

Electrical Engineering Technology

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Degree Program(s) Assessed	Assessment Methods	Number of Individuals Assessed
<i>BSET – Electronics, or Computer Technology, or Telecommunications Technology</i>	<ul style="list-style-type: none"> • Portions of the national Fundamentals of Engineering exam administered in Senior Projects (EET4833). 	31
	<ul style="list-style-type: none"> • Exit surveys from graduating seniors 	0
	<ul style="list-style-type: none"> • Feed back from alumni. 	0
	<ul style="list-style-type: none"> • Employer surveys. 	0
	<ul style="list-style-type: none"> • Employment statistics. 	0
	<ul style="list-style-type: none"> • Feedback from EET industrial advisory board. 	0

Analysis and Findings:

The Assessment Methods are those identified in our recently overhauled Outcomes Assessment Plan. They target the gathering of data required to satisfy our accreditation agency. Not all of the methods delineated above have been implemented as yet. Because our accreditation agency, TAC/ABET, has initiated sweeping reforms of the information required for accreditation (heavy emphasis on program outcomes) we are in process of developing the procedures, processes and tools of complying. Most, or all, of those tools will be in place by 2004 and the fall out will include a very enhanced ability to assess both our educational and program outcomes.

The FE (Fundamentals of Engineering) exam is a national level instrument required of all who wish to eventually attain registered status as a Professional Engineer – it is the first step. The test is broad in scope exercising a student's mastery of the field of knowledge offered in his/her degree program. Within the curriculum, a truncated version focused on electronics is required of all seniors. From the examination results it can be seen that EET students perform well in the areas of:

- a) Ethics
- b) Equivalent resistances
- c) Basic ac/dc circuit analysis w/o dependent sources
- d) Simple op-amp circuits
- e) Number systems
- f) Digital systems
- g) Microprocessor/Computer applications

However, the following areas of weakness have been identified and will be addressed in the faculty curriculum review meeting for 2003:

- a) Applications of diodes in rectification circuits (ac to dc conversion)
- b) Circuit analysis with dependent sources
- c) Transformer circuits (reflection of load resistances and induced currents)
- d) Transistor circuits
- e) Thevenin Voltages
- f) RMS v.s. Peak-to-Peak voltages
- g) Mixed voltages (DC and AC combinations)
- h) Capacitor and Inductor energy storage w/integral equations

The examination was administered at Stillwater, and both of our off-campus sites at Oklahoma City and Tulsa. The range of exam averages for these locations is 3.16 to 3.67 on a 4.0 scale, indicating that our students are generally quite knowledgeable in the fundamentals of their major.

Uses of Assessment Results:

In the past results of department specific surveys (which included feedback from alumni) were used to by the faculty and the Industrial Advisory Council to adjust curriculum emphasis when/where needed. However for this year, we have had zero funds to allay the costs of preparing and mailing surveys. Until those funds are restored our ability to generate information from that source aspect is extremely limited.