

## Project and Experiment-Based Fluid Dynamics Education

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**Abstract :** This paper presents the project and experiment-based fluid dynamics education in Meisei University, a private institution in Tokyo, Japan. We pay attention not only to the basic engineering courses but also to the practical aspect of engineering experience. So, we prepare courses called the Projects from I to VI. The Projects I and II are designed for the first year, III and IV are designated for the second year, V and VI are prepared for the third year, respectively. Each supervisor is responsible for two of these projects every year. When students take the Project V and VI at the third year, we automatically assume that these students will join the lab of the project for the graduation thesis. We would like to show our experience in the Project I in the summer term, 2016. In this project, we introduce a traction flight vehicle called Cat Flyer. This is a kind of a kite towed by a car for example. This is very similar to parasailing, but flight is possible even on the roads. Experiments in mechanical engineering education are also very important, and we would like to explain our course on centrifugal pump, venture, and orifice. Although these are described in detail in the text books of fluid dynamics, it is still crucial to have practical experiments as a student.

**Keywords :** aerodynamics, experiment, fluid dynamics, project

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