What's the difference between an Engineer, an Engineering Technologist, and a Technician?

The answer to this question is critical for a student to be enrolled in the correct major. Many people do not understand the differences between a degree in engineering, a degree in engineering technology, and a degree leading to a career as a technician, especially since there are degrees offered in all three for some disciplines. They are not the same, so what's the difference?

4 year Bachelor of Science (B.S.) degree in Engineering: These careers involve the application of science to the design and manufacture of something (automobiles, aircraft, computers, software, buildings, highways, dams, machinery, etc.). The engineer is a professional whose principle duties are research, development and design. The product of engineering work is usually a new product or an improvement of an existing one. The most fundamental tools of engineers are mathematics and physics, and engineers typically make extensive use of computers. The first two years of this program are offered at MCC.

4 year Bachelor of Science (B.S.) degree in Engineering Technology: These careers focus on application and practice, and so emphasize laboratory experience. Engineering Technology programs include specialized technical courses that emphasize rational thinking and applying scientific principles to find practical solutions to technical problems, as well as courses in mathematics and science that support the technical courses. The product of an engineering technologist is a new process or a new and better way of making products. Engineering technologists also specialize in day-to-day problem solving. The first two years of this program are offered at MCC.

2 year Associate of Applied Science (A.A.S.) degree leading to a career as a Technician: These careers involve the application of science to the technical service of something. The technician is a professional whose principle duties often involve installing, repairing, upgrading and servicing things that have already been developed. They also play important roles in product testing and certification. This program is offered at MCC.

Example: A simple example can illustrate the difference between these three different career areas. If your computer breaks down, the proper professional to take it to is the technician. The technician is trained in the service of computers, while an engineer and engineering technologist may not have this training. Engineers designed and developed the computer into a successful product, engineering technologists developed the process to manufacture it in the best manner, but it is the technician who will service it after it is sold. Engineers research, develop and design the many new improvements we see in computers these days; engineering technologists continually discover better ways to manufacture computers so they are of higher quality and less expensive; while the technicians must continuously update their training in order to provide the necessary service of these changing technical products.

Conclusion: A student considering a career in engineering, engineering technology or as a technician should carefully investigate these differences and make a career decision based on what sounds like the most exciting and rewarding choice. Our faculty can provide additional academic advice for those students seeking help with the selection of their major. If you have additional questions, contact the Engineering Technologies Department at 732-906-2586.