

## **0.1 ROBOTICS EQUIPMENT**

We can divide the equipment for robotics into three different groups: 1. Electronics, 2. Computer science, 3. Engineering.

### **0.1.1 ELECTRONICS**

- WIRES
  - 4x 15cm
  - 4x 10cm
- CONNECTORS
  - 8x 2.5mm FT
  - screw driver
- RESISTORS
  - 2x 330
  - 2x 3.3k
  - 2x 33k
  - 2x 330k
  - 10k potentiometer (with wires)
- NON-LINEAR RESISTORS AND SENSORS
  - 1x foto-tranzistor FT & aperature
  - 1x reed switch
  - 1x key FT
  - IR distance sensor
- ACTUATORS
  - light bulb
  - 2x DC motor FT
  - 1x servo-motor
  - 1x servo attach
  - LCD (i2c)

### **0.1.2 COMPUTER SCIENCE**

- Arduino UNO controller

- modul RobDuino-v2 (shield)
- Arduino UNO adapter -> FisherTechnik (3D print)
- USB kabel
- battery charger for 2x18650 Lilon battery
- 2x 18650 Lilon battery's
- 9V Power Supply

### **0.1.3 MECHANICAL ENGINEERING**

#### **0.1.3.1 CONSTRUCTION ELEMENTS**

- 12x square block 15x15x30mm
- 6x square block 15x15x15mm
- 2x square block 7.5x15x30mm
- 5x square block 7.5x15x15mm
- 3x "L" profile 15x15x45mm
- 2x "L" profile 15x15x30mm
- 4x rim R1" fiksno
- 2x tire 11/90R1
- 4x square holder 15x15x15mm
- 2x angled block 60° 15x15mm
- 2x angled block 30° 15x15mm
- 1x pin rail 15mm
- 2x M4 nuts and bolts L=25mm

#### **0.1.3.2 GEARING (GEARS and GEARBOX)**

- 2x gearboxes with shafts
- 2x sliding bearing
- 1x axle/shaft 45mm
- 1x axle/shaft 90mm
- 2x mechanical pivot joint
- 2x sliding bearing
- 2x spojka osi 15mm (BCA)
- 1x objemka 5mm (RD)
- 1x worm gear with attachment nut
- 1x gear fi48mm Z30
- 1x os elise 30mm

#### **0.1.4 OPTIONAL**

- rubber bands
- black isolating tape