The Research Program Consists of:

- Specialized coursework in energy efficiency
- Research during the academic year
  - Focus on numerical simulation of high efficiency cooling strategies
  - Hands on experience with state of the art energy efficiency solutions
  - As part of UC Davis Western Cooling Efficiency Center team
  - As part of an interdisciplinary undergraduate research team
  - Collaboration with national laboratories
  - Cooperation with industrial affiliates
  - Academic publication of research results
- Summer 2017 engineering apprenticeship with industry
- Opportunity to present results at US Dept. of Energy Building Technology Office Peer Review in Washington D.C.
Preferred Qualifications

• Any undergraduate student may apply
• Most appropriate major disciplines include:
  – Mechanical Engineering
  – Civil and Environmental Engineering
  – Computer Science and Engineering
• Research fellows will have experience or interest in:
  – Computer modeling of physical systems
  – Heat transfer and thermodynamics
  – Design and control of complex multi-mode systems
  – Energy efficiency and sustainability in the built environment
• Research fellows will be familiar with or prepared to learn:
• Research fellows will also have the following characteristics:
  – Excellent communication skills
  – Natural leaders and team players
  – Self directed, curious, and motivated
The Research Focus – Developing Tools for ...

- EnergyPlus
- Open Studio
- Technology Performance Exchange
- Building Component Library
Research Focus – Hybrid Air Conditioning

- Hybrid systems mix multiple cooling strategies and switch between numerous modes of operation to heat/cool/dehumidify efficiently across a range of operating conditions
- Integrate systems for mutualistic efficiency advantages
- Can reduce peak electricity demand by 40% or more
- Some technologies promise 65% savings for annual cooling energy consumption
- Advanced technologies include
  - Variable speed fans and compressors
  - Heat recovery
  - Dessicant dehumidification
  - Indirect evaporative cooling
- Following slides illustrate a few examples
Applicants to apply for interview:

• Submit application, and resume via Aggie Job Link
  “Job ID #813755 – STDT 4 - Student Assistant - Western Cooling Efficiency Center ”

Applications deadline: August 1 2016

• Contact for information:

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