

Equipment for learning physics

In our physics course we are using modern techniques. Most convenient for a student is to have the equipment at home. It makes possible to do the given exercises with own **laptop**, calculation tools and measuring systems.

We can start physics by using mobile phone and laptop. A bit later we will use Arduino microcontroller and sensors because it makes possible to make own data measurements and analysis.

Here is the list of equipment which I strongly recommend to buy. NOTE that if you order these as soon as possible from web, you get these much cheaper. **Feel free to find suitable sellers: Check the delivery time!**

It is also recommended to sell these later to new students if you don't need these any more after physics courses.

Arduino UNO or Mega and USB cable for the microcontroller

Take a look to the link: <https://www.arduino.cc/>



USB-A – USB-B:

Acceleration sensor GY-61



[GY-61 GY 61](#)
[ADXL335 Three-axi...](#)

Note that you have acceleration sensor in your mobile phones but this makes possible to make own automatic measuring and analyzing systems.

Gyro (=angular velocity sensor) GY-50



[GY-50](#)
[L3G4200D Tri...](#)

Note that you have acceleration sensor in your mobile phones but this makes possible to make own automatic measuring and analyzing systems.

Arduino starter kit may be a good choice

I can borrow equipment in our classroom but if you like to use these also at home, consider to buy also these.

Arduino starter kits include several equipment which are useful for us:

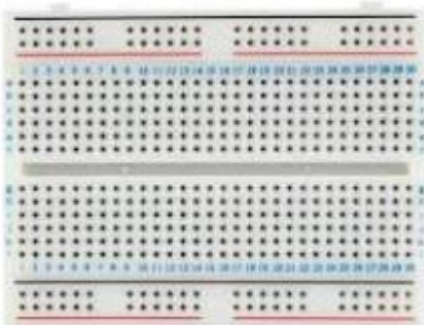
LDR resistor for measuring light: should be very cheap but typically not sold single pieces.



NTC resistor for measuring temperature: should be very cheap but typically not sold single pieces.



Test connection platform: we really need this for all.



jump wires male-male.



During the course, we can talk about other needs...