

# FP Engineering Requirements - Bike

The following requirements are potential “additional requirements” specified in the final project rubric. The base requirements have not been posted yet as of writing, so we have provided more than two additional requirements in the event that one of these requirements is a base requirement.

- The system should be able to withstand rain and other wet conditions. It should be rated at IPX4 water and dust resistance (the device is protected against spraying water at any angle).
- The system should be able to emit a visible turn signal and brake signal from at least 500 ft from the rear. (Oregon Vehicle standard)
- The system should be secure and should not be dislodged while someone is riding the bike.
- The system should be easy to install by an individual that is not familiar with the system. Ideally, a lay person should be able to install the system by themselves within ten minutes (provided an installation manual and the system itself).
- The system should have a battery life of at least two hours.
- The system should weigh no more than x pounds.
- The system should have indicators for: on/off, battery life indicator with a tolerance of  $\pm 10\%$  of actual, and turn signal visible to user.