

ENEL220 Tutorials for Term 1, 2019

Exercises are mostly taken from the **7th Edition**. BUT some questions are from more recent editions. Please use questions in this sheet rather than textbooks to avoid confusion between versions.

Attempt the “pre-tutorial” question(s) before attending the tutorial; an electronic version is available on Learn. During term 1, tutorial marks will be given for attempting the “pre-tutorial” question(s), as well as the first in-tutorial question. Attempts are not expected to be perfect, but you are expected to have given it a really good attempt and have tried all parts of the question.

Note that only the first in-tutorial question will be marked, the others will not contribute towards your final grade. However, they will still be useful for learning the material, and I highly recommend you do them.

I will attend the term 1 tutorials along with teaching assistants (TAs), and we are all happy to help you with the course material or the in-tutorial questions (including the marked one) if you get stuck!

Why am I structuring term 1 tutorials this way?

I have found that the only way to do well in this course is by solving lots and lots of circuits throughout the course. Material keeps building on previous knowledge. The pre-tutorial problems will allow you to work out what you need to practice/ learn and I will endeavor to help you learn/ revise this material during lectures and tutorials.

The easiest way to pass this course will be to:

- Attend and participate in all lectures and tutorials.
- Attempt all pre-tutorial problems (data shows this has a big impact).
- Study before the test and exam.
- Ask the TAs and lecturers questions when you don't understand something. Be proactive.

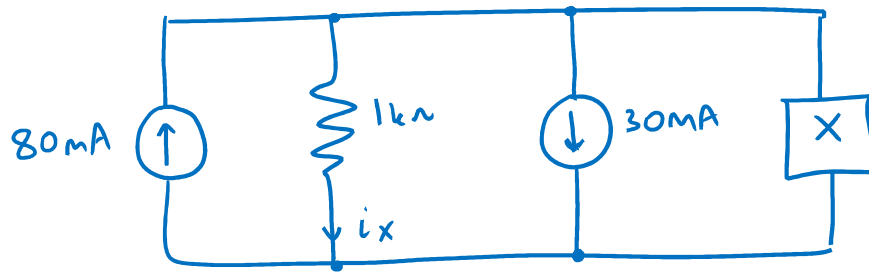
Wishing you an enjoyable and successful 2019!

Pre-tutorial 1 Questions (to be attempted before class on March 1st, 2019)

Chapter 2, Ex 26: Power

A fuse must be selected for a certain application. You may choose from fuses rated to “blow” when the current exceeds 1.5 A, 3 A, 4.5 A or 5 A. If the supply voltage is 110 V and the maximum allowed power dissipation is 500 W, which fuse should be chosen and why?

Chapter 3, Ex 38: KCL



Using KCL, find the power absorbed by element X in the circuit above if it is a:

(a) $4\text{ k}\Omega$ resistor

(b) 20 mA independent current source (arrow down)

(c) dependent current source (arrow up, labelled $2i_x$)

(d) 60 V independent voltage source (+ at top)