

HIGHER EDUCATION

Recession Hits Some Sciences Hard At Florida State University

Philip Froelich, 63, is the tenured Francis Eppes Professor of Oceanography at Florida State University (FSU) in Tallahassee. He won't be much longer. Despite a distinguished 31-year career as a researcher and administrator, he will be laid off next May. And despite a positive external evaluation within the past year, his department—much diminished by layoffs—will be no more, folded along with the geological sciences department into a new department dominated by meteorology. “Why would you cut Flip Froelich? It doesn't make any sense,” says geologist Michael Perfit of the University of Florida (UF), Gainesville.

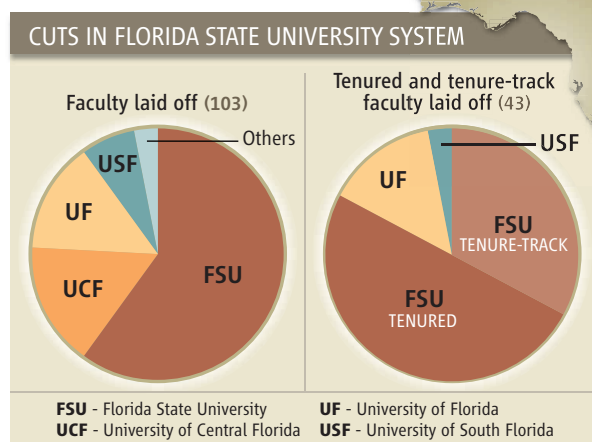
It's all about money, of course. When the cash-strapped Florida state legislature recently slashed funds for higher education for the third straight year, big across-the-board cuts spilled down through individual state university budgets. But at FSU—one of the “big four” Florida state schools—the fiscal crisis has turned into a ravaging torrent for a few departments, most of them in the sciences.

In the end, unlike at other universities, FSU administrators balanced their budget by firing many faculty members, including many tenured professors like Froelich. That decimated the geological sciences, oceanography, and anthropology departments. “The layoffs at FSU have truly devastated faculty morale across the campus,” says anthropologist Cheryl Ward of Coastal Carolina University in Conway, South Carolina, who left FSU before the cuts. They “caused lasting harm to science programs.”

But to the FSU administration, slashing small departments that were far from supporting themselves was the only way to avoid permanently undermining education across the university. The deep, targeted cuts were unfortunately the best option, says FSU Provost Lawrence Abele. “I don't believe in cutting across the board; that weakens everything,” he says.

There's no disagreement on the 39,000-student FSU campus that the budget situation has gone from serious to dire. The big, tax-generating housing bubble burst early in Florida, which has no state income tax to cushion the loss. The Florida legislature cut the state university system's annual \$380 million budget by \$82 million over

2007 to 2010—\$55 million of it in this academic year. That budget, plus tuition, pays all salaries in the state system. And at slightly over \$3100 last year (up 15% this year), tuition at Florida state universities was the lowest in the nation, notes Joseph Travis, FSU's dean of the College of Arts and Sciences. “We're trying to run a Major League Baseball operation on a AAA or AA [minor league] budget,” he says.



Heavy FSU layoffs. The majority of faculty firings in the Florida State University System came at Florida State University (left), where about 80% of “tenure-line” layoffs occurred (right).

Across-the-board cuts “could cripple the institutional missions, starving everybody,” says Travis, so “you do elaborate cost-benefit analyses. Which of the programs are the weakest?” FSU President T. K. Wetherell made the criteria for judging the strength of a department or program explicit: student credit hours generated, degrees awarded, contract and grant expenditures, and tuition collected, all on a per-faculty as well as an absolute basis.

The state legislature funds FSU “based on enrollment,” Travis notes. The departments of geological sciences, meteorology, and oceanography came in at the bottom of 15 Arts and Sciences departments with about 6000 student credit hours per year each, according to Travis. Anthropology was fourth from the bottom with 11,000 hours; English, for example, had 50,000. “Sciences never pay for themselves,” says Travis. “There's always a subsidy arrangement” in which larger departments in effect help support smaller ones. But in the third straight

year of budget cutting, “the subsidy gets harder to find,” says Travis.

Targeted departments and programs within departments took heavy hits. Geological Sciences and Oceanography will be merged with Meteorology at the end of this academic year to form a new department of Earth, Ocean, and Atmospheric Sciences. Froelich thinks the merger is a reasonable idea but says “the university should have done it 2 to 5 years ago,” when more favorable economic conditions would have given any merged department better prospects. Anthropology barely survived elimination but will be diminished and restructured.

The numerous and often focused faculty firings have been much more controversial. Of the faculty laid off from 2007 to 2010 in the 10,700-faculty Florida State University System, 60% were laid off from

FSU's approximately 1750 faculty alone, according to data collected by FSU faculty members and provided by Froelich. Approximately 43 tenured or tenure-track faculty were laid off across the system. But according to FSU English professor and Faculty Senate President Eric Walker, 35 of those 43 “tenure-line” faculty were lost at FSU.

Of about 21 tenured faculty let go across the system, all or all but one were at FSU. The College of Education was hit hard, but 10 of that 21 came out of the College of Arts and Sciences, all of them scientists in the relatively small departments of geological sciences, oceanography, and anthropology. Oceanography, at least, had just this spring received a “glowing” evaluation from the university that included an external reviewer, according to Froelich.

Elsewhere in the Florida state system, faculty fared better. At UF, “we did not cut a lot of existing people,” says Provost Joseph Glover. “We did cut a lot of vacant and newly vacant positions. And we've spread [the cuts] over a period of time, [so] this year we only have left a small amount to do.” The geological sciences department was on the block for a while, notes Perfit, its chair. The problem, as he sees it, was that “we were just small. Some of the best [geoscience] schools in the nation are being cut just because

they're small" and would therefore seem to create only small losses to the university. His department survived, though for now the university is using stimulus money to pay everyone in the department.

FSU was the only university in the system to lean so heavily on faculty layoffs, but FSU's Travis still sees no way around that.

IRELAND

Embryo Ruling Keeps Stem Cell Research Legal

A ruling from the Irish Supreme Court has reignited that country's debate over the legal status of human embryos, confirming the legality of research with human embryonic stem cells (hESCs) but leaving such work in a regulatory limbo that may not be resolved soon. On 15 December, the court ruled that human embryos outside the womb are not "unborn" and therefore are not protected under the country's constitution. The case before the court, in which a woman wanted to implant frozen embryos against the wishes of her estranged husband, does not directly involve stem cell research, but an opposite ruling could have made such work unconstitutional. "It's not a green light" for hESC research, says Siobhán O'Sullivan, director of the Irish Council for Bioethics. However, the ruling means "that certainly hES cell research is not banned in Ireland."

Ireland, a largely Catholic country that has experienced a growth in biomedical research over the past decade, has no laws governing human embryos outside the womb. Abortion is illegal, but assisted reproduction and research with hESCs, which are derived from lab-grown embryos, are both unregulated. Scientists have been uncertain, however, whether the Irish Constitution, which "acknowledges the right to life of the unborn," prohibits derivation of hESCs or even work with ones derived elsewhere. Public funding agencies have been similarly perplexed about whether they could fund hESC research. No such work has so far been funded.

O'Sullivan says that because of the legal vacuum, it is difficult to say if any hESC research is going on in Ireland. "If you were using them, you wouldn't want to publicize the fact," she says. But several scientists in Ireland have said they would like to work with the cells, and Science Foundation Ireland acknowledges that a few, whose names have not been revealed, have applied for public funding to do so. Frank Barry, head of the Regenerative Medicine Institute at the

As to Oceanography in particular, "the discussion was never about ... value of research," he writes in an e-mail. "The discussion was always about whether we could continue to afford to subsidize" a department generating so few undergraduate credit hours and relatively few graduate degrees. And in 40 years the legislature has never

come back and restored funds it cut from the budget, he says. Other Florida universities like UF may be using stimulus money to avoid extensive faculty firings until budget cuts are restored or tuition increases accumulate, he says, but "we at FSU chose not to take this kind of chance."

—RICHARD A. KERR

National University of Ireland, Galway, says he has not submitted a grant involving hESCs, but he would welcome the chance to work with the cells. The ruling "is a major milestone for Ireland in terms of research with human ES cells," he says. "However, I think it also puts Ireland in a place where it does not want to be, where hESC research is both legal and unregulated."

In 2008, University College Cork (UCC) became the first major university in Ireland to explicitly allow work with hESCs. The univer-



Controversial move. University College Cork (*above*) issued regulations on research with hESCs, prompting a billboard campaign by opponents of such work.

sity's governors voted 16 to 15 to require scientists who want to work with hESCs to get approval from the university's ethics board. UCC also established a subcommittee to examine the proposed source of the cells, the goals of the intended research, and the applicant's expertise in the relevant fields. The move sparked widespread debate in Ireland, and no UCC researcher has publicly acknowledged seeking approval for hESC work.

So far, other universities have not followed UCC's lead. The Irish legislature, the Oireachtas, has also avoided dealing with the controversial issue, although ethical and law experts as well as scientists have been urging lawmakers to take action for years. A government Commission on Assisted Human Reproduction in 2005 recommended legislation to regulate fertility treatments. And in 2008, O'Sullivan's Council for Bioethics said in a paper that the government's failure to act "undermines the moral value of the embryo," and it recommended that a national regulatory body oversee embryo research.

That could be the council's final word on the subject. On 16 December, the government announced that the body would no longer be funded—a victim of severe budget cuts in Ireland. "There is now a vacuum in terms of ethical oversight," Barry says. But O'Sullivan says that the expertise that went into the council's report will still be available to politicians as they wrestle with the issue.

In the Supreme Court ruling, the judges urged the country's lawmakers to address the legal status of in vitro human embryos, calling Ireland's lack of regulation of fertility treatments "disturbing" and "undesirable." One judge cited hESC research as an example of how science has gotten ahead of the law. Health Minister Mary Harney responded by promising that the government would propose legislation in 2010 to regulate assisted reproduction, but she failed to reference hESC research.

O'Sullivan says speedy action in any case is unlikely, given that a lengthy public consultation period will be necessary. "I'd be very surprised if we have regulation in 2010," she says. But O'Sullivan hopes the process moves forward as quickly as possible. "The fact that the government has not yet regulated this area is absolutely incredible and very unfortunate indeed," she says. "It doesn't actually matter which side of the debate you sit on; what we have right now is cowboy territory." —GRETCHEN VOGEL