UNG | UNIVERSITY of NORTH GEORGIA™

COLLEGE OF SCIENCE & MATHEMATICS

Facility Planning Study

STEM Excellence Center

Executive Summary

This UNG STEM Excellence Center Facility Planning Study defines spaces for transdisciplinary STEM teaching, collaborative learning, and research in a new STEM facility to be built on the UNG Dahlonega Campus.

The University of North Georgia College of Science & Mathematics is a leader in STEM (science, technology, engineering, and mathematics) education with an innovative transdisciplinary curriculum that utilizes the latest teaching pedagogies. Our goal is for UNG students to become successful scientists and mathematicians by providing them an active learning experience with real world training in a flexible, collaborative environment. UNG's STEM program effectively prepares graduates for STEM careers or for graduate or professional schools.

Our aim is to construct a facility which will provide the flexible, immersive spaces needed for student engagement across the STEM fields. We aspire for our students to succeed, graduate, and become part of an educated workforce critical to developing new technology and innovations that spur economic growth in Georgia around the nation.

A rapidly growing enrollment, where over a quarter of entering freshmen are STEM majors, has resulted in accommodation strain with classrooms and labs fully scheduled throughout the academic day, including evening labs. Current facilities cannot properly reconcile course, student, and faculty needs.

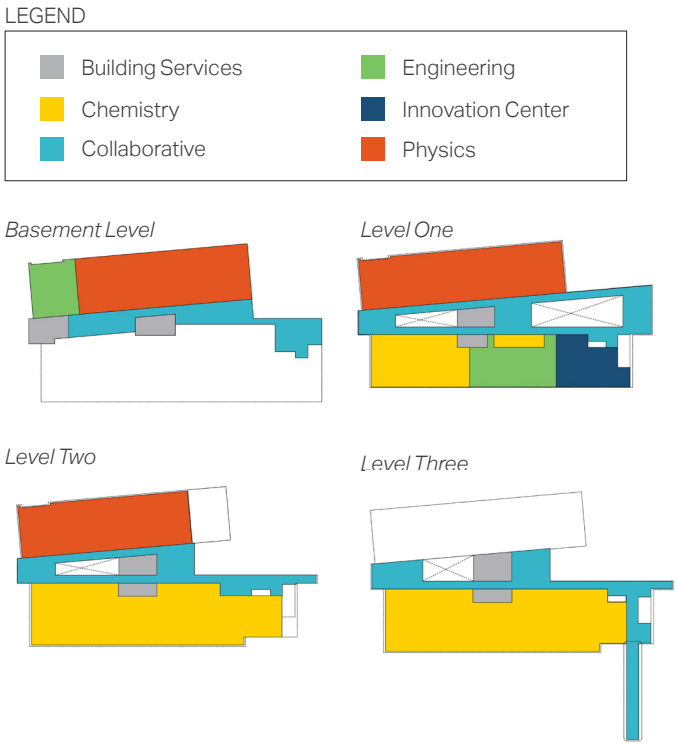
UNG will raise 10 million dollars in private support, with the remaining funds of this 50 million dollar project provided by the state of Georgia. Because of Georgia's growth, the state simply cannot keep up with the demand for more and improved facilities. This STEM Facility can be built much sooner with private funding from UNG supporters.

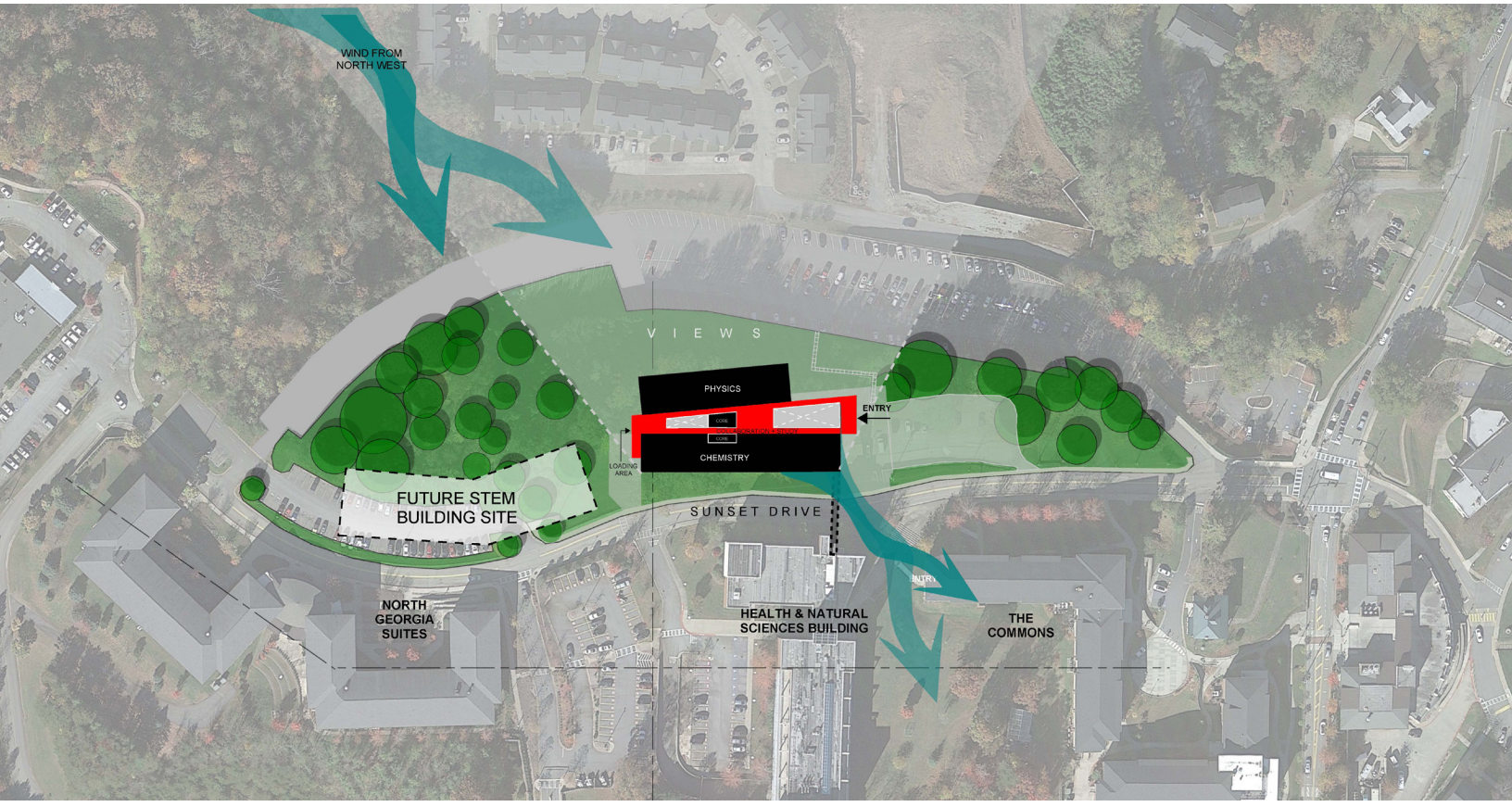
Site and Facility

The future home of the new STEM Excellence Center is located on the Dahlonega campus. The 6.3-acre site is located to the north of the existing Health and Natural Sciences building, across Sunset Drive. The site is bounded to the north by an existing parking lot. There is an approximately 63 ft drop from Sunset Drive to the north parking lot, providing an opportunity for the building to nestle in the hillside, between the lush existing trees.

The approach to the building and site from the campus Drill Field down the hill is quite striking- shaping a powerful building entry statement. By creating a large open plaza with grand stair terracing the hill to the north, the outdoor spaces become just as important as the building itself.

The building steps with the topography, creating "found space" as a lower level of the north bar. Most people will access the building from the east and the "back" of the building is to the west, up the hill, forming the loading zone.





Interior Spaces

The new STEM facility will house and support programs for the UNG College of Science & Mathematics through community and collaboration spaces, high-tech and hybrid classrooms, instructional and research laboratories, academic workplaces, makerspaces and building support.

The transdisciplinary approach to STEM emphasizes experiential and team-based learning, so community space is key to helping students connect across disciplines. A wellness- focused environment with a sustainable building and occupiable roof, energy efficiency with natural light, and grand views of the mountains is designed for students and faculty to do great work and thrive.

There are two full floors and two partial floors, which work the sloping topography. By designing the building bars as modular and efficient, this allows for more open collaboration spaces within the center atrium. The atrium, and impressive 4-story space, connects the building, program, and people to foster a highly collaborative environment.

Program

The new STEM Excellence Center program brings Chemistry, Physics & Astronomy, and (new) Engineering students, faculty, staff, and regional business partners together for 21st century learning and research. The program includes:

INSTRUCTIONAL LABS

Multi-functional labs with flexible furniture and utilities to provide amenities for teaching for the future

RESEARCH LABS

Modern labs for focused research by faculty, with student support

ACTIVE-LEARNING SPACES

Integrated technology for high-tech, collaborative, hybrid learning

COLLABORATION SPACES

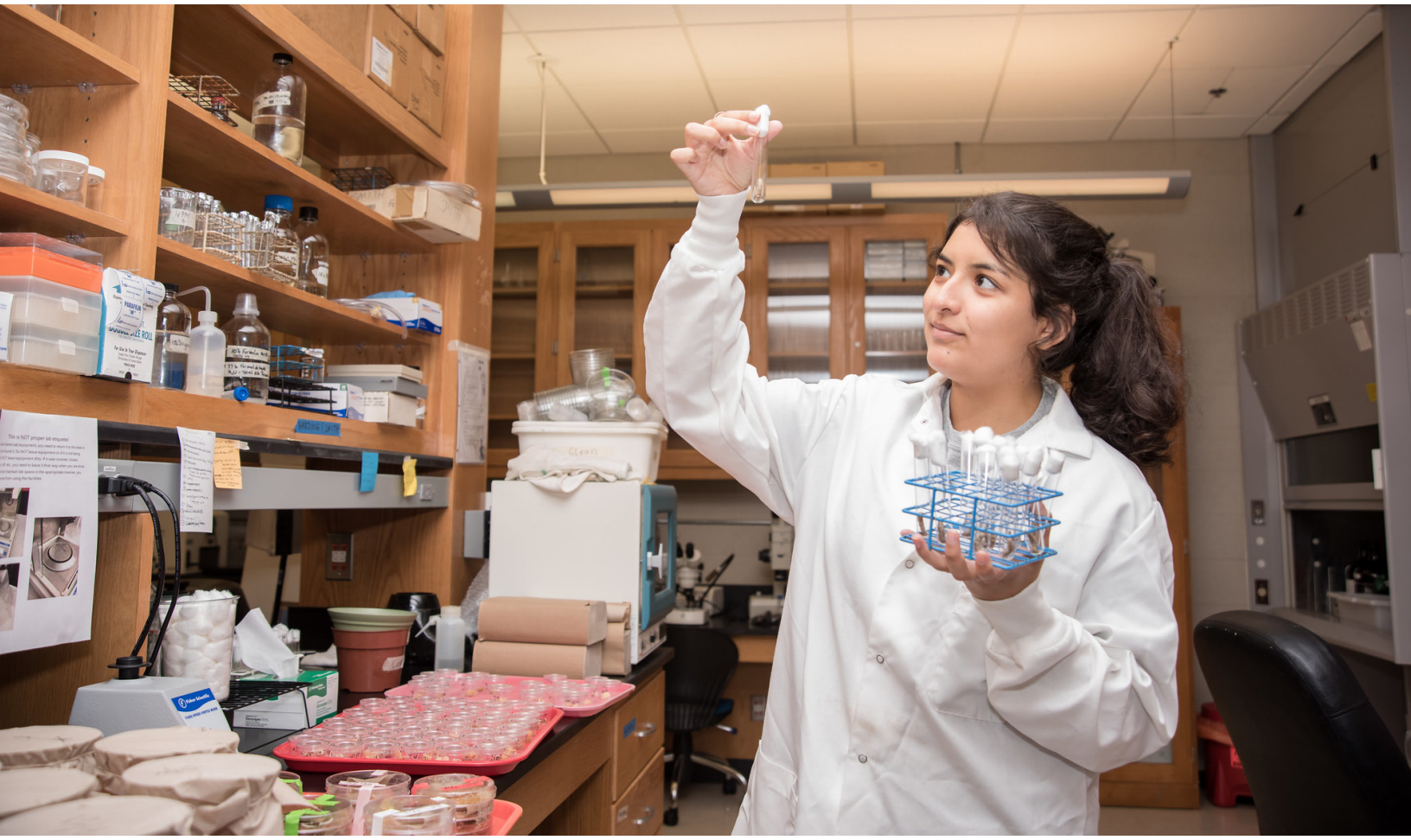
Variety of spaces for learning, studying, and lounging to foster cross-disciplinary engagement

INNOVATION CENTER

Flexible, multi-use space with 24/7 access for collaboration with regional business partners

MAKER-SPACES

Dirty, hands-on spaces to make, create, and innovate projects and technologies of all types



Philanthropy

A NEW STEM EXCELLENCE CENTER WHERE STEM KNOWLEDGE CONVERGES.

We ask you to make a leadership gift to the STEM Excellence Center Fund that will support the facility as a crucial investment in transforming STEM education and enriching student education at UNG for years to come.

STEM is a high demand career field critical to technology and innovation with a projected growth of 11% in STEM careers between 2021 and 2031. The U.S. will need to significantly increase the number of STEM graduates in order to stay globally competitive in a knowledge-based, technological economy. Our college's transdisciplinary STEM curriculum will positively impact student retention and graduation rates, thus producing needed scholars in science and mathematics for spurring economic development in the North Georgia region, the state, and the U.S.

It is essential for UNG to build new instructional spaces that keep pace with the 21st century demands of science and technology. In addition, the new building will be connected via an elevated walkway to the Health and Natural Sciences Building that houses the Department of Biology. The chemistry and physics departments are currently housed in Rogers Hall, an aging facility, with instruction held in small, antiquated laboratories and classrooms built in 1947. Unable to accommodate the expanding enrollment in STEM, Rogers Hall classrooms are fully booked, and some evening labs are scheduled due to heavy daytime use. These crowded spaces with insufficient lab bench space leave no room for facilitating teamwork needed for STEM instruction or for using modern scientific instrumentation. With growing enrollment, additional faculty members have been hired who now occupy small, shared offices, which often double as places for advising and tutoring sessions. The new STEM Excellence Center will alleviate many current problems with old buildings, overcrowding, and dispersed instruction, especially in 76 year-old Rogers Hall.

STEM Excellence Center Naming Opportunities

Your gift demonstrates a strong commitment to success for STEM students at the University of North Georgia. We are deeply grateful of your support for excellence in STEM education. All gifts to the building fund are appreciated and gifts above $1,000 will be recognized on a donor display in the lobby of the STEM building.

The following is a list of naming opportunities for rooms and other spaces within the building. Please review this list to find your areas of interest and the value for your desired investment. For more information about room diagrams, naming plaques, and other inquiries, please see contact information on the back of this document.

SPACE NAME	UNITS	SF/UNIT	AMOUNT
STEM Excellence Center	1	70,000	$10,000,000
Floors (B - L3)	4	10,000 - 20,000	$1,500,000
College of Science & Mathematics	1	70,000	$5,000,000
Chemistry Department	1	21,480	$2,500,000
Physics & Astronomy Department	1	17,265	$2,500,000
Engineering Department	1	3,680	$2,500,000
Innovation Center	1	2,535	$2,500,000
Outdoor Terrace	1	8,190	$2,000,000
Outdoor Grand Stairs	1	7,890	$2,000,000
Lobby	1	2,000	$500,000
Atrium	1	12,330	$1,500,000
Pedestrian Bridge	1	1,000	$2,000,000
GENERAL			
Faculty Offices	38	120 ea.	$25,000
Large Conference Room	1	350	$250,000
Student Study Rooms	3	500 ea.	$150,000
Breakroom	2	350 ea.	$75,000
Wellness	1	120	$50,000
CHEMISTRY			
Large General Classroom/ Lecture	1	1,800	$500,000
Medium Classrooms/ Lecture	2	1,000 ea.	$250,000
Research Labs	4	725 ea.	$100,000
Research Support Spaces	2	350 ea.	$25,000
Teaching Labs	2	1,450 ea.	$250,000
Specialty Teaching Labs	3	1,450 ea.	$250,000
Specialty Teaching Lab	1	2,420	$250,000
Teaching Lab PrepSpaces	2	350 ea.	$25,000

SPACE NAME	UNITS	SF/UNIT	AMOUNT
PHYSICS & ASTRONOMY			
Research Labs	3	725 ea.	$100,000
Research Support Spaces	1	350 ea.	$25,000
Large Classroom	1	1,800	$500,000
Teaching Lab	3	1,450	$250,000
Specialty Teaching Labs	3	1,450	$250,000
Teaching Lab PrepSpaces	1	350 ea.	$25,000
ENGINEERING			
Teaching Lab + Support	1	1,750	$250,000
Shop + Shop Support	1	1,450	$500,000
INNOVATION CENTER			
Classroom / Training / Computer Lab	1	725	$1,500,000
Makerspace	1	1,450	$500,000

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