



**Custom Home, Moderate Climate**

## Yavapai College Construction Technology Program

**Years in business:** 8

**Average homes built per year:** 1

### House Description

**Size:** 2,008 s.f.

**Location:** Phoenix, Ariz.

**Construction cost:** \$82 per s.f.

The students at Yavapai College gain valuable experience designing and building a home using state-of-the-art building science principles while homeowners benefit from an extremely well-designed and built home. The results, according to the EVHA judges, are "incredible."

The judges were "very impressed with the fact that ... they are passing on to the community and the next generation," by holding open houses, marketing the homes, advertising, receiving media attention, and having student-led home tours. Local builders are invited to the open houses as part of the outreach and education effort.

Yavapai College wishes to thank the following people and companies:

- Michael Uniacke, Advanced Insulation
- Energy and Environmental Building Association
- Building Science Corporation
- Advanced Energy Corporation
- Building Knowledge Inc.
- Yavapai College Residential Building Technology Students, Class of 2004
- Kurt Holmes, Instructional Specialist
- Carrie Venz, Teacher Assistant
- Charlie Gohman, Arizona Dept. of Energy
- Anthony Floyed, Scottsdale, Ariz. Green Building Program
- Justin Erickson, Master Student
- American Lung Association Health House



### Energy Features

**Foundation:** R-16 insulating concrete form conditioned crawlspace

**Wall construction:** 2x6 wood frame with advanced framing details

**Wall insulation:** R-21 cellulose cavity insulation with R-5 insulating sheathing

**Ceiling insulation:** R-38 blown cellulose

**Windows:** Low-e, gas-filled; U-0.32; SHGC 0.29

**HVAC:** 86% efficient heat recovery ventilator; 94 AFUE furnace, 12 SEER air conditioner

**Ducts:** Sealed with mastic; 100% in conditioned crawlspace

**Water heating:** Active solar water heating with electric back-up

**Lighting:** 70% fluorescent; tubular skylight

**Appliances:** ENERGY STAR dishwasher supplied

**Blower door test:** 1.2 ACH50

**HERS rating:** 92.9

**Innovative features:** Direct vent gas fireplace