In doing assignments in your ET and CT courses, you should provide well thought-out and clearly presented solutions. If you do not show your work and simply put down an answer, your instructor is free to give you a zero. Units are important, and an answer without units is an incomplete answer. Improper units can kill people, in fact. So units are important.

It is recommended that you purchase an Engineering Computation Pad and use it for your assignments. This type of pad has a grid which can be very useful in drawing out circuits. A ruler or electric circuit stencil is also helpful to draw quick circuits. Once you have completed your assignment, you can scan it and submit it.

For most problems in assignments, you should use the following template as a guide to presenting your solution.

Problem X.Y (Here you MUST provide the number of the problem from the book. In other words, you should NOT call the first problem you do from the book as ‘1’ and the second problem you do from the book as ‘2’. Instead, follow the book numbering. If the problems are not from the book, then of course, you should use the numbering provided in the assignment in your course.) For instance, you might have Problem 4.3.

Given: (In this section, you should provide the information you have about the problem, including any circuit drawings. The information should generally be in the form of an equation and not just numbers.) For instance, you might have R1 = 100 ohms, f = 120Hz, etc. You should not write just: 120 Hz.

Find: (In this section, you should state what the problem or part is asking.) For instance, you might have:

Find: V1, V2 (voltages across R1 and R2, respectively). You should be sure to designate on the circuit you drew in the given (if applicable), the variables you are trying to find. For instance, the problem may ask you to find the voltages across R1 and R2. You decide to name those V1 and V2. You should then show V1 and V2 on your circuit. If there are multiple parts to the problem, you do each individually. So you might have:

1. Find: V1

After you solved part a, you would then go to part b and what is to be found in that part of the problem.

Assumptions: (In this section, you state any assumptions which you use in the problem.) An example is that you might assume ideal resistors.

Solution: (In this section, you solve the problem showing the various steps. Showing each step you used in arriving at your answer is important as then you get better feedback from the instructor. If an instructor marks the step where you went wrong in your work, you know where to go back and figure out what you did wrong. You should make note of any theorems you use. You may need to provide additional circuit drawings, especially if you are reducing the circuit (as in Thevenin’s) or are using a model (ex. transistor), as you go through the solution. Also, if you refer to or use an earlier equation, you should give the first equation a number.)

For instance, you might have something like the following:

IT = VT/RT (1)

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RT = R1\*R2/(R1 + R2)

Substituting into (1), IT = VT \* (R1 + R2) / (R1 \* R2)

Answer: (In this section, you write out the answer in equation form with units and place a box around the answer. Do NOT just put a number.) For instance, either of these would be acceptable:

V1 = 2.7 mV or the voltage across R1 is 2.7mV

The following would be unacceptable:

2.7mV

While this process may appear time-consuming, once you get used to this process, it will become second nature. This provides a systematic approach to laying out and solving the problem and provides you with a professional looking document for submission.