

Unpacking the Hidden Curriculum in Engineering

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Abstract:

In engineering, the issue of underrepresentation continues to be a topic of high debate amongst engineering departments in the U.S. and internationally. While there have been many approaches to tackling this issue, one underexplored area is around hidden curriculum. The hidden curriculum of engineering is a relatively new concept and describes the (un)intentional, explicit, or implicit messages that are systemically transmitted and structurally sustained and supported. In working or learning environments, hidden curriculum hinders many groups from navigating successfully, affecting their subsequent decisions and actions (e.g., persistence, retention). A mixed-methods study was conducted across 58 colleges of engineering for undergraduates, graduates, and faculty across the United States and Puerto Rico between 2018 to 2020. The results of the session revealed interesting differences across gender, race, and institutional type and role. This session will introduce the audience to the concept of hidden curriculum, how it is perceived by faculty and students and how an individual's response to the acquired hidden curriculum may serve to reinforce or mitigate the status quo in engineering. The talk will culminate with some suggestions and strategies to mitigate the negative outcomes of hidden curriculum.

Selected References:

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3. R.J. Downey & I. Villanueva Alarcón. (2022). Reading the world of engineering education: An exploration of active and passive hidden curriculum awareness. *American Society of Engineering Education, Liberal Education, Engineering & Society Division, St. Paul, Minneapolis, MN, June 26-29, 2022*, Paper ID 37254, p. 1-12.
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5. V. Sellers & I. Villanueva. (2021). What strategies do diverse women in engineering use to cope with situational hidden curriculum? *Proceedings of the American Society of Engineering Education Annual Conference & Exposition (virtual), Women in Engineering Division, Long Beach, CA, June 27-30, 2021*, Paper ID #32762, 1-16.
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