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Use Of Multiple Physics Education Methods And Learning Activities to Maximize Student Processing Time During Lecture ROBERT DUFFIN, GERALD AKSA, JEFFERSON CARTANO, THOMAS ROSKOP, County College of Morris — Combinations of physics education methods have been used effectively to improve learning outcomes in undergraduate courses in a wide range of classroom size. Some mixtures of methods have been shown to be more effective than others. Educators in the Engineering Technologies and Engineering Science Department (authors 1, 2, 3 and 4) at the County College of Morris have been investigating new approaches with a mixture of teaching pedagogies to maximize processing and active learning time in the classroom. Recently (author 1) has found some success in a fifteen-week general astronomy course which had the goal of maximizing learning potential with the use of pre-lecture data-gathering, peer-on-peer in-class activities, discussion-image-based lectures, key-point board work, long-form info review slides, chapter quizzes and detailed chapter study-guides. In addition, a ten-week flipped problem-focussed Summer term mechanics course had promising hands-on student processing success.

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