Long Wang* (lwang@spsu.edu), 1100 South Marietta PKY, Marietta, GA 30060, and Kai Qian (kqian@spsu.edu), 1100 Marietta PKY, Marietta, GA 30060. Enhancing Student Learning in Calculus Through Subject-Oriented Projects. Preliminary report.

Calculus as one of the core courses often becomes a hurdle for students majoring in computer science, engineering or sciences. One of the most likely reasons is that students do not understand why they need to take the course and how calculus is applied to their fields. Therefore they are not interested in learning the course. Moreover, the course is often taught using traditional methods, with lectures full of definitions, formulas and theorems, and homework followed by quizzes and exams, and as a result, students who are typically not engaged by the teaching method, fail to enjoy the beauty of calculus. We will develop a series of subject-oriented projects which present calculus related topics in the context of the students’ major, as we believe that this will motivate students to learn calculus and improve their leaning efficiency. (Received September 22, 2010)