UCSC to Get Grades

Faculty members at the University of California at Santa Cruz voted 154 to 77 in late February to make letter grades mandatory for the first time in the campus's 35-year history, beginning with incoming freshmen in 2001. The faculty will vote at the end of May on whether—and in what form—to retain the current narrative evaluations system.

UCSC is one of just a handful of US institutions that use written evaluations to describe students' strengths and weaknesses and progress over a term. Some faculty and students fear that mandatory letter grades will shift the emphasis away from learning. The issue remains highly charged, and is likely to be revisited in a mail ballot to poll the more than half the academic senate who didn't vote.

Debate over whether to switch to a conventional grading system has come up periodically over the years. Proponents argue that UCSC graduates are at a disadvantage when applying for fellowships, entrance into graduate and professional schools, or industry jobs. They also worry about prospective students and their parents being turned off by the lack of grades. Not having grades gives the campus a "flaky, laid-back image," says physicist Bruce Rosenblum. "This not only hurts our recruitment, but much more important to me, it hurts the students we get."

To address such concerns, UCSC students have been able to opt to earn a grade point average since 1997. But it's not enough, proponents of mandatory grades argue. "Beginning students have little idea of what they will eventually do, and anyone encouraging them to opt for no letter grades can hurt them badly," says Rosenblum.

UCSC graduates are admitted to graduate school at a rate "second only to Berkeley within the UC system," notes physics chair George Brown. "The fact of the matter is that they are not handicapped [by not getting letter grades]." What's more, adds Brown, who also heads the campus committee on education policy, "UCSC gets plenty of highly qualified applicants."

For their part, UCSC students and alumni were overwhelmingly against mandatory letter grades. "I think it will change the nature of this learning environment," says Rachel Cannara, a senior physics major who spearheaded a letter-writing campaign against requiring grades. "Not having grades fosters collaboration, as opposed to negative competitive behavior among students." In physics, that can be especially important for women, she adds.

It's ironic to be moving to a more competitive structure at a time when teamwork is increasingly emphasized in the workplace, notes UCSC psychologist Barbara Rogoff. She is involved in developing plans for a system of streamlined narrative evaluations, intended to lighten the burden on professors, as well as make it easier for admissions committees and other outsiders to read UCSC transcripts. A lot of faculty members, even those who favor letter grades, want to have evaluations too. Says physicist Zack Schlesinger, "I am hoping we can keep positive aspects of our culture, in terms of how a class is taught, and how students learn. Students here never ask about grades or what is on the test. They are motivated by curiosity."

TONI FEDER

From Quarks to Squawks: Former Physicist Plays Avant-Garde Sax

At the tiny Museum of Contemporary Art in Washington, DC, John Butcher stood before his audience and introduced himself: "The pre-show publicity described my concert as freely improvised solo sax. That's usually guaranteed to keep people away in droves, so I'm glad you're all here!" Thus, one evening in February, did Butcher, free music improviser and former theoretical physicist, begin a performance of his characteristically unfettered, richly varied music.

Butcher, a native of London, first took up the saxophone in the 1970s while he was a physics undergraduate at the University of Surrey. After finishing his degree, he moved to London, where, as a graduate student at Imperial College, he continued to follow his interests in both physics and improvised music. Choosing quantum chromodynamics as his field, he worked on charmed quarks under the guidance of Hugh Jones. In his free time, he played saxophone in various avant-garde groups.

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But quarks and gluons weren't attractive enough to keep him in the world of physics. "I began to feel I wasn't making a difference," recounts Butcher. "I was just chipping away, filling in details." He also felt somewhat alienated from his fellow theorists. "At tea breaks no one seemed to talk much—they just sat there lost in their own worlds." In 1981, soon after earning his PhD, he became a professional musician.

Usually, saxophonists create notes by blowing over the single reed in the saxophone's mouthpiece. The reed, in turn, causes the column of air in the saxophone to vibrate at a fundamental frequency determined by fingering the saxophone's keys. With careful control of breath, lips and fingers, the saxophonist creates the warm, sweet tone characteristic of the instrument.

Although Butcher and other free improvisers don't completely eschew such nice notes, they strive instead to expand the variety of sound that can be produced with the instrument. At the Georgetown concert, Butcher's first piece (on soprano saxophone) opened with a sequence of piercing, simultaneously sounded overtones. At the start of his final piece (on tenor saxophone), the audience heard him blowing in such a way that the reed barely vibrated. The sound emerging from the horn resembled the washing back and forth of waves on a pebbly beach. To the listener, Butcher's solo improvisations unfold as a series of sonic episodes of strikingly different tone and rhythm.

Does a knowledge of physics help to make such sounds? "Not really," says Butcher, "but I do think more about the instrument as a tool for the