



Intellectual property education crucial to America's future



By C. L. Max Nikias and
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Intellectual property (IP) industries today generate 38.2 percent of total U.S. GDP, or an astonishing \$6.6 *trillion* in annual output. IP is also responsible, directly and indirectly, for 30 percent of total U.S. employment and more than 80 percent of the market value of publicly-traded companies. And yet despite IP's undisputed economic importance, not a single American college or university offers any undergraduate courses on the basic workings of patents, copyrights, trademarks and trade secrets in U.S. social and economic life.

This "IP education gap" poses a threat

to U.S. leadership of the Knowledge Economy. To grasp just how great a threat, imagine what the cost to U.S. leadership would have been in the industrial era a hundred years ago had no universities at the time offered any courses in industrial management or the organization of mass production enterprises. The founding of the Wharton School in 1881, the department of industrial engineering at Penn State in 1909, and the Harvard Business Review in 1922 were all critical to teaching early 20th century American business leaders how to build and sustain the most powerful economy in the world.

IP education will prove just as critical for U.S. economic success in the 21st century. That's why the two of us — University of Southern California (USC) president C. L. Max Nikias, and the medical innovator and philanthropist Dr. Gary K. Michelson — have joined together to launch the nation's first-ever undergraduate course in intellectual property.

This new USC course offering — "The Entrepreneur's Guide to Intellectual Property" — will provide students with a practical grounding in the basic workings of patents, copyrights, trademarks, and trade secrets. Open to students of any major as an elective, the class will also

spotlight the myriad ways that IP legal rights influence almost every career and field of endeavor today.

Up to now, intellectual property has been taught only in law schools (or the occasional business school seminar). But over the last 50 years, IP has grown from a narrowly-specialized legal field into a major force in American social and economic life. With IP-protected innovation now the principal driver of corporate value as well as national economic growth, intellectual property has become vitally important to all Americans, not just those in the legal profession.

Remember that scene in the 1967 movie “The Graduate” when Mr. McGuire (Walter Brooke) offers career advice to a young Benjamin Braddock (Dustin Hoffman)?

“Plastics!” he says. “There’s a great future in plastics.”

Half a century later, intellectual property has become the new watchword for almost any technology- or business-focused career. Indeed, IP’s influence is everywhere. While wireless markets are won and lost in corporate “patent wars,” the victors in tomorrow’s driverless car business may be decided by today’s Google trade secret lawsuit against Uber. In the biotech sector, billions of dollars in investments hinge on Supreme Court patent decisions and proposed new IP legislation. As for the music industry, it’s still trying to figure out what the \$7 million 2015 copyright infringement verdict against Robin Thicke and Pharrell Williams for borrowing merely the “themes” of soul singer Marvin Gaye’s work means for their creative options.

From Silicon Valley startups to Fortune 500 board rooms, from MIT engineering labs to Wall Street trading desks, and from industry trade conferences to the

trade policy debates raging in Congress, intellectual property questions now lie at the heart of a great many arenas of modern life today. Given that reality, any young person who does not understand at least the basics of intellectual property — and its role in science, business, arts, and the professions — may find him or herself at a distinct disadvantage in the world of tomorrow.

The small business community has already begun to address the IP education gap. Sens. Gary Peters (D-Mich.) and James Risch (R-Idaho) introduced the bipartisan Small Business Innovation Protection Act, to fund better IP education for small businesses. Rep. Dwight Evans (D-Pa.) has introduced a similar bill in the House. Both bills recognize that patents are often key to small business success — and that small businesses are key to job creation.

Now it’s time for universities to get in the game. And it’s no accident that USC is home to the nation’s first undergraduate course in intellectual property. USC’s School of Cinematic Arts — ranked best in the nation — produces many of the finest talents in the copyright-intensive Hollywood film and television industry. And the new USC Michelson Center for Convergent Bioscience will soon be blazing a trail to new life-saving cures — a task that would be impossible without the patents that drive nearly all investment in biotech research.

Every major new industry of the last 100 years — from the automobile and aircraft businesses to semiconductors, personal computers, software, biotech, mobile telephony and Internet e-commerce — was launched on the back of an IP-protected innovation. It’s time higher education developed a curriculum to ensure that the same thing happens in the next 100 years.



University of Southern California president C. L. Max Nikias holds eight patents in digital signal processing and is a member of the National Academy of Engineering, a fellow of the American Academy of Arts and Sciences and a charter fellow of the National Academy of Inventors (NAI).



Philanthropist Dr. Gary K. Michelson is one of the most prolific inventors in the history of medicine, with hundreds of patents for new spinal surgery treatments. He was inducted in both the National Inventors Hall of Fame and the National Academy of Inventors.