### Course Descriptions:

**EGD TEK 101, Engineering Graphics:** This introductory course covers the fundamentals of technical drawing and an introduction to computer-aided design (CAD) with a focus on mechanical applications. Topics include the development of visualization and technical sketching skills in conjunction with orthographic projections; dimensioning and tolerancing practices, including an introduction to geometric dimensioning and tolerancing (GD&T); and descriptive geometry with applications to engineering. Lab work includes hand sketching and the use of two- and three-dimensional CAD systems. Students use one or more CAD software packages to draft and model various objects. The use of CAD software is an integral part of the course.

*Note:* This course uses AutoCAD and SolidWorks.

**EGD TEK 111, 2-D Computer-Aided Drafting with AutoCAD:** This course teaches the fundamentals of 2D computer-aided design and drafting. This course teaches the fundamentals of 2D computer-aided design and drafting. Students will utilize CAD software such as AutoCAD to create and modify two-dimensional drawings, with a focus on mechanical parts. Students will learn and apply intermediate CAD skills in drawing, plotting, and dimensioning and tolerancing in accordance with industry standards. The course assumes the student has some prior knowledge of technical drawings, either by taking EGD 110 or an equivalent Engineering Graphics course, or through relevant industry experience.

**EGD TEK 210, 3D Computer-Aided Design:** This course teaches the fundamentals of 3D solid modeling. The topics include sketching, part modeling, assembly modeling, and engineering drawing creation using 3D parametric modeling software. The course assumes the student has prior knowledge of technical drawings, either by taking EGD TEK 101 or an equivalent Engineering Graphics course, or through relevant industry experience.

*Note:* This course uses SolidWorks.

**EGD TEK 310, Engineering Design:** This course provides an introduction to mechanical design for drafters, designers, and engineers. Topics include the design process and methodologies, documentation practices, material selection, manufacturing processes, and technical communication. The use of 3D CAD software and a design project are integral to the course.

*Note:* This course uses SolidWorks.