

**Course title:**

Cosmetic Emulsions – Troubleshooting of products quality and stability – ~~selectable~~ / regular course

**Number of contact hours:** 45 hours (15h lectures, 30h laboratories)

**ETCS credits:** 3

**Course description:** The subject of the lectures concerns the characteristics of the cosmetic emulsion as a dispersion system, including physicochemical properties of cosmetic emulsions and the criteria of raw materials selection. In addition, some information related to the emulsions technology such as emulsification process parameters, influencing formation and stabilization of emulsion and to the methods for assessing the quality of the products systems will describe. During laboratory classes selected cosmetic preparations (creams, lotions, shampoos), based on synthetic and natural origin raw material will be obtained. Next an evaluation of the products physicochemical properties (emulsion type, pH, stability, viscosity measurement) will be conducted.

**Education effects** (P7S\_UW, P7S\_WG):

- **knowledge:** student knows the mechanisms of cosmetic emulsions stabilization, knows the criteria of raw materials selection and the influence of emulsification process parameters on the systems quality,
- **skills:** student can obtain stable dispersion systems and assess their physicochemical properties, in accordance with good manufacturing practice knows the methods of handling with cosmetic raw materials, final products and waste products
- **social:** student is able to work independently and in the group, both at the laboratories and during preparation of the reports

**Literature:**

1. D.F. Williams, W.H.Schmitt - "Chemistry and Technology of the Cosmetics and Toiletries Industry.", Blackie Academic & Professional, Glasgow 1996
2. T.J. Lin, Manufacturing Cosmetic Emulsion, Alluredbooks, Carol Stream, 2009

**Assessment method:** Final test, completing the laboratories (presence and delivering of reports from each performed exercise)

**Prerequisites:** Basic knowledge in organic chemistry and technology

**Primary target group:** All specialties students

**Lecturer:** dr inż. E.Sikora,, Contact person: dr inż. E.Skrz E.Sikora, e-mail: [esikora@pk.edu.pl](mailto:esikora@pk.edu.pl)