

28th WERC Environmental Design Contest

CALL FOR TASKS



The 28th WERC Environmental Design Contest will be held April 8-11, 2018 at New Mexico State University in Las Cruces, NM. The WERC Environmental Design Contest is a unique university student competition that brings industry, government, and academia together through innovative and improved solutions to current and emerging environmental challenges.

Since 1991, the Design Contest has challenged teams of university students from across the U.S. and around the world to design solutions for real-world problems and develop operational bench-scale models for their developed technologies. Throughout the multi-day competition, participating teams are required to present their work through conference-style poster sessions, written and oral presentations, and demonstration of working bench scale models before a panel of professionals.

Participating universities have found the Design Contest to be an important contributor to ABET accreditation, where it often serves as the senior capstone project. Through participation in the Design Contest, students are required to design and demonstrate functionality of a complex engineering system in an inter- and/or multidisciplinary environment. The Design Contest has also proven effective in energizing students by engaging them in real-world scenarios that challenge their ability to think both critically and creatively, explore both traditional and innovative solutions, develop business acumen, and gain insight into the broader impact of environmental challenges on society.

Topics of Interest

Private industry and government agencies are invited to submit tasks that clearly define a current or emerging environmental challenge that needs to be solved or addressed through innovative, novel ideas (see <https://enr.nmsu.edu/files/2017/07/Sample-Task.pdf> to view a sample task)

Topics of interest are separated into the following four tracks:

1. Industry need

- Treatment of soil, water, wastewater and/or produced water
- Remediation of soil
- Robotics for environmental applications
- Integration of alternative energy into new and/or traditional technologies for environmental application
- Other (to be defined by proposed sponsor)

2. Public health

- Arsenic and nitrate removal from water
- Removal of emerging contaminants of concerns in wastewater (pharmaceuticals, hormones, trace organics)
- Hazardous and/or medical waste handling and disposal
- Other (to be defined by proposed sponsor)

3. IOT for environmental applications

- Remote monitoring of radioactive environments
- Remote sensing
- Robotics applications for remote sensing, data collection, etc.
- Other (to be defined by proposed sponsor)

4. Emerging innovations for sustainable land use

- Environmental remediation, restoration, and /or alternative land use of previously remediated sites
- Soil or water treatment in remote, isolated, or adverse conditions
- Alternative Energy applications
- Other (to be defined by proposed sponsor)

Scope

Proposed Tasks must include the following:

- Background on Environmental Concern
- Design Considerations
- Problem Statement
- Bench-Scale Demonstration
- Evaluation Criteria

For more information, please contact Jalal Rastegary at 575-646-2913 or email enr-nm@nmsu.edu. Additional information can be found at <https://wercdesigncontest.nmsu.edu>