

Design Competition: Indoor Greenery System and the Built Environment

2021 Project Criteria

BACKGROUND

Various efforts have been made to reduce building energy consumption while maintaining a comfortable indoor environment. Greenery infrastructure enhancements have been recognized as one of the climate change adaptation measures. Limited studies have been conducted on indoor greenery systems such as indoor living walls on energy use and thermal comfort although people spend about 90% of their time indoors.

CHALLENGE

How to effectively integrate greenery systems (for example living walls, green walls, and vertical indoor gardens) with our indoor environment in buildings? What are the creative ways that you can think of based on cutting-edge technologies? How to reach optimum resource efficiency? How do indoor greenery systems affect interior space, occupants, and sustainability? You may use an existing building or an imaginary building to illustrate your design idea.

IMPORTANT DATES

- Registration open: September 1, 2021
- Submission deadline: September 28, 2021
- Competition result announcement: November 5, 2021

ELIGIBILITY

- Each team (2-3 students) needs to register on the UW competition website and submit their competition materials before the submission deadline. Students from different majors are encouraged to form teams.
- Each team member must be a registered student at the University of Wyoming in Spring 2021. If a team is awarded, each student participating as a team will have the prizes as described.

SUBMISSION ELEMENTS

1. Design Statement Requirements
 - Page Limit (not to exceed): 3 (including one page for cover page)
 - Font: Times News Roman, 12pt
 - The statement should include a description and illustration of the design idea, cutting-edge technologies applied in your design, the innovation of the design idea, and the potential impacts of the design concept on interior space, occupants, and sustainability.
2. PowerPoint Presentation Requirements
 - Slide Limit (not to exceed): 10 slides
 - The presentation should reflect the key points in the design statement.

3. Video Requirements

- Time Limit (not to exceed): 5-minute
- Introduce the participants and present your design idea.

All submitted work must be original work. Proper citations and references must be given if you need to refer to existing studies. Each submission will be reviewed by judges from industry and academia on the novelty, practicality, and the level of integration between greenery systems and the indoor environment of the design ideas. Students should consider how the integration of indoor greenery systems affects occupants, interior space, and resource demands (energy and water).

JUDGING

- Submissions are judged on competition criteria and a professional appearance by the competition judging committee.
- Final winners are selected from the judges' recommendations and criteria scores.
- Participating students will receive a notification stating the status of their project submittal(s) on November 5, 2021.

AWARDS

- First Place: 2TB portable hard drive and one of your favorite books up to \$25
- Second Place: 1TB portable hard drive
- Third Place: Texas Instruments TI-36X calculator or one of your favorite books up to \$25.

Top winners of the design competition may have the opportunity to be mentored by Civil and Architectural Engineering faculty and participate in selected parts of the research project on building integrated indoor greenery systems sponsored by the National Science Foundation as an undergraduate researcher (1-2 openings) for Spring 2022.

QUESTIONS

Please contact the competition organizer Liping Wang at lwang12@uwyo.edu with any questions on this competition.

Please contact Caitlyn Julia Spradley at Caitlyn.Spradley@uwyo.edu with any issues with the website or submission for the competition.