

# SCANFAX

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IEEE

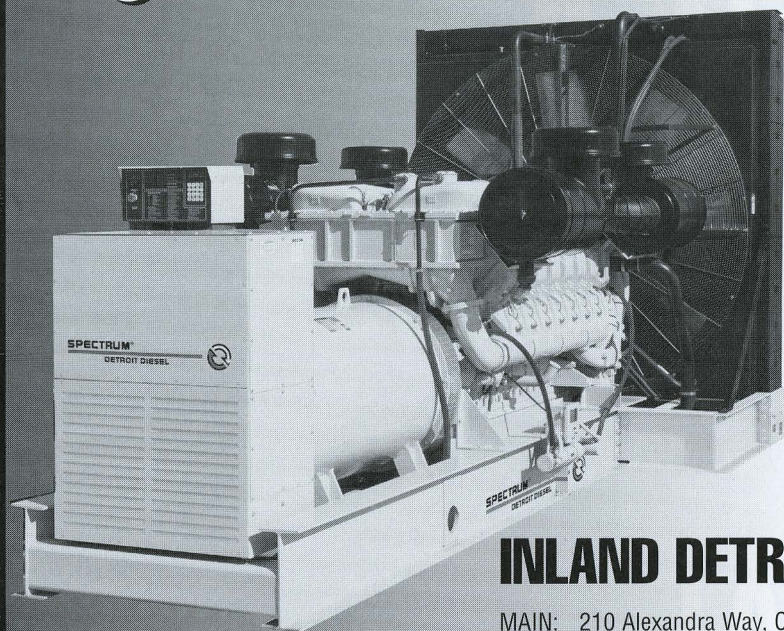
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#### Chairman

Edward G. Bogus Ph.D.  
Phone 847-259-9600 ext.4738  
Fax 847-818-5757  
E-mail: [e.g.bogus@ieee.org](mailto:e.g.bogus@ieee.org)

#### Editor

Gerry Ryan  
Phone 773-380-7955  
Fax 773-380-7922  
E-mail: [gryan@hdrinc.com](mailto:gryan@hdrinc.com)

#### Publisher

Barbara Slack  
Slack Attack Advertising

#### Editor-in-Chief

Paul Zukowski  
Slack Attack Advertising

#### Art Director

Nancy Rudd  
Slack Attack Advertising

#### Advertising Sales

Beth Vander Grinten  
Slack Attack Advertising  
608-222-7630  
E-mail: [bethv@slackattack.com](mailto:bethv@slackattack.com)

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# SCANFAX

## Feature

### 8 Educational Opportunities

*Motivated engineers have a wide choice of educational opportunities in the Chicago area.*

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**On the cover:** Image courtesy of University of Illinois at Chicago

#### CHICAGO SECTION EXECUTIVE COMMITTEE MEETING

Tuesday, June 13, 7:15 pm

DeVry DuPage, Room 230, 1221 N. Swift Road, Addison, Ill.

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# Chairman's Message

Edward G. Bogus, PhD.  
IEEE Chicago Section, Chairman

The Chicago Section Year 2000 Annual Awards Banquet was held on April 15, 2000. At this banquet, Section members and guests gather to recognize our members' professional achievements and acknowledge the hours of service

that volunteers have contributed to the Section during the past year. The success of all our programs depends on the efforts of the volunteers that work so hard to plan the events and the enthusiastic support of the members that participate in the events.

The first award that was presented at the banquet was the IEEE Fellow award. Members of the IEEE that are elevated to the grade of Fellow are a select group. They receive this honor for their significant contributions to the electrical engineering profession, either as an engineer, a scientist, a technical leader or an educator. Nominees for the Fellow grade must be sponsored by five current Fellows, they must be senior members at the time of nomination, and they must be IEEE members for at least five years.

The selection of Fellows by the IEEE Board of Directors takes place annually and is limited to 1% of the higher-grade membership. This year the new Fellow from the Chicago Section is **Prof. Hung-Yu David Yang**.

Prof. Yang received the BS degree in electrical engineering from National Taiwan University, Taipei in 1982 and the Ph.D. degree in electrical engineering from the University of California at Los Angeles in 1988. He is currently an associate professor at the University of Illinois at Chicago in the Electrical Engineering and Computer Science department. He received the Fellow award for his contribution in the field of wide-band ferrite microstrip antennas and the theory of antennas on periodic structures.

The next award was the Chairman's Award. This award is presented to a member of the Section that has contributed a significant amount of volunteer time and effort to benefit the Section. The success the Section has in achieving its goals of providing all members opportunities for technical and professional development is made possible by the hard work of these extraordinary volunteers. Their enthusiastic participation in Section activities and cooperation in carrying out the duties of the office they hold show their commitment to IEEE.

The winner of this year's Chairman's

Continued on page 6.



Representatives from the participating societies in the Washington Award Commission with the Year 2000 award recipient Donna Shirley, former manager of the Jet Propulsion Laboratory's Mars Exploration Program. Front row (l to r): Maggie White, Secretary, Washington Award Commission; Katherine M. Hannon, Chair, Washington Award Commission; Donna Shirley; Kathryn N. Gray (NSPE). Back row (l to r): John P. Mick (WSE); Michael F. Molnar (ASME); Edward G. Bogus (IEEE); Jeffrey Dunlap (ANS); Francis S. Kendorski (AIME); G. Richard Spencer (ASCE); and W. Robert Iverson, Jr. (WSE).



Edward G. Bogus, Chairman of the IEEE Chicago Section congratulates the 2000 Washington Award recipient Donna Shirley, former manager of the Jet Propulsion Laboratory's Mars Exploration Program. IEEE is one of seven engineering societies participating on the Washington Award Commission, which annually honors an outstanding engineer for preeminent service in the advancement of human progress.

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award is **Chuck Nochumson**. Chuck is active at several levels in the Section and is truly deserving of this recognition. He is the IAS/IES chapter treasurer, the Chicago Section finance chairman, and the IAS 2001 Conference treasurer. Chuck received this award for his dedicated service to the IEEE Chicago Section.

In celebration of the third millennium, the IEEE established an award to honor members that have made outstanding contributions to a section, community, chapter, board, or area of technology. The IEEE Third Millennium Medals are being presented this year to a select and special group of 3,000 members throughout the Institute. The last time IEEE gave such an Institute-wide award was in 1984. The IEEE Centennial Medals were presented in 1984 to 1,984 members to commemorate the 100th anniversary of the IEEE's earliest predecessor society, the American Institute of Electrical Engineers.

Twenty-four members nominated by the IEEE Chicago Section were winners of the Millennium Medals. The medals were distributed at the Awards Banquet. The winners are:

**Michael A. Banak, Arupjyoti Bhuyan, Edward G. Bogus, Leonard M. Cohen, Hugh C. Edfors, James R. Fancher, Joseph Feitler, Patrick J. Hennelly, Sheldon F. Isenberg, Carl R. Kannewurf, Constance A. Kelly, Martin E. Lake, Frank A. Lakowski, Peter S. Look, Chris J. Lovin, Patrick R. Murphy, Adrienne H. Novick, Charles J. Nochumson, N. R. Phoenix, Geraldine Ryan, Douglas F. Smith, John E. Waters, Irwin C. Smiley, and George M. Thomas.**

Students are an important part of the Section and each year members of the Section's six student branches receive awards for Leadership, Scholarship, and Special Recognition.

This year the winners are:

### LEADERSHIP

**Jennifer Piane—DePaul University**  
**David Hreczany—DeVry Chicago campus**  
**Peter Poitra—DeVry DuPage campus**  
**Edward K. Wang—Northwestern University**  
**Dawn Fuller—U of I Chicago**

### SCHOLARSHIP

**Yuqing Sun—DePaul University**  
**Joshua Wade—DeVry Chicago campus**  
**Kevin Mehnert—DeVry DuPage campus**  
**Michael J. Englert—Northwestern University**

### SPECIAL RECOGNITION

**Jeremy Snarski, Alex Passas, Chad Hostetter, Andrew Wyr—DeVry DuPage campus**  
**Tayo Ihimoyan—IIT**

On behalf of the members of the Chicago Section, I congratulate the year 2000 award winners. ■

### Additional IEEE Chicago Section Members Who Received Millenium Awards

*By Norman E. Phoenix, IEEE Chicago Section Awards Chairman*

In addition to the 24 members who received Third Millennium Medals from the Chicago Section at our Awards Banquet and are listed in the "Chairman's Message," there are also members of the Chicago Section who received medals from IEEE Societies, the National Boards, or Region 4. We want to recognize them here. (This list is based on the latest tabulation from national headquarters and may not be complete.)

**Robert Adler**  
**Sidney M. Bennett**  
**Barry C. Brusso**  
**Carl K. Chang**  
**John W. Estey**  
**Barry N. Feinberg**  
**Abraham H. Haddad**  
**Henry Robert Hofmann**

**Aggelos K. Katsaggelos**  
**Dennis W. Lamont**  
**Joseph L. Locicero**  
**Wayne C. Luplow**  
**N.R. Orszula**  
**James B. Owens**  
**A.H. Rubenstein**  
**T.S. Rzeszewski**  
**P.L.E. Uslenghi**

### Sponsors and Student Committee Acknowledged

*By Joe Feitler, Dinner Committee Secretary*

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In addition, our Chicago Section would like to thank the IEEE members who participated in the Student Activities Committee:

**Chair, Peter S. Look, Motorola CGIS**  
**Ellen Fong, UIC Graduate School of Business**  
**Raymond Lam, Metapath Software Int.**  
**Samina Haque, Motorola Network Solutions**  
**Daniel Scire, Motorola CGIS**

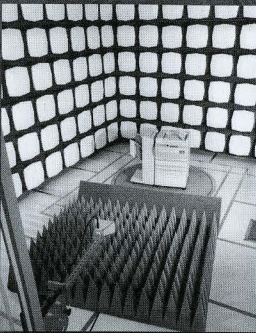
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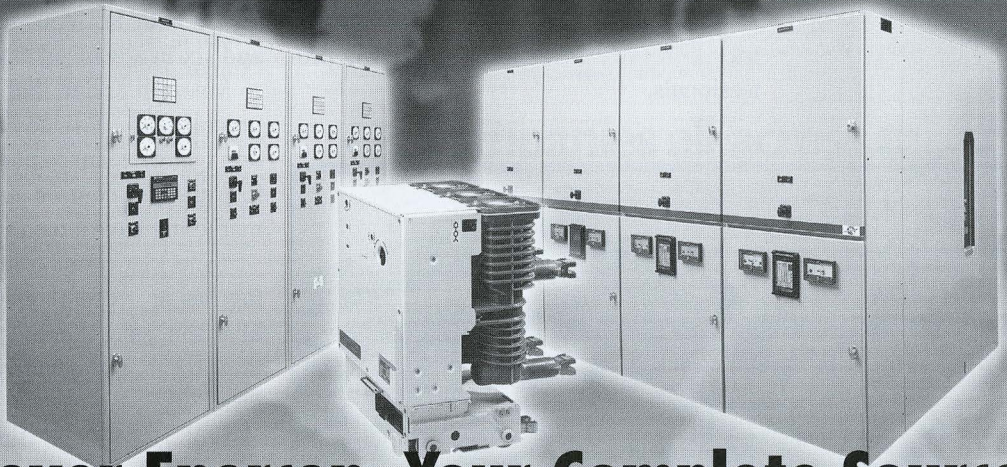
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# EDUCATIONAL opportunities

By Paul Zukowski

Motivated engineers have a wide choice of educational opportunities in the Chicago area.

Whether you want to keep up with rapidly changing technology or make a career move into management, the colleges and universities in the Chicago area provide a wealth of classes and programs geared to the working professional engineer.

Once a year, SCANFAX surveys the educational opportunities in management and engineering fields of possible interest to IEEE members. While Illinois has a wealth of notable engineering programs at colleges throughout the state, we concentrated on the Chicago area where our members live and work. And while many Chicago-area institutions of higher education have extensive degree programs for regular students, we concentrated on programs for adult working professionals.

## NU McCormick School of Engineering

Northwestern University in Evanston has five master's programs for working adults that combine business classes with engineering studies. Most can be completed by taking evening classes.

Gina Myerson, the director of the Master of Engineering Management program, said, "You can think of it as a technical MBA, with six courses in management and six in advanced engineering."

Myerson added that the Northwestern programs are designed for engineers who don't have management skills, and that the business courses such as finance and marketing have a technical slant.

"The McCormick School of Engineering has an extremely strong reputation," Myerson said, "and students will find their peers in the courses to be on a high level."

Prof. Henry Stoll directs the Master of Manufacturing Engineering program, and he agreed with Myerson's assessment that the courses are demanding and the students highly motivated. His students typically have an undergrad degree in engineering and several years of work experience. Taking the 12 required courses at the rate of one per term means the degree typically takes four years to complete.

The other Northwestern programs are Master of Information Technology, Master of Project Management, and Master of Management in Manufacturing.

The latter is a full-time, two-year course that requires students to quit their jobs, said Prof. Stoll. "They will go back to work in a different capacity, probably in a different company. They're studying to become president."

## UIC College of Engineering

The Off-Campus Graduate Engineering Programs at the University of Illinois at Chicago are specifically designed to accommodate working adults at Chicago suburban locations. Three of the five departments at the UIC College of Engineering offer off-campus programs, including the Electrical Engineering and Computer Science Department. The department offers a comprehensive range of courses in the field of electrical and computer engineering and computer science. Three UNIX file servers back 85 student-accessible Sun workstations, six Silicon Graphics workstations, and 34 Macs.

Classes are offered one evening per week, and students typically enroll in one class a term, allowing them to obtain an advanced engineering degree while working full time. MS programs range from six to nine courses without a thesis. PhD programs typically require seven courses beyond the MS and a dissertation, which may be fulfilled at the workplace.

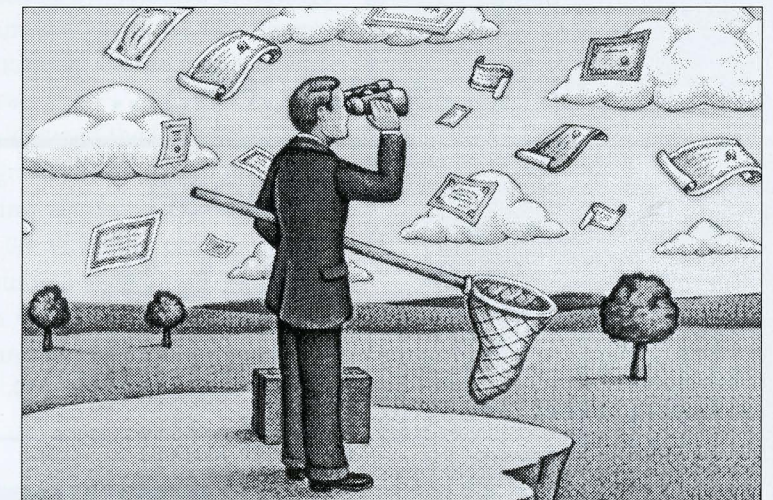
As part of an online initiative, UIC has developed Web-based instruction for the working professional, concentrating on computer science, micro-mechanical systems, telecommunications, software engineering, and power electronics.

UIC's newest offering is a Master of Engineering degree in which engineering professionals can combine advanced engineering studies with management courses. Prof. P.L.E. Uslenghi is director of the program, and said, "This is a terminal professional degree where the course work can be flexible beyond the three core classes. Students can use part of the courses to upgrade technical skills in the area of engineering they are interested in, and the rest to broaden their skills as a manager by enrolling in the College of Business Administration, for instance."

Many of the courses are already on the Internet, and Uslenghi said, "We envision that eventually all our engineering cours-



Northwestern University offers five master's programs that combine business classes with engineering studies, and most of the classes are available in the evening.



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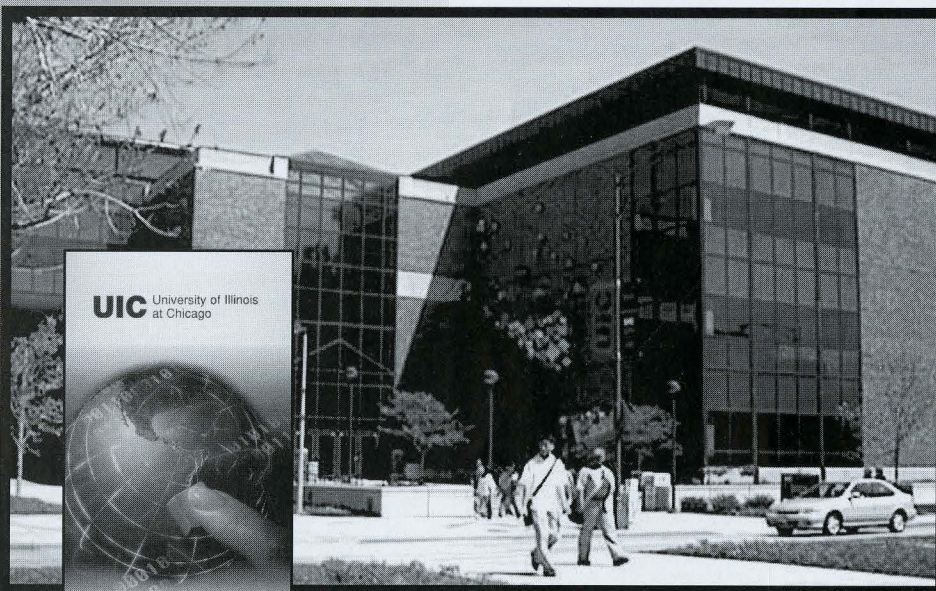
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The University of Illinois at Chicago Engineering Research Facility will be where a new Master of Engineering program is directed, although many of the courses are available online.



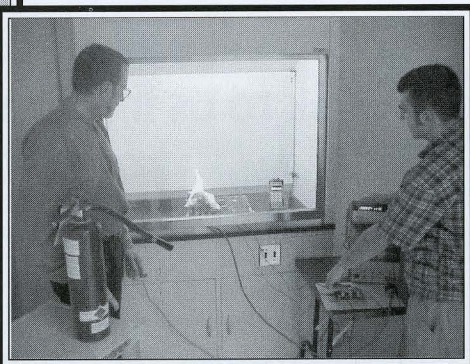
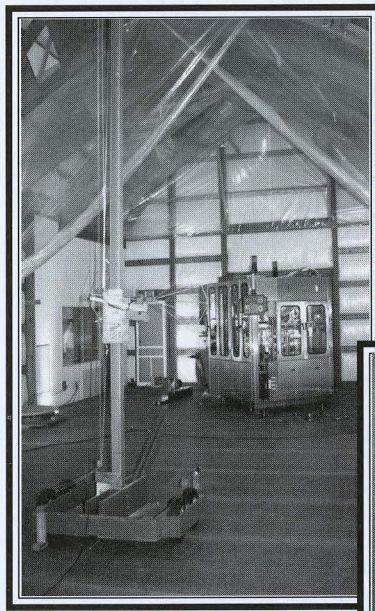
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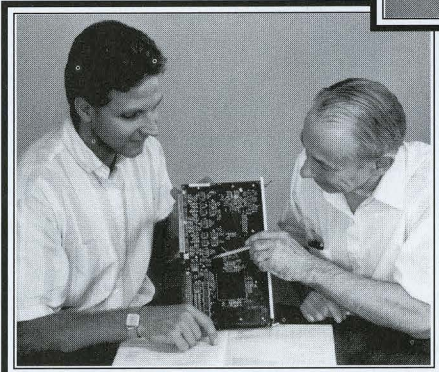
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es will be on-line." They are being brought to the Web at the rate of 5-10 a year.

"We have 42 students now taking the Internet courses," he said, "but keep in mind that the Illinois Board of Higher Education just approved the degree and this fall will be the first time we can advertise it as such."

### IIT Armour College

The Electrical and Computer Engineering Department of Armour College of Engineering and Science offer short courses designed to help industry professionals keep informed about rapidly changing technological standards and practices.

Located at IIT's main campus on the South Side and its Rice Campus in Wheaton, the courses take four days, and often include Saturdays. Topics for the summer semester include Java Programming for Engineers, Applications of CDMA to Wireless Communications, and ATM Based Broadband Networks.

IIT has also offered distance learning since 1976, and has over 150 courses each semester available through interactive television links. The school is increasing the courses available via the Internet.

Finally, IIT includes the Stuart Graduate School of Business, which offers management degrees such as an MS program in Operations and Technology Management designed to advance the careers of experienced professionals in technical fields. Offered in Saturday sessions over an 18-month period in Wheeling, the program applies advanced business and management concepts to functional responsibilities in operations, manufacturing, R&D, and information systems and technology.

### DeVry Institute of Technology / Keller Graduate School of Management

Geared more toward hands-on application work than to theoretical education, DeVry Institute of Technology has had locations in both Chicago and Addison/DuPage County, and will open a Tinley Park campus this summer 30 miles southwest of the Loop.

In addition to offering full-time bachelor degree programs during the day, DeVry has evening degree programs in Electronics, Computer Information Systems, Telecom-

munications, Accounting, and Business Administration, plus a degree-completion program in Technical Management.

In 1998, DeVry introduced an accelerated degree program in Telecommunications, where the usual 15-week class terms are accelerated into seven or eight weekends using an independent learning component and Web-based course material.

DeVry's newest course is a BS in Computer Engineering Technology. The national director for computer and electronic engineering programs and IEEE member Amin Karim said, "Graduates from the CET program will design programming solutions for networks that include PCs, servers, and what we call 'invisible computers' such as ATMs."

Karim said DeVry already offers the CET program at its other campuses in Arizona, Ohio and Texas, and has applied for approval from Illinois education authorities in time for the fall term. A recent regional survey of IEEE members revealed even those with prior education degrees

were interested in additional training in the computer engineering area.

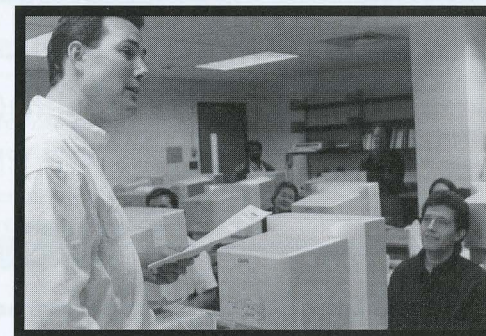
The other electronics-related bachelor's degree that DeVry offers is the Electronics Engineering Technology program. "It's different from engineering programs at universities such as NU, IIT or UIC because it is very application-based and students take labs with each technical course," he said. DeVry's EET program includes courses in digital signal processing, wireless communications, and control systems.

DeVry Institutes was acquired by Keller Graduate School of Management in 1987. Keller was founded in Chicago in 1973 and has expanded its presence in the continuing and professional education area.

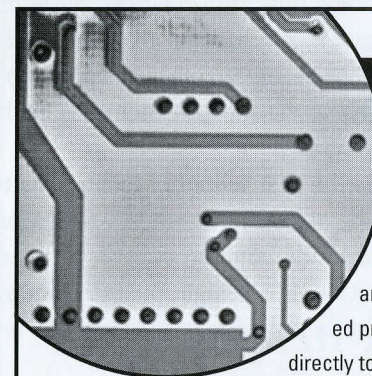
Keller is one of the largest part-time evening graduate schools in the country, offering six master's degree programs at 36 education centers nationwide, including its Online Educational Center in Oakbrook Terrace and nine Chicago-area sites. Those six programs



Northwestern University promotes the high level of peers that continuing students will find in their master's programs.



Northwestern designed programs for engineers so that even the business courses such as finance and marketing have a technical slant.



### Technology Management

The Stuart School's M.S. in Operations & Technology Management program is designed to advance the careers of experienced working engineers, scientists, and other technical professionals. This AACSB-accredited program applies business and management concepts directly to the areas of service operations, manufacturing, TQM, logistics, R&D, new product development, MIS, and e-commerce.

The curriculum is cross-functional — integrating the many areas necessary for effective management in technology-driven organizations. Small interactive classes emphasize strategy, people skills, economic analysis, team building, project management, initiating change, and an integrated approach to problem-solving.

The program consists of 12 courses offered on Saturdays, over an 18 month period, in Wheeling, Illinois, near Palwaukee Airport.

For additional information, contact Professor Joel Goldhar, 312-906-6526, goldhar@stuart.iit.edu

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- Managerial Accounting
- Probability & Statistics for Business Decisions
- Financial Management, Budgeting, & Control





DePaul offers a wide range of computer science and e-commerce courses at its six area campuses, and has been called the Internet's Ivy League.

## University of Illinois at Chicago COLLEGE OF ENGINEERING

### MEng

#### Master of Engineering Degree Program on the Internet

The MEng is a professional degree program based entirely on course work, without a research component, that will be offered worldwide on the Internet, beginning in Fall 2000. It is a very flexible program that is tailored to the educational needs of professional engineers who cannot attend courses in a traditional classroom environment on a university campus because of geographical location, work or family obligations, or disability. Prospective students will be able to design their own curricula with the assistance of a faculty advisor; the only compulsory courses are: Engineering Law, Engineering Management, and an executive-type seminar.

#### Courses offered on the Internet in Fall semester 2000:

- Object-oriented languages and environments.
- Electromagnetic field theory.
- Quasi-static electric and magnetic fields.
- Wireless communication networks.
- Advanced wireless communication networks.

#### Courses offered on the Internet in Spring semester 2001:

- Electromagnetic compatibility.
- Engineering law.
- Fundamentals and design of microelectronic processing.
- Microwaves.
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are Business Administration, Telecommunications Management, Project Management, Information System Management, Human Resource Management, and Accounting and Financial Management. Terms are 10 weeks with some accelerated schedules.

#### DePaul University

DePaul doesn't have an engineering school, but they do have an IEEE chapter. And Director of Student Services Ann Morley said, "DePaul has the largest school of computer science at the graduate level in the United States, and that includes eight master's degrees. Altogether we have 3,000 enrolled in degree programs right now."

The master's programs are offered by the School of Computer Science, Telecommunications and Information Systems. CTI is in its sixth year as an independent department, and was started by Dean Helmut Epp out of the mathematics department.

The MS programs are in Computer Science, Distributed Systems, Human-Computer Interaction, Information Systems, Management Information Systems, Software Engineering, Telecommunication Systems, and the new E-Commerce Technology program.

"We're the first school of technology to offer an e-commerce master's," said Morley. "Most are coming out of business schools. Crain's Chicago Business magazine recently called us the Internet's Ivy League."

All the courses are available in the evenings at one or more of DePaul's six campuses: Lincoln Park, Loop, Lake County, Naperville, O'Hare, and Oak Forest.

Because DePaul is on quarters, four courses can be completed in a year, taking one per term—13 are required. "We don't require a background in the area that you're going to study," she said. "We have designed the curriculum with a prerequisite phase of zero to seven courses to allow you to catch up, and then go into the master's core and advanced phases."

Morley estimated that 70% of the MS students are working full-time.

For those who don't want a degree,

DePaul also offers a variety of 10-, 12-, and 30-week certificate programs through its Institute for Professional Development. IPD programs include Local Area Networks, Visual C++, Java, and Web Developer. The newest 10-week program is in Web Commerce.

The 30-week Computer Career Program has a waiting list. This accelerated program is designed to help people make career changes into the computer field. Admission is restricted to college graduates and requires passing an entrance examination. The program has graduated over 4,000 individuals, many of whom are employed by major corporations and businesses throughout the area.

#### Elmhurst College

For those seeking a more traditional campus setting, suburban Elmhurst College might be appealing. The 128-year-old institution has had an evening program since 1949 which currently offers course work in nearly every department, and students can complete 22 majors entirely in

the evening.

Of particular interest to engineers seeking to enter the executive ranks would be the Elmhurst Management Program. Designed specifically for work-

ing professionals seeking an accelerated major in business administration, classes meet once a week, year-round, and requirements for the major can be completed in about 18 months. ■

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For more information contact:

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