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Enhancing Introductory Physics Courses Using The SCALE-UP Active Learning Model.[1] ABDELLAH AHMIDOUCH, SHIVA PHUYAL, BASHAR ALJAWRNEH[2], North Carolina AT State University — The Department of Physics at North Carolina A&T State University aims at transforming course delivery of introductory physics courses and associated labs by adapting and implementing the Student-Centered Active Learning Environment with Upside-down Pedagogies (SCALE-UP) model. The SCALE-UP format is a student-centered active learning method that promotes active learning and integrates lecture and laboratory work into one. We piloted several versions of the SCALE-UP model, including a full SCALE-UP and a hybrid form of SCALE-UP, which include all the interactivity and engagement of the SCALE-UP method with the exception that the labs are not integrated into the lecture. Student performance and attitude toward learning were measured through gains on the Force Concept Inventory (FCI) standardized test, analysis of the Colorado Learning Attitudes About Science (CLASS) survey data, student class attendance, and overall student grades. This paper describes the methods used and the preliminary results of the SCALE-UP project implementation.

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