



Your University of Choice

## COURSE SYLLABUS

Term: SPRING 2017

**Course: BIOL 230 – Microbiology Lab**

<b>Instructor Information:</b>	
<b>Instructor Name</b>	Dr. Fiona Groninger-Poe
<b>Office Number:</b>	331
<b>Phone Number:</b>	(219) 473-4357 <leave a message!>
<b>Email:</b>	<a href="mailto:fpoe@ccsj.edu">fpoe@ccsj.edu</a> To contact Dr. Poe using e-mail: 1. Use your CCSJ account 2. Put “Micro” or “Microbiology” in the subject line 3. Compose and send your e-mail
<b>Hours Available:</b>	Office hours are posted outside of room 331; typically available 1:30-2:30 pm Monday through Thursday with additional hours on Tuesdays after 10 am
<b>Instructor Background:</b> B.S. Manchester University (Chemistry, 2008); Ph.D. University of Illinois at Urbana-Champaign (Biochemistry, 2014); Science Olympiad Volunteer Event Supervisor (2014-present); American Society for Microbiology science teaching fellow (2013); Robert L. Switzer Teaching Award (2012). Research interests include microbiology, enzymology, agar degradation pathways, and sugar metabolic pathways in plant pathogens.	

<b>Course Information:</b>	
<b>Course Time:</b>	Lecture: Monday and Wednesday 8:30 – 10:00 am Lab: Monday 10:15-11:45 am
<b>Classroom:</b>	334
<b>Prerequisites:</b>	C or better in, BIOL 115, BIOL 115L, BIOL 205, BIOL 205L and concurrent enrollment in BIOL 230L
<b>Required Books and Materials:</b>	<i>Microbiology</i> 8 <sup>th</sup> edition by Jacquelyn G. Black; ISBN: 9780470541098  A separate lab notebook is REQUIRED (LAB-100-7GW-D). Preferably, the notebook will contain carbonless-copy pages. These are available through the bookstore and also through Amazon.
<b>Learning Outcomes/ Competencies:</b> Students will: <ul style="list-style-type: none"><li>• Use bright field microscopy techniques to identify shape, arrangement, size, and specialized features of microbes</li><li>• Demonstrate the ability to independently perform Gram stain and microscopy on a sample</li></ul>	

<ul style="list-style-type: none"> <li>• Use sterile techniques to successfully inoculate cultures</li> <li>• Prepare specific solid and liquid media such as Luria-Bertoni (LB) broth, nutrient broth, and phenol red sucrose</li> <li>• Culture microorganisms from soil using specialized media</li> <li>• Calculate original concentration of a sample from a dilution</li> <li>• Identify a microorganism based on results from microbiological tests</li> <li>• Create hypotheses and design experiments to test hypotheses</li> <li>• Present experimental findings in either a poster session or as an oral presentation</li> </ul>
<p><b>Course Description:</b> A 1-credit course. BIOL 230L is a laboratory experience with pure cultures and sterile techniques; methods of identification of unknown microorganisms; experiments demonstrating principles of microbial genetics, transformation, antibiotic sensitivity and resistance.</p>
<p><b>Learning Strategies:</b> Skills-based learning, literature reviews, BlackBoard, group projects, problem-based learning, experiential learning</p>
<p><b>Experiential Learning Opportunities:</b> Experimental design, hypothesis development, writing/presenting original research to peers</p>

<b>Assessments:</b>																	
<b>Lab reports</b>	Due at the next lab meeting; Rubrics available on BlackBoard (includes points for prelabs found in the lab handout for the week or posted separately on BlackBoard); lowest score is dropped 9 x 50 points	50 pts x 9 = 450 points															
<b>Presentation</b>	Students will present findings from microbial identification performed throughout the semester during the last 2 weeks of classes	100 points															
<p><b>Grading Scale:</b></p> <table style="width: 100%; border: none;"> <tr> <td style="width: 33%;">100 – 92: A</td> <td style="width: 33%;">91 – 90: A-</td> <td style="width: 33%;"></td> </tr> <tr> <td>89 – 88: B+</td> <td>87 – 82: B</td> <td>81 – 80: B-</td> </tr> <tr> <td>79 – 78: C+</td> <td>77 – 72: C</td> <td>71 – 70: C-</td> </tr> <tr> <td>69 – 68: D+</td> <td>67 – 62: D</td> <td>61 – 60: D-</td> </tr> <tr> <td>59 and below</td> <td>F</td> <td></td> </tr> </table>			100 – 92: A	91 – 90: A-		89 – 88: B+	87 – 82: B	81 – 80: B-	79 – 78: C+	77 – 72: C	71 – 70: C-	69 – 68: D+	67 – 62: D	61 – 60: D-	59 and below	F	
100 – 92: A	91 – 90: A-																
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79 – 78: C+	77 – 72: C	71 – 70: C-															
69 – 68: D+	67 – 62: D	61 – 60: D-															
59 and below	F																
<b>Course Schedule:</b>																	
Class Date	Assignments due	Class Discussion/Activities															
<b>Week 1: Jan 9</b> No Lab	Purchase textbook Purchase lab notebook if needed	No lab															
<b>Week 2: Jan 16</b>	No assignment due	No lab (MLK Jr Day)															

No Lab  <b>JAN 16 – NO CLASSES</b> <b>JAN 17 – Last day for course changes</b>		
<b>Week 3: Jan 23</b> <i>All labs, prelabs, and rubrics are available on BlackBoard</i> Lab 1	No assignment due	Complete lab 1, prelab 2 <i>All labs, prelabs, and rubrics are available on BlackBoard</i>
<b>Week 4: Jan 30</b> Lab 2	Lab 1 Prelab 2	Complete lab 2, prelab 3
<b>Week 5: Feb 6</b> Lab 3 <b>Feb 6</b> – Last day to withdraw without instructor approval	Lab 2 Prelab 3	Complete lab 3, prelab 4
<b>Week 6: Feb 13</b> Lab 4	Lab 3 Prelab 4	Complete lab 4, prelab 5
<b>Week 7: Feb 20</b> Lab 5	Lab 4 Prelab 5	Complete lab 5, prelab 6
<b>Week 8: Feb 27 – Mar 2</b> <b>SPRING BREAK</b>	No lab; no assignments due	No lab meeting
<b>Week 9: Mar 6</b> Lab 6	Lab 5 Prelab 6	Complete lab 6, prelab 7
<b>Week 10: Mar 13</b> Lab 7	Lab 6 Prelab 7	Complete lab 7, prelab 8
<b>Week 11: Mar 20</b> Lab 8	Lab 7 Prelab 8	Complete lab 8, prelab 9
<b>Week 12: Mar 27</b> Lab 9	Lab 8 Prelab 9	Complete lab 9, prelab 10
<b>Week 13: Apr 3</b> Lab 10	Lab 9 Prelab 10	Complete lab 10, determine if any additional experiments are needed to ID your microbe
<b>Week 14: Apr 10</b> Extra lab time as needed	Lab 10	Work on presentations

<b>April 14, 15 - Easter Recess</b>		
<b>Week 14: Apr 17 Class presentations</b>	Class presentations	
<b>April 21 - LAST DAY TO WITHDRAW</b>		
<b>Week 15: Apr 24 SEMESTER EXAMINATIONS Exam 4 - TBA</b>	No final exam Class presentations, as needed	

**I reserve the right to change this schedule to meet the needs of the class.**

<b>Responsibilities</b>	
<b>Attending Class</b>	<p>You cannot succeed in this class if you do not attend. We believe that intellectual growth and success in higher education occur through interaction in the classroom and laboratories. However, we do not want to penalize students for participating in college-sponsored events. When you miss class because of a college event, you must give notice of your absence in advance, and you are responsible for all missed work. Being absent doesn't excuse you from doing class work; you have <b>more</b> responsibilities to keep up and meet the objectives of this course.</p> <p><u>Attendance is counted as being present from the first 10 minutes of class until the end of lecture and lab.</u> It is the student's responsibility to make attendance a priority. Anyone missing after the first 10 minutes of class will be marked absent unless a written excuse is provided within 24 hours of the occurrence. Similarly, anyone leaving early without a written excuse will be counted as absent.</p> <p>Participation through regular attendance is required to be successful in this course. Therefore, if a student is absent more than three (3) times (excessive tardiness is counted as absence), the student will be subjected to a grade of F or FW per policy stated under the Withdrawal from Classes section on this syllabus.</p> <p><u>In the event of absence during an exam, the student will receive a ZERO (0) on that exam.</u> The lowest exam score is dropped, so that exam score will not be considered when determining the final grade. If a student is absent during more than one exam, the student will receive a ZERO (0) for each exam, but only one grade will be dropped. It is the student's responsibility to ensure attendance on exam dates. In the event of multiple excused absences (with acceptable documentation), it is the student's responsibility to contact the instructor to determine an appropriate course of action.</p>

	<p><u>In the event of absence during lab, the student must contact the instructor within 24 hours of the absence to determine an acceptable course of action.</u> Each laboratory exercise is different, and in some cases a make-up lab would be impractical due to costs or time restrictions. As with exams, one lab report is dropped so one absence is permitted without penalty. For excused absences, make-up labs <i>may</i> be permitted at the instructor’s discretion only if an acceptable substitute assignment can be determined.</p> <p>ALL WORK IS DUE ON THE DUE DATE SPECIFIED IN THIS SYLLABUS OR ON BLACKBOARD. If a student is absent on lab 2, the student must still turn in lab 1 due that day. Contact the instructor if an extension is needed. See “Turning In Your Work” below.</p>
<p><b>Turning In Your Work</b></p>	<p>You cannot succeed in this class if you do not turn in all your work on the day it is due. Due dates are specified for each assignment on this syllabus; any changes will be announced in class and posted on BlackBoard.</p> <p><b>ASSIGNMENTS WILL NOT BE ACCEPTED AFTER THEIR DUE DATES.</b> You may request an extension in writing at least 24 hours in advance of the due date for assignments, but it is up to the instructor’s discretion whether or not to allow an extension.</p> <p><b>If you are absent the day that an assignment is due, follow these guidelines:</b></p> <ul style="list-style-type: none"> <li>• IN-CLASS ACTIVITIES: it is the student’s responsibility to collect the assignment and do this work independently after an absence. Credit is awarded for excused absences only.</li> <li>• LAB REPORTS: turn in via BlackBoard, e-mail, campus mail, or handed in to the professor <u>on its scheduled due date</u>; <b>you must contact the professor</b> to determine what to do about missing the lab section.</li> </ul> <p>If a link is not provided through BB, contact the instructor to make a link available for turning in assignments. If you must turn in a lab report through BlackBoard, scan and upload the ORIGINAL pages (not the copy pages) to improve clarity for grading. It is the student’s responsibility to request extensions in writing from the instructor.</p>
<p><b>Using Electronic Devices</b></p>	<p>Electronic devices can only be used in class for course-related purposes. If you text or access the Internet for other purposes, you may be asked to leave, in which case you will be marked absent and will lose all participation points for the day.</p>
<p><b>Participating in Class</b></p>	<p>You must be on time, stay for the whole class and speak up in a way that shows you are prepared for class. If you are not prepared for class discussion, you may be asked to leave, in which case you will be marked absent and lose participation points for the day.</p>

	Students must be prepared for class, polite and respectful, help with in-class group work, show attentiveness throughout class, and ensure that conversations stay on topic. Students are expected to be engaged throughout the lecture by participating in activities, questions, and discussions. Two points will be deducted for each infraction, up to the maximum points for the day. Grade notes will be entered on BlackBoard describing the score.
<b>Doing Your Own Work</b>	<p>If you turn in work that is not your own, you are subject to judicial review, and these procedures can be found in the College Catalog and the Student Planner. The maximum penalty for any form of academic dishonesty is dismissal from the College.</p> <p>Using standard citation guidelines to document sources avoids plagiarism. <b>For this class, you MUST use American Chemical Society (ACS) style</b>, available online for free at the following link:  <a href="http://pubs.acs.org/userimages/ContentEditor/1246030496632/chapter14.pdf">http://pubs.acs.org/userimages/ContentEditor/1246030496632/chapter14.pdf</a></p> <p>Be sure to use your own words <i>completely</i> (use your own sentence structure not just a thesaurus to change a few words or phrases), cite your source parenthetically in the text, and attach a works cited page to the end of the assignment. If your paper is similar in sentence structure, phrasing, figures, etc, to another student's <u>both</u> students will be punished based on the severity of the plagiarism.</p> <p><b>PLEASE NOTE:</b> All papers may be electronically checked for plagiarism.</p>
<b>Withdrawing from Class</b>	After the last day established for class changes has passed (see the College calendar), you may withdraw from a course by following the policy outlined in the CCSJ Course Catalog.

<b>Resources</b>	
<b>Student Success Center:</b>	The Student Success Center provides faculty tutors at all levels to help you master specific subjects and develop effective learning skills. It is open to all students at no charge. You can contact the Student Success Center at 219 473-4287 or stop by the Library.
<b>Disability Services:</b>	Disability Services strives to meet the needs of all students by providing academic services in accordance with Americans with Disabilities Act (ADA) guidelines. If you believe that you need a “reasonable accommodation” because of a disability, contact the Disability Services Coordinator at 219-473-4349.
<b>CCSJ Alerts:</b>	Calumet College of St. Joseph’s emergency communications system will tell you about emergencies, weather-related closings, or other incidents via text, email, or voice messages. Please sign up for this important service annually on the College’s website at: <a href="http://www.ccsj.edu/alerts/index.html">http://www.ccsj.edu/alerts/index.html</a> .

	<p>In addition, you can check other media for important information, such as school closings:</p> <p><b>Internet:</b> <a href="http://www.ccsj.edu">http://www.ccsj.edu</a></p> <p><b>Radio:</b> WAKE – 1500 AM, WGN – 720 AM, WIJE – 105.5 FM, WLS – 890 AM, WZVN – 107.1 FM, WBBM NEWS RADIO 78</p> <p><b>TV Channels:</b> 2, 5, 7, 9, 32</p>
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## Emergency Procedures

### MEDICAL EMERGENCY

#### EMERGENCY ACTION

1. Call 911 and report incident.
2. Do not move the patient unless safety dictates.
3. Have someone direct emergency personnel to patient.
4. If trained: Use pressure to stop bleeding.
5. Provide basic life support as needed.

### FIRE

#### EMERGENCY ACTION

1. Pull alarm (located by EXIT doors).
2. Leave the building.
3. Call 911 from a safe distance, and give the following information:
  - Location of the fire within the building.
  - A description of the fire and how it started (if known)

### BUILDING EVACUATION

1. All building evacuations will occur when an alarm sounds and/or upon notification by security/safety personnel. **DO NOT ACTIVATE ALARM IN THE EVENT OF A BOMB THREAT.**
2. If necessary or if directed to do so by a designated emergency official, activate the building alarm.
3. When the building evacuation alarm is activated during an emergency, leave by the nearest marked exit and alert others to do the same.
4. Assist the disabled in exiting the building! Remember that the elevators are reserved for persons who are disabled. **DO NOT USE THE ELEVATORS IN CASE OF FIRE. DO NOT PANIC.**
5. Once outside, proceed to a clear area that is at least 500 feet away from the building. Keep streets, fire lanes, hydrant areas and walkways clear for emergency vehicles and personnel. The assembly point is the sidewalk in front of the college on New York Avenue.
6. **DO NOT RETURN** to the evacuated building unless told to do so by College official or emergency responders.

#### **IF YOU HAVE A DISABILITY AND ARE UNABLE TO EVACUATE:**

Stay calm, and take steps to protect yourself. If there is a working telephone, call 911 and tell the emergency dispatcher where you are **or** where you will be moving. If you must move,

1. Move to an exterior enclosed stairwell.
2. Request persons exiting by way of the stairway to notify the Fire Department of your location.

3. As soon as practical, move onto the stairway and await emergency personnel.
4. Prepare for emergencies by learning the locations of exit corridors and enclosed stairwells. Inform professors, and/or classmates of best methods of assistance during an emergency.

#### HAZARDOUS MATERIAL SPILL/RELEASE

##### EMERGENCY ACTION

1. Call 911 and report incident.
2. Secure the area.
3. Assist the injured.
4. Evacuate if necessary.

#### TORNADO

##### EMERGENCY ACTION

1. Avoid automobiles and open areas.
2. Move to a basement or corridor.
3. Stay away from windows.
4. Do not call 911 unless you require emergency assistance.

#### SHELTER IN PLACE

##### EMERGENCY ACTION

1. Stay inside a building.
2. Seek inside shelter if outside.
3. Seal off openings to your room if possible.
4. Remain in place until you are told that it is safe to leave.

#### BOMB THREATS

##### EMERGENCY ACTION

1. Call 911 and report incident.
2. If a suspicious object is observed (e.g. a bag or package left unattended):
  - Don't touch it!
  - Evacuate the area.

#### TERRORISM AND ACTIVE SHOOTER SITUATIONS

##### EMERGENCY ACTION

1. Call 911 and report intruder.

#### RUN, HIDE OR FIGHT TIPS:

1. **Prepare** – frequent training drills to prepare the most effectively.
2. **Run and take others with you** – learn to stay in groups if possible.
3. **Leave the cellphone.**
4. **Can't run? Hide** – lock the door and lock or block the door to prevent the shooter from coming inside the room.
5. **Silence your cellphone** -- use landline phone line.
6. **Why the landline?** It allows emergency responders to know your physical location.

7. **Fight** – learn to “fight for your life” by utilizing everything you can use as a weapon.
8. **Forget about getting shot – fight!** You want to buy time to distract the shooter to allow time for emergency responders to arrive.
9. **Aim high** – attack the shooter in the upper half of the body: the face, hands, shoulder, neck.
10. **Fight as a group** – the more people come together, the better the chance to take down the shooter.
11. **Whatever you do, do something** – “react immediately” is the better option to reduce traumatic incidents.