



e-news



This special issue of ITS-Davis e-news examines the opportunities for interdisciplinary graduate education in a range of transportation-related studies, and for professional development through UC Davis Extension. Click on the links below to read the full story. If you know a potential candidate, please forward this e-news.

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Special Education Issue

January 2002

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Apply Now for Fall 2002

Thinking about a graduate degree in Transportation? Now is the time to apply for the 2002-2003 school year. The application deadline for admissions is February 1 for international students and March 1 for domestic students. For more information see [Accepting Applications for Fall 2002](#). Extensions may be granted for good cause by graduate program assistant [Joan Tolentino](#).

Why UC Davis Transportation Studies?



Professor Deborah Niemeier and the students in her research group

Graduate study at UC Davis prepares students for the current and future demands of a career in transportation. Students may choose a multidisciplinary course of study through one of several affiliated academic departments at UC Davis, or through the Institute of Transportation Studies at UC Davis (ITS-Davis).

ITS-Davis is a multi-faceted internationally recognized program with 40 affiliated faculty members, 60 graduate students and a \$6 million annual budget. The Institute houses one of the world's leading university programs on travel behavior, advanced vehicle technology, and environmental impacts of transportation.

The ITS-Davis program is unique in the breadth of its scope of inquiry, notes Patricia L. Mokhtarian, chair, Transportation Technology and Policy Graduate Group, and professor of Civil and Environmental Engineering. It ranges from

engineers working on technological advances in vehicle propulsion, anthropologists studying the market reaction to and adoption of new technologies, and economists exploring the true social costs of various automotive technologies, to statisticians analyzing data on emissions, and policy analysts evaluating actual and prospective transportation-related policies.

"The opportunities for a student to study and blend multiple approaches to tackling the important issues of modern society are unparalleled," says Mokhtarian.

Graduate programs are flexible and allow students to customize their studies.

"Around a core of common subject areas, each student crafts a program of study that uniquely fits her or his interests and skills," Mokhtarian explains.

The two largest graduate programs are the Transportation Technology and Policy Program administered by ITS-Davis, and the Transportation Planning and Design

Program of the Department of Civil and Environmental Engineering. The Department of Mechanical and Aeronautical Engineering, which hosts the Hybrid Electric Vehicle Drivetrain Design Center and has produced the winning FutureTruck and FutureCar teams, also offers graduate study. Students may also pursue degrees in several other programs that offer transportation-related studies.



Professor Pat Mokhtarian, ITS-Davis Associate Director for Education, with students

TRANSPORTATION TECHNOLOGY AND POLICY

The Graduate Group in Transportation Technology and Policy (TTP), housed under ITS-Davis, provides a modern interdisciplinary education for addressing pressing transportation, environmental, economic, and social problems facing the nation and the world. Students may pursue either a technology track or a planning and policy track. The program is open to students from any background.

For details go to <http://ttp.ucdavis.edu/>

TRANSPORTATION PLANNING AND DESIGN

Housed within the Civil and Environmental Engineering Department, the Transportation Planning and Design program at UC Davis emphasizes basic analytical skills in systems analysis, planning, and policy analysis and an understanding of fundamental relationships within and between transportation and other systems. This program generally is the choice of students who already have an engineering degree.

For more information go to <http://cee.engr.ucdavis.edu/gradinfo/>



UC Davis Mechanical Engineering Department's 2001 FutureTruck team in DC after winning first place

AUTOMOTIVE SYSTEM DYNAMICS

The Department of Mechanical and Aeronautical Engineering offers masters and doctoral programs. The applications deadlines are March 1 for international applicants and March 15 for domestic applicants. Many of these students are affiliated with the department's Hybrid Electric Vehicle Center and FutureTruck and FutureCar projects.

For more information go to http://mae.ucdavis.edu/programs/grd_main.htm

AFFILIATIONS AND RESEARCH FACILITIES

Transportation research facilities at UC Davis include computer laboratories for modeling the traffic flow and behavioral implications of intelligent transportation systems technology, a laboratory to

conduct experiments on fuel cell and other electric vehicle propulsion systems, and a fleet of battery powered vehicles used for field testing.

ITS-Davis maintains close relations with ITS affiliates at the University of California campuses in Berkeley, Irvine, and Los Angeles and is a founding member of the federally funded University of California Transportation Center (UCTC). It is also a major participant in the statewide Partners for Advanced Transit and Highways (PATH), with major support for traffic congestion management and the ITS-Davis-based New Mobility Center, one of PATH's network of centers.



FCV program students Anthony Eggert, Meena Sundaresan, P. Badrinarayanan, Richard Counts, Joshua Cunningham

In addition, ITS-Davis researchers coordinate with research facilities operated by other units on topics of mutual interest including the Advanced Highway, Maintenance and Construction Technology Research Center, Crocker Nuclear Laboratory, Combustion Laboratory, and the Hybrid Electric Vehicle Technology Center.

INTERNSHIPS

In addition to pursuing advanced degrees, many students accept internships with prestigious organizations to enhance their credentials and build their real-world experience. In recent years, students have interned with the following organizations:

- Office of System and Economic Assessment in the Economic Analysis Division of the Volpe National Transportation Systems Center
- California Fuel Cell Partnership
- California Energy Commission
- Exxon Research
- Los Alamos National Laboratory
- U.S. Dept. of Transportation, Federal Highway Administration
- International Energy Agency



The UC Davis Arboretum

FUNDING: Fellowships and Grants

A variety of sources offer graduate student funding:

- Several fellowships of up to \$18,000, funded by the US Department of Transportation and California Department of Transportation through the University of California Transportation Center (UCTC), are available to domestic MS and PhD students.
- Teaching and research assistantships are available for eligible MS and PhD students, including international students.
- A graduate fellowship of \$10,000, funded by Chevron, is available for a student excelling in energy and environmental research.
- UCTC PhD dissertation grants of up to \$15,000 are awarded for outstanding dissertation proposals.
- US Department of Energy Fuel Cell and Hybrid Vehicle Fellowships, other fellowships, tuition fee grants, and work-study programs are also available.

FUNDING: National Science Foundation IGERT Program

In addition to the funding sources listed above, ITS-Davis is able to guarantee three years of financial support for selected highly qualified domestic PhD students through a prestigious award from the National Science Foundation. The primary goal of the Integrative Graduate Education and Research Training (IGERT) Program is to produce “a cadre of broadly prepared PhDs with multidisciplinary backgrounds and the technical, professional, and personal skills essential to addressing the varied career demands of the future.”

In October 1998, one of these prestigious and highly competitive five-year multi-million dollar grants was awarded to the graduate transportation program at UC Davis. Of the more than 80 IGERT programs nationwide, only one — ITS-Davis — focuses on transportation. The IGERT program currently supports 16 doctoral students at ITS-Davis.

For more information about financial support, see <http://ttp.ucdavis.edu/> and scroll down to “Financial Aid.”

JOB PROSPECTS: Interdisciplinary Approach in High Demand



Recent grads and ITS- Davis Director Dan Sperling at an EVAA

Formal studies and ITS-Davis’ experience with private and public organizations confirm the strong demand for graduates with a well-rounded, interdisciplinary education. Advances in transportation technology, such as intelligent transportation systems, telecommunications applications, and clean-fuel propulsion systems, occur in a policy and social context, and it is critical for transportation professionals to be equipped to understand both the technology and policy sides of the coin.

“Government is demanding cleaner and more fuel-efficient vehicles to address global climate change, reduce energy consumption and improve air quality and overall transportation efficiency,” says ITS-Davis Director Dan Sperling. “Therefore, it is essential that policies are developed with an awareness of

Conference press briefing

an awareness of policy implications.”

Employers in industry, government, non-profit groups, and universities actively recruit students trained in transportation at UC Davis because of the program’s strong research reputation.

In the past few years, UC Davis PhD graduates have secured assistant professor or equivalent positions at the University of Tennessee, University of Nevada-Reno, Georgia Tech, University of Central Florida, and Argonne National Laboratory. Master’s students are in great demand by state and federal governments, consulting companies, large corporations in the energy, auto manufacturing, and trucking industries, and national energy laboratories. UC Davis Transportation faculty members receive many personal requests each year for graduates.



Students and faculty join Dr. Ferdinand Panik (center), ITS-Davis board member and Sr. VP, DaimlerChrysler

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From the Horse's Mouth: Why They Chose ITS-Davis

Karl-Heinz Hauer, PhD, Graduated September 2001. CEO, Xcellvision, Wolfsburg, Germany



Hauer accepts award from Volkswagen

“Several very convincing reasons led me to study transportation at ITS-Davis. First, I liked the people, which I consider to be very important.

“Second, the fuel cell modeling program and everything connected to it, including the research on other alternative vehicles, was most important for me because I was planning to work on fuel cell technology later.

“In addition, the international community involvement made the program very interesting. The fuel cell group had people from the U.S., China, India, Brazil and Germany, and, in general, Davis is a very multicultural city.

“Last but not least in importance was the flexible structure of the study program. Besides fuel cells, I was interested in economics and in environmental questions. It was no problem to incorporate classes about these issues into my program of study. I found the professors willing to listen to their students’ desires, and to make the maximum possible without sacrificing the quality of study.

“After graduation I started the company Xcellvision, which consults on fuel cell vehicles/systems and develops measurement equipment for fuel cell stacks. Although the decision to start Xcellvision was not easy, I believe that my studies in Davis prepared me for it through classes, discussions and contacts in many ways.

“What do I miss most? People and of course the wonderful California weather.”

Gustavo Collantes Current PhD Student

“However intellectually stimulating the experience of doing a MS in Aerospace Engineering, I felt I needed to add a social flavor to my education. I developed an interest in eclectic approaches to research with policy implications, where my engineering background would blend with social-sciences perspectives.

“After considerable exploration of different programs in the US, I found the TTP program at UC Davis could provide a great environment for my doctoral studies. Its interdisciplinary nature and the quality of the associated faculty attracted me to the program. Now in my second year, I can say that all my expectations were met.”



Collantes recently returned from the 81st Annual Meeting of the Transportation Research Board in Washington, DC

Anthony Eggert, MS, Graduated June 2001
Ford Motor Company, Manager, California Fuel Cell Partnership

“The thing that attracted me to the ITS TTP program over other, more traditional programs was the interdisciplinary aspect of both the classes and the research.

“One thing I learned from working in industry is that in order to solve nearly all real-world problems, especially those in transportation, one needs to address the technical, economic, and political issues concurrently. The TTP program at Davis offers strong training in all of these areas and provides the student an understanding of the complex interactions that they will need for success.

“The other aspect of the TTP program that was appealing to me was the strong environmental focus of both the research projects and the faculty.”



Eggert with Ford's FCV at a recent ITS-Davis workshop in Washington, DC

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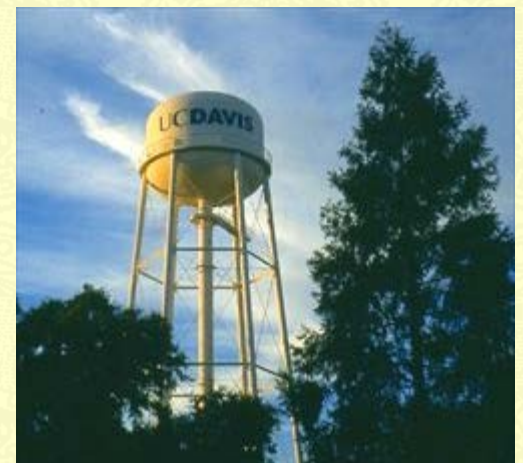
Now Accepting Applications for Fall 2002

Apply online at <http://gradstudies.ucdavis.edu/b4apply.htm>

UC Davis has a new policy of accepting ONLY on-line applications. For details on application requirements and prerequisites for the TTP program, go to: <http://ttp.ucdavis.edu/TTPAdmissionInstructions.htm>

Questions?

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The UC Davis water tower

Admission to graduate studies requires a bachelor's degree from an accredited institution. Students generally are admitted for the fall quarter only, but exceptional cases for off-cycle admission can be considered. The application deadline for admissions is February 1 for international students and March 1 for domestic students.

Another Option: Continuing Education

UC DAVIS EXTENSION OFFERS CERTIFICATE PROGRAM IN TRANSPORTATION MANAGEMENT



Anthony Palmere, Assistant General Manager of Unitrans, teaches the introductory transportation course

For professionals who seek to expand their understanding of society's complex transportation needs without tackling a graduate degree, there is another option. UC Davis Extension, the continuing education arm of the university, offers a certificate program in Transportation Management. Students also may enroll in individual courses - all of which are UC approved and offer academic credit.

The UC Davis Extension mission is to deliver knowledge that improves people's lives. Whether it means acquiring the skills to solve a business problem, the confidence to pursue a new career, or the opportunity to explore new interests, UC Davis Extension's goal is to help individuals and organizations succeed through the transformational power of learning. Established in 1960, UC Davis Extension has been educating area professionals for over 40 years.

The curriculum of the new Transportation Management Certificate Program takes a macro-level approach to studying transportation as it relates to planning, policy, legislation, the environment and organizational management. It also introduces fundamental business administration concepts and their application to transportation management.

The program is ideal for transportation or land use professionals who want to expand their knowledge and skills in organizational or business management, or broaden their education about transportation systems, and for professionals working outside the transportation field who want to become involved in management, planning or development of transportation systems.

Contact: 800-752-0881

http://www.universityextension.ucdavis.edu/certificateprograms/cert_transport.html



Extension instructor Michelle DeRobertis teaches a bicycle and pedestrian planning class