Should I take ECE 110 with ECE 120?

Relevancy:

Both ECE 210 and ECE 220 are mostly taken for sophomores. The two courses are not related well. ECE 210 focuses on the analog signal process. In this course, you will learn how the circuit works depending on what elements in the circuit and how the analog signal behaves with Fourier series. Whereas, in ECE 220, you mostly learn about basic code writing about C programming.

Workload:

For ECE 210, you will have about 14 homework, 5 lab assignments biweekly, 3 midterms and the final exam for one semester. For the first midterm, the course focuses on the circuit as ECE 110, but much deeply. For the second midterm, you will deal with phasor circuits, Fourier series and LTI system. For the third midterm, the Fourier transform will be the most important topic. The final exam will cumulatively cover all course materials and LTIC circuit and Laplace transform as well. The lab deals with how radio signal works by constructing a radio signal receiver circuit.

For ECE 220, you will have about 14 MPs that is to write a code and lab assignments for one semester. For the first exam, LC-3 assembly language that is covered in ECE 120 will be covered. For the second exam, C programming will be covered such as function, array and recursion.

Recommendation:

If you want to take these two courses concurrently, the answer is “yes”. Since these two courses are not related, you can take these classes together in one semester. For ECE 210, you will not take too much time, but as the semester goes, the course starts to deal with complicated mathematical theories such as Fourier series. If you are stuck on a homework question, you better go to TA's or a professor's office hour and ask them since it means that you miss one thing or misunderstand one small part of lecture.

Compared to ECE 210, the MPs for ECE 220 is a big problem since it will take a lot of your time. The explanation for the MPs is not clear sometimes and the coding is one big time-consumer because of debugging.

For my opinion, before taking ECE 220, you have to take a time to think whether you had a problem related to LC-3 when you took ECE 120. If it is, you have to put much effort on it since most problems on the first exam for ECE 220 will be related to LC-3. Usually, one problem out of 3 or 4 only deals with basic C programming and others are related to LC-3. As you did, if you had a problem related to basic circuit analysis such as Kirchhoff' law and Thevenin/Norton analysis when you took ECE 110, then you have to study a lot for it before you take ECE 210. It is because until the half semester of ECE 210 is finished, the course mostly shows you complex circuits with diverse forms. Since ECE 210 basically deals with many mathematical materials such as laws, you have to be sure about your basic mathematical ability.

(article by JoonYoung Park)