(PET) shows the chemical processes occurring in the body, technologies replacing organ functions, and implants, etc. are all common today. There is a lot of work done; however, the great thing about biomedical engineering is that there are many things to work on. Tissue engineering uses combination of cells, engineering and materials methods, and suitable biochemical and physicochemical factors to improve or replace biological functions. Researchers have grown solid jawbones and tracheas from human stem cells towards this end. Several artificial urinary bladders have been grown in laboratories and transplanted successfully into human patients. Advance in tissue engineering potentially solves the problem of compatibility in organ transplantation.

There are also artificial organs that are made from biocompatible non-biological materials. For example, dental implants that are available today. Yet most of the implants needs constant and reliable energy supplement to fully replace the organ, which is the main disadvantage in most of the implants and in artificial hearts in particular.

Progress in electronic engineering, computer engineering and neuroscience allowed group of researchers in John Hopkin's University to build Modular Prosthetic Limb, which is a sophisticated mechanical arm under neural control of a man. Hugh Herr, a professor in MIT Media Lab, built his own prosthetic legs that are able to replace the functions of his lost legs and even overcome the normal capabilities of biological limbs. The brain-machine interface can be the point where differences between biological and non-biological limbs disappears.

Gene therapy is probably the most regulated research branch. Early clinical failures led to dismissals of gene therapy. Clinical successes since 2006 regained researcher's attention, although as of 2014, it was still largely an experimental technique. These include treatment of retinal disease Leber's congenital amaurosis, X-linked SCID (severe combined immunodeficiency), ADA-SCID, adrenoleukodystrophy, chronic lymphocytic leukemia (CLL), acute lymphocytic leukemia (ALL), multiple myeloma, haemophilia (a group of hereditary genetic disorders that impair the body's ability to control blood clotting) and Parkinson's disease. Between 2013 and April 2014, US companies invested over $600 million in the field.

Although today many of diseases can be treated, there are places where plague and infectious diseases remain the main cause of death. This means that antibiotics and medicines should become more available because it is a work of biomedical engineers not only to help to cure the disease but also to make the treatment more available. This variety of sub-disciplines is the direct result of the idea of biomedical engineering: applying science to medicine. Biomedical engineering is the fact that engineering will not leave medicine, instead, it seeks to close the gap between these two fields.

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SOFTWARE ENGINEERING IN OUR LIFE

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The paper deals with notion of Software Engineering. What Is Software Engineering?
Software plays a critical role in our daily life. It behinds our banking system's.
Our telephones depend on it…

What is Software Engineering?

Software Engineering – is an engineering discipline, connected with all aspects of manufacture of Software from beginning stages of creating specification until maintenance and support of system after commissioning. There are two passphrases in this definition of Software Engineering:

- Engineering discipline
- All aspects of manufacture of Software

Engineering discipline. Engineers – are that specialists, performing practical job and achieve practical results. A scientist is able to say: problem is unsolvable in the frame of existing theory and it will be as scientific result worthy of publication and defense of thesis.

For problem solving engineers is applying theories, methods and means, useful for solving this problem, however they apply them selectively and always try to find solutions, even in that cases, when there is not exist any theory or methods according to this problem yet. In these cases engineers find method or means for problem solving, apply it and response for these means, because these means have not been tested yet. The set of engineering methods or fashions, which are not justified theoretically, however which were given repeated confirmation on practice, plays a big practical role. In Software Engineering, they called as "best practices".

Engineers works in the conditions of limited resources: time, financing and organizational (equipment, technic, people). By the other words, the product must be developed until deadlines, in the frame of allotted financing sources, equipment and people.

Software engineering deals not only with technical issues of Software productivity (Requirements Specification, Projecting, coding,…), but also with management of software projects, including issues of planning, financing, staff management and so on. Besides that, the Software Engineering goal is developing means, methods and theories for maintenance of Software production process.

Software engineers apply systematic and organizational ways to job for achieving maximal efficiency and quality of software. Their task is adaptation of existing methods and ways to solution of concrete problem.

What is the difference with computer science?

Computer science is about the theory and methods of computer and software engineering, while software engineering deals with practical problems of software development. Computer science is the basic of software engineering and engineer in software should know the computer science. As well as engineer in electronic should know physics. In the ideal. Software engineering should be supported by some theories from computer science, but in actually it is not always so. Software engineers use receptions, which can be applied only in concrete conditions and cannot be generalized on other cases, but elegant theories of informatics cannot be always applied in real ambiguous systems.

Lastly, computer science- is not the single theoretical fundament of software engineering, because the circle of problems, staying in the front of software engineer is greatly wide then just coding. It is also management of finance, organization of works in staff, interaction with customer and so on. Solutions of these problems require the fundamental knowledge beyond the frames of computer science.

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ЭЛЕКТРИЧЕСКИЕ СТАНЦИИ И СИСТЕМЫ КЫРГЫЗСТАНА

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ELECTRIC POWER PLANTS AND SYSTEM OF KYRGYZSTAN

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The paper deals with notion of seven major hydropower stations and 2 thermal power stations of Kyrgyzstan.

Energy sector is the most promising industry sector of Kyrgyzstan, which provides a basis for economy development. Water is the main wealth of the Kyrgyz Republic.

Hydropower sector, which uses continuously renewable resources for electricity generation is the main direction for the energy industry development of Kyrgyzstan.

Kyrgyzstan ranks third among the CIS countries after Russia and Tajikistan by hydro resources. Mountain Rivers possess hydropower potential of 142.5 billion kWh. The Republic Rivers have the exceptional concentration of potential capacity per 1 km of river bed.

Our Naryn River surpasses such might rivers as Volga and Angara by the specific power. Potential hydraulic energy resource of Naryn River is 56.9 billion kWh. It is possible to build 22 hydro power plants with electricity generation around 30 billion kWh on this river and its tributaries in addition to existing power plants.

	Name HPP	Commissioning year	Installed capacity, MW	Water reservoir capacity, billion m^3	Average long-term generation, million kWh per year
	Toktogul	1975	1200	19.5	4400
	Kurupsai	1981	800	0.370	2630
	Tashkumyr	1985	450	0.144	1555
	Shamaldysai	2002	240	0.040	902
	Uchkurgan	1962	180	0.021	802
	At-Bashi	1970	40	0.0096	160
	Total		2910		