

國立東華大學
National Dong Hwa University
生化暨分子醫學科學系學士班115學年度學程規劃表
DEPARTMENT OF BIOCHEMISTRY AND MOLECULAR MEDICINE BACHELOR
115 Academic year Curriculum planning table

一、本系學士班學生需滿足校核心課程及學程相關規定，學分達128學分，方得畢業。

I. Students of this bachelor's degree must meet the core curriculum and curriculum requirements of the school, And the credits will be 128 credits.

二、本系學士班主修學程(major)，包含下列各項

II. The bachelor's degree major in this department consists of the following:

1. 基礎科學學程(15學分)

(i). Fundamental Program of Science(15credits)

2. 生科核心(一)學程(22學分)

(ii). Core Program of Biochemistry and Molecular Medicine (I)(22credits)

3. 生科核心(二)學程(28學分)

(iii). Core Program of Biochemistry and Molecular Medicine (II)(28credits)

三、本系學士班專業選修學程

III. The bachelor's degree Professional elective Program:

1. 生物化學學程(20學分)

(i). Program of Biochemistry(20 credits)

2. 生物醫學學程(20學分)

(ii). Program of Biomedical(20 credits)

四、校核心課程31學分(語文9學分、體育3學分、校核心通識課程19學分)

IV. Core curriculum 31 credits (9 credits in language, 3 credits in physical education, 19 credits in University Core General Education Courses)

五、重要相關事項

V. Important notes:

1. 本系學士班學生須滿足校核心課程相關規定及修滿四個學程，學分達128學分以上方得畢業(即修滿主修領域(major)加一個副修學程(minor)，或加一個本系專業選修學程，連同校核心課程學分，總計修習學分數達128 以上)。

2. 本系學生除修畢校核心英語必修6學分外，尚需通過語言中心規定之英語能力檢測，並持成績證明至語言中心登錄，始達本校英語能力畢業標準。學生符合英語免修條件者，得申請免修；審核通過免修者，授予6學分並計入畢業學分數內。申請方式依本校「學士班校核心英語必修課程免修作業要點」公告為準。

3. 入學之新生於入學前二年或大一修課期間，符合校核心英語必修免修條件者，得申請免修；審核通過免修者，授予6學分並計入畢業學分數內。詳細檢核標準和實施辦法，依語言中心「學士班學生英語能力畢業標準及實施辦法」之規定辦理。

4. 選修本系碩士班專業選修課程，至多可列計6學分為學士班畢業學分(可採計任一專業選修學程)。

5. 學生選修歷年核心(二)學程中之科目均可列計核心(二)學程學分，而不受任一年度學程規劃表之限制。

6. 修習114學年度以前舊課規之任一選修學程課程，可採計為114學年度後課規之任一選修學程畢業學分。

7. 本系之「相同或等同課程對照表」請參見系網。

8. 持海外中五學制的學生，畢業學分數應增加至少12學分(總畢業學分必須至少為140學分，不限修本系課程，但課程內容由系所建議或課程委員會認定)。

9. 106學年度起入學之新生，畢業前應完成本校規定之跨域自主學習認證時數。詳細之考核標準及認證審核，悉依學務處「跨域自主學習認證實施辦法」辦理。

10. 五年一貫生，必須於大四起修習「論文研究」課程。

11. 為推動全英語授課，理工學院EMI教師所開設之EMI課程，與本系相同課名或相同性質課程可視為等同課程。請參閱相同或等同課程對照表。

12. 選用113(含)學年度以前課規之同學，依規定需完成之服務學習學分數，尚未完成者，得以校核心通識課程抵認。

- 1.Students in the bachelor' s program of this department must meet the relevant requirements of the school' s core curriculum and complete the study for four programs, earning a total of at least 128 credits before graduation (i.e., completing the major field of study and adding one minor program, or one professional elective program from the department, together with the university' s core course credits, the total number of credits is 128 or more).
- 2.In addition to completing 6 credits of mandatory core English courses, students in this department must pass the English proficiency test prescribed by the language center and log in to the language center with the score certificate to meet the school' s English proficiency graduation standards. Students who meet the requirements for English exemption can apply for exemption; those who pass the examination will be granted 6 credits which will be counted toward the graduation credits. The application process is based on the university' s "Guidelines for Exemption from Core English Courses for Bachelor's Degree Programs."
- 3.New students may apply for exemption from the core English requirement if they meet the exemption criteria before the second year of study or during their first year. Students who pass the examination will be granted 6 credits which will be counted toward graduation credits. Detailed verification standards and implementation methods shall be handled in accordance with the "Graduation Standards and Implementation Measures for English Proficiency of Bachelor's Degree Students" of the Language Center.
- 4.Students who take elective courses from the department's master' s program can count up to 6 credits toward their bachelor' s graduation credits (credits from any professional elective program can be counted).
- 5.The subjects taken by students in the Core (II) Curriculum over the past years can be counted as Core (II) Curriculum credits and are not restricted by any annual academic schedule.
- 6.Courses from any elective program under the old curriculum prior to the 114 academic year can be counted as graduation credits for any elective program under the curriculum after the 114 academic year.
- 7.Please refer to the department' s website for the "Equivalency or Equivalent Course List" .
- 8.Students with a foreign secondary school education under the 5 academic system must complete at least 12 additional credits (the total graduation credits must be at least 140 credits, and they are not limited to courses in the department, but the course content is recommended by the department or determined by the curriculum committee).
- 9.Students admitted from the 106 academic year onward must complete the university' s required cross-domain self-directed learning certification hours before graduation. Detailed assessment standards and certification audits will be handled in accordance with the "Cross-domain Independent Learning Certification Implementation Measures" of the Academic Affairs Office.
- 10.Students in the five-year jointed Bachelor-Master program must take the "Thesis Research" course starting from their fourth year.
- 11.In order to promote English-medium instruction (EMI), EMI courses offered by the College of Engineering will be considered equivalent to courses with the same course title or nature within this department. Please refer to the equivalency or equivalent course list.
- 12.Students under the curriculum of Academic Year 2024 or earlier who have not completed the required "Service Learning (I)" or "Service Learning (II)" credits may fulfill the requirement with University Core General Education Courses.

國立東華大學
National Dong Hwa University

115學年度基礎科學學程
Fundamental Program of Science
115 Academic year Curriculum planning table

一、規劃單位:理工學院

I. Planning Department: COLLEGE OF SCIENCE AND ENGINEERING

二、依重要相關事項,修滿下列科目達學分,完成本學程

II. According to important notes, credits will be completed in the following subjects to complete the Program.

三、課程明細

III. Course details:

	科目名稱	必選修	學分	年級	學期	*先修/#背景	課群/學群	科目代碼	備註
1	普通化學(一) General Chemistry (I)	必	3.0	一	上			CHEM10000	
2	普通化學(二) General Chemistry (II)	必	3.0	一	下			CHEM10200	
3	普通化學實驗(一) General Chemistry Lab (I)	必	1.0	一	上	#普通化學(一)/		CHEM10100	
4	生物學(一) Biology (I)	必	3.0	一	上			BMM_10100	
5	生物學(二) Biology (II)	必	3.0	一	下			BMM_10200	
6	生物學實驗(一) Biology Laboratory(I)	必	1.0	一	上			BMM_10500	
7	生物學實驗(二) Biology Laboratory (II)	必	1.0	一	下			BMM_10600	

四、重要相關事項

IV. Important notes:

- 1、有關基礎科學學程修習方式,請本院物理系、化學系、生醫系、材料系及光電系學生依所屬學系修課規定修習。
- 2、本院應數系、電機系、資工系及外院系學生欲修習本學程做為副修學程,請於物理系、化學系、生醫系、材料系及光電系等五系選擇一學系規定之修課科目修習(請參閱各學系課規)。
- 3、化學系大一同學只能修支援化學系開設的普通化學課及實驗課。

Fundamental Program of Science

1.Regarding the course requirements for the Basic Science Program, students from the College's Departments of Physics, Chemistry, Biochemical and Molecular Medical Sciences, Materials Science, and Opto-electronic Engineering should follow the course regulations of their respective departments.

2. Students from the Departments of Applied Mathematics, Electrical Engineering, and Computer Science, as well as students from other colleges, who wish to pursue this program as a minor, are required to select and complete the designated courses from one of the five departments (Physics, Chemistry, Biochemical and Molecular Medical Sciences, Materials Science, or Opto-electronic Engineering). For details, please refer to the course regulations of each department.

3. Freshman students in the Department of Chemistry are only allowed to enroll in General Chemistry courses and laboratory courses offered by the Department of Chemistry.

系所主管:

院 長:

列印日期:2026/3/25

國立東華大學
National Dong Hwa University

115學年度生科核心(一)學程
Core Program of Biochemistry and Molecular Medicine (I)
115 Academic year Curriculum planning table

一、規劃單位:生化暨分子醫學科學系學士班

I. Planning Department:DEPARTMENT OF BIOCHEMISTRY AND MOLECULAR MEDICINE BACHELOR

二、依重要相關事項,修滿下列科目達22.0學分,完成本學程

II.According to important notes, 22.0 credits will be completed in the following subjects to complete the Program.

三、課程明細

III.Course details:

科目名稱		必選修	學分	年級	學期	*先修/#背景	課群/學群	科目代碼	備註
1	生物醫學實驗 Biomedical laboratory course	必	1.0	一	下				
2	細胞生物學 Cell Biology	必	4.0	二	上			BMM_20900	
3	細胞生物學實驗 Cell Biology Laboratory	必	1.0	二	上			BMM_21000	
4	有機化學(一) Organic Chemistry (I)	必	2.0	二	上			CHEM21400	
5	分子生物學 Molecular Biology	必	4.0	二	下			BMM_31800	
6	分子生物學實驗 Experiments in Molecular Biology	必	1.0	二	下			BMM_30900	
7	有機化學(二) Organic Chemistry(II)	必	2.0	二	下			CHEM21500	
8	生物化學(一) Biochemistry(I)	必	3.0	三	上			BMM_30000	
9	生物化學實驗 Biochemistry Laboratory	必	1.0	三	上			BMM_32000	
10	生物化學(二) Biochemistry (II)	必	3.0	三	下			BMM_22000	

四、重要相關事項

IV. Important notes:

無

系所主管:

院 長:

列印日期:2026/3/25

國立東華大學
National Dong Hwa University

115學年度生科核心(二)學程
Core Program of Biochemistry and Molecular Medicine (II)
115 Academic year Curriculum planning table

一、規劃單位:生化暨分子醫學科學系學士班

I. Planning Department:DEPARTMENT OF BIOCHEMISTRY AND MOLECULAR MEDICINE BACHELOR

二、依重要相關事項,修滿下列科目達28.0學分,完成本學程

II.According to important notes, 28.0 credits will be completed in the following subjects to complete the Program.

三、課程明細

III.Course details:

科目名稱		必修修	學分	年級	學期	*先修/#背景	課群/學群	科目代碼	備註
1	微積分(一) Calculus(I)	選	3.0	一	上			AM_10500	
2	普通物理實驗(一) General Physics Laboratory (I)	選	1.0	一	上			PHYS10100	
3	普通物理(一) General Physics(I)	選	3.0	一	下			PHYS10000	必選
4	普通化學實驗(二) General Chemistry Lab(II)	選	1.0	一	下	#普通化學(二)/		CHEM10300	
5	遺傳學 Genetics	選	3.0	二	上			BMM_20800	
6	生物嫁接技術與生醫應用 Bioconjugate Techniques and Biomedical Applications	選	3.0	二	上			BMM_33300	
7	專題研究(一) Undergraduate Research(I)	選	1.0	二	上			BMM_22150	1.建議先修課程：生物醫學實驗。 2.此課程為學生進實驗室做專題。
8	專題研究(二) Undergraduate Research(II)	選	1.0	二	下				1.建議先修課程：生物醫學實驗。 2.此課程為學生進實驗室做專題。
9	生物統計學 Biostatistics	選	3.0	二	下			BMM_20400	
10	人體生理學 Human Physiology	選	3.0	二	下			BMM_33400	建議先修課程：生物學(二)
11	微生物學 Microbiology	選	3.0	三	上			BMM_30500	
12	永續綠色醫材與化妝品應用 Eco-Friendly Biomaterials & Cosmetics for Sustainable Applications	選	3.0	三	上			BMM_33590	
13	專題研究(三) Undergraduate Research(III)	選	1.0	三	上			BMM_22160	1.建議先修課程：生物醫學實驗。 2.此課程為學生進實驗室做專題。
14	專題研究(四) Undergraduate Research(IV)	選	1.0	三	下				1.建議先修課程：生物醫學實驗。 2.此課程為學生進實驗室做專題。
15	免疫學 Immunology	選	3.0	三	下			BMM_30300	

科目名稱		必選修	學分	年級	學期	*先修/#背景	課群/學群	科目代碼	備註
16	生醫材料概論 Introduction of Biomaterials	選	3.0	三	下			BMM_33600	
17	轉譯醫學導論 Introduction of translational medicine research	選	3.0	四	上			BMM_41460	
18	生物醫學前瞻 Frontiers in biomedical science	選	1.0	四	上			BMM_33450	原科目名稱：生命科學前瞻，此課程為學術演講課
19	專題研究(五) Undergraduate Research(V)	選	1.0	四	上			BMM_22170	1.建議先修課程：生物醫學實驗。 2.此課程為學生進實驗室做專題。
20	專題研究(六) Undergraduate Research(VI)	選	1.0	四	下				1.建議先修課程：生物醫學實驗。 2.此課程為學生進實驗室做專題。
21	應用酵素學 Applied Enzymology	選	3.0	四	下			BMM_41450	
22	書報討論 Journal club	選	2.0	四	下			BMM_41570	
23	台灣生技產業現況 Taiwan's Contemporary Biotechnology Industry	選	2.0	四	下			BMM_33420	

四、重要相關事項

IV. Important notes:

- 1.普通物理(一)為必選課程，「期中停修」視為未選。
- 2.專題研究及生物醫學前瞻須二擇一選修。
- 3.生物資訊分析，可抵認校核心「資訊科技」學分。

- 1."General Physics (I)" is a required course. If you withdraw from the course during the semester, the course will be regarded as not completed.
- 2.Either "Specialized Research" or "Biomedical Frontiers" must be chosen as an elective course.
- 3."Bioinformatics Analysis" can be counted as the University core "Information Technology" credit.

系所主管：

院 長：

列印日期:2026/3/25

國立東華大學
National Dong Hwa University

115學年度生物化學學程

Program of Biochemistry

115 Academic year Curriculum planning table

一、規劃單位:生化暨分子醫學科學系學士班

I. Planning Department:DEPARTMENT OF BIOCHEMISTRY AND MOLECULAR MEDICINE BACHELOR

二、依重要相關事項,修滿下列科目達20.0學分,完成本學程

II.According to important notes, 20.0 credits will be completed in the following subjects to complete the Program.

三、課程明細

III.Course details:

科目名稱		必選修	學分	年級	學期	*先修/#背景	課群/學群	科目代碼	備註
1	生醫領航 Introduction of Biomedical	選	1.0	一	上			BMM_11000	
2	管理學 Introduction to Management	選	3.0	一	下			BM_20200	
3	分析化學(一) Analytical Chemistry(I)	選	3.0	二	上			CHEM20100	
4	營養與代謝 Nutrition & Metabolism	選	2.0	二	上			BMM_22130	
5	生物技術之儀器分析方法 Instrumental Analysis for Bio-technology	選	3.0	二	上			BMM_22110	
6	商事法 Business Law	選	3.0	二	上			FIN_30200	
7	生醫產業導論 Introduction to Biomedical Industry	選	3.0	二	下			BMM_41400	原科目名稱：生物產業導論
8	生物科技概論 Introduction to Biotechnology	選	3.0	二	下				
9	生物資訊分析 Bioinformatics analysis	選	3.0	三	上				
10	生化工程導論 Introduction of Biochemical Engineering	選	2.0	三	上			BMM_33490	
11	中草藥學導論 Introduction of Chinese Materia Medica	選	3.0	三	上			BMM_33510	建議先修課程：生物學、有機化學
12	創業管理 Entrepreneurship	選	3.0	三	上			IB__32100	
13	幹細胞治療及免疫療法 Stem Cell Therapy and Immunotherapy	選	2.0	三	下			BMM_@0010	
14	臨床生物化學概論 Clinical Biochemistry	選	2.0	三	下			BMM_32900	
15	演化發育生物學 Evolutionary developmental biology	選	3.0	四	上				
16	生物有機化學(一) Bioorganic Chemistry(I)	選	3.0	四	上			CHEM50400	
17	基因體學 Genomics	選	3.0	四	下				

四、重要相關事項

IV. Important notes:

列印日期:2026/3/25

選修本系碩士班專業選修課程，至多可列計6學分為學士班畢業學分(可採計任一專業選修學程)。

A maximum of 6 credits taken from the master' s program of this department can be counted as graduation credits for the bachelor's degree.

系所主管：

院 長：

國立東華大學
National Dong Hwa University

115學年度生物醫學學程

Program of Biomedical

115 Academic year Curriculum planning table

一、規劃單位:生化暨分子醫學科學系學士班

I. Planning Department:DEPARTMENT OF BIOCHEMISTRY AND MOLECULAR MEDICINE BACHELOR

二、依重要相關事項,修滿下列科目達20.0學分,完成本學程

II.According to important notes, 20.0 credits will be completed in the following subjects to complete the Program.

三、課程明細

III.Course details:

	科目名稱	必選修	學分	年級	學期	*先修/#背景	課群/學群	科目代碼	備註
1	生醫領航 Introduction of Biomedical	選	1.0	一	上			BMM_11000	原科目名稱：生命科學導論
2	管理學 Introduction to Management	選	3.0	一	下			BM_20200	
3	商事法 Business Law	選	3.0	二	上			FIN_30200	
4	生醫產業導論 Introduction to Biomedical Industry	選	3.0	二	下			BMM_41400	原科目名稱：生物產業導論
5	奈米醫學 Nanomedicine	選	3.0	二	下			BMM_22100	
6	病毒學 Virology	選	3.0	三	上			BMM_31400	
7	癌症生物學概論 Introduction of Cancer Biology	選	3.0	三	上			BMM_33480	建議先修課程：細胞生物學
8	創業管理 Entrepreneurship	選	3.0	三	上			IB__32100	
9	中西醫學概論 Introduction of Medicine and Traditional Chinese Medicine	選	3.0	三	下			BMM_33570	建議先修課程：生物學、有機化學
10	神經退化疾病概論 Introduction to Neurodegenerative Disorders	選	2.0	三	下			BMM_33520	
11	幹細胞治療及免疫療法 Stem Cell Therapy and Immunotherapy	選	2.0	三	下			BMM_@0020	
12	幹細胞生物前瞻 Advanced Stem Cell Biology	選	2.0	三	下				
13	分子醫學診斷 Diseases and Molecular Diagnostics	選	3.0	四	上			BMM_41540	
14	組織工程與再生醫學 Tissue Engineering and Regenerative Medicine	選	2.0	四	上			BMM_41560	建議大三以上學生修習
15	醫學新知導論 Introduction to Medical Innovations	選	3.0	四	上			BMM_33610	
16	臨床醫學與智慧醫療照護 Clinical Medicine and Smart Healthcare	選	3.0	四	上			CSIE62210	

科目名稱		必選修	學分	年級	學期	*先修/#背景	課群/學群	科目代碼	備註
17	精準醫療 Precision medicine	選	3.0	四	下			BMM_41470	
四、重要相關事項 IV. Important notes: 選修本系碩士班專業選修課程，至多可列計6學分為學士班畢業學分(可採計任一專業選修學程)。 A maximum of 6 credits taken from the master' s program of this department can be counted as graduation credits for the bachelor's degree.									

系所主管：

院 長：