welcome to the MAE spaces in engineering building III
Engineering building III (EB3) is one of NC State University College of Engineering’s central buildings, and it is home to both the Department of Mechanical and Aerospace Engineering (MAE) and the UNC/NC State Joint Department of Biomedical Engineering (BME).

Situated on NC State’s Centennial Campus, EB3 sits alongside engineering buildings one and two (EB1 and EB2) and Fitts-Woolard Hall, each of which houses the main offices for many of the other College of Engineering departments, along with the James B. Hunt Jr. Library. These cornerstone buildings of academic excellence and engineering innovation surround Centennial Campus’s Academic Oval, most often simply referred to as “The Oval,” a 1,000 foot lawn where students, staff and faculty alike study, relax and enjoy the weather of the City of Oaks.

EB3 houses the MAE departmental offices along with many of our laboratories, classrooms and machine shops. To learn more about these facilities, take a look at the following pages.

Adjacent to the Oval, you can find a Long EZ Aircraft that was constructed, flown and donated to the MAE Department by Aerospace PhD Alumni Arthur (Art) Grantz.
On one side of the hallway, there is the MAE Hall of Fame display that features some MAE's brightest and most successful alumni. On the other side, a display shows the history of the MAE department since NC State's founding.

The "Batcave," a student club and organization workspace where the Aerial Robotics Club and High-Powered Rocketry Team work and build rockets and other aerial vehicles.

Display for Westinghouse J30 Jet Engine

Structural Mechanics Lab - Introduces students to instrumentation systems and basic components of solid mechanics. Conducts experiments in rod torsion, beam bending and use of strain gauges.

Dynamics, Vibrations & Controls Lab - Introduces students to principles of dynamics and controls. Lab modules include experiments in vibrations, circuits and PID control.

Thermal Sciences & Energy Systems Lab - Introduces students to the measurements of properties associated with thermal and fluid sciences. Lab modules include experiments in temperature, air and fluid measurements.

Lecture halls where sophomore and junior MAE classes are held.
The Highbay Building is located behind EBIII and is accessible through the first floor of EBIII.

Formula SAE Student Team Autoshop where students build a new Formula Race Car every year for SAE Competitions.

Subsonic Windtunnel Facility used to simulate flight conditions so that research data can be gathered on everything from unmanned aerial vehicles (UAVs) to military jets. The subsonic tunnel can also be used to simulate storm conditions that test the durability of structures such as buildings or bridges, and it can reach wind speeds of 90 mph. We also have both a supersonic and now a hypersonic wind tunnel at our MAE West Research Labs.

Baja SAE Student Team Autoshop where students build a new Baja Car every year for SAE Competitions.

An anechoic chamber used for sound and vibration research. The chamber is so silent that you can hear your own organs if you are in there for long enough.

SolarPack Student Team Autoshop where students design and build solar powered vehicles to compete in the Formula Sun Grand Prix Competition.

Aerospace Engineering Space Senior Design Shop where seniors in the Mechanical Engineering program design and build spacecrafts.

Aerospace Engineering Flight Senior Design Shop where seniors in the Mechanical Engineering program design and build different types of aircrafts.

Undergraduate Student workspace developed by faculty to give undergraduates more freedom to explore their engineering interests and work on projects with various different teams.

Display of Formula and Baja Team Cars from previous years.