

KNOWLEDGE PROBE REPORT: ECE-314, FALL-2008

PROBE OVERVIEW: The knowledge probe designed by Prof. Sudharman Jayaweera for incoming students in ECE-314 was administered to the students on the first week of classes. The probe was made optional and was posted to the web and the students were asked to submit the probe within a week's time. The probe contained 7 questions on material pertaining to circuits and systems II (ECE-213) and results from calculus. Out of the 24 students registered that were registered for the class at that time, 13 (approx half) students turned in the probe.

ANALYSIS OF RESULTS: Results from the probe were indicative of several problems: (a) insufficient preparation from the mathematical end in terms of not being able to solve a simple constant coefficient differential equation or solving simple integrals by parts or substitution, (b) insufficient retention from the circuits class, in terms of not being able to write down KCL/KVL equations for R/L/C circuits to being able to work with circuits with operational amplifiers, and (c) indifference, in terms of not taking the probe seriously. The probe should be made compulsory to get more feedback from the students.

INSTRUCTOR ANALYSIS: Even if the fact that they had forgotten the mathematical formula was overlooked, they were given sufficient time to use other books to answer the questions. The underlying problem here is that they don't even know where to look in these books to get the answers to the questions. Secondly, they are here for a degree in **Electrical Engineering** and not knowing the material from the ECE-213 class cannot be excused in any way. Several students commented that they had taken the class during the Summer in CNM and the instructor had not covered the material.

RECITATION HOURS: The GA assigned to the class, conducted recitation sections every Friday to enable those students who feel they need help with the prerequisite material to ask questions. The GA worked out several problems from both the class as well as material from outside. The feedback from the students here was very positive.

Problems with
(a) ECE-213
(b) Calculus
(c) Trigonometry
(d) DE

$\frac{13}{24}$ turned the
probe in
of the 13
not one of them
reflective of
any retention

Not knowing
circuits 213
material cannot
be excused in
any way.
They are going for
a degree in EE
not polling.