

# Designing Gender-Inclusive Sustainability Curricula in Engineering Education

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## ABSTRACT

Incorporating sustainability into engineering education is essential for tackling global environmental issues. Nonetheless, the persistent gender imbalance in engineering remains a significant obstacle to achieving equitable and sustainable outcomes. This paper investigates the creation and execution of gender-inclusive sustainability curricula within engineering education. Through a thorough review of existing curricula, institutional policies, and current gender diversity initiatives, the study highlights effective strategies for integrating gender inclusivity into sustainability-oriented engineering courses. It specifically analyses how course content, teaching methods, and assessment practices influence the engagement of women and underrepresented genders in sustainability fields. By showcasing case studies and exemplary practices from institutions that have successfully adopted gender-sensitive approaches to sustainability, this research puts forward a framework for engineering programs to follow. This framework emphasizes intersectional perspectives on sustainability, illustrating how gendered experiences of environmental challenges, like climate change or resource scarcity, can inform engineering solutions. Additionally, it offers recommendations for promoting inclusive learning environments, ensuring diverse representation in sustainability initiatives, and advancing gender equity in engineering leadership. The findings indicate that gender-inclusive curricula not only empower underrepresented groups within engineering but also enhance the creation of more comprehensive, diverse, and innovative responses to sustainability challenges. This paper calls for a fundamental rethinking of engineering education to nurture a more inclusive and sustainable future for everyone.

**Keywords:** Gender inclusivity, sustainability, engineering education, curriculum design, diversity, intersectionality, environmental justice