**Project Title:** Energy Audit- Campus Buildings

**Project Description:** Choose a group of buildings on campus that you believe could be updated to make energy efficiency improvements. Evaluate your buildings, identifying which efficiency features are present (i.e., timed/motion activated lights, LED, etc.), as well as what may be lacking or effecting the overall efficiency of the buildings. Use the Iowa City Climate Toolkit Checklists for Home and Business and other resources to guide your recommendations and analysis.

**Background:** The University of Iowa has made significant progress in improving energy efficiency of buildings, and new construction has focused on LEED (Leadership in Energy and Environmental Design) certification. Even with all this progress, some buildings could improve their energy efficiency. In this project the group will choose a set of buildings and study their energy-using features, insulation, and whether there is adequate energy efficiency education. It may be helpful to begin with a checklist of what to look for or determine a scoring method before you start. Some examples of factors to consider can be seen in the links below.

After observing and analyzing areas for improvement, the students should focus on practical solutions for improving the efficiency of the building. When possible, attempt to quantify the savings in terms of energy and dollars saved. Since assumptions will be made, make sure to show your work and justify how you arrived at your estimates. Your recommendations may vary from building to building.

**Helpful Readings:**

City of Iowa City, Climate Action Around The House and Climate Action At The Business:

* <https://www8.iowa-city.org/WebLink/0/edoc/1879522/Checklist%20for%20Climate%20Action%20Around%20the%20House.pdf>
* <https://www8.iowa-city.org/WebLink/0/edoc/1879523/Checklist%20for%20Climate%20Action%20at%20the%20Business.pdf>

7 Simple Ways To Improve Energy Efficiency

* <https://www.bdc.ca/en/articles-tools/business-strategy-planning/manage-business/pages/how-aim-net-zero-energy-efficiency.aspx>

**Desired Outcomes:**

* Determine a checklist or set of items to check for in your energy audit. Choose a set of buildings. Observe and record data from conducting your study. Recommend improvements tailored to each building. Include cost estimates and long term savings (financial and energy) wherever possible. Consolidate information into a single, concise written report or presentation that could be used.

**Potential Collaborators/Stakeholders:**

* Office of Sustainability and the Environment
* Facilities Management
* AmeriCorps
* Johnson County Clean Energy District

**Evaluation:**

* Are data visualizations aesthetically pleasing and accurately portrayed? Was the collection of data consistent across buildings? Is your checklist thorough? Which building(s) or locations on campus did you audit and why? Are your recommendations easily implemented, practical, and do you explain their environmental impact? Can the presentation, data, and written report be understood and used by managers to apply changes? Are there behavioral solutions to supplement the upgrades to energy using infrastructure? Did you follow the Iowa City Climate Toolkit guides? How do your findings apply to the City Climate goals in general?

**Course Relevance:**

* Sustainability Certificate based courses, Sustainable Systems, Intro to Sustainability