

Engineering Update

April, 2011

EDITORIAL FEATURES/SPECIAL SECTIONS

Aerospace

- *Aerospace Engineering & Manufacturing* – April 13 digital issue features Propulsion and Testing & Simulation
- *Military & Aerospace* – May issue features Trends in Electronic Warfare and Signals Intelligence

Business of Engineering

- *Consulting-Specifying Engineer* – May issue features Electrical Distribution and distributed at the NFPA Conference
- *Engineering Inc.* – May/June issue features EEA Award Winning Projects and Mentoring Programs for Young Engineers
- *National Society of Professional Engineers* – May issue features Top IT Successes

Chemical

- *Chemical & Engineering News* – April 25 issue features Top Instrumentation Companies
- *Chemical Engineering* – May issue features Pressure Measurement and distributed at the Electric Power Conference
- *Chemical Engineering Progress* – May issue features On the Horizon: Nanotechnology

Civil

- *CE News* – May issue features Top Civil Firms and Leveraging Technology
- *Civil Engineer* – May issue features Bridges, Mass Transit and distributed at the World Environmental & Water Congress

Construction

- *Better Roads* – May issue features Used Equipment Strategy and distributed at the International Bridge Conference
- *Roads & Bridges* – May issue features State of the Bridges and Accelerated Bridge Construction
- *Structural Engineer* – May issue features New Approvals

Diversity

- *Diversity Careers* – Summer issue features Women in Engineering and Mechanical Engineering
- *Minority Engineer* – Spring issue features Civil and Construction Engineers and Government/Military
- *Workforce Diversity* – Spring issue features Aerospace & Defense Industry and Electrical Engineering

Electronic

- *Electric Energy* – May/June issue features Call Centers & Customer Service and Facilities Data Management and distributed at the APPA National Conference
- *Electronic Component* – May issue features Military & Aerospace and Medical Electronics and distributed at the Lightfair Conference

- *Evaluation Engineering* – May issue features Switching Systems and EMC Test Equipment
- *IEEE Spectrum* – May issue features Energy/Environment: Fish Sensing and distributed at the Semiconductors/Computer 2011 Conference

Energy/Environmental

- *EnergyBiz* – May/June issue features EnergyBiz Leadership Forum Coverage and Energy Efficiency Takes Center Stage
- *Environmental & Science Engineering* – May/June issue features Storage Tanks, Containment Systems & Spill Management and distributed at the American Water Works Association
- *Pollution Engineering* – May issue features Industrial Wastewater and distributed at the RemTEC Seminar
- *Power Engineering* – May issue features Outage Planning and Management and distributed at the American Nuclear Society Annual Meeting

Government

- *GI Jobs* – June issue features Transportation and Aviation
- *Government Engineering* – May/June issue features Environment and Technology and distributed at the American Water Works' ACE11
- *Military Engineer* – May/June issue features Sustainable Installations and Engineering Service FY12 Programs

HVAC

- *ASHRAE Journal* – May issue features Schools/Educational Facilities and Geothermal
- *HPAC Engineering* – May issue features Roles in Energy-Use Reduction

Manufacturing

- *Control Engineering* – May issue features Performance Monitoring and Social Media Interactive Learning
- *Manufacturing Engineer* – May issue features Techniques in Medical Manufacturing and distributed at the EASTEC Conference

Mechanical

- *Engineered Systems* – May issue features High-Performance Commercial Buildings and distributed at the NFPA Conference
- *Facilities Engineering* – May/June issue features the Future of Facilities Engineering and Top 10 Innovative and Eco-Friendly Facilities in America
- *Mechanical Engineering* – June issue features Human Factors Engineering and distributed at the ASME Annual Meeting
- *Plumbing Engineer* – May is Annual Fire Protection/Safety issue and features Emergency Fixtures and Sprinklers
- *Plumbing Systems & Design* – May issue features Hydronics for Plumbing Engineers

Mining

- *Coal Age* – May issue features Logistics/Transportation and Quality Control
- *Engineering & Mining Journal* – May issue features Maintenance Vehicles and Utility Equipment
- *Mining Engineering* – May issue features Review of Exploration and Geology and Earth Sciences

Petroleum/Oil

- *Journal of Petroleum Technology* – May issue features Intelligent Fields Technology and Well Construction
- *Offshore Engineer* – May issue features Risk Management and Safety and Deepwater Subsea Boosting
- *Oil & Gas Journal* – May issue features Offshore Petroleum Operations and distributed at the Offshore Technology Conference

Plant

- *Plant Engineering* – May issue features Automation Report: How Much Better Can We Get?
- *Plant Engineering Management* – May issue features Safety and Predictive Maintenance

Transportation

- *Automotive Engineering* – May digital issue features Testing and Simulation
- *Off-Highway Engineering* – May issue features Executive Viewpoint and Electronics

JOB FAIRS

Targeted Job Fairs – Engineering/Technology

April 5	Baton Rouge, LA
April 12	Silicon Valley
April 15	Boston, MA
April 21	Washington, DC
April 26	Los Angeles, CA

May 11	Baltimore, MD
May 17	Washington, DC
May 25	New York, NY

Expo Experts - Engineering

April 4	Colorado Springs, CO
April 12	Dallas, TX

May 16	Washington, DC
May 17	Houston, TX
May 24	Denver, CO

CONFERENCES & SEMINARS

GPA Annual Convention

April 3-6
San Antonio, TX

APWA Snow Conference

April 10-13
Spokane, WA

Navy League Sea-Air-Space Conference

April 11-13
Washington, DC

Composite Manufacturing Conference

April 12-14
Dayton, OH

AADE Conference

April 12-14
Houston, TX

AIChE National Spring Meeting

April 13-17
Chicago, IL

SEI Structures Congress

April 14-16
Las Vegas, NV

Digital Energy Conference

April 19-21
Houston, TX

SPIE Defense and Security

April 25-29
Orlando, FL

Offshore Technology Conference

May 2-5
Houston, TX

Electric Power Conference

May 10-12
Chicago, IL

North American Waste-to-Energy Conference

May 16-18
Lancaster, PA

RemTEC Seminar

May 16-19
Chicago, IL

LightFair Tradeshow

May 17-19
Philadelphia, PA

EASTEC Conference

May 17-19
West Springfield, MA

World Environmental & Water Congress

May 22-26

Palm Springs, CA

LAYOFFS

Boeing is issuing layoff notices to 130 employees in Huntsville, AL and 90 at other sites across the country as the company adjusts to changes in the Missile Defense Agency's Ground-based Midcourse Defense program. Boeing has been prime contractor for ground-based missile defense since 2001. The layoffs are not related to Congressional delays getting a 2011 budget passed or the continuing resolution under which the federal government is currently operating. *AL.com*

General Dynamics NASSCO notified its employees that the company will carry out work force reductions in the coming weeks. Employees received letters informing them of the potential that they may be indefinitely laid off between late May and early June. NASSCO anticipates that this action will result in approximately 350 employees being laid off. These layoffs are the result of the federal budget stalemate that is preventing the U.S. Navy from contracting for any new programs, delays within the Navy's ship repair schedule, and a downturn in the commercial shipbuilding market. *San Diego Daily Transcript*

Hutchinson Technology, a supplier of suspension assemblies for hard disk drives, will reduce the size of its workforce by as much as 40% or as many as 910 jobs over the next 12 months in response to slower sales. As part of its cost reduction plan, the company will also consolidate its components operations. *Reuters*

Mitsubishi Digital Electronics America, headquartered in Irvine, CA, began laying off some 170 workers Friday as it exits the LCD television business. A large percentage of the layoffs, which will occur in phases, will come from Irvine, though a company spokesperson declined to provide a more specific number. The company's distribution centers in Ontario and Braselton, GA, are closing, and all services will relocate to its headquarters in Irvine. *Orange County Register*

Northrop Grumman will eliminate 500 jobs amid delays and uncertainty about domestic and international programs. The majority of the job cuts, slated to be completed by the end of May, will take place at the company's four Maryland facilities; however, jobs will also be lost in other states. *Carroll County Times*

Raytheon Company announced layoffs for 60 employees at its Fort Wayne, IN facility. According to a company spokesperson, 25 of the 60 volunteered to be laid off. An unidentified Raytheon employee who was not laid off said that employees are handling it well and so is the company. *Wane.com*

TRENDS

Engineers and Business School - A Match Made in Heaven

Quick, take a guess: What fraction of MBA students are engineers?

About a third, according to admissions officers at some of the top programs. It's not hard to imagine why masters programs in business administration want so many math-drenched applicants, but what's in it for the engineers?

"They may have a product idea and recognize they don't have the business skills to make it work," says Linda Abraham, who started the admissions consulting service Accepted.com, in Los Angeles, where 40% of MBA admission seekers are engineers.

Scott Shrum, vice president of marketing at admissions consulting firm Veritas Prep, outlines four traits that define successful applicants: leadership (initiative and impact), teamwork (working with and influencing others), creative intellect, and maturity (breadth of experience and how you face adversity). Engineers, he says, typically need help mastering the first two.

What you should look for in an MBA program really depends on what you want: to switch to finance, stay in high tech, move into product management, or do something else, Abraham says. "It's important for engineers to have an idea where they're going. Just hating your job is not a good reason to get an MBA."

IEEE Spectrum compiled a list of five key characteristics that might matter to an engineer, and a handful of MBA programs that stand out in those categories. This is by no means an exhaustive list. (The tuition charges and fees are for the length of time students normally take; median base salaries were provided by the programs themselves.)

JUMP-START A BUSINESS

Stanford Graduate School of Business, Stanford, CA

Tuition and fees: US \$53,118

Graduates' median base salary: \$120,000

Silicon Valley's proximity to Stanford and its close interaction with the engineering school through courses and research spell s-t-a-r-t-u-p. The school focuses on leadership and entrepreneurship, and top industry names visit the campus regularly and even teach jointly with professors.

Special mention: University of California, Berkeley (Haas School of Business), Yale School of Management, Columbia Business School

STRONG REP

Carnegie Mellon University (Tepper School of Business), Pittsburgh, PA

Tuition and fees: \$52,500

Graduates' median base salary: \$100,000

CMU's business program and engineering school are both world renowned, and it consistently comes up in lists of engineers' top MBA picks. So it isn't surprising that Tepper is, as *The Economist* recently noted, "probably best known for...a quantitative approach and cutting-edge use of information technology."

Special mention: Northwestern (Kellogg School of Management), MIT Sloan School of Management, Harvard Business School, University of Pennsylvania (The Wharton School)

INNOVATIVE

MIT Sloan School of Management, Cambridge, MA

Tuition and fees: \$50,625

Graduates' median base salary: \$110,000

Sloan drinks its own Kool-Aid with the Dean's Innovative Leader Series, in which students have in-depth discussions with industry leaders, and the Sloan Innovation Period, one week of intensive leadership seminars and exposure to faculty research. Innovation "is in their DNA," MBA counselor Abraham says of MIT-Sloan.

Special mention: UC Berkeley (Haas), Stanford, University of Toronto (Rotman School of Management)

ENGINEERS—AND CAREERS—APLENTY

University of Michigan (Ross School of Business), Ann Arbor, MI

Tuition and fees: \$45,189

Graduates' median base salary: \$100,000

Forty-two percent of Ross's 500-strong MBA class of 2011 come from an engineering, math, or science background. Good news for them: Recruiters and employers rave about Michigan's MBA students, and students rave about Ross's career services.

Special mention: MIT (Sloan), Yale, Georgia Tech College of Management

CAREER SWITCH TO FINANCE

University of Chicago (Booth School of Business)

Tuition and fees: \$53,225

Graduates' median base salary: \$100,000

Finance is Booth's top subject, and about half the graduating class of 2009 went to work in the finance sector. Other pluses: The school has generated more Nobel laureates (six) than any other business school and has garnered the top spot in Bloomberg BusinessWeek's past two rankings for U.S. MBA programs.

Special mention: Harvard, Penn (Wharton), Columbia