

Schedule for 2310521  
**METABOLIC ENGINEERING (2 credits)**  
 Second semester (2020)

Time: TH 10.00 - 12.00

Room: 519-SCI10

เรียน online **Co-ordinator: Alisa**

Topic	Hrs.	Date	Instructor
1. Review : metabolic pathways 1.1 Fuel reactions 1.2 Biosynthetic reactions 1.3 Energetics	6	Jan 21, 28, Feb 4	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 11, 18	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	Jan 25, Mar 4	Kuakarun
<b>Mid-term examination:</b>			
4. Metabolic engineering for extension of product spectrum and novel products	8	March 18, 25, April 1, 8	Saowarath
5. Metabolic engineering for enhancement of product yield and productivity	4	April 22, 29	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 6, นัดเพิ่ม	Alisa
<b>Final examination:</b>			