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Education in nuclear chemistry at the Czech Technical University in Prague

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Department of Nuclear Chemistry (DNRC) exists at the Faculty of Nuclear Sciences and Physical Engineering of the Czech Technical University in Prague since the establishment of this faculty in 1955. From the beginning, many recognized scientists were involved in the department activities, among others František Běhounek (student of Marie Curie), Jiří Starý and Petr Beneš. Since 2003, part of the research activities has been carried on in the newly established Centre for Radiochemistry and Radiation Chemistry (CRRC). The Department, together with the Centre, provide education in nuclear chemistry at three different levels – each commonly taking three years of study; we put emphasis on versatility and adaptability of graduates of all levels.

Education of students at bachelor level is firmly rooted in physical and nuclear chemistry, with good basics in analytical, organic, inorganic and biochemistry, including practical exercises. Candidates of bachelor degree must pass state exams from general chemistry and nuclear chemistry. They must also successfully defend bachelor theses.

Master level courses encompass all disciplines of nuclear and radiochemistry, including separation chemistry, trace radiochemistry, radiation chemistry, chemistry of radioactive elements, radioanalytical methods, chemistry of nuclear fuel cycle, application of radionuclides, radiation methods in biology and medicine etc. Students may choose from three specializations - applied nuclear chemistry, environmental nuclear chemistry and nuclear chemistry in biology and medicine, practical abilities are trained in extended laboratory exercises from nuclear chemistry. Candidates defend diploma theses and pass state exams from nuclear chemistry, physical chemistry and one elective subject.

The Ph.D. level course is oriented on independent research of the candidates. Moreover, all of them must also attend highly specialized lectures relevant to their specific field of study; the main fields of research are oriented on the chemistry of nuclear fuel cycle, radiation methods and radionuclide behaviour in the environment. Students have to pass Ph.D. state exam and defend their theses.

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