

**Lecture Titles and Time Allotted**  
**July 27 – 31, 2026**

<b>Topic No.</b>	<b>Topic Title</b>	<b>Lecturer</b>	<b>Time Allotted (Hours)</b>
1	Growth and Metabolism	C.L. Cooney	2.5
2	Recombinant Organisms for Bioprocesses	K.L.J. Prather	1.5
3	Bioreactor Operations: Microbial Fermentations	M.Z. Rosenberg	1.5
4	Bioreactor Operations: Mammalian Cell Culture	M.Z. Rosenberg	2.0
5	Scale-Up of Bioreactors: Mammalian and Microbial Systems	M.Z. Rosenberg	2.0
6	Molecular Biology in Bioprocess Development	K.L.J. Prather	1.0
7	Media and Air Sterilization	C.L. Cooney	1.5
8	Modeling and Bioprocess Monitoring	K.L.J. Prather	3.0
9	Perfusion Technologies	J.C. Love	1.5
10	-Omics-Guided Bioprocess Development	A.M. Lewis	1.5
11	Cell-free Biosynthesis (Remote)	M.C. Jewett	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	Control, Automation and Data Analytics	A. Maloney, J. Parra,	1.5
15	Single-Use Bioreactors	J.C. Leung	1.5
16	Bioprocess Design, Simulation and Economics	C.L. Cooney	1.5
<b>Start</b>	<b>9 AM Mon. – Fri.</b>		
<b>End</b>	<b>Lectures end at 5 or 5:30 PM Mon.-Thur. Course Ends at 12:30 PM on Friday</b>	<b>Total Hours of Lectures</b>	<b>27</b>

**Fermentation Technology Lecture Schedule**  
**July 27 – 31, 2026**  
**MIT**  
**Classroom 56-114**

<b>Monday</b>	<b>Tuesday</b>	<b>Wednesday</b>	<b>Thursday</b>	<b>Friday</b>
9:00-9:30 Introduction (KLJP)	9:00-10:30 Topic #3 (MZR)	9:00-10:30 Topic # 8 (KLJP)	9:00-10:30 Topic #11 (MCJ)	9:00-10:30 Topic #15 (JCL-1)
9:30-10:30 Topic #1 (CLC)	<b>10:30-11:00 Break</b>	<b>10:30-11:00 Break</b>	<b>10:30-11:00 Break</b>	<b>10:30-11:00 Break</b>
<b>10:30-11:00 Break</b>	11:00-1:00 Topic #4 (MZR)	11:00-12:30 Topic #8 (KLJP)	11:00-12:00 Topic #12 (JCL-1)	11:00-12:30 Topic #16 (CLC)
11:00-12:30 Topic #1 (CLC)	<b>1:00-2:00 Lunch</b>	<b>12:30-1:30 Lunch</b>	12:00-12:30 Topic #13 (JCL-1)	<b>12:30 End of Course</b>
<b>12:30-1:30 Lunch</b>	2:00-4:00 Topic #5 (MZR)	1:30-3:00 Topic #9 (JCL-2)	<b>12:30-1:30 Lunch</b>	
1:30-3:00 Topic #2 (KLJP)	<b>4:00-4:30 Break</b>	<b>3:00-3:30 Break</b>	1:30-3:00 Topic #13 (JCL-1)	
<b>3:00-3:30 Break</b>	4:30-5:30 Topic #6 (KLJP)	3:30-5:00 Topic #10 (AML)	<b>3:00-3:30 Break</b>	
3:30-5:00 Topic #7 (CLC)			3:30-5:00 Topic #14 (AM/JP)	
<b>6:00-8:30 Reception Welcome Center</b>	<b>Evening Free</b>	<b>Evening Free</b>	<b>6:00-8:30 Dinner Samberg Conf. Ctr.</b>	

**Initial Keys of Lecturers:**

**CLC:** Charles L. Cooney  
**MCJ:** Michael C. Jewett  
**JCL-1:** James C. Leung  
**AML:** Amanda M. Lewis  
**JCL-2:** J. Christopher Love  
**AM:** Andrew Maloney  
**JP:** Juan Parra  
**KLJP:** Kristala L.J. Prather  
**MZR:** Morris Z. Rosenberg