

**Philosophy students correspond with NASA scientists on simulated Mars mission**

Students in Dr. Per-Erik Milam’s introduction to ethics in science and engineering class recently had the unique opportunity to dialogue with members of NASA’s HI-SEAS Mission 3 crew, which is currently simulating a mission to Mars. Dr. Milam’s sister, Sophie, is one of six scientists stationed inside a geodesic dome along the slopes of Hawaii volcano Mauna Loa for the eight-month mission, which began last October.

As part of the mission’s educational outreach efforts, the crew has communicated via video with schools nationwide. Students in Dr. Milam’s philosophy class submitted a series of questions on the topics of gender and diversity in engineering, safety and the value of space exploration. The crew’s responses are posted to YouTube .

“Our collaboration was a great opportunity for these students,” Dr. Milam said. “The HI-SEAS project, and space exploration in general, raises a number of important ethical questions. The opportunity to converse with the scientists and engineers working on such a project about something like gender disparity in the STEM fields, or the value of space exploration, is immensely valuable.”

Inside the dome, the crew’s research projects include planting a food garden, developing 3-D printing and virtual reality applications, creating fitness programs, mapping microbiomes and identifying orbital trajectories for missions to Mars. Each member brings a different area of expertise to the crew. Sophie, a mechanical engineer, specializes in the robotics field, with a particular focus on tensegrity robotics controls.

“Tensegrity structures are robust systems with a natural redundancy that makes them potentially well suited to exploration of hostile habitats including other planetary bodies,” Sophie said. “Ironically, the nature of the structures makes them difficult to design a controller for, and a robot without a good controller is pretty much useless. To counter this obstacle, my research, which is heavily influenced from my internships at NASA Ames Research Center working with the Tensegrity Team within the Intelligent Robotics Group, looks at computationally-evolving controllers that can ‘learn’ different walking gaits for their structures.”

Funded by the NASA Human Research Program, HI-SEAS is led by researchers at the University of Hawaii at Manoa. Learn more about the mission at [hi-seas.org](http://hi-seas.org).

**Nursing students teach emergency preparedness to Macomb County fifth graders**

Oakland University School of Nursing students are teaching emergency preparedness to upper elementary students in Macomb County.

As part of the program’s teaching initiative, students are working with the Macomb County Health Department (MCHD) to teach disaster preparedness.

“It ties into our health promotion course objective by teaching health promotion education to children and their families by increasing community resiliency,” said Kim Holka, OU nursing adjunct instructor.

MCHD and the Macomb County Health Department Medical Reserve Corps partnered with the Macomb Intermediate School District, Health Occupation

Students of America and Oakland University’s School of Nursing to present emergency preparedness lessons to fifth grade classrooms throughout Macomb County. This pilot program was made possible through a grant received by the MCHD for their “Youth Emergency Preparedness Outreach Initiative.”

“We’re enthusiastic about our partnership with the Macomb County Health Department,” said Holka, who is also a member of the Macomb County Reserve Corps. “This course has helped students get involved in the community.”

The collaboration between MCHD allows nursing students to learn about emergency and disaster preparedness in class and then utilize their training with-

in the community.

This initiative increases community awareness by teaching fifth grade students how to talk with their parents about basic emergency preparedness, including communication plans, first aid kits, and evacuation materials. By becoming leaders in the outreach program, nursing students gain risk communication skills that will benefit them if deployed in an emergency.

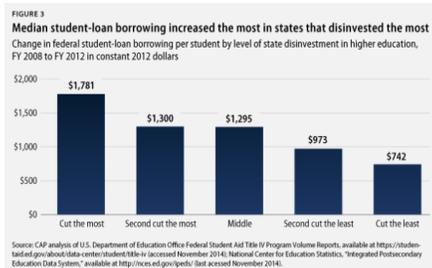
“The class helped me to better communicate with different age groups,” said nursing sophomore Kristiana Hila.

“The fifth graders were very engaged with our presentations, so I think they took a lot from it.”



## Student Borrowing Highest in States That Slashed Higher Ed Funding

From the Center for American Progress's new report, *A Great Recession, A Great Retreat*:



*Higher Ed Today*  
December 5, 2014

## OR: Governor proposes 14 percent funding increase for higher education

Oregon Gov. John Kitzhaber (D) outlined a two-year education funding plan last week that increases state support for public colleges and universities by 14 percent, boosts community college funding by 7 percent and raises state appropriations for financial aid by 25 percent. Overall state spending for K-12 and higher education would increase 9 percent if the governor's budget is approved by the state legislature. Kitzhaber will submit his budget plan to the state legislature early next year.

*The Oregonian*  
December 1, 2014

## State funding for public colleges dwindling

### Dive Brief:

- In fiscal year 2012, for the first time, tuition surpassed state money as funding sources for public universities, according to a new Government Accountability Office report.
- According to the GAO, the statistic is evidence that college is becoming unaffordable, the Huffington Post reports.
- Tuition in 2012 accounted for 25% of total revenues for public colleges and universities, compared to 23% for all state sources combined — a dip from 32% in 2003.

### Dive Insight:

The GAO study, released last month, looked at figures from 2003 through 2012. The federal Pell Grant program now accounts for a smaller portion of the total cost of college than it ever has. In the 1970s, about three-quarters of the public college revenues were from state sources. While young Americans typically blame colleges and universities for the rising student debt problem, it is state budget cuts that are driving up tuition, the GAO reports.

*Education Dive*  
January 6, 2015

## State Disinvestment in Higher Education Has Led to an Explosion of Student-Loan Debt

Center for American Progress

The author of this paper examines state disinvestment in public higher education during the Great Recession and the relationship between state funding cuts and increased student debt.

According to the paper, states that have reduced funding for higher education the most in recent years have graduates with greater debt levels. The paper concludes with a call for implementing the Public College Quality Compact, a proposed federal grant program that would require states to create new funding streams for higher education, make college affordable for low-income students, improve institutional performance, and remove barriers to degree attainment by standardizing admissions and transfer policies and raising K-12 learning standards.

Report can be read at <http://cdn.americanprogress.org/wp-content/uploads/2014/12/BaylorStateDivestment.pdf>

*Center for American Progress*  
December 3, 2014

# State and National Headlines

## Students Applying to More Colleges Nationwide

The total number of colleges that students are applying to is on the rise nationwide.

Counselors across the country say the rise in applications is due to the proliferation of the Common Application, on top of a growing fear, especially among higher performing students, that they will not get into the more selective schools.

The National Association for College Admission Counseling is also reporting an increase in the number of applications received at most four-year colleges.

The most recent data on the topic is from 2012, when the association reported 28% of college freshmen having submitted at least seven applications for admissions.

*Education News*  
January 8, 2015

## Gates Foundation initiative looks to broaden discussion of college value

### Dive Brief:

- An initiative funded by the Bill & Melinda Gates Foundation is trying to change the public discussion about what can be considered a valued outcome for college graduates.
- The Post-Collegiate Outcomes Initiative is consider-

ing four overlapping categories of graduate outcomes: public, private, economic, and human capital, the Chronicle of Higher Education reported.

- A public human capital outcome example would be charitable giving, while a personal human capital outcome would be career satisfaction.

### Dive Insight:

The idea behind the initiative is to move the college value discussion away from just an earnings and gainful employment calculation.

The project is managed by the American Association of Community Colleges, the American Association of State Colleges and Universities, and the Association of Public and Land-Grant Universities. The group plans to seek input on the framework from different perspectives over the next few months, and it has already had discussions with the U.S. Chamber of Commerce Foundation to get employer points of view.

*Education Dive*  
January 6, 2015

## Today's College Students Are More Diverse than Ever

America's postsecondary population is more diverse than ever before. This infographic from the Bill & Melinda Gates Foundation is designed to demonstrate the

extent of this diversity by imagining America as 100 college students.

From full-time to part-time employment, a wide age range, and a mix of learning environments, it is obvious that America's college students no longer fit one mold.



*Higher Ed Today*  
December 19, 2014

## Study: Financial Aid Drives 4-Year Enrollment, Persistence

Students who received privately funded scholarships were more likely than similarly qualified peers who did not to enroll in four-year rather than two-year colleges and to remain enrolled into their second year, according to a randomized study described in a paper from the National Bureau of Economic Research.

The study (abstract available here), which was conducted by economists at Massachusetts Institute of Technology and Har-



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## January 2015 *NEWSLETTER*

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### State and National Headlines *CONTINUED*

vard University, found that the effects of the aid in encouraging enrollment and boosting persistence were especially pronounced among nonwhite students and students with lower grade point averages and standardized test scores -- those who often are not reached by merit-based aid programs offered by states and colleges.

*Inside Higher Ed*  
January 13, 2015

**Higher ed requesting \$66 million more in '16**

MONTGOMERY — The Alabama Commission on Higher

Education is requesting a \$66.6 million increase in state funding for fiscal 2016.

The budget recommendation approved Friday would mean a 5 percent hike in funding for the state's two- and four-year institutions. The total budget request is \$1.53 billion.

Commission officials said it is too early to discuss possible tuition increases for the next academic year.

*DecaturDaily.com*  
December 6, 2014