Outline of the course: Formulation with Surfactants
Lectures in bold are available, the rest will be available in fall 2012.

INTRODUCTION
1. Introduction to Surfactants
2. Surfactants in Solution
3. Polymers in Solution
4. Phase Diagrams with Surfactants – Principles
5. Surfactant – Polymer Interaction
6. Adsorption of Surfactants and Polymers

FORMULATION
7. Introduction to the HLB and CPP Concepts
8. Introduction to the concept of Surfactant Affinity Difference, SAD
9. Measurements of the Surfactant Affinity Difference, SAD
10. Surfactants and the Surfactant Affinity Difference, SAD
11. Surfactant Mixtures and the Surfactant Affinity Difference, SAD
13. Boosting solubilization – Introduction to Hydrotropes and Linkers
14. Salt specificity, the Hofmeister Series in Formulation

APPLICATIONS
15. Formulation of Microemulsions using the SAD concept
16. Formulation of Emulsions using the SAD concept - I
17. Formulation of Emulsions using the SAD concept - II
18. Formulation of Nanoemulsions using the SAD concept
19. Formulation of Pickering Emulsions
20. Formulation of Foams
21. Control of the Rheology
22. Cleaning
23. Specific Applications

Formulation with chemicals requires knowledge from a plethora of areas i surface chemistry, among which are phase behavior of surfactant and/or polymer systems, basic physical chemistry, rheology, etc. It is therefore a formidable task to give a course in formulation.

In order to facilitate for the formulator we have adopted the concept of SAD, Surfactant Affinity Difference, introduced by Prof. J.-L. Salager. This concept is based on the observation that systems of surfactant-oil-water all follow the same generic pattern. In the production of the course we have therefore chosen to first produce the basic lectures based on this concept, i.e. lectures 7 - 14. The introductory part, viz. lectures 1 - 6 and the application part, viz lectures 15 -22, are being produced fall and winter 2012/13.