

<u>Question</u>	<u>Answer</u>
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Title of Paper	Microwave circuit design through active learning
Abstract	<p>We have recently expanded our undergraduate labs to include four 20 GHz VNA-s and four high-speed TDR oscilloscopes. They were obtained initially for junior electromagnetics labs but this opens up obvious opportunities for more hands-on approaches to teaching and learning microwave circuit design. We are currently redesigning our two quarter, senior-level sequence with these goals in mind:</p> <ul style="list-style-type: none"> a) Emphasize complete design cycle, from “paper” development, to simulation, to prototype development and testing, followed by more advanced prototyping, testing and redesign. b) De-emphasize face-to-face lecture and emphasize in-class activities and peer interaction c) Provide students with as much immediate or early feedback as possible by utilizing a new classroom interaction system developed by Learning Catalytics. d) Reinforce student learning by having “lab” and “lecture” merge into one so that concepts can be immediately put to practice instead of waiting for assigned lab time. <p>Work by R. Caverly at U. of Villanova has provided the initial impetus and work by K.C. Gupta on “conceptual mapping” is providing the framework. We will report on the course design and lessons learned from the initial offering.</p>