

Student Application Biotechnology Summer Institute for High School Students in Pima County

The Pima Community College Biotechnology Summer Program is a cooperative program with Pima Community College, JobPath, Inc. a workforce development organization, the Joint Technology Education District, (JTED) and the Pima County OneStop Career Center.

The Biotechnology Summer Institute will offer high school students the opportunity to take an Introduction to Biotechnology Course at Pima Community College West Campus. Students will attend class four hours a day for five weeks. The Institute will be offered May 27, 2008 – June 27, 2008. Students completing this course will receive four college credits. JTED will provide course fees, registration and books. The four credits are contingent upon successful completion of the course with a grade of C or above. This year we are unfortunately not able to offer a stipend.

What is Biotechnology? Biotechnology is the application of biological technologies to solve problems and make useful products. Examples of the technologies used are cell culture, recombinant DNA technology, protein biochemistry and bioinformatics. Biotechnologists may work with biological molecules, living cells, and whole organisms. Biotechnology has many medicinal, agricultural, forensic, and environmental applications.

Arizona has a growing biotechnology industry that needs skilled workers. There is a gap between the projected needs of biotechnology employers in Southern Arizona and the number of skilled workers projected to enter the workforce. The biotechnology industry employs people with training in laboratory research to work in research and development, diagnostics, production, clinical testing, and quality control. Potential employers include biotechnology and pharmaceutical companies, and university and government laboratories. Biotechnologists have various levels and types of training. Individuals with an associate's or bachelor's degree work as laboratory technicians or assistants. Individuals with a master's or Ph.D. in a biotechnology related field, direct research, have teaching or administrative positions.

Students who participate in the Summer Institute will:

- Gain hands on lab experience
- Learn through class lectures
- Work in small groups
- Have guest lectures from employers
- Go on field trips to employers
- Learn how research impacts society
- Develop critical thinking skills

Students will perform the following lab techniques during the Summer Institute:

- Gel electrophoresis
- Analysis of DNA sequences
- Polymerase Chain Reaction (PCR)
- Cloning
- DNA typing (forensics)
- Protein purification

Students should apply who:

Are curious about how people use scientific research to cure cancer and solve problems in the world

- Are interested in science and math
- Have completed at least one biology course

(Please word process or type. If handwritten, applications must be clearly legible.)

I. Personal Information			
Last Name	First Name	Middle Initial	SSN
Street Address			
City	State	Zip Code	
Home Phone Cell Phone	E-mail address		
Gender and Ethnicity to be used for statistical purposes only (If you are Native American, please specify tribe.): African American Asian or Pacific Islander Caucasian Hispanic Native American () Other (Gender: Female or Male Birthdate:)			
Name and Address of school you are presently attending.			
II. Family Information			
Parent or Guardian Last Name:	Parent or Guardian First Name	Middle Initial	
Current Address:			
City	State	Zip	
Home Phone	Work or Cell Phone	E-mail address	

III. Education		
High School	Date of Graduation (Expected)	
Anticipated College Major		

IV. Narrative

Please address the following points in a typed one or two page narrative essay not to exceed 500 words. • Please explain why you are interested in participating in the Biotechnology Summer Program. • Describe any previous experience you have had in a lab setting. • Please add any additional information the selection committee should have when considering your application.

V. Other Required Documentation

A complete application includes the following materials: • A completed Pima Community College Admissions Application (apply online at www.pima.edu) • Official transcripts from all schools attended and a copy of GED scores (if applicable). • Assessment scores from the Pima Community College Assessment Test • A recommendation from a teacher from whom you have taken a science, technology, or math course. (Please provide the teacher with the attached forms to complete and return in a sealed, signed envelope.) • Completed Application and Application Checklist.

VI. Certification

I certify that all information supplied by me in this application is accurate and complete and that any misrepresentation on this application will be cause to nullify my application prior to admission or may result in dismissal following admission. I also agree to abide by the rules and regulations of Pima Community College and the University of Arizona.

Signature of Student

Date

Signature of parent or guardian (if still in high school)

Date

Deadline:

Complete Application due March 31, 2008. Incomplete or late applications will not be accepted.

Please submit all applications to:
Dr. Lisa Werner, Lead Faculty Biotechnology
2202 W Anklam Rd. Mailcode 0215
Tucson, AZ 85709

Teacher Reference

The following is to be completed by student:

Waiver of access to applicant recommendation: The Family Educational Rights and Privacy Act of 1974, as amended (P.L. 93380) allows a candidate for admission to waive his/her rights of access to confidential recommendations written on his/her behalf if used solely for admissions purposes. You are not required to waive access to the recommendation form as a condition for admission. You are required, however, to complete this waiver form and select one option.

I agree do not agree to waive access to the recommendation written by

_____.

Signature of Student

Date

Signature of parent or guardian (if still in high school)

Date

The following is to be completed by the teacher providing this reference:

The student who provided you with this form is applying for the Biotechnology Summer Program that begins in the summer of 2008. The program is designed to promote interest in the areas of biotechnology. Upon successful completion of the program students will receive four college credits. The selection committee seeks references from individuals who know the qualifications and qualities of the candidate. Your comments are greatly appreciated and will be considered carefully prior to selecting participants. If you have any questions, please feel free to contact Dr. Lisa Werner at Lisa.Werner@pima.edu or 206-6002. Please return these forms to the applicant in a sealed envelope and sign your name across the seal. Deadline for student to submit the completed application for first consideration is March 31, 2008.

Teacher's Name _____

Teacher's Work Address _____

Teacher's Work Phone _____

How long have you known this student? _____

In what capacity have you known this student? _____

Teacher's Reference Form Please rank the student in the following grid.

Criteria	Please circle one answer		
	1 Below Average	2 Average	3 Above Average
Motivation and ability to handle a biotechnology curriculum.	1	2	3
Dependability and accountability, including timeliness, ability to follow through on assignments, regard for safety of self and others.	1	2	3
Ability to problem solve and apply critical thinking skills.	1	2	3
Ability to cooperate with others, and degree of selfdirection.	1	2	3
Verbal and written communication skills.	1	2	3
Flexibility and creativity, including ability to adapt to change and to remain calm in stressful situations.	1	2	3

Please answer the following questions:

1 What do you see as this student's strengths?

2 What do you see as areas for improvement/growth in this student?

3 Comments:



Pima County Community College District

Student and Parent/Guardian Agreement

Student Consent

I understand that I will be taking a class at Pima Community College (PCC) in biotechnology.

If accepted to the Biotechnology Summer Program, I agree to:

- 1 Attend all classes and activities of the Biotechnology Summer Program.
- 2 Participate in studies and surveys to help evaluate the program.
- 3 Allow the sharing of all relevant academic and workplace information among Pima Community College and JobPath.

I certify that all the information in my application is accurate and that I completed the attached application and personal statement myself. I understand that PCC may reject my application if any information is found to be incomplete or inaccurate.

Student Signature

Date

Parent/Guardian Consent (if student is still in high school and/or under 18 years of age). I support my son's/daughter's decision to apply for the Biotechnology Summer Program. I understand that if he/she is selected, I will attend the required orientations and annual activities connected to the Biotechnology Summer Program.

Parent/Guardian Signature

Date

This program is very competitive. All required application components will be considered in the selection process. These include:

- PCC Assessment Test Scores – You must take these before you submit your application
- Transcripts
- Essay
- Teacher Recommendation
- Completed Application Form and Application Checklist

PCC Assessment Test Instructions For Students Who Are Under Age 16

- If you are under 16, you must take your PCC assessment tests at the West Campus, 2202 W. Anklam Rd., and your PCC application must be approved by our Division Dean of Student Support Services, Betty Elasowich. A parent or legal guardian must accompany you.
- To make an appointment with Ms Elasowich, call 206-6677.
- Arrive at the PCC West Campus before your appointment so that you can complete a PCC application. You and your parent or guardian will then meet with Ms. Elasowich. After she signs your application, you can process your application at Admissions and will be given a PCC student number. When you have the student number, you can take the PCC assessment tests.

Pima Community College West Campus is located at 2202 W. Anklam Rd.

<http://www.pima.edu/maps/>

You will need to go to the first floor of the Santa Catalina Building, Building C. The parking lot and main entrance on the south side are at ground level. Admission is C 101, the Division Dean of Student Support Services office is C 125, and Assessment and Testing is C 141. Once you get into the C building you can ask any PCC personnel for directions!

If you are 16 or over, you can take the assessment test at any of these locations: Assessment Center Telephone Numbers

- Community Campus: 2066454
- Desert Vista Campus: 2065047
- Downtown Campus: 2067254
- East Campus: 2067874
- Northwest Campus: 2062212
- West Campus: 2066648
- DavisMonthan Air Force Base: 2064866
- Northeast Community Learning Center: 2062525
- Southeast Community Learning Center: 7622800, ext. 2988

The link below has sample test questions and answers:

<http://www.pima.edu/assessment/SampleQuestions.shtml>

Application Checklist for Complete Applications

____ I have taken the PCC Assessment Tests and have included a copy of my test scores

____ I have enclosed my transcript

____ I have enclosed teacher recommendation

____ I have enclosed the essay

____ I have completed and enclosed signed forms