

# Physics 1

## HSLU, Semester 2

Matteo Frongillo

Last update:

February 17, 2025

### Contents

<b>I</b>	<b>Mechanic</b>	<b>2</b>
<b>1</b>	<b>Cinematic</b>	<b>2</b>
1.1	Uniform linear motion . . . . .	2
1.2	Non-uniform linear motion . . . . .	2
<b>II</b>	<b>Fluid dynamics</b>	<b>3</b>

## Part I

# Mechanic

## 1 Cinematic

### 1.1 Uniform linear motion

$$a = \text{const.}$$

$$v(t) = \int_{t=0}^t a \, dt' = [a \cdot t']_0^t + C = a \cdot t - a \cdot 0 + C = a \cdot t + v_0$$

### 1.2 Non-uniform linear motion

Part II

## Fluid dynamics