YORK TECHNICAL COLLEGE

TECHNICAL STANDARDS FOR **MECHANICAL AND ENGINEERING GRAPHICS TECHNOLOGIES**

ESSENTIAL FUNCTIONS OF A **MECHANICAL AND ENGINEERING GRAPHICS ENGINEERING TECHNICIAN**:

1. Demonstrate knowledge of:
   A. Mathematics
   B. Communications, both oral and written
   C. Physics
2. Mechanical power design and utilization
3. Computer Graphics
4. Manufacturing
5. Construction

The Department of Engineering Technology at York Technical College is committed to equity, diversity and providing a learning environment to all qualified individuals. The faculty is committed to providing disability access that is about inclusion and which gives all individuals equal opportunities to learn. However, we cannot provide an accommodation and/or an academic adjustment that 1.) constitutes a substantial alteration to an essential element of a course or program, 2.) may pose safety issues, or 3.) creates unfairness or impairs the learning of other students. Our ultimate goal is that all individuals that complete our programs are prepared to successfully perform in the workplace. We cannot falsely represent the high expectations employers hold for our graduates to new students entering our programs.

MINIMUM QUALIFICATIONS NECESSARY TO PERFORM ESSENTIAL FUNCTIONS OF AN ENGINEERING TECHNICIAN:

COMPREHENSION: Must be able to read and comprehend at a level necessary for their technical specialty (recommended RDG 101 or higher). Must have sufficient spatial visualization skills for understanding, designing, and drafting objects that do not yet exist and cannot be physically seen or touched.

DOCUMENTATION: Must be able to produce written documents by any means available. Must be able to attend meetings or lectures, take handwritten notes on paper and then use those notes to complete tasks. Must be able to attend meetings in shop environments or off-site company facilities in addition to classrooms. Must be capable of producing multiple pages of handwritten calculations for a given problem.

MATHEMATICS: Must be able to perform high-level mathematical calculations using pencil and paper in the prescribed systematic manner.

COMPUTERS: Must be able to operate computer systems. Must be able to sit at and use a computer continuously for 8 or more hours per day. Students will often sit at a CAD terminal for 12+ hours a day during projects.

LAB EQUIPMENT: Must be able to set up and operate lab equipment, stand while recording data on paper forms, use instruments and gages and read small vernier and other scales. Must be able to move between pieces of equipment and assist in the setup, functioning, and clean-up of the equipment and the lab.

WORK RELATIONS: Must be able to work in a team/group and help build devices and machines. This can involve standing for long periods, lifting metal objects, bending, kneeling or lying on floors, and getting up and down from these position repeatedly. Must be able to take assigned portion of a larger group task and accomplish the task independently without assistance from others in the workgroup who are all working on their own different portion. Must be able to produce drawings, designs, perform research and calculations independently in a deadline-driven environment under pressure. The deadlines are often driven by external, non-changeable factors such as customer ship dates, intermediate schedule milestones, and supporting shop personnel.

GRAPHICS: Must be able to draft working drawings for designs appropriate to their major on paper or using CAD programs. Must be able to accurately sketch on paper various diagrams, illustrations, and pictorials in prescribed manners.

EQUIPMENT OPERATION: Must be able to use the following types of equipment, tools and materials: instruments and controls, plans, designs, specifications, reference books, calculators, computers, cad systems, drawing boards. Must be able to prepare and use machine tools in lab settings, including, but not limited to drills, lathes, vacuums to clean the area, and sweeping. Also involves hand tools and other objects commonly found in manufacturing environments.

PHYSICAL CHARACTERISTICS: Must be physically able to: see well either naturally or with correction, and use arms, hands, and fingers well. Must be able to lift up to 50 lbs. Must have good eye/hand/foot coordination. Must be able to set up and operate lab equipment, perform fine and precise hand movements constantly and for extended periods.

Students not capable of meeting these requirements or are capable of meeting these requirements with an accommodation are asked to contact their division office to arrange an appointment to talk with the program manager.