



AALBORG UNIVERSITET

**Studienævnet for Kemi, Miljø og
Bioteknologi**

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Dispensation til ændret kursusbeskrivelse for Kulhydratkemi

Studienævnet for Kemi, Miljø- og Bioteknologi giver dispensation fra studieordningerne for cand. polyt. i Bioteknologi 2016, cand. polyt. Medicinsk bioteknologi 2016, cand. polyt. Kemi 2013 samt cand. scient i Kemi 2013 til at kursusbeskrivelsen for Kulhydratkemi erstattes af den reviderede beskrivelse vedlagt i Appendix A.

Exemption to revised course description for Carbohydrate Chemistry

The study board for Chemistry, Biotechnology and Environmental Engineering provides exemption from the curricula for MSc in Biotechnology 2016, MSc in Medical Biotechnology 2016, MSc (eng.) in Chemistry 2013, and MSc in Chemistry 2013 and allows the course description for Carbohydrate Chemistry to be replaced by the revised description provided in Appendix A.

Venlig hilsen

Niels T. Eriksen
Formand for Studienævnet for Kemi, Miljø og Bioteknologi

Godkendt 8/3-17
Josef Paul



Appendix A

Title: Carbohydrate Chemistry
Kulhydratkemi

Prerequisites -

Objective: Students who complete the module must be able to:

Knowledge

- explain and show in depth understanding of the structure and chemical properties of mono- and disaccharides as well as oligo- and polysaccharides
- demonstrate knowledge of industrially important carbohydrates including hydrocolloids and their gelation properties
- explain essential aspects of glycobiology
- demonstrate in depth knowledge of the substrate specificity, regio- and anomeric selectivity as well as the function and catalytic mechanisms of carbohydrate active enzymes
- demonstrate knowledge of the enzymology related to degradation and modification of plant based biomass including starch, cellulose and pectin

Skills

- apply and suggest methods of carbohydrate synthesis and modifications to solve problems in industrial processes and applications
- apply knowledge to evaluate structure in relation to functional properties of carbohydrates
- carry out calculations on basic carbohydrate chemical concepts
- perform theoretical analyses of chemical and physical methods in carbohydrate chemistry
- suggest relevant chemical and enzyme catalysts for chemical reactions in carbohydrate chemistry

Type of instruction Lectures and theoretical exercises

Exam format: Written or oral examination

Evaluation criteria: As stated in the joint programme regulations