**Science and society**

Science is a systematic study of anything that can be examined, tested, and verified. Today different branches of science investigate almost everything that can be observed or detected, and science as a whole shapes the way we understand the universe, our planet, ourselves, and other living things. Science develops through objective analysis, instead of through personal belief. In all fields of science, researchers use the same systematic approach, known as the scientific method, to add to what is known.

During scientific investigations, scientists put together and compare new discoveries and existing knowledge. Scientists use existing knowledge in new scientific investigations to predict how things will behave. Sometimes scientific predictions go much further by describing objects or events that are not yet known. For example, Russian chemist Dmitry Mendeleyev. He drew up a periodic table of the elements arranged to illustrate patterns of recurring chemical and physical properties. Mendeleyev used this table to predict the existence and describe the properties of several elements unknown in his day. His predictions proved to be correct when the elements were discovered.

Also I know such names of prominent physicists and Nobel Laureates as Nikolay Basov, Peter Kapitza, Aleksandr Prokhorov, Andrey Sakharov and Zhores Alferov. They’ve made a remarkable contribution to modern physics and electronics. I’d like to emphasize the achievements of Zhores Alferov. He shared half of the Nobel Prize with American physicist Herbert Kroemer for their independent yet parallel improvements to semiconductors during the early 1960s. Zhores Alferov tried a new method: having combined different semiconducting materials. He vastly improved transistor performance. These layered semiconductors are called heterostructures. Today, the heterostructures are used in satellite communication systems, in the base stations for mobile-telephone networks, and in the fiber-optic technology that speeds Internet data throughout the world. Heterostructure lasers make it possible for CD players to reproduce music and for the bar-code scanners in stores to automatically record sales.

Today, science has a profound effect on the way we live. The first automobile was made in the 1880s. It made use of many advances in physics and engineering. The first computers emerged in the 1940s from simultaneous advances in electronics and mathematics. Other fields of science also play an important role in the things we use or consume every day. Research in industrial chemistry has created a vast range of plastics and other synthetic materials, which have thousands of uses in the home and in industry. Science has also brought about technology that helps save human life. As a result, the majority of people on the planet now live longer and healthier lives than ever before.

However, scientific discoveries can also have a negative impact in human affairs. Industrial and agricultural chemicals pollute the global environment. City air is contaminated by toxic gases from vehicle exhausts. Most significantly of all, the burning of fossil fuels such as coal, oil, and natural gas releases into the atmosphere carbon dioxide and other substances known as greenhouse gases. These gases have altered the composition of the entire atmosphere, producing global warming and the prospect of major climate change in years to come.

Science has also been used to develop technology that raises complex ethical questions. For example, research involving genetic engineering, cloning, and in vitro fertilization gives scientists the unprecedented power to bring about new life, or to devise new forms of living things. Science can also generate technology that is deliberately designed to harm or to kill. For example, chemical and biological warfare, nuclear weapons.

The Nobel Prize is one of the most prestigious international prizes. It is awarded annually for outstanding scientific research, revolutionary inventions or a major contribution to the culture or development of society. (Physics, Chemistry, Physiology and medicine, Literature, Promotion of peace throughout the world, Prize in economics).

Svetlana Aleksievich is Belarusian writer, Nobel Prize Laureate in Literature 2015.

 «[У войны не женское лицо](https://ru.wikipedia.org/wiki/%D0%A3_%D0%B2%D0%BE%D0%B9%D0%BD%D1%8B_%D0%BD%D0%B5_%D0%B6%D0%B5%D0%BD%D1%81%D0%BA%D0%BE%D0%B5_%D0%BB%D0%B8%D1%86%D0%BE)», «[Цинковые мальчики](https://ru.wikipedia.org/wiki/%D0%A6%D0%B8%D0%BD%D0%BA%D0%BE%D0%B2%D1%8B%D0%B5_%D0%BC%D0%B0%D0%BB%D1%8C%D1%87%D0%B8%D0%BA%D0%B8)», «[Чернобыльская молитва](https://ru.wikipedia.org/wiki/%D0%A7%D0%B5%D1%80%D0%BD%D0%BE%D0%B1%D1%8B%D0%BB%D1%8C%D1%81%D0%BA%D0%B0%D1%8F_%D0%BC%D0%BE%D0%BB%D0%B8%D1%82%D0%B2%D0%B0)», «[Время секонд-хэнд](https://ru.wikipedia.org/w/index.php?title=%D0%92%D1%80%D0%B5%D0%BC%D1%8F_%D1%81%D0%B5%D0%BA%D0%BE%D0%BD%D0%B4-%D1%85%D1%8D%D0%BD%D0%B4&action=edit&redlink=1)».

Barack Obama is Nobel Peace Prize Laureate 2009.

Andrzej Geim and Constantin Nowoselow are Nobel Prize winners in physics in 2010. They discovered a new modification of carbon – grapheme.

**My scientific research and scientific supervisor**

I am engineer of the electronic engineering and technology department of BSUIR. My special subject is EEG signals. I am doing development technique search pathological activity patterns in multichannel EEG signals. This technique automates the process of finding abnormal activity patterns and accelerate the diagnosis of diseases and their treatment. Because, today the search for such patterns is carried out or in semi-automatic mode or doctor by looking though all of the electroencephalogram. My work is primarily of practical importance. The development of this technique is based on join work with neurologists scientific and practical center of neurology and neurosurgery in Minsk. My scientific supervisor is candidate of technical science, docent Davydov M.V. He graduated from BSUIR and was awarded candidate’s degree. The range of his scientific interests I very wide. He is interested in the design, development and testing of medical electronic devices and systems. My boss has published numerous scientific papers. He has participated in various scientific conferences and seminars both in our country and abroad. Today my supervisor combines both theoretical and practical research. I always consult him when I encounter difficulties in my research. My technique involves obtain EEG data, consultation with the neurologist about the existence of patterns in the EEG then the mathematical description of the patterns and then the development of the program automatic pattern detection. I have a publication in the Journal Reports of BSUIR about my scientific research and I take part in XXIV-th International Readings "Great Transformers of Natural Science". I am planning to finish writing the thesis by the end of my take master graduate courses and to protect it at the meeting of state examination commission on protection of master dissertate.

**Education in our country and the UK.**

There are 2 stages of higher education in our country. If you want to take master courses you should pass entrance exams in special subject. The course of study lastы 1 year. During your study you should pass candidate exams in philosophy, foreign language and special subject. After defending your thesis you will be awarded an academic degree of master of technical science. If you want to proceed with your education you may take post-masters courses. You should pass entrance exams in special subject. The course of a study lasts 3 years. You receive the diploma of a researcher. If you defense your candidate dissertation you will be awarded a scientific degree of a candidate of technical science. To proceed with your education you can take doctoral courses specialists with higher scientific degrees have good career prospects. These prospects are connected with professional research and creative activity. These people can realize their research potential to full extent.

There are two distinct types of study possible in any UK university, the first by instruction and the second by research.

The most common type of course is courses by instruction, or taught courses. Taught courses lasts one year and usually lead to a higher degree such as a Master of Science or a Master of Arts. Degrees by instruction are very similar to undergraduate courses in that most of the time is devoted to attending lectures. This may take up the first eight or nine months of the course and is followed by written examinations. A period of research lasting for two or three months usually follows and the results of it are presented in the form of the thesis. Oral examination lasts an hour or two, to test the knowledge accumulated throughout the year.

Research Courses gives the most popular qualifications such as a Doctor of Philosophy and Master of Philosophy. If you want the qualification a Doctor of Philosophy you should study three years. . If you want the qualification a Master of Philosophy you should study two years. Both of these qualifications require the student to carry out a piece of innovative research in a particular area of study. It is essential that the work has never been done before. The first stage of a research degree involves a very extensive survey of all previous work undertaken in that area. It lasts six months. The research course usually involves collecting information in some way. This might be through experimentation. This second part of a research degree lasts two years in case of a Doctor of Philosophy. For qualification a Doctor of Philosophy needs written a thesis during the final six of the three-year period. The thesis will contain an introduction, methodology, results and discussion. The research must then be examined orally.

These two different types of study require similar qualities from the people who undertake them. Both demand an inquisitive mind, a high level of intellectual ability, a high degree of organizational ability, very patience.

There are types of academic degrees in the UK such as associate, bachelor, master and doctor. The bachelor’s degree, usually representing completion of a four-year course of study on a collegiate level,