

<http://desl-pwrs.epfl.ch>

## Student project proposal

### *Project title*

Mechanical design of the chassis and guidance of a reduced scale hyperloop capsule

*Project type*       MSc thesis       BA semester project       MSc semester project

### *Project responsible and e-mail*

Cyril Dénéreaz – [cyril.denereaz@epfl.ch](mailto:cyril.denereaz@epfl.ch)

### *Project description*

In the framework of the reduced scale hyperloop research program, the chassis of a capsule must be designed in order to integrate all the subsystems but also to allow its smooth displacement inside a curved tube.

### *Tasks of the student*

- Study of the different solutions for the mechanical design of the chassis, the guiding rails and the link between the two, being the suspension mechanism.
- Mechanical design (chassis, guiding rails and suspension system) according to the static/dynamic loadings, but also to the space constraints (volume available).

### *Requirements*

- Mechanical design
- Materials selection
- FEM simulation