**Questions and Answers, September 7, 2021**

Q1:  Can inductance be negative?

A1:  No.  Similarly, we will not have negative capacitance.  Both L and C will be positive, at least in this course.  Note, resistance can be negative, but not inductance nor capacitance.

Q2:  How do we deal with the current created by an inductor?

A2:  I am troubled by the phrasing of this question; we usually do not talk about inductors "creating" current.  However, they certainly do affect currents, and the current cannot make a step jump, that is, the current through an inductor must be continuous in time.  If you plot the inductor current, that current will not jump up or down.  To address the question more directly, we will deal with the current through an inductor by applying the defining equation for inductors.

Q3:  We need a lecture where we review all of our source transformations.

A3:  I will see what I can do about this. I am not sure what would work best.  You can ask for a Zoom session to talk about this, and there can be more than one student in that session.  It must be an optional session.

Q4:  I would like to get more example problems.

A4:  There are literally hundreds of example problems on the course web page, under the old exams and quizzes.  Those are example problems, usually worked out in detail.  If you have a question about any of them, let me know.

Q5:  Why do you take so long teaching?  You should stay on topic.

A5:  We used to do straight lecture and examples.  The student failure rate was very high. I decided to change.  I teach the way I do to try to keep your attention, and to get you to think.  That is what leads to meaningful, lasting, learning.  Most of the things I talk about are intended to make you think, and are related to the concepts, which are challenging.  There are some times when I will tell a short joke or other humorous items, again with the intent to keep your attention.  I really think this is all to your benefit.  I hear your concern, but I do not think I should change back to an approach that did not work well.

Q6:  What calculator do you recommend?

A6:  I recommend the TI-nspire CX CAS.  Yes, it is expensive.  No, it is not required, but it is helpful.

Q7:  What do you mean by "step change"?

A7:  This is a good question, and I tried to address it in an answer above.  I can answer more clearly when I can draw graphs.  So, I invite you to ask this question again in class, at the beginning of class when I ask if there are questions.

Q8:  Are we behind?

A8:  No.  We are on schedule.  I suspect the above questioner (Q5) thought we were behind.  We are not.  The schedule is set up to allow us to do what we did September 7, where we spent 40 minutes going over homework questions.  I will let you know if we fall behind, but we have not done so yet.