Technical Standards for (Biotechnology)

Our program technical standards have been developed to help students understand nonacademic standards, skills, and performance requirements expected of a student in order to complete this particular curriculum.

If an accommodation is necessary to participate in the program, it is imperative to identify a reasonable accommodations to those students who qualify under the Americans with Disabilities Act (ADA). Reasonableness is determined by the Disability Services Office (DSO) and the program on a case-by-case basis utilizing the program technical standards. The accommodation needs to be in place prior to the start of the program, or it may delay your ability to start the program. It is the student's responsibility to contact the DSO and request accommodations.

Skills	Description	Specific Examples
Motor Skills	Biotechnology students should possess gross and fine motor skills, enabling them to learn laboratory skills and work safely in the lab.	Should be able to: • Perform delicate operations, which require adequate hand-eye coordination. • Perform manual laboratory procedures with agility. • Operate sensitive laboratory equipment, including computers, touch screens, keyboards, and computerized equipment.
Vision	Biotechnology students possess sufficient visual ability for observing and assessing laboratory results, and for reading and following laboratory procedures.	Should be able to • Visualize small, microscopic organisms using a binocular microscope.

Skills	Description	Specific Examples
		• View very small changes in color and sufficient perception of depth (texture, shape, and size). • Differentiate visual characteristics of specimens, reagents etcetera e.g. color, clarity, and viscosity • Read and understand text, numbers, graphs, and other data in small print and on a monitor screen.
Hearing	Biotechnology students should be able to ensure safe and effective laboratory operations.	Should be able to • Effectively communicate with other laboratory personnel while in the lab and be able to follow directives. • Detect and assess equipment and alarm sounds. • Communicate via telephone or other similar devices.
Technological	Biotechnology students should be proficient in or capable of learning technology relevant to the laboratory and classroom.	Should be able to • Use a computer or computerized device. • Navigate and use learning management systems such as Blackboard.

Skills	Description	Specific Examples
		• Learn to use Microsoft Office tools e.g. Excel, Word, Power Point. • Send and retrieve work/school related emails and be able to attach documents to emails. • Use the internet for gathering information e.g. researching laboratory related issues. • Work with software that accompany laboratory equipment and devices. • Maintain or troubleshoot equipment according to manufacturer guidelines.
Communication	Biotechnology students should be able to communicate clearly both verbally and in writing.	Should be able to • Clearly verbalize pertinent information to supervisors, co- workers, fellow students, faculty members etc. in English. • Clearly record, in writing, relevant documents such as lab notebooks, term papers, laboratory protocols, standard operating

Skills	Description	Specific Examples
		procedures etcetera, in English. • Understand and execute written and oral instructions received in English. • Use professional jargon when communicating within the discipline.
Critical Thinking/ Problem Solving	Biotechnology students should be able to analyze and assess various laboratory and scientific scenarios in order to arrive at conclusions and make informed decisions.	Should be capable of: • Reasoning, measuring, calculating, analyzing data, formulating ideas. • Multitasking • Prioritizing tasks • Working efficiently • Exercising appropriate judgement specific to various situations. • Logical thinking • Problem solving as it relates to laboratory issues • Researching information from the internet, books, media, laboratory reference manuals, company technical support personnel in order to operate equipment safely and perform laboratory

Skills	Description	Specific Examples
		procedures with minimal or no assistance. • Abiding by laboratory safety guidelines. • Progressing towards self-sufficiency and working independently with minimal supervision.
Interpersonal Skills	Biotechnology students should be able to positively interact or display professionalism when interacting with other members of the Biotechnology program including, but not limited to, classmates, teammates, instructors, laboratory technicians, work based learning supervisors etc. Students should also be able to interact with individuals with different social, emotional, cultural and intellectual backgrounds.	Should be able to : • Adapt appropriately to changing situations/environments in the laboratory • Maintain composure under stressful or hostile conditions. • Show respect to fellow students, faculty, coworkers, supervisors etc. • Be respectful and tolerant to everyone irrespective of their race, nationality, sexual orientation, gender, disability, religious or moral beliefs • Demonstrate honesty, integrity, dependability and accountability in a laboratory setting.

Skills	Description	Specific Examples
		• Deport oneself professionally by way of attitude, dress, general appearance etcetera.
Environmental Tolerance	Biotechnology students should be able to tolerate a variety of environmental stressors.	Should be able to • Remain focused and alert in a fast paced, highly stressful (sometimes unpredictable) work environment. • Follow specific regulatory guidelines in the laboratory. • Work safely with potentially infectious organisms, samples, and other hazardous materials.

This document is intended to serve as a guide regarding the physical, emotional, intellectual and psychosocial expectations placed on a student. This document cannot include every conceivable action, task, ability or behavior that may be expected of a student. Meeting these technical standards does not guarantee employment in this field upon graduation. Ability to meet the program's technical standards does not guarantee a student's eligibility for any licensure, certification exam, or successful completion of the degree program.