UAB SCHOOL OF HEALTH PROFESSIONS
The University of Alabama at Birmingham

Clinical & Diagnostic Sciences

M.S. Biotechnology

2024-2025
STUDENT HANDBOOK

UAB // SHP

UAB SCHOOL OF HEALTH PROFESSIONS

CLINICAL & DIAGNOSTIC SCIENCES

M.S. BIOTECHNOLOGY

2024-2025 ACADEMIC HANDBOOK

Joe N. Garner, PhD
Interim Program Director

05/17/2024
Date

Kathy Nugent, PhD
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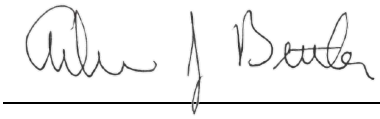
5/20/2024
Date



Andrew Butler, PhD
Dean, School of Health Professions

Date

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INTRODUCTION

DEAN'S WELCOME MESSAGE

Welcome to the University of Alabama at Birmingham School of Health Professions! We are pleased you chose to join one of our many excellent programs, which in combination have established us as a national leader in health professions education.

We are home to one of the largest health professions schools in the nation with more than 30 programs at the certificate, baccalaureate, master's, and doctoral levels, with more than 2,000 undergraduate and graduate students enrolled.

Moving into a post-COVID environment is a new start for everyone in health care, and you are in the best place to begin your personal journey toward joining this dynamic field. We are all committed to providing you a world-class education, and to support your pursuit of knowledge and your strong desire to serve others as a healthcare professional.

The pandemic has challenged all of us in many ways, and your entry into one of our professional programs demonstrates one of the most precious personal qualities one can have: resilience. That resilience has brought you here today and will continue to serve you well during your journey at UAB.

We recognize that healthcare needs - even outside of a pandemic - are constantly changing. That is why we continue to add innovative programs to our academic portfolio and to enhance and revitalize ongoing programs. We also offer graduate programs you will only find in Alabama at UAB, such as Genetic Counseling, Nuclear Medicine and Molecular Imaging, Low Vision Rehabilitation, Health Physics, Healthcare Quality and Safety, doctoral-level Rehabilitation Science, and Biomedical and Health Sciences.

Our degrees and programs are fully accredited by their respective professional organizations. This means you will be eligible for licensure, national certification or registrations and enjoy being in high demand within the job market. Our first-time student exam pass rate on many credentialing exams is an astounding 98 percent or higher.

Graduating from the School of Health Professions means you will acquire an esteemed degree, have a host of job opportunities in healthcare – an industry that continues to grow rapidly – and be well prepared to make a difference in your community. We look forward to maintaining our relationship with you when you join our alumni community.

Our alumni give advice to current students that is worth repeating: "learn your craft, be a better professional for your patients, be open minded to future possibilities, and remember to have a healthy work/ life balance".

I look forward to seeing you grow in your respective fields and watching you become the leader we know you can be.

Andrew J. Butler, PhD, FAPTA

OVERVIEW OF THE SCHOOL OF HEALTH PROFESSIONS

A leader in federally funded research, the UAB School of Health Professions (SHP) is one of the largest academic institutions of its type in the United States and currently boasts several nationally ranked programs. What began in the 1950s as a collection of training programs in various para-professional disciplines has grown into an internationally recognized center of academic excellence.

The SHP initially took shape in 1969 as UAB gained autonomy within the University of Alabama System. Originally christened the School of Community and Allied Health Resources (SCAHR), the school incorporated the School of Health Services Administration and the Division of Allied Health Sciences from the College of General Studies with parts of the Department of Public Health and Epidemiology from the medical school. An innovative facility designed to meet the growing needs of the health care industry, the SCAHR was divided into four academic divisions that functioned like regular academic departments: Health Services Administration, Public Health and Environment, Allied Health Sciences, and the Regional Technical Institute for Health Occupations.

Throughout the 1970's and 80's the school's offerings were amended to reflect the changing health care industry. As a result of the changes, SCAHR became the School of Public and Allied Health (SPAH). Next it became the School of Community and Allied Health (SCAH) and later the School of Health Related Professions (SHRP). During this time, the school added several new areas of study including a nationally ranked program in Nutrition Sciences. Through the leadership and guidance of early visionaries, the school experienced unparalleled success, which continues to date.

Today, the School of Health Professions is comprised of more than 30 programs – at the certificate, baccalaureate, master's, and doctoral levels – across five academic departments: Clinical and Diagnostic Sciences, Health Services Administration, Nutrition Sciences, Occupational Therapy, and Physical Therapy. The school is housed in three buildings, the Susan Mott Webb Nutrition Sciences Building, the Learning Resource Center Building (LRC), and the School of Health Professions Building (SHPB).

With more than 2,200 faculty, staff, and students, SHP is one of six schools comprising the world-renowned UAB Academic Health Center. Students have access to vast academic resources, state-of-the-art facilities, and progressive research.

SHP is proud of many accomplishments including:

- U.S. News & World Report ranks SHP programs in the nation's top 25.
- Research funding is over $14 million and growing.
- The school is at the top of the list in research funding from the National Institutes of Health for schools of its type and has been either first or second in funding received since 1969.

Under the current leadership of Dean Andrew Butler, the school has never been stronger or better positioned as a national leader in health professions education.

School of Health Professions Contact Information

In addition to your program director and program faculty, the following individuals may be able to provide assistance with questions and issues related to your school and program activities.

Jennifer Christy, PhD, Assistant Dean for Faculty Affairs

(205) 934-5903; jbraswel@uab.edu

Samantha Giordano-Mooga, PhD, Director of Undergraduate Honors Program

(205) 996-1399; sgiordan@uab.edu

Melanie Hart, PhD, Associate Dean for Academic and Faculty Affairs

(205) 934-7528; mhart2@uab.edu

Kevin Storr, Director of Communications

(205) 934-4159; storr@uab.edu

Lee Test, Director of Academic and Faculty Operations

(205) 975-8034; ltest@uab.edu

Marci Willis, Director, Learning Resource Center

(205) 934-9472; mbattles@uab.edu

SECTION 1 – SCHOOL AND UNIVERSITY INFORMATION

ACADEMIC CALENDAR

All dates related to registration, payments of tuition and fees, drop/add dates, other administrative requirements, and official school holidays are recorded on the UAB Academic Calendar.

ACADEMIC INTEGRITY CODE

The University established a new Academic Integrity Code effective August 23, 2021. This Code, which applies to undergraduate, graduate, and professional students as well as all academic activities, defines academic misconduct and outlines procedures for breaches of the code. Policies are established for resolution of charges of academic misconduct, and these processes are managed by the Academic Integrity Coordinator (AIC). In the School of Health Profession, the AIC is the Associate Dean for Academic and Faculty Affairs, the office is located in SHPB 660. The full text of the Academic Integrity Code is available at: Academic Integrity Code.

ADVISING

Undergraduate student advising is provided through the Student Services and Advising unit, which is housed in the School of Health Professions Building (SHPB) 230 suite of offices, near the elevators on the 2nd floor. Walk-ins are accepted, but appointments are preferred. Contact information for individual advisors is listed below.

Andrea Bennett, Academic Advisor III, (205) 996-1689; arbennett@uab.edu

Eileen Hatfield, Academic Advisor II, (205) 934-4185; mehatfie@uab.edu

Chris Smith, Academic Advisor III, (205) 934-5974; cjsmith1@uab.edu

Adam Pinson, Academic Advisor III, (205) 996-6789; apinson@uab.edu

Graduate student advising is provided through the SHP graduate programs.

AMBASSADORS

Ambassadors help to spread awareness of the School of Health Professions and its multifaceted undergraduate and graduate programs, serve as liaisons between the department and university-wide student organizations, and serve as a student voice in school and university committees. The SHP Ambassadors help to support the programs within the school that will impact recruitment and retention initiatives.

ASKIT

AskIT is the technology help desk for faculty, staff, and students. They provide free support via telephone, email, or in-person. You will be asked to supply your BlazerID when you request assistance.

Phone: (205) 996-5555 Email: askit@uab.edu Website: https://uabprod.service-now.com/service_portal

ATTENDANCE

Class attendance is expected in all SHP programs. Specific class, laboratory, or clinical site attendance requirements may be more stringent than university guidelines. Refer to the program requirements in this handbook and in course syllabi for policies. The UAB attendance policy is as follows:

The University of Alabama at Birmingham recognizes that the academic success of individual students is related to their class attendance and participation. Each course instructor is responsible for establishing policies concerning class attendance and make-up opportunities. Any such policies, including points for attendance and/or participation, penalties for absences, limits on excused absences, total allowable absences, etc., must be specified in the course syllabus provided to students at the beginning of the course term. Such policies are subject to departmental oversight and may not, by their specific prescriptions, negate or circumvent the accommodations provided below for excused absences.

The University regards certain absences as excused and in those instances requires that instructors provide a reasonable accommodation for the student who misses assignments, presentations, examinations, or other academic work of a substantive nature by virtue of these excused absences. Examples include the following:

- Absences due to jury or military duty, provided that official documentation has been provided to the instructor in a timely manner in advance.
- Absences of students registered with Disabilities Services for disabilities eligible for "a reasonable number of disability-related absences" provided students give their instructors notice of a disability-related absence in advance or as soon as possible.
- Absences due to participation in university-sponsored activities when the student is representing the university in an official capacity and as a critical participant, provided that the procedures below have been followed:
    - Before the end of the add/drop period, students must provide their instructor a schedule of anticipated excused absences in or with a letter explaining the nature of the expected absences from the director of the unit or department sponsoring the activity.
    - If a change in the schedule occurs, students are responsible for providing their instructors with advance written notification from the sponsoring unit or department.
- Absences due to other extenuating circumstances that instructors deem excused. Such classification is at the discretion of the instructor and is predicated upon consistent treatment of all students.
- Absences due to religious observances provided that students give faculty written notice prior to the drop/add deadline of the term.

In these instances, instructors must give students the opportunity to complete assignments in a way that corresponds as much as possible to the nature, scope, and format of the original. Options may include making up exams or other assignments, rescheduling student classroom presentations, or arranging for early or late submission of written assignments. The course make-up policy should be included in the syllabus.

Background Check

Students in SHP programs are required by policy to undergo a background check using the school's approved vendor, CastleBranch, at the time of program admission, and again, prior to placement in a fieldwork placement (clinical, internship, practicum, residency, etc.). Additional checks may be required by the individual sites therefore, students should work with the program to ensure compliance requirements are met. Instructions for requesting the background check are provided to students by their programs.

The Office of Academic and Faculty Affairs is responsible for ensuring student compliance throughout the program. Students found to be non-compliant will not be allowed to matriculate in the program (orientation, attend class, fieldwork placement, etc.) until all requirements are met. Program Directors, Fieldwork Coordinators, and students will be notified of non-compliance and a hold will be placed on the student's account.

- **The initial background check must be completed prior to the first day of class.**
- **Subsequent background checks must be completed prior to the first day of the semester of a fieldwork placement (clinical, internship, practicum, residency, etc.).**

BlazerID / BlazerNET / Email

BlazerID: All students receive a unique identifier, the BlazerID, established at: www.uab.edu/blazerid. Your BlazerID is required for accessing BlazerNET and other campus resources. To activate one's BlazerID, select "Activate Accounts."

BlazerNET is the official portal of the UAB information network and is accessible from any Internet-accessible computer, on- or off-campus. Access BlazerNET from UAB home page www.uab.edu then choose UAB Quicklinks.

Email: uab.edu UAB student email is provided through Microsoft Office 365, a cloud-based system. Students have 50 GB of email space and 25 GB of free file 1 TB storage. Monitor your email regularly. Your UAB email is the official communication medium for courses, news, information, and announcements. Do not forward your UAB account to a personal email account. UAB is not responsible for information not received by the student due to the 'redirecting' of a UAB account to another email server.

Blazer Express

The UAB Blazer Express Transit System provides transportation throughout the UAB campus. With a valid UAB ID badge, students can enjoy fare-free bus transportation. All buses are ADA-accessible and can seat approximately 35 riders. For an updated schedule, route maps, and hours of operation please go to www.uab.edu/blazerexpress/.

Bookstore

There is one bookstore located on the UAB campus, offering a wide variety of products and services to students, including online purchasing and shipping. The bookstore stocks UAB memorabilia and college wear in addition to all required textbooks and course material.

UAB Barnes and Noble Bookstore

Location: 1400 University Blvd, Hill Student Center, Birmingham, AL. 35233

Hours: M – F 8:00am – 5:00pm | Sat 10:00am – 2:00pm | Sun Closed

Telephone: (205) 996-2665 Website: https://uab.bncollege.com/shop/uab/home

Campus OneCard

The UAB OneCard is the official university identification card. It is used for personal identification, for entry to campus events and the recreation center, for library checkout, and for other UAB services. It also serves as a declining balance card for the UAB meal plans and for Blazer Bucks accounts. Additional information is available at www.uab.edu/onecard.

Campus Map

UAB's campus map can be found at the following: www.uab.edu/map/

Campus Safety

Campus safety procedures and resources can be accessed at https://www.uab.edu/students/home/safety.

Canvas Learning Management System

The Canvas Learning Management System is the platform used for managing instructional materials online. Canvas course sites are accessed through BlazerNET or at www.uab.edu/elearning/canvas. Students should monitor their course sites routinely for communication from faculty and to manage course assignments.

Catalog

The UAB Catalog is published annually and includes UAB's courses, policies, and curricula. Students can link to the Undergraduate or Graduate catalog at www.uab.edu/catalog.

Community Standards and Accountability

Community Standards and Accountability is responsible for upholding the integrity and purpose of the university through the fair and consistent application of policies and procedures to students' behavior to ensure a community that respects the dignity and right of all persons to reach their highest potential. SARC delivers programs and services in order to promote student safety and success, the pursuit of knowledge, respect for self and others, global citizenship, personal accountability and integrity, and

ethical development. More information can be found here: UAB Student Advocacy, Rights & Conduct. The UAB student conduct code may be accessed online: UAB Student Conduct Code.

Counseling Services

Student Counseling Services offers no cost, confidential counseling for UAB students related to physical, emotional, social, intellectual, or spiritual concerns. Student Counseling Services is located in the Student Health and Wellness Center at 1714 9th Avenue South (3rd Floor), Birmingham, AL. 35233. For more information, call (205) 934-5816 or https://www.uab.edu/students/counseling/.

Disability Support Services (DSS)

Accessible Learning: UAB is committed to providing an accessible learning experience for all students. If you are a student with a disability that qualifies under the Americans with Disabilities Act (ADA) and/or Section 504 of the Rehabilitation Act, and you require accommodations, please contact Disability Support Services for information on accommodations, registration, and procedures. Requests for reasonable accommodations involve an interactive process and consist of a collaborative effort among the student, DSS, faculty, and staff. If you have a disability but have not contacted Disability Support Services, please call (205) 934-4205 or visit Disability Support Services.

If you are a student registered with Disability Support Services, it is your responsibility to contact the course instructor to discuss the accommodations that may be necessary in each course. Students with disabilities must be registered with DSS and provide an accommodation request letter before receiving academic adjustments. Reasonable and timely notification of accommodations for the course is encouraged and provided to the course instructor so that the accommodations can be arranged.

Drug Screen

Students in SHP programs are required by policy to undergo a drug screen using the school's approved vendor, CastleBranch, at the time of program admission, and again, prior to placement in a fieldwork placement (clinical, internship, practicum, residency, etc.). Additional screens may be required by the individual sites therefore, students should work with the program to ensure compliance requirements are met. Instructions for requesting the drug screens are provided to students by their programs.

The Office of Academic and Faculty Affairs is responsible for ensuring student compliance throughout the program. Students found to be non-compliant will not be allowed to matriculate in the program (orientation, attend class, fieldwork placement, etc.) until all requirements are met. Program Directors, Fieldwork Coordinators, and students will be notified of non-compliance and a hold will be placed on the students' account.

- **The initial background check must be completed prior to the first day of class.**
- **Subsequent background checks must be completed prior to the first day of the semester of a fieldwork placement (clinical, internship, practicum, residency, etc.).**

EMERGENCIES

Report suspicious or threatening activity to the UAB Police Department immediately. Law officers are available 24 hours, seven days a week. Also, more than 300 emergency blue light telephones connected directly to the police dispatch are located throughout campus.

UAB Police: Dial 911 *from a campus phone*

or call: (205) 934-3535 | (205) 934-HELP (4357) | (205) 934-4434

Emergencies affecting campus are communicated via the following:

- UAB Severe Weather & Emergency Hotline: (205) 934-2165
- University home web page: www.uab.edu
- Webpage: www.uab.edu/emergency
- Announcements on BlazerNET
- Cell phone messages and SMS text – register for B-ALERT notices via https://idm.uab.edu/ens/b-alert

FERPA TRAINING

The Family Educational Rights and Privacy Act (FERPA) of 1974 provides protection for all educational records related to students enrolled in an educational program. Information about your rights and protection of your records is available at the following site: FERPA. If you have questions or concerns about FERPA issues, you may email FERPA@uab.edu. All SHP students are required to complete FERPA Training. Compliance with the training requirement is monitored monthly.

FINANCIAL AID

Financial Aid Counselors are available each day in the One Stop Student Services Office located in the Hill Student Center, 1400 University Blvd. Suite 103, Birmingham, AL 35233. If you have general questions, you can call the Office of Student Financial Aid at (205) 934-8223 or send an email to finaid@uab.edu. For additional financial aid information: Cost & Aid.

FOOD SERVICES

Dining facilities available on campus closest to the SHP buildings include the Commons on the Green – located on the Campus Green, south of 9th Avenue and the Campus Recreation Center. For additional information about meal plans and campus dining facilities: Student Dining.

GRADUATE SCHOOL

The UAB Graduate School offers doctoral programs, post-master's specialist programs, and master's level programs. Graduate programs in SHP are coordinated through the Graduate School and students must adhere to the Graduate School policies and procedures. Graduate School information for current students is available at Graduate School. Policies and Procedures for the Graduate School can be located in the Graduate School Catalog.

Graduation

All students must complete an application for degree six months prior to graduating and no later than the deadline in the academic calendar. The University holds commencement every semester. Check the commencement website for the most current information: UAB Commencement.

Health Insurance

To ensure that all students have adequate health care coverage, including ongoing primary and specialty care, the University of Alabama at Birmingham (UAB) requires all students to have major medical health insurance. Students can provide proof of their own private coverage or be enrolled in the Student Health Insurance Plan. The plan is a 1-year commercial policy provided by United HealthCare and is re-negotiated annually. This policy is a comprehensive health insurance policy at an affordable cost that is specifically designed to meet the needs of UAB Students. If you are required to have insurance but have sufficient coverage on another plan and wish to opt out of the Student Health Insurance Plan, you are required to submit a waiver to Student Health Services at the beginning of every semester. More information including submitting a waiver can be found at this website: Student Health Insurance Waivers.

HIPAA Training

The Health Insurance Portability and Accountability Act (HIPAA) includes significant requirements for protecting individual privacy of health information. All students in the School of Health Professions must complete an online tutorial and be tested on HIPAA regulations at the time of program admission. A BlazerID is required to access the training site, located at HIPAA. Compliance with the training requirement is monitored monthly.

Honor Societies

All students in the School of Health Professions are eligible for consideration for the following society memberships.

- Alpha Eta Society – The UAB Chapter of this Society recognizes students registered in the final term of a baccalaureate or graduate health professions program. Inductees must have a cumulative grade point average of 3.0 (4.0 = A) and be in the upper 10% of their program. Nominations are made by program directors in spring and summer terms.
- Phi Kappa Phi – This is the oldest, and most selective, all-discipline honor society in the nation. Membership is by invitation to the top 7.5% of junior students and the top 10% of seniors and graduate students. Nominations are made by program directors.

Immunization Policy

To provide a safe and healthy environment for all students, faculty, and staff at the University of Alabama at Birmingham (UAB), first-time entering students, international students and scholars, and

students in clinical & non-clinical programs, provide proof of immunization against certain diseases: Student Immunizations.

Institutional Review Board for Human Use (IRB)

Student researchers must comply with all requirements for protection of human subjects. Detailed information is available on the IRB website.

Intellectual Property

Intellectual property refers to an asset that originated conceptually, such as literary and artistic works, inventions, or other creative works. These assets should be protected and used only as the creator intends. Training materials defining inventor status, patent criteria, and other intellectual property issues are available at: University Policies on Patents, Copyright, and Intellectual Property.

Lactation Centers

Through the work of the UAB Commission on the Status of Women, the University has provided several lactation centers for students, faculty, and staff across the campus. Center locations. The School of Health Professions' lactation room is in the Susan Mott Webb Nutrition Sciences Building at 1675 University Blvd, Room 219A, Birmingham, AL 35233. Female students enrolled in the School of Health Professions have access to the room via their student ID/OneCard. If you cannot access the room, contact the building administrator, Julia Tolbert-Jackson at (205) 934-4133.

Libraries and Learning Resource Center

UAB's libraries house excellent collections of books, periodicals, microforms, and other media. Students have online remote access to catalogs and online collections. Computers are available for student use during regular hours of operation. UAB Libraries.

SHP Learning Resource Center (LRC)

The School of Health Professions Learning Resource Center (LRC) provides a unique set of enterprise solutions that promote an exciting, intriguing, and innovative learning environment. It provides a state-of-the-art media studio; audio/visual support; and information technology management of public, classroom, and testing labs.

Location: 1714 9th Avenue South (2nd Floor), Birmingham, AL. 35233.
Phone: (205) 934-5146
Email: shplrc@uab.edu

Lister Hill Library of the Health Sciences

This is the largest biomedical library in Alabama, and one of the largest in the south. Located across the crosswalk from the School, the LHL has extension libraries in University Hospital and The Kirklin Clinic. Dedicated librarians hold "office hours" in the Learning Resource Center weekly.

Location: 1700 University Blvd. Birmingham, AL. 35233
Website: https://library.uab.edu/locations/lister-hill

Phone: (205) 975-4821

Mervyn H. Sterne Library

A collection of more than one million items supporting teaching and research in the arts and humanities, business, education, engineering, natural sciences and mathematics, and social and behavioral sciences.

Location: 917 13th Street South, Birmingham, AL. 35233
Website: https://library.uab.edu/locations/sterne
Phone: (205) 934-6364 (Reference) | (205) 934-4338 (User Services)

Non-Academic Misconduct Policy

The Student Conduct Code promotes honesty, integrity, accountability, rights, and responsibilities expected of students consistent with the core missions of the University of Alabama at Birmingham. This Code describes the standards of behavior for all students, and it outlines students' rights, responsibilities, and the campus processes for adjudicating alleged violations. Behavior that violates UAB standards of conduct listed within the Student Conduct Code and elsewhere will be subject to disciplinary action through the appropriate conduct process. Whether it is determined that an individual or group is responsible for the violation(s), either by direct involvement or by condoning, encouraging, or covering up the violation, appropriate response will occur with respect to the individual(s) and/or group involved.

Undergraduate Non-Academic Policies

Graduate Non-Academic Policies

One Stop Student Services

If you have questions or need assistance with an academic or administrative process, the UAB One Stop is where to go! Advisors will help you solve your problem or do the legwork for you if another UAB resource is needed. One Stop is located in the Hill Student Center, 1400 University Blvd. Suite 103, Birmingham, AL 35233. You may contact the One Stop office by phone or email at (205) 934-4300; (855) UAB-1STP [(855) 822-1787]; onestop@uab.edu.

Parking

Student vehicles must be registered with UAB Parking and Transportation Services, located at 608 8th Street South, Birmingham AL. 35294. The office is open Monday – Friday from 7:30am – 5:00pm. Parking is allocated on a first-come, first-served basis. Parking fees are established by location, payable by semester or year, and are billed to the student's account. For additional information: UAB Student Parking.

Plagiarism and TurnItIn

Plagiarism is academic misconduct that will result in a grade of zero and may result in dismissal from the School of Health Professions and UAB (see Academic Integrity Policy). All papers submitted for grading

in any SHP program may be reviewed using the online plagiarism monitoring software. Please note that all documents submitted to Turnitin.com are added to their database of papers that is used to screen future assignments for plagiarism.

Recreation Center

The Campus Recreation Center, located at 1501 University Blvd, Birmingham, AL 35233, is open to faculty, staff, students, and their families. A valid student identification card or membership card is required for access. Facilities include basketball courts, racquetball courts, weight rooms, swimming pools, exercise rooms, and indoor track.

School of Health Professions Awards

All students in the School of Health Professions are eligible for consideration for the following awards.

- Alfred W. Sangster Award for Outstanding International Student – This award is presented annually to an international student in recognition of their academic and non-academic achievements.
- Cecile Clardy Satterfield Award for Humanism in Health Care – This award is made annually to recognize one outstanding student for humanitarianism, professionalism, and commitment to health care.
- Charles Brooks Award for Creativity – This award is made annually in recognition of creative accomplishments such as written publications or artistic contributions which complemented the student's academic activities.
- Dean's Leadership and Service Award – Presented to a maximum of three outstanding SHP students annually, this award recognizes leadership to the School, UAB, and the community.

For more information: UAB School of Health Professions Student Awards and Scholarships. Please refer to the program section of this handbook for awards available to students in individual programs.

School of Health Professions Scholarships

The SHP has several scholarship opportunities for students enrolled in SHP programs. The Scholarship Committee, comprised of faculty from each department, reviews and, selects awardees.

Scholarships available to students in any SHP program are the following:

The *Carol E. Medders Endowed Scholarship in Health Professions* was established by Carol Medders, former Director of Admissions for the School of Health Professions Student Services. Applicants must be currently enrolled in a full-time, degree-granting program in the School of Health Professions and should demonstrate academic excellence and financial need. The award recipient should be enrolled in a program that has a competitive application process and academic course load that prohibits them from holding full-time employment. This scholarship is awarded for the Spring Semester.

The *Ethel M. and Jesse D. Smith Endowed Nursing and Allied Health Scholarship* is an endowment that provides scholarships for both the School of Health Professions and School of Nursing. Applicants must be enrolled in a School of Health Professions undergraduate program and be a resident of the state of Alabama. Applicants should demonstrate academic excellence and financial need. This scholarship is awarded in the Fall.

The *Lettie Pate Whitehead Foundation* provides funding for scholarships focused on the foundation's founding mission—to provide financial assistance to women who express financial need in nine southeastern states. At the University of Alabama at Birmingham, Lettie Pate Whitehead Scholarships are awarded to women who, in addition to financial need, have an interest in pursuing studies in nursing or other health-related professions. Both undergraduate and graduate students within the Schools of Nursing and Health Professions are eligible. This scholarship is awarded each semester.

The *Dr. Edward D. and Sandra Dunning Huechtker Endowed Memorial Award* provides assistance to deserving students in need of financial support to continue in the pursuit of their goal of a career in the health professions. This award is open to undergraduate and graduate students enrolled in one of the School of Health Professions majors. Applicants should demonstrate academic excellence and financial need. This scholarship is awarded in the Spring Semester.

The *School of Health Professions Junior Advisory Board Endowed Scholarship* was established to provide financial awards assisting students with the completion of professional licensure and certification exams necessary to practice in their fields and/or the costs associated with professional development and job preparation. This scholarship is awarded in the Spring semester.

For more information: UAB School of Health Professions Student Awards and Scholarships. Application announcements are made by the Office of Academic and Faculty Affairs. Many programs in SHP also have scholarships available to currently enrolled students in those programs. Please refer to the program section of this handbook for more information.

SHARED VALUES

Collaboration, integrity, respect, and excellence are core values of our institution and affirm what it means to be a UAB community member. A key foundation of UAB is diversity. At UAB, everybody counts every day. UAB is committed to fostering a respectful, accessible and open campus environment. We value every member of our campus and the richly different perspectives, characteristics and life experiences that contribute to UAB's unique environment. UAB values and cultivates access, engagement and opportunity in our research, learning, clinical, and work environments. The School of Health Professions aims to create an open and welcoming environment and to support the success of all UAB community members.

Social Media

Social media can serve as useful communication tools. However, health professions students should use the forums judiciously. The school's official sites are the following:

- Twitter: https://twitter.com/UAB_SHP
- Facebook: www.facebook.com/UABSHP
- YouTube: www.youtube.com/uabshp
- Vimeo: http://vimeo.com/uabshp
- LinkedIn: UAB SHP LinkedIn
- Website: www.uab.edu/shp

For more information: UAB Social Media Guidelines.

Student Health Services

The University provides prevention, counseling, and treatment services to students through Student Health Services (SHS) located at 1714 9th Avenue South (3rd Floor), Birmingham, AL. 35233. The clinic is open from 8:00am – 5:00pm Monday – Thursday; 9:00am – 5:00pm Friday. They are closed for lunch between 12:00pm – 1:00 pm weekdays. For more information: Student Health Services. Appointments may be scheduled by calling (205) 934-3580.

Title IX

In accordance with Title IX, the University of Alabama at Birmingham does not discriminate on the basis of gender in any of its programs or services. The University is committed to providing an environment free from discrimination based on gender and expects individuals who live, work, teach, and study within this community to contribute positively to the environment and to refrain from behaviors that threaten the freedom or respect that every member of our community deserves. For more information about Title IX, policy, reporting, protections, resources and supports, please visit the UAB Title IX webpage for UAB's Title IX Sex Discrimination, Sexual Harassment, and Sexual Violence Policy; UAB's Equal Opportunity and Discriminatory Harassment Policy; and the Duty to Report and Non-Retaliation Policy. For more information: UAB Title IX.

Tuition and Fees

Tuition and fees for the University are published annually under the "Students" tab of the UAB website. They may be paid through BlazerNET. SHP programs have specific fees attached to programs, courses, and/ or laboratories. For more information: Tuition & Fees.

Payment deadlines for each semester are published on the official academic calendar. Please note that failure to meet payment deadlines can result in being administratively withdrawn from courses.

Weather

Severe weather situations that may affect the safety of students, faculty, and staff are communicated through the same channels as other emergencies. For more information: Emergency Management. Other information sources include:

- B-ALERT System (contact information must be setup and current)
- UAB Severe Weather & Emergency Hotline: (205) 934-2165
- WBHM Radio (90.3 FM)

Withdrawal from Course / Program

Withdrawal from a course or from your program is an official process and should be discussed with your academic advisor and / or program director. Most programs in the School of Health Professions are full-time and the curricula specifically sequenced. Withdrawal from a course may risk your wait time to register for the class again. You might have to wait for a full year before resuming enrollment in the program. Withdrawals are made through the UAB registration system via the Student Resources tab in BlazerNET. Notice of program withdrawal should be given in writing to the program director. For more information: UAB Add/Drop and Withdrawal Policy.

SECTION 2 – SHP AND UAB POLICIES

SCHOOL OF HEALTH PROFESSIONS POLICIES

BACKGROUND CHECK AND DRUG SCREEN POLICY

With the exceptions noted below, students admitted to clinical and non-clinical programs in the School of Health Professions (SHP) will complete a routine criminal background check and drug screen using the approved vendor (CastleBranch). These screenings should be completed prior the first term of enrollment. Subsequent routine criminal background checks and drug screens using the approved school vendor will be completed prior to fieldwork placement (clinical, internship, practicum, residency, etc.).

Students enrolled in SHP undergraduate programs will complete a learning module in the campus learning management system by the first semester of enrollment. If a fieldwork placement (clinical, internship, practicum, residency, etc.) is required, students must complete criminal background checks and drug screens prior to the first day of the semester of a fieldwork placement.

- Fees for these screenings will be the responsibility of the student.
- The rules and regulations governing individual fieldwork placement sites may include additional provisions and/or more stringent guidelines which supersede this policy. Fees for these screenings are the responsibility of the student.
- Should your criminal background check contain issues, or you fail a drug screen that may prevent you from receiving or sitting for board certification/licensure, a representative from the Office of Academic and Faculty Affairs will contact you. Depending upon the outcome, students will have a registration hold placed on their account until in compliance and this may result in being dismissed from the program. See program's guidelines regarding specific consequences.

Programs requiring a criminal background check and drug screening by the end of the first semester of enrollment and again, prior to fieldwork placement (if applicable in the program requirements), are the following:

Administration Health Services, PhD
Biomedical Sciences to Biotechnology Fast Track
Biomedical Sciences to Clinical Laboratory Science Fast Track
Biomedical Sciences to Health Physics Fast Track
Biomedical Sciences to Nuclear Medicine & Molecular Imaging Sciences Fast Track
Biomedical and Health Sciences, MS
Biotechnology, MS
Biotechnology, PhD
Dietitian Education Program, Graduate Certificate
Genetic Counseling, MS
Health Administration (Residential), MSHA
Health Care Management to Healthcare Quality and Safety Fast Track
Health Care Management to Health Informatics Fast Track

Health Care Management to Occupational Therapy Doctorate Fast Track
Health Physics, MS
Medical Laboratory Science, MS
Nuclear Medicine & Molecular Imaging Sciences, MS
Nutrition Sciences, MS
– Dietetic Internship Clinical Track
– Dietitian Education Program
– Research Track
Nutrition Sciences, PhD
Occupational Therapy, OTD – (entry level)
Physical Therapy, DPT
Physician Assistant Studies, MSPAS
Rehabilitation Science, PhD

The following students enrolled in SHP undergraduate programs will complete a learning module in the campus learning management system by the first semester of enrollment. If a fieldwork placement (clinical, internship, practicum, residency, etc.) is required, students must complete criminal background checks and drug screens prior to the first day of the semester of a fieldwork placement.

Health Care Management, BS
Biomedical Sciences, BS
Biobehavioral Nutrition and Wellness, BS
Disability Studies and Rehabilitation Science, BS

Programs waived from the Criminal Background Check and Drug Screening requirements are the following: *

Applied Mixed Methods Research, Graduate Certificate
Biotechnology Regulatory Affairs, Graduate Certificate
Clinical Informatics, Graduate Certificate
Health Administration (International and Executive tracks), MSHA
Health Informatics, MSHI
Healthcare Finance Management, Graduate Certificate
Healthcare Leadership, DSc
Healthcare Leadership, Graduate Certificate
Healthcare Quality and Safety, MS
Healthcare Quality and Safety, Graduate Certificate
Health Services Research, MS
Healthcare Simulation, MS
Healthcare Simulation, Graduate Certificate
Nutrition for Community Health, Graduate Certificate
Nutrition Sciences, MS
– Clinical Track-Prior Learning
– Lifestyle Management and Disease Prevention Track

Low Vision Rehabilitation, Graduate Certificate
Multi-Tiered Approach to Trauma, Graduate Certificate
Occupational Therapy Doctorate (Post Professional)
Physical Therapy Residencies (Neurologic, Orthopedic)
Primary Care Physical Therapy for Underserved Populations, Graduate Certificate

*Students enrolled in exempt programs who participate in a course(s) incorporating community, corporate or other high impact, out-of-classroom activities such as service learning, capstone projects or other hands-on learning experiences, may be required by placement sites to submit background check and drug screening results. Students are responsible for the fees associated with such screening.

CastleBranch

STUDENT INSTRUCTIONS FOR UNIVERSITY OF ALABAMA AT BIRMINGHAM

SCHOOL OF HEALTH PROFESSIONS

About CastleBranch.com

CastleBranch is a secure platform that allows you to order your background check & drug test online. Once you have placed your order, you may use your login to access additional features of CastleBranch, including document storage, portfolio builders and reference tools. CastleBranch also allows you to upload any additional documents required by your school.

Order Summary

Required Personal Information

- In addition to entering your full name and date of birth, you will be asked for your Social Security Number, current address, phone number, and e-mail address.

Drug Test (LabCorp or Quest Diagnostics)

- Within 24-48 hours after you place your order, the electronic chain of custody form e-chain will be placed directly into your CastleBranch account. This e-chain will explain where you need to go to complete your drug test.

Payment Information

- At the end of the online order process, you will be prompted to enter your Visa or MasterCard information. Money orders are also accepted, but will result in a $10 fee and additional turn-around-time.

Place Your Order

Go to: www.castlebranch.com and enter package code:

AH01 - Background Check and Drug Test

You will be required to enter your program under "Student Information" classification

You will then be directed to set up your CastleBranch profile account.

View Your Results

Your results will be posted directly to your CastleBranch profile account. You will be notified if there is any missing information needed in order to process your order. Although 95% of background check results are completed within 3-5 business days, some results may take longer. Your order will show as "In Process" until it has been completed in its entirety. Your school's administrator can also securely view your results online with their unique username and password. If you have any additional questions, please contact the Service Desk at 888.723.4263 x 7196 or visit the website to submit your question at: https://www.castlebranch.com/contact-us.

Dismissal of Student for Failure to Make Satisfactory Academic Progress

Dismissal of Student and Appeal Process

Emergency Plan – SHPB/LRC/WEBB

SHPB/LRC/WEBB Emergency Plan

UAB Policies

Academic Progress

- Graduate
- Undergraduate

Health

- Immunizations
- Needle Sticks and Exposures

Inclusiveness

- Equal Opportunity and Discriminatory Harassment

Police and Public Safety

- Campus Safety
- Firearms, Ammunition, and Other Dangerous Weapons

Research and Scholarly Activities

- Academic Integrity Code
- Ethical Standards in Research and Other Scholarly Activities
- Patent

Substance Use/Abuse

- Alcoholic Beverages, Use and Consumption
- Drug Free Campus
- Non-Smoking

Technology

- Technology Resources

SECTION 3 – M.S. BIOTECHNOLOGY PROGRAM INFORMATION

WELCOME

Welcome to the Biotechnology Program. This handbook has been compiled to provide you with information to help you as you progress through the program. Where appropriate, the contact for more detailed information on various subjects has been included. If, however, you desire or need further explanation of any matter, or other types of information, please contact your faculty mentor or program manager. The UAB web pages, or links, are included for some of the sections of this handbook, and you are encouraged to review the links for information you may need. The UAB and School of Health Professions (SHP) pages have search engines to allow you to input keywords and find information. Also, the campus directory and calendars are located on the main UAB page under "Quicklinks": The University of Alabama at Birmingham | UAB.

Refer to the UAB graduate school webpage: https://www.uab.edu/graduate/ or the CDS biotechnology webpage: https://www.uab.edu/shp/cds/biotechnology. Students should regularly refer to the web site for their specific program for updates.

ABOUT THE PROGRAM

Biotechnology is an industry based on biology that harnesses cellular and molecular processes to create novel technologies and products that will positively impact the quality of our lives and the health of our planet. The Biotechnology program at UAB provides students with the training necessary to be part of the industry's specialized workforce. Students will develop a strong knowledge base in science, technology, research, and industry-specific entrepreneurial skills that can translate scientific discovery into commercial products which will ultimately improve the odds for millions of patients around the world who are suffering from diseases for which there are no adequate treatments.

Upon completion of the program, graduates are well prepared for leadership roles in the biotechnology industry including management, research and development, and regulatory affairs. Graduates are also prepared for roles in marketing and commercialization of biotechnology products and technologies and are qualified for jobs with competitive salaries. In the 21st century, the biotechnology industry will be a key economic engine for the United States greatly outpacing other industries with strong job growth. At UAB, we are proud to offer students the specialized training needed for the continued support and growth of the biotechnology industry in the United States.

PROGRAM MISSION STATEMENT

The mission of the Biotechnology program is to provide a quality education to prepare a diverse student body for careers in various fields involving biotechnology and its related disciplines. The program is designed to provide students with broad training and education in:

- Scientific principles & knowledge underlying biotechnology, drug discovery, and design.
- Scientific principles & knowledge underlying emerging diagnostic technologies associated with biotechnology.
- Basic laboratory techniques in biotechnology.
- Business principles and knowledge underlying the commercialization of science.
- Processes and procedures required to launch a biotechnology company.
- Legal, regulatory, and marketing issues in biotechnology.

FACULTY & STAFF

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The Biotechnology Program

Has faculty and staff that support all BT students. For student questions, contact the Program Director.

biotech@uab.edu

FACILITIES

Students are expected to treat all university, department, and program facilities with respect. When using the spaces, the following is expected:

- Use spaces for their intended purposes.
- Observe all applicable policies (i.e. no eating in the lab).
- Treat equipment with care and respect.
- Clean up after yourself.
- Be mindful of others in the space.
- Conduct yourself professionally and in a manner that positively reflects on the BT program.
- DO NOT prop doors open or allow unauthorized individuals into the space.
- Secure all spaces when leaving.

School of Health Professions

The M.S. in Biotechnology Program is one of many programs offered by the Department of Clinical & Diagnostic Sciences (CDS) located in the School of Health Professions (SHP). Within SHP, students can find the following:

- Biotechnology Lab: The in-person curriculum includes three lab courses- BT 650, BT 651, and BT 652. All three lab courses will occur in the Biotechnology Lab, located on the third floor of SHP.
- Program Director's Office: Located on the fourth floor of SHP in office 443.
- Program Manager II: The Program Manager II will serve as your academic advisor as you matriculate through the BT program. The Program Manager II's office is located on the fourth floor in SHP 436.

Center for Biophysical Sciences & Engineering

Many classes offered by the M.S. in Biotechnology occur in the Center for Biophysical Sciences & Engineering (CBSE). Additionally, most faculty offices are located on the second floor of CBSE. Within CBSE, students can find the following:

- Biotechnology Faculty: Located in various offices on the second floor of CBSE.
- Classrooms: Located on the first floor of CBSE.
- Biotechnology Research Labs: Located on the second floor of CBSE.

All Biotechnology students should have One Card access to SHP and CBSE. Please alert the Program Manager II via email if you do not have access to one or both facilities.

GOALS AND OBJECTIVES

The Master of Science in Biotechnology is designed to prepare a diverse student body for careers in various fields involving biotechnology and its related sciences. The program is divided into three major content areas of emphasis to provide students with broad training and education in scientific knowledge, research principles, and business practices and entrepreneurship. Specifically, the curriculum includes broad training and education in:

- Scientific principles and knowledge underlying biotechnology.
- Scientific principles and knowledge underlying emerging diagnostic technologies associated with biotechnology.
- Basic laboratory techniques in biotechnology.
- Instrumentation and automation principles used in the biotechnology industry.
- Legal and regulatory issues in biotechnology.
- Biotech business operations, management, and entrepreneurship.

More specifically, graduates of this program are expected to demonstrate attributes desirable of biotechnology professionals such as:

1. ***Dependability***
    a. Demonstrate integrity, honesty, and conscientiousness in work.
    b. Accept responsibility for one's own actions.
    c. Organize and complete work on schedule without sacrificing accuracy and reliability.
    d. Follow established policies and procedures.
    e. Punctuality.
    f. Submission of coursework by stated deadline.
2. ***Stability***
    a. Work effectively under conditions of stress and/or change.
    b. Maintain a professional demeanor under adverse conditions.
3. ***Ability to interact effectively with others***
    a. Influence and contribute to a pleasant work environment.
    b. Communicate with others in a professional and courteous manner.
    c. Contribute willingly to the accomplishment of group endeavors.
4. ***Professionalism***
    a. Maintain a neat, clean personal appearance complying with existing dress codes (see page 49).
    b. Show initiative and interest to improve technical skills and expand knowledge.
    c. Investigate appropriate sources (literature and professional) for technical and professional information.
    d. Maintain confidentiality of patient and laboratory data.

NOTE: Students are evaluated based on the criteria listed above during the didactic courses using an Affective Evaluation Form (see page 44). Students are informed of the observations of the faculty so that changes in student behavior can occur to ensure a successful transition to internships. These behaviors are expected of all students in the classroom and in internship settings.

The objectives below will be addressed within the Biotechnology courses:

1. ***Interpret and correlate test data:***
    a. Accurately determine the results of experiments using the appropriate controls, standards, and/or references.
    b. Calculate results of experiments performed, if necessary.
    c. Evaluate the validity of experimental results in terms of reference intervals, quality control data, and analytical system performance.
    d. Correlate results of experiments with other experimental data and pertinent information to identify potential errors.
    e. Repeat experiments or perform confirmatory or additional procedures as indicated.
    f. Record and report results in writing, orally, or by computer conforming to established procedures.
2. ***Institute and monitor quality control and quality assurance measures to optimize precision and accuracy of laboratory tests:***
    a. Perform quality control procedures on analytical tests, equipment, reagents, media, and products according to protocol.
    b. Acknowledge unacceptable control results and take corrective action if indicated.
    c. Recognize and correct basic instrument malfunction.
    d. Following standard laboratory procedures, document all information such as quality control, maintenance, and remedial actions taken.
    e. Set up policies and record forms for a simple quality control program.
    f. Use the appropriate safety precautions and barriers in the performance of various tasks in order to prevent the transmission of infectious agents or other laboratory accidents and document any incidents.
3. ***Participate in the development of skills and knowledge needed for technology assessment (statistics, scientific literature analysis, study design, presentations, and evaluation skills):***
    a. Evaluate data for sensitivity, specificity, and predictive value.
    b. Evaluate tests, methods, instruments, and new technology in biotechnology.
    c. Evaluate systems processing for total testing for inpatient, outpatient, and point of care and referral specimens.
4. ***Develop a general understanding of regulatory requirements and health & safety management topics governing biotechnology:***
    a. Describe the purpose of UAB and external agencies concerning safety and biosafety guidelines, standards, laws, and regulations that recommend and/or mandate compliance with established standards of practice.

b. Describe implications for non-compliance with health and safety management practices.
c. Describe federal and state regulatory statutes for the development, approval, and commercialization of drugs, biologics, and medical devices.

5. Develop the abilities of critical thinking, innovation, and problem solving:

a. Demonstrate how to identify a specific problem.
b. Use scientific knowledge to propose a solution to the problem.
c. Develop the solution to the problem in the form of a technology.
d. Generate a plan on how to move the technology from the bench to commercialization.

CURRICULUM

The M.S. Biotechnology curriculum for both the in-person and online programs are outlined below. Students must successfully complete all classes with a minimum grade of C or higher and maintain an overall GPA of 3.0 or higher to graduate from the program. Please note, an HP designation indicates the class is offered in-person. A designation beginning with "Q", such as QL, QM, etc., indicates the class is offered online.

With the exception of CDS 610 QL, in-person students are NOT permitted to take online sections. If an in-person student registers for an online (QL) section, they will be instructed to drop and add the correct, in-person section. Additionally, online students are not permitted to take in-person classes. If an online student registers for an in-person (HP) section, they will be instructed to drop and add the correct, online section. It is the student's responsibility to correctly register for all classes before the add/drop deadline as stated on UAB's Academic Calendar. Failure to do so may affect the student's ability to graduation on time. UAB's Academic Calendar can be located: Current Academic Calendar - Students - Academics (uab.edu)

PREREQUISITE COURSES FOR BIOTECHNOLOGY:

Curriculum Track	Course	Semester Hours
Biotechnology	Pre-calculus Algebra (or higher)	3
	General Chemistry I with Lab	4
	General Chemistry II with Lab	4
	Introductory Biology	4
	Genetics *	3
	*Another biology course (applicable toward a degree) may be substituted with approval from the Program Director	

CURRICULUM COURSES FOR BIOTECHNOLOGY (IN PERSON STUDENTS)

FALL: 13 Semester Hours		Credits	Notes
BT 500 HP	Principles of Biotechnology I - Nucleic Acid Technology	3	Fall Only
BT 650 HP/A	Applications in Biotechnology I	2	Fall Only
BT 670 HP	Bench to Commercialization I	3	Fall Only
BT 676 HP	Innovative Technologies in Biotechnology	1	Taken each semester
CDS 610 QL	Research Design & Statistics	3	Fall Only
CDS 505 HP	Professional Development	1	Fall Only
SPRING: 11 Semester Hours		**Credits**	**Notes**
BT 550 HP	Principles of Biotechnology II - Amino Acid Technology	3	Spring Only
BT 651 HP/A	Applications in Biotechnology II	2	Spring Only
BT 671 HP	Bench to Commercialization II	3	Spring Only
BT 676 HP	Innovative Technologies in Biotechnology	1	Taken each semester
BT 695 OC	Biotechnology Internship	2	Offered Fall, Spring, & Summer. Recommended in the Spring or the student's second semester.
SUMMER: 13 Semester Hours		**Credits**	**Notes**
BT 600 HP	Principles of Biotechnology III – Systems Biology & Pharmacology	3	Summer Only
BT 652 HP/A	Applications in Biotechnology III	2	Summer Only
BT 672 HP	Bench to Commercialization III	3	Summer Only
BT 676 HP	Innovative Technologies in Biotechnology	1	Taken each semester
BT 690 HP	Capstone: Integrating Basic Science & Product Development	4	Summer Only
	TOTAL:		**37 Credits**

CURRICULUM COURSES FOR BIOTECHNOLOGY (ONLINE STUDENTS) – SUGGESTED SCHEDULE

FALL: 14 Semester Hours		Credits	Notes
BT 500 QL	Principles of Biotechnology I - Nucleic Acid Technology	3	Fall Only
BT 670 QL	Bench to Commercialization I	3	Fall Only
BT 676 QL	Innovative Technologies in Biotechnology	1	Taken each semester
BT 605 QL	Applications of Biochemistry in Biotechnology	3	Offered each semester. Recommended in the Fall
CDS 610 QL	Research Design & Statistics	3	Fall Only
CDS 505 QL	Professional Development	1	Fall Only
SPRING: 12 Semester Hours		**Credits**	**Notes**
BT 550 QL	Principles of Biotechnology II - Amino Acid Technology	3	Spring Only
BT 671 QL	Bench to Commercialization II	3	Spring Only
BT 676 QL	Innovative Technologies in Biotechnology	1	Taken each semester
BT 675 QL	Special Topics	3	Offered each semester. Recommended in the Spring
BT 695 OC	Biotechnology Internship	2	Offered Fall, Spring, & Summer. Recommended in the Spring or the student's second semester.
SUMMER: 11 Semester Hours		**Credits**	**Notes**
BT 600 QL	Principles of Biotechnology III – Systems Biology & Pharmacology	3	Summer Only
BT 672 QL	Bench to Commercialization III	3	Summer Only
BT 676 QL	Innovative Technologies in Biotechnology	1	Taken each semester
BT 690 QL	Capstone: Integrating Basic Science & Product Development	4	Summer Only
	TOTAL:		**37 Credits**

BIOTECHNOLOGY INTERNSHIP – BT 695

Each student in the M.S. Biotechnology Program is required to complete one internship during one semester while enrolled in the program. The internship will consist of 80 hours (up to 10 hours per week). The internship can be carried out at research core facilities which are located at UAB, or, at a local biotechnology company. Depending on their professional interests, the student can complete a research focused internship, or an internship focused on the business aspects of biotechnology. This allows each student to learn techniques in areas of interest and to enhance his/her abilities in the application of scientific principles to developing novel techniques.

If a student elects to complete their BT 695 internship at an off-campus site a signed affiliation agreement must be in place before the student can proceed.

AFFILIATION AGREEMENT POLICY

If a student elects to complete their BT 695 internship at an off-campus site a signed affiliation agreement must be in place before the student can proceed. Students cannot complete their BT 695 internship at an off-campus site if an affiliation agreement is not in place.

Below is a list of off-campus sites where an affiliation agreement is already established. Per the program policy, students are responsible for contacting the site to determine if an internship is available and complete any application/interview processes the site has in place to secure the internship:

- Discovery Life Sciences
- Endomimetics
- TriAltus Bioscience
- Tsela Scientific Laboratories

If a student plans on completing their BT 695 internship at an off-campus site not from the approved list, they must notify the Program Manager II at least three (3) months before their scheduled start date, so the affiliation agreement process can be initiated with the UAB Legal Department and the off-campus entity. It is important to note that affiliation agreements take time and not all affiliation agreements can be successfully negotiated with the site and UAB, so ongoing communication between the student and the program is essential.

If an affiliation agreement is not in place by the internship's scheduled start date, students have two (2) options:

- Wait to register/withdraw from BT 695. Once the affiliation agreement is in place, register for BT 695. Students electing this path must understand this may affect their progression in the program and delay their graduation if an affiliation agreement is not secured in time for the student to complete the internship requirement before the end of the semester.
- Secure a different internship with an on-campus site or an off-campus site the program has an approved affiliation agreement with to complete BT 695 course.

CAPSTONE COURSE – BT 690

Research and analysis skills are necessary to be successful in the biotechnology industry. To ensure the development of these skills, all M.S. in Biotechnology students will complete the BT 690: Capstone Course. BT 690 is an independent research course wherein students will develop the ability to research, analyze, and describe a biotechnology product or company. BT 690 gives students the opportunity to explore the history, management, and life cycle of a biotech company or product from discovery to development with an emphasis on ethical concerns, the current economic environment, marketing issues, intellectual property, finances, and growth opportunities.

EXPECTED STUDENT BEHAVIOR

Students are expected to demonstrate interest and ability for professional education, as well as mature professional behavior. Acceptable behavior includes, but is not limited to, the following:

1. ***Integrity in all program assignments.***
    - Refrain from giving or receiving unauthorized aid in examinations or other assigned work. This includes talking during exams, quizzes, etc.
    - Treat knowledge concerning patients and official documents as confidential (comply with HIPAA).
    - Refrain from plagiarism and falsification of student laboratory results, patient reports, official documents, classroom assignments, and attendance records.
2. ***Dependability in program assignments.***
    - Arrive for class (didactic and internship) ON TIME. Being late is not acceptable and could affect your grade. Plan to arrive 10-15 minutes early to get set up.
    - Attend all scheduled classes.
    - Remain in the area of assignment until dismissed (by the instructor or supervisor).
    - Inform appropriate individuals as soon as possible when absence/tardiness is unavoidable (see Attendance policies on pages 10 & 48-49).
    - Carry out assignments as scheduled and complete them on time.
    - Record and/or report data in an accurate and orderly fashion.
    - Make up, if permissible, course work and assignments missed during excused absence.
3. ***Responsibility for own actions in didactic and internship courses.***
    - Accept constructive criticism and use it to improve performance.
    - Refrain from personal habits that distract or disrupt the classroom and/or internship environment (e.g., excessive talking, profanity, chewing gum or tobacco, eating and drinking).
    - Maintain a neat, clean personal appearance complying with existing dress codes (see page 49).
    - Comply with established safety standards.
    - Refrain from any behavior or action that jeopardizes the welfare of fellow students, faculty, staff, and others.
    - Keep the work area clean and orderly.

- Refrain from activities which potentially damage equipment, supplies, and/or private and public property.

4. ***Stability***
    - Refrain from the use of alcoholic beverages or illegal drugs at required school activities and during all courses/internships.
    - Adjust to changes such as workflow and procedures without sacrificing accuracy and reliability in clinical assignments.

Students are also expected to report violations of "Expected Student Behaviors", or any other instances of unethical conduct in any case to the faculty or other appropriate authorities.

ESSENTIAL REQUIREMENTS

In order to successfully complete the M.S. in Biotechnology, students must complete the designated academic and internship requirements. In addition to the academic requirements, students must also meet the essential requirements.

The essential requirements are the "physical abilities, mental abilities, skills, attitudes, and behaviors a student must show or perform at each stage of their education."[1] The absence of an essential requirement would fundamentally alter the program's goals. The essential requirements include functions in observation, movement, communication, intellect, and behavior.

OBSERVATION

The student must be able to:

1. Observe laboratory demonstrations in which biologicals (i.e., body fluids, culture materials, tissue sections, and cellular specimens) are tested for their biochemical, hematological, immunological, microbiological, and histochemical components.
2. Observe business or laboratory personnel in internship settings in order to perform assigned projects.
3. Characterize the color, odor, clarity, and viscosity of biologicals, reagents, or chemical reaction products.
4. Employ a clinical grade binocular microscope to perform tissue culture related objectives.
5. Read and comprehend text, numbers, illustrations, and graphs displayed in print, on a projection screen, and on a video monitor.

MOVEMENT

The student must be able to:

1. Move freely and safely about a laboratory.
2. Reach laboratory benchtops and shelves.
3. Travel to research core facilities and businesses for internship experience.
4. Perform moderately taxing continuous physical work, often requiring prolonged sitting, in confined spaces, over several hours.

5. Maneuver equipment safely around the laboratory in order to facilitate data collection.
6. Control laboratory equipment (i.e. pipettes, inoculating loops, test tubes) and adjust instruments to perform laboratory procedures.
7. Use an electronic keyboard to operate laboratory instruments and to calculate, record, evaluate, and transmit laboratory information.

COMMUNICATION

The student must be able to:

1. Read and comprehend technical and professional materials (i.e. textbooks, magazine and journal articles, handbooks, and instruction manuals).
2. Follow verbal and written instructions in order to correctly perform test procedures.
3. Communicate with faculty members, fellow students, staff, other health care professionals, and business executives verbally and in a recorded format (writing, typing, graphics, or telecommunication).
4. Prepare scientific manuscripts, scientific posters, grant and business proposals, laboratory reports, and take examinations within specified times.

INTELLECT

The student must:

1. Possess the following intellectual skills: comprehension, measurement, mathematical calculation, reasoning, integration, analysis, comparison, self-expression, and criticism.
2. Be able to exercise sufficient judgment to recognize and correct performance deviations.

BEHAVIOR

The student must:

1. Be able to manage the use of time and be able to systematize actions in order to complete professional and technical tasks within faculty-defined time limits.
2. Possess the emotional health necessary to effectively employ intellect and exercise appropriate judgment.
3. Be able to provide professional and technical services while experiencing the stresses of task related uncertainty (experimental failures, lack of enthusiasm about a current discovery, disagreements over data interpretations), emergent demands, and a distracting environment.
4. Be flexible and creative and adapt to professional and technical change.
5. Recognize potentially hazardous materials, equipment, and situations and proceed safely in order to minimize risk of injury to patients, self, and nearby individuals.
6. Adapt to working with unpleasant biologicals.
7. Support and promote the activities of fellow students and of healthcare/life science professionals. Promotion of peers helps furnish a team approach to learning, task completion, problem solving, and patient care.
8. Be honest, compassionate, ethical, and responsible. The student must be forthright about errors or uncertainty. The student must be able to critically evaluate his/her own performance, accept constructive criticism, and look for ways to improve (i.e. participate in enriched educational

activities). The student must be able to evaluate the performance of fellow students and tactfully offer constructive comments.

[1]Essex-Sorlie D. The Americans with Disabilities Act: I. History, Summary, and Key Components. Acad Med 69; 1994: 519-524.

GRADING INFORMATION

GRADES

Final grades and credits for each student are recorded and preserved as a permanent record at UAB.

The final grades for academic courses are compiled and proportioned to develop a final course grade. At the beginning of each semester, the course instructor will provide students with a course syllabus which will include the system of proportioning scores used to develop the course grade. Minimum performance criteria designated by the course instructor must be achieved by the student. These criteria indicate the level of competency of the individual student.

Grades are awarded according to the level of the student's achievement in each course. The grades for academic courses are indicated by letters:

- A = Excellent
- B = Above Average
- <C = Failure
- P = Pass
- W = Withdrawal: A notation (not a grade) assigned by the Registrar and reflects an administrative action initiated by the student in accordance with UAB regulations.
- I* = Incomplete: A temporary notation assigned a student who has not completed course requirements
- N = No Grade Submitted: A temporary notation made by the Registrar if the course instructor does not assign a grade prior to issuing of grade reports or when the course is designated to extend beyond a single term.
- X = Absent from Final Exam

*Such a notation is the prerogative of the instructor and is normally assigned only if the student's circumstances are extenuating and if there is reasonable expectation that the course requirements can be satisfactorily completed by the end of the following term. The notation of "I" will convert to an "F" unless an extension is requested specifying the date the student will complete the course requirements.

INCOMPLETES

- The temporary notation of "I" (incomplete) may be reported at the discretion of the course director to indicate that the student has performed satisfactorily in the course but, due to unforeseen circumstances, has been unable to finish all course requirements.
- An incomplete is never given to enable a student to raise a deficient grade. This notation should not be used unless there is reasonable certainty that the requirements will be completed during

the following semester because, at the end of the next semester, the incomplete automatically changes to an F if it has not been replaced with a letter grade.

- In highly unusual circumstances, a student may request an extension of time to complete the requirements. This request must be submitted in writing in advance of the time when the grade automatically changes to an F because the approval of the instructor, program director, and the Graduate School are all required.
- A student cannot graduate with an I or N grade designation on their record.
- The policy can be viewed at the following website: Academic Progress < Catalog | The University of Alabama at Birmingham (uab.edu)

Assignment of grades in the curriculum is the responsibility of the individual course director, and review of the grade can be requested according to the process outlined by the School of Health Professions linked on page 26 of this handbook.

GPA

The student's grade point average (GPA) is calculated by dividing the total quality points earned by the semester hours attempted. Semester hours attempted is defined as the total semester hours for any course in which the student was registered on a regular basis and receives an A, B, C, D, F, or WF. Quality points are awarded as follows:

Quality Points	Letter Grade
4	A
3	B
2	C
None	D, F, P, NP, F or W

Good Academic Standing

In order to remain enrolled in the program, a student must maintain a grade point average of at least 3.0 (B average) and earn at least as many hours of P grades as the total of NP and WF grades combined to be in good academic standing as defined by the Graduate School.

A graduate student, who, at the end of any semester, fails to meet the criteria to maintain good academic standing will be placed on academic probation. If approved by the Program Director, students on academic probation must re-establish good academic standing within the next two semesters during which they are enrolled at UAB. Failure to reestablish good academic standing at the end of their second

term of enrollment while on academic probation will result in academic dismissal from the UAB Graduate School.

Students admitted into the Biotechnology Program on contingency must maintain a grade point average of at least 3.0 (B average) and meet all requirements outlined in their acceptance letter to remain in the program (see page 47).

AFFECTIVE EVALUATION

S = Satisfactory; I = Improvement Needed; U = Unsatisfactory; E = Essential Function

	S	I/U	E
A. Dependable in performance of classroom and laboratory responsibilities which may be demonstrated by: • Demonstrating integrity, honesty, and conscientiousness in work. Accepting responsibility for one's own actions. (e.g. admits and corrects mistakes) • Organizing and completing assignments or work on schedule without sacrificing accuracy and reliability. (e.g., requires no prodding or reminder of completion of responsibility, leaves work area clean and restocked without reminding, appropriately prepares for class, lab, or clinical setting, completes assignments/work within established deadlines) • Following established policies and procedures of program. (e.g., uses references, laboratory procedure manuals, adheres to policies, adheres to safety regulations) • Being punctual and in class when required or assigned. (e.g., follows attendance policy, is in class/laboratory area and ready to begin activities prior to time expected and has all materials/supplies needed for the activities of the session/day. Does not take lengthy breaks. Does not plan work or other activities during time assigned for class/clinical practice)			X X
B. Stable in response to work environment which may be demonstrated by: • Working effectively under conditions of stress and/or change. (e.g., continues to perform at an appropriate rate without making mistakes when the workload is heavy and plans and budgets time) • Maintaining professional demeanor under adverse conditions. (e.g., continues to perform with a calm, logical, respectful, and positive manner and provides competent or accurate service even when conditions are less than ideal)			

C. Shows professionalism which may be demonstrated by: • Maintaining a neat, clean personal appearance complying with existing dress codes. (e.g., follows program dress code) • Showing initiative and interest to improve technical skills and expand knowledge. (e.g., asks to learn more than minimally required, offers to start an activity without being told, reads information prior to laboratory sessions, participates in professional societies, continuing education, and self-study programs, attends district and state meetings, attends hospital in-service education programs) • Investigating appropriate sources (literature and professional) for technical and professional information. (e.g., looks up information in writing before inquiring from others, utilizes faculty and teachers, rather than other students for information, uses student laboratory and clinical procedure manual) • Maintaining confidentiality of patient and laboratory data. (e.g., does not talk about laboratory work outside of the laboratory) • Demonstrating ethical conduct in professional endeavors. (e.g., does not release inappropriate information to patient, fellow student, or other individual. Does not offer advice to health care workers beyond scope of practice. Repeats any work in which problems are suspected)			X X

ACADEMIC POLICIES

ACADEMIC INTEGRITY CODE

All students are required to complete the Academic Integrity Code (AIC) course in Canvas. Once admitted to UAB and registered for classes, students will be enrolled in the AIC Canvas course. The title of the course will include the enrollment term and "UAB Academic Integrity Code". To access the UAB Academic Integrity Code course in Canvas, students must use their BlazerID and password to login to Canvas and locate the course on the Canvas dashboard. When students can't see the course in Canvas, they should work through these possible solutions.

The deadline for completing the Academic Integrity Code varies each semester, and the completion date will be communicated via an announcement in Canvas. Completion of the Academic Integrity Code Canvas course is required, and failure to meet the deadline will automatically result in a registration hold (coded AI) preventing students from registering for classes for the subsequent semesters. To resolve the Academic Integrity Code hold, please contact UAB One Stop. Questions regarding the UAB Academic Integrity Code should be directed to the Academic Integrity Code Coordinator.

ACADEMIC MISCONDUCT

Academic conduct generally concerns the behaviors and actions of students in the teaching/learning environment, whether on campus or at another location sponsoring a learning activity. When behaviors and actions of students are deemed unethical or inappropriate, the term academic misconduct may be applied. Examples of Academic Misconduct include, but are not limited to, cheating, facilitating cheating, fabrication, misrepresentation, plagiarism, self-plagiarism, etc. A student's failure to meet technical standards shall also be handled as Academic Misconduct under this Policy. The M.S.

Biotechnology Program follows and abides by the UAB School of Health Professions and UAB policies regarding Academic Misconduct as outlined by the UAB Academic Integrity Code. The policy can be reviewed using the following website: Academic Progress < Catalog | The University of Alabama at Birmingham (uab.edu)

The following are considered academic misconduct and will be treated as such:

a. ***Cheating:*** Using or attempting to use unauthorized materials, including but not limited to materials, information, study aids, the work of others, or electronic device-related information, any of which have not been approved by the instructor, as well as unauthorized assistance from third parties including a commercial service or engaging another person (whether paid or unpaid); sharing answers for either a take-home or in-class exams unless specifically and explicitly allowed.
b. ***Facilitation:*** Assisting, knowingly helping, supporting, conspiring, or colluding with others to engage in any form of academic dishonesty, including but not limited to two or more students that work together to produce individually submitted work without permission of the appropriate faculty member.
c. ***Plagiarism:*** All papers and assignments must be the original work of that student or have the work of another in quotation marks with proper reference notations immediately following the direct quote. If a student is proven to have plagiarized another individual's work, claiming that work as his or her own, the student is in violation of the UAB Academic Integrity Code and will be subject to the UAB policies on Academic Misconduct.
d. ***Self-Plagiarism:*** Resubmitting your own previously submitted work without proper citation and permission from the current instructor to whom the original work was subsequently submitted.
e. ***Fabrication:*** Presenting as genuine, any invented or manufactured citation, data, or material.
f. ***Falsification/Misrepresentation:*** Falsifying, altering, or incorrectly defining the contents of documents or other materials related to academic matters, work pertaining to schedules, prerequisites, and transcripts, or misrepresenting facts about oneself for the purpose of obtaining an academic advantage or for the purpose of academically injuring another student.

TESTING

The Biotechnology Program aims to provide an environment that is conducive to test taking and promotes academic integrity.

a. Students are expected to read and comply with all academic regulations as published in the UAB catalog, the SHP catalog, and the BT Handbook.
b. Students are expected to arrive to the designated testing location at least 10 minutes before the scheduled start time. Arriving in advance gives the student time to log onto the computer, log onto Canvas, etc. without disrupting others.
c. Students are expected to arrive to the designated testing location with all required materials. Required materials will be designated by the course director in advance.
d. Students should only have the permissible materials on their desk during an exam. All phones, tablets, etc. should be silenced and placed in the student's bag, which should then be closed. Bags should be placed under the desk or in a location designated by the course director or

proctor. Students are not permitted to open their bags during the exam unless the proctor grants permission.

e. If a student is permitted scratch paper during an exam, it will be provided by the proctor at the start of the exam. Students are not permitted to write on the scratch paper until the exam begins. If a student writes on the scratch paper before the exam begins, it will be discarded. Students will submit the scratch paper to the proctor at the end of the exam.
f. Students are not permitted to talk during an exam or while in a testing room while an exam is ongoing. If a student talks, they will be excused from the room and will receive a grade of 0 on the exam. Regardless of topic, talking during an exam constitutes academic misconduct and will be treated as such. If the student needs assistance, they should raise their hand and the proctor will assist.
g. If extenuating circumstances, such as, illness, make absence from class unavoidable, the student is responsible for communicating with the course director in a timely manner. The student is also responsible for making arrangements to reschedule any missed assignments or exams. To demonstrate an excused absence as outline in UAB's Attendance Policy, the student must obtain a signed statement from a physician or other relevant documentation and submit it to the course director.
h. Make-up exams for unexcused absences will be conducted at the discretion of the course director. An instructor may apply a penalty or a zero for the examination if the absence is unexcused.

GRADUATION REQUIREMENTS

Graduation from the M.S. Biotechnology Program requires the following:

a. Completion of all courses in the curriculum with a minimum grade of "C" or higher and an overall GPA of 3.0 or higher.
b. Demonstration of an acceptable level of professionalism throughout matriculation. Professionalism will be assessed using the Affective Evaluation (see page 44).
c. Completion of all financial and administrative obligations as specified by the University of Alabama at Birmingham.

PROBATION/DISMISSAL

a. Students who are accepted to the program with contingencies must demonstrate their ability to perform at or above the level detailed in their acceptance letter. They are also to establish and maintain good academic standing – as defined by the UAB Graduate School - by the end of their first term. Students who do not establish this level of performance may be dismissed from the BT program.
b. A student who receives a grade of F in a required Biotechnology program course will be immediately dismissed from the program.
c. Students admitted in good academic standing who fail to obtain a minimum 3.0 GPA during any semester will be placed on academic probation by the UAB Graduate School. Students placed on academic probation must re-establish good academic standing by bringing their overall GPA to at least 3.0 within two subsequent semesters or they will be permanently dismissed from the School of Health Professions, the UAB Graduate School, and by extension, the Biotechnology

Program. The policy can be reviewed by visiting the following link: Academic Progress < Catalog | The University of Alabama at Birmingham (uab.edu)

d. If a student is dismissed from the program, the process outline on **page 26** of this handbook under **Dismissal of Student for Failure to Make Satisfactory Academic Progress** will be followed.
e. Students dismissed from the program can appeal the decision by following the process outlined on **page 26** of this handbook under **Dismissal of Student for Failure to Make Satisfactory Academic Progress.**

WITHDRAWAL

a. A student who wishes to withdraw from one or more courses, but not the entire semester, must meet with the Program Director before withdrawal to discuss. Withdrawing from any course may delay the student's progression through the program and/or ability to graduate on-time.
b. A student who wishes to voluntarily withdraw from the Biotechnology Program must have approval by the Program Director before the withdrawal is officially made. The student must submit a written statement, in the form of an official business letter, of their intent to withdraw from the program including the effective date of the withdrawal and must schedule a face-to-face, or phone meeting, with the Program Director to discuss the withdrawal. Once approved by the Program Director the official UAB withdrawal is made by the student through the UAB One Stop Student services.
    a. Students should refer to the Academic Calendar for refunds on tuition and fees: https://www.uab.edu/students/academics/academic-calendar
    b. Those who withdraw for medical reasons may appeal to SHP's Associate Dean to grant an exception to the refund policy.
    c. More details regarding the exceptions may be found at the following website: secure2.compliancebridge.com/uab/portal/getdoc.php?file=94
c. Students who voluntarily withdraw from the program for any reason may only be considered for reenrollment if they departed in good academic standing.
d. NOTE: The failure to attend a class does not constitute a formal withdrawal.

OPERATIONAL POLICIES

ACADEMIC CALENDAR

UAB's Academic Calendar outlines important dates as they pertain to academic operations including, but not limited to, the following: Payment deadlines, first day of classes, last day of classes, university breaks and holidays, withdrawal deadlines, etc. To review the Academic Calendar for the term, visit the following website: Current Academic Calendar - Students - Academics (uab.edu)

ATTENDANCE

In regards to the Academic Calendar, please note the following:

a. It is the student's responsibility to review the calendar and act accordingly.
b. Students are expected to attend classes and meet academic commitments from the first day of class through the last day of final exams as stated on UAB's Academic Calendar.

c. If extenuating circumstances, such as, illness, make absence from class unavoidable, the student is responsible for communicating with the course director in a timely manner.
d. If a student is not present in class, it will be considered an unexcused absence unless it meets the criteria for an excused absence as outlined on page 10 of this handbook and the student provides documentation.
e. The course director is not obligated to allow a student to make up any work missed as a result of an unexcused absence.
f. Unless it is the result of circumstances outside the student's control (i.e. flights cancelled by the airline, documented illness, etc.), arriving to campus after the designated start date does not constitute an excused absence.
    a. For a list of university approved excused absences, reference page 10 of this handbook

At the beginning of each term, class schedules will be posted on Canvas and in syllabi indicating dates, times, location, lecture topics, laboratory sessions, examinations, assignments, etc. The class schedules are subject to change, as circumstances require. The students will be informed of any necessary schedule changes as soon as possible.

a. The program requires 3 terms of full-time enrollment to complete.
b. Students will typically have class Monday through Thursday each week; however, the exact days and times of class sessions will vary from day to day and term to term.
c. Each student will complete an internship prior to graduation. The student will work with their internship supervisor to coordinate a schedule. The student is expected to follow that schedule.
    a. Students are discouraged from working more than 10 hours per week at their internship
    b. If a student is interning at a site on campus, they must follow all applicable UAB rules regarding student employment
d. Work schedules and personal commitments must be planned around class/internship schedules. Students may not leave early or arrive at class, lab sessions, or internships late because of work.
e. Attendance is mandatory at all assigned classes (lectures, labs, etc., refer to Attendance Policy, page 48).

ADVISING/FACULTY MENTOR

a. The Program Manager II will serve as the academic advisor for all BT students. Prior to class registration, the Program Manager II will send an advising email to each student listing the classes required in order to graduate by the student's designated graduation term. It is the student's responsibility to register for the classes listed, or to communicate with the Program Manager II in a timely manner if they plan on deviating from the plan. Deviating from the plan outlined by the Program Manager II may result in a delay of graduation for the student.
b. Each student will be assigned a faculty mentor during their first Individual Development Plan (IDP) meeting with the Program Manager II. Faculty mentors are assigned based on the interests and/or goals of the student. Students are expected to interact with their faculty mentor on a regular basis, via email, in person, or virtually.
c. Objectives of Faculty Mentorship:
    i Open lines of communication between students and faculty.
    ii Professional development.

iii Provide the student with a person with whom they can discuss problems, concerns, academic questions etc.
iv Address issues in a constructive manner.
v Strong letters of recommendation and professional references.

Dress Code

a. Clothing should be clean, neat, in good repair, and appropriate for class.
b. Business casual dress is preferred for class.
c. During lab, students must wear closed toe, closed heal shoes, long pants, and lab coats. Failure to follow the dress code may result in the student being dismissed from lab and earning a grade of 0 for the day's work.
d. When at internship sites, clinic sites, or research labs, students are required to adhere to the attire guidelines for that facility.

Letters of Recommendation/References

a. Students must complete at least one semester in the BT Program and be in good standing to receive a letter of recommendation and/or reference from a member of faculty or staff.
b. Students must ask BT Faculty if they are willing to write a letter of recommendation (LOR) or provide a reference prior to submitting their names to the requesting body.
c. Students should request a letter of recommendation 1-2 months before the deadline to submit.
d. Failure to ask may result in the decline of the LOR or reference.
e. The request must also include the completed letter of recommendation template, how many letters are required, who they are going to, and when they are due. This applies to all forms of references (job, graduate school, medical school, award, etc.).
f. Students should remind the faculty or staff member as the deadlines approach.
g. Faculty and staff members are not required to provide LORs.

Professional Conduct

Professional behaviors and attitudes are essential components on UAB's Biotechnology Program. In preparation for professional pursuits, students are expected to meet the following professionalism standards set forth by the program:

a. Attend Class.
b. Be on-time for all commitments (class, appointments, internship shifts, etc.).
c. Thoughtfully complete and submit all assignments by the designated due date.
d. Use proper grammar in written and oral assignments.
e. Use proper grammar and email etiquette in all emails to faculty, staff, classmates, etc. Do not use "text speak."
f. Present an appearance that reflects a professional image as defined in the BT Dress Code (see page 49).
g. Be courteous in the use of electronic devices: pagers, cell phones, tablets, laptops. Devices should be on silent/vibrate when in lecture, lab, and internships.

h. Treat individuals with respect. Comply with applicable laws, regulations, and policies.
i. Profanity is not allowed at any time.
j. Use confidential information responsibly and do not violate applicable laws.
k. Acknowledge and appropriately manage conflicts of interest.
l. Conduct and present oneself in such a manner that reflects the high professional standard set forth by the Department of Clinical and Diagnostic Sciences and the School of Health Professions.

SUPPLIES

Students are expected to supply their own:

a. Lab notebooks (see guidelines outlined in BT lab course syllabi)
b. Notepaper
c. Pens & pencils
d. Scientific calculators
e. Laboratory coat (program approved) which is fluid resistant, long sleeved, cuffed, and long-length. Program provided lab coats may be available to borrow on a first come, first serve basis.
f. Students are expected to have access to a computer (either personal, or in the LRC or Lister Hill Library.) Computer applications are essential for completion of course requirements and the projects in courses.

LAB SAFETY POLICIES & PROCEDURES

Every attempt is made to provide appropriate instruction in the utilization of universal precautions and exposure control procedures. Specific requirements vary according to the curricula of each academic program. Students are expected to comply with the standards set by the U.S. Department of Labor Occupational Safety and Health Administration (OSHA) (29.CFR Part 1910.1030) and the BT program policies and procedures. The policies and procedures apply to all students, faculty, and staff. The rules and procedures described below have been developed for the protection and health of students, faculty, and staff. Noncompliance will be considered as misconduct and handled as such. These rules and procedures comply with the OSHA Standards for Occupational Exposure to Bloodborne Pathogens, CDC Recommendations for Prevention of HIV Transmission in Health-Care Settings, CDC Recommendations for Airborne Pathogens, UAB Biosafety Manual, and UAB Chemical Safety and Waste Management Manual.

GENERAL REGULATIONS FOR STUDENT LABORATORY COURSES

1. Students are expected to arrive at least 10 minutes early to put backpacks away and put lab coats on.
2. Eating, drinking, smoking, chewing gum or tobacco, applying cosmetics or lip balm, or handling contact lens is PROHIBITED in the labs (even if the lab space is being used for class or an examination, and not a lab session). No items should be placed in the mouth or near the face.
3. Dress must be in compliance with the program dress code (see page 49).

4. Standard precautions (which combine universal precautions and body substance isolation) must be observed in the laboratory to prevent contact with blood, body fluids, and all secretions and excretions.
5. All procedures involving blood or other potentially infectious materials are performed to minimize splashing, spraying, spattering, and generating droplets.
6. Personal Protective Equipment:
    a. Long-sleeved, fluid resistant (fluid barrier) lab coats (not jackets) and shoes which completely cover the feet (not open toe, not open heel, not cloth) must be worn during all lab sessions.
    b. Lab coats must be buttoned or secured completely for protection.
    c. Students will not be admitted to lab sessions without lab coats or the appropriate clothes and shoes.
    d. Disposable laboratory coats will not be available for student use and shoe covers will not be available.
    e. Students must wear appropriate shoes and have the required laboratory coat to be able to conduct student laboratory sessions.
    f. Students who do not comply will not be permitted to stay in the laboratory session.
    g. Gloves must be worn in ALL lab sessions. Non-latex gloves are used in the student laboratory sessions. Students must not use oil-based lotions, which decrease the integrity of gloves.
    h. An eye and face protection unit must be worn when performing procedures that may generate droplets of blood, body fluids, secretions or excretions, or other infectious/harmful materials.
    i. Plastic aprons must be worn over lab coats when performing procedures with blood, body fluids, secretions or excretions, or microbial broth cultures/simulated specimens. Contaminated aprons must be disinfected immediately using the precautions mandated for a small spill.
    j. Protective goggles or safety glasses must be worn in chemistry labs when performing procedures that may result in possible splashing of harmful chemicals. Additional requirements for personal protective equipment and/or environmental controls that are required for certain procedures will be designated in individual course lab manuals.
    k. Dress appropriately for all laboratory sessions (as outlined in the Dress Code on page 49).
7. Gloves are removed inside out aseptically (without producing aerosols) and are discarded in the biohazard container with red bag at the end of each laboratory session or when necessary due to gross contamination, tearing, or puncturing.
8. The plastic face shield should be cleaned with disinfectant spray at the end of each lab in which it is used (or when gross contamination occurs). Goggles or safety glasses should be cleaned in the same manner. If a woven nose and mouth facemask is worn, it should be discarded (in biohazard container with red bag) at the end of each lab session in which it is used (or if gross contamination occurs).
9. Lab coats should be hung on the designated coat rack after each lab session. The program washes laboratory coats on a regular basis for the student. Soiled lab coats must be removed immediately.

10. Lab coats and other protective equipment must be removed before leaving the lab for any reason.
11. Open operations with flammable, combustible, or toxic chemicals must be carried out under a fume hood. Material safety data sheets are located in the laboratory.
12. Hands must be washed (upon removing gloves) with an antimicrobial solution before leaving a lab session for any reason or when gross contamination occurs. After washing and drying hands, turn off faucet using a paper towel. This towel is potentially contaminated and must be placed in a special container located by the sinks.
13. Skin (other than hands) which has come in contact with blood or other potentially infectious material must be washed immediately with antimicrobial solution and water. If eye contamination occurs the eyewash must be used immediately.
14. A pipetting aid or semi-automatic pipette must be used to pipette all fluids. Mouth pipetting is prohibited.
15. Food and drink must not be stored in lab refrigerators or anywhere in lab area.
16. The workstation must be cleaned with disinfectant before and after each lab period and after spills of potentially contaminated material. Lamps and all objects left on the desktop must be wiped with disinfectant-soaked towels.
17. The workspace should be covered with a large, white, plastic-coated absorbent towel at the beginning of each lab session. All contaminated materials should be kept on the towel. Books and papers needed for lab should be kept off the towel. Personal items MUST be stored in day lockers and not left on the floor in the prep area or in the student laboratory. Students must have a lock for use with the day lockers. The towel should be discarded (in the biohazard container with red bag) at the end of each lab session (or when grossly contaminated).
18. Small spills of contaminated material may be wiped up with a disinfectant soaked gauze or towel. Wash the surface a second time with another disinfectant soaked towel. Discard towels in a biohazard (red bag) container. Never pick up broken glass with hands but use a mechanical device such as tongs, forceps, or a brush and dustpan. Large spills must be reported to the instructor or lab staff. Staff (faculty or teacher) must oversee cleanup of any spills.
19. Used needles and other sharps are not bent, broken, recapped, or re-sheathed by hand. Used needles are not removed from disposable syringes. Needles and sharps are disposed of in impervious disposable containers.
20. Do not remove pencils, pens, or other materials used during lab sessions because they may be contaminated. Use the materials supplied or leave your personal pencils, etc., as donations for the lab.
21. Unauthorized visitors are not permitted to enter the lab. If an emergency situation requires that someone speak with a student during a laboratory session, the visitor must first approach the teacher or course master to obtain permission to speak with student. Students must remove their lab coat, wash their hands, and leave the laboratory. If a student is expecting someone the student must obtain permission from teacher or course master before leaving the laboratory.
22. Cuts or other skin abrasions must be covered by Band-Aid(s) prior to putting on gloves.
23. A student may not leave the laboratory area during an exam unless he/she obtains permission from the teacher or instructor. Multiple students are not permitted to exit the area at the same time during an exam.
24. Incidents and Injury Reporting

a. Cuts or other skin abrasions must be covered by Band-Aid(s) (available in First Aid Box) prior to putting on gloves.
b. All incidents/injuries occurring in lab regardless of severity must be reported promptly to the instructor or lab staff who will take appropriate action (i.e., send student to Student Health or Emergency Department).
c. An incident report will be completed by the student, signed by the instructor, and kept on file in the Program Office. Forms are available from BT faculty and teachers.
d. To access the incident report: https://www.uab.edu/riskmanagement/images/VisitorStudent_Incident_Report_OCT2022.pdf
e. Refer to UAB Body Fluid Exposure Policy.

General Regulations for Internship Sites

Students are expected to follow the General Regulations for Student Laboratory Courses while at internship sites. The internship sites will have established protocols for safety to which all students must adhere.

Lab Training

By the deadlines designated by the course instructor, students are required to complete the following lab training courses on Canvas. Failure to complete any and all training courses by the deadline will result in the student being excused from lab until the training courses are satisfactorily completed. Students may not be permitted to make-up any coursework missed due to missing lab trainings:

- BIO 303: Basic Biosafety Training
- CS 101: Chemical Safety Training
- OHS 101: Using PPE in the Laboratory

Requirements Prior to Beginning an Internship (For Online & In-Person Students)

- **Background Check/Drug Screen through CastleBranch–**Students are required to complete the background check and drug screen upon entry to the program and then prior to beginning their internship if the internship begins more than one year after the student began the program. Students who do not have compliant status in the CastleBranch system for a background check and drug screen will not be allowed to matriculate to the next semester or begin an internship until they are compliant. Please refer to page 25 for specific background check and drug screen instructions.
- **Immunizations –** Students must fulfill the following immunization requirements prior to the start of their assigned internships. Students that do not have compliant status within the Student Health and Wellness system will not be allowed to begin an internship.
  Immunizations - Students - Health (uab.edu)

  _____ MMR (Measles, Mumps, Rubella)

  _____ Tdap (Tetanus, Diphtheria, Acellular, Pertussis)

_____ Tuberculosis Screening

_____ Varicella (Chickenpox/Shingles)

_____ Meningococcal ACWY

- **Additional Requirements**

  Internship sites may have additional requirements beyond the UAB School of Health Professions policy. Students are required to comply with all internship site requirements prior to their start date.

- **Cost/Fees**

  The student is responsible for all costs and expenses associated with the requirements listed in this document and any requirements dictated by the internship site(s).

Graduate Student Policies

Information on Graduate School Policies and Procedures may be found online at: 2024-2025 Catalog of Graduate Programs < Catalog | The University of Alabama at Birmingham (uab.edu)

Graduate School policies and procedures are developed to ensure that high standards for graduate study are maintained at UAB. These policies and procedures are the joint responsibility of the Graduate Council and the Graduate School Dean. The Graduate Council, through consultation with the dean, is responsible for developing academic requirements and describing these requirements through appropriate policies. The dean, through consultation with the Graduate Council or the Advisory Committee of the Graduate Council, is responsible for developing procedures that effectively enforce academic requirements and implement policies.

The Graduate Council, through its Advisory Committee, will review academic requirements, policies, procedures, and Graduate School activities annually and recommend appropriate changes. Changes in academic requirements and related policies will require a majority vote of the Graduate Council. A change in composition or responsibility of the Graduate Council will require a two-thirds majority vote of the Graduate Council.

For all other information go to the Graduate School Student Information webpage for information on Academic Policies and Progress, Registration, Financial, Commencement, other Academic Programs and Career Development.

Current Students - Graduate School (uab.edu)

Application for Degree & Certificate

Upon successful completion of all program requirements students will be awarded an M.S. degree. All students MUST apply for their degrees at least three months prior to their anticipated graduation date.

Students can access the Application for Graduate Degree/Certificate online through BlazerNET by clicking **Links/Forms** and selecting **Apply for Graduate Degree/Certificate**. The application must be submitted by the deadline date listed on the Graduate School website. Upon submission of the application for degree/certificate, a fee will be assessed to your student account. This fee covers the verification of your curriculum requirements and your diploma (if earning a graduate degree) and will only be assessed the first time you apply to graduate. The fee for graduate degrees is $60 and the fee for graduate certificates is $20.

Additional information is available at the Graduate School website.

Graduate School Handbook

For more information on Graduate School policies refer to the UAB Graduate school handbook:

http://catalog.uab.edu/student-handbook/

Computer Requirements

Canvas Computer Requirements

In order to successfully complete the requirements of the M.S. in Biotechnology (both in-person and online), students must be able to successfully navigate Canvas, UAB's Learning Management System. Whether the class is online or in-person, most class information will be posted on Canvas. Biotechnology professors will post the following information to Canvas: Syllabi, updates, instructions, PowerPoints, recorded lectures, etc. It is the student's responsibility to regularly check Canvas and use resources accordingly. For information on how to navigate Canvas, use the following link: Canvas - eLearning (uab.edu)

UAB uses Canvas, a learning management system, to deliver its online courses. Below you will find important information regarding accessing and navigating Canvas:

NOTE: Additional technical requirements may be required for some courses.

What are the basic computer specifications for Canvas?

Click the link to access a list of basic computer system requirements to use Canvas. It is always recommended to use the most up-to-date versions and reliable internet connections. Canvas will still run with the minimum specifications, but you may experience slower loading times. Find out more about Computer Specifications.

Which browsers support Canvas?

Because it's built using web standards, Canvas runs on Windows, Mac, Linux, iOS, Android, or any other device with a modern web browser.

Canvas supports the last two versions of every browser release. We highly recommend updating to the newest version of whatever browser you are using as well as the most up-to-date Flash plug-in. Find out more about Supported Browsers.

Required Components:

- **Java:** The Java plug-in is required for screen sharing in Conferences. Please note: Some browsers do not support Java. Otherwise, there are no other browser plug-ins used by Canvas. Verify Java and Find Out-of-Date Versions.
- **Adobe Reader:** Adobe Reader software is the free global standard for reliably viewing, printing, and commenting on PDF files. It's the only PDF file viewer that can open and interact with all types of PDF content, including forms and multimedia. Go to the Free Reader Download.

Tips

- Adjust Canvas settings so Canvas announcements are sent directly to UAB email.
- Check Canvas regularly and thoroughly.
- DO NOT just rely on the "To Do List" function. Check every tab regularly for updates and important information.

Technical requirements

Taking an online class or using Canvas as part of an in-person class requires some technical skills and certain hardware, software, and other resources.

Basic software/hardware

Students will need to have access to the following:

- Computer
- Webcam and microphone
- Speakers
- Reliable internet connection

Basic technical skills

Online courses are designed to be accessible and easy to participate in, but do require students be able to:

- Use a keyboard and mouse.
- Save, open, and edit various file types.
- Open, send, and reply to email communications.
- Include and open attachments in email messages.
- Upload and download files to and from your computer and the internet.
- Navigate the Internet.
- Navigate the UAB Canvas course platform.
- Obtain and navigate software to open PDF files.
- Download and utilize software and/or plug-ins required by the course instructor(s).

Internet connection

A high-speed internet connection with speeds of 1.5 mbps or higher is recommended for online courses. A high-speed internet connection ensures that you can access all of the course materials and resources, particularly large file sizes as with streaming video. However, technologies used in individual courses vary. See the course syllabus for additional technical requirements.

- What does ***Internet Speed*** mean?
    - Some online courses use videos. Viewing is only possible if a certain amount of data is transferred to your computer in a timely manner.
    - The speed that the data can be sent to you is called your "internet speed". YouTube and most other videos are encoded with at least a 256Kbps (kilobits per second) rate/speed.
- Approximate speeds of the common types of Internet Service Providers:
    - Dial-up internet - 56 bps (from phone company)
    - DSL internet - 768 kbps+ (from phone company)
    - Cable internet - 1,000-10,000+ kbps (from cable company)
    - Dial-up connections cannot retrieve the data fast enough causing video to frequently pause to let more data arrive. DSL and Cable connections are more than adequate to watch most online videos.
- How can I determine my current Internet speed?
    - Visit www.bandwidthplace.com.
    - Write down your Download and Upload speeds after you complete the test.
    - This will aid technical support in assisting you with technical issues you may experience.

STUDENT ORGANIZATIONS

BIOTECHNOLOGY ASSOCIATION OF ALABAMA (BAA)

BAA is a statewide organization representing Alabama's bio related industries, research scientists, clinicians, and business professionals who are working together to foster, develop, and support the life sciences in Alabama. BAA events, programs, and member benefits are designed to enhance the progress of the Biotechnology industry and its members. The BAA is the Alabama state affiliate of the Biotechnology Industry Organization (BIO), the preeminent national association for biotechnology companies.

For more information on the BAA refer to the following link: https://bioalabama.com/AboutBioAlabama

The Biotechnology Program encourages students to join the BAA. The BAA membership application may be found at the link below: http://www.bioalabama.com/membership/

Other organizations for involvement can be found here under "Get Involved" on the Graduate School website: https://www.uab.edu/graduate/students/current-students

BIOTECHNOLOGY GRADUATE STUDENT ASSOCIATION AT UAB

The Biotechnology Graduate Student Association at UAB is an organization aimed at enhancing the social, recreational, and educational function of the Biotechnology Graduate Program. The purpose of the club is to serve as a resource and enrich the experience of students as they matriculate through the Biotechnology program at UAB.