Faculty of Biomedical Engineering CTU is the second youngest faculty of CTU and is very motivated to offer a few examples of the electronic support of education in bachelor's and master's degree fields. In particular, the promotion of studies in the paramedical fields. Due to the interdisciplinary approach to study at the faculty is to use just as much as possible electronic support teaching and learning. Among the used electronic support study include use of e-learning system Moodle, working in various modules NIS, educational videos, animation, testing knowledge EduBase2 system (especially for the medical terminology), both for self and for the final tests, as well as several web portals focusing on imaging systems in medicine. Given the priority of the faculty to develop high-quality laboratory facilities, is to link each laboratory with the aforementioned tools and technologies and other means. Such examples are both artificial laboratory simulation and patient anatomy and physiology lab. In the laboratory simulation of artificial patient is newly available recording system METI Vision, which enables complete business document such as rescue team at reviving injured. In the laboratory of anatomy and physiology is available specialized software environment which allows the connection of real experiments and the results of these experiments used in the models. In conclusion, the paper is then carried out summary and discussed some specific examples of experience from electrical study support.