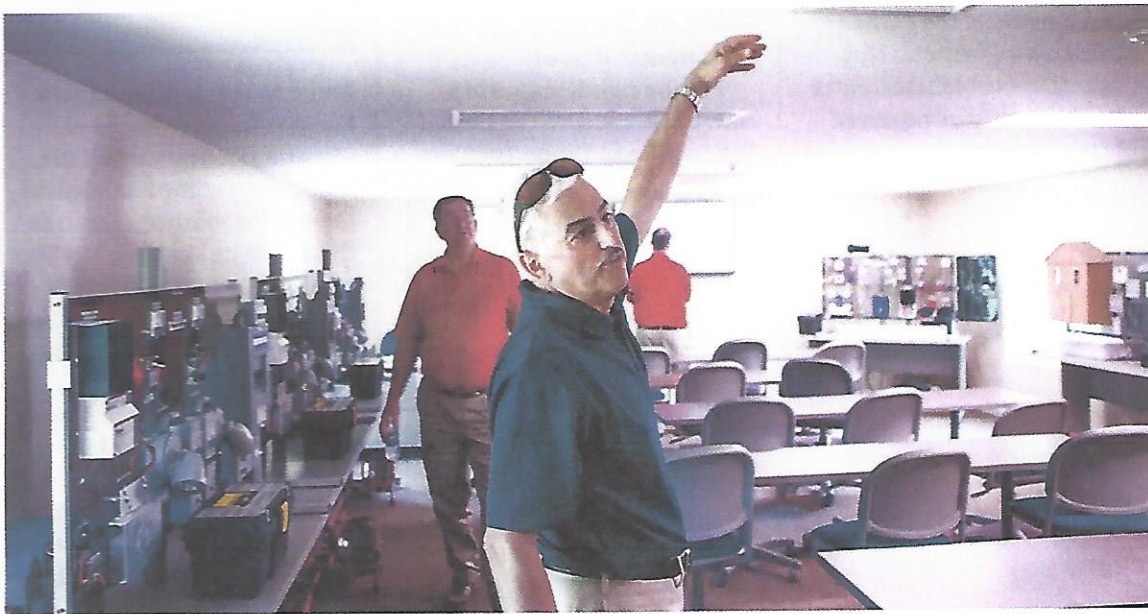


COMMUNITY

When a House Is More than a Home

The Sustainable Conservation House at 1114 N. 52nd St., adjacent to the UAFS campus, allows students to learn about the latest technology in energy auditing and energy efficiency in a hands-on laboratory. Used by both university students and local businesses, one side of the house can demonstrate a variety of conditions for students to observe and understand. The other side demonstrates the latest in energy efficient technology. Keeping an eye on it all is John Martini, assistant professor of electronics technology in the College of Applied Science and Technology. Recently he shared what he knows about the house.



ENERGY EFFICIENCY: On the classroom side, John Martini demonstrates some aspects of the home.

Why was the Sustainable Conservation House created?

Doug Knierim, owner of DK Construction in Van Buren, is a contractor who works for OG&E and AOG to do energy audits and weatherization for homeowners. I asked him if our students could accompany his guys on energy audits. Later he asked me if we would like to have a house on campus built specifically to demonstrate energy efficiency, and with him and his company Energy Efficiency Design and Development (EEDD), we created the Sustainable Conservation

House to provide hands-on training using a vacant older home near campus. Today it serves a dual purpose: We teach courses for university students, and we provide training for local industries.

How does the house work as a training laboratory?

The house is a stone home with an addition built by the previous owners. The original house is the laboratory. We've added 13 dampers that allow us to create different conditions inside that students can investigate. We deliberately have

inefficient appliances and leaky ducts and windows to show how bad things can get.

In the addition, we have come as close to net-zero energy building as we could get. We insulated the walls and ceiling, put in a new type of ductless heat pumps to heat and cool the space, and installed triple-paned, argon-filled windows, the best you can get.

How is the house used in degree programs?

Right now there is a class in energy auditing there, and in the spring we will have a class

in generating clean electrons. We also offer sustainable conservation and solar PV installation when they are requested. We have students from electronics technology, electrical engineering technology, computer graphics technology, business, and mechanical engineering who take these upper division electives.

How is it used by local industries?

Lots of people use it. In October, I will be teaching a course in solar PV installation for licensed electricians who work for an area electrical contractor. EEDD offers courses for CenterPoint Energy, AOG, OG&E, Rheem, and others. Part of each course is taught in Van Buren, and part is taught here in the house.

Are there any other really cool classes taught there?

We teach a class to WATC students and college students called STEM Guitar. We teach them to build a solid-body electric guitar from scratch while teaching them STEM. The exams they take cover chemistry, math, technology, safety, and manufacturing.