



Chandler Unified School District

BIT300 Biotechnology 1
SY 2024-25



Course Overview

Course Description

This course is designed to introduce students to the scientific concepts and laboratory research techniques currently used in biotechnology. Students will develop laboratory skills, critical thinking, and communication skills currently used in the industry. After completing this course, students will have the necessary skills to transition to an entry-level biotech position. Biotechnology I areas of study include lab safety, science inquiry, documentation, data analysis, solutions, buffers, nucleic acid tech, microbiology, and careers in biotechnology. Leadership skills are enhanced through HOSA: Future Health Professionals. This course will satisfy one Biological Lab Science credit for any Arizona university entrance requirements.

AP/IB/Dual Enrollment

May be offered for Dual Credit

Prerequisite/Fee(s)

25

Course Materials

- Laptop- Students will use these for notes, lab planning, execution, write-ups, and graphing
- A section in a 3-ring binder or two-pocket folder specific for biotechnology will be required daily. Students will utilize them for their warm-ups, assignments, and notes.
- Composition Notebook- A scientific legal notebook will be kept
- Writing Utensils- black/blue/red ink pens, pencils, and a highlighter
- The following is beneficial, but not required, to have in science class: flash drive, graph paper, expo markers, scotch tape, ruler, scissors, stapler/staples, markers, colored pencils, crayons, and glue

Course Attire: Students are responsible for the following

Students must follow all lab safety rules and may be required to wear closed toed shoes, a lab coat (provided), safety goggles (provided), and disposable gloves (provided) during labs

Adopted Resource(s)

Biotechnology: Science for the New Millennium.

**An asterisk indicates a resource containing sexually explicit materials per legislative definitions. CUSD has determined that all the above resources are of exceptional educational value.*

Site and Faculty Information

School name and address:

Camille Casteel High School, 24901 S Power Rd, Queen Creek, AZ 85142

Building principal:

Jay Schnittger
schnittger.jay@cusd80.com

Teacher:

Jentry Yard-Husk Biology Bachelor of Science, Master of Education
yard.jentry@cusd80.com

Office hours: Wednesdays from 7:00am-7:25am and 2:15pm-2:45pm

Course Access

This course is taught in-person at Camille Casteel High School. Students will have access to the curriculum and instruction in the classroom. Google Classroom is the primary location for students to access material when absent from classes taught in person.

Equipment Usage Agreement:

Students will receive training for the proper use and care of all equipment. I understand that while my student uses school equipment, they are responsible for its care. If school equipment is damaged, lost, stolen, or destroyed under my student's care, I further understand that my student and I will be responsible for the replacement or cost of repair of the damaged equipment.

CTE Program Responsibilities:

Career & Technical Student Organization (CTSO)

Career & Technical Student Organizations (CTSOs) are co-curricular organizations that help enrich applied academics, communications, and teamwork. Students in CTE programs can participate in CTSO leadership activities and competitive events.

This program is aligned with the following CTSO: HOSA.

Industry Credentials

CTE programs allow each student to earn an industry certification aligned to their CTE program area. This CTE program will offer the following industry credential(s) for all students by program completion:

This is a beginning-level course, which will lead to an industry credential(s) in the advanced course(s) within this program

Technical Skills Assessment (TSA)

Technical Skills Assessments (TSA) are an Arizona Department of Education high-stakes state assessment designed for each program area. The TSA is to certify and document student attainment of industry-validated knowledge and skills through online testing. The TSA is taken after the CTE program (year 2 or 3) of each program.

Non-Discrimination Clause/ Aviso de no discriminaci3n

The non-discrimination clause can be accessed using the link or QR code (www.cusd80.com/Page/983)



Help

Academic Support

- Contact the teacher to schedule an appointment during office hours
- [Ed Tech](#) support for students, parents/guardians, and community link (cusd80.com/Page/45109)

Mental Health Support

- CUSD mental health support cusd80.com/Domain/10528 or 480-573-8808 (talk or text)
- Suicide & Crisis Lifeline: 9-8-8 hotline
- 24-hour Crisis Line Talk: 602-222-9444, Text: 741-741

Student Conduct, Success, and Responsibilities

Student Handbook

Students must follow the policies and procedures in the [Student Handbook](#). Copies of the handbook can be found at <https://www.cusd80.com/Page/533>, and printed copies will be provided upon request.

Student Responsibilities

-Classroom Participation-Content discussion will be a normal part of class. To make this as non-boring as possible, you are expected to interface with the content prior to coming to class. It is expected that you

have done this, and the style of the discussion is based on this assumption. Questions will be asked about the content that you have reviewed before class, and you answer them. Everyone, especially in this small classroom setting, will have the opportunity to demonstrate that they are knowledgeable about the topic. Please make sure that you are prepared.

-Tests and Quizzes-Tests and quizzes will consist of, but are not limited to, multiple choice questions, short response questions (essay), graphical analysis, experimental design, and defining vocabulary words. Tests and quizzes are comprehensive and pop quizzes will be given periodically. Successful students generally review previous and new material about 30-45 minutes a night, in addition to their homework, in order to receive an excellent grade in this class. Re-takes on tests only will be allowed once grades are posted. Students will have two weeks to re-take the short answer and the multiple-choice portion of the test before school or after school once per quarter. In order to re-take a test, students will need to show that they have completed two proofs of practice. Examples of proofs of practice will be discussed in class.

-Homework-Homework assignments are posted on google classroom and are all chosen carefully to help practice and enhance subject comprehension. Students are expected to keep up with all assignments and participate in order to receive all credit. Assignments may include reading guides, web assignments, objective questions, essay response, worksheets, vocabulary building, online simulations, interactives, and more.

-Laboratory Work-Laboratory work will be conducted throughout the year. Laboratory write-ups consist of formal and informal write-ups, pre and post lab assessments, and an occasional lab practical. Students must score at least a 90% on the Safety Quiz the first week of school in order to participate in labs. Any student who does not follow the safety contract will be given an alternative assignment to complete instead of participating in the lab.

-Technology-With the 1:1 technology initiative, it is the responsibility of the student to bring their fully charged laptop to school every day. Technology is a tool no different than a pencil. Like all school supplies, students are expected to have the supplies needed to learn.

-Google Classroom-The following is the Google Classroom website that students and parents/guardians are able to use in order to view the classroom set up by their teachers. The class website contains class information, assignments, videos, study guides, and helpful websites.
<https://classroom.google.com/>

-Discipline Protocol-It is the expectation that students hold themselves to high standards. The teacher will address students who are not meeting these expectations. The standard progression for discipline for students not meeting these expectations include:

- a warning
- a warning with a phone call
- a Parent-teacher conference
- a referral.

Our goal is to work with families to ensure that all students have a safe and focused learning environment.

-Tardy Protocol-Students are expected to be in their seats when the bell rings and ready to learn. If a student is tardy to class teachers will follow this progress to rectify students being late to class.

- a warning on their first and second offense.
- the teacher will email / call home.
- Notify Attendance Interventionist and email / call home.
- On the fifth offense, the teacher will refer the student to our Attendance Interventionist, who can work with families and assign Saturday school if necessary.

The teacher has the option to provide their own lunch detention at their discretion instead of writing a

conduct referral.

-Food/Drink and Lab Safety-There is no food, drink, or gum allowed in the classroom, except for water bottles. Safety is a major consideration in any science laboratory. It is essential to adhere to all the laboratory rules provided in the safety contract. Students who do not observe and practice classroom safety procedures and school rules will not be permitted to participate in lab. It is everyone's responsibility to maintain a safe environment.

-Academic Dishonesty- Cheating- Students are expected to demonstrate honesty and integrity while in attendance at Casteel High School. We expect each student to do his or her own work. This includes taking tests, completing homework, and other class assignments. If submitted work is not a true reflection of a student's own effort and ability, then the student has manifested unacceptable academic behavior and the assignment will receive a zero. The following actions will be considered cheating:

- a. Claiming credit for work not the product of individual effort.
- b. Providing access to materials/information so that others may wrongly claim credit. (Both parties will receive zero credit)
- c. Knowing about and tolerating observed dishonest behavior.
- d. Since this is a laboratory course, we encourage students to work in cooperative groups. However, all lab reports and work submitted must be individual and unique.

*All accounts of academic dishonesty will be handled according to the CUSD Student Code of Conduct.

-Digital Citizenship- Google Classroom and Google Meet-Posts in Google Classroom and Google Meet will only be used to discuss school related content only. Students are expected to have a respectful tone of voice when posting and all school rules and consequences related to harassment and bullying apply. Students will use appropriate grammar instead of texting language and posts will not be used to promote personal websites or chat rooms. Sarcasm will be limited in order avoid misinterpretations. No personal information will be shared (including telephone numbers, addresses, e-mails etc.). Lastly, students will not post photos or videos showing themselves or classmates without permission. If any of these rules are not followed, students will be given a conduct referral.

-Photos and Videos- Inside the Classroom and through Google Classroom/Meet-Students may not video record, sound record, or take pictures of the teacher or students without permission.

-Cell Phones-With the 1:1 technology initiative, cell phones will not be permitted to be out and used during class time.

Late work

-Absences and Homework-If a student has an excused absence, it is his or her responsibility to make up any work that was missed, including labs, assignments, and warm-ups. There is a section in Google Classroom, where students can view, download, and complete any missed work. Missed labs or in-class activities can be made up by scheduling an appointment with Mrs. Yard-Husk to come in before school, after school, or during lunch. Students who have excused absences have at least one day every day they are absent to make up the work they missed. Excessive absences can result in the loss of a credit for the course. If the student was present when an assignment was given, but absent the day the assignment is turned in, the assignment will be due the day the student returns to school. Make-up work for unexcused absences is not allowed; it will simply be a zero in the grade book so please make sure to call in any excused absences. If a student is absent for an extended period of time, accommodations will be made.

All reading and video assignments are carefully chosen to enhance subject comprehension. You are expected to keep up in these. Successful students spend approximately two hours outside of class for each hour spent in class. You should be doing something EACH night. Possible assignments may include: vocabulary building, reading guides, web assignments, objective questions, and essay responses. Please, avoid procrastination!

-Late Policy-Students are given a specific due date for all assignments. Students may turn in their

assignments late until the unit assessment for partial credit. Any late work turned in after the unit test will be a 0 in the gradebook.

Assessments and Assignments

Students will complete assessments during each unit of study to assess their understanding. Students will complete the CUSD Common Final at the end of the first and second semesters. The Common Final will count for 20% of the student's final semester grade in grades 9-12 and 10% in grades 7-8 (some exceptions may apply at the Junior High level). Common finals will be in ELA, Math, Science, Social Science, and World Language.

Final exams will be given during the CUSD Jr High/High School Early Dismissal days in December and May, as identified on the [District Calendar](#).

If students are requested to participate in a survey, the survey questions will be provided to parents/guardians seven days before student contact.

Grading

Grade Percentage

A	B	C	D	F
90.00%-100%	80.00%-89.99%	70.00%-79.99%	60.00%-69.99%	<60%

Quarter grades

- **Grading Categories and Coursework**- Grades consist of a combination of warm-ups, assignments, class participation, quizzes/tests, lab reports, projects, notebook checks, homework and class work. Any work not turned in will receive a zero in the gradebook. Grades will be calculated in the following way:

60%: Summative Assessments (tests/quizzes, formal lab reports)

40%: Formative Assessments (warm-ups, homework, and assignments)

Students and parents may access Infinite Campus in order to view and track student's success. Infinite Campus can be found at the following site:

<https://chandleraz.infinitecampus.org/campus/portal/chandler.jsp>

- **Finals:** Finals are not given early. Absent students will receive a zero until they can take the final

- **Extra Credit:** Extra credit is not offered.

Semester grades

Semester grades are calculated using 40/40/20: Each quarter accounts for 40% of the semester grade and the final exam accounts for the remaining 20%.

Units of study

Units for BIT300 Biotechnology 1

**An asterisk will indicate a unit of study containing sexually explicit materials per legislative definitions.*

Maintain a Safe Work Environment

Demonstrates Standard Operating Procedures (SOPS) in the Laboratory

Demonstrate Quality Control Procedures

Demonstrate Critical Thinking and Problem-Solving Skills

Demonstrate Ethical and Legal Conduct

Examine the Role of Living Organisms in Bioscience Research

Demonstrate Basic Lab Skills in the Use of Equipment and Instrumentation

Demonstrate Microbiology Skills

Demonstrate Protein Techniques

Demonstrate Material preparation and Storage

Demonstrate the Use of Bioinformatic Resources

Demonstrate Nucleic Acid Techniques

Demonstrate Scientific Measure

Signature Page - Please return this page to your student's teacher.



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Site: Camille Casteel High School

Building Principal: Jay Schnittger, schnittger.jay@cusd80.com

Teacher: Jentry Yard-Husk, yard.jentry@cusd80.com

Parent/Guardian

Acknowledgment

Parents/Guardians must specify their approval by selecting "Acknowledge" or "Potential Conflict" for their student's involvement in the units of study. Please note students cannot decline participation in standards-based units. The teacher will reach out regarding options if "Potential Conflict" is selected.

Unit of study	Acknowledge	Potential Conflict
Maintain a Safe Work Environment	<input type="checkbox"/>	<input type="checkbox"/>
Demonstrates Standard Operating Procedures (SOPS) in the Laboratory	<input type="checkbox"/>	<input type="checkbox"/>
Demonstrate Quality Control Procedures	<input type="checkbox"/>	<input type="checkbox"/>
Demonstrate Critical Thinking and Problem-Solving Skills	<input type="checkbox"/>	<input type="checkbox"/>
Demonstrate Ethical and Legal Conduct	<input type="checkbox"/>	<input type="checkbox"/>
Examine the Role of Living Organisms in Bioscience Research	<input type="checkbox"/>	<input type="checkbox"/>
Demonstrate Basic Lab Skills in the Use of Equipment and Instrumentation	<input type="checkbox"/>	<input type="checkbox"/>
Demonstrate Microbiology Skills	<input type="checkbox"/>	<input type="checkbox"/>
Demonstrate Protein Techniques	<input type="checkbox"/>	<input type="checkbox"/>
Demonstrate Material preparation and Storage	<input type="checkbox"/>	<input type="checkbox"/>
Demonstrate the Use of Bioinformatic Resources	<input type="checkbox"/>	<input type="checkbox"/>
Demonstrate Nucleic Acid Techniques	<input type="checkbox"/>	<input type="checkbox"/>
Demonstrate Scientific Measure	<input type="checkbox"/>	<input type="checkbox"/>

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By signing and returning this form, the parent/guardian acknowledges they have reviewed the resources and units of the study included in the syllabus.

- As the parent/guardian, I understand I may contact the teacher with questions on resources, content, or units of study at any time during the school year and view my student's grades in Infinite Campus.

Student name (printed)

Student signature

Parent/Guardian name (printed)

Parent Signature

Date

Please return this page to your student's teacher.