Exercise 5	**Hall effect**		*Theory:*
Team:	Name:		*Experiment:*
Date:	Weeks day and hour:	Major, group:	*Remarks*

- *Equation for the Lorentza force:*.....
- *The condition of equilibrium between the strength of the electric field and the Lorentz force acting on the electron:* .....

  .....
- *The formula for the dependence of the carrier concentration of the Hall constant:* .....
- *One parameter linear regression equation with uncertainty:* .....

  .....
- *Propagation of uncertainty principle :* .....

  .....
- *The mobility of carriers of other materials such as .: silicon, graphene*.:

  n_{Si} = ..., n_C = ...

For electromagnet current (given by assistant) I = ...[ ] magnetic field induction is B = ... [ ]

Table 1. Fill the table column headers with SI. Below measured values write down calculated uncertainties.

	slope $\mathbf{V_H}$ **vs.** $\mathbf{V_C}$	slope $\mathbf{V_H}$ **vs.** $\mathbf{I_x}$	slope $\mathbf{I_x}$ **vs.** $\mathbf{V_C}$	**μ** **[ ]**	$\mathbf{R_H}$ **[ ]**	**σ** **[ ]**	**n** **[ ]**
Value							
Uncertainty							

Using the propagation of uncertainty principle, calculate uncertainty μ, σ, R_H and *n*, and write them down in Table 1 below the values calculated from the measurements. Compare the obtained value of the mobility of carriers mobility of other materials.