

Design Engineering Technology Program Educational Objectives

The purpose of the Design Engineering Technology (DET) program is to develop, in each student, the degree of technical competence that would allow the graduate to be employed as a design engineering technician in any engineering company. The skills required can be broken into six major categories which are:

1. Mechanical Ability

The ability to relate to mechanical systems or processes in the engineering environment is the desired outcome. Developing, analyzing, and visualizing various types of engineering drawings and specifications are required activities. Mechanical ability is developed by Technical Specialty Courses and Basic Sciences.

2. Accuracy

The ability to solve engineering problems properly and systematically is the desired outcome. A thorough understanding of mathematics and the design process is required. Accuracy is developed by Basic Sciences and Basic specialty Courses.

3. Manual Dexterity

The ability to use a wide variety of "design tools", comparable to those used by design technicians, is the desired outcome. A respect for these "tools" and a pride in one's workmanship is developed. Manual dexterity is developed by Technical Specialty Courses and Technical Electives.

4. Creativity & Confidence

The ability to communicate engineering principles in either 2-D or CAD is the desired outcome. The variety of courses allows for some improvising in the solutions to the problems at hand. Creativity is developed by Technical Specialty Courses.

5. Effective Communication

The ability to confidently communicate engineering information and concepts by oral presentation or technical reports, in a manner that would gain customer approval and support, is the desired outcome. Another element of confidence is proper social adjustment, which requires positive interaction among colleagues and customers. This is accomplished by a variety of technically-oriented projects required by the D.E.T. and General Studies Division. Confidence is developed by Humanities Courses and Communication Courses.

6. Technical Currency

D.E.T. students are encouraged to actively participate in the local, technical societies as student members. The intent is to encourage exposure to "state of the art" design practices. Technical currency is developed by ASME, ASQC, AEMS, etc. and Technical Societies.

Besides the technical and professional skills that our students desire to achieve, another objective is continuing their education for a bachelor degree or beyond. The college has articulation agreements with many universities in the area and Ohio. For instance the University of Akron maintains an accredited Bachelor of Science in Engineering Technology (BSET) and is located within an easy commuting distance for prospective students from this area. Our graduates have been accepted into the BSET program at the University of Akron, with a minimum of difficulty. Many have gone on to graduate with the BSET degree.

The continuous improvement of the program is assured through an advisory committee whose members are experts in their field. The committee is made from private and public business representatives mostly in the field of design and mechanical areas, both in the design and application sides. It is also made from the faculty members in the program. Some members change periodically in order to maintain a fresh perspective while maintaining continuity from the remaining members.