# EXPLORE

## OUR CAMPUS

SELF-GUIDED WALKING TOUR

College of Engineering
UNIVERSITY OF WISCONSIN–MADISON

# WELCOME

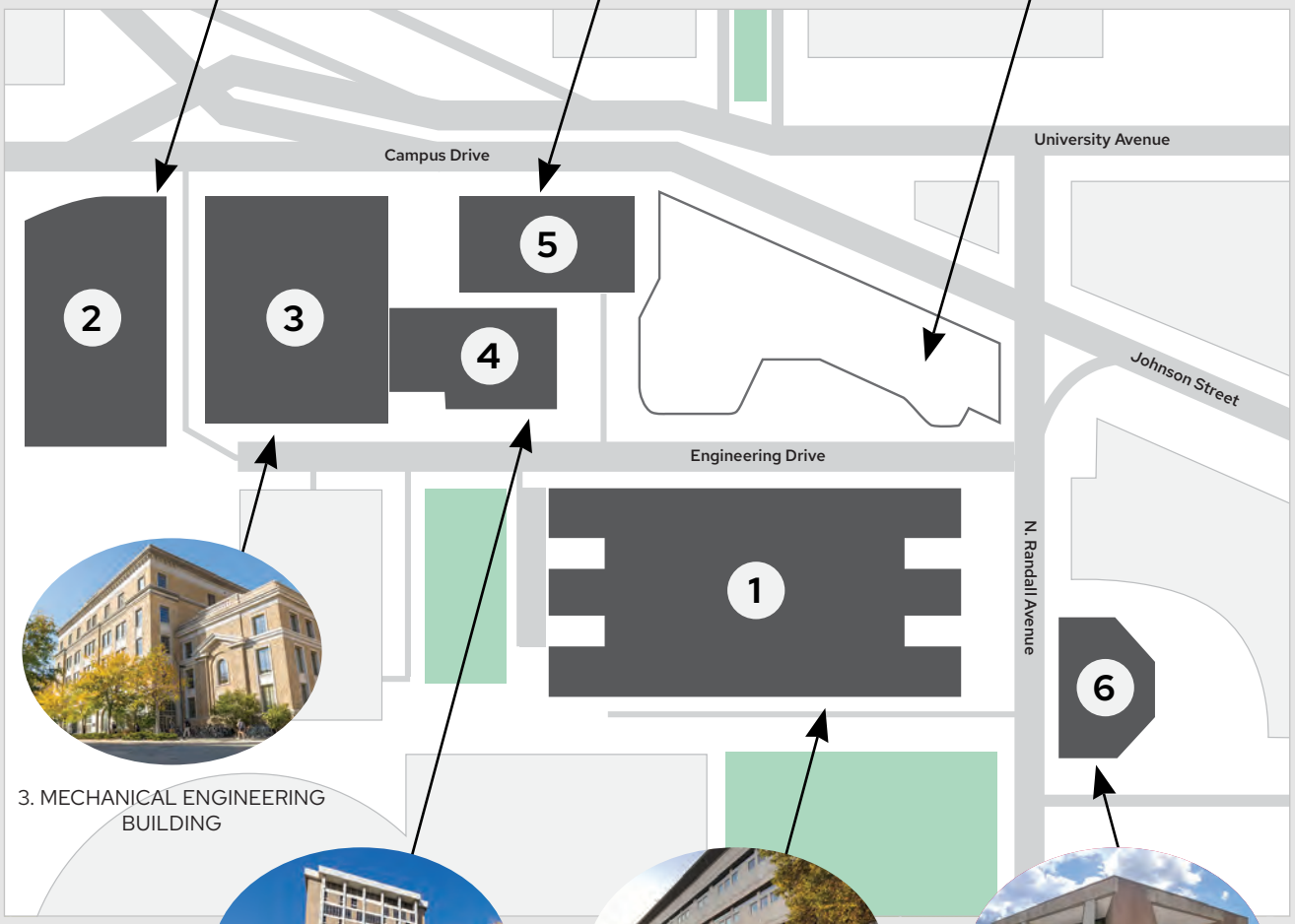
The College of Engineering is a "campus within a campus," and a community in and of itself. This walking tour will give you a look at some of our vibrant, ever-evolving engineering spaces (subject to availability … class may be in session or we might be perfecting our latest innovation)! Our faculty, staff and students, however, are the people who bring our classrooms, laboratories, study spaces and common areas to life. We all contribute to a welcoming, supportive, fun environment in which we all work, learn, discover, grow—and make a difference. We hope you consider the College of Engineering as the next step in your educational journey—and we're happy to meet with you or answer any questions you have along the way.

# COLLEGE OF ENGINEERING CAMPUS

2. ENGINEERING CENTERS BUILDING

5. MATERIALS SCIENCE & ENGINEERING BUILDING

COMING SOON: THE PHILLIP A. LEVY ENGINEERING CENTER






3. MECHANICAL ENGINEERING BUILDING

4. ENGINEERING RESEARCH BUILDING

1. ENGINEERING HALL

6. WENDT COMMONS

We're growing (and that means we're under construction). Find the latest info for how to safely navigate our campus here.


# 1. ENGINEERING HALL

## SIGNATURE SPACES

**Huibregtse Commons:** A popular gathering, dining and study atrium featuring both indoor and outdoor seating. The Badger Market is open most of the day and is a great place to grab a meal or a snack between classes.

**Lecture halls and flexible classrooms:** Located right off Huibregtse Commons are two of our largest traditional lecture halls on the engineering campus. You might find classes like statics, dynamics, physics and others in these rooms, as well as activities ranging from design presentations to various student organization events. We also have smaller, flexible classrooms, many of which are in the 2300 hallway on the second floor.

**Engineering Student Center (Room 1150):** Located right next to the Badger Market, this office is home to the Engineering Student Center. The student center is a resource hub for students that offers programming, space for students to engage and make meaningful connections with others, as well as a comfortable place to study, hang out with friends, and be their genuine and authentic selves. The student center also supports student organizations and engagement, involvement and success programs for first-year students.

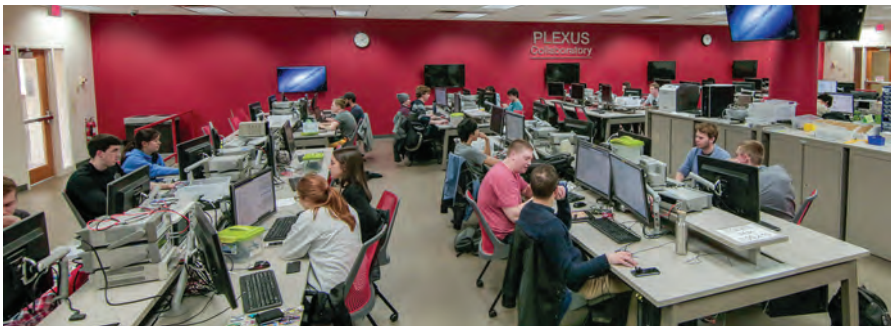
**Engineering Career Services (Room 1147):** The ECS team connects thousands of engineering students annually with employers looking to fill internship, co-operative and full-time positions; ECS services also include group and individual resume-building workshops, mock interviews, and other events designed to help our students land their dream job.

**Chemical engineering undergraduate labs (Rooms B103 and B209):** These state-of-the-art instructional spaces opened in winter 2024 after a complete renovation; B103 is home to the chemical engineering summer lab "capstone" course, while B209 is stocked with equipment ranging from distillation and humidification towers to solvent extraction and membrane filtration units.

**Thompson Design Lab (Room 1438):** This is a classroom in which most first-year electrical and computer engineering students take ECE 210, *Introductory Experience in Electrical Engineering*. Each student receives a toolkit filled with tech they'll use in this and other courses, and the class is a great example of the many hands-on learning experiences our students receive throughout their education.

**Wright Water Resources Teaching Collaboratory (Room 1269):** In this combined (and recently renovated) tech-rich classroom and laboratory space, undergraduates learn about the physics of fluids and conduct experiments that allow them to see how water and other liquids work in real life.

**Experimental Mechanics Lab (Room 1313):** Here's where to come to break things! The latest of many student learning labs to get a major upgrade, this lab features all new equipment and a technology-rich, hands-on learning experience. Both a classroom and an




experimental facility, it enables students in many engineering majors to study how various materials behave and discover why they fail.

**Plexus Collaboratory (Room 3654):** The largest lab in the electrical and computer engineering program, this space is an educational hub for student activity. When class is in session, there's ample space for nearly 100 students, along with lots of industry-grade test and measurement equipment. There's almost always something going on here, as it's home to all of our 300-level electrical and computer engineering hands-on lab courses and several of our larger flipped classes. Best of all, when it's not being used for a class, the space and equipment are open to all electrical and computer engineering students.

**Jun and Sandy Lee Wisconsin Structures and Materials Testing Lab:** Paired with an existing facility that features useful equipment such as the 1,000,000-pound test machine, an addition to the lab also incorporates capabilities that allow faculty, staff and students to test full-scale structural elements. The new space features a reaction wall, 20-ton overhead crane, giant doors that allow outdoor access, and enough room to test a 40-foot-long component.

**HOME TO:**

- College of Engineering dean and administration
- Engineering Career Services
- Engineering Student Center
- Department of Chemical and Biological Engineering
- Department of Civil and Environmental Engineering
- Department of Electrical and Computer Engineering

**WISCONSIN IDEAS:**

Within this building, our faculty, staff and students conduct research that leads to advances in many areas. For example:

- Safe, intuitive self-driving vehicles and smart transportation systems
- Clean, abundant water resources for the people of our planet
- Groundbreaking materials for ultrafast, efficient electronics
- A cost-effective method for recycling all plastic materials and vastly reducing mountains of waste

# 2. ENGINEERING CENTERS BUILDING

## SIGNATURE SPACES

**The Design Innovation Lab @ ECB:** From the atrium, look over the railing to the space below. The Design Innovation Lab occupies all of the space you see, and beyond. In fact, it offers nearly 14,000 square feet of traditional and high-tech machine shop space in which our engineering students bring their ideas to life.

**Biomedical engineering design labs:** Occupying space adjacent to the atrium, these design and prototyping spaces support our biomedical engineering students in the client-based design projects they undertake every semester of their education.

- **Room 1080** features six team-based workstations with computers loaded with engineering software. This lab also contains electronic testing equipment so our students can design and test circuits used in medical devices. It's open to biomedical engineering design students any time.
- **Room 1070,** the "Fab-Lab," is a flexible space for design teams that contains medical equipment, including a ventilator, ultrasound and simulation mannequin; sewing and soldering equipment; tools, a smartboard and dual-monitor computers.
- **Room 1002,** an experiential teaching laboratory, features cell culture equipment for tissue engineering, chemistry hoods for biomaterial and microdevice fabrication, whole-body 3D motion capture (the tech used to generate CGI characters like Gollum in Lord of the Rings), and optical workstations. Across the hall is a poster that describes the seven-semester biomedical engineering design sequence.

**Myers Student Automotive Lab** is our very-well-equipped student "auto garage." It's located on the north end of the building's main floor, near the front entrance. It is home to several of our students' competitive vehicles, including gas and electric snowmobiles, Formula cars, Baja cars and more.

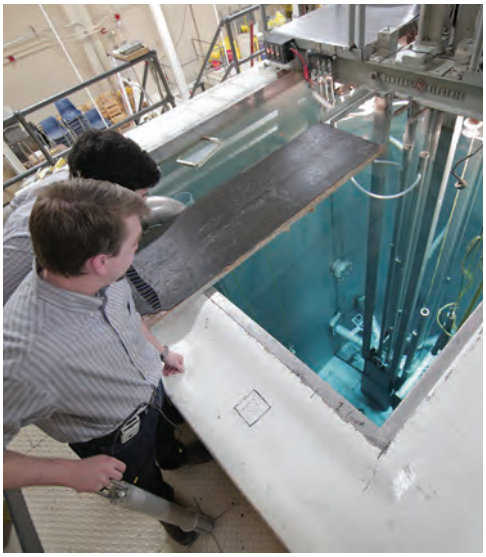
**Rockwell Automation Industrial Connected Enterprise Lab** houses a suite of industry-level advanced industrial manufacturing technologies. It supports undergraduate courses as well as research and is a space meant to connect people with ideas and technology.

## HOME TO:

- Department of Biomedical Engineering
- The Design Innovation Lab @ ECB

## WISCONSIN IDEAS:

Within this building, our faculty, staff and students blaze new trails in human health and in understanding conditions such as cancer, heart disease, neurological disorders and more. They develop solutions to client-based health challenges. Their pioneering work also improves everything from microelectronics to medical devices to 3D metal materials.



# 3. MECHANICAL ENGINEERING BUILDING

## SIGNATURE SPACES

**Atrium:** This spacious main floor is home to many lecture halls and flexible classrooms, as well as lots of study areas and gathering space that's often used to host events like student design showcases.

**The Max Carbon Radiation Science Center:** One exceptionally unique aspect of our college is that it is home to a nuclear reactor. Unlike utility companies' nuclear reactors, ours isn't built to generate power. Rather, it's used solely for research and education in important areas related to radiation science. Some of our students even become licensed operators!

**Second-floor design labs:** In addition to more traditional classrooms, you'll also find lots of undergraduate laboratory and design space in this building.

- **Room 2148** is our Energy Systems Lab, in which our students learn about topics related to thermodynamics, fluid mechanics and heat transfer. They can operate a wind tunnel, gas-turbine jet engine, heat-pump, and more.
- **Room 2158** is our intro to mechanical engineering classroom and lab, in which our students learn and apply design, measurement and software principles, then build the smallest crane that can lift the heaviest mass as fast as possible.
- **Room 2109,** which supports our mechanical engineering senior design capstone course in which students work in teams to design and fabricate systems and devices.

**Our full-scale driving simulator:** This unique laboratory includes a full-size Ford Fusion and a 240-degree screen with surround sound. It enables our faculty and students to better understand what factors contribute to safe—and unsafe—driving, particularly as we move toward autonomous vehicles!

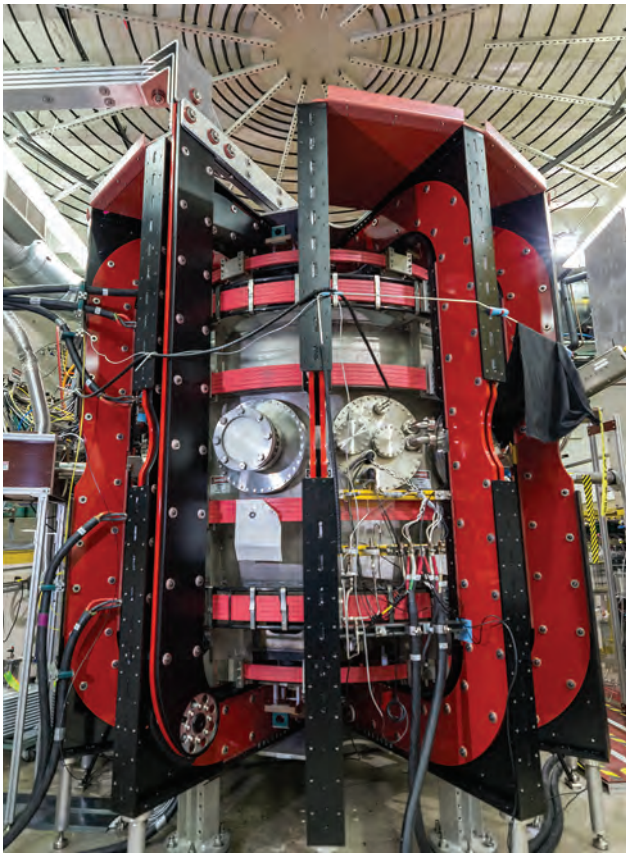
## HOME TO:

- Department of Industrial and Systems Engineering
- Department of Mechanical Engineering

## WISCONSIN IDEAS:

Within this building, our faculty, staff and students conduct research that leads to advances in many areas. For example:

- High-performance, high-efficiency engines—including those that can run on new types of fuel
- Joints and tendons that last longer and heal more quickly
- New energy technologies and methods that allow us to store renewably generated energy
- Wearable robots that make hard physical work less of a strain on our bodies



# 4. ENGINEERING RESEARCH BUILDING

## SIGNATURE SPACES

**Pegasus-III fusion experiment:** This completely renovated facility is among several major experiments around the country striving to make fusion energy a reality.

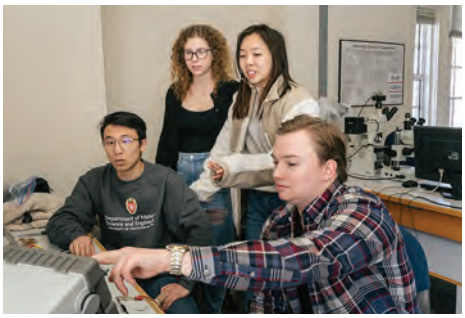
**Engine Research Center laboratories.** This center is the nation's oldest university-based engine research center. Today its many faculty, staff and students focus on making gas and diesel engines run cleaner and more efficiently.

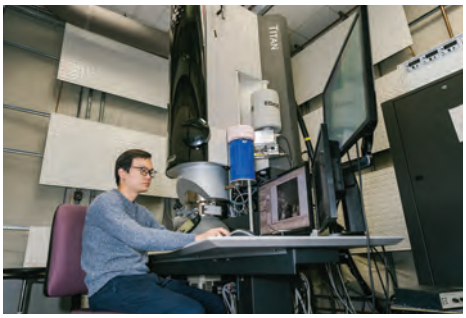
## HOME TO:

Department of Nuclear Engineering and Engineering Physics

## WISCONSIN IDEAS:

Lots of the people in this building study energy—whether that's nuclear fission, solar or even entire energy systems. They're also known internationally for breaking ground in nuclear fusion, a promising clean energy technology.



# 5. MATERIALS SCIENCE & ENGINEERING BUILDING

## SIGNATURE SPACES

**The Nanoscale Imaging and Analysis Center**, a shared facility for studying the characteristics of organic and inorganic materials using highly precise electron and atomic microscopes and microanalysis techniques.

**This building also houses a working foundry** where our students learn to cast metal alloys. Members of our Materials Advantage/American Foundry Society student organizations use it throughout the year and demonstrate metal casting during the college's annual Engineering EXPO.

## HOME TO:

Department of Materials Science and Engineering

## WISCONSIN IDEAS:

The materials scientists and engineers who work and learn in this building help create, understand and improve the materials that make up almost everything we use or enjoy today—from electronics to energy and construction to medicine.

New materials are at the heart of pretty much everything we use today. For example:

- Chips in modern and next-generation computers
- Long-lasting and safe batteries for everything from electric cars to our energy grid
- And materials that withstand extreme environments, like the ultrahot inside of a nuclear reactor or the outside of a ship traveling through space

In materials science and engineering, our students learn how to design and characterize materials for products that improve the quality of our daily lives.


# 6. WENDT COMMONS

## SIGNATURE SPACES

**Academic advising:** Students in all majors come here to meet with their advisors, who offer appointments and drop-in hours. Engineering advisors help our students navigate the requirements of their program, develop a course plan, explore other majors, and find resources to support them academically and personally. In fact, advisors are the best place for our students to start … when they don't know where to start!

**Computer Aided Engineering lab:** This building houses one of 21 fully stocked computer labs supported by the college's Computer Aided Engineering (or CAE) team. CAE provides computing resources for the College of Engineering, including computer labs with more than 600 workstations, computing support, and software in labs and for remote use on student computers.

**Design Innovation Lab @ Wendt:** An innovator's playground, the Design Innovation Lab @ Wendt is 12,000 square feet of high-tech tools—along with people who can help engineering students learn to use them—for turning almost any idea into a reality. The lab aims to empower the people who use it, and offers many workshops and training opportunities so it's accessible to people with a wide range of experience levels. It was created for students, and is run by students. It contains tools and technology to invent and design new products. It's used for classes, research, student orgs, and personal projects. In addition, the Kohler Innovation Visualization Studio enables its users to truly interact with designs and data, and features virtual reality technology and a giant interactive screen.

**Classrooms and study space:** Rooms 311, 312 and 324 are loaded with technology and designed with flexibility to accommodate many modes of teaching, learning and studying. These light-filled rooms come in small, medium and large sizes and are popular for group meetings as well as individual study.

**Undergraduate Learning Center:** Through tutoring and other academic support services, the staff and students who work in our ULC are focused on helping engineering students succeed—and many of our students use this valuable service as a way to enhance their learning. The ULC also is a place where our students study, form study groups, and discuss engineering concepts and problem-solving strategies with each other and with the tutors.

## HOME TO:

- Academic advising
- Computer Aided Engineering lab
- One of two College of Engineering makerspace locations
- Undergraduate Learning Center

## WISCONSIN IDEAS:

The staff and students who work in and use this building are focused on ideas, innovation and information! It's the kind of supportive place in which teamwork abounds, we seek to lift each other up, and we all eagerly share knowledge, kick ideas around, learn new skills, and push the limits of possible.


# THE PHILLIP A. LEVY ENGINEERING CENTER

## BIG IDEAS FOR A BOLD BUILDING

The Phillip A. Levy Engineering Center, an architecturally striking 395,000-square-foot facility, will be the centerpiece of our seven-building engineering campus. It will be multidisciplinary, hard-working and efficient, and its occupants, collaborative. It will feature shared laboratories that unite faculty, staff and students from disparate engineering disciplines around a common challenge.

On day one, our new building will greatly expand our current capacity in "state-of-the-art" facilities for learning and discovery. Given the rapid pace of science and technology advances, however, we're also thinking decades down the road. Through resilient spaces defined by what they are capable of, the building's intentional design for reconfigurability will provide us freedom to pivot, adapt and evolve as the future emerges.

# BE A BADGER ENGINEER

We hope this walking tour is the first of many steps on your path to becoming an engineer. If you'd like to continue your journey, here are a few ways you can do just that.

**Learn more about the College of Engineering:**
Register to attend an engineering information session at visitbucky.wisc.edu.

**Contact us with questions:**
FutureEngineers@engr.wisc.edu

**Or, if you want to be an engineering student, apply today!**
Visit www.wisc.edu/admissions/apply.

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