



GATE Center of Excellence

Fuel Cell, Hydrogen, and Hybrid Vehicle

GRADUATE STUDENT MANUAL

UC Davis GATE Center of Excellence Research Program

The UC Davis Fuel Cell, Hydrogen, and Hybrid Vehicle (FCH2V) GATE Center of Excellence established in 2005 is focused on research, education, industrial collaboration and outreach within automotive technology.

A systems integration philosophy is guiding the FCH2V Center's education and research activities. The Center is using its knowledge and understanding of systems to identify critical research needs and design efficient and effective research and education initiatives. It is integrating the latest thinking on fuel cell and hybrid vehicle systems with hydrogen energy systems modeling. The focus is on training students to approach their work from both micro and macro perspectives — to understand vehicle design at the component as well as systems integration level.

This document provides information for current graduate students about the GATE Center. We seek your feedback on student research interests to help in our program planning. Specifically, this document includes:

1. Graduate student opportunities
2. Website Services
3. Graduate student expectations
4. Program events & regular meetings
5. Appendix A: Research project write-up instructions

Graduate Student Opportunities – Summary

As a graduate student with GATE Center sponsorship, you have a large number of opportunities, many of which you will not find in other graduate programs. These opportunities are available to all program graduate students and we encourage you to take full advantage of them. Specific opportunities include (but are not limited to):

- *Graduate research funding while you are working on completing a graduate degree*
 - Research funding provides full support for the three academic quarters, including tuition, fees, and a stipend, summer quarter funding must be provided by your research advisor.
 - Note: Funding is not guaranteed, after first year continued funding is contingent upon performance and a new grant proposal.
- *Support for publications and conferences, including event and travel reimbursement*
 - In many cases, conference information will be provided to you. However, it is up to you and your advisor to identify specific publication and speaking opportunities to enhance your graduate experience. Specific requests should be made to the Director and/or the Program Manager for travel, event, & publication cost reimbursements. Instructions regarding the application for travel money can be found in a later section.
- *Direct interaction with the U.S. Department of Energy and external experts*
 - The GATE Center will hold several workshops each year with representatives from the U.S. Department of Energy (U.S. DOE) and invited experts. You can meet and interact with U.S. DOE representatives and invited experts, present your research results, and get valuable feedback.
- *Internship opportunities with program sponsors and external experts*
 - Internship opportunities may be available from private or public sector organizations in the region. You are encouraged to seek out opportunities and identify job descriptions that are complementary to your graduate experience.

Website Services

The GATE Center Website is regularly updated with additional features to benefit our students, faculty, and staff. Below you will find a list of the web services that can be found at <http://GATE.its.ucdavis.edu>.

- *Create a homepage*
 - Within your first week you should be issued a login and temporary password for the GATE Website.
 - If you have not received a login and password, please let us know.
 - Please change your password once you receive your temporary password.
 - Your login should be the portion of your UCD email address before the “@”
 - After you log in, you will find your username above the top navigation bar
 - Clicking on your username will allow you to view your home page
 - You can add content or edit your homepage by using the tabs located above the body text
 - In addition, you can manage the content on your home page by using the “my folder” link located to the right of your homepage link
 - If you encounter any problems, contact the Assistant Program Manager, Daniel Mayers (drmayers@ucdavis.edu).
- *Publications*
 - In an effort to make sure that our sponsor has the most up to date publications, please keep the Program Manager informed with research papers or presentations that you complete. These will be posted on the program website. We prefer to post *.pdf, *.doc, or *.ppt formats for download; however, if you have an external link to your papers we can reference that instead.

Graduate Student Expectations

To take advantage of the GATE Program opportunities, there are expectations and requirements for all graduate students in the program. These expectations help ensure that you are getting the most out of your graduate experience and that the program is a success.

- *Actively lead a GATE research project. Follow through on the research project plan outlined in your grant proposal and actively work with your advisor. An annual review of your research progress will be conducted.*
- *Generally, your student progress review will focus on your progress in developing your thesis, your willingness to engage with your advisor and others for assistance, identifying publication opportunities for your research, and meeting deadlines set by your advisor and the program.*

- **Reporting Deadlines**
 - Twice a year (March 15th and September 15th) and at the request of your advisor or the director, you are required to complete the “Research Project Write-up Reporting Form”. The purpose of this document is to outline your project objectives, goals, and accomplishments. This should be used as a working tool for project planning between the graduate researchers and your project advisor. A portion of this document will be used in the program reports to the U.S. DOE – please ensure the update is clear, well written, but concise. Please complete this document in a timely fashion. The link to this form is included in Appendix A.
 - Prepare and present a summary of your research at the annual U.S. DOE Program Meetings, usually held at UC Davis. The schedules vary for these events. The Program Manager will inform you of exact dates and presentation deadlines.

Program Events & Regular Meetings

We plan to conduct several events per year for the U.S. DOE. These may be research workshops focused on particular technical topics, program review meetings, or public outreach events. The Program Manager will inform you of the exact dates and opportunities.

GATE Technology – Related Courses

Below is a list of courses with direct relevance to the GATE Center’s objectives:

- XXXXX:
- XXXXX:

Supplemental Funding and Internship Opportunities

Some of the opportunities in the GATE Center will require you to apply for them ahead of time; specifically, travel and internships. Below are the methods for applying for these awards.

- **Travel Awards**

The GATE Center understands that networking and attending conferences are vital for a successful academic career. Accordingly, the GATE Center sponsorship includes travel money for every student funded through the program. On an academic calendar basis (October through September), \$1,000 is reserved per student for travel to conferences and professional meetings. Your research advisor will work with you to identify specific publication and conference opportunities that pertain to your field of study. Travel money may be used to cover transportation, lodging, conference fees, and publication cost reimbursements. In paying for food, please remember that the program will not reimburse for alcohol purchases. In order to receive a reimbursement, the ITS-Davis Travel Reimbursement Worksheet needs to be filed with the Program Manager and the ITS-Davis Financial / Development Assistant.
- **Friends of ITS-Davis Additional Travel Funds**

The Friends of ITS-Davis program has established an annual fund to provide supplementary travel funding for students in ITS-Davis. Domestic awards are limited to \$700 and international awards are limited to \$900. These funds are intended to supplement, not replace, the travel funding through other programs. If, for example, the total cost for a conference trip was \$1500, one could use their \$1000 GATE funding and apply for an additional \$500 through Friends of ITS-Davis. This money is reserved

specifically for oral presentations, with the exception of the annual *Transportation Research Board (TRB)* meeting. A thorough explanation of the award policy can be found at <http://www.its.ucdavis.edu/education/ttp/StudentTravel.html>

- **Additional Computer Resource Fund**

The Friends of ITS-Davis has a computer resource fund. On an annual basis, students can apply for awards between \$100 and \$250 for computer hardware that will benefit the individual. These commonly include monitors, printers, etc. Documentation on this award can be found at <http://www.its.ucdavis.edu/friends/student-services/computerFund.html>

Appendix A – Research Project Write-up Reporting Form

There is a PDF reporting form available for download from the website at <http://gate.its.ucdavis.edu/student-documents/GATE%20Reporting%20Form.pdf>. Please follow the instructions on the form. On the last page there are six fields for uploading image files. Do not worry about formatting the images in the document as the Program Manager will adjust the size and ratios to fit them into the compiled final report. For reference, below is a screen shot of the first page of the document.

**UC Davis Fuel Cell, Hydrogen, and Hybrid Vehicle (FCH2V)
GATE Center of Excellence
Reporting Form**

Reporting Period (MM/YY to MM/YY)

Fellow Name:

Academic Quarter

Project Title:

Instructions: Please fill in the fields below

Project Description (no word limit) [reference figures in body of text (e.g. fig 1.0) and click fields on page 5 to upload]