

Overview

This final year project demonstrated the development of a smart bicycle trainer that can be controlled from virtual cycling exercise applications such as Zwift. The trainer has been manufactured and a torque characteristic and calibration test needs to be performed on the trainer and the brake. An existing master's student, Mr C Loedolff (21878439@sun.ac.za) has agreed that the his existing test setup in the Structures Laboratory may be used to perform the required tests.

General lab safety:

The following general lab safety instructions are applicable:

1. No after hours testing may be performed without the necessary permissions
2. An induction is required before testing may be undertaken.
3. Closed shoes must be worn at all times.
4. Loose clothing may not be worn.
5. Good housekeeping practices should be kept during testing.
6. No food or drink is permitted in the lab.
7. Safety report must be visible and accessible during testing.
8. If uncertain, ask for help - it will be willingly provided!

Fire Safety

There is no direct fire risk associated with the work to be performed as there is no use of highly flammable liquids/gases or explosive material. However, in the case of an emergency, the evacuation route for the laboratory can be found in Figure 1. To reduce the risk of serious injury or fatalities, all exits will remain unobstructed, and the use of earphone/headphones is prohibited while working in the laboratory so that warning and emergency alarms can be heard clearly.