



**COGNITIVE DOMAIN:** Knowledge; what graduates will know.

*Knowledge and Comprehension*

- ◆ Exhibit understanding of CAD and database tools
- ◆ Comprehend basic research skills in order to research products, materials, processes, techniques, components, and assemblies
- ◆ Understand concepts of fluid mechanics, forces in bodies at rest, mechanical devices, and material properties

*Application*

- ◆ Contribute appropriate design solutions to the product development process and to product manufacturing processes
- ◆ Communicate effectively internally within an organization as contributing member of a product design team or externally with vendors and/or customers
- ◆ Produce documentation for product production including working drawings and bill of materials
- ◆ Solve basic engineering problems using computational skills

*Analysis, Synthesis & Evaluation*

- ◆ Assess customer needs to develop an appropriate design solution
- ◆ Use critical thinking skills to distill data to apply to product design

**AFFECTIVE DOMAIN:** Attitude; growth in feelings or emotional areas

- ◆ Inclination to the sciences
- ◆ Creative tendency
- ◆ Inquisitive nature
- ◆ Self-motivated
- ◆ Ability to meet deadlines
- ◆ Ability to make decisions without constant supervision
- ◆ Be a lifelong learner (in order to keep up-to-date in technology)

**PSYCHOMOTOR DOMAIN:** Skills; manual or physical

- ◆ Ability to produce solid models of the product
- ◆ Assist in the prototype lab to machine, weld, and assemble new components
- ◆ Produce hand sketches of ideas
- ◆ Use instruments to produce accurate two-dimensional representations of designs