Programs of Study

The postbaccalaureate programs in engineering at the University of Michigan–Dearborn (U of M–Dearborn) are geared to the demands of the student and the needs of industry and are designed to further the theoretical and technical background of the engineer. The College offers programs leading to the Master of Science in Automotive Engineering, Master of Science in Computer Engineering, Master of Science in Computer and Information Science, Master of Science in Electrical Engineering, Master of Science in Engineering Management, Master of Science in Industrial and Systems Engineering, Master of Science in Manufacturing Systems Engineering, Master of Science in Mechanical Engineering, and joint M.S./M.B.A. degrees through the School of Management. The College also provides education and research opportunities for students in the Doctor of Engineering Program offered through the Ann Arbor campus. Working students are accommodated by course offerings late in the afternoon and evening in automotive engineering, computer engineering, computer and information science, electrical and computer engineering, engineering management, industrial and systems engineering, manufacturing systems engineering, and mechanical engineering. All programs in graduate studies in engineering at the University of Michigan–Dearborn, except the M.B.A. part of the I.S.E./M.B.A. degrees, are offered through the Horace H. Rackham School of Graduate Studies in Ann Arbor. A master’s degree is awarded after completion of a minimum of 30 credit hours, although each program has individual requirements that must be met prior to graduation.

Research Facilities

The College of Engineering and Computer Science built the Engineering Complex in 1997, adding $3,000,000-square feet of laboratory, classroom, office, and study space. The complex houses a rapid prototype laboratory, a human factors laboratory, a design studio, a hypermedia laboratory, and CAD, PC, Macintosh, networking, and Sun computer laboratories. The Manufacturing Systems Engineering Laboratory building is equipped with laboratories that include metrology, machine dynamics and diagnostics, precision machining, and computer-integrated manufacturing. This component of manufacturing research is supplemented by an extensive array of computers dedicated to the engineering disciplines. In addition, the College has several other experimental laboratories available for research: machine vision and intelligence, design and fatigue, acoustics and vibrations, combustion engines and fuels, vehicle electronics, plastics and composites, circuits, electronic control systems, energy conversion, manufacturing simulation, 3-D imaging, applied thermodynamics, fluid mechanics, heat transfer, computer automation, robotics, data communications, and digital systems. Combined, the College’s facilities provide effective and comprehensive areas for teaching, student projects, research, and faculty projects that impact curriculum and build strong partnerships with industry, government, and the community. The College also features several centers and institutes—the Institute for Advanced Vehicle Systems, the Center for Lightweight and Composite Automotive Materials and Processing, the Henry W. Patton Center for Engineering Education & Practice, and the Vetréonics Institute—to further facilitate advanced research objectives.

Financial Aid

Scholarships, fellowships, and other grants-in-aid, as well as financial assistance through departmental employment, are often available to qualified students in engineering. In keeping with University practice and policy, such assistance is available without regard to race, color, creed, sex, or national origin. The number of awards available each year varies, as does the amount of the stipend. Recipients are appointed by, or upon the nomination of, the departments in which the applicants are enrolled. Application forms for students who will be registered at the University of Michigan–Dearborn can be obtained from the College of Engineering. When submitted to the College of Engineering, this application form, titled “Application for Graduate School Fellowship, Teaching, or Research Assistantship,” serves as the vehicle for obtaining consideration for all awards administered by the College.

Cost of Study

The tuition for full-time graduate students (8 credit hours) working toward a master’s degree is $3729 for Michigan residents and $7086 for out-of-state residents. In addition, students are assessed a $71.45 fee per credit hour and a per-semester technology assessment of $139.

Living and Housing Costs

The local living costs are somewhat dependent upon the availability of housing. An estimation of living costs beyond the cost of study is $1400 per month.

Student Group

Enrollment at the University of Michigan–Dearborn is 8,700 students. Of this figure, 2,500 students are enrolled in the College of Engineering and Computer Science: 1,500 are undergraduates and 1,000 are graduate students.

Location

The University of Michigan–Dearborn is located in the heart of Michigan’s largest urban area, just 10 miles from downtown Detroit and a wide variety of cultural, athletic, and recreational opportunities. Many outdoor recreation facilities, including rivers, lakes, beaches, and ski areas are within a short driving distance.

The University

The University of Michigan–Dearborn is one of three campuses governed by the University of Michigan Board of Regents. As a regional campus of the University of Michigan system, it shares in the tradition of excellence in teaching, research, and service. The campus, which is located on 202 acres of the former estate of the late Henry Ford, is primarily a commuter campus. It was founded in 1959 as a senior-level institution offering only junior, senior, and graduate courses. Since 1971, the Dearborn campus has offered full four-year degree programs and expanded its graduate offerings. As part of the University of Michigan System, U of M–Dearborn enjoys the resources of a large multiuniversity and the advantages of moderate size.

Applying

Applications for graduate admission, accompanied by a nonrefundable fee of $60 for domestic students ($75 for international students), transcripts, and letters of recommendation, should reach the department by August 1 for the fall term, December 1 for the winter term, or April 1 for the spring term. Application materials can be downloaded via the College’s Web site at http://www.engin.umd.umich.edu.

Correspondence and Information

For information about the various engineering programs at the University, students should contact Graduate Student Services.

College of Engineering and Computer Science
2201 Engineering Complex
University of Michigan–Dearborn
4901 Evergreen Road
Dearborn, Michigan 48128-1491
Phone: 313-593-0897
Fax: 313-593-9967
E-mail: gradprog@engin.umd.umich.edu
Web site: http://www.engin.umd.umich.edu/
University of Michigan–Dearborn

THE FACULTY AND THEIR RESEARCH

Kuimi Akingbehin, Professor of Computer and Information Science; Ph.D., Wayne State, 1985. Intelligent systems, real-time computing.

Alan Argento, Professor of Mechanical Engineering; Ph.D., Michigan, 1989. Structural dynamics, engineering materials.

Selim Aslan, Assistant Professor of Electrical and Computer Engineering; Ph.D., Polytechnic Institute of Grenoble (France), 1983. DSP, education technology and distance learning.

Vivek Bhise, Professor of Industrial and Manufacturing Systems Engineering; Ph.D., Ohio State, 1971. Human factors and ergonomics.

Charu Chandra, Associate Professor of Industrial and Manufacturing Systems Engineering; Ph.D., Arizona State, 1994. Information systems.

Chia-hao Chang, Professor of Industrial and Manufacturing Systems Engineering; Ph.D., Oregon State, 1978. Information systems.

Yubao Chen, Professor of Industrial and Manufacturing Systems Engineering; Ph.D., Wisconsin–Madison, 1986. Intelligent manufacturing.

John Cherng, Professor of Mechanical Engineering; Ph.D., Tennessee, 1978. Vibrations, acoustics, NVH.

Li C. Chow, Professor of Mechanical Engineering; Ph.D., London, 1965. Fatigue, fracture and damage mechanics.

Bruce C. Cho, Associate Professor of Computer and Information Science; Ph.D., Northwestern, 1981. Theory of computation.

Ali El Kateeb, Associate Professor of Electrical and Computer Engineering; Ph.D., Concordia (Montreal), 1992. Reconfigurable computing.

William Grosky, Professor and Chairperson, Computer and Information Science; Ph.D., Yale, 1971. Multimedia databases.

Jinhua Guo, Assistant Professor of Computer and Information Science; Ph.D., Georgia, 2002. Distributed systems.

Hugh E. Huntley, Associate Professor of Mechanical Engineering; Ph.D., Michigan, 1992. Engineering materials and manufacturing design.

Swatantaraka K. Kachhal, Professor and Chairperson, Industrial and Manufacturing Systems Engineering; Ph.D., Minnesota, 1974. Health-care system.

Roberlo K. R. Kampf, Associate Professor of Computer and Information Science; Ph.D., Michigan, 1981. Information systems, intelligent systems.

HongTae Kang, Assistant Professor of Mechanical Engineering; Ph.D., Alabama, 1999. Fatigue, automotive structural durability, road load prediction.

TaeHyung Kim, Assistant Professor of Electrical and Computer Engineering; Ph.D., Texas A&M, 2003. Power electronics, motor drives and hybrid electric vehicles.

James W. Knight, Associate Professor of Industrial and Manufacturing Systems Engineering; Ph.D., Ohio State, 1977. Ergonomics, statistical design of experiments.

Ghassan Kridi, Associate Professor of Industrial and Manufacturing Systems Engineering; Ph.D., Missouri–Columbia, 1997. Intelligent manufacturing and metal forming.

Shridhar Lakshmanan, Associate Professor of Electrical and Computer Engineering; Ph.D., Massachusetts at Amherst, 1991. Signal and image processing.


Ben Q. Li, Professor and Chairperson, Mechanical Engineering; Ph.D., Berkeley, 1989. Computational study of multiscale and multiphysical phenomena in thermal fluids, materials processing and manufacturing.

Xiangyang (Sean) Li, Assistant Professor of Industrial and Manufacturing Systems Engineering; Ph.D., Arizona State, 2001. Information systems and quality, decision mining, human-computer interaction, simulation.

Robert E. Little, Professor of Mechanical Engineering; Ph.D., Michigan, 1963. Reliability, modes of failure, fatigue, mechanical design.

Yung-wen Liu, Assistant Professor of Industrial and Manufacturing Systems Engineering; Ph.D., Washington (Seattle), 2006. Reliability and quality engineering, stochastic process modeling, applied statistics, health-care modeling.

P. K. Mallick, Professor of Mechanical Engineering and Director of Interdisciplinary Programs; Ph.D., IIT, 1973. Materials and manufacturing processes, solid mechanics, failure analysis/design, composites.

Bruce Maxim, Associate Professor of Computer and Information Science; Ph.D., Michigan, 1982. Software engineering.

Brahim Medjahed, Assistant Professor of Computer and Information Science; Ph.D., Virginia Tech, 2004. Databases, semantic Web, Internet computing, workflows.

Carole Mei, Associate Professor of Mechanical Engineering; Ph.D., Auckland (New Zealand), 1999. Vibration analysis and vibration control.

Chris Mi, Assistant Professor of Electrical and Computer Engineering; Ph.D., Toronto, 2000. Power electronics.

John Miller, Associate Professor of Electrical and Computer Engineering; Ph.D., Toledo, 1983. Machine vision systems and image processing.

William J. Mitchell, Assistant Professor of Mechanical Engineering; M.S., Michigan, 1980. Materials and manufacturing processes.

Pravansu Mohanty, Associate Professor of Mechanical Engineering; Ph.D., McGill, 1994. Engineering materials and manufacturing design.

Yi Lu Murphey, Professor of Electrical and Computer Engineering; Ph.D., Michigan, 1989. Character segmentation and recognition.

Natarajan Narasimhamurthi, Associate Professor of Electrical and Computer Engineering; Ph.D., Berkeley, 1979. Hybrid vehicles and electric vehicles.

Elayed A. Orady, Professor of Industrial and Manufacturing Systems Engineering; Ph.D., McMaster, 1982. Intelligent manufacturing.

Nilesh Patel, Assistant Professor of Computer and Information Science; Ph.D., Wayne State, 1997. Digital imaging.

Eric Ratts, Associate Professor of Mechanical Engineering; Ph.D., MIT, 1993. Thermodynamics, heat transfer and cryogenics.

German Reyes-Villanueva, Assistant Professor of Mechanical Engineering; Ph.D., Liverpool (England), 2002. Lightweight fiber-reinforced composite materials and metal alloys.

Paul C. Richardson, Associate Professor of Electrical and Computer Engineering; Ph.D., Oakland, 1999. Real-time networks.

Naem Seliya, Assistant Professor of Computer and Information Science; Ph.D., Texas A & M, 2006. Networking and distributed systems.

Keshav S. Varde, Professor of Mechanical Engineering and Associate Dean of the College of Engineering and Computer Science; Ph.D., Case Western Reserve, 1974. Waste heat management and utilization.

Yung-wen Liu, Assistant Professor of Computer and Information Science; Ph.D., Buffalo, SUNY, 2002. Multimedia information retrieval.

Louis Y. Tsui, Associate Professor of Computer and Information Science; Ph.D., Michigan, 1984. Operating systems.

Onur Ugur, Professor of Industrial and Manufacturing Systems Engineering; Ph.D., Texas Tech, 1979. Discrete and continuous simulation, modeling of production systems, materials handling systems, ARIMA and other time-series techniques.

Keshav S. Varde, Professor of Mechanical Engineering and Associate Dean of the College of Engineering and Computer Science; Ph.D., Rochester, 1971. Thermal/fluid sciences, thermodynamics, combustion, alternative energy sources/fuels.

Shengquan Wang, Assistant Professor of Computer and Information Science; Ph.D., Texas A & M, 2006. Networking and distributed systems.


Weidong Xiang, Assistant Professor of Electrical and Computer Engineering; Ph.D., Tsinghua (China), 1999. Software radio, smart antenna, OFDM, MIMO, Wireless LAN.

David Yoon, Associate Professor of Computer and Information Science; Ph.D., Wayne State, 1989. Computer graphics.

Armagh Chin, Professor of Industrial and Manufacturing Systems Engineering; Ph.D., Iowa, 1997. Modeling and analysis of manufacturing systems, intelligent simulation environments.

Yi Zhang, Professor of Mechanical Engineering; Ph.D., Illinois, 1989. Design and manufacturing of gearing systems.

Dongming Zhao, Associate Professor of Electrical and Computer Engineering; Ph.D., Rutgers, 1990. Image processing and machine vision.

Qiang Zhen, Assistant Professor of Computer and Information Science; Ph.D., Waterloo, 1995. Database query optimization.

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