

LIFS 4630 Advanced Topics in Biotechnology (Fall Semester, 2018)
Wed (15:00 – 16:20) & Wed (15:00 – 16:20) (Rm 4504)
bcwkrw@ust.hk; Room 5520

Topic	Lecturer	Date
1. Introduction and Background	W.K. Wong	5/9, 7/9, 12/9
2. Applications of biotechnology in:		
i) Medicine		
ii) Agriculture and livestock		
iii) Environment		
iv) Biomass utilization		
v) Basic Research		
3. Microbial selection, manipulation and application		14/9, 19/9, 21/9
4. Modes of expression of heterologous proteins in prokaryotic systems		26/9, 28/9 3/10,
1st Examination (20-25%)		5/10
4. Modes of expression of heterologous proteins in prokaryotic systems		10/10, 12/10
5. Production and utilization of human Epidermal Growth Factor (hEGF)		19/10 , 24/10, 26/10, 31/10
2nd Examination (20-25%)		2/11
6. Production and utilization of human basic Fibroblast Growth Factor (bFGF)		7/11, 9/11
7. Application of recombinant hEGF & bFGF to the developments of cosmetic and therapeutic skin care products		14/11, 16/11
8. Introduction to fermentation processes; microbial growth kinetics; fermentor design and control; important parameters to be optimized in fermentation		21/11, 23/11 28/11, 30/11
9. Legal, social and ethical aspects		
Final Examination (50-60%)		To be announced