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Improving Student Learning Through "Tuning"¹ WILLIAM EVENSON, UVU / BYU Emeritus

"Tuning" is a term adapted from efforts in Europe, and now around the world, to define very specifically what students need to know, understand, and be able to do to qualify for a degree in physics. This process brings faculty together from a wide variety of higher education institutions to define degree-level learning outcomes. Physics faculty in the Utah System of Higher Education and two private institutions in Utah have engaged in "Tuning" physics since 2009 at the 2-year (or associate degree) level, the bachelor's level, and the master's level. That work continues and will be updated annually. I will briefly explain Tuning, describe how it can strengthen student learning, and report some of the experience of Tuning physics in Utah. I argue that this process is directed toward a culture change in academic departments, giving primary focus to what students learn rather than to what faculty teach or to other faculty and institutional inputs. It also seeks ultimately to change graduation requirements from counting courses (or seat time) to assessing the accomplishment of learning outcomes.

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