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A Small Step

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Sam Schuman's essay, "Cultivating: Some Thoughts on NCHC's Future" challenges NCHC and honors practitioners to expand the role of honors on campus so that honors may become the locus of a more generalized push for excellence in higher education. There is a symmetry in Sam's call since many people's first involvement with honors, as students, faculty, or administrators, was likely catalyzed by the general disinterest in excellence that pervades much of what passes for education on our campuses. The symmetry arises from going full circle, from the larger university to the safe haven of honors education to practice our craft, and then back to reinvigorate the surrounding academic community. Of course there is also irony in Sam's vision since I am sure that some people in and out of honors view the role of honors practitioners as pariahs on campus participating in a marginal enterprise out of the mainstream of the "real" enterprise of the university, with "real" being defined as producing grants, graduates, winning sports teams, revenue, knowledge, depending on an individual's bias.

Sam listed a variety of ways that honors could inject doses of excellence into the experience of students on campus not participating in honors. I am going to focus on one aspect, the classroom, using experience I am in the process of gaining, to explore possible ways that honors can broaden its influence and reach a larger audience on campus than just those students enrolled in honors.

This is my first academic year as a "returning" faculty member not directly responsible for honors on my campus. I was graciously given the fall semester to retool for my return to teaching this spring. My home department, Physics, had their teaching schedule worked out before they had any idea that I would be returning home. Hence I was given much leeway with respect to my teaching assignment for the spring 2001 semester. After much consideration, I decided to offer an experimental course on **Einstein's Spacetime**. Years ago, I had envisioned offering such a class

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as sort of a pre-major course designed to expose students planning to major in physics or related areas to some of the more fun aspects of the discipline before they entered the typical mind-numbing calculus-based introductory physics course. But like many ideas, I never got around to implementing this one.

One of the dead horses I have beaten during my long involvement in honors is the lack of challenging and serious science courses for students in liberal arts, business, education, etc. Although we have such a course in the Honors College at UNLV (see my essay in the previous issue of JNCHC), I began to envision a different course, one open to a broader range of students. I spent time in the fall designing a course that would introduce students to Special Relativity while requiring no other prerequisite for admission than some level of facility in algebra. As a topic, Special Relativity can be approached seriously and rigorously using logic, algebra, and a willingness to grapple with the surprising conclusions that arise. Therefore I confidently, probably overconfidently in retrospect, decided to offer a course built around the wonderful world of shrinking meter sticks and slow clocks to any student willing to declare herself or himself proficient at an unspecified level in algebra.

It is fair to ask what role honors played in my decision to design and offer such a course. First, offering a course is easier than enticing enough students to take it to meet the reasonable enrollment criteria that exist on campus. Therefore I recognized that I was putting a lot of time and effort into developing a course that might not attract enough students to overcome the enrollment barrier. Although this was a real risk, I thought I had two reasons for optimism. First, I thought that I could probably sell the course to the administration even if the course did not attract the nominal fifteen students required. (I thought I could get by with five or more students.) Second, I decided to use my connections with the Honors College to recruit students using their database. Although the course would not be offered as part of the honors curriculum, my plan was to teach it at a level of seriousness not typically found in a science course for non-majors. The pictured audience would be students in honors and students not in honors who would be attracted by the posters describing the course that were placed around campus.

An algebra-based exploration of Einstein's theory of Special Relativity. The topics covered will include but not be limited

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to time dilation, length contraction, the addition of velocities, the Lorentz transformation, the Twin Paradox, and Minkowski space-time diagrams. The beauty and consistency of Special Relativity will be emphasized. The only prerequisite is curiosity about the natural world and minimal skills in algebra. This course satisfies three credits of the Core Requirements in Science.

The development of Special Relativity by Albert Einstein in 1905 was the beginning of the revolution that has inexorably led to the current, and still evolving, view of the physical universe. Although Special Relativity completely reformulated the relationship of space to time, the intuitively bizarre conclusions of Special Relativity follow easily from two assumptions, a healthy dose of logical thinking, and a modicum of algebra. The consequences of Special Relativity have been affirmed experimentally over and over again.

One of the fundamental lessons that an understanding of Special Relativity forces upon the open-minded student is that human "intuition" has little effect on the rules that underlie physical reality.

As the starting date for spring semester registration drew close, I speculated along with my colleagues in physics about the chances of getting five or more students to enroll, which I thought sufficient to keep the course on the books. Since students in honors have priority registration, I was confident that the first few days of registration would determine whether or not I had an audience.

One of the things I love about life on campus is the unpredictability of things. An astounding array of students began to enroll for the course. It was scheduled for a room that held about 20 students in the Physics Building. The enrollment quickly necessitated a change to a larger room in the Engineering Building. The enrollment eventually peaked at about 40, fluctuated, and finally settled at something like 36. The students ranged from freshmen in fine arts to graduate students in political science and included a physics major or two. About six of the students were from the Honors College but the vast majority were students who wanted to learn about Special Relativity. My mind set quickly changed from wondering if

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the course would go, to wondering how I was going to present the material to a group of students with a bewildering array of backgrounds. I will leave a description of the actual class experience for a future article.

The idea of a hybrid course, one that sees as its audience a mix of students in honors and students not in honors, does not exist on our campus as a defined entity. Honors courses can be taken only by students in the Honors College. Of course students in honors take regular courses, but their density in regular courses rarely, if ever, is high enough to impact the class. In fact, I don't think the small number of students in my class who were from the Honors College changed the class dynamic. The principle roles the Honors College played was in giving me confidence that an audience could be found and that a nucleus of students in the class would be up to meeting the challenge of the material being presented.

Although I have done nothing to make the idea of hybrid courses more formal on our campus, it does seem to me an idea that could be generalized to broaden the impact of honors education on campus. The generalized idea would be to use faculty who have successfully taught in honors to develop hybrid courses that would be offered outside of honors. The rationale for using faculty with honors experience is two-fold. First, they have a realistic notion of the level of work that can be expected from students in honors and can use that notion to design a course with equivalent expectations. Also, if someone has successfully taught a course in honors, the idea of using the honors database to attract an audience is more likely to succeed.

Of course many faculty would argue that their regular courses are normally taught at an "honors level." Consequently, what is the need for hybrid courses? The Honors College or Program would operate as "broker" for these courses in the sense that it would offer faculty the opportunity to develop such courses. Interested faculty would negotiate with their chairs for permission to teach a hybrid course. The Honors College would agree to advertise the course within the campus honors community and encourage students to take these hybrid courses. It might even make sense for the University or College's course schedule to list hybrid courses in a special section to highlight classes that were designed to bring the "honors experience" to a broader group of students.

The visibility of such a program could be increased by having the Honors College offer only one or two hybrid courses a semester. Honors

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could even reward the faculty teaching such courses with a special stipend or some other recognition to reinforce the notion that honors is a good campus citizen concerned with enriching the educational experience of all students on campus. The idea of hybrid courses is presented here in malleable form that allows the resourcefulness of the honors community to mold it to fit the unique and varied circumstances that exist on campuses across the country. It is offered as one small step honors can take on campus in an effort to move incrementally toward the much grander vision for NCHC enunciated by Sam Schuman.

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