Abstract
With the close of the twentieth century, the software production paradigm is changing. Software production trends are discussed that will help educational institutions meet the needs of industry.

1. Introduction
Everyone can today afford a computer that will operate independently or connect to services over the Internet. Universities no longer need large expensive computer laboratories. Anyone with wireless enabled laptop computers can stay connected as long as they are in range of a wireless network. People no longer need to go to a physical campus to take courses; distance learning is available to everyone wherever they are located. With instant messaging and PDAs (personal data assistants), everyone can stay connected. Open standards software systems are being created that are reusable and interoperable. Large complex software systems can be built and maintained by teams with members globally dispersed around the world. Advanced CASE (Computer Aided Software Engineering) tools are available that can produce cost effective software in a timely manner.

2. Software Production Trends
Today, most high school graduates are computer literate. Many know a computer language and are proficient in working with database management systems. Students expect to learn advanced information technology when they enter universities to study computer science, information technology, or software engineering. Students are beginning to say NO to computer science. The worn out subjects related to computational mathematics and algorithms sparks little student interest. Many professors have not bothered to update their knowledge to learn the latest software development processes, tools, standards, etc.

During Fall 2004 MIT’s undergraduate majors in the electrical engineering and computer science department declined almost twenty percent. Thirty eight percent fewer students applied to the Carnegie Mellon’s school of computer science. Rutgers University, Stanford University, and the University of California at Berkeley all have had their number of computer science students decline. In the US according to the Computer Research Association the number of new undergraduate majors in the computer science field dropped eighteen percent. If this trend continues, computer science departments emphasizing algorithms and computational mathematics may be folded back into mathematics departments or may disappear all together. Ones that meet the needs of industry shall prosper.

Industry is showing preference for employment candidates with certificates showing expertise in the latest areas needed by industry and are declining to hire those with master and doctorate degrees. To meet industry demands, some universities are offering information technology and software engineering programs. The US Department of Labor has projected software engineering to be one of the fastest growing occupations through the year 2012. Many of these programs offer distance learning courses where employees do not have to leave their workplace to take courses. Industry has banded together to support open software standards and open software. Universities are organizing to create open standard shared software infrastructure hubs to introduce the latest advanced CASE tools into university software project courses. Other universities are introducing the software factory concept to create software systems using an intuitive, documentable and repeatable development process. Universities that will be relevant during the twenty-first century must continue to improve their educational processes to meet the needs of industry.