The ivory towers of academia, those old barriers that kept researchers at universities isolated from each other, are tumbling down at Oregon State University.

In their place, a tower of a new sort – a 74-foot-high, glass-paned atrium highlighting the university’s new Kelley Engineering Center in Corvallis.

Built to flood the interior of the engineering center with a healthy dose of light, the atrium also was designed to accomplish another goal: to bring faculty and students and visitors face to face in a setting that encourages mixing, mingling and a trading ideas.

Breaking down barriers of isolation and fostering communication has become the norm rather than the exception in university research these days. It’s especially crucial in the competitive fields of electrical engineering and computer science, the roots of the programs that will be housed in the center this coming fall, says Ron Adams, dean of OSU’s College of Engineering.

Oregon State University Kelley Engineering Center

PROJECT COST: $45 million
PROJECT SIZE: 146,000 square feet
PROJECT FINANCING: $20 million private donation and $20 million matching funds from OSU, with the university still seeking a remaining $5 million in private contributions
OWNER: Oregon State University
ARCHITECT: Yost Grube Hall Architecture
ENGINEERS: CH2M Hill, Glumac Inc., Interface Engineering, KPFF Consulting Engineers
CONTRACTOR: Skanska USA Building Inc.
OTHER ASSOCIATES: C3MG, DHC Consultants, Green Building Services, Smithgroup Inc., Martin Kelley, city of Corvallis Development Services, Clair Co.
Adams calls the Kelley project the “centerpiece” of an ongoing push by OSU to place its engineering program among the top 25 in the country.

“When we set out on this journey for the top 25, we chose to focus on two things,” Adams says. “One, we want every one of our graduates to be work ready. On the first day after they graduate from here, they know how to do engineering in … whatever context they’re in.

“Second … we want to be seen as among the best at collaboration. The whole process of innovation is driven by … the ability to collaborate.”

Collaboration is more than just an academia buzzword these days. It’s a concrete term that pencils out to dollars and cents – a lot of dollars and cents.

The majority of the funding that pays for the type of engineering research done at OSU, for example, comes from government agencies, which are looking for solutions to complex problems.

“It’s no longer possible for a single professor and a single graduate student to solve those (types) of problems,” Adams says.

And that’s where the atrium at the Kelley Engineering Center will come into play.

“It’s a mechanism to create opportunities for dialogue,” says Yost Grube Hall Architecture’s Steven Mortensen, who served as project architect for the center.

From a café and lounge seating areas to six sky bridges and walkways connecting with a staircase with landings on several levels, the atrium provides “little spaces for casual conversations, places to meet and chat about things,” Mortensen says.

The idea of providing places for small impromptu or chance meeting between graduate students and pro-

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**Favorite Feature**

“The open stair is probably my favorite element. It’s suspended from steel rods from the roof. The experience of walking down that stair and being on those landings, it really makes you feel like you’re floating in space.”

– STEVE MORTENSEN, project architect, Yost Grube Hall Architects

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**Martin Kelley Powers OSU Engineering Push**

When Oregon State University decided to try to move its way onto the list of the top 25 engineering schools in the country, administrators found themselves in a chicken versus egg situation.

The university’s College of Engineering needed to try to attract new faculty to the school while trying to boost research to retain the talent it already had.

In stepped Martin Kelley, who had graduated from OSU’s College of Engineering in 1950. There was little doubt in Kelley’s mind which should come first for the university. And it wasn’t the chicken. Or the egg.

“He said, ‘I think it should be the building,’ ” *recalls Ron Adams, dean of OSU’s engineering college.*

Kelley wasn’t just willing to provide his opinion. He also donated $20 million to help OSU begin building what would eventually turn into the $45 million Kelley Engineering Center in Corvallis.

It was that initial donation that Adams believes provided the spark to light the fire behind what has now become a grand-scale plan to boost OSU’s engineering program.

“The position I was in was trying to basically align a lot of people with this idea, both inside the (university) as well as outside,” Adams says. Kelley’s donation was “probably one of the biggest validating steps. A lot of things really broke loose as a result of his gift.”
fessors extends even to hallway areas, spaces that Mortensen describes as “little informal gathering nodes where students can bump into professors.”

But fostering ideas among professors and students is just one aspect of the collaboration expected to spring from the design of the engineering center.

With less and less funding coming from the state, public universities in Oregon are turning increasingly to help from the private business sector – opening their doors and inviting the companies in to see research as it’s being done.

That’s why the atrium’s north and south sides feature stretches of glass that will allow visitors to view projects going on in graduate student work areas.

Another perk for the collaborative process: laboratory spaces located further to the south behind the graduate student areas that allow for flexibility in configuration to meet the changing needs of research projects.

The flexible design is a new approach for OSU, a break with a tradition where a researcher did all of his or her work in the same laboratory environment during an entire career at the university. Instead, the new labs will host a project for its entire duration. Once that project is completed, a new one – along with a new project team – will move into the space.

OSU has already experienced the windfall that can be harvested from collaboration, innovations that can help the university’s engineering program advance its standing among programs from other universities around the country.

As an example, Adams points to OSU’s tsunami research lab, which is accessible through the Internet. Researchers anywhere in the world can tap into the lab, and plan experiments and participate in them without ever stepping foot on OSU’s Corvallis campus.

“What a lot of people don’t know is, that is the result of collaboration between computer science and civil engineering (programs at OSU),” Adams said.

Another OSU program, Tekbots, in which engineering students at the university build robots during their freshman year and then add new details based on the lessons they learn until they graduate, has caught the eye of other schools around the country. Texas A&M, recognized as one of the top engineering schools in the United States, has purchased the program to use for its students, Adams said.

OSU has more plans to update campus buildings to help push its engineering program forward. Within the next four years, Graff and Apperson halls will be remodeled to house programs in the engineering college. Further down the road, a new structure will be built for the college’s chemical, environmental and bio engineering programs.

But for now, Adams is satisfied to step back for a moment and watch the last few finishing touches on the Kelley Engineering Center, which is scheduled for completion in July.

“We believe the grand opening of this building will take us to the next level,” Adams says.

Project architect Mortensen also is counting down the days until the project is done. Once students and faculty move into the center in the fall, there’s a good chance he and the rest of the design team from Yost Grube Hall, including firm principal and project designer Nels Hall, will probably visit the center to query professors and students on how they like the building.

It’s something the firm does for almost every project it works on.

“We ask people spur of the moment how they like it and we always get a favorable reaction,” Mortensen says. “Some of the best satisfaction is knowing that for the people using it, it’s so natural for them to use the space, they don’t think about it twice.”