



Austin Community College, Biotechnology Department

# Student Handbook

Academic Year: 2010-2011

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## *Welcome to Austin Community College's Biotechnology Program!*

On behalf of the faculty and staff of the Biotechnology Program, I would like to welcome you to Austin Community College (ACC) and the Biotechnology Department! We are excited to have you and will treat you with courtesy and respect. We are here to assist you in gaining an education both within the classroom and in your internship experience, the capstone of the knowledge that you gain from the classroom.

ACC is accredited by the Commission on Colleges, Southern Association of Colleges and Schools (SACS), is recognized by the Texas Skill Standards Board (TSSB) and we are responsive to an Advisory Board whose members are selected from the local biotechnology industry.

The Biotechnology Department Student Handbook has been compiled by the faculty to provide information pertinent to students enrolled in this program. The purpose of this handbook is to detail policies and procedures specific to this program and is constructed to be used as a supplement to the ACC Student Handbook. It serves to bridge the overriding policies of the College with the policies specific to this program. The policies and procedures set forth in this handbook are designed to support the success of the biotechnology student.

You will find this handbook a valuable resource for information including: program description and options, important contact numbers, required materials, academic policies, and progressive discipline policy, just to name a few.

If you have any further questions about Biotechnology Department policies or procedures please feel free to contact me, your instructors or the Biotechnology Department Administrator.

I wish you success in the pursuit of your educational goals,

Patricia Phelps, PhD  
Biotechnology Department Chair  
Austin Community College

## *Attributes of the Biotechnology Laboratory Professional*

Biotechnology is an applied biology field utilizing living organisms in the applications of agriculture, engineering, technology, medicine and pharmacology for the manufacture of products with the intention of improving the quality of human life. The biotechnology laboratory professional is an essential part of this industry.

The Biotechnology laboratory professional may work in the areas of research and development, quality systems, production, clinical testing and diagnostics to name just a few! Specific job functions may include responsibility for clinical sample testing, product manufacturing, material processing, laboratory monitoring and documentation, equipment validation and maintenance, inventory control, product inspection, assist in complying with government regulations, collection and evaluation of data and assist with research and development.

Potential employers include biotechnology and pharmaceutical companies as well as clinical labs in hospitals, universities, government, and independent settings.

The purpose of this program is to provide the student with the theory and hands-on experience necessary for an entry level position as a Biotechnology Technician. Some essential attributes of the Biotechnology laboratory professional include:

- ✓ Perform, develop, evaluate, correlate and assure accuracy and validity of laboratory information, direct and supervise laboratory resources and operations and collaborate in the production and/or development of biotechnology products.
- ✓ Perform diverse and multi-level functions in the areas of analysis and decision-making, information management, regulatory compliance, education and quality assurance/performance improvement.
- ✓ Possess skills for financial, operations, marketing, and human resource management of the laboratory setting.
- ✓ Work independently and collaboratively, being responsible for their own actions, as defined by the profession. They have the requisite knowledge and skills to educate other laboratory professionals and others in their project team.
- ✓ Relate to people, a capacity for calm and reasoned judgment, careful attention to details, and a demonstration of commitment to the thoughtful performance of their work are essential qualities.
- ✓ Communication skills extend to consultative interactions with members of the project team, external relations and customer service.
- ✓ Demonstrate ethical and moral attitudes and principles that are necessary for gaining and maintaining the confidence of patients, professional associates and the community.

# IMPORTANT BIOTECHNOLOGY DEPARTMENT INFORMATION & CONTACTS

## Biotechnology Department Website:

All Biotechnology department specific information can be found on our website:

<http://www.austincc.edu/biotech/>

Here you will find information on our degree plans, course descriptions, skill standards, scholarships, workshops, facilities, faculty and class syllabi.

## Biotechnology Program Advising:

Advising for the Biotechnology Department is carried out with a Biotechnology faculty member. To obtain forms and set up an appointment please call 512-223-5915 or e-mail

[biotech@austincc.edu](mailto:biotech@austincc.edu)

## Biotechnology Department Textbooks and Supplies

1. **Textbooks:** Biotechnology textbooks are mandatory and available for purchase at the Eastview and Round Rock Campus Bookstore. Please visit the bookstore site for hours of operation: <http://austincc.bkstore.com/bkstore/content>
2. **Supplies:** Students are responsible for providing and bringing the following to every class:
  - Safety Goggles (Z87.1)
  - Lab notebook (see your instructor)
  - A scientific calculator
  - Sharpie or other type of permanent, waterproof marker
3. **Computers and Internet Access:** It is strongly advisable that students have a dependable home personal computer with internet access and a printer. Students will be required to use computer software and the internet to generate various reports and to complete homework assignments. Students may also be required to print out course material for class. Computers, printers and internet can be accessed at several ACC computer labs: <http://irt.austincc.edu/CollegeComputers/>

## Faculty & Staff Contact Information

Name	Title	Phone Number	Email @austincc.edu	Website www.austincc.edu/
<b>FACULTY:</b>				
Dr. Patricia Phelps	Department Chair	(512) 223.5914	Pphelps	pphelps
Dr. Linnea Fletcher	Professor	(512) 223.5912	Linneaf	linneaf
Shelley O'Grady	Assistant Professor	(512) 223.1790 x25639	sogrady	sogrady
Dr. Sandra Porter	Assistant Professor, Adjunct	(512) 223.5915	Sporter	sporter
Angela Wheeler	Assistant Professor, Adjunct	(512) 223.1790 x26054	awheeler	awheeler
Dr. Bradley Hall	Assistant Professor, Adjunct		Bhall1	
<b>STAFF:</b>				
Steven Spurlock	Administrative Assistant III	(512) 223.5915	Sspulock	
Evelyn Goss	Lab Technician	(512) 223.5913		



## ACC RESOURCES

ACC is a very large and complex place (8 campuses and 11 centers). It can be difficult at times to figure out who to call or what to do in a particular situation. The executive vice president's office and other departments at ACC have worked hard to provide several basic information sources to help make your transition to an ACC student a smooth one.

When you have a problem that is not specific to the Biotechnology Program, there are many resources to help you find the solution.

1. A good place to start is the ACC website: <http://www.austincc.edu/>. There is a keyword search box in the top-left corner of the website. You can also try the A-Z listing found here: <http://www.austincc.edu/index/>
2. The student resource webpage: <http://www.austincc.edu/current/>. This essential website will have practically everything you will need to start your semester off right.
3. The student handbook also is also a very important resource. You can pick one up in the admissions office. It's also available online: <http://www.austincc.edu/handbook/>
4. Admissions and Records: <http://www.austincc.edu/support/admissions/index.php>
5. Although your professor is the best tutor for your class, ACC offers a free tutoring program at every campus. To locate the best campus and schedule that meets your needs you can go here: <http://www.austincc.edu/tutor/>
6. Computer access is a must for this program. If you do not have a computer at home, ACC offers extensive computer labs with support: <http://www.austincc.edu/tutor/students/computers.php>
7. All new students MUST obtain a student ID. You will need this ID to gain access to the learning labs, computer labs, libraries and testing centers. Information on how to obtain an ID is here: [http://www.austincc.edu/support/admissions/student\\_id.php](http://www.austincc.edu/support/admissions/student_id.php)
8. All new students must obtain their ACC eID. This is needed to gain access to all online secured entities such as your registration, grades, and Blackboard. Information on how to obtain your ACCeID: <https://acceid.austincc.edu/idm/user/login.jsp>
9. All students must utilize their official ACC email to communicate with their professors. Information on how to obtain your email is found here: <http://www.austincc.edu/google/>
10. Student Support & Success: <http://www.austincc.edu/support/>

# BIOTECHNOLOGY PROGRAM MISSION

## Biotechnology Mission Statement

It is the mission of the Biotechnology Program to provide exceptional quality education while delivering a technologically-relevant workforce to our community-based industry partners.

## Biotechnology Program Goals

1. To provide students both academic instruction and professional training in the field of laboratory sciences to meet the employment needs of Austin and surrounding communities.
2. Provide a climate conducive to stimulate interest in biotechnology, participate in professional organizations, and encourage awareness in changing trends in laboratory technology.
3. Produce graduates who meet entry level competency in the profession.
4. To produce skilled laboratory workers who:
  - ✓ are qualified to perform, with minimal supervision, the tests routinely performed in biotechnology laboratories
  - ✓ have a working knowledge of the principles of the tests they are performing
  - ✓ keep accurate and legible records and are able to communicate reports clearly to fellow laboratory personnel
  - ✓ are able to correlate test results in order to confirm them
  - ✓ will strive for accuracy in the performance of tests and will make every effort to eliminate error through their ability to recognize irregularities in test results and procedures and make corrections according to preset strategies and criteria and refer them to more qualified personnel when appropriate
  - ✓ are skillful in the operation of laboratory instruments and are able to recognize instrument failures and take appropriate actions
  - ✓ are able to demonstrate and explain routine procedures to others in the laboratory
  - ✓ will take responsibility for their own work and are able to organize their work to make the most efficient use of time
  - ✓ will adapt well to various work situations
  - ✓ maintain the confidentiality of internship results,
  - ✓ will cooperate with their coworkers and all members of the internship site
  - ✓ will strive to keep their competence and knowledge current in relation to the changing work environment
  - ✓ will have the qualities of honesty and intellectual integrity beyond reproach
5. To maintain high academic and professional standards both in the program and in its students.
6. To serve as a resource for the biotechnology laboratories in the Austin area.

## Quality Statement

The Biotechnology Department is committed to maintaining and monitoring a quality system to ensure we meet the educational needs of our community. The Biotechnology Department is committed to disseminating quality throughout the department in a systematic and conscientious program of *Leading by Example*. Biotechnology Department students are expected to read and abide by the policies and procedures outlined in the Quality Manual.

## Quality Policy

*The Austin Community College Biotechnology Department will accomplish the goals outlined in the mission statement by:*

- Committing to a department-wide Quality System detailed in the Quality Manual
- Engaging the local biotechnology industry in the development of our academic program through student internships, faculty training, and adjunct faculty and guest lecturer participation
- Committing to a program that is designed and implemented to meet customer requirements; the ACC biotechnology student, the Austin biotechnology industry and the Austin and surrounding communities as a whole
- Ensuring Biotechnology Department staff and faculty are highly qualified by meeting educational and work experience standards, annual professional development requirements, consistent policy training and continual recruitment of adjunct faculty from the local biotechnology industry
- Establishing departmental policy guidelines for students, staff and faculty ensuring communication through development of departmental handbooks and training
- Emphasizing competency-based education principles using TSSB-recognized skill standards as guidelines in program development and classroom training
- Setting up an active monitoring system which consists of measurable quality objectives to ensure standards are maintained, evaluated, reviewed and revised as needed
- Presenting life-long learning opportunities to our community by offering an Associate's degree, certificate programs, distance learning classes, continuing education classes, short courses, work-force professional development and on-the-job training through internships within our community
- Educating students with a solid foundation in problem solving, communication, quality processes and team work, with current and emerging biotechnology skills
- Working in partnership with our advisory board to keep our educational program relevant

# BIOTECHNOLOGY PROGRAM POLICIES

## Biotechnology Admission Requirements

Admission requirements for the Biotechnology Program include:

1. Completion of high school or GED equivalent.
2. Meet current requirements for admission to ACC. Students need to pass the Texas State Initiative (TSI) test in reading, writing and math.
3. Meet with a Biotechnology Department faculty member for advising. Call 512-223-5915 or email [biotech@austincc.edu](mailto:biotech@austincc.edu) for an appointment.

## Biotechnology Program Options

Two-year community college students have several options as follows:

1. A one-year **certificate** focusing on entry level skills or biomanufacturing depending upon the needs of industry in the area.
2. A two-year **Associates of Applied Science (AAS)** degree in biotechnology. The AAS degree provides students the more advanced skills necessary to be an R&D technician as well as the courses for transfer to a university including Texas A&M University, Texas State University - San Marcos, Stephen F. Austin State University or the University of Houston; all of which have established transfer agreements. For more information about transferability of courses, please check the transfer guide at the ACC website.
3. Four-year graduates (postbacs) can obtain the **Advanced Certificate** in one year or less depending upon skill level and background knowledge. This certificate is composed solely of biotechnology courses. The prerequisite for the advance certificate is that a student must hold a baccalaureate or associates degree that includes one and a half years of biology and one year of chemistry (including one semester of organic chemistry) and department approval to be admitted to the program. Proficiency in oral/written English and in use of computers is required (to be tested separately if requested by the Department Chair or course instructor).
4. The entry-level training, certificates, and AAS require a semester-long internship in industry near the end of the coursework.
5. All courses, except the internship, are offered also through continuing education.

## Biotechnology Program Length

The Associate of Applied Science (AAS) degree, if taken full time (six semesters), takes two years to complete. The one-year certificate and Advanced Technical Certificate take one year to complete (3 semesters, full-time). This is an intensive program and students should prepare themselves as well as their family members to make the time commitment. Each student's level of preparedness before coming into the program will determine the amount of time required to complete the Biotechnology Program.

## Biotechnology Program Progression

In order to successfully progress through ACC programs, the student must:

- Complete pre-requisite courses before progressing in the program.
- Be enrolled in co-requisite courses at the same time.
  - Withdrawal from any co-requisite course prior to the college official withdrawal date will result in withdrawal from all other co-requisite courses regardless of the current grade in the course.
  - Students who fail a co-requisite course are required to retake all co-requisite courses upon re-admission.
- Achieve a minimum grade of “C” in all courses.
- Satisfactorily meet course objectives.

## Biotechnology Program Placement Exams

Students must pass a placement exam with a grade of 70% or better to enroll in all second year advanced biotechnology courses. A study guide for preparing for the competency exams can be found here: <http://www.austincc.edu/biotech/> Contact department administrator to schedule the placement exam. Placement exam grade can be used to register for second year classes as follows:

- 70-79% - one semester
- 80-89% - two consecutive semesters
- > 90% - three consecutive semesters

## Degree Plan

A current degree plan with course descriptions can be found in the ACC College Catalog or online at the Biotechnology home page: <http://www.austincc.edu/biotech/>

1. Certificate Degree Plan: <http://www.austincc.edu/biotech/certificate.php>
2. Associates Degree Plan: <http://www.austincc.edu/biotech/associates.php>
3. Advanced Technical Degree Plan:  
<http://www.austincc.edu/biotech/advancedtechnical.php>

## ACC Course Descriptions

All current degree plans and course descriptions can be found here:

<http://www.austincc.edu/huse/plans.php>

## Graduation

Early in the last semester of the Biotechnology Program, students must request an application for graduation. Please visit <http://www.austincc.edu/support/admissions/applyingforgraduation.php> for complete information on graduation.

## Biotechnology Department Internship Policies

Students are required to register for and perform a semester-long internship near the end of their coursework. Students are provided with an Internship Handbook and class syllabus which is reviewed on the first day of class. Both documents will assist the student in understanding internship expectations and how internship success is determined. An online copy can be obtained here: <http://www.austincc.edu/biotech/>

An internship course allows students to apply the knowledge and skills obtained in the curriculum into real life experiences in a biosciences laboratory.

Students will be held to the highest level of work ethics. Excellent attendance, reviewing of lecture notes, laboratory procedures, textbooks and attentiveness to instruction provided are high among the expectations. The ultimate goal of the internship is that the student is able to do the basic work at the bench with minimum supervision in most areas, regardless of the location of the internship.

### *Please note!*

- Internships are seldom paid positions!
- Training students is very time consuming due to the nature of the training required at the bench. Training students slows down the work process in the department during the days that a student is on-site. Students should consider internship training experiences to be a privilege, not a right.
- Students will be given an internship site based on availability and the strength of the student's skill set. Students may not turn down an internship site, but with instructor approval may use a biotech job as their internship.
- Students may be required to travel outside the Austin Metropolitan area for some internship sites. Rotations on evenings, nights or weekends are unusual, but may occasionally be required.

There are two Internship classes that apply to different program tract students. Students who wish to sample more internship experiences before settling into a job may sign up for both courses in separate semesters. To register for these classes you must obtain permission from the Biotechnology Department Chair. Contact the Biotechnology Department Administrator for an appointment.

- ***BITC 2486 - Internship-Biology Technician/Biotechnology Laboratory Technician I*** *The experience can be internal to the college where the student prepares kits for the Biotechnology Center for distribution under the supervision of a trained ACC instructor. Activities include designing and refining laboratory protocols for the classroom use. Or the experience can be external to the college, where the student is mentored and supervised by a workplace employee. This may be paid or unpaid experience. This course may be repeated if topics and learning outcomes vary. Capstone for certificate or elective for A.A.S.*
- ***BITC 2487 Internship – Biology technician/Biotechnology Laboratory Technician II*** *This is an experience external to the college for an advanced student in a specialized field involving a written agreement between the educational institution and a business or industry partner. Mentored and supervised by a workplace employee, the student achieves objectives that are developed and documented by the college that directly relate to specific occupational outcomes. This may be paid or unpaid experience. This course may be repeated if topics and learning outcomes vary. Capstone course for A.A.S.*

## **Transfer of College Credit**

All courses to be transferred into the degree plan from another institution must be evaluated and approved by the Admissions and Records office of Austin Community College. Please request a transcript evaluation through the Admissions and Records office as soon as possible.

Students may transfer credit from other biotechnology programs to ACC. The criteria used to assess a transfer student's work shall be:

1. Course description and grade received. A grade of “D” or less will not be accepted for transfer.
2. Course(s) must have been completed no more than two years prior to acceptance to the ACC Biotechnology Program.

The Biotechnology Program officials will authorize approval of credit after reviewing transcripts and course descriptions. In any instance, however, additional assessment may be required in the form of an ACC final course exam in that particular Biotechnology Program course and a laboratory practical exam or the student may be required to audit all courses transferred.

Students whose coursework is more than two years old may challenge the course by taking the course final and laboratory practical. A grade of 70% or better on each is required.

## Advanced Placement Core Curriculum

Students requesting credit through the College Board Advanced Placement Program (AP) must complete at least one college credit course at ACC before appropriate credit is posted on their ACC academic record. There is a per credit hour charge. For more information, students should review the current College Catalog.

## Biotechnology Department Challenge Exam Policy

A student may qualify for a challenge exam to receive credit for a first year Biotechnology Program course based on previous formal laboratory science training.

The student must provide a letter of request outlining the subject area being challenged and the justification for eligibility for the challenge exam. The student must describe how they meet the skill standards of the class. This letter of request must be presented to the Biotechnology Program officials at least four weeks prior to the proposed test date.

To successfully complete the challenge exam the student must pass a comprehensive written exam covering fundamental concepts and demonstrate all competencies required by the course including a lab practical to prove acquisition of essential hands-on laboratory skills. Minimum scores of 70% are required for both the written and practical exams.

***The following Biotechnology Program courses may be challenged:***

- BIOL1414 - Introduction to Biotechnology

***Please note!***

- There is a fee to take this exam. Please inquire with the Department Administrator.
- Students who test out of a biotechnology course by this challenge process must substitute an equivalent number of science elective credits to qualify for graduation.

## Institutional Credit by Exam

It is also possible for a student to obtain Institutional Credit by Exam from the Biotechnology program if they have already mastered the skills through industry training or other academic equivalent courses. The exam involves a several day test where students demonstrate both the skills and knowledge they would have gained by taking that particular course.

## Program Readmission Policy

A student who withdraws from the program or fails to achieve the minimum course grade for progression may be re-admitted ***one time only*** to the Biotechnology Program upon the recommendation of the Biotechnology Program Admissions Committee and according to the criteria outlined below.



## Readmission Criteria

- A student who has been out of the Biotechnology Program for more than one year must reapply as a new applicant and will complete all second year Biotechnology Program course work.
- The student must meet current admission requirements.
- The individual must submit a letter requesting re-admission to the Biotechnology Program Department Chair four weeks prior to the re-entry semester. This letter serves as a re-entry request. It is in the individual's best interest to address the criteria addressed below, if possible.
- Each reentry request will be evaluated by the Biotechnology Program Admissions Committee, who will make the determination of whether to allow the student to re-enter. Criteria used in this determination will include, but are not limited to:
  - The student's motivation, interest in the field, and compatibility with the profession as can be demonstrated by successful employment or volunteer activities in laboratory related areas, attendance and participation in professional activities, and/or continuing college coursework in related studies.
  - The correction of any identified program-related problems.
  - Available space.
- Re-admitted students are conditionally accepted and will be required to audit or repeat previous course work as determined by the Admissions Committee.

## Re-admission Conditions

- The student will be given, and expected to follow, the policies of the current Biotechnology Department Student Handbook.
- The student retakes all Biotechnology Program courses starting with the fall semester of the second year unless otherwise stipulated by the Admissions Committee.

## Re-admission Priority

The Admissions Committee will review the files of all students requesting re-admission to the Biotechnology Program. The following priority guidelines will determine placement on a waiting list for a space-available opening.

### First Priority:

- Students having minimum course grades of "B" who withdrew for personal/health reasons.
- GPA on Biotechnology Program course work may be used to rank equally qualified students.

### Second Priority:

- Students having minimum course grades of "C" who withdrew for personal/health reasons.
- Students who withdrew on or before the last day to withdraw who were not currently in good academic standing. Good academic standing is defined as an academic average of 75 or above in Biotechnology Program course work.

- Students, who did not earn a minimum grade of “C” in Biotechnology Program course work.
- GPA on Biotechnology Program course work may be used to rank equally qualified students.

*Students who are unsuccessful during their second admission to the program and those students who are withdrawn for unsafe lab practices are ineligible for readmission and may not re-apply to the Biotechnology Program.*

## **Student Evaluation:**

Students are evaluated by faculty throughout their tenure in the Biotechnology Program.

### **1. Texas State Skills Standards**

The State of Texas has adopted the Washington Skill Standards for Biotechnology. The ACC Biotechnology Program has formally adopted these standards is recognized by the Texas Skill Standards Board ([www.tssb.org](http://www.tssb.org)). Each course offered fulfills a specific set of skill standards. Those can be found here: <http://www.austincc.edu/biotech/skillstandards.php>. *The students must demonstrate competency in each of the skill standards that apply for each class.*

### **2. Placement Exam**

*Students must pass the Biotechnology Department Placement exam with a grade of 70% or better to enroll in all second year advanced biotechnology courses.* A study guide for preparing for the competency exams will be given to the student when they request admission in the advanced biotechnology course. Placement exam grade can be used to register for second year classes as follows: 70-79% - one semester, 80-89% - two consecutive semesters, > 90% - three consecutive semesters.

### **3. Class grades & GPA**

Biotechnology courses require a minimum of 70% in **both** the lecture and the laboratory components, even though the average of the two components may be 70% or greater. The courses use the following scale for determination of final grades: A = 90-100%, B = 80-89%, C = 70-79%, D = 60-69%, F = 59% and below. *The student must achieve a minimum grade of “C” in all academic course work of the degree plan.*

### **4. Work Performance & Technical Abilities Evaluation**

For every Biotechnology class, you will obtain a final work performance evaluation from the instructor. The instructor will meet with the student individually to review the evaluation, give the student a copy and the department will retain a copy.

### **5. Student Portfolio**

Throughout your tenure in the program, you will build a portfolio that will include a current up-to-date resume which outlines your newly acquired educational background, technical experience and work experience (internship) in addition to all the SOPs of each piece of equipment you have trained on, your class presentations and papers and work performance evaluations.

## ACADEMIC POLICIES

The complete academic policies and procedures can be obtained in the ACC Student Handbook (<http://www.austincc.edu/handbook/>). The following are excerpts from the ACC Student Handbook and/or bridging policies between the ACC Handbook and the Biotechnology Department.

### Family Education Rights and Privacy Act

The following statement concerning student records maintained by the Austin Community College District is published in compliance with the Family Education Rights and Privacy Act of 1974. The release of information to the public without the consent of the student will be limited to that designated as directory information. Directory information includes name, address, telephone number, date and place of birth, major field of study, participation in activities, dates of attendance, degrees, certificates and awards, name of the previous educational institution attended, student classification and enrollment status. Any student objecting to the release of all or any portion of such information must notify Admissions and Records within the first 12 class days of the semester. The restriction will remain in effect until revoked by the student.

### Student Records

Academic information pertinent to each ACC student is maintained by ACC and the Biotechnology Department. After the student graduates or withdraws from the program the files are kept for 5 years. After that time, transcripts and pertinent information will be sent to Institutional Records and stored according to college policy. All other documentation will be destroyed according to college policy.

Students can access their academic files by arranging an appointment with the Biotechnology Department Chair to review these records. Students are expected to keep their file information current in case emergency notification becomes necessary. Student files are stored to protect the file and the information contained in the file. Any public inquiries concerning a student will be referred to the Department Chair.

*Academic records may include:*

- Application(s) / Transcripts
- Correspondence to and from the student
- Internship evaluation tools
- Student Work Performance Evaluations
- Conference forms
- Confidentiality forms
- Probation forms
- Student information sheet

## E-mail Access

All ACC faculty and staff are required per ACC policy to communicate with you using your ACCmail account only! *Actively enrolled students are required to use their ACCmail account while communicating with ACC instructors and ACC staff.* ACC administrators, and your instructors, will send important information to you at this account. Also, ACC will notify you of any college related emergencies using this account.

Instructions on obtaining your ACCmail as well as FAQs in regards to this email account can be found here: <http://www.austincc.edu/google/>

## Attendance Policy

Students are expected to always come to class prepared for the lecture and the laboratory exercise. This includes bringing the correct textbook, any assignments which are due, materials for note taking, calculators and accessories to be used in lab. A student may be dismissed from class if not prepared. Please see class-specific attendance policies. Attendance policies are up to the discretion of each instructor.

### General Applications

Punctual attendance is expected for scheduled lecture, and laboratory for each biotechnology course. Routine medical or dental appointments, well child check-ups, etc., should be scheduled outside of course time. Specific attendance policies are found in the syllabus of each biotechnology course. Excessive absences may result in implementation of the Progressive Discipline Policy, possibly resulting in dismissal from the course or program.

#### 1. Classroom

Absences from class for reasons other than health or family emergencies will not be tolerated. The student is responsible for contacting the instructor to obtain any assignments, handouts and special instructions for how the class may be made up. Students are expected to be on time for class, and a student who arrives later than 15 minutes from the official beginning of the class is considered absent for that class. Excused absences must be requested of the instructor, and are subject to the stipulations found in the course syllabus.

#### 2. Laboratory

Absences from student laboratory sessions are particularly problematic. Laboratory schedules require a “building block” approach in which skills learned in one lab are utilized as the “building block” of another. The skills learned in the laboratory are essential for entry into an internship in a biotechnology laboratory in order to develop competency. Missed laboratory sessions are very difficult to make up, and critical lab skills must be demonstrated to the satisfaction of the course instructor. The amount of credit achieved for the activity will vary according to each course’s syllabus. Excused absences must be requested of the instructor, and are subject to the stipulations found in the course syllabus.

### **3. Internship**

Regular and punctual attendance at the internship site is required. Students should carefully review the attendance policies stated within the internship courses syllabus. Absences (or tardiness) from internship obligations for reasons other than health or family emergencies will not be tolerated and the student will be subject to the Progressive Discipline Policy which may ultimately result in being withdrawn from the Biotechnology Program.

### **4. Make-up Labs**

In the event that a student misses a lab activity, he or she may not be able to arrange for a make-up lab session. Any make-up labs are scheduled entirely at the discretion of the lab instructor and lab technician, regardless of the reason for the student's absence. Many lab activities require time-consuming set-up or expensive supplies, and students might not be able to re-schedule them if missed. If the student has advanced notice of a lab absence they should contact their instructor immediately to determine the makeup options (if any).

## **Electronic Devices**

In any learning setting, the use of electronic devices, such as smart phones, must be limited to emergency situations only. This includes phone calls, text messaging and emailing! Students may not take calls, read or write text messages or emails during class. The use of these devices is not only distracting to you but also to your fellow students and instructor.

Electronic devices must be set to silent mode at all times in the classroom. If you have an emergency situation and need to use your electronic device, you must LEAVE CLASS and return with minimal interruption. This policy will be enforced!

NOTE! Students are prohibited from having unapproved electronic devices during testing (both the classroom and the testing center). It is an act of academic dishonesty to be caught with an electronic device on your person during testing and will be dealt with using the Progressive Discipline Policy.

## **Academic Dishonesty**

Academic integrity is an essential component of professional behavior in any biosciences program. Any documented incidences of academic dishonesty can result in withdrawal from the program.

The ACC Biotechnology program follows the college's general policies on academic integrity as set forth in the ACC Student Handbook. A copy of the student handbook is available at each campus's administrative offices, or may be downloaded from the ACC website at: <http://www.austincc.edu/handbook/index/htm>.

Academic work submitted by students shall be the result of their own thought, research or self-expression. For purposes of these regulations, academic work is defined as, but not limited to exams and quizzes, whether taken electronically or on paper; projects, either individual or group; papers; classroom presentations; and homework. When students borrow ideas, wording or organization from another source, they shall reference that information in an appropriate manner.

**Definition:**

Academic dishonesty includes but is not limited to the following:

- Cheating on an exam or quiz by bringing information to the testing area, using an unapproved electronic device, talking to another student during the test, or looking at another student's test during the examination, removal of privacy screen on computer.
- Plagiarizing - when students borrow ideas, wording or organization from another source, they shall reference that information in an appropriate manner
- Unauthorized collaboration / collusion with another in preparing outside work for fulfillment of course requirements.
- Unauthorized entry (hacking) into test banks or examinations
- Assisting others in academic dishonesty
- Discussing an examination with students who have not taken the exam
- Having a copy of the examination outside the time and place of test administration

# BIOTECHNOLOGY DEPARTMENT PROGRESSIVE DISCIPLINE POLICY

## Program Progression

In order to successfully progress through the ACC Biotechnology Program, the student must:

1. Complete pre-requisite courses before progressing in the program.
2. Be enrolled in (or have previously completed) co-requisite courses in the discipline at the same time
  - a. Withdrawal from any co-requisite course in the discipline prior to the college official withdrawal date may result in withdrawal from all other discipline-specific co-requisite courses regardless of the current grade in the course.
  - b. Students who withdraw from a general education co-requisite course during the semester may be ineligible for progression to the next semester until that course is completed.
3. Achieve a minimum grade of “C” in all biotechnology courses in the degree plan.
4. Satisfactorily meet course goals and objectives.

## Progressive Discipline

The Biotechnology Department faculty are committed to student success in this program. Therefore, biotechnology students who are not meeting course objectives in theory, lab, or internship courses will be apprised of their performance status using the progressive discipline process.

### Step 1: Warning

The instructor provides the student with a verbal warning or written feedback as to their status. The instructor counsels the student regarding criteria for successful completion of the course and makes recommendations for improvement. Recommendations may include but are not limited to, remediation by faculty, utilization of peer study groups, tutors, computer-assisted instruction, and seeking assistance from ACC counselors. At the discretion of the instructor and depending on the situation, this step may be skipped and a conference completed.

### Step 2: Conference

The student meets with the instructor in a formal conference to review the performance deficit. A written report will identify specific course or program objectives not met. A remediation contract including deadlines for completion will be developed to correct the deficit so the student can successfully progress through the program.

If at any time the student does not comply with all terms outlined in the conference report, the student may be placed on probation or withdrawn from the program, if applicable.

### Step 3: Probation

Probation may be implemented for, but not limited to, the following behaviors:

- ◆ academic dishonesty

- ◆ unsatisfactory course or internship performance
- ◆ unsatisfactory course or internship attendance and punctuality
- ◆ unethical, unprofessional behavior, and/or unsafe lab practices
- ◆ refusal to participate with a procedure
- ◆ behavior which compromises academic or industrial affiliations of the program

The student meets with the instructor and department chair. An ACC counselor may be asked to assist in representing the student. The faculty will complete a probation contract explicitly stating expectations that must be followed during the probationary period, the duration of the probationary period, and sign it.

Probation is a trial period in which the student must improve or be withdrawn from the program. A probation period for safety or professional conduct violation is required to last until the student successfully completes all program requirements.

#### Step 4: **Withdrawal**

If at any time during the probation period, the student fails to meet any of the conditions of the probation, the student may be withdrawn from the program. Accordingly, if at the end of the probation period the student has not met the criteria for satisfactory performance outlined in the probation, the student will be withdrawn from the program.

A student who is placed on probation for unsafe or unprofessional conduct will be withdrawn from the program for subsequent safety or professional conduct violations at any time during the program. (If the occurrence is past the official college date for withdrawal from a course, the student will receive a performance grade of “F” for failure or “U” for unsatisfactory.)

Some situations do not allow for the progressive discipline process due to the severity or the timing of their occurrence. Incidents of this nature may require the student to be immediately placed on probation or withdrawn from the program. Examples of these include, but are not limited to:

- ◆ academic dishonesty
- ◆ falsification of documentation
- ◆ unprofessional behavior that seriously jeopardizes student, staff, or internship mentor’s safety

NOTE: If the occurrence is past the official college date for withdrawal from a course, the student will receive a performance grade of “F” for failure or “U” for unsatisfactory.

The withdrawing student must meet with the course instructor and/or department chair to complete all exit forms and have an **Exit Meeting** within two weeks of the withdrawal.

#### **Student Complaint/Grievance Procedure**

Students who wish to contest the decisions made by the Biotechnology Department may file a grievance in accordance to the rules outlined in the ACC Student Handbook, available at the ACC website: [www.austincc.edu](http://www.austincc.edu).



# HEALTH & SAFETY POLICIES & PROCEDURES

## Health Insurance

The College does not provide personal health insurance coverage for students. All ACC students are encouraged to carry some type of personal health insurance. Information about health insurance is available at: <http://www.austincc.edu/ehs/Insurance.php>

ACC provides student medical accident insurance for *students participating in certain college sponsored classes or activities*, such as classes with laboratory components. For covered classes, the student pays a \$3.50 insurance fee at the time of registration. More information on student insurance policies and procedures is available at:

<http://www.austincc.edu/ehs/pdf/StudentAccidentInsuranceproc091206.pdf>

## Restricted Laboratory Access

Due to the possible presence of potential hazards, the laboratory must be considered “off-limits” to non-ACC persons, such as student roommates, family members, the public at large, etc. The door to the laboratory will be kept locked except during times when a faculty member or their designee is present. Non-laboratory persons must be escorted by an ACC faculty member or their designee when in the laboratory. Exceptions to this policy include other Health Science and Biotechnology faculty and their supervised students as well as ACC custodial personnel. Other exceptions to this policy are at the discretion of Program faculty. *At no time are individuals below the age of 18 allowed to be in the laboratory unsupervised.*

## Professional Risks & Personal Responsibility

Excerpt from the ACC Student Handbook: “As the official ultimately responsible for ACC’s compliance with environmental, health, and safety regulations, the ACC president requires that all ACC employees, students, and visitors:

- Report hazardous conditions and safety concerns immediately to their supervisors, instructors, hosts, and/ or emergency management personnel, as appropriate.
- Abide by safe practices and procedures established by the college.
- Cooperate fully with the ACC Environmental Health, Safety, and Insurance Office in addressing environmental, health, and safety issues.
- Adhere to all local, state, and federal regulations concerning environmental, health, and safety issues.
- Cooperate fully with environmental, health, and safety inspectors from local, state, and federal agencies.
- Take action to resolve safe workplace issues when appropriate.”

Some biotechnology laboratory environments carry inherent risks to the student. In the curriculum, students will be given information regarding known risks for various chemicals and biohazards, and will be provided skills to implement precautions appropriate to these risks as part of the program curriculum. It is the responsibility of the student to implement standard precautions in the laboratory.

## Dress Code

The following dress code is required for laboratory exercises where safety precautions are needed. Please note: during almost every class meeting you may be performing lab work. Be prepared! During internships, the student must also adhere to the dress code of the facility in which they are assigned.

- **Shoes:** Shoes must be closed-toed. Leather-type tennis or similar shoes are strongly recommended. Clogs, crocs or other types of shoes with no back or holes in the top are not allowed.
- **Hair:** If hair length is at or below the shoulder, or if it has tendency to hang in the face, it must be drawn back; such as in a clip or band.
- **Head coverings:** If the head covering falls below the shoulders it must be tucked securely inside the lab coat to prevent contamination by blood and/or body fluids.
- **Laboratory coats are encouraged.** When not in use, the lab coat is to be stored in the laboratory in a designated area. Lab coats may NEVER be worn outside the lab.

***Students not conforming to the dress code may be sent home from class at the instructor's discretion. Any class time missed will need to be made up, regardless of the reason.***

## Environment of Safety in the Laboratory

Austin Community College and its faculty will follow policies and procedures specified by the ACC Health & Safety Department in order to educate students and faculty in safety procedures mandated by biotechnology facilities. The ACC safety policies and accident procedures are available at: [http://www.austincc.edu/sci\\_safe](http://www.austincc.edu/sci_safe)

Students will be trained by their instructor in these safety policies and procedures for all laboratory courses and students are expected to abide by them. When students have completed the trainings, they will be required to sign an agreement for compliance and to provide a contact person that may be reached in case of a medical emergency.

### Safety Training in the classroom:

The student is required to perform class-specific safety training *prior* to performing experiments. Every student is required to watch a safety video, go through the Biotechnology Student Safety Training Handout with the instructor and sign the Safety Contract.

1. The complete ACC science safety policy at: [http://www.austincc.edu/sci\\_safe/](http://www.austincc.edu/sci_safe/)
2. The safety video is available online: <http://www.austincc.edu/biology/safetyvid.html>
3. The Biotechnology Student Safety Handout is obtained from your instructor.

4. You must bring your personnel protective equipment to EVERY class! Closed-toed shoes AND safety glasses or goggles.

## **Exposure Response**

Students and faculty members who experience an exposure to any potential biohazard or airborne inhalation of a hazardous material require specific follow-up. It is the responsibility of the individual to initiate certain actions and to report the incident as soon as possible (preferably within one hour) to their immediate supervisor or instructor. It is the responsibility of the instructor or supervisor to take the appropriate steps to ensure the safety and well-being of the student. It is the responsibility of the Department Chair to assist their faculty member following an exposure to the student. Faculty will ensure that copies of the exposure procedures and appropriate forms will be made available to the students prior to their first laboratory exercise.

Accident claim form: <http://www3.austincc.edu/it/eforms/frontpage.php?ID=RIIN.004>

Injury form: <http://www3.austincc.edu/it/eforms/frontpage.php?ID=RIIN.003>

# LABORATORY POLICIES

## Laboratory Rules & General Information

Welcome to the ACC Biotechnology Lab. The Biotechnology Department Lab Techs have compiled this information to make your semester more successful and enjoyable.

### Lab Courtesy

We share our main lab with the Medical Laboratory Technology Program (MLT). Please always move the supply cart into the prep room after class is over and remove any equipment or supplies from the benches so that MLT will have a clean, open space in which to work. If your lab session has been messy or you have worked with any organisms or hazardous chemicals, please clean bench tops with bleach, ethanol, and/or soapy water.

MLT has many biohazard bags in buckets on the floor around the room, as well as red sharps disposal boxes and white biohazard envelopes in green holders on the bench tops. Please never place anything into these receptacles. MLT has them incinerated at their expense. If you work with biohazards, please place contaminated tips, gloves, plates, or other items in the small biohazard bags in orange holders provided. These will be autoclaved after class.

Finally, always make sure to turn off equipment when you leave the lab. This is especially important for heated items such as water baths and optical instruments such as spectrophotometers.

### Micropipettors

Two sets of four micropipettors are stored in the cabinet below each workstation. These are labeled with a number corresponding to the workstation and a letter, A or B. This way, each student can use their own set of micropipettors for the semester and they can be easily tracked and returned to their cabinet if misplaced.

### Pipette Tips

The tips intended for regular, daily use are located in cabinet 1B, and are restocked frequently. Take a pack of each size tip needed and store them in the cabinet or drawer at your workstation; do not stockpile more than one box per size. Filter (aerosol-resistant) tips for special use in PCR and RNA work are kept in the prep room in cabinet 9B. Please avoid mixing these tips with the regular tips in cabinet 1B because they are more expensive and not necessary for everyday use. One exception is the p10 size tips which we will provide the filter tips only. Please save empty boxes by placing them on the table in the prep room. They will be refilled for you.

### Glassware

During and after class, please place dirty glassware either on the bottom shelf of the cart or next to the sink in the prep room. You are not required to wash your own glassware unless directed to do so. Do not leave dishes in sinks, on benches, or any other place other than the designated areas. If you are instructed to clean your own glassware, follow the procedure outlined in SOP-GWW-001.

Please **never** use pen, wax pencil, or permanent marker to write on the white marking area of the glassware, since these residues are impossible to remove. You may use permanent marker to mark directly on the glass, or a graphite pencil to mark in the white marking area. The best method for labeling glassware is to mark it with label tape.

### **Broken Glass**

Please use the blue broken glass boxes for broken glass disposal (used slides and cover slips, Pasteur pipettes, broken glassware). Place plastic pipettes in the regular trash, never in these boxes. There is a dustpan in the prep room which can be used for sweeping up broken glass.

### **Solution/Sample Storage**

Please thoroughly label everything you store in a refrigerator or freezer. Items should be labeled with the following information:

- Name of substance, including concentration and/or pH if applicable
- Date stored
- Your name or initials

Store refrigerated items in the area of the fridge designated for your class as instructed. Items that are stored in other areas, or items that are unclearly or inadequately labeled, may be discarded at the discretion of the lab technician.

Storage in the  $-20^{\circ}\text{C}$  freezer is organized into vertical racks filled with microcentrifuge tube boxes. Your group should obtain a box, clearly label with your group or individual names or initials, and store in the appropriate rack. Please do not start a new box for each lab activity because there is limited storage space.

### **Equipment Locator**

An equipment locator can be found in the designated file cabinet in the lab room. Use this document to locate supplies and equipment. Most of the cabinets and drawers are labeled to help you find things. If there is an item that you cannot find or is not listed, or that you think our department needs, please contact your instructor. We cannot promise that items will be where they are listed, given the number of individuals working in this lab. Please do your part to return items to their listed location.

### **SOPs**

SOPs written specifically for the equipment in our department are found in the top drawer of the designated file cabinet in the lab room. There is also an SOP packet that we have printed each semester. Copies are usually located on or under the table at the front of the room.

## **ACC Biotechnology Student Lab Checkout Duties**

The ACC Biotechnology program regards lab etiquette as an important part of the curriculum. Showing courtesy to students, staff and instructors who share the work area by caring for equipment, leaving a clean workspace, and removing biological and chemical hazards is considered practicing good lab etiquette.

***Each student or group should perform the following before leaving lab after every class:***

- Ensure that any solutions you have made are labeled properly according to SOP SOL-001 and that you have created a solution prep form for each. Store them properly in the provided storage location for your class.
- Replace any equipment, supplies, or reagents that you have used to their proper storage place, provided that other students are not still using them.
- Clean your personal work area. This includes removing all items from your lab bench, wiping the bench with a wet paper towel if any chemicals were used, wiping the bench with 10% bleach and a paper towel if any microorganisms were used, and removing debris from the sink.
- Wash glassware that you have used according to SOP GWW-001, or store it to the right side of the sink in the prep room. Never leave glassware in the basin of any sink. If left unwashed, glassware must be rinsed with tap water to remove chemical residues (not doing so is a safety violation).
- When possible, you are encouraged to assist other students who are still working by performing some of the duties listed below.

***The following should be checked for completion by the last person to leave the lab after every class:***

- Replace any reagents or solutions used during the lab period to the appropriate storage place, or leave on the rolling cart. Check labels for special storage conditions (for example, some items need to be stored frozen, or wrapped in foil to block light). Take special care to ensure that hazardous substances (such as concentrated acid or flammable solvents) are stored either in the fume hood or in their designated cabinet.
- Replace equipment and consumables to the appropriate storage place (if unknown, check the equipment locator for the storage location), or leave on the rolling cart.
- Move rolling cart(s) into the prep room.
- Turn off all balances and remove any chemicals or weighing vessels from balance pans and surrounding countertop.
- Remove all items from lab benches. Wipe the benches with a wet paper towel if any chemicals were used; wipe the benches with 10% bleach and a paper towel if any microorganisms were used. Only perform this step if it has clearly not been done already.
- Place pH meters in Standby mode by pressing the Standby key (LCD will read “STANDBY”), and make sure that pH probe tips are submerged in the provided storage solution.
- Turn hot plates off by turning heat and stir dials to “0”.
- Turn off spectrophotometers, trans-illuminators and other equipment containing lamps or bulbs to conserve lamp life.

Instructors in our program assign courtesy points based on performance of these duties. Aside from affecting your grade at ACC, lab etiquette is also a critical skill expected of any biotechnology lab employee.

## STUDENT SIGNATURE PAGE

### Biotechnology Student Handbook

Please read each statement below. INITIAL each statement in the space indicated to signify your understanding and agreement to abide by the policies and procedures in this handbook. Print, sign and date in the space below.

1. \_\_\_\_ I have read and agree to comply with the student policies and procedures as outlined in the Biotechnology Department Student Handbook. Furthermore, I will agree to and will comply with the course requirements as listed in the Syllabus and Policies of the Biotechnology Program.
2. \_\_\_\_ I understand that while performing my regularly assigned duties, I may be exposed to chemical and biological hazards. I will use the appropriate personal protective equipment required when there is an inherent potential for dangerous exposure, or a potential for spills or splashes of them. I understand that if I fail to use available personal protective equipment, I may be subject to disciplinary action.
3. \_\_\_\_ I have been informed regarding the inherent health/safety hazards in the biotechnology laboratory.
4. \_\_\_\_ I will complete all required educational training materials and submit signed documentation to the Biotechnology Program as required.

Printed Name \_\_\_\_\_ Date \_\_\_\_\_

Signature \_\_\_\_\_