page 1 of 6

					1 st y	year			2nd	year			3 rd	year			4 th	year			
	Course	Credits	Hours	Fa			ring	Fa		Spr			all	Spi	ring		all		ring		Note
				class	lab	class	lab	class	lab	class	lab	class	lab	class	lab	class	lab	class	lab		
Core	Chinese Literature:	2	2	2																	
Required	Appreciation and																				
Courses	Creative Writing 1																				
	Chinese Literature:	2	2		2																
	Appreciation and																				
	Creative Writing 2																				
	Practical English 1	0	2	1	1															Note 1	
	Practical English 2	0	2			1	1													Note 1	
	Practical English 3	0	2					1	1											Note 1	
	Practical English 4	0	2							1	1									Note 1	
	English for Business	2	3									2	1							Note 1	
	Communication 1																				
	English for Business	2	3											2	1					Note 1	
	Communication 2																				
	Practical English of	2	3													2	1			Note 1	
	Professionals 1																				
	Practical English of	2	3															2	1	Note 1	
	Professionals 2																				
	Applied Information	2	3	2	1															Note 1	
	Technology: Office																				
	Software																				
	Programming Design	2	3			2	1													Note 1	
	General Ed	12	12																	Note 2	
	Physical Education	0	12	2		2		2		2		2		2							
	(1)~(6)																				
	Subtotal	28																			
Professional	Calculus	3	4	3	1																
Required	General Chemistry	3	3	3				1				1									
Courses	General Chemistry Lab.	1	3	1	2													1		1	
	Physics principles for biologist	3	3	3																	

					year				year				year				year		
Course	Credits	Hours		all	Spr	ring	Fa			ing	Fa			ing		all		ring	Note
			class	lab	class	lab	class	lab	class	lab	class	lab	class	lab	class	lab	class	lab	
General Biology-1	3	3	3																
General Biology Lab1	1	3	1	2															
General Biology-2	3	3			3														
General Discussion on	2	2			2														
Biotechnology																			
Organic Chemistry	3	3			3														
Organic Chemistry Lab.	1	3			1	2													
Laws, Standards, and	2	2			2														
Academic Ethics on																			
Biotechnology																			
Freshman Seminar	1	1	1																
Analytical	3	3					3												
Chemistry(Lab)																			
Biochemistry-1	4	4					4												
Biochemistry Lab1	1	3					1	2											Service Learning
Biochemistry-2	4	4							4										
Microbiology	3	3							3										
Microbiology Lab.	1	3							1	2									
Cell Biology	3	3									3								
Cell Biology Lab.	1	3									1	2							
Bioinformatics-1	2	3											2	1					Computer courses
Molecular Biology	3	3									3								
Biostatistics	3	3									3								
Laboratory Quality	3	3											3						
Management System																			
Research Training 1	1	1											1						
Research Training 2	1	1													1				

							year			2 nd y				3 rd					year		Note
	Course	e	Credits	Hours		all		ring		all		ring	Fa		Spr			all		ring	
		I			class	lab	class	lab	class	lab	class	lab	class	lab	class	lab	class		class	lab	
		Seminar 1	1	1													1	0			
		Seminar 2	1	1															1	0	
		Subtotal	61																		
		Subtotal Required Course Credits	89																		
Professional	Biomedical	Animal Physiology	3	3					3												
Elective Courses	Program	Animal Cell Culture and Application	2	2							2										
		Immunology	3	3									3								
		Vaccine & Vaccination	3	3											3						
		Laboratory Animal Medicine	3	3															3		
		Gene Transfer	2	2															2		
		Virology	3	3													3				
		Genomics	3	3							3										
		Genetics	3	3					3												
		Special Topics to Genome Project & Annotation	3	3							3										
		Introduction to Pharmacy	3	3					3												
		Bioinorganic Chemistry	3	3									3								
		Applied Bioinstrumentation and Analysis	3	3									3								
		Bioinformatics-2	2	3											2		2	1			Computer courses
		Special Topics in Molecular Biology	3	3											3						

						year			2 nd y					year				year		Note
Cou	rse	Credits	Hours		all		ring	Fa		Spr		Fa			ring		all		ring	
				class	lab	class	lab	class	lab	class	lab	class	lab	class	lab	class	lab	class	lab	
	Proteomics	3	3											3						
	Developmental	3	3											3						
	Biology																			
	Protein Separation	2	2													2				
	and Two																			
	Dimensional																			
	Electrophoresis																			
	Protein preparation	2	2															2		
	and mass spectrum																			
	analysis																			
Biofood	Nutrition	3	3					3												
Program	Introduction to	3	3					3												
	Biochemistry																			
	Engineering																			
	Plant Physiology	3	3					3												
	Cosmetics Science	3	3					3												
	Herb Plant	3	3					3												
	Cultivation and																			
	Application																			
	Food Chemistry	3	3							3										
	Food Analysis (Lab)	3	3							3										
	Tissue culture and	3	3	1	1		1			3							1			
	Application																			
	Environmental	3	3							3										
	Ecology																			
	Food Microbiology	3	3	1			1					3					1			
	(Lab)																			
	Enzymology	3	3											3						
	Food Safety	3	3											3						
	Fermentation	3	3											3						
	Food Process	3	3													3				
	Engineering (Lab)																			

						1 st y	year			2 nd y	/ear			3 rd y	year			4 th	year		Note
	Course		Credits	Hours	Fa	ıll	Spr	ing	Fa	ıll	Spr	ing	Fal	11	Spr	ing	Fa	ıll	Spi	ring	
					class	lab	class	lab	class	lab	class	lab	class	lab	class	lab	class	lab	class	lab	
		Dietary Supplements	3	3													3				
		and Functional																			
		Foods																			
以上	專業選修學	是程至少需修 20 個學分	Profess	ional ele	ctives	must ł	be seled	cted at	least 2	20 crea	lit hou	ırs							•		

~					1 st	year			2 nd	year			3 rd	year			4 th	year		
	Course	Credits	Hours			Spr		Fa			ring	Fa		Spr	ing		all	Spr	ing	Note
				class	lab	class	lab	class	lab	class	lab	class	lab	class	lab	class	lab	class	lab	
Other	Programming Design-1	2	3					2	1											
Elective	Programming Design-2	2	3							2	1									
Course	General Biology Lab2	1	3							1	2									
	Bioorganic Chemistry	2	2					2												
	Biotechnology Law	2	2							2										
	Ecology	2	2									2								
	International Biotech Industry											2								
	Military Training-1	0	2	2																1-semester courses
	Military Training-2	0	2			2														1-semester courses
	Nursing-1	0	2	2																1-semester courses
	Nursing-2	0	2			2														1-semester courses
	Research Paper Writing	1	1											1						
	Industrial Practice	1	1											1						
	Biosensor	3	3													3				
	Biotechnical Intellectual Property	2	2													2				
	Rights and Patents																			
	Introduction of Bioindustry	2	2													2				
	Physic Chemistry	3	3													3				
	Agriculture and Food Industrial	2	2															2		
	Waste Management																			
Subtotal Re	quired Course Credits	89																		
Subtotal Ele	ective Course Credits	39																		
Subtotal Pro	ofessional Elective Course Credits	20																		

Subtotal Elective courses from other schools	19									
Grand Total	128									

Notes:

1.In accordance with the General Provisions for Study, undergraduate students need to satisfactorily complete Service Learning, meet the university-wide basic competencies of English, Information Technology, Chinese, and Sports, and pass the core competencies of their department to be eligible for graduation.

2.Students who entered in and since the 2008-09 academic year need to complete at least 12 General Education course credits. General Education courses are divided into three areas: Humanities, Social Science, and Natural Science. Each area is divided into two subcategories: core and extended. Students need to take 1 two-credit course in both of the subcategories within each area to be eligible for graduation. Only 12 course credits will be counted toward graduation. Additional course credits earned in General Education courses are not counted toward graduation.

3. Course credits obtained from the Teacher Education Center cannot be counted toward students' final grades.

4. Elective courses credits include BT professional courses and courses from other schools, but the BT Department can only admit maximum 19 course credits.

5. The newly added elective courses in this academic year can be applied retroactively to students who entered the university prior to the 2019 academic year.

6. When retaking the professional courses, students can choose those which are the same course name or the same course content as substitutions under the approval of the

department chair. These courses can be regarded as their graduation credits, and can be applied retroactively to students who entered the university prior to the 2019 academic year.

7. Students can choose the course from BT master program, which can be counted as their graduation credits under the approval of the department chair, and can be applied retroactively to students who entered the university prior to the 2019 academic year.

8.Professional Electives can be selected from two programs of study, students must first complete one of these of study, each consisting of at least 15 course credits.9.Professional electives must be selected at least 20 credit hours.

10. When retaking the Calculus course, students can choose Calculus l course as substitutions under the approval of the department chair. These courses can be regarded as their graduation credits, and can be applied retroactively to students who entered the university prior to the 2019 academic year.

11. The credits of interdisciplinary focused course program are not included in course structure diagram that can be regarded as the other department credits

12. The required courses on this Course Outline may be counted as elective course credits toward total graduation credits by students who entered the university prior to the 2018 academic year.

13. The courses, Introduction to Pharmacology, may be counted in the Biomedical Program by students who entered the university can be traced back to the 2019 academic year.