

A List of Courses for Natural Science Experimental Class (Bio

Course Code	Course Title	Credit	Total Academic Hours	Scheduling Hours	Time Allocation			
					Theoretical Teaching	Practice Teaching		
						Lab.	Internship	Others
Common Cognition Courses								
General Courses								
Compulsory Courses								
All courses are required to taken (4 times for Situation and Policy(2 credits))								
TH028	Modern Chinese History	3	48	48				
TH000	Cultivation of Ethics and Fundamentals of Law	3	48	48	32			16
TH029	Introduction to Mao Zedong's Thoughts & Theoretical System of Socialism with Chinese	3	48	48	48			
TH007	Basic Theory of Marxism	3	48	48	32			16
PE001	Physical Education (1)	1	32	32				32
PE002	Physical Education (2)	1	32	32				32
PE003	Physical Education (3)	1	32	32				32
PE004	Physical Education (4)	1	32	32				32
TH004	Military Theory	1	16	16	16			
	Total Credits	17						
Optional Courses								
6 credits are required for English electives during the whole period of study.								
EN061	English (1)	3	48	48	48			
EN062	English (2)	3	48	48	48			
EN063	English (3)	3	48	48	48			
EN064	English (4)	3	48	48	48			
EN065	English (5)	3	48	48	48			
	Total Credits	15						
Common Cognition Core Courses								
Minimum 12 credits.								
	Humanities	2						
	Social Science	2						
	Natural Science							
	Engineering Science and Technology	2						
	Total Credits	12						
Cognition Practice								
Compulsory Courses								
All required to taken								
XP004	Social Cognition Practice in the New Era	2	32					32
	Total Credits	2						
Specialized Courses								
Cognition Practice								
Compulsory Courses								
All required to taken								
BI143	Natural Science Foundation	2	32	32	32			
CA150	Inorganic & analytical chemistry	4	64	64	64			
MA077	Linear Algebra (B)	3	48	48	48			
MA080	Advanced Mathematics (A) (1)	6	96	96	96			
CA239	Organic Chemistry (1)	4	64	64	64			
IN100	Information Retrieval and Utilization	1	16	16	16			
MA081	Advanced Mathematics (A) (2)	4	64	64	64			
MA119	Probability & Statistics	3	48	48	48			
PH003	Physics (B) (1)	3	48	48	48			
BI131	Introduction to Biology	3	48	48	48			
CA240	Biochemistry (1)	4	64	64	64			
CS154	Thinking and Approach of Programming (C++)	3	48	48	48			
PH004	Physics (B类) (2)	3	48	48	48			
	Total Credits	43						
Specialized Courses								
Compulsory Courses								
All required to taken								

BI144	Biochemistry	3	48	48	48			
BI289	Genetics and Anagenesis	2	32	32	32			
BI290	Programming Languages for Bioinformatics	2	32	32	16	16		
BI296	Introduction to Linux and Shell Scripting	2	32	32	16	16		
BI372	Biostatistics	3	48	48	32	14	2	
BI462	Bioinformatics (C)	3	48	48	32	16		
BI471	Computational Structural Biology	2	32	32	32			
BI470	Systems Biology	2	32	32	22	10		
BI472	Computational Biochemistry	3	48	48	48			
Total Credits		22						

Specialized Courses

Optional Courses

16 credits are required during the whole period of study

BI145	Biochemistry	3	48	48	48			
BI211	Microbiology (D)	3	48	48	48			
BI295	Molecular Biology (C)	2	32	32	32			
BI292	Cell Biology	2	32	32	32			
BI383	Gene Engineering	2	32	32	32			
CS022	The Principle of Database System	3	48	32	32	16		
CS339	Computer Network (D)	3	48	48	48			
EI372	Algorithm and Data Structure (A)	3	48	48	48			
BI371	Principles of Algorithms in Bioinformatics	3	48	48	32	16		
BI473	Biostatistical Models	2	32	32	32			
BI475	Biological Big Data	2	32	32	32			
BI476	Biostatistical Case Study	2	32	32	24	8		
BI493	Generalized Linear Model	2	32	32	24	8		
Total Credits		32						

Specialized Practical Courses

Courses in Lab.

Compulsory Courses

All required to taken

CA156	Inorganic & Analytical Chemistry Experiment	2	64	64		64		
CA155	Organic Experiment I	2	64	64		64		
ME130	Eco-Tech Innovation Experiment	2	64	64		64		
PH028	Physics Lab. I	1	24	24		24		
BI299	Biochemistry Lab.	1.5	48	48		48		
CA241	Physical Chemistry Experiment I	2	64	64		64		
PH029	Physics Lab. II	1	24	24		24		
BI390	Bioinformatics Lab.	2	64	64		64		
Total Credits		13.5						

Internship & Practice

Compulsory Courses

All required to taken

TH010	Military Training	3	48	48				48
BI294	Science & Technology Internship and Innovation—Biotechnology (1)	2	64				64	
BI329	Science & Technology Internship and Innovation—Biotechnology (2)	1	32				32	
BI367	Science & Technology Internship and Innovation—Biotechnology (3)	1	32				32	
BI466	Professional Practice (Bioengineering)	2	64	64			64	
Total Credits		9						

Professional Comprehensive Practice

All required to taken

BS448	Undergraduate project (Thesis) (Bioinformatics)	12	384	384				384
Total Credits		12						

Other Optional Courses

6 credits are required during the whole period of study

ME124	Engineering Practice (B)	2	64	64				64
BI278	Field Trip on Biology (B)	1	32	32			32	

informatics)

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2 (in summer semester)
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