

Mechatronics Design: Technical Standards for admission, progression and graduation

The following technical standards describe the non-academic qualifications required for entrance to, continuation in, and graduation with an Associate in Applied Science (AAS) degree or Associate in Occupational Studies (AOS) degree in Mechatronics Design from SUNY College of Technology at Delhi. Candidates must be able to meet these minimum standards with or without reasonable accommodation for successful completion of certificate/degree requirements.

Sensory/Observation Skills

General: Use technical, mathematical, and analytical/visualization skills to create computer-assisted design/drawings and technical documentation. Conduct inspections/troubleshoot and take the necessary measures to solve the technical problem according to applicable standards.

Specific:

- Interpret technical manuals/drawings, analog/digital meters, oscilloscopes, and other measuring devices.
- Differentiate and determine the most logical solution using predetermined problem solving techniques (Visualize 2D/3D geometric shapes and their rotations).
- Solve technical problems using logic and other mathematical solutions.
- Create, design and implement technical drawings and processes.
- Identify colors, sounds, smells, and other sensory inputs and respond accordingly for safe operations (visual/audible alarms, and system conditions).
- Select appropriate materials, tools and equipment for installation, maintenance and repairs.
- Observe and accurately recreate approved procedures.

Motor Skills

General: Possess physical strength, flexibility, and dexterity needed to safely perform assigned tasks.

Specific:

- Design technical drawings and mechanical processes, operate tools and machinery, demonstrating proper hand eye coordination.
- Execute computer commands and operations to draw, edit, render, and animate designs.

Communication skills

General: Communicate to gather and convey information.

Specific:

- Speak, write, and understand English.
- Obtain necessary information from oral and written sources.
- Express information accurately and coherently.
- Use correct spelling and grammar in drawing work and report writing.

Behavioral skills

General: Behave appropriately in both self-directed and shared learning environments.

Specific:

- Work cooperatively with partners, groups and independently as needed with minimal supervision.
- Exhibit strong work ethics through diligence, persistence and punctuality while demonstrating sound judgment.

- Conform to prescribed safety procedures.

Environmental Tolerance

General: Function safely within an automated manufacturing/industrial setting.

Specific:

Work for prolonged periods amidst:

- Variation in lighting, Air-conditioning, Electrical Equipment and Machinery
- Sharp tools and materials, Chemicals and toxins, Heat, dust, and fumes
- Slippery or uneven surfaces and Noise
- Work at varying heights and confined spaces.
- Dress appropriately for work and environmental conditions.