FOOD NANOTECHNOLOGY EDUCATION – INTEGRATED COURSES PROGRAM IN ILAN UNIVERSITY

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Food nanotechnology has become the popular and important issue in the 21st century that will change the food industrial economy. Food nanotechnology education is in consequence become the new research topics in the development of science education to teach students to explore the small-scale field. This study introduced the food nanotechnology education, integrated courses program, in Ilan University which is the benchmark schools in food nanotechnology education in Taiwan. Integrated courses program of nano-biotechnology curriculum includes three parts named fundament, core and application curriculum are to provide an interdisciplinary education to students in Department of Food Science with a broad understanding of nanotechnology in food and biological category. Multi-method learning is also applied in this integrated courses program, such as distance learning, service-learning and problem based learning. The nanotechnology exhibition space and featured laboratories offers students to experience and practice the essence of nanotechnology. Totally 127 credits electives in this integrated courses program and, so far, 30 students participated in this curriculum. More than 400 undergraduate students elected the distance learning course “Introduction of Food Nano-technology” and 76 persons in these students participated in service-learning in the past 4 years. The hardware and software design in this integrated courses program promotes nanotechnology learning environment. The average score of teaching satisfaction was 4.02 in 5-point scale survey in PBL courses. This integrated courses program facilitated the students to understand the new and emerging food nanotechnology and to offer the opportunity to contact the new nano-biotechnology.