



**SLCC Biotechnology 1080
Biotechnology Experience
Itineris Early College High School
Spring 2011**

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Course website: <http://www.iechs.org/staff/booth/BTEC1080.htm>

Course Information: This class meets three times a week for 2 hours (3 cr).

Course Description: Prereq: BTEC 1010 and BTEC 1015 w/C grade or better in both. This course is an early hands-on research experience in which students conduct mentored research activities. Students apply their knowledge to specific research topics assigned by Biotechnology faculty. Hours are flexible and arranged in collaboration with faculty.

Required Materials for each student:

- Calculator
- A Sharpie permanent marker
- Laboratory Notebook

Laboratory Fee:

Due to the expense of supplies for this course, a lab fee of **\$25** is required of each student enrolled. Please pay lab fees early at the office.

Grade and Corresponding Percentage

A	93 – 100 %	C+	77 – 79.9%
A-	90 – 92.9%	C	73 – 76.9%
B+	87 – 89.9%	C-	70 – 72.9%
B	83 – 86.9%	D	60 – 69.9%
B-	80 – 82.9%	E	below 60%

Category	Value	Grade Breakdown
Attendance and Participation	See Explanation	0 points
Laboratory Notebook	4 at 25 points each	100 points
Lab Meeting Reports	4 at 50 pts each	200 points
Laboratory Duties	50 pts	50 points
Poster Presentation	150 pts	150 points
Total		500 points

Evaluation:

Attendance and Participation: This course is primarily hands on training in the laboratory. *The experiments for this course may require time outside of regular class time to complete.* The points awarded will be directly proportional to the time in class minus lost points for lack of participation or inappropriate behavior. The total points earned by each student will be multiplied by the percentage of time that student was in class to calculate the final grade. The Itineris Early College High School attendance policy also applies to this class.

Homework: There are no specific homework assignments for this course, but it is expected that students need to devote time outside of class for things like background research, presentation preparation, etc.

Laboratory Notebook: Maintaining a laboratory notebook is an important part of many science jobs. In Industry the laboratory notebook is the property of the company and must stay at the company. You are expected to keep the lab notebooks at school. Lab books will only be graded four times and each check is worth 25 points. Points will be lost if the notebook is not current, legible, or not completed following proper scientific method.

Laboratory Meeting Reports: Four times a month (about once a week) the class will hold a 30 minute lab meeting in the conference room in the main office. One student will present during each meeting. This student will have 15-20 minutes to explain their research project and the progress that has been made since the previous report. Reports are to be in PowerPoint format and emailed to the instructor **the night before class** so that it will be ready to present. The remaining time will be given to questions and discussion of the project. There will be no make-up reports as you are expected to meet these deadlines just as you would be expected to in the workplace.

Laboratory Maintenance / Evaluation: Each student will be assigned a roll in maintaining the order of the lab. Assignments will be rotated monthly. Failure to complete your assigned tasks will result in loss of points. Working together with others is important for work in the laboratory.

Poster Presentation: Each student will prepare a scientific poster for the SLCC Biotechnology Poster Symposium to present on Monday May 16th. The poster will be a report of the research conducted throughout the semester and students are expected to present their posters to the public/judges. See the poster criteria for specific details.

Classroom Policies Biotech 1080

Students' conduct and dress should be in accordance with Jordan School District and Salt Lake Community College policies. Failure to learn the policies is not an excuse. A link for the Jordan School District policy of student conduct can be found on the course website.

Laboratory Dress Code: Students shall dress in a manner that shows respect for the educational environment and is befitting the day's activities. This means no revealing or skimpy clothing, wear lab coat when conducting experiments, no open toed shoes in the lab (bring an extra pair of shoes if necessary), and eye protection when necessary.

Classroom Behavior: Students who demonstrate through their actions to be a distraction from a learning environment will be dismissed from class for the day. If multiple offenses occur that student may be asked not to return to the class and will receive a failing grade.

Academic Honesty: Students will be expected to adhere to the Itineris Early College High School academic honesty policy. Any violation of this policy will result in a minimum of a zero for the assignment and could lead to dismissal from the course with a failing grade. The academic honesty policy can be found at <http://www.iechs.org/docs/AcademicHonestyPolicy.pdf>.

Cell phones and other electronic devices: Possession of a cellular telephone by a student is a privilege that may be forfeited by any student that uses their cell phone inappropriately. Cellular telephone use during classroom time, instructional activities and field trips is prohibited. Cellular telephones must remain off during these times. Failure to comply with this policy will result in dismissal from the class for the day with loss of the day's points. Cell phones will not be tolerated in class and 5 points will be deducted from a student's grade each time a cell phone is seen, heard, or used in lab. Calculators are available for checkout at the front office.

Food: No food or drink in the laboratory.

Safety: Students will be working with lethal chemicals. Students will be trained in laboratory safety procedures. Students must return a signed laboratory safety contract to continue to participate in the laboratory activities (see attached contract). **Any activity endangering the safety of any students WILL NOT be tolerated and may result in dismissal from the course.** Contact Dr. Booth if you have any questions about laboratory activities and/or safety issues.

Microbe use: All bacterial strains used in this course have been selected and genetically altered to be non-pathogenic to humans.

Disease Education: During the course of Biotechnology the topics of viruses, bacteria, and disease transmission will be discussed. This topic MAY address the issues of AIDS/HIV and other health issues. **State law requires that written parental consent must be obtained before a student can participate in learning about contraception devices and/or substances that includes issues such as AIDS/HIV and that parents be given the opportunity to review the curriculum. The curriculum of this course does not include the topics of contraception, but we will discuss the process of viral infection as it pertains to the field of biotechnology.**

Lab Safety Agreement Biotech 1080 Spring 2011

For success in our laboratory, everyone must agree to respect the same laboratory rules, to obtain and use the proper safety equipment, and to take appropriate precautions during a lab activity. I as your teacher will prepare you ahead of each lab on the safety issues, but it is up to you to remember good lab protocol and obey those warnings announced ahead of time.

Very Important things to remember:

1. **ABSOLUTELY NO** food or drink in the laboratory. Never eat or drink in the laboratory.
2. NEVER taste chemicals. NEVER directly touch chemicals.
3. No pipetting by mouth.
4. Never work alone in the laboratory.
5. Never perform any experiment not specifically assigned by your teacher.
6. Use lab equipment properly and only after training and instruction.
7. Do not apply cosmetics in the laboratory.
8. It is best not to wear contact lenses in the lab. Chemical vapors can get between the lenses and the eyes and cause permanent eye damage.
9. Know the location of all safety and emergency equipment used in the laboratory.
10. Become familiar with the specific hazards of an experiment before you begin.
11. Before beginning work: tie back long hair, roll up loose sleeves and put on any personal protective equipment required by your teacher.
12. Report any accidents, incidents, or hazards to the teacher immediately.
13. Keep your work area neat and uncluttered.
14. Clean your work area at the conclusion of a lab activity, disinfect your station with bleach solution.
15. Follow the proper disposal of all reagents, sharps, and broken glass.
16. Wash your hands with antibacterial soap and water.
17. Always respect lab work. Due to the amount of students that will utilize the biotech lab, there will be other experiments at or around the workstations. Please leave them alone.

Your commitment to the lab safety rules and your respect of the property in the laboratory are absolutely necessary. If intentional misuse or abuse of the lab and its property is intended, you may be removed from the course.

I understand the safety rules and agree to conduct myself appropriately by adhering to safe laboratory practices as instructed. I also understand that there is a \$25 lab fee associated with this course.

Student's printed name _____

Student's Signature _____

Date _____

My student has discussed with me the disclosure, the safety contract, and the importance of safety in the laboratory and I support my student in safe laboratory practices.

Parent/Guardian's Signature _____