

**Schedule for 2310522**

**CARBOHYDRATE BIOTECHNOLOGY (2 credits)**

**First semester (2022)**

**Time: TH, FR 13.00 - 14.00**

**Co-ordinator: Kittikhun**

**Room: 519 SCI10**

Topic	Hrs.	Date	Instructor
1. Review on Carbohydrates 2. Introduction to Carbohydrate Biotechnology : From Agricultural Products to Carbohydrates of Industrial and Medicinal Importance	2	11, 18 Aug	Kittikhun
3. Enzymatic Production of Carbohydrates and Glycosides : Glycosyl Hydrolases and Glycosyl Transferases	2	19, 25 Aug	Kittikhun
4. Carbohydrate Characterization & Analysis	4	26 Aug, 1, 2, 8 Sep	Manchumas
5. Functional Carbohydrates : Structure, production, properties, and applications (Starch; Oligosac: MOS, IMO, Gentio-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	9, 15, 16, 22, 23 Sep	Rath
<b>Mid-term examination: สอบ 3-7 Oct 2022; วันที่ 06-10-2022 เวลา 13:00 - 15:00 น.</b>			
5.3 Chitin-Chitosan and Other Low-digestible Saccharides (XOS, Manno-OS)	4	20, 21, 27, 28 Oct	Rath
6. Glycobiology and Glycoconjugates - Concepts of Glycobiology - Glycosylation and Disease - Glycoconjugates and recognition	6	3, 4, 10, 11, 17, 18 Nov	Kittikhun
7. Future Prospects: Carbohydrate Drug Design & Carbohydrate based Vaccines : Glycomics and Glycobiology : Functional Carbohydrates	3	24, 25 Nov (นัดเพิ่ม 1 ชั่วโมง)	Manchumas

**Final examination: สอบ 28 Nov - 13 Dec 2022; วันที่ 28-11-2022 เวลา 13:00 - 15:00 น.**
