

Advanced course on Multicomponent Mass Transfer brings together students from Brazil and the Netherlands at UNICAMP

From 10 to 14 March 2014 BE-Basic, UNICAMP and TU Delft jointly organized the advanced course Multicomponent Mass Transfer, hosted by the School of Chemical Engineering at UNICAMP, Campinas – Brazil. The course was attended by in total 19 Master, PDEng (Professional Doctorate in Engineering) and PhD students from UNICAMP and from TU Delft, creating a very international experience.

Prof Guilherme Castilho (UNICAMP) and prof Luuk van der Wielen (TU Delft, BE-Basic) showed the students how to deal with complex multicomponent mass transfer problems, occurring in mixtures e.g. with three or more species, with more than one driving force (including electrical or pressure gradients) and with a solid matrix such as a polymer of a porous medium. Such problems occur in real-life situations encountered in chemical engineering, biotechnology, pharmaceuticals, food engineering, water treatment etc. The course, a balanced mix between lectures and assignments, is based on the excellent textbook “Mass Transfer in Multicomponent Mixtures”, written by two well-known experts in this field, Hans Wesselingh and Rajamani Krishna, with whom prof Van der Wielen taught this course before in The Netherlands.



Photo: Prof Guilherme Castilho (left), all involved students and professors in front of School of Chemical Engineering at UNICAMP (middle), and prof. Luuk van der Wielen (right).

During the coming weeks, the students will apply the knowledge and methodologies provided by this course on cases from their own field, such as their PhD research topics which include for example biofuel production and water treatment. The detailed analysis of their own case will be the basis for the course examination in early April.

This course is part of an extensive international course program by BE-Basic, with among others TU Delft and UNICAMP as key partners. For the coming period more courses are (being) planned: Communication & Policy for a Biobased Economy, Biobased Economy Beyond Bioethanol (entrepreneurship), Biothermodynamics, Metabolomics for Microbial Systems Biology, and Biocatalysis.