

Library Unlimited

NC State reinvents the university's bookstacks—and more—with its ultramodern, high-tech Hunt Library on Centennial Campus.

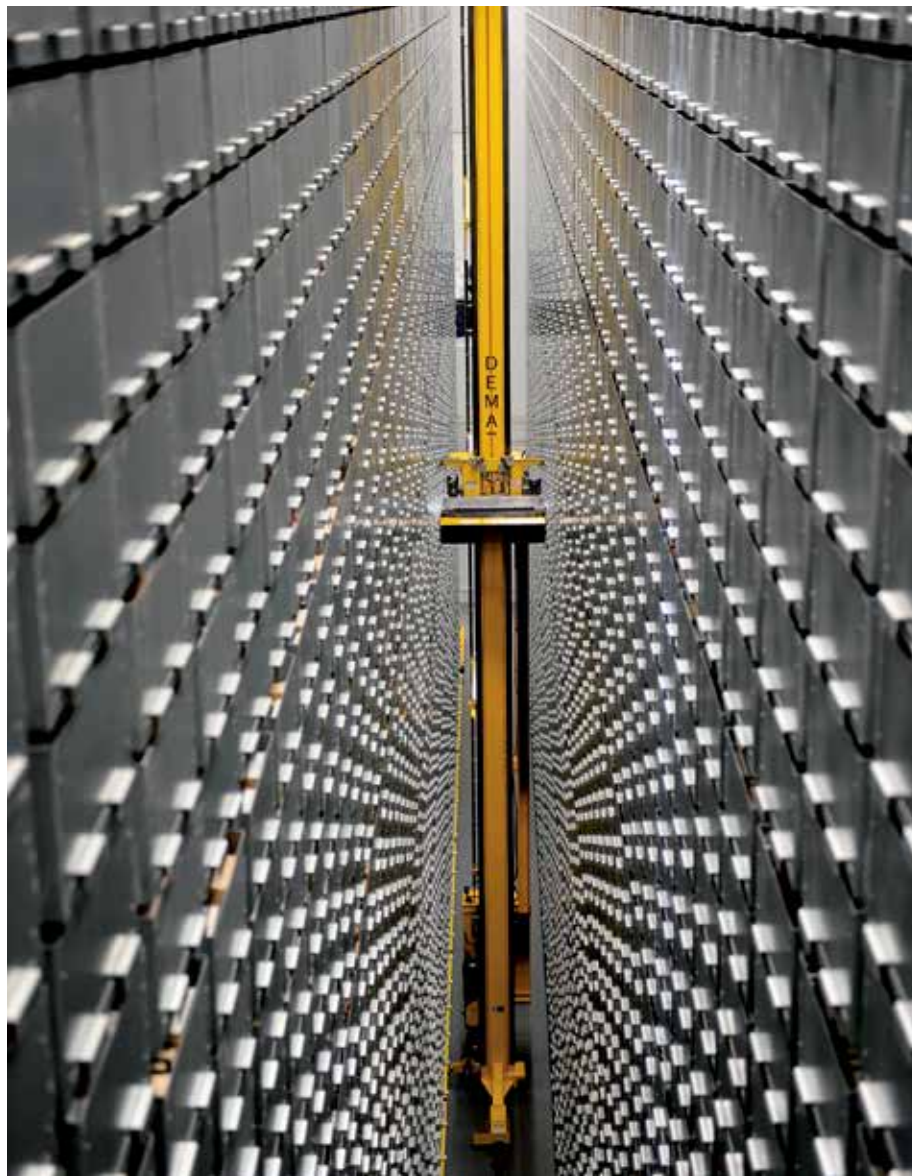
BY BILL KRUEGER

It's a library where the books—most of them, anyway—are out of sight. It's a library where the latest technology—from 3-D printing to a credit-card sized computer known as Raspberry Pi—is made available to all students and faculty. It's an environmentally friendly library that is flooded with natural light and several rainbows worth of color, from the yellow staircases to the dozens of hues seen in the chairs, sofas and stools.

It's the new James B. Hunt Jr. Library, and it is now open on Centennial Campus.

The five-floor library frames a new campus lawn between College of Engineering buildings and new student housing on Centennial, and brings a new vibrancy to the once-sterile section of campus. There are ample opportunities for serendipity at the Hunt Library, from professors in different disciplines striking up a conversation about their latest academic work in the Faculty Research Commons to students happening upon a film being shown in the iPearl Immersion Theater or a video presentation being made inside the glass walls of a conference room known as the Fishbowl.

It's a library that challenges notions of what a library can or should be.



The robots are winning

The Hunt Library holds about 1.5 million books (roughly a third of the total collection for NCSU Libraries), but most of them aren't on shelves where patrons can grab them. Instead, they are maintained in a two-story, 120-foot-long vault that is home to the "bookBot robotic book delivery system." The bookBot, which can be seen through a large window on the first floor, retrieves requested books and delivers them to a library employee who puts them on a shelf for patrons. The entire process takes less than five minutes. By consolidating most of the books in the vault, space is freed up elsewhere in the library for students to study, professors to hold class sessions and patrons to conduct all manner of research using the latest technology.

Our bookBot is better

At least it's more productive. About a dozen or so universities in North America use bookBots, but most use them primarily to store books that are rarely circulated. NC State's bookBot is the primary way to retrieve books that are held in 18,212 metal bins, or shelves.

But I want to see the books

About 30,000 books, mostly dealing with engineering, science and textiles, are out on shelves where students can touch and see them. The Rain Garden Reading Lounge has a selection of books written by NC State professors. NCSU Libraries also have what they call a "virtual browse" feature on the online catalog, enabling patrons to see—virtually—the books on the shelf next to the book they requested.

In good company

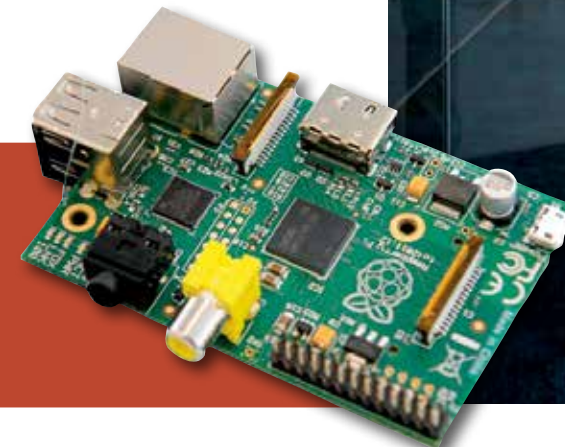
The Hunt Library was designed by one of the hottest architecture firms in the world. Snøhetta, which is based in Norway, has worked on the reconstruction of Times Square in New York, the new library of Alexandria in Egypt, the National September 11 Memorial and Museum in New York and the King Abdulaziz Center for World Culture in Saudi Arabia. Pearce Brinkley Cease and Lee, a North Carolina firm, was the library's executive architect.

NC State's own Apple

The showcase on the second floor may look like an Apple store with its glass walls, but it's not named for the company responsible for iPhones and iPads. Instead, it's named for library benefactors Lawrence and Ella Apple of Burlington, N.C. Lawrence Apple '49, '53 MS, '55 PHD joined the faculty at NC State in 1955 and is now a professor emeritus of plant pathology and active supporter of the library.

Try some Raspberry Pi...

...but not with a scoop of the Howling Cow ice cream that is sold on the first floor. Raspberry Pi is the name of a credit-card sized computer that patrons can plug into a television and keyboard to learn programming, play high-definition video or play games. It is one of several bits of technology (including more mainstream items like iPads and GPS devices) that can be checked out in the Apple Technology Showcase.



Visitors can watch the bookBot in action through a large window on the first floor, while patrons of the Apple Technology Showcase (right) can check out a Raspberry Pi and other technological gadgets.

PHOTOGRAPH BY MARC HALL, NCSU

RASPBERRY PI PHOTOGRAPH BY MARC HALL, NCSU; APPLE STORE PHOTOGRAPH COURTESY OF NCSU LIBRARIES



Have a seat, any seat

For many visitors, the most striking features of the Hunt Library are the chairs, stools and sofas, which come in all shapes, sizes and colors. In fact, there are 75 different types of chairs in 115 different colors. Some of them even have names: There's "The Egg Chair," designed in 1958 by Arne Jacobsen to provide people with a bit of privacy in a public space; an orange sofa called the "Item" that was manufactured by Bernhardt Designs in Lenoir, N.C.; and the Barcelona chairs and ottomans (designed by Ludwig Mies Van de Rohe in 1929).

Still short of seats

The Hunt Library has more than 1,750 seats, which doubles the seating capacity for NCSU Libraries. But it's still not enough for 10 percent of the student body, and well short of the 20 percent standard set by the UNC system.

The writing on the walls

The Hunt Library has almost 100 group study rooms, which are in short supply

at D.H. Hill. Each room is equipped with the latest technology, such as large-screen display monitors. And the walls are made of whiteboards, perfect for students needing to work through a series of equations.

SHHHH!

Librarians are not walking around telling students to be quiet, but there's a quiet reading room on the second floor that is as close as the Hunt Library comes to a traditional library space. It even has books on shelves surrounding the wooden tables and chairs.

Which library am I in?

The Learning Commons on the fourth floor has the same look of the Learning Commons in D.H. Hill, with similar furniture and work stations. The screens between work stations even bear a pattern that mimics the Color Wall at D.H. Hill.

At the movies

A large curved screen capable of displaying vivid videos greets you as you enter the Hunt Library. What those videos will show depends on the students and faculty who use the library. It has already been used to show a nine-minute film on the role of the College of Humanities and Social Sciences at a technical institution like NC State and a rotating panel of photos that students have taken the Hunt Library. Like much of the technology at the Hunt Library, the iPearl Immersion Theater is there to help students and faculty translate their imagination into something tangible. Popcorn, unfortunately, is not provided.

A gamer's paradise

The Hunt Library features a Game Lab with multiple player stations and a 20-x-5-foot micro-tile video wall that can be used as one large screen or divided into sections to allow students to play different games at the same time. It has two purposes: One is to serve as a research lab and classroom for the university's game development program, and the other is to provide entertainment for students.



It's not just about style with all the different chairs—they have to be comfortable, too. Some enjoy the cozy privacy of "The Egg Chair," below, while others opt for a more open feel.

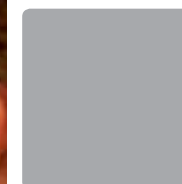


DRY ERASE BOARD PHOTOGRAPH COURTESY OF NCSU LIBRARIES; VIDEO SCREEN, STUDY SPACE AND GAMING PHOTOGRAPHS BY MARC HALL, NCSU

TRIANGULAR CHAIR PHOTOGRAPH BY MARC HALL, NCSU; EGG CHAIR PHOTOGRAPH BY TAMMY WINGO



Learning can happen in group study rooms, sometimes with the help of high-tech video screens (including the one in the Game Lab, below) or in more traditional study spaces with great views of Lake Raleigh.



Chancellor Randy Woodson talks about the Hunt Library and what it means for NC State, p. 16.



The yellow stairs can lead you through the Hunt Library or offer a spot for students to gather. Outside, the Skyline Terrace offers great views and a green roof.

GREEN ROOF AND YELLOW STAIRS PHOTOGRAPHS BY MARC HALL, NCSU

It's not Oz, but...

As the Hunt Library was nearing completion in 2012, an alum who saw a photo of the stairs suggested, hopefully, that maybe it was just a primer coat. No, the wooden staircases throughout the building are yellow, and students are already saying that you simply have to “follow the yellow brick road” to move about the library. But be assured that there are several red accent walls throughout the library. Even the counters in the bathrooms are red.

Green is the new red

Not really, but the Hunt Library was designed with many green features. It has a radiant panel HVAC system, a rooftop solar system to heat water and efficient plumbing fixtures. The building uses

BALCONY PHOTOGRAPH COURTESY OF NCSU LIBRARIES

a “unitized curtain wall façade system with integral solar shades” to reduce heat while providing daylight and a view to the outside for patrons. The library even uses recycled denim in some of the ceiling tiles to provide sound baffling.

Even more green outside

The outside of the building features what is known as high SRI paving (Solar Reflective Index, in case you were wondering), a rain garden and a green roof—all efforts to reduce the amount of heat the building gives off and reduce stormwater runoff.

A virtual journey

The Navy ROTC unit at NC State wants to train its cadets on the bridge of a Navy ship. A genetics professor wants to take

his students inside a genome. An English professor wants his students to see—or hear, actually—what it was like to be part of the crowd during a sermon at St. Paul’s Cathedral in the 17th Century. They can do that through the Teaching and Visualization Lab and the Creativity Studio. The lab provides 360-degree video projection and 16 speakers zoned for different parts of the room, while the studio next door has movable walls and projectors that enable the room to be converted into the bridge of a Navy ship or put students inside a genome.

Way beyond PowerPoint

The Hunt Library is equipped with a handful of media production and music rooms, where students can learn the latest digital media skills. They can use “green screen” curtains for videos, video editing suites, keyboards and studio lighting to add cutting-edge video and audio to their presentations.

Check this out, Wolf Blitzer

We’re familiar with the fancy touch screens that the anchors at CNN and other networks like to use to show us the latest polling numbers in a county in Ohio on Election Night. The Hunt Library has one of those—it’s called a perceptive pixel wall—and it’s housed in something called the Fishbowl. It’s a conference room with two large glass walls, enabling anyone walking by outside the room to get at least a peek at what’s being shown on the screen.

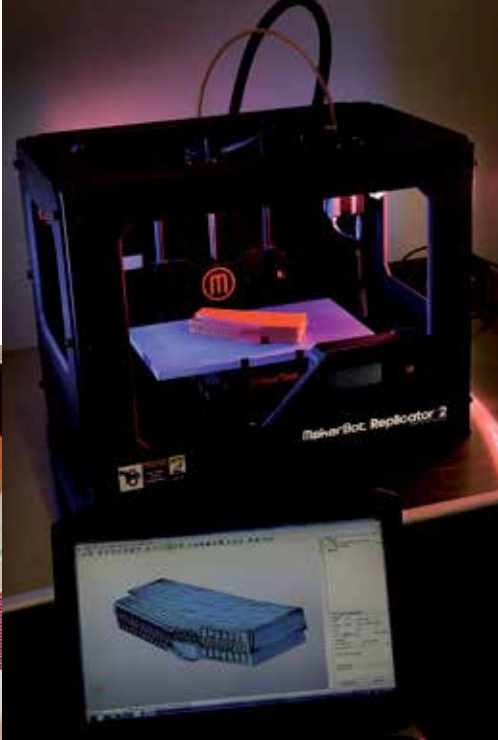
A room with a view

It’s hard to beat the view from the Skyline Terrace, which extends off the top floor of the Hunt Library. The library is 88 feet high, as high as the seventh floor at D.H. Hill, and offers a great view of Lake Raleigh and an obscured view of downtown.





The Institute for Emerging Issues hopes to engage visitors in ongoing discussions about everything from education to health care through its Emerging Issues Commons, above and below. Meanwhile, 3-D printers (right, creating a plastic replica of the Hunt Library) provide some of the “wow factor” for the new library.



3-D Printing

Imagine having a computer file of the Hunt Library—or any other building, for that matter—and being able to watch a “printer” turn it into a three-dimensional, plastic replica of the building. It’s technology that has been available to a select few engineering and design students at NC State until now, but the Hunt Library enables any student or faculty member to take advantage of 3-D printing.

PHOTOGRAPHS BY MARC HALL, NCSU

>> redandwhiteforlife.com

The James B. Hunt Jr. Library is so new that a few of its high-tech features were still in the works as we put the finishing touches on our cover story. Check out our blog for the latest news from the Hunt Library.

KEYWORDS: Hunt Library

On the Web:
www.lib.ncsu.edu/huntlibrary

To see student photos of the Hunt Library: d.lib.ncsu.edu/myhuntlibrary



Can I show you my research?

Interdisciplinary study and research is a hot topic on campus, but there aren’t many spaces where an engineering professor is likely to run into, say, a professor whose expertise is soil science. Library officials hoping that sort of serendipity—and possible new ways to combine interdisciplinary research—will take place in the Faculty Research Commons.

Graduate glee

Graduate students get a dedicated space where they—and only they—can study or work on their research. It’s something they’ve been clamoring for at D.H. Hill.

It’s not just a library

One of the first areas visitors see when they walk into the Hunt Library is not the library itself, but the Emerging Issues Commons that features a spiraling, electronic message board and a collection of audio and video presentations on challenges facing North Carolina. It’s the new high-tech, interactive front porch of the Institute for Emerging Issues, which is also housed in the new building. The Institute, chaired by former Gov. James B. Hunt Jr. ’59, ’62 ms, tackles issues such as the environment, education and health care.

What, no bricks?

There was talk early in the process of constructing a library that would look like the rest of the brick buildings on Centennial Campus, but university officials decided to strive for a signature, iconic building that speaks to NC State’s role as a technological leader in the 21st century. But guess what? Susan Nutter, vice provost and director of libraries, tells us that the construction company, mindful of the significance of brick at NC State, placed a single brick somewhere in the building. Where? “It’s in the building,” Nutter says, “but I’m not to know where it is.”

PHOTOGRAPH BY MARC HALL, NCSU

“We’ve got to stay ahead.”

A consultant’s study in 2002 made it clear that the libraries at NC State were insufficient for the university they were supposed to serve. The study found that library facilities were “severely” undersized, in poor shape and overcrowded. One proposed solution was to build a new library on Centennial Campus. A little more than a decade later, with the help of \$115 million in state funds and additional money from donors, the James B. Hunt Jr. Library has opened on Centennial Campus.

We talked with Susan Nutter, vice provost and director of libraries at NC State, about how university libraries have evolved and her dreams for the new Hunt Library.



Susan Nutter, vice provost and director of libraries at NC State, is determined to help NC State students and faculty stay on the cutting edge.

On the evolving nature of university libraries: Change has come from the way people work together now. Students really do work in a collaborative environment, and the courses expect that of them. They have to make a lot of group presentations, they have group projects, but they also seem—and maybe this is from social media—but they like to teach each other and help each other. So we had to come up with collaborative spaces.

Her dream for the Hunt Library: The idea was that we would have a building that would be iconic and would be a symbol of what NC State is in the 21st century, and that it would kind of stand out and become something like the Bell Tower, something that says, “This is NC State.”

Giving the people what they want: We talked with faculty and students in focus groups to see what they wanted. They wanted natural light, and lots of it. They wanted collaborative spaces. They wanted color. They wanted a variety of spaces. The faculty is crying out for spaces where they can meet each other, people from other disciplines. Interdisciplinary research is where we’re going, and it’s very hard. They just don’t have natural places to gather, and the library provides that.

On meeting the unique needs of students: Students live on a different schedule, and they’re hungry all the time and they need to sleep at different times, so we let people sleep in the library. We tried to get even more food in [at the Hunt Library], and it’s very hard. The ice cream has been a really hot item, and it’s a great way to showcase the university’s ice cream. It is the best anywhere.

On what happens to D.H. Hill Library: We anticipate the best of Hunt will come to D.H. Hill. In moving books over [to Hunt] from Hill, we can empty a couple of parts of floors to create these common spaces for graduate students and faculty that we’ve never had before.

Staying on the cutting edge: I figure it takes about three years for these other [university] libraries to see what we’re doing and then do it themselves, so we’ve got to stay ahead.