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## A combined nuclear technology and nuclear chemistry master - A unique initiative at Chalmers University of Technology, Sweden

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The need for engineers and scientists who can ensure safe and secure use of nuclear energy is large in Sweden and internationally. Chalmers University of Technology has therefore launched a new 2-year master's program in Nuclear Engineering, with start from the autumn of 2009. Since the program is open to both Swedish and foreign students and the teaching language is English, the first year enrolment showed an unexpected interest.

The program starts with compulsory courses dealing with the basics of nuclear chemistry and physics, radiation protection, nuclear power and reactors, nuclear fuel supply, nuclear waste management and nuclear safety and security. There are also compulsory courses in nuclear industry applications and sustainable energy futures. The subsequent elective courses can be chosen freely but there is also a possibility to choose informal tracks that concentrate on nuclear chemistry or reactor technology and physics. The nuclear chemistry track comprises courses in e.g. chemistry of lanthanides, actinides and transactinides, solvent extraction, radioecology and radioanalytical chemistry and radiopharmaceuticals. The program is finished with a one semester thesis project. The projects can be performed both in the University's headquarters (Nuclear Chemistry Department or Nuclear Technology) on own research themes or in cooperation with different nuclear facilities on themes of interest. The advanced combined courses in both nuclear chemistry and nuclear technology make this master program quite unique on international level so far.

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