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Discovering Undergraduate Mathematics in American Indian Culture.

This project develops and researches undergraduate mathematics materials based in the culture and mathematics of Native American Peoples for integration into undergraduate courses with an emphasis on social justice and equity in mathematics education. While mathematics topics include probability and statistics, number theory, transformational geometry, and pre-service elementary and secondary education-related content, social concerns are reflected in cultural topics such as public health (diabetes) and Tribal membership (blood quantum). The presenters discuss how standard undergraduate mathematics topics can impact daily life among Tribes. These materials—both paper and electronic—are classroom ready, and are developed, piloted and assessed in consultation with Tribes in the the Rocky Mountains, the Plains, the Pacific Northwest, and the Southwest. This work is an NSF DUE TUES funded project. (Received August 30, 2017)