A Jump Start for Science Students

It’s not often that a graduate student receives a signed photograph from undergraduates with words of thanks. But Daryl Haggard is not just any graduate student. For students in the Astronomy Department’s Pre-MAP program, Haggard is a bridge to science research—and a mentor and role model.

Pre-MAP, short for Pre-Major in Astronomy Program, is designed to encourage more underrepresented students to pursue careers in astronomy and other science disciplines. In its first year, Pre-MAP recruited seven participants; next year the number is likely to double.

Pre-MAP was the brainchild of graduate students Marcel Agüeros, Kevin Covey, Andrew West (who has since graduated), Haggard, and astronomy professor Eric Agol, who were interested in increasing diversity in the department. They envisioned a program, loosely based on the UW’s successful Freshmen Interest Group Program, that would provide science-oriented students with a sense of community and opportunities to learn about astronomy research during their first year on campus.

“A lot of people can’t see what astronomy will lead to as a career,” says Haggard. “That’s a big concern—what kind of job they’ll be able to get. They tend to go into fields that are more familiar. We wanted to give them an idea of what it would look like to be an astronomer.”

Integral to Pre-MAP are interactions with faculty, graduate students, and postdoctoral students. During their first quarter on campus, Pre-MAP students are enrolled in Astronomy 102, an introductory course, as well as a Pre-MAP seminar led by Haggard. The seminar serves as an introduction to research methods and opportunities. The students observe researchers in action—recently helping a graduate student and postdoc gather data on pulsating white dwarfs (a type of star) via a remote connection to the Apache Point Observatory in New Mexico—and then work, in small groups, on faculty or postdoc research projects.

After their first quarter, five students chose to continue participating in astronomy research, working with graduate students or postdocs. “We had even more conversion of students to doing research than we expected,” says Agüeros. “We hope they’ll keep that momentum.”

Mentoring is another key element of Pre-MAP. Graduate students and postdocs serve as unofficial mentors to the students involved with their research, but Haggard is trying to build other mentor relationships as well—with faculty, graduate students, and advanced undergraduates. Most important, the students have each other.

“They feel a lot of unity with each other,” says Haggard. “There’s a sense of creating a little community within the big community. They have a home. It
Maya Lin first catapulted to public attention in 1981 when, as a 21-year-old student at Yale University, she won the national design competition for the Vietnam Veterans Memorial—now the nation’s most visited public monument. From April through September, the Henry Art Gallery is devoting its expansive Stroum and East galleries to an exhibition of new work by this celebrated artist.

Lin is widely recognized for a remarkable body of work that includes monuments, earthworks, architecture, and landscape works. The Henry exhibition, “Systematic Landscapes,” shows how Lin continues to explore landscape as both form and content. Included are recent sculptures, drawings, and large-scale installations.

The artworks reveal new and at times unexpected views of the natural world: from the topology of the ocean floor to the imagined form of a large body of water, from an iceberg’s shape—both above and below the ocean’s surface—to the undulations of a mountain range.

The exhibition was organized by Richard Andrews, director of the Henry. Maya Lin will speak about her work on April 20. For details, visit www.henryart.org.

Translating Data Through Visuals

Remember the famous saying about a picture being worth a thousand words? Chris Adolph would like to revise that.

“A picture better be worth a thousand words,” he says. And he’s offering a course to make sure that happens.

Adolph, assistant professor of political science and a faculty member of the Center for Statistics in the Social Sciences (CSSS), has created a new course, “Visualizing Data,” to help graduate students effectively translate their research data into a graphic format. The course is offered through CSSS.

“It’s more effective to present statistical models visually rather than showing a table with mysterious numbers,” says Adolph. “The information is equivalent, but if I need to explain my research to someone else, I absolutely know which one I’d use.”

There are plenty of computer programs that translate data into simple graphs, but these fall short when dealing with the complex data that social scientists consider.

“You can put a lot more information in a graphic than people are used to doing,” says Adolph. “But if you try to create a graphic of this sort without training, you will probably produce some awful pictures. Often the emphasis is on dressing up the data rather than showing the relationship between variables. Such graphics can fail to focus on what is most important and can be misleading. These are big problems.”

To emphasize the value of effective graphics, Adolph offers the example of the Challenger disaster. “The night before the launch, the makers of the solid
rocket boosters were worried that cold temperatures during the launch could lead to O-ring damage, based on past data," says Adolph. "They tried to convince NASA to delay the launch. But what they sent NASA—29 sheets of handwritten notes, with tables of temperatures—didn't make a convincing argument. If they had presented the data in a way that clearly demonstrated the very high level of risk, NASA probably would have cancelled the launch." Adolph has created a graphic, using the original data, to prove his point. In that one visual, the connection between cold temperatures and O-ring damage is unmistakable.

Although graphics are usually a tool for explaining one's research findings, sometimes they can actually influence those findings. Graduate students in Adolph's class create visuals using data from past research projects; sometimes they discover different results when they present the data visually.

"The data have not changed, but by plotting them in a picture, taking away unnecessary information, students can see something quite different," says Adolph. "Sometimes something not obvious turns out to be a big finding. Sometimes something that seemed obvious turns out to be insignificant."

Worth more than a thousand words? Absolutely.

Religion, Violence, and Peace

After the attacks of 9/11, Jim Wellman began asking a difficult question: Is religious violence inevitable? Now he and Scott Noegel are exploring that question with students in a new course, "Religion, Violence, and Peace: Patterns Across Time and Tradition."

"Some scholars have argued that religion has been 'hijacked' by violence," says Wellman, assistant professor of western religions in the Jackson School of International Studies. "Others have asserted that religion is inherently violent. Still others posit that religion, conflict, and violence are interwoven across history and cultures."

Wellman and Noegel, professor of Near Eastern Languages and Civilization, offer no answers. But using ancient and contemporary case studies, they pose plenty of questions. They explore a different theme in class each week, from religious terrorism to religious symbolism to peace movements. Students write weekly papers, participate in an online discussion moderated by teaching assistants, and research their own case study.

"The case studies we present in class are intended to serve as models, to give students a sense of the kinds of case studies they can do," says Noegel, who considers the students’ case studies the heart of the class. "We don’t have answers for the questions we are posing. Our goal is to have students debate the questions and articulate their own voice."

With 150 students in the class, the professors are looking forward to reading the students’ diverse case studies at the end of the quarter. "Our hope is that they produce knowledge here, partnering with us as religious scholars," says Wellman. "I think this is pretty exciting."

Get an Insider's Look at A&S During Washington Weekend

Wondering what’s new and exciting at the UW? You can find out firsthand during Washington Weekend, April 27-29. For three days, the campus will be offering public tours, lectures, demonstrations, performances, and more. In the College of Arts and Sciences, more than 20 departments will be participating.

"I often talk about the tremendous breadth and depth of the College," says David Hodge, dean of Arts and Sciences. "During Washington Weekend, visitors can experience it themselves. We open our doors so that the community can share in the excitement and sense of discovery that we witness here on a daily basis."

Many departments will be offering tours and open houses. Take a turn on a pottery wheel in the School of Art, visit the Pacific Northwest Seismograph Network’s Seismology Lab in the Department of Earth and Space Sciences, learn about the extensive plant collections in the Department of Biology’s Botany Greenhouse, and tour the Department of Anthropology’s archaeology lab, where prehistoric artifacts are analyzed.

Want to learn more about topics in the news? The Jackson School Alumni Club will present a panel discussion on the current state of affairs in Iraq. Astronomy
Professor Don Brownlee will speak about leading NASA’s Stardust mission, which recently made news when it gathered dust from a comet streaking across the sky. Through its alumni club, Department of Economics faculty will speak about 2005 Nobel Prize research on game theory. And the Department of Communication is hosting a conversation with Husky football Coach Tyrone Willingham.

There will be performances and exhibits throughout the College, including free concerts in the quad, presented by the School of Music. The School of Drama will offer mini-performances, DXARTS will present experimental works, and the Department of English has scheduled a book reading and discussion. The Henry Art Gallery, Burke Museum, and Jacob Lawrence Gallery will offer exhibitions as well.

Slavic Fest will be presented by the Department of Slavic Languages and Literature, with a symposium, a lecture on Czech-Slovak costumes (in conjunction with the opening of an Allen Library costume exhibit), a folklore parade, and a performance of traditional dances and songs.

Thanks to fortuitous timing, the UW will be hosting the Regional Ethics Bowl during Washington Weekend—a wonderful opportunity to observe some of our brightest students debating specific ethical scenarios with students from other schools. The UW team won both the regional and national Ethics Bowl in 2005.

To learn more about these and other activities scheduled for Washington Weekend, including times and locations, visit www.UWalum.com or call 206-543-0540.

Celebrating Our Distinguished Alumni

Each year, the College of Arts and Sciences celebrates the successes of its faculty, staff, students, alumni, and volunteers at the Celebration of Distinction. This year’s event will be held on May 18 in the HUB Ballroom on the UW’s Seattle campus.

Four distinguished alumni will receive special recognition at the dinner for their exceptional accomplishments. Honorees are nominated by Arts and Sciences departments and selected by a committee of College volunteers, board members, and divisional deans. This year’s honorees include:

The Honorable Tom Lantos (BA 1949, MA 1950, Economics)
Congressman Lantos is currently serving his 13th term in the U.S. House of Representatives. Born in Budapest, Hungary, he survived the holocaust and arrived in the U.S. on an academic scholarship in 1947. Founder of the Congressional Human Rights Caucus, he continues to serve as co-chairman. For three decades prior to his service in Congress, Tom Lantos was a professor of economics, an international affairs analyst for public television, and a business consultant. He is the only holocaust survivor ever to serve in the U.S. Congress.

Kristina B. Katsaros (BS 1960, PhD 1969, Atmospheric Sciences)
Recently retired as the Director of NOAA’s Atlantic Oceanographic and Meteorological Laboratories in Miami, Dr. Katsaros came to the UW as a student in 1957 and joined the faculty in 1969. She left Seattle to lead two national laboratories, first in France and then in the U.S. A member of the prestigious National Academy of Engineering, she has received numerous scientific awards for her research, leadership, and teaching. In 2003, she returned to the UW as an affiliate professor.
Herbert Lindenberger (PhD 1955, Comparative Literature [English])
A specialist in English, German, and French literature of the 19th and 20th centuries, Herbert Lindenberger launched the Comparative Literature Department at Stanford University in 1969, shaping what many consider to be the strongest literature faculty in the country. He also has served as president of the Modern Language Association, the largest national professional organization for the humanities. Now a professor emeritus, he is a tireless promoter for opera—his passion—and appears as a featured speaker on its behalf around the world.

Roger Shimomura (BA 1961, Art)
Artist Roger Shimomura, a distinguished professor emeritus from the University of Kansas, has received every major award accorded there for teaching and research. His art addresses socio-political issues of Asian Americans, often inspired by diaries from his late immigrant grandmother. Shimomura has had more than 100 solo exhibitions of paintings and prints, and has presented his experimental theater pieces at many significant venues, including the Smithsonian. Shimomura’s personal papers are being collected by the Archives of American Art, Smithsonian Institution.

All faculty, staff, alumni, and friends of the College are invited to attend the Celebration of Distinction. For more information, visit www.artsci.washington.edu/cod2006/ or call 206-616-4469.