Davidson Mathematics and Science Center
transforming the campus

By Melanie Robbins ’06 M.A. Photos by Jeff Ross.
The new, 105,000-square-foot, four-story Davidson Mathematics and Science Center that opened this summer is “not just a building,” according to President Milton Glick, speaking at the June 3 VIP opening, “... it is a transformational building” that will change the nature of how faculty teach and students learn.

The building’s namesakes and major donors, Jan and Bob Davidson, did not merely invest in bricks and mortar, Glick continued, “They are investing in the people inside.” Calling them “true visionaries,” Glick noted that the Davidssons have dedicated their lives’ work to education, thinking always of the future, even in challenging economic times. “Every generation wants their children to have a better life than they had. This building is a part of making that happen,” Glick said.

Bob Davidson noted that the first talks about developing the new, four-story center began just five years ago. “One of the reasons that Jan and I moved to Nevada—besides Lake Tahoe—was the can-do spirit of Nevada.” With support from other donors, as well as the Nevada Legislature, Nevada showed its spirit and made the dream of the first new science building on campus since the 1970s a reality.

Bob also noted that the issues that face our nation and state often require top-rate scientific knowledge to solve. “70 to 80 percent of our population is completely out in left field about the science that underlies our problems,” he noted, adding that the new center will be used to train the problem-solving scientists and leaders of the future.

With regard to the University itself, Bob said, “You can’t have a first-rate university without a strong foundation in math and science. This has been true for 500 or 600 years.”

Jan Davidson said that completing the building was “wonderful,” and added, “We will do good things with this school and this facility.”

Jan and Bob Davidson received honorary doctorates from the University at the May Commencement ceremonies, to honor them for the many contributions they have made to Nevada and the nation. In addition to providing funds for the Davidson Center, they have been national leaders in the education of profoundly gifted children and have been at the forefront of nationwide efforts toward creating a knowledge-based economy. On the Reno campus, they founded The Davidson Academy of Nevada—a free public school for profoundly gifted middle and high school students located in the Jot Travis Building. At that ceremony, Glick said, “It is clear that Jan and Bob are two individuals who have had a profound impact on our campus, the state of Nevada, and our country.”

With some 70 percent of students henceforth slated to attend classes in the new facility on the southeast side of campus, the Davidson Center looks to have a long-term impact on all who teach or study there. But it’s merely a vessel, Glick noted, albeit a vessel built with a forward-thinking design that incorporates open spaces to promote student-to-student and student-to-teacher interaction, as well as state-of-the-art technology throughout.

The Davidson Center’s major features include the new 464-seat Nell J. Redfield Foundation Auditorium, the largest teaching-centered auditorium on campus, as well as the E.L. Cord Foundation wing with four, 80-seat, high-tech classrooms and a computer lab featuring leading-edge digital technology. The University of Nevada, Reno Foundation provided funds for the west wing, which will be the new home for the College of Science Dean’s Office, as well as the Department of Mathematics and Statistics.

The center includes a host of new laboratories: 11 for physics and bioscience, including one astronomy lab and a dedicated biology lab; four organic chemistry labs and eight general chemistry labs. All the new labs include top-of-the-line equipment and instrumentation that promise to upgrade the learning experience for students, as well as give faculty the ability to teach in novel ways. As one example, Mario Alpuche, assistant professor in chemistry, noted that one of the labs will be dedicated to analytical chemistry and will have equipment for mass spectrometry, gas and liquid chromatography, as well as electrochemistry instrumentation.

“Analytical separations are going to be a big emphasis in the new lab— the principle is that you take a complex mixture, you separate it into individual parts and then analyze the parts separately,” Alpuche said. “This type of equipment is widely used in many labs, such as an environmental lab or a pharmaceutical lab. The equipment will be very much like what students will encounter if they go to work in a lab that uses that technology.”

Jeff Thompson, dean of the College of Science, noted that the students he’s led through tours of the building “were in awe” at the prospect of taking classes in the new labs.

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University President Milton Glick
“It’s not just a modern feel; the building has modern equipment.”

In addition, the building itself is “much more open than older buildings,” Thompson said. “It’s designed to make people want to stay. The idea is to give them a home. There are places for people to sit down and talk to each other, work with each other. It’s designed so you easily gravitate toward those places. Currently, students waiting to get into their labs are sitting on the floor in hallways.”

The outside of the center is the same: open spaces, informal seating and gathering spaces, Thompson added. New landscaping shows off the stately columns on the back of the Paul Laxalt Mineral Research Building that were previously only visible from a back parking lot, and, instead of asphalt, new paved walkways serve as a conduit from Fleischmann Agriculture to Palmer Engineering and the lower Quad in front of Scrugham Engineering and Mines.

The Davidson Center will also serve as the new anchor for science and engineering, Thompson said. In addition to science students and many others who take Core Curriculum courses, all first-year engineering students will take classes in the center, he noted.

Before the Davidson Center was built, the College of Science was housed in various buildings across campus. This summer, the Dean’s Office will move from Ross Hall and the Department of Mathematics and Statistics will move from the Ansari Business Building into the college’s new headquarters. Mathematics and Statistics will be on the second floor with the dean’s suite on the fourth floor. The suite includes the Robert Z. Hawkins Foundation Dean’s Conference Room, an outdoor patio, a break room and a reception area.

All offices, halls and most classrooms have panoramic views of the Reno skyline or the surrounding “old Reno” neighborhoods, as well as nearby mountain ranges.

Swatee Naik, professor of mathematics and...
statistics, said it’s “quite exciting” to be moving to the new building. She also loves that the center’s name includes the term “Mathematics.” “It will help us have an identity,” she said. “We’re in what’s called the ‘business building.’ It doesn’t sound right.” Naik also believes that science and mathematics are a natural pairing.

Growing up in India, mathematics was not separated from science, said Naik, who has taught at Nevada since 1994: “We did physics along with math and it was coordinated quite well so that what you were learning in physics was proved in the mathematics class. So the beauty of mathematics came to me through science.”

The new center will help the reputation of the college and the University, and will lead to attracting more students, Naik said. “Given the times, it is especially nice that we have something happening here that will benefit the University. I’m really grateful for the gifts that made this possible.”

Richard Schultz, 2010 Foundation Professor, will be happy to shift from using labs as classrooms. “We’re squeezed here in the geological sciences and engineering department for lab space and classroom space,” he said while sitting in his office in the Laxalt Mineral Engineering Building. “Having the Davidson Center so close by means we can move our classes out of our laboratories and have classes where they should be: in ‘smart’ classrooms.” He noted that his department has had an “enormous flux” of students into its programs and is at capacity, thus the need to hold classes in laboratory spaces. “We’ve done
that for years. We’re overjoyed that the new facility has been built.”

David Zeh, biology professor, says that a typical Biology 190 class, Introduction to Molecular and Cell Biology, or the Core Curriculum course, Biology 191, Introduction to Organismal Biology, have as many as 250 students, which requires that they be held in a large lecture hall such as the auditorium in Edmund J. Cain Hall or the Jot Travis Building lecture hall—both destinations quite a hike from his office his Fleischmann Agriculture.

“It will be really nice to be able to just walk across courtyard and give our lectures in the new building,” Zeh said. Walking to the new food service area, located next to the main, ground-floor entrance of the Davidson Center, will also be a boon. “Right now, the nearest food on campus is in the business building or the Jot Travis Building.”

But it’s the new laboratories that will really make a difference, Zeh noted. “We’re really crunched for laboratory space for teaching undergraduate biology classes.” With biology courses required to advance within all health sciences fields, let alone biotechnology and biology majors, undergraduates pack the current lab spaces in Fleischmann Agriculture.

A laboratory course, Biology 192, supplements both introductory 190 and 191 classes, Zeh explained. But the new building will allow the biology department to transition so that lab classes will be associated with both introductory courses. “We’ll double the number of labs and we’ll be able to effectively double the number of students.”

The new laboratory space is welcome indeed to the physics department, said Professor Ron Phaneuf: “One of the issues we are having now is trying to accommodate all the students that we have in undergraduate labs in this building.”

The Leifson Physics Building is more than 30 years old, he said. “We’ve managed to rearrange some of the furniture and squeeze a few more students in, but we’re limited to about 18 students per lab section. And with the numbers of students that we have now, it creates scheduling problems. We’re looking forward to the new accommodations.”

The physics department will move all lower-division undergraduate labs to the new building. Like the other professors, having a new, large-capacity auditorium is a welcome addition. “The Schulich Lecture Hall [the round building next to Leifson Physics] is uncomfortable. There’s always a few empty seats, but students come in late and don’t want to crawl over people, so they end up sitting
in the aisles. We’re looking forward here to moving some of those large lecture classes to the Davidson Center.”

The department is also planning, as funding allows, to replicate and/or upgrade the demonstration equipment currently housed in Schulich Hall. “These demonstrations are important, especially in introductory classes,” he said, in order for students to conceptualize ideas such as accelerating an electron beam within a magnetic field.

Physics has a large teaching service load because many other disciplines require introductory physics. The department teaches three levels of introductory physics, calculus-based, which is for scientists and engineers; algebra and trigonometry-based, for general physics students, “and what we lovingly call ‘Physics for Poets,’” he said. “Physics 100, which requires a minimum of mathematics, is probably one of the more important classes we teach because a lot of future politicians and people who will be making important decisions take this class. I hope we are giving them a little bit of insight,” he said, echoing Bob Davidson’s sentiments about the importance of understanding scientific principles.

Students and alumni are excited about the possibilities in the new building.

Westfall Scholar Nichole Peterson ’10 (geography), saw the Davidson Building for the first time in June: “My first impression of it was that the design of it is so much different than what I expected. Typically, you just see white walls and square rooms—the design seems to be an afterthought. In here, the atmosphere is very clean, but without the sterility. It’s very modern and exciting.”

President Glick noted that the facility “replaces buildings built when the campus was barely computerized,” so the innovations in the building are not only welcome, but profound in their impact. “Generations of Nevada students will benefit immensely from this wonderful facility,” he said.

The Davidson Mathematics and Science Center was designed by H+K Architects, a Reno-based firm specializing in government, military, educational, and state and municipal building projects. PENTA Building Group, a commercial contractor headquartered in Las Vegas, constructed the building.