**Project Title: {electronic piston lock}**

**Project participants: {it’s just me, myself, and I}**

**Factors that influence design, planning and use of a project’s system**

# Function

A big part of subjects such as system engineering revolves around the designing and creating of projects. For this significant amount time is requires working on the project. However, many if not all projects require equipment that are inaccessible to most outside of the classroom and with many projects being stored inside the classroom for safe keeping gaining access to the room for those working on projects and keeping out unwanted intruders from damaging the workspace and projects stored becomes crucial. The problem of keeping out unwanted students can be easily resolved by locking the doors to the room after use but gaining access for those that need the room becomes difficult as it becomes bothersome needing to fine staff with keys to the room. Because of this, a system capable of preventing intruders while being able to determine class members can be extremely beneficial.

In order to achieve such a system a Radio-frequency identification (RFID) reader specifically a near field communication(nfc) reader will be used to interface and communicate with an electronic AAAAAAAAAA

The nfc reader must be able to recognise student IDs and differentiate between approved IDs such as systems students and teachers that have been previously inputted into the system and reject all other IDs.

The system must also have a closed failsafe in case of power failure, this mean the lock would stay locked in the event of power failure.

The system must also have a failsafe such as a manual key. This is to be used in case of power failure and provide a second way to open the door

* 1. **Design**

{electronically controlled system for lock and unlocking, }

* 1. **Planning**

{…….}

* 1. **Production**

{…….}

* 1. **Use**

{…….}

1. **User needs and requirements.**
   1. **Design**

{…….}

* 1. **Planning**

{…….}

* 1. **Production**

{…….}

* 1. **Use**

{…….}

1. **Appropriate materials.**
   1. **Design**

{…….}

* 1. **Planning**

{…….}

* 1. **Production**

{…….}

* 1. **Use**

{…….}

1. **Environment of use (where the system will be used).**
   1. **Design**

{…….}

* 1. **Planning**

{…….}

* 1. **Production**

{…….}

* 1. **Use**

{…….}

1. **Safety.**
   1. **Design**

{…….}

* 1. **Planning**

{…….}

* 1. **Production**

{…….}

* 1. **Use**

{…….}

1. **Minimisation of waste and energy.**
   1. **Design**

{…….}

* 1. **Planning**

{…….}

* 1. **Production**

{…….}

* 1. **Use**

{…….}

1. **Cost.**
   1. **Design**

{…….}

* 1. **Planning**

{…….}

* 1. **Production**

{…….}

* 1. **Use**

{…….}