

## **Proposition 10-24/25**

**Proposal Type:** Resolution

**Title:** Proposal for name change from the “Department of Civil Engineering” to the “Department of Civil and Environmental Engineering”

**Date Submitted:**

**Sponsor(s):** Runwei Li (College of Engineering), Michaela Buenemann (College of Art and Science), Christopher Erickson (College of Business), Tawny Aguirre (Doña Ana Community College), Dylan McDonald (Library), Omar Holguin (College of Agricultural, Consumer and Environmental Sciences), Geoffrey Smith (College of Art and Science), Kristian Finlator (College of Art and Science), Jiayi Wang (College of Health, Education and Social Transformation), and Christopher Brown (College of Art and Science).

**Proposed Committee:** Curriculum and Planning

**Prior Approvals:** Department Faculties in Department of Civil Engineering, Department of Civil Engineering, College of Engineering

### **Proposal**

As per New Mexico State University Administrative Rules and Procedures, 2.15, the following change in an academic unit is being proposed: A name change from the “Department of Civil Engineering” to the “Department of Civil and Environmental Engineering”.

The Department has a long history at NMSU, with study programs rooted in the traditional areas of civil engineering. With the enactment of the EPA in 1970 and the rapid growth in the field of environmental engineering driven by regulatory pressures, the Department added a new graduate degree program in environmental engineering in the late 1980s. Since then, the Department has continued to build expertise in this specialty field of civil engineering and is well-recognized by peers, profession, and grant agencies. We believe it is opportune to change the name of the Department for further growth.

### **Rationale**

**1. Alignment with current degrees:** The proposed name accurately connotes the degree programs currently offered by the Department: Bachelor of Science and Master of Science in Civil Engineering; Master of Science in Environmental Engineering; and Master of Engineering in Civil Engineering. The Department has added the “Master of Science in Environmental Engineering” program in environmental engineering since the late 1980s.

The program provides unique educational and research opportunities at the graduate level in the fields of water quality, aquatic chemistry, environmental microbiology, water treatment, water pollution control, wastewater treatment reclamation and reuse, desalination, membrane processes,

industrial, hazardous, and solid waste management, groundwater remediation, contaminant fate and transport, resource recovery from waste streams, air pollution control, and nanotechnologies in environmental applications. The program courses emphasize basic engineering and scientific principles, as well as the design of environmental engineering unit operations and processes.

**2. Alignment with engineering:** The proposed name will help collaborate with other departments with similar research and educational interests, such as “Department of Plant and Environmental Sciences,” “Department of Geography and Environmental Studies,” and “Department of Geological Science.” Among these departments, there are four programs that may share common interests with the “Master of Science in Environmental Engineering” program, including (1) Master of Science - Department of Plant and Environmental Science; (2) Bachelor of Science in Environmental Science - Department of Plant and Environmental Science; (3) Bachelor of Science in Environmental Studies - Department of Geography and Environmental Studies; and (4) Bachelor of Science in Earth and Environmental Sciences - Department of Geological Sciences.

The “Master of Science in Environmental Engineering” program is distinct from the other programs by its focus on the engineering aspect. The program has unique course requirements in water and wastewater treatment, solid and hazardous waste systems design, industrial pollution control, and advanced water treatment. These unique environmental-related courses can serve as complements to other programs. The Department of Civil Engineering has discussed the name change proposition with related departments and received responses of no concern so far.

**3. Alignment with the trend in peer institutes:** The two other research universities in NM (the University of New Mexico and New Mexico Institute of Technology) have both re-named their Civil Engineering departments recently to include “environmental”. Of the 15 NMSU peer institutions, 7 feature civil engineering departments with “environmental” in their name; 4 others have other departments with “environmental” in their names (amounts to 11/15 or 73%).

Peer Institution Name	“Environmental” featured in civil engineering unit	“Environmental” featured in other engineering units	Environmental not featured in any engineering unit
Colorado State University <sup>1</sup>	×		
Iowa State University <sup>2</sup>	×		
Kansas State University <sup>3</sup>			×
Montana State University <sup>4</sup>			×
Oklahoma State University <sup>5</sup>	×		
Oregon State University <sup>6</sup>		×	
Texas Tech University <sup>7</sup>	×		
University of Arizona <sup>8</sup>		×	
University of Idaho <sup>9</sup>	×		
University of Nevada – Reno <sup>10</sup>	×		
University of New Mexico <sup>11</sup>	×		
University of Texas - El Paso <sup>12</sup>			×
University of Wyoming <sup>13</sup>			×

Utah State University <sup>14</sup>	×		
Washington State University <sup>15</sup>	×		

**4. Alignment with emerging issues:** The proposed name aligns with and capitalizes on the “new” identity of the Department with NMSU research initiatives and programs (e.g. Energy, Environment, and Water core area, the Water Science and Management Graduate Degree Program, the New Mexico Produced Water Research Consortium, etc.). The change will help position the Department and NMSU among peers and stakeholders in mitigating emerging global environmental issues, including global warming, climate change, and public health concerns related to environmental pressures. In addition, the change will position the Department to better emphasize the importance of the environment to the civil and environmental engineering professions through frameworks such as ASCE’s Envision (The Blueprint for Sustainable Infrastructure) and U. S. Green Building Council’s LEED (Leadership in Energy and Environmental Design) rating systems.

**5. Alignment with professional classification:** Our graduates could be fittingly categorized as “Civil Engineers” and “Environmental Engineers” in accordance with the engineering occupations listed in the U. S. Bureau of Labor Statistics, and by professional societies, licensing agencies, and potential employers.

According to the U. S. Bureau of Labor, “Environmental engineers use engineering disciplines in developing solutions to problems of planetary health. Work may include waste treatment, site remediation, or pollution control technology.”<sup>16</sup> The “Master of Science in Environmental Engineering” program provides courses and research training exactly in agreement with the description from the U. S. Bureau of Labor.

**6. Alignment with demographics:** From a demographic point of view, student profiles in environmental engineering programs have traditionally been more diverse than those in other civil engineering programs. For example, based on an American Society of Engineering Education (ASEE) reports<sup>17</sup>, while the recipients of BS degrees in civil engineering are 74.6% men and 25.4% women, the recipients of BS degrees in civil and environmental engineering are 71.7% men and 28.3% women, and the recipients of BS degrees in environmental engineering are 48.3% men and 51.7% women. Environmental engineering programs attract a more gender-diverse population with almost equal proportions of men and women. Similar trends are observed for graduate degrees awarded (MS and PhD) according to the same ASEE data source<sup>17</sup>.

Based on the above and with the accord of the Department’s Industry Advisory Board, the departmental faculty has voted favorably for this name change to better position the Department in attracting a diverse pool of students to our programs and to help our graduates find the most appropriate professional positions. Beyond the change of the name, no other structural or administrative changes will occur.

## Appendix

### A1. Reference

1. Department of Civil and Environmental Engineering, Colorado State University. <https://www.engr.colostate.edu/ce/> [Access on 01/23/2025].
2. Department of Civil, Construction and Environmental Engineering, Iowa State University. <https://www.ccee.iastate.edu/> [Access on 01/23/2025].
3. Department of Civil Engineering, Kansas State University. <https://ce.k-state.edu/> [Access on 01/23/2025].
4. Civil Engineering Department, Montana State University. <https://www.montana.edu/ce/> [Access on 01/23/2025].
5. School of Civil and Environmental Engineering, Oklahoma State University. <https://ceat.okstate.edu/cive/> [Access on 01/23/2025].
6. School of Chemical, Biological and Environmental Engineering, Oregon State University. <https://engineering.oregonstate.edu/CBEE> [Access on 01/23/2025].
7. Department of Civil, Environmental, and Construction Engineering, Texas Tech University. <https://www.depts.ttu.edu/ceweb/> [Access on 01/23/2025].
8. Department of Chemical and Environmental Engineering, University of Arizona. <https://chee.engineering.arizona.edu/> [Access on 01/23/2025].
9. Department of Civil and Environmental Engineering, University of Idaho. <https://www.uidaho.edu/engr/departments/cee> [Access on 01/23/2025].
10. Department of Civil and Environmental Engineering, University of Nevada, Reno. <https://www.unr.edu/cee> [Access on 01/23/2025].
11. Gerald May Department of Civil, Construction and Environmental Engineering, University of New Mexico. <https://civil.unm.edu/> [Access on 01/23/2025].
12. Department of Civil Engineering, University of Texas at El Paso. <https://www.utep.edu/engineering/civil/> [Access on 01/23/2025].
13. Department of Civil and Architectural Engineering and Construction Management, University of Wyoming. <https://www.uwyo.edu/civil/index.html> [Access on 01/23/2025].
14. Civil and Environmental Engineering Department, Utah State University. <https://engineeCivilandEnvironmentalEngineeringring.usu.edu/cee/> [Access on 01/23/2025].
15. Department of Civil and Environmental Engineering, Washington State University. <https://ce.wsu.edu/about/> [Access on 01/23/2025].
16. Occupational Outlook Handbook, U.S. Bureau of Labor Statistics. <https://www.bls.gov/ooh/architecture-and-engineering/environmental-engineers.htm> [Access on 01/23/2025].
17. By the numbers, American Society for Engineering Education. <https://ira.asee.org/by-the-numbers/> [Access on 01/23/2025].