

*Turning Students  
into Entrepreneurs*

## YECHIAM YEMINI

Professor of Computer Science

**D**ell, Yahoo, Google, and Facebook were founded by college students, Professor Yechiam Yemini tells his Principles of Innovation and Entrepreneurship class. He wants to teach students how to create innovative technologies and transform them into successful startups.

Yemini has combined academia with serial entrepreneurship. His first company, Comverse Technology, co-founded in 1984, revolutionized voice messaging technologies. Ten years later, System Management Arts created the first products to diagnose network failures automatically.

Startups, he explained, are another way of disseminating basic knowledge. “High-tech startups,” he explained, “distill the value in raw, basic technologies by creating innovative products and introducing them to the market,” he said.

Yemini’s course rests on three legs. The first is understanding how to identify opportunities. The most fertile areas are those where new ideas disrupt established ways of doing things, such as integrated circuits, the Internet, and wireless networks.

“Today, the biggest transition is from cellular phones to mobile computing. Now your phone is a tool to go shopping, access content, play video and read books. It’s a wonderful opportunity to launch companies that exploit this,” Yemini said.

The course’s second leg involves startup mechanics. “We look at the engines of value creation,” Yemini said. “Different engines make products, exchange information with the market, and manipulate the flow of financial resources. We look at how to design these engines to optimize the value they create while minimizing risks and errors.”

Yemini’s third leg is product development. “Many companies fail because they spend all their time creating a product and then look for a market,” he said. “They didn’t manage the risk that customers wouldn’t like their implementation, or that market needs might change.” He advises students to begin talking with customers from day one, and to keep improving products incrementally until they are happy.

Currently, Yemini is focusing on managing mobile services. “Mobility presents a disruptive change in delivering network services. It presents research opportunities to create new technologies, which may one day lead to new startups,” he said.

“A startup company is a bunch of engines that express the value of a technology. Think of it as a mechanism, a black box. There are ways to build a better box, ways to engineer it to better distill the value of the underlying technology. My course on innovation and entrepreneurship tries to teach how to engineer a technology company, much as one engineers other innovative constructs.”

*B.Sc., Hebrew (Jerusalem), 1972; M.Sc., 1974; Ph.D., California (Los Angeles), 1978*

