

## **I. Purpose of Technical Standards**

The **technical standards** for the Biology & Chemistry Department at the County College of Morris define the essential skills and competencies required for students to successfully participate in and complete coursework within our programs. These standards ensure that students meet lecture and laboratory expectations while maintaining safety and ethical conduct in scientific work.

These standards apply to all students enrolled in courses offered by the Biology & Chemistry Department and serve as guidelines for faculty, staff, and administrators in curriculum design, student support, and assessment of student readiness to enter our programs. For a complete list of Environmental Science, Biology & Chemistry courses, refer to the following links: [Environmental Science Courses](#), [Biology Courses](#) and [Chemistry Courses](#).

Disabled students seeking accommodations for courses can register with the Office of Accessibility Services.

## **II. Categories of Technical Standards**

### **1. Cognitive Abilities & Critical Thinking**

Students should be able to:

- Use critical-thinking, problem-solving skills and previously learned material and skills to understand scientific concepts, analyze data, and draw logical conclusions.
- Follow multi-step protocols and adapt to variations in experimental conditions.

### **2. Communication Skills**

Students should be able to:

- Comprehend scientific literature, textbooks, and laboratory manuals.
- Communicate scientific findings.
- Follow instructions in a laboratory setting to ensure safety and accuracy.
- Engage in professional and respectful discussions with peers and faculty about scientific concepts.

### **3. Technical & Laboratory Skills**

Students should be able to:

- Follow directions for proper handling of glassware, laboratory equipment, and chemicals according to safety and laboratory protocols.
- Maintain accurate and detailed laboratory notebooks or reports.

- Follow waste disposal guidelines and understand the environmental impact of laboratory activities.

#### **4. Motor Skills & Manual Dexterity**

Students should be able to:

- Work with or use laboratory equipment and instruments safely and efficiently.
- Ensure safety standards are met when working with laboratory equipment.
- Follow directions for safe practices when working with biological specimens, chemicals, and potentially hazardous materials.

#### **5. Sensory & Observational Skills**

Students should be able to:

- Observe and record results accurately.
- Utilize senses to collect information and report changes in laboratory conditions that may be indicative of a safety hazard.

#### **6. Safety & Compliance with Regulations**

Students should be able to:

- Adhere to OSHA, CDC, and institutional safety guidelines when working in labs.
- Wear appropriate personal protective equipment (PPE), including but not limited to lab coats, gloves, and safety goggles when working in laboratories.
- Recognize chemical hazards by interpreting Safety Data Sheets (SDSs).
- Adhere to emergency procedures, including chemical spill response, fire safety, and first aid.
- Understand the ethical implications of handling biological specimens, human-derived materials, and chemical substances.

#### **7. Professionalism & Ethical Conduct**

Students should be able to:

- Uphold standards of academic integrity (e.g., avoiding plagiarism and data fabrication or falsification).
- Demonstrate respect for peers, faculty, and laboratory personnel.
- Work effectively in both individual and collaborative settings.
- Accept constructive feedback and demonstrate adaptability when completing different tasks.

For certain courses, such as Ecology, additional technical standards may be required. Please refer to the course documents for further technical standards.

### **III. Commitment to Accessibility Accommodations**

These technical standards are designed to define the essential skills and competencies required for academic success in our programs. However, they are not intended to serve as barriers to participation.

In accordance with the Americans with Disabilities Act (ADA), Section 504 of the Rehabilitation Act, and other applicable laws, the department will provide reasonable accommodations to disabled students with documented disabilities. Accommodations will be determined on an individual basis through an interactive process between the student and the Accessibility Services Office and if needed, per course, consultation with faculty, ensuring that students can meet the programs' essential requirements without fundamentally altering academic or safety standards.

No qualified student shall be excluded from participation, denied benefits, or subjected to discrimination based on disability. The Biology & Chemistry Department remains committed to upholding legal and ethical responsibilities to ensure fair access while maintaining the integrity of our academic and safety expectations.