

**NIGHTHAWK BIOTECHNOLOGY, INC.
(BIOTECHNOLOGY I; JTS137/CTS137)**

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JOB DESCRIPTION

WELCOME

Nighthawk Biotechnology, Inc. is very excited to welcome you to our corporate family. Over the course of the next year we will introduce you to the exciting field of biotechnology. We will provide you with the technical, communication, and leadership skills that will prepare you for exciting research opportunities.

OBJECTIVES

- Understand the world of biotechnology enabling higher level critical thinking and problem solving
- Understand the central dogma of molecular biology and how this dogma is used in the biotechnology and pharmaceutical industries
- Become proficient in laboratory skills that could lead to further exploration in college
- Accurately record scientific experiments and analyze data
- Develop collaboration skills
- Learn leadership skills
- Explore career opportunities in the biotechnology/pharmaceutical industry
- Completion of Arizona CTE Career Preparation Standards & Measurement Criteria for Bioscience (41.0100.0; <http://www.azed.gov/cte/bio/>)

TEXTBOOK

Biotechnology, Science for the New Millennium by Ellyn Daugherty

OTHER MATERIALS NEEDED

- 1 inch 3 ring Binder with Paper and Dividers
- Pen/Pencil
- Scientific Calculator

Health Occupations Students of America (HOSA)

All employees of Nighthawk Biotechnology, Inc. are members of the co-curricular HOSA Organization. Employees may choose how active they wish to be in HOSA.

HOSA is an international student organization recognized by the U.S. Department of Education and the Health Science Education (HSE) Division of ACTE. HOSA's two-fold mission is to promote career opportunities in the health care industry and to enhance the delivery of quality health care to all people. HOSA's goal is to encourage all health science instructors and students to join and be actively involved in the HSE-HOSA Partnership. HOSA provides a unique program of leadership development, motivation, and recognition exclusively for secondary, postsecondary, adult, and collegiate students enrolled in health science education and biomedical science programs or have interests in pursuing careers in health professions. HOSA is 100% health care! Since its inception in 1976, HOSA has grown steadily reaching over 245,000 members through 54 chartered [HOSA Associations](#), American Samoa, Canada, District of Columbia, Germany, Italy, and Puerto Rico.

HOSA is not a club to which a few students in school join. Rather, HOSA is a powerful instructional tool that works best when it is integrated into the HSE and health science related curriculum and classroom. HSE instructors are committed to the development of the total person. Those who join the HSE-HOSA Partnership recognize the importance of providing students with training far beyond the basic technical skills needed for entry into the health care field. The rapidly changing health care system needs dedicated workers who,

in addition to their technical skills, are people-oriented and capable of playing a leadership or followership role as a member of a health care team.

HOSA's mission is especially critical when considering the acute shortage of qualified workers for the health care industry. It is essential that the HSE-HOSA Partnership maintain its momentum and encourage all HSE instructors to integrate HOSA into their curriculum and classrooms.

Through HOSA, employees will be encouraged to participate in

- Leadership Opportunities that provide training
- Leadership Camp
- Online Competitions
- Regional, State, and International Conferences
- College Scholarship Opportunities

Formal membership in HOSA requires \$20 year dues which covers affiliation with National and State HOSA and a t-shirt. Camps, competitions, and conferences require additional costs. Fundraising opportunities will be provided.

Potential Opportunities for Participation, outside of the classroom laboratory include:

Event	Date(s)	Estimated Cost
Chapter Leadership Camp in Prescott, AZ at Pine Summit Camp	October 03 – 05, 2019	\$150.00
Fall Conference in Phoenix, AZ at the Phoenix Convention Center North Building	November 14, 2019	\$60.00
Regional Online Testing	November/December 2019	\$1.00/test/person
Online Testing	January 2019	\$3.00/test/person
Regional Conference	February 14, 2020	\$35.00
State Leadership Conference at the Westin La Paloma in Tucson, AZ	April 15-17,2020	\$300 – 400.00
2020 HOSA International Leadership Conference in Houston, TX (Only top 3 in state in each competition area attend)	June 24 – 27, 2020	\$2,000.00

ATTENDANCE POLICY

In accordance with Arizona state law and Amphitheater Public School District’s Governing Board policy, students cannot miss more than 10% of each class. Students enrolled in year-long courses may only have 17 excused absences, after which all additional absences will be marked as “unexcused.” Students in semester-long courses may only have 9 excused absences, after which, each additional absence will be marked as “unexcused.” Please note, teachers are not required to provide make-up work for any absence that is marked “unexcused.” Regular school attendance is essential for success in school.

ELECTRONICS POLICY

Cellular phones and other personal electronics should be POWERED DOWN once the employee enters the classroom. Cell phones will remain in the possession of the employees at all times and should be placed into a backpack. On occasion, the teacher may encourage the use of cellular phones to complete an assignment during the class period. This is the only time that the cell phone should be used and it should be used to complete course work. Violations of this policy will be result in the loss of five Personnel Policy Points per occurrence. After three occurrences, parents will be contacted.

GRADING POLICIES

Grading will be based on the following evaluation tools: Exams, Quizzes, Cumulative Semester Final Exams, Laboratory Notebook, Biotechnology-In-The-News, Homework, Classwork, and Adherence to Personnel Policy. Grades will be assigned based upon total points earned.

Grade	Percentage
A	90% and Above
B	80% - 89%
C	70% - 79%
D	60% - 69%
F	< 60%

Homework Assignments (10 points per assignment), Biotechnology-In-The-News (20 points per assignment), Laboratory Notebooks (25 points per review), and Laboratory Reports (100 points per report):

Must be turned in on the due date. Late assignments will be accepted within five school days of due date, unless otherwise notified, without loss of points, unless the assignment was reviewed in class. Assignments not turned in within five school days will result in awarding of 50% of the total points (an F on the assignment). It is the responsibility of the employee to keep track of assignments missed when absent. Employees should work with their laboratory partner(s) to obtain assignments given while absent. If an employee misses class due to an excused absence, the employee has one week to make up any missing assignment. **Most labs cannot be made up.**

Exams (100 points per exam) and Quizzes (10 points per quiz):

Exams: Notified one week in advance of all exams.

Quizzes: Announced and unannounced.

The majority of the questions on exams and quizzes will be written. Employees should expect to have multiple choice, true/false, fill-in-blank, and essay style questions. Employees will also be evaluated verbally to help employees learn how to appropriately communicate science. Since this is a laboratory based course, employees will also have practical based questions where they will need to explain equipment, identify parts to equipment, demonstrate use of equipment, etc.. If an employee misses class due to an excused or unexcused absence, the employee will make-up the exam during the next available Conference Period. Failure to make up the exam or quiz within five days of returning to school will result in awarding 50% of the total points (an F on the assignment). No employee will ever be awarded less than 50% of the total points possible.

Cumulative Semester Final Exam (200 points):

Final Exams: Per the published IRHS schedule.

A cumulative semester final will be given at the end of each semester.

Adherence to the Personnel Policy (200 points per semester):

The Personnel Policy is the guiding principle of our company. Adherence to the policy is mandatory. Failing to follow an aspect of the Personnel Policy will result in the following:

First Infraction: Warning. Written documentation.

Second Infraction: Loss of 25 points. Written documentation.

Third Infraction: Loss of 50 points. Conference with employee and parent/guardian(s). Written documentation.

Employees can expect to receive graded items within 48-96 hours of the assignment being turned in or the exam/quiz being taken. TYLER will be frequently updated. Questions about grades should be raised by the employee first, not the parent/guardian. Grades will be discussed with a parent/guardian only in the presence of the employee. Email discussions should be started by the employee with the parents cc'd.

Revisions of exams will not be allowed. Employees can work to raise the grade of an exam up to the next whole number by completing an additional questions/discussion during the next available Conference Period. For example: a employee earns an 83 on an exam and chooses to answer the additional questions/discussion to receive up to a 90. Questions/discussion will be specific to the individual employee and will be written and/or verbal to assess the content that the employee has struggled with in the exam. The questions may be discussions with the teacher in lieu of written assessment (emphasizing the need to verbally communicate in science). The goal of this policy is to encourage employees to learn from their mistakes and to develop a self-awareness of areas where further development is needed.

MAKE-UP POLICY

If a employee misses a class due to an excused absence for legitimate reasons (The State of Arizona considers a legitimate excuse to be one that is due to medical, religious, or emergency situations beyond one's control), the employee has five days to make up any missing assignment. Most labs cannot be made up.

INCOMPLETE POLICY

Under very limited conditions such as an extended illness, employees may receive an incomplete (I). Employees will have two weeks to complete all of the work missed during these absences. Otherwise the incomplete will become an F.

CLASS OFFICERS In Nighthawk Biotechnology, Inc. we use the assistance of class officers. A set of officers will be peer selected for the first semester and a new set will be peer selected for the second semester. These are peer leaders who help with the general functions of the class. These are serious positions that will have real responsibilities to both the teacher and the class. Only serious applicants should run for these positions.

- **Officers are elected by the class for one semester. Officers will be evaluated at the quarter by their co-workers. If the coworkers determine the officer is not performing satisfactorily, they can be removed by a 2/3 majority vote.**
- **Officers are required to perform all duties on their own without reminders.**
- **Each officer must keep a written record of duties performed including date and description. This record must be signed off by two witnesses weekly. Performance record will be submitted monthly.**
- **Monday, August 12, 2019:** the class will be asked to nominate candidates for each category.
- **Tuesday, August 13, 2019:** each candidate will give a 2-3 minute speech to support his or her candidacy.
- **Wednesday, August 14, 2019:** we will hold an election for these officers

Clinical Research Associate

A clinical research associate is responsible for the design, planning, implementation, and overall direction of clinical research projects. He or she evaluates and analyzes clinical data and coordinates activities of associates to ensure compliance with protocol and overall clinical objectives. He or she may also travel to field sites to supervise and coordinate clinical studies.

- **Makes sure the class atmosphere is positive and productive.**
- **Assists students with classroom procedures. Helps students returning from absences.**
- **The PRIMARY Host to classroom guests and substitute teachers. Implements lessons when teacher is gone.**
- **Assists with emergency procedures. Lead evacuation line.**
- **Signs off student lab stations at the end of each lab for cleanliness, organization, and inventory control.**
- **Is the liaison between students and teacher for classroom issues.**
- **Other duties may arise as needed.**
- **LEADS BY EXAMPLE; ATTENDANCE, ATTITUDE, BEHAVIOR, ORGANIZATION.**

The class Clinical Research Associate has the potential to earn 15 additional Personnel Policy Points per quarter. (depends on performance).

Technical Services Representative

A technical services representative provides technical direction and support to customers on the operation and maintenance of company products. He or she also serves as a contact for customers on technical and service-related problems. A technical services representative also demonstrates uses and advantages of products.

- **Makes sure the class atmosphere is positive and productive.**
- **Educates students in handling and utilizing lab equipment.**
- **Informs students on technical procedures.**
- **Instruct students on handling technical equipment.**
- **Assists President as host to classroom guests, including assisting substitutes .**
- **In charge of audiovisual equipment, printer, autoclave, water baths, roH2O, milliQ, flow hood, and incubators.**
- **Assists with emergency procedures. Ends the fire escape line.**
- **Checks in/out lap top computers, and computer lab**
- **Other duties may arise as needed.**
- **LEADS BY EXAMPLE; ATTENDANCE, ATTITUDE, BEHAVIOR, ORGANIZATION.**

The class Technical Service Representative has the potential to earn 15 additional Personnel Policy Points per quarter. (depends on performance).

Environmental Health and Safety Officers (2 Individuals)

An environmental health and safety specialist is responsible for developing, implementing, and monitoring industrial safety programs within the company. He or she inspects lab and storage areas to ensure compliance with Occupational Safety and Health Administration (OSHA) regulations. He or she evaluates new equipment and raw materials for safety, and monitors employee exposure to chemicals and other toxic substances. A safety specialist, depending on the job level, may also conduct training programs in hazardous waste collection, disposal, and radiation safety regulations.

- **Makes sure the class atmosphere is positive and productive.**
- **Leads class in emergency procedures, takes role during evacuations.**

- Maintains all safety equipment: safety showers, eye washes, safety glasses, First aid kit, SDS book.
- Instructs class in safety hazards pertaining to each lab protocol.
- Coaches all students on safety issues during all lab work.
- Ensures that safety protocol is met ie. Safety glasses, gloves, aseptic technique, NO FOOD/DRINK IN LAB.
- Other duties may arise as needed.
- LEADS BY EXAMPLE; ATTENDANCE, ATTITUDE, BEHAVIOR, ORGANIZATION.

The class Environmental Health and Safety Officers has the potential to earn 15 additional Personnel Policy Points per quarter. (depends on performance).

The teacher reserves the right to make changes and/or adjustments to these policies. Adequate and advance notice will be given to the employees should these policies change.

Keep It CLASSY Nighthawks!
Let's have a great year in biotechnology!

