CHANGING LIVES AND HIS COMMUNITY

Adam french, an undergraduate engineering student, has established feed fairborn as an effort to fight hunger in our local area. The miami valley center for regional sustainability plans to be taken completely off the grid by diverting materials from landfills and using sustainability practices to supply heat, water, and electricity. Adam believes that engineering can be used to help people, as evidenced by his work with the center, which uses high-temperature compost around the perimeter of the building to trap the heat.

An unique aspect of the College of Engineering and Computer Science programs at Wright State University is the project-centered education we offer.

Student projects enhance the educational experience by combining academic knowledge with real-world engineering. Our competitive design teams have won awards all over the country while gaining valuable hands-on experience in their field.

Through our partnerships with the Air Force Research Laboratories at Wright-Patterson Air Force Base, local and regional tech companies or our own Centers of Excellence, students can participate in a variety of design teams or research opportunities at any stage in their program.

Just as the Wright Brothers created the first airplane and changed the world, the College of Engineering and Computer Science strives to lead the way in innovative concepts, design, research and technology ventures.

ASSOCIATION OF COMPUTING MACHINERY CONTEST

Each fall the student chapter of the association of computing machinery (acm) plans and conducts the local programming contest, where more than 70 students participate. The winning teams from the local contest move on to the regional contest, where more than 120 teams from dozens of colleges and universities participate. The winners then go to the annual world finals of the acm international collegiate programming contest where they compete with over 2000 teams from 88 countries.

College of Engineering and Computer Science

DESIGN TEAMS AND RESEARCH OPPORTUNITIES

WHERE EDUCATION MEETS INNOVATION

WRIGHT STATE UNIVERSITY
3640 Colonel Glenn Hwy.
Dayton, OH 45435
(937) 775-5272
cecs.wright.edu

WRIGHT STATE UNIVERSITY

"JUST THINK"

This senior project involves extensive research into EEG signals, their meaning and how these brain wave signals can enable people with limited motion to conduct simple tasks. The project team designs, builds, programs and tests devices that can be worn on the user to carry out simple everyday tasks, such as flipping a light switch or opening a door.

MULTIUSER INTERACTIVE NETWORKED CAMPUS SIMULATION (MINCS)

In order to establish a virtual environment in which arbitrary location-based content can be visualized, senior computer science students designed and implemented a client/server software package to interact with a static model of the Wright State University campus. Users may explore the exterior of the Wright State campus and interior of the Joshi Research Center. The system allows interaction with other users through avatars, geometry additions, a location-based event system, and a chat service.

MICRO AIR VEHICLE

Using nature for inspiration, the Center of Excellence in Micro Air Vehicle Research has created a micro air vehicle (MAV) modeled after the dragonfly. The MAV has a seven-and-a-half-inch wingspan and weighs 10 grams—the weight of two nickels. Military and non-military advantages of planes this size include rescue missions and spying on enemies in urban areas. This interdisciplinary project covers a broad range of knowledge including electrical engineering, computer science, human factors and mechanical engineering. The MAV project utilizes the expertise of local companies, and WSU students, from freshman to graduate levels.

ROBOTIC LAWNMOWER COMPETITION

Engineering and computer science students compete in the Annual Robotic Lawnmower Competition, sponsored by the Institute of Navigation (ION) Satellite Division. The purpose of the competition is to design and build an autonomous robotic unmanned lawnmower using the art and science of navigation to rapidly and accurately mow a field of grass. The WSU team consists of students from the mechanical engineering, electrical engineering, computer science and computer engineering. Our students are also developing similar technology for an autonomous robotic field striping machine for athletic fields.

OTHER ONGOING DESIGN PROJECTS:

- High Altitude Balloon
- Prosthetic Socket Manufacturing Machine
- Moon Buggy
- Automated System for Demineralization in Bone
- Deep Tissue Injury Treatment with LEDs
- Shell Eco-Car
- What is the Optimal Symbol Size?
- Exercise Chair Design
- Human Powered Vehicle Competition
- Third World Country Incubator
- Facial Hemangioma Phantom Project
- SAE Mini Baja

SAE AERO DESIGN TEAM

Mechanical engineering students at WSU enter the SAE Aero Design Competition as part of their senior design project course. The goal of the competition is to design and build a radio-controlled aircraft from scratch based on a prescribed engine and overall dimensions. The competition tests the ability of the students to predict the performance of their original design as well as determine how much weight their aircraft can carry. The team participates in both a design event and a flight event.