

Schedule for 2310521

METABOLIC ENGINEERING (2 credits)

Second semester (2022)

Time: TH 10.00 - 12.00

Co-ordinator: Alisa

Room: SCI10 519

ขั้นต่ำ 5 คน (ถ้าน้อยกว่าตามความจำเป็น)

Topic	Hrs.	Date	Instructor
1. Review : metabolic pathways 1.1 Fuel reactions 1.2 Biosynthetic reactions 1.3 Energetics	6	Jan 12, 19, 26	Nuchanat
2. Concepts of metabolic engineering 2.1 Comprehensive models for cellular reactions 2.2 Reaction rate and dynamic mass balance 2.3 Metabolic engineering of enzymes diverting metabolisms	4	Feb 2, 9	Kuakarun
3. Regulation of metabolic pathway and metabolic flux analysis 3.1 Regulation of enzyme activity and concentration in transcription/translation levels 3.2 Regulation at whole cell level: Global control 3.3 Regulation of metabolic network	4	Feb 16, 23	Kuakarun
Mid-term examination; 8 มี.ค. 2566 เวลา 8:30-10:30 น.			
4. Metabolic engineering for extension of product spectrum and novel products	8	March 16, 23, 30,	Saowarath
5. Metabolic engineering for enhancement of product yield and productivity	4	April 20, 27	Alisa
6. Metabolic engineering for environmental biotechnology 6.1 Metabolic engineering for improvement of xenobiotic metabolism 6.2 Metabolic engineering for green biotechnology	4	May 4, and 2-h off-schedule	Alisa
Final examination; 12 พ.ค. 2566 เวลา 13:00-15:00 น.			