

Course List (2015-16 cohort and thereafter)

| Course Code | Course Title (English) | Course Title (Chinese) | Unit(s) |
|------------------------|---|------------------------|---------|
| BCHE2000 | Frontiers in Biochemistry | 生物化學專題簡介 | 2 |
| BCHE2030 | Fundamentals of Biochemistry | 基礎生物化學 | 3 |
| BCHE2070 | Research Internship | 研究實習 | 2 |
| BCHE3040 | Proteins and Enzymes | 蛋白質與酶 | 3 |
| BCHE3050 / BCHE4010 | Molecular Biology | 分子生物學 | 2 |
| BCHE3070 | Recombinant DNA Techniques | 重組 DNA 技術 | 1 |
| BCHE3080 | Bioenergetics and Metabolism | 生物能量與新陳代謝 | 3 |
| BCHE3090 | Self-study Modules in Biochemistry | 生物化學自學單元 | 2 |
| BCHE3650 | Molecular Biology and Recombinant DNA Lab | 分子生物學及重組 DNA 實驗 | 2 |
| BCHE3680 | Bioenergetics and Metabolism Laboratory | 生物能量與新陳代謝實驗 | 2 |
| BCHE3730 | Analytical Biochemistry Lab | 分析生物化學實驗 | 2 |
| BCHE4020 | Recombinant DNA Techniques | 基因重組技術 | 1 |
| BCHE4030 | Clinical Biochemistry | 臨牀生物化學 | 3 |
| BCHE4040 | Aspects of Neuroscience | 神經科學概論 | 3 |
| BCHE4060 | Basic and Applied Immunology | 基礎及應用免疫學 | 3 |
| BCHE4080 | Biochemistry for Forensic Sciences | 生物化學鑑證 | 2 |
| BCHE4090 | Biochemistry for Sport and Exercise | 運動生物化學 | 2 |
| BCHE4130 | Molecular Endocrinology | 分子內分泌學 | 3 |
| BCHE4610 | Molecular Biology Laboratory | 分子生物學實驗 | 2 |
| BCHE4640 | Aspects of Neuroscience Laboratory | 神經科學概論實驗 | 2 |
| BCHE4760 | Immunology and Haematology Lab | 免疫學及血液學實驗 | 2 |
| BCHE4830 | Medical Biochemistry Laboratory | 醫學生物化學實驗 | 2 |
| BIOL2120 | Cell Biology | 細胞生物學 | 3 |
| BIOL2210 | Ecology | 生態學 | 3 |
| BIOL2213 | Ecology Laboratory | 生態學實驗 | 1 |
| BIOL2310 | General and Molecular Genetics | 普通與分子遺傳學 | 3 |
| BIOL2313 | Genetics Laboratory | 遺傳學實驗 | 1 |
| BIOL2410 | General Genetics | 普通遺傳學 | 2 |
| BIOL3012 | Biodiversity Laboratory I | 生物多樣性實驗 (一) | 2 |
| BIOL3022 | Biodiversity Laboratory II | 生物多樣性實驗 (二) | 2 |
| BIOL3310 | Human Biology | 人類生物學 | 3 |
| BIOL3410 | General Microbiology | 普通微生物學 | 3 |
| BIOL3413 | Microbiology Laboratory | 微生物學實驗 | 1 |
| BIOL3530 | Plant Physiology | 植物生理學 | 3 |

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|-------------|---|------------------------|---------|
| BIOL3560 | Biology of Fungi & Non-Vascular Plants | 真菌及非維管束植物生物學 | 2 |
| BIOL3570 | Biology of Vascular Plants | 維管植物生物學 | 2 |
| BIOL3610 | Invertebrate Form and Function | 無脊椎動物型態及功能 | 2 |
| BIOL3620 | Vertebrate Life | 脊椎動物學 | 2 |
| BIOL3630 | Animal Physiology | 動物生理學 | 3 |
| BIOL3710 | Marine Biology | 海洋生物學 | 3 |
| BIOL4010 | Evolutionary Biology | 演化生物學 | 3 |
| BIOL4012 | Field and Environmental Biology | 野外考察及環境生物學 | 2 |
| BIOL4032 | Physiological Investigations | 生理學探索 | 2 |
| BIOL4120 | Developmental Biology | 發育生物學 | 3 |
| BIOL4220 | Environmental Biotechnology | 環境生物技術學 | 3 |
| BIOL4260 | Conservation Biology | 保育生物學 | 3 |
| BIOL4310 | Human Genetics | 人類遺傳學 | 3 |
| BIOL4510 | Hong Kong Flora and Vegetation | 香港植物及植被 | 3 |
| BIOL4710 | Fish Biology and Mariculture | 魚類生物學及海產養殖 | 3 |
| BIOL4901 | Senior Experimental Project I | 實驗專題討論 (一) | 2 |
| BIOL4902 | Senior Experimental Project II | 實驗專題討論 (二) | 2 |
| BIOL4903 | Senior Experimental Project III | 實驗專題討論 (三) | 2 |
| BIOL4906 | Internship | 專題實習 | 2 |
| BIOL4907 | Field Study | 實地研習 | 2 |
| CHEM1070 | Principles of Modern Chemistry | 現代化學概論 | 3 |
| CHEM1072 | General Chemistry | 基礎化學 | 3 |
| CHEM2120 | Main Group Chemistry | 主族元素化學 | 2 |
| CHEM2200 | Organic Functional Groups: Structure and Reactivity | 有機官能團的結構和反應 | 2 |
| CHEM2300 | Thermodynamics and Chemical Equilibrium | 熱力學與化學平衡 | 2 |
| CHEM2310 | Chemical Bonding | 化學鍵 | 2 |
| CHEM2320 | Fundamentals of Spectroscopic Analysis | 波譜分析法原理 | 2 |
| CHEM2400 | Analytical Chemistry | 分析化學 | 2 |
| CHEM2820 | Organic Chemistry Laboratory I | 有機化學實驗 (一) | 2 |
| CHEM2830 | Physical Chemistry Laboratory I | 物理化學實驗 (一) | 2 |
| CHEM3130 | Transition Metal Chemistry | 過渡金屬化學 | 2 |
| CHEM3220 | Organic Reactions: Reactivity and Selectivity | 有機反應和選擇性 | 2 |
| CHEM3230 | Physical Organic Chemistry and Aromatics | 物理有機及芳香化學 | 2 |
| CHEM3320 | Chemical Kinetics | 化學動力學 | 2 |
| CHEM3330 | Molecular Spectroscopy | 分子光譜學 | 2 |
| CHEM3410 | Instrumental Analysis | 儀器分析 | 2 |

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| CHEM3810 | Organic Chemistry Laboratory II | 有機化學實驗 (二) | 2 |
| CHEM3820 | Organic Chemistry Laboratory III | 有機化學實驗 (三) | 2 |
| CHEM3830 | Physical Chemistry Laboratory II | 物理化學實驗 (二) | 2 |
| CHEM3840 | Physical Chemistry Laboratory III | 物理化學實驗 (三) | 2 |
| CHEM3860 | Inorganic Chemistry Laboratory II | 無機化學實驗 (二) | 2 |
| CHEM3870 | Analytical Chemistry Laboratory II | 分析化學實驗 (二) | 2 |
| CHEM4100 | Advanced Inorganic Chemistry | 高等無機化學 | 2 |
| CHEM4400 | Advanced Analytical Chemistry | 高級分析化學 | 2 |
| CHEM4430 | Practices in Testing Laboratory | 測試實驗室之措施及守則 | 2 |
| CHEM4440 | Food Testing and Environmental Analysis | 食物測試及環境分析 | 2 |
| CHEM4630 | Asymmetric Organic Synthesis | 不對稱有機合成 | 2 |
| CHEM4640 | Pharmaceutical Chemistry | 藥物化學 | 2 |
| CHEM4710 | Quantum Chemistry | 量子化學 | 2 |
| CHEM4780 | Mass Spectrometry | 質譜分析法 | 2 |
| CHEM4781 | NMR Spectroscopy | 核磁共振光譜學 | 2 |
| CHEM4784 | Bioanalytical Methods | 生物分析方法 | 2 |
| CHEM4785 | Industrial Chemistry | 工業化學 | 2 |
| CHEM4788 | Chemical Applications in Forensic Science | 化學在法庭科學上之應用 | 2 |
| CHEM4960 | Research Projects in Chemical Science I | 化學專題研究 I | 2 |
| CHEM4970 | Research Projects in Chemical Science II | 化學專題研究 II | 2 |
| CMBI2200 | Literature survey in CMB and Scientific Communication | 細胞及分子生物學科技文獻檢索和科學交流方法 | 2 |
| CMBI3101 | Biology of Model Organisms for CMB Research | 細胞及分子生物學常用模式生物及其生物學 | 3 |
| CMBI4001 | Protein Trafficking | 蛋白運輸 | 1 |
| CMBI4002 | Protein Folding | 蛋白折疊 | 1 |
| CMBI4003 | Signal Transduction | 信號傳導 | 1 |
| CMBI4101 | Cancer Cell Biology | 癌細胞生物學 | 1 |
| CMBI4102 | Stem Cell Biology | 幹細胞生物學 | 1 |
| CMBI4103 | Neuronal Cell Biology | 神經細胞生物學 | 1 |
| CMBI4201 | Genomics and Transcriptomics | 基因組學及轉錄組學 | 1 |
| CMBI4202 | Proteomics | 蛋白質組學 | 1 |
| CMBI4203 | Metabolomics | 代謝組學 | 1 |
| CMBI4301 | Current Topics in Cell Biology | 當今細胞生物學主題 | 1 |
| CMBI4302 | Current Topics in Molecular Biology | 當今分子生物學主題 | 1 |
| CMBI4303 | Current Topics in Biotechniques | 當今生物技術主題 | 1 |
| CMBI4901 | Senior Experimental Project I | 實驗專題討論 (一) | 2 |
| CMBI4902 | Senior Experimental Project II | 實驗專題討論 (二) | 2 |

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| CMBI4903 | Senior Experimental Project III | 實驗專題討論 (三) | 2 |
| ENSC2270 | Introduction to Environmental Science | 環境科學導論 | 3 |
| ENSC2515 | Environmental Chemistry | 環境化學 | 3 |
| ENSC2517 | Environmental Chemistry Laboratory | 環境化學實驗 | 2 |
| ENSC3230 | Principles of Environmental Protection and Pollution Control | 環境保護與污染管制導論 | 3 |
| ENSC3320 | Biochemical Toxicology | 生化毒理學 | 3 |
| ENSC3415 | Environmental Instrumentation Techniques | 環境儀器分析技術 | 3 |
| ENSC3417 | Environmental Instrumentation Techniques Laboratory | 環境儀器分析技術實驗 | 2 |
| ENSC3520 | Environmental and Biochemical Toxicology | 環境及生化毒理學 | 3 |
| ENSC3820 | Environmental and Biochemical Toxicology Lab | 環境及生化毒理學實驗 | 2 |
| ENSC3920 | Biochemical Toxicology Laboratory | 生化毒理學實驗 | 2 |
| ENSC4240 | Environmental Impact Assessment | 環境影響評估 | 3 |
| ENSC4242 | Environmental Impact Assessment Laboratory | 環境影響評估實驗 | 2 |
| ENSC4250 | Environmental Health | 環境衛生學 | 3 |
| ENSC4310 | Methods in Toxicological Research | 毒理學研究方法 | 3 |
| ENSC4510 | Methods in Toxicological Research Laboratory | 毒理學研究方法實驗 | 2 |
| ENSC4525 | Advanced Environmental Chemistry | 高級環境化學 | 3 |
| ENSC4535 | Chemical Treatment Processes | 化學處理程序 | 3 |
| ENSC4901 | Senior Experimental Project I | 實驗專題討論 (一) | 2 |
| ENSC4902 | Senior Experimental Project II | 實驗專題討論 (二) | 2 |
| ENSC4903 | Senior Experimental Project III | 實驗專題討論 (三) | 2 |
| ENSC4906 | Internship | 專題實習 | 2 |
| ENSC4907 | Field Study | 實地研習 | 2 |
| ESSC2010 | Solid Earth Dynamics | 固體地球動力學 | 3 |
| ESSC2020 | Climate System Dynamics | 氣候系統動力學 | 3 |
| ESSC3100 | Structural Geology | 構造地質學 | 3 |
| ESSC3120 | Physics of the Earth | 地球物理 | 3 |
| ESSC3200 | Atmospheric Physics | 大氣物理 | 3 |
| ESSC3220 | Atmospheric Chemistry | 大氣化學 | 3 |
| ESSC3300 | Ocean and Climate | 海洋與氣候 | 3 |
| ESSC3320 | Hydrogeology | 水文地質學 | 3 |
| ESSC3600 | Understanding Our Biosphere | 認識我們的生物圈 | 3 |
| ESSC3800 | Global Environmental Change | 全球環境變化 | 3 |
| FNSC2003 | Food, Nutrition and Health | 食品，營養與健康 | 2 |
| FNSC3010 | Nutrition and Human Development | 營養及人體發育 | 3 |

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| FNSC3030 | Nutritional Biochemistry | 營養生物化學 | 3 |
| FNSC3110 | Food Chemistry and Analysis | 食品化學及分析 | 3 |
| FNSC3180 | Food Microbiology | 食品微生物學 | 3 |
| FNSC4001 | Food Science Laboratory II | 食品科學實驗(二) | 2 |
| FNSC4002 | Nutritional Science Laboratory II | 營養科學實驗(二) | 2 |
| FNSC4110 | Food Technology | 食品技術學 | 3 |
| FNSC4120 | Community Nutrition | 社區營養學 | 3 |
| FNSC4150 | Introduction to Medical Nutrition Therapy | 食療學概論 | 3 |
| FNSC4160 | Nutrition Planning and Food Policy | 營養規劃及食品政策 | 3 |
| FNSC4170 | Food Product Development and Quality Control | 食品開發及品質控制 | 3 |
| LSCI2002 | Basic Laboratory Techniques in Life Sciences | 生命科學基本實驗技巧 | 2 |
| LSCI2003 | Scientific Conduct and Ethics | 科學道德與倫理 | 1 |
| LSCI3000 | Synthetic Biology Workshop | 合成生物學工作坊 | 2 |
| LSCI4000 | Literature Research in Life Sciences | 生命科學文獻專題討論 | 3 |
| MATH1010 | University Mathematics | 大學數學 | 3 |
| MATH1020 | General Mathematics | 普通數學 | 3 |
| MATH1030 | Linear Algebra I | 線性代數(一) | 3 |
| MATH1520 | University Mathematics for Applications | 大學應用數學 | 3 |
| MATH2010 | Advanced Calculus I | 高等微積分(一) | 3 |
| MATH2020 | Advanced Calculus II | 高等微積分(二) | 3 |
| MATH2040 | Linear Algebra II | 線性代數(二) | 3 |
| MATH2055 | Introduction to Analysis | 分析導論 | 3 |
| MATH2070 | Algebraic Structures | 代數結構 | 3 |
| MATH2230 | Complex Variable with Applications | 複變函數與應用 | 3 |
| MATH3010 | Higher Geometry | 高等幾何 | 3 |
| MATH3030 | Algebra I | 代數學(一) | 3 |
| MATH3080 | Number Theory | 數論 | 3 |
| MATH3210 | Linear Programming | 線性規劃 | 3 |
| MATH3220 | Operation Research and Logistics | 運籌學與物流學 | 3 |
| MATH3230 | Numerical Analysis | 數值分析 | 3 |
| MATH3240 | Numerical Methods for Differential Equations | 微分方程之數值方法 | 3 |
| MATH3250 | Discrete Mathematics | 離散數學 | 3 |
| MATH3260 | Graph Theory | 圖論 | 3 |
| MATH3270 | Ordinary Differential Equations | 常微分方程 | 3 |
| MATH3290 | Mathematical Modeling | 數學模型 | 3 |
| MATH3310 | Computational and Applied Mathematics | 計算及應用數學 | 3 |
| MATH4210 | Financial Mathematics | 財經數學 | 3 |

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|-------------|--|------------------------|---------|
| MATH4220 | Partial Differential Equations | 偏微分方程 | 3 |
| MATH4240 | Stochastic Processes | 隨機過程 | 3 |
| MATH4250 | Game Theory | 對策論 | 3 |
| MBTE2000 | Introduction to Molecular Biotechnology | 分子生物科技導論 | 2 |
| MBTE2010 | Diversity of Life: Applications and Sustainability | 生物多樣性：應用及可持續發展 | 2 |
| MBTE3000 | Business and Social Aspects of Biotechnology | 生物技術學與商業及社會的關係 | 3 |
| MBTE4033 | Methods in Molecular Biotechnology Laboratory I | 分子生物技術學方法實驗（一） | 2 |
| MBTE4034 | Methods in Molecular Biotechnology Laboratory II | 分子生物技術學方法實驗（二） | 2 |
| MBTE4320 | Genetic Engineering | 遺傳工程學 | 3 |
| MBTE4510 | Plant Biotechnology | 植物生物技術學 | 3 |
| MBTE4520 | Animal Biotechnology | 動物生物技術學 | 3 |
| MBTE4530 | Microbial Biotechnology | 微生物生物技術學 | 3 |
| MBTE4901 | Senior Experimental Project I | 實驗專題討論（一） | 2 |
| MBTE4902 | Senior Experimental Project II | 實驗專題討論（二） | 2 |
| MBTE4903 | Senior Experimental Project III | 實驗專題討論（三） | 2 |
| NSCI3000 | Learning from Nature to Future Problem Solving | 從自然學習解決難題 | 2 |
| NSCI4051 | Workshop on Mathematical Sciences | 數學科學工作坊 | 3 |
| PHYS1001 | Essential Physics | 基礎物理 | 3 |
| PHYS1002 | General Physics | 普通物理 | 3 |
| PHYS1111 | University Physics I – Introduction to Mechanics, Fluids and Waves | 大學物理（一）：力學、流體與波動導論 | 3 |
| PHYS1122 | University Physics II – Introduction to Optics and Modern Physics | 大學物理（二）：光學與近代物理導論 | 3 |
| PHYS1712 | Physics Laboratory I | 物理實驗（一） | 1 |
| PHYS2041 | University Physics III – Introduction to Heat and Electromagnetism | 大學物理（三）：熱學與電磁學導論 | 3 |
| PHYS2051 | Quantitative Methods for Basic Physics | 基礎物理中的定量方法 | 3 |
| PHYS2061 | Basic Computational Physics | 基礎計算物理學 | 3 |
| PHYS2401 | Introduction to Astronomy and Astrophysics | 天文及天體物理導論 | 3 |
| PHYS2711 | Physics Laboratory II | 物理實驗（二） | 2 |
| PHYS2722 | Physics Laboratory III | 物理實驗（三） | 1 |
| PHYS3011 | Classical Mechanics I | 經典力學（一） | 3 |
| PHYS3021 | Quantum Mechanics I | 量子力學（一） | 3 |
| PHYS3022 | Applied Quantum Mechanics | 應用量子力學 | 3 |
| PHYS3031 | Thermodynamics and Statistical Physics | 熱力學與統計物理學 | 3 |

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|-------------|---|------------------------|---------|
| PHYS3041 | Electromagnetic Theory I | 電磁學理論 (一) | 3 |
| PHYS3051 | Methods in Theoretical Physics I | 理論物理的分析方法 (一) | 3 |
| PHYS3061 | Introduction to Computer Simulation of Physical Systems | 物理系統之電算機模擬導論 | 3 |
| PHYS3410 | Practical Electronics | 實用電子學 | 3 |
| PHYS3420 | Topics in Contemporary Physics | 當代物理專題 | 3 |
| PHYS3730 | Basic Instrumentation | 基礎儀器學 | 3 |
| PHYS3810 | Short Theoretical Project I | 理論專題 (一) | 1 |
| PHYS4011 | Classical Mechanics II | 經典力學 (二) | 3 |
| PHYS4021 | Quantum Mechanics II | 量子力學 (二) | 3 |
| PHYS4031 | Statistical Mechanics | 統計力學 | 3 |
| PHYS4041 | Electromagnetic Theory II | 電磁學理論 (二) | 3 |
| PHYS4050 | Solid State Physics | 固體物理 | 3 |
| PHYS4051 | Methods in Theoretical Physics II | 理論物理的分析方法 (二) | 3 |
| PHYS4061 | Computational Physics | 計算物理學 | 3 |
| PHYS4420 | Physics in Meteorology | 氣象學中的物理 | 3 |
| PHYS4430 | Astrophysics | 天文物理 | 3 |
| PHYS4440 | Topics in Nanoscience and Technology | 納米科學及技術專題 | 3 |
| PHYS4450 | Optical Physics | 光物理 | 3 |
| PHYS4460 | Relativity | 相對論 | 3 |
| PHYS4470 | Nuclear and Particle Physics | 核物理與粒子物理 | 3 |
| PHYS4480 | Special Topics I | 物理專題 (一) | 3 |
| PHYS4490 | Special Topics II | 物理專題 (二) | 3 |
| PHYS4491 | Special Topics III | 物理專題 (三) | 3 |
| PHYS4492 | Special Topics IV | 物理專題 (四) | 3 |
| PHYS4610 | Senior Project I | 畢業專題研究 (一) | 3 |
| PHYS4620 | Senior Project II | 畢業專題研究 (二) | 3 |
| PHYS4710 | Short Experimental Project II | 專題實驗 (二) | 1 |
| PHYS4801 | Seminar I | 學術報告 (一) | 1 |
| PHYS4802 | Seminar II | 學術報告 (二) | 1 |
| PHYS4811 | Short Theoretical Project II | 理論專題 (二) | 1 |
| RMSC2001 | Introduction to Risk Management | 風險管理導論 | 3 |
| RMSC4002 | Data Analysis in Finance and Risk Management Science | 財務與風險管理之數據分析 | 3 |
| RMSC4003 | Statistical Modelling in Financial Markets | 金融市場的統計建模 | 3 |
| RMSC4004 | Theory of Risk and Insurance | 風險理論與保險 | 3 |
| STAT2001 | Basic Concepts in Statistics and Probability I | 統計及概率基本概念 (一) | 3 |
| STAT2003 | Computer-aided Statistical Reasoning | 電腦輔助統計論証 | 3 |

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|--------------------|---|-------------------------------|----------------|
| STAT2004 | SAS for Data Management | SAS 數據管理功能 | 3 |
| STAT2006 | Basic Concepts in Statistics and Probability II | 統計及概率基本概念 (二) | 3 |
| STAT2009 | Introduction to Programming Language for Statistics | 統計電腦語言導論 | 3 |
| STAT3001 | Foundation of Financial and Managerial Statistics | 財務及管理統計基礎 | 3 |
| STAT3002 | Experimental Design | 試驗設計 | 3 |
| STAT3003 | Survey Methods | 調查方法 | 3 |
| STAT3004 | Basic Methods in Biomedical Statistics | 生物醫藥統計 | 3 |
| STAT3005 | Applied Nonparametric Statistics | 應用非參數統計 | 3 |
| STAT3007 | Introduction to Stochastic Processes | 隨機過程入門 | 3 |
| STAT3008 | Applied Regression Analysis | 應用迴歸分析 | 3 |
| STAT4002 | Multivariate Techniques with Business Applications | 多元技巧及其商業應用 | 3 |
| STAT4003 | Statistical Inference | 統計推論 | 3 |
| STAT4004 | Actuarial Science | 保險統計學 | 3 |
| STAT4005 | Time Series | 時間序列 | 3 |
| STAT4006 | Categorical Data Analysis | 範疇性數據分析 | 3 |
| STAT4007 | Statistical Quality Control | 統計品質控制 | 3 |
| STAT4008 | Survival Modelling | 生存數據模型 | 3 |