

Fermentation Technology

July 27th-31st, 2020

Topic No.	Topic Title	Lecturer	Time Allotted (Hours)
1	Growth and Metabolism	C.L. Cooney	2.5
2	Recombinant Organisms for Bioprocesses	K.L.J. Prather	1.5
3	Protein Glycosylation in Mammalian Cells: Basic Principles and Effects of Cell Culture	K. Calhoun	2.0
4	Bioreactor Operations: Microbial Fermentations	M.Z. Rosenberg	1.5
5	Bioreactor Operations: Mammalian Cell Culture	M.Z. Rosenberg	2.0
6	Molecular Biology in Bioprocess Development	K.L.J. Prather	1.0
7	Scale-Up of Bioreactors: Mammalian and Microbial Systems	M.Z. Rosenberg	2.0
8	Media and Air Sterilization	C.L. Cooney	1.5
9	Modeling and Bioprocess Monitoring	K.L.J. Prather	3.0
10	Perfusion Reactors – Applications and Examples	J.C. Love	1.5
11	Medium Design and High Cell Density Cultivation	J.C. Leung	1.5
12	Power Requirement in Bioreactors	J.C. Leung	1.0
13	Oxygen Transfer and Shear in Bioreactors	J.C. Leung	2.0
14	Design of Experiments	N.C. Connors	1.5
15	Single-Use Bioreactors	J.C. Leung	1.5
16	Bioprocess Design, Simulation and Economics	C.L. Cooney	1.5
Start	8:30 AM Mon., 9 AM Tue. – Fri.		
End	Lectures end at 5 or 5:30 PM Mon.-Thur. Course Ends at 12:30 PM on Friday	Total Hours of Lectures	27.5

Fermentation Technology Lecture Schedule July 29-August 2, 2019

Monday	Tuesday	Wednesday	Thursday	Friday
8:30-9:00 Introduction (KLJP)	9:00-10:30 Topic #4 (MZR)	9:00-10:30 Topic # 8 (CLC)	9:00-10:30 Topic #11 (JCL-2)	9:00-10:30 Topic #15 (JCL-2)
9:00-10:00 Topic #1 (CLC)	10:30-11:00 Break	10:30-11:00 Break	10:30-11:00 Break	10:30-11:00 Break
10:00-10:30 Break	11:00-12:30 Topic #5 (MZR)	11:00-12:30 Topic #9 (KLJP)	11:00-12:00 Topic #12 (JCL-2)	11:00-12:30 Topic #16 (CLC)
10:30-12:00 Topic #1 (CLC)	12:30-1:30 Lunch	12:30-1:30 Lunch	12:00-12:30 Topic #13 (JCL-2)	12:30 End of Course
12:00-1:00 Lunch	1:30-2:00 Topic #5 (MZR)	1:30-3:00 Topic #9 (KLJP)	12:30-1:30 Lunch	
1:00-2:30 Topic #2 (KLJP)	2:00-3:00 Topic #6 (KLJP)	3:00-3:30 Break	1:30-3:00 Topic #13 (JCL-2)	
2:30-3:00 Break	3:00-3:30 Break	3:30-5:00 Topic #10 (JCL-1)	3:00-3:30 Break	
3:00-5:00 Topic #3 (KC)	3:30-5:30 Topic #7 (MZR)		3:30-5:00 Topic #14 (NCC)	
6:00-9:00 Reception MIT Museum	Evening Free	Evening Free	6:00-9:00 Dinner Samberg Conf Ctr.	

Initial Keys of Lecturers:

NCC: Neal C. Connors

CLC: Charles L. Cooney

KC: Kara Calhoun

JCL-1: J. Christopher Love

JCL-2: James C. Leung

KLJP: Kristala L.J. Prather

MZR: Morris Z. Rosenberg