## Quick Primer for Advising of STEM Division Programs

1. STEM students should ALWAYS be taking a math course. Most of the science and engineering programs need at least Trigonometric Functions to complete. Students should continue taking math until they complete the degree requirements.
2. Engineering Technology vs. Engineering Science (see flip side).
   a. Engineering Technology is a 2 year degree that prepares students for the workforce and continuing education. I recommend one of our Engineering Technology degrees if the student needs to find a job after graduating.
   b. Engineering Science is the first two years of a four year Engineering Degree. This degree is for any student that definitely wants to go on to a four year school (and I recommend the student be a full time student) and realizes that this degree will NOT help him/her get a job.
   c. The curriculum for Engineering Technology and Engineering Science are VERY DIFFERENT. They are NOT interchangeable.
   d. We do NOT currently offer many of the courses required to complete the Engineering Science degree. Students will have to take courses at another community college (I often suggest Tunxis). If a student elects Engineering Science, please let the student know they will need to take courses at another college as well to complete.
3. Electronic vs. Mechanical vs. CAD vs. Automated Manufacturing vs. General Engineering Technology
   a. Electronic Engineering Technology is very different from the rest. So the first thing to determine before advising courses is to determine if the student wants to do Electronics or not. If so, please advise the student using the Electronic course curriculum.
   b. Mechanical, CAD, Automated Manufacturing and General Engineering Technology all have the SAME CURRICULUM for the FIRST TWO SEMESTERS. So, they can all be advised the same for the first two semesters.
4. Math and Science degree options (Math/Science vs. Environmental Science vs. Horticulture)
   a. Horticulture is the only degree that can reasonably be expected to end in job placement. Horticulture can transfer to UConn through the GAP program. We are also working on an articulation with WCSU to transfer into the Business Administration program for those interested in business management.
   b. Environmental Science is for students interested in Environmental Science or Geology. The degree options have been condensed into one degree. This degree has turned into a transfer degree due to lack of jobs for those with Associate's degrees.
   c. Math/Science should be used for students that wish to major in Biology, Chemistry, Physics or Math. Students interested in Chemistry can be placed in the Chemistry Option degree program. All other students need advising based on their choice of major.
      i. We do not currently have a track for Math. Assume the students will need Calculus I and above and Principles of Statistics and would then need Gen Ed.
      ii. We do not currently have a track for Physics. A Physics Major CANNOT take PHY*H121 and PHY*H122 General Physics I and II. A Physics Major REQUIRES PHY*H221 and PHY*H222 Calculus-Based Physics I and II, which we do not offer. Assume that a physics major will need Calculus I and above and would then need Gen Ed.
5. When in doubt, refer back to #1.

6. Students taking TCN 101 do not need IDS 101

# Engineering vs. Engineering Technology

Taken from: http://abet.org/engineering-vs-engineering-technology/

## How are they different?

Engineering and engineering technology are separate but closely related professional areas. Here are some of the ways they differ:

## Curricular Focus

Engineering programs often focus on theory and conceptual design, while engineering technology programs usually focus on application and implementation.

Also, engineering programs typically require additional, higher-level mathematics, including multiple semesters of calculus and calculus-based theoretical science courses. Engineering technology programs typically focus on algebra, trigonometry, applied calculus, and other courses that are more practical than theoretical in nature.

## Career Paths

Graduates from engineering programs are called engineers. They often pursue entry-level work involving conceptual design or research and development. Many continue on to graduate-level work in engineering.

Graduates of four-year engineering technology programs are called technologists, while graduates of two-year engineering technology programs are called technicians. These professionals are most likely to enter positions in sectors such as construction, manufacturing, product design, testing, or technical services and sales. Those who pursue further study often consider engineering, or facilities management, or business administration.

Of course, there is much overlap between the fields. Engineers may pursue MBAs and open their own consulting firms, while technologists may spend their entire careers in design capacities.