THE ROLE OF SIMULATION AND WORKING IN TEAMS

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RAMESH YERRABALLI: So Jon, can a student take our class

without a real board?

JONATHAN VALVANO: Yes, but we feel strongly that the hands on learning

that results by doing the labs on the physical hardware--

simulation is an important tool in engineering design and so therefore,

everyone will design, develop, and debug each lab in simulation, even if

you have a real board.

RAMESH YERRABALLI: However, we understand that some of you will not

be able to purchase a real kit.

In this case, you'll be able to write the software, design and test it in

simulation, as we will demonstrate in module two.

JONATHAN VALVANO: Yes.

Performing the labs in simulation will develop some learning, but we have

decided that performing each lab on the real board will be necessary to

get certification.

RAMESH YERRABALLI: So how do you feel about people

working together in groups?

JONATHAN VALVANO: Ah, we strongly encourage you to reach out to others

in your local area and take the class together.

And possibly, in that way, you could share a single kit.

RAMESH YERRABALLI: So you'd say, working in a small group is a

wonderful way to learn.

An effective team size is anywhere from two to three students.

Help

HOW STUDENTS' KNOWLEDGE AND SKILLS WILL BE ASSESSED:

There will be three components of assessment. First, each module will have a quiz, which is a set of multiple choice/numerical questions that must be answered. If the student does not pass this quiz, then they can ask for help in the discussion forums and be allowed to retake the quiz. The second assessment involves solving the lab in simulation, and the third assessment is completing a physical lab. This means the student will wire up a simple circuit, write microcontroller code, and run the software on the real computer. Added to the student's software will be a grading engine that can assess the quantitative performance of the system. The labs result in a numerical score describing how many of the lab requirements the student successfully completed.

10% quizzes
45% labs in simulation
45% labs running on the real board