PHYSICS COLLOQUIUM:

Learning Assistants in Introductory Physics and Other STEM Courses: Supporting Equitable Student Success

Date:
9/25/2026

Time:
10:30 AM – 11:50 AM

Location:
SSB 130

Dr. Cassandra Paul

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Professor of Physics & Astronomy | Professor of Science Education
San José State University

About The Speaker:

Cassandra Paul is Interim Associate Vice Provost of Student Success at San José State University and a professor in the Department of Physics and Astronomy and the Science Education Program. She previously taught introductory physics and master's-level science education courses. Dr. Paul's research examines how active-learning and asset-based pedagogies can promote equitable student outcomes, as well as how faculty professional development can support their implementation. She also studies the relationships among assessment, feedback, grading practices, student success, retention, and equity in physics and other science courses. Dr. Paul was instrumental in founding SJSU's Learning Assistant program, which has become a national model for supporting student learning and historically marginalized student populations. Her research has been supported by multiple National Science Foundation grants. In 2023, Dr. Paul received SJSU's Outstanding Professor Award, which recognizes excellence in teaching effectiveness and service to the San José State campus community.

Abstract:

Learning Assistants (LAs) are undergraduate students prepared to support their peers in their classrooms through active learning and collaborative problem solving. At San José State University, our work with LAs began in an introductory algebra-based physics for non-majors, where we redesigned the course around model-based active learning, inclusive pedagogy, and structured small-group interaction. The Learning Assistant program has since expanded across physics courses and to other disciplines through a centralized program. This talk will examine findings from a quantitative study of more than 25,000 students in ten introductory STEM courses. Sections with LAs had lower rates of withdrawal, D grades, and F grades, while students who encountered an LA were more likely to graduate in a STEM major. These associations were particularly strong for women and students from racial and ethnic groups historically marginalized in STEM. I will discuss how Learning Assistants may improve student outcomes, narrow equity gaps, and support institutional change.

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