各院適用:113.06版

食品暨應用生物科技學系學士班學生畢業條件明細表 (114學年度起入學適用)

- (一)最低修業年限:四年(獸醫系五年)
- (二)可延長修業二年(不包括休學二年)
- 二、應修最低畢業總學分數:共132學分(不含體育課程)。
- 三、校必修課程及學分數:

一、修業年限:

- (一)體育課程:必修2學分,不計入畢業學分。超修之體育課程 至多採計為外系2學分。運動績優生另依體育室相關規定辦
- (二)英文能力檢定:0學分。
- (三)通識課程:28學分。(課程分類請參閱選課系統)
- 1.核心素養課程:共10類,至少3學分。

其中「資訊素養:程式設計與AI應用」修課規定如下

- (1)必修1學分
- (2)外籍生得免修,如有修習可採計通識學分
- 2.語文素養課程:
 - (1)本國語文:4學分

敘事表達:語文素養2學分。 敘事表達:語文應用2學分。

(2)外國語文:6學分:

英語溝通與表達2學分。

學術英文聽讀2學分。

學術英文說寫2學分。

- 3.領域素養課程:至少10學分。
 - (1)應修習「人文、社會、自然」三領域各1門課程,合計至 少6學分。
 - (2)應修習「統合領域」課程至少4學分。
 - (3)國防教育類課程(非必修)至多採計1門為通識畢業學分,超 修該類課程不可以採計為外系學分。
 - (4)本系隸屬生命科學學群,該學群課程至多採計1門為通識 畢業學分,超修該學群課程不可以採計為外系學分。
- 4.超修之通識課程可以採計為外系選修至多4學分。
- 5.其他規定:本系學生可自由修習人文領域、社會科學領域及 自然科學領域等三領域;唯「農業科技與生活」、「實用生活化 學」、「營養與保健」、「食品安全衛生」、「餐桌上的營養學」不 列入通識畢業學分計算。
- 四、院專業必修課程及學分數:最低應修 學分
- 五、系專業必修課程及學分數:最低應修 60 學分

科目名稱	全或半	學分
(1) 微積分(一)	半年	2
(2) 微積分(二)	半年	2
(3) 普通生物學	半年	3
(4) 有機化學	全年	6
(5) 物理化學	半年	3
(6) 分析化學	半年	3
(7) 生物統計學	半年	3
(8) 食品化學	半年	3
(9) 食品分析	半年	2
(10) 食品分析實習	半年	1
(11) 微生物學(一)	半年	2
(12) 微生物學實習(一)	半年	1
(13) 微生物學(二)	半年	2
(14) 微生物學實習(二)	半年	1
(15) 食品加工學(一)	半年	2
(16) 食品加工學實習(一)	半年	1
(17) 食品加工學(二)	半年	2

- ※必修科目及畢業學分數規定,由各系依課程規劃表填列。
- ※如無課程或學分異動,不須每學年提送。

項

科目名稱	全或半	學分
(18) 食品加工學實習(二)	半年	1
(19) 食品工程(一)	半年	2
(20) 生物化學	全年	6
(21) 生物化學實習	半年	2
(22) 營養學	半年	2
(23) 營養學實驗	半年	1
(24) 食品衛生法規	半年	3
(25) 有機化學實驗	半年	1
(26) 分析化學實驗	半年	1
(27) 專題研究 A~H	全年	2
(28) 畢業論文	全年	2

- 六、系專業選修課程及學分數:最低應選修25學分。本系學生若 有修習「跨領域第二專長」,請參照本系「跨領域第二專長 本系學生必修科目表 | 修課。
- 七、承認外系學分:最多 不設限 學分。(除校規定通識課程必修 28 學分外,本系僅再承認4學分通識課程列入畢業學分)
- 八、其他特別規定:
 - (一)食品加工學實習(一)(二)分為 AB 兩班,學生上下學期須選 修不同班別課程。
 - (二)生物化學實習為半學年2學分課程,在上下學期都有開設課 程,學生須於修業中至少修習一次並取得2學分以滿足必 修要求。
 - (三)本系學生需於【畢業論文】與【專題研究】兩個課程之中 任選一科,如須上修需提供相關證明資料。
 - (四)本系學生不少於25學分之選修科目,其中需包含【假期實 習】及【食品生物技術】,但不包含任何語文課程之修 習。擬選修【假期實習】者,需先完成實習後,再於次學 期進行選課。
 - (五)擬提早畢業學生,應於大三時提前修畢大四必修科目 (【專題研究】或【畢業論文】)。
 - (六)其他未盡事宜依「國立中與大學食品暨應用生物科技學系 學生選課規則」辦理。
- 八、輔系:學生修習輔系之學分,應在其主系規定最低畢業學 分以外加修之科目及學分數 (至少二十學分),請見教務 處課務組公告事項。

九、雙主修:

- (一)學生修讀雙主修,其加修學系(所、學位學程)畢業條件 以核准修讀學年度的畢業條件為基準。修讀雙主修學生, 除應修滿所屬系(所、學位學程)規定畢業科目學分外, 應至少修滿加修學系(所、學位學程)全部專業必修科目 學分始可取得雙主修資格。若該生主修系所之必修課程名 稱與本系必修課程名稱相同時,能否免修該課程由本系決
- (二)學士班學生如扣除所屬學系(學位學程)學分後,加修學系 (學位學程)專業必修科目學分仍不足四十學分,或加修學 系(學位學程)專業必修科目學分原本不足四十分學分,應 由加修學系(學位學程)指定選修科目學分補足之。
- 十、跨域專長:

本系有開設,申請對象學士班;跨域專長課程與學生本 系 (學位學程)、雙主修、輔系或其他跨域專長應修課程 及學分重複者,由跨域專長的系(學位學程)或學院指 定與專長相關選修課程補足。

十一、入學資格:屬修業年限少於國內高級中等學校及專科學 校之國外同等學校畢業生,如海外中五學制畢(結) 業生,畢業學分數應增加至少12學分,其增加之學分 數與修習科目請詳附表。

附表:

食品暨應用生物科技學系學士班學生畢業條件明細表(113學年度起入學適用)

入學資格屬修業年限少於國內高級中等學校及專科學校之國外同等學校畢業生,如海外中五學制畢(結)業生,畢業學分數應增加至少12學分,其增加之學分數與修習科目如下列:

科目名稱	全或半	學分
(1) 食品科學概論	半	2
(2) 食品品評學	半	2
(3) 食品微生物學(一)	半	2
(4) 食品微生物學實習	半	1
(5) 穀類加工	半	2
(6) 人體生理學	半	3
(7) 食品儀器分析	半	2
(8) 光譜學應用	半	3
(9) 食品添加物	半	3
(10) 發酵學	半	3
(11) 新產品研究開發	半	3

系(學位學程)承辦人:

主任簽章:

114年8月22日修訂

Department of Food Science and Biotechnology Graduation Requirements for **Undergraduate Students Enrolled after 2025**

Items Items

I. Period of Study:

- 1. Minimum period of study: 4 years (5 years for Veterinary Medicine)
- 2. Can be extended for 2 more years (excluding 2 years of suspension)
- II. Minimum graduation credits: 132 credits (excluding PE

III. University Required Courses and Credits:

- 1. Physical Education (PE) Course: 2 credits, not included in graduation credits. Additional credits earned from PE courses are capped at 2 and will count as credits from various departments. Student Athletes outstanding sports achievements will be handled according to the relevant regulations of the Office of Physical Education and Sports.
- 2. English Proficiency Requirement: 0 credit.
- 3. General Education: 28 credits
 - i. Core Competencies: at least 3 credits. International students do not need to take the "Information Literacy" course. The course "Information Literacy: Programming and AI Applications" is a required 1-credit course.
 - ii. Language Competencies:
 - ➤ Native Language and Literature : 4 credits Narrative Expression: Language Literacy Narrative Expression: Language Application
 - > Foreign Language: 6 credits. **English Communication and Expression** Academic English: Listening and Reading Academic English: Speaking and Writing
 - iii. Domain Competencies: at least 10 credits
 - > Humanistic Domain, Social Science Domain, and Natural Domain: at least one course in each Domain, total at least 6 credits.
 - ➤ Integrated Domain: at least 4 credits.
 - > For National Defense Education courses, only credits of 1 course can be counted toward general education credits.
 - > Our program belongs to the area of Life Sciences Cluster_, therefore, only one course from this area will be recognized.
- 4. Excess general education courses can be counted as elective VIII.Other Regulations: credits from other departments, up to a maximum of 4
- 5. Other Regulations: Students in this department may freely take courses in the Humanistic Domain, Social Science Domain, and Natural Science Domain. However, the following courses will not be counted toward general education graduation credits: "Agricultural Technology and Life," "Practical Life Chemistry," "Nutrition and Health," "Food Safety and Hygiene," and "Nutrition on the Dining
- IV. College Required Professional Courses and Credits: Minimum ____ credits.

. Departm	ent Re	quired Professional Courses and Credits:	
Ainimum	60	credits.	

Core Course Title	Semester	Credits
	/Year	_
1. Calculus(I)	Semester	
2. Calculus(II)	Semester	
3. General Biology	Semester	
4. Organic Chemistry	Year	6
5. Physical Chemistry	Semester	
6. Analytic Chemistry	Semester	3
7. Biostatistics	Semester	3
8. Food Chemistry	Semester	3
9. Food Analysis	Semester	2
10. Food Analysis Lab	Semester	1
11. Microbiology (I)	Semester	2
12. Microbiology Lab (I)	Semester	1
13. Microbiology (II)	Semester	2
14. Microbiology Lab (II)	Semester	
15. Food Processing (I)	Semester	2
16. Food Processing Lab (I)	Semester	
17. Food Processing (II)	Semester	2
18. Food Processing Lab (II)	Semester	1
19. Food Engineering (I)	Semester	
20. Biochemistry	Year	6
21. Biochemistry Lab	Semester	2
22. General Nutrition	Semester	
23. General Nutrition Lab	Semester	1
24. Food Hygiene and Regulation	Semester	
25. Organic Chemistry Lab	Semester	1
26. Analytic Chemistry Lab	Semester	
27. Special Topics (A~G)	Year	2
28. Thesis Writing	Year	2

- VI. Department Elective Courses and Credits: Students must complete a minimum of 25 elective credits within the department. Students who pursue an "Interdisciplinary Second Specialty" should follow the department's "Required Course List for Students Pursuing an Interdisciplinary Second Specialty."
- VII. Recognition of Credits from Other Departments: No upper limit on the number of credits. (In addition to the 28 general education credits required by the university, the department only recognizes an additional 4 general education credits toward graduation requirements.)

- (1) Food Processing Laboratory (I) is divided into Class A and Class B. Students must enroll in different classes across the two semesters.
- (2) Biochemistry Laboratory is a half-year, 2-credit course offered in both semesters. Students must take this course at least once during their studies and earn 2 credits to meet the graduation requirement.
- (3) Students are required to complete either *Thesis* or Special Project Research. Those who need to take the course in advance must submit relevant supporting documents.

<u>Department of Food Science and Biotechnology</u> Graduation Requirements for Undergraduate Students Enrolled after 2025

- (4) Students in this department are required to complete no fewer than 25 elective credits, which must include Holiday Internship and Food Biotechnology. However, language courses are not counted toward this requirement. Students intending to enroll in Holiday Internship must first complete the internship before registering for the course in the following semester.
- (5) Students planning for early graduation should complete the senior-year required course (*Thesis* or *Special Project Research*) during their junior year.
- (6) Any matters not covered herein shall be handled in accordance with the "Course Selection Regulations of the Department of Food Science and Biotechnology, National Chung Hsing University."
- IX.Minor Degree: To earn a minor degree, students are required to take 20 (or more) credits in addition to the department's minimum graduation credits. For more details, please see the bulletin of Curriculum Division website.
- X. Double Major: The graduation requirements for students in pursuit of a double major (department or degree program) shall be determined by relevant regulations in effect at the time when their application was approved. Double major students not only have to fulfill all graduation credit requirements of their first major (department or degree program), they must also complete all core courses for their second major (department or degree program). Only upon achieving a passing grade in these courses will students be eligible for a double major graduation qualification.

Undergraduate students who did not complete or are short of 40 credits for the second major must make up for those credits by taking courses designated by the second major (department or degree program).

- XI. Cross-Disciplinary Expertise Development Program: If the required professional courses of the program overlap with those of the affiliated departments (degree programs), double major, minor, or other cross-disciplinary expertise programs, students shall not take the said courses. Instead, they shall select other courses specified by the program's departments (degree programs) or colleges.
- XII. Students who graduate from educational institutions equivalent to senior high school or junior college with a secondary education study period of less than 6 years are required to complete at least 12 extra credits as part of their graduation requirements.

2024/5/6

Department/Graduate Institute/Degree Program Processing Clerk 系(所、學位學程)承辦人:

Signature by Department (Degree Program) Head:

系所主管簽章: