

the academic crossroads of campus **G.WAYNE CLOUGH** UNDERGRADUATE LEARNING COMMONS



welcome from Dean of Libraries, Catherine Murray-Rust

At the academic crossroads of campus adjacent to the Library, the G. Wayne Clough Undergraduate Learning Commons is Georgia Tech's visible commitment to its undergraduate students.

Opened at the beginning of the fall 2011 semester, Clough Commons offers 220,000 square feet of classrooms, labs and learning spaces that are open 24 hours a day, almost every day of the year. With over 2,000 new seats in common areas, classrooms and group study rooms, the search for both quiet and collaborative spaces to study is much easier.

The Library faculty and staff enthusiastically welcomed Provost Rafael Bras' decision to integrate the Clough Commons and the Library. Many of the spaces and services planned for Clough Commons grew out of student involvement in renovating Library spaces and requests for new services as the curriculum changed and the campus grew.

Georgia Tech students believe that the Library belongs to them, and they have the right and the responsibility to make it a focal point of their time at the Institute. The Library's goal is to extend that sense of ownership to the Clough Commons.

Sincerely,

Catherine Muray Rust

Catherine Murray-Rust Dean of Libraries, Georgia Institute of Technology Library





a sustainable commitment to undergraduate education

The G. Wayne Clough Undergraduate Learning Commons is a 220,000 square foot, \$93 million, sustainably-designed facility created in response to Georgia Tech's growing student body. The Clough Commons is dedicated to student academic enrichment, innovative learning experiences, advances in teaching pedagogy and integrating technology into the classroom.

Named in honor of Georgia Tech President Emeritus G. Wayne Clough (1994-2008), the Clough Commons is vital to Tech's long-term ability to create a new physical archetype for America's leading universities.

The facility was designed to demonstrate both academic success and sustainability at work. The intent is to bring together all components of undergraduate learning into a centralized location, including classes, laboratories for first-year students, study space, tutoring, advising and technology support.

The Clough Commons is a tribute to water and energy efficiency. It encompasses sustainable design features that will enable LEED (Leading in Energy and Environmental Design) certification, making it one of 11 other LEED-certified buildings on campus. Most notably, there is a 1.4 million gallon cistern installed under Tech Green to facilitate water recycling, an interactive dashboard displaying real-time energy and water saving analytics, 360 photovoltaic solar panels, a roof garden and much more.

Key support units from academic affairs are highly visible and accessible for students to discover undergraduate research opportunities, access tutoring help, obtain communications support and engage in cross-disciplinary experiences, making the Clough Commons a true crossroads for academic enrichment and innovative learning.









INNOVATIVE



TOGETHER

SPACE



ANSWERS







GREEN

a vibrant learning community

For the first time at Georgia Tech, there is a central location for undergraduates to inquire about their academic careers, discover research and scholarship opportunities, or obtain answers on a wide variety of academic-related needs. The CORE Help Desk is fully staffed by academic professionals to guide students to appropriate resources or answer questions on the spot.

Academic and support offices include:

The **Center for Academic Success** offers a wide range of academic support programs dedicated to helping students succeed at Tech. Programs include the GT 1000 Freshman Seminar, 1-to-1 tutoring, peer-led undergraduate study, academic coaching, academic success workshops and Tech PrEP.

The **Center for the Enhancement of Teaching and Learning (CETL)** is instrumental in carrying out Georgia Tech's strategic goal of developing new approaches to instruction and providing a student-focused education. They offer professional development initiatives for graduate students, teaching enrichment activities for faculty, educational research on teaching and learning pedagogy, and other alumni and grant agency-funded initiatives.

The **CommLab** promotes excellence in WOVEN (written, oral, visual, electronic or nonverbal) communication by offering communication and writing support to students for any communication-related assignments or projects, regardless of discipline. This approach allows the Tech community to have greater success in their academic and workplace careers, as well as their civic and community lives. Students can practice in one of the four presentation rehearsal studios in the Clough Commons or meet with presentation coaches in the CommLab.

The **Office of Undergraduate Studies** engages students in academic programs beyond the classroom by developing an intellectual community at Tech and fostering greater student-faculty interaction. Resources and services include academic advising, intellectual discussions at the weekly Open Forums, guidance regarding prestigious fellowships (such as Rhodes, Marshall and Fulbright), undergraduate research opportunities, pre-professional advising and much more.

The **Technology Support Center** is a service of the Office of Information Technology, which offers a variety of walk-in support services to students, faculty and staff. These services include hardware/software assistance, how-to clinics, malware prevention and email configuration.

Finally, by linking the Clough Commons with the **Library**, both physically and intellectually, Georgia Tech has created a vibrant, 24-hour academic and cultural complex at the heart of campus.





creating a transformative learning environment

The nature of academic study at Georgia Tech goes hand in hand with recent shifts in pedagogy from individual study to collaborative learning.

Innovative minds need complementary spaces to encourage creativity and develop technological change fundamental to the advancement of the human condition. In the Clough Commons, Tech undergraduates are involved in hands-on, experiential, collaborative, and technologically enhanced teaching and learning opportunities, which greatly enrich their student experience.

The combination of flexible furniture in a variety of styles, a plethora of mobile white boards, inviting open spaces, technology-equipped group study rooms, ubiquitous wireless and power, refreshments, and natural day-lighting creates an ideal 24/7 work environment for students. The roof garden offers a verdant escape which overlooks the Atlanta skyline.

Innovation in Design

Many spaces in the Clough Commons were inspired by renovations made to Library commons spaces. Created in 2002, the Library West Commons includes 80 individual productivity terminals, a multimedia studio, a presentation rehearsal studio, and a recently upgraded Library Services Desk.

After a period of student input and assessment, the Library East Commons (LEC) was renovated in 2006 to be a social, flexible, and highly visible student workspace. In the LEC, students can find all the resources needed for a 24-hour collaborative learning work cycle. It also includes a performance space where academic and cultural presentations by students are frequent. The most recent Library Commons space, completed in 2009, is the 2nd floor West Commons (2 West). This is an entirely student-designed Commons and many of the design considerations for 2 West played a role in the Clough Commons.

The Library Commons renovations were experiments in how to provide library services and resources in the digital age. Likewise, the Clough Commons is an experiment in how to transform the academic spaces to be a suitable environment for innovation and undergraduate academic success.

a tradition of support

The Clough Commons could not have been built without support from the state of Georgia. In addition, the Institute's leaders, generous donors and faithful alumni support Georgia Tech's tradition of providing students with every possible advantage to sustain their lifelong learning and success in a highly rigorous academic environment. The Clough Commons is a 21st century expression of that cherished tradition, and stands as a testament to a commitment to the undergraduate experience by the Institute and its tenth president, G. Wayne Clough.

a commitment to sustainability

The Clough Commons is an iconic example of environmental sustainability in the city of Atlanta.

As one of 12 LEED-rated building's on Tech's campus, it is equipped with a suite of eco-friendly features designed to save energy, conserve water, inspire students about "green" building and demonstrate the mechanics of sustainability.

Water Efficiency

A 1.4 million gallon cistern, one of the largest in the U.S., is installed under Tech Green to significantly increase water recycling efforts. Water harvested from the cistern is reused for toilet flushing and water efficient landscaping resulting in 89% self-sufficiency. A mere 11% of Atlanta's water supply is used to operate this facility. The cistern can supply water for the Clough Commons with no interruption for up to 28 days without rain.

Interactive Sustainability Dashboard

Visitors can access information on interactive dashboards about the sustainable features of the Clough Commons, including solar production, water recycling, energy use, HVAC, and plants on the roof garden. Sensors are strategically placed throughout the Clough Commons to continuously collect energy and usage data. These touch-screen sustainability dashboards, located on 2nd and 5th floors, display water and energy usage in real-time.

Building Sustainably

Careful planning and specific measures were taken to ensure the Clough Commons was built in a sustainable manner. Construction crews successfully diverted 75% of the building materials from landfills through on-site recycling. In addition, many materials and resources were sourced within a 500-mile radius to minimize fossil fuel consumption.

The entire facility is positioned at an angle to maximize the use of daylight. Strategically placed light shelves diffuse direct sunlight during the summer months, while still allowing natural daylight to reduce the electrical light load. In the winter months, the angle of direct sunlight provides both the benefit of naturally daylit spaces, as well as the passive solar heat gain, which reduces the electrical heating load.

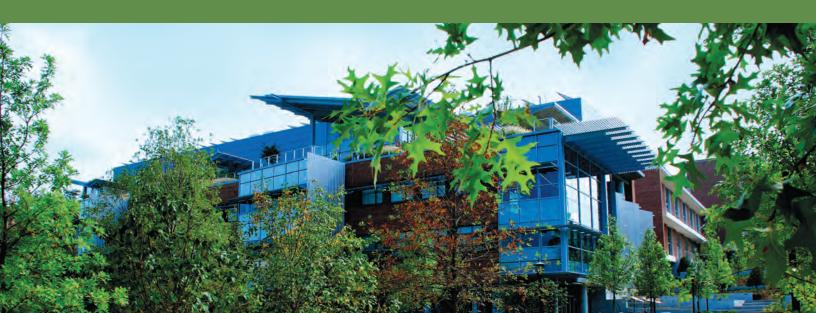
The roof includes approximately 360 photovoltaic solar panels developed by a Georgia Tech spinoff company called Suniva. Dr. Ajeet Rohatgi, a Regents Professor from the School of Electrical Engineering at Georgia Tech, developed the technology and founded Suniva.

Green Roof Garden

The roof garden features plants native to Georgia. Open spaces between cement tiles on the floor of the roof capture run-off and feed water from the roof garden into the cistern. The garden covers 50% of the building's roof which helps to improve cooling efficiency and minimizes the "heat island effect."

Promoting a Healthy Indoor Environment

The use of carbon dioxide monitoring and the continuous delivery of outdoor air helps the Clough Commons maintain a healthy indoor environment. Additionally, low-emitting materials were used to minimize harmful volatile organic compounds (exposure from adhesives, sealants, carpets, paints, and coatings).



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