, professors believe that thoughtful student feedback is necessary to improve teaching and learning. During a designated time, you will be asked to answer a short online survey of research-based questions related to instruction. The anonymous results of the survey will be made available to your professors and division chairs for continual improvement.

10) FERPA (Family Educational Rights & Privacy Act) prevents dissemination of certain information about a student to others without the student’s authorization. It is a Federal law that protects the privacy of student education records. Further information can be found at http://www.hccs.edu/programs/financialaid/ferpa/ and https://www2.ed.gov/policy/gen/guid/fpco/ferpa/index.html

11) CAMPUS CARRY. “At HCC the safety of our students, staff, and faculty is our first priority. As of August 1, 2017, Houston Community College is subject to the Campus Carry Law (SB11 2015). For more information, visit the HCC Campus Carry web page at http://www.hccs.edu/district/departments/police/campus-carry/.”
IT’S IN THE SYLLABUS

This message brought to you by every instructor that ever lived.

www.phdcomics.com

NOTES to YOURSELF

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