

The GRRATE Project

Guitars, Rocketry, Robotics Advanced Technological Education



The Project:

GRRATE is an NSF ATE grant-funded program that uses project-based learning to engage women, students of color, and rural and low-income students in STEM.

GRRATE offers students three course sections of an original 3-credit hour elective course called ISC1006 Wide World of Science. Each course section offers a different semester-long project in either guitar-building, rocketry, or robotics.

Conceptual Framework:

GRRATE instructors undergo professional development training and apply lessons from gender and race theory including growth mindset, stereotype threat, universal design for learning, multicultural inclusion and accessibility.

Our Mission:

Our goal is that students graduate the GRRATE course with an increased confidence in STEM learning, primed entry-level STEM skills and an awareness of STEM career paths and local opportunities. We measure our success through a pre and post-test survey that gauges STEM attitudes. We have served 111 students from 2019-2020. Our students were 67% female, 54 students of color and 60% rural.

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