

## **Advances in Engineering Education**



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## **Editorial**

Issue 13.3 includes five manuscripts. The issue opens with Carpenter and Johnson-Bey features insights from a national Listening Session with 46 engineering students, offering first-hand perspectives on how to more effectively recruit, support, and retain a diverse population in STEM—highlighting both widely used practices like project-based learning and under-addressed needs such as mental health, housing, and food security. Schultz et al., is a study of the Tech4Wildlife course at Georgia Tech, which illustrates how project-based, interdisciplinary learning grounded in the UN Sustainable Development Goals can foster sustainability mindsets and conservationist identities among engineering and computing students.

Chan et al., offers a study exploring the integration of a mindfulness-based intervention into a first-year engineering course, highlighting how short in-class meditation sessions can support student mental health and well-being. While quantitative outcomes showed limited change, students qualitatively reported benefits like stress reduction and improved focus, suggesting potential value in incorporating mindfulness practices into engineering education. Castaneda et al., offers a study that integrates project-based learning units into an introductory engineering mechanics course to foster students' critical consciousness—an essential affective skill for addressing systemic inequities through engineering. Findings show that culturally relevant, real-world scenarios can help students reflect more deeply on social justice and their roles as future change agents, with one-third of participants demonstrating growth in critical awareness. Finally, Hernandez-Mena et al., offers a study on the ITIF methodology—an interactive, four-phase teaching approach combining flipped classroom, peer instruction, and other active strategies—to boost motivation and engagement in first-year engineering courses. Results show that the platform-supported method maintained high student motivation and correlated greater participation with improved academic performance, offering a promising model for dynamic, feedback-driven instruction.