

Schedule for 2310522

CARBOHYDRATE BIOTECHNOLOGY (2 credits)

First semester (2020)

Time: TH, FR 13.00 - 14.00

Room: 503 SCI10

Co-ordinator: Kittikhun

Topic	Hrs.	Date	Instructor
1. Review on Carbohydrates 2. Introduction to Carbohydrate Biotechnology : From Agricultural Products to Carbohydrates of Industrial and Medicinal Importance	2	13, 14 Aug	Kittikhun
3. Enzymatic Production of Carbohydrates and Glycosides : Glycosyl Hydrolases and Glycosyl Transferases	2	20, 21 Aug	Kittikhun
4. Carbohydrate Characterization & Analysis	4	27, 28 Aug, 3,4 Sep	Manchumas
5. Functional Carbohydrates : Structure, production, properties, and applications (Starch; Oligosac: MOS, IMO, Gento-OS, Cyclodextrins; Disac: Trehalose, Maltose, Maltitol, Nigerose; Monosac: Glucose, Fructose) 5.1 Starch and Related Saccharides 5.2 Fructose Related Saccharides (FOS,Glycosylsucrose, Palatinose, GOS, Lactosucrose)	5	10, 11, 17, 18, 24 Sep	Rath
Mid-term examination:			
5.3 Chitin-Chitosan and Other Low-digestible Saccharides (XOS, Manno-OS)	4	15, 16, 22, 29 Oct	Rath
6. Glycobiology and Glycoconjugates - Concepts of Glycobiology - Glycosylation and Disease - Glycoconjugates and recognition	6	30 Oct, 5, 6, 12, 13, 19 Nov	Kittikhun
7. Future Prospects: Carbohydrate Drug Design & Carbohydrate based Vaccines : Glycomics and Glycobiology : Functional Carbohydrates	3	20, 26, 27 Nov	Manchumas
Final examination:			

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