Extra Bonus Opportunity Landon Arnold

📅 Dates	@March 3, 2023
⊙ Category	
⊙ Class	ENGR 3530 - 001
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Extra Bonus Opportunity

In this extra bonus opportunity, please start to draft the reflections for your

learning experiences you have had for the

1. In class learning such as answering questions, how many you have answered? What you have learnt from those?

   a. One question I remember asking in class particular was regarding the terminology of the "feedback arm" of an Op-Amp. I learned that the feedback arm refers to components placed between the negative node and the output of the Op-Amp and include any parallel components in that 'arm'. The name originates from the returning of the output voltage signal back to the negative input through the branch and usually through a resistor.

   b. I posed multiple questions outside of class regarding HW 2 such as:

      i. How we take the absolute value of the resistance ratio when calculating closed-loop gain as phase is not considered.

      ii. The theory for calculating voltage at each point in problem two after simplifying the circuit.

      iii. Using Thevenin Theorem to simplify the circuit in Q5 to a difference amplifier for making calculations. I learned how to properly apply Voltage Division in this process.

2. Learn from the posted videos, what you have learnt from those videos?

   a. I learned that multimeters can give incorrect readings when their battery is drained.

   b. ESR - Equivalent Series Resistance Meter usage for measuring resistance in a capacitor.

   c. Capacitance and resistance are inversely related and this can be seen as a capacitor goes bad and blows up. The resistance increases and the capacitance decreases.

   d. Testing a capacitor 'in circuit' does not read the most accurate results.

3. Any extra learning resources you have found helpful for you, such as from a Youtube Video, a Blog? Let me know those.

   a. These have been particularly useful in Circuits II, but there is some content overlap, so I though I would provide them here:

   These are primarily on complex impedance, and things do get a little convoluted witht the differences in syntax:

   http://www.mathforengineers.com/AC-circuits-calculators/parallel-RC-circuit-Impedance.html

   http://hyperphysics.phy-astr.gsu.edu/hbase/electric/impcom.html#c2

   https://www.electronics-tutorials.ws/accircuits/impedance.html

   b. This helped me when initially refreshing the idea of Thevenin Theorem

   https://byjus.com/physics/thevenin-theorem/

   c. I also wanted to mention the note taking software I advocate; especially to type equations. I have heavily utilize Notion productivity software the past few semester for assignment organization and typed notes with KaTex; and more recently ChatGPT3 integration! I certainly recommend it to my peers when I get the chance.

   (I used Notion to write this!!)

https://www.notion.so/

https://www.notion.so/product/ai

https://katex.org/

4. Provide me some feedback for how to make our class better, any feedback will be highly appreciated to make sure you are successful for our class.

   a. I really appreciate your responsiveness and active engagement as a professor. You have been one of the most participation-facilitating instructors I have had, and this has had a great impact on the learning environment.

   b. At the current moment, I do not have any feedback to improve the class. The only thing I can think of is for future iterations of this course it might be better to have two shorter lectures than one long lecture. Especially late in the day the one long lecture does take a bit of stamina. This is not a big deal, just a thought! (This is the question you asked me a few weeks ago).