

National Kaohsiung University of Science and Technology

Application for the Microprogram for Chief Technology

Officers in Professional Disciplines

“Title of Program”

State the applying department in full here

State the name of the Principal Investigator here

Implementation period: From August 1, 2023, to July 31, 2024

Seal and signature of the Principal Investigator	Seal and signature of the Department Director	Seal and signature of the College Dean
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Date (yy/mm/dd):

Funded proposals from all academic units shall be provided as a reference
to other academic units

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Basic program information

Department			
Program title			
Core theme	Briefly describe the professional interdisciplinary skills and competencies to be instilled in students		
Principal Investigator	Name		Title
	Department/unit		
	Teacher category	☐ Full-time ☐ Contracted	
	Telephone	(Work) ext: (Mobile)	
	E-mail		
Team member 1	Name		Title
	Department/unit		
	Teacher category	☐ Full-time ☐ Contracted ☐ Part-time ☐ Industry professional	
	E-mail		
Team member 2	Name		Title
	Department/unit		
	Teacher category	☐ Full-time ☐ Contracted ☐ Part-time ☐ Industry professional	
	E-mail		
Team member 3	Name		Title
	Department/unit		

	Teacher category	☐ Full-time ☐ Contracted ☐ Part-time ☐ Industry professional		
	E-mail			
Team member 4	Name		Title	
	Department/unit			
	Teacher category	☐ Full-time ☐ Contracted ☐ Part-time ☐ Industry professional		
	E-mail			
Team member 5	Name		Title	
	Department/unit			
	Teacher category	☐ Full-time ☐ Contracted ☐ Part-time ☐ Industry professional		
	E-mail			
(add rows if necessary)				
Contact	Name		Title	
	Department/unit			
	Faculty category	☐ Full-time teacher ☐ Full-time assistant		
	Telephone	(Work) ext: (Mobile)		
	E-mail			
Funds requested	NT\$			

Program summary (in 500 words)

Program keywords in Chinese and English (list at least three)

Guidelines

1. Please include page numbers and a table of contents (including figures and tables) in the proposal.
2. The maximum length of the proposal is 25 pages from the application information to the end of part VII, the sustainability plans and outcomes showcase. The funding application and other attachments are not within the scope of the page limit. Proposals that exceed this page limit shall be excluded from review.
3. The shaded text in the proposal is only for your reference and should be deleted before submission.

1. Program summary

1. Describe the teaching objectives and core competencies of the academic unit, plans for its future development, and plans for interdisciplinary teaching.
2. Describe the motivations for submitting this program application, the background of the program, and the objectives for implementing the program.
3. Describe the strengths and capacities of the department and team.

2. Core theme

1. Describe how the core theme was determined and how it relates to the department's plans, including interdisciplinary developments.
2. Describe how the core theme of the program is integrated into the design of interdisciplinary course modules to instill professional skills and interdisciplinary competencies and therefore achieve the goals of solving problems and developing interdisciplinary talents.

3. Program framework and implementation strategies

1. Describe the specific measures and strategies employed to implement the program (include the program framework and implementation procedure).
2. Describe interdisciplinary teacher collaboration and co-construction measures (supplementary figures are allowed).
3. Describe the plans for managing teacher teams (include arrangements for teacher development, following the example provided in the table below).

[Example] Plans for teacher in-service training and development

Order	Category	Theme	Description
1.	Associating issues	Industry developments and localized design	Observing local issues and devising solutions through creative design to meet local needs.
2.	Putting innovation into practice	Design of interactive lessons and assessments	Constructing teaching objectives and teaching activities, planning holistic learning outcomes assessments.
3.	Using digital technology	One-day exploratory course in audiovisual marketing	Understanding the current trends in video marketing developments and learning post-production methods

(add more rows if necessary)

IV. Course module planning

1. Describe the course module and course contents (graphics or tables are allowed).
2. Describe how the course resources are applied to foster students' interdisciplinary skills in solving sustainability-related objectives and issues, consolidate the department's goals for student development, and nurture students' interdisciplinary skills.
3. Please complete the course module summary using the following table. List all courses in the program, each with its syllabus as shown in Attachment 1. Place the code number assigned to the syllabus in the last column.

Order	Academic year/semester	Course title	Instructor	Credits	Course information		Code
1.					☐ New course ☐ Reorganization of an existing course	☐ Co-instructed ☐ Instructed by an industry professional	
2.					☐ New course ☐ Reorganization of an existing course	☐ Co-instructed ☐ Instructed by an industry professional	
3.					☐ New course ☐ Reorganization of an existing course	☐ Co-instructed ☐ Instructed by an	

						industry professional	
4.					☐ New course ☐ Reorganization of an existing course	☐ Co-instructed ☐ Instructed by an industry professional	
Total					Description: The course module consists of five credits or 90 course hours		

[Example] Core Competencies and Learning Outcomes Assessment Sheet

Order	Academic year/semester	Course title	Instructor	Credits	Course information		Code
1.	Example 112-1	Marine Ecology – Environment and Climate		0.5 credits/ 9 hours	☒ New course ☐ Reorganization of an existing course	☐ Co-instructed ☒ Instructed by an industry professional	1
2.	Example 112-1	Marine Ecology – Conservation and Resources		0.2 credits/ 4 hours	☒ New course ☐ Reorganization of an existing course	☐ Co-instructed ☒ Instructed by an industry	2

						professional	
3.	Example 112-1	Environmental Testing – Analytical Methods		0.2 credits/ 4 hours	☒ New course ☐ Reorganization of an existing course	☒ Co-instructed ☐ Instructed by an industry professional	3
4.	Example 112-1	Environmental Testing – Industry Applications		0.1 credits/ 2 hours	☒ New course ☐ Reorganization of an existing course	☐ Co-instructed ☒ Instructed by an industry professional	4
5.	Example 112-1	Environmental Testing – Materials Analysis		0.5 credits/ 9 hours	☒ New course ☐ Reorganization of an existing course	☐ Co-instructed ☒ Instructed by an industry professional	5
6.	Example 112-1	Environmental Testing – Data Interpretation		0.5 credits/ 9 hours	☒ New course ☐ Reorganization of an existing course	☐ Co-instructed ☒ Instructed by an industry professional	6

7.	Example 112-2	Underwater Skills – Diving		1 credit/ 18 hours	☒ New course ☐ Reorganization of an existing course	☐ Co-instruct ed ☒ Instructed by an industry professional	7
8.	Example 112-2	Artificial Intelligence		2 credits/ 36 hours	☐ New course ☒ Reorganization of an existing course	☒ Co-instruct ed ☐ Instructed by an industry professional	8
Total				5 credits/ 91 hours	Description: The course module consists of five credits or 90 course hours		

4. Please describe the methods for evaluating students' interdisciplinary learning and the strategies for evaluating learning outcomes (including the plans for showcasing the program outcomes at the end of the semester), and complete the following Competency and Learning Outcomes Evaluation Sheet.

[Example] Competency and Learning Outcomes Evaluation Sheet

Competency	Description	Learning outcomes and assessment strategies
Example: Civic Literacy in Practice	Able to utilize diverse means to learn and express concern toward social situations and keep track of new information on various issues	Applying experiential, practical, reading, and reflection to enable students to understand and apply civic literacy in

Competency	Description	Learning outcomes and assessment strategies
		practice.

(add more rows if necessary)

Notes:

1. NKUST's core competencies: Cultural literacy, life aesthetics, global vision, professional knowledge, lifelong learning, citizenship responsibility practice, creative thinking, communication and expression, and teamwork.
2. In addition to the aforementioned core competencies, learning outcomes can also be assessed based on department-specific core competencies.

V. Program implementation schedule

- (1) Describe the work tasks and their corresponding strategies throughout the program implementation schedule.
- (2) Describe the corresponding program objectives and indicate the schedule for the tasks and the checkpoints.
- (3) Complete the strategies and tasks using the following table based on the program implementation schedule.

[Example] Program implementation schedule

Shaded regions indicate task schedules; a ▲ indicates a checkpoint													
Strategies	Tasks	August 2023 to July 2024											
		8	9	10	11	12	1	2	3	4	5	6	7
Teacher teams	Interdisciplinary co-construction consensus camp						▲						▲
	Regular teacher team meeting				▲						▲		
	Teacher training workshop					▲						▲	
Interdisciplinary co-construction teaching													
Outcomes showcase													
Cumulative progress		25%			50%			75%			100%		

(add more rows if necessary)

VI. Expected outcomes and performance indicators

- (1) Describe the expected outcomes of the program; define the qualitative and quantitative performance indicators and achievement values.
- (2) Choose the appropriate university-defined performance indicators and at least one self-defined performance indicator
- (3) Insert the target values for the shared performance indicators in the following table and describe and provide examples of self-defined performance indicators.

University-defined performance indicators					
Indicator	Category	Measurement	Assessment	Objectives for the 2023 academic year	Remarks
Outcomes: enhancing teachers' innovative pedagogies	☐ Qualitative ☒ Quantitative	Number of instructors who are applying innovative teaching approaches	Number of instructors in the program		
	☐ Qualitative ☒ Quantitative	Enrollment in an innovative teaching course	Enrollment		
	☐ Qualitative ☒ Quantitative	Encouraging the implementation and usage of innovative teaching, teaching materials and teaching aids, and teaching	Number of innovative teaching materials and teaching plans		

		plans			
Outcomes: enhancing students' interdisciplinary learning skills	☐ Qualitative ☒ Quantitative	Enrollment in an interdisciplinary course	Enrollment		
	☐ Qualitative ☒ Quantitative	Number of practical interdisciplinary outcomes created by students	Number of interdisciplinary practical works or outcomes		
	☒ Qualitative ☐ Quantitative	Describe the implementation of strategies that enhance interdisciplinary learning	Describe the interdisciplinary learning outcomes		
Self-defined performance indicators					
Indicator	Category	Measurement	Assessment (calculation formula)	Objectives for the 2023 academic year	Remarks
	☐ Qualitative ☐ Quantitative				
	☐ Qualitative ☐ Quantitative				
	☐ Qualitative ☐ Quantitative				

(add more rows if necessary)

VII. Sustainability plans and outcomes showcase

- (1) Describe the plans for co-construction and sustainability; these may include paradigm shifts and diffusion of benefits.
- (2) Describe the plans for and benefits of showcasing interdisciplinary and practical outcomes, such as competitions or exhibitions.
- (3) The description of students' practical outcomes should include a discussion of the ways professional knowledge and skills are integrated into interdisciplinary competencies, the scope of application, and the underlying knowledge concepts.

VIII. Funding application

Program title:					
Particulars		Funding details			
		Unit price (NT\$)	Quantity	Total price (NT\$)	Description
Functional expenses	Writing fees – for review				Review: Remuneration based on word count or piecework
	Writing fees – for completion of designs				Completion of designs: 1. Posters (remuneration-based piecework at NT\$5,405 to NT\$20,280 per piece). 2. Leaflets (remuneration-based piecework at NT\$4,060 to NT\$13,510 per piece).
	Attendance fees				Fees paid to guests and committee members to attend meetings at NKUST as part of various courses, activities, visits, evaluations, and internship committee-level internship activities.
	Consultation				Fees paid to guests and

	fees				committee members to attend meetings at NKUST as part of various courses, activities, visits, and evaluations.
	Hourly pay for lecturers (internal)				1. Hourly pay for various seminars, courses, panels, briefings, outcomes exhibition, and lectures as part of the Higher Education SPROUT Project, reimbursed after auditing.
	Hourly pay for lecturers (external)				2. Lecturer assistants are paid at a rate of half of the hourly pay for lecturers (internal and external). 3. Handled in accordance with the Executive Yuan Part-Time Payment Standards for Concurrently Serving Military, Civil and Teaching Personnel and the NKUST Directions Governing the Payment Standards for Topical Lectures.

	Work-study wages				Payment for assistance in project-related temporary collation and consolidation of functional information, including temporary backstage workers' wages and labor-employer wages of TAs, reimbursed after auditing.
	Supplementary national health insurance premium				Handled in accordance with the relevant regulations of the National Health Insurance Administration's National Health Insurance Act (Second Generation) and reimbursed after auditing the actual program implementation status.
	Labor and health insurance and retirement pension for student workers				Pensions are reimbursed after auditing in accordance with the Labor Pension Act; insurance premiums are handled in accordance with the relevant insurance and labor

					insurance regulations. Note: 1. Health insurance can be exempted for short-term (less than three months) workers, those who work less than 11 hours per week, or off-campus personnel with health insurance and a higher income. 2. Payment for on-campus personnel with no health insurance is calculated by multiplying their amount due by 2.11%.
	Insurance fees				Payment for safety insurance and public liability insurance for organizing various activities, courses, and visits as part of the Higher Education SPROUT Project. Note: Participants should be insured.
	Venue fees				Rental fees for using venues to organize various activities,

					conferences, courses, forums, outcomes exhibitions, and other relevant activities as part of the Higher Education SPROUT Project, reimbursed after auditing.
	Venue decoration fees				1. Payment for decorating venues for organizing outcomes exhibitions, briefings, panels, large conferences, forums, and other relevant activities as part of the Higher Education SPROUT Project, based on the program needs; reimbursed after auditing. Includes costs for printing large images, banners, lecturer hall-type large advertisements, display boards, display shelves, outcomes displays, booths, decorative flowers, equipment rentals etc. 2. Payment for decorating venues for organizing

					outcomes exhibitions, briefings, panels, large conferences, forums, and other relevant activities as part of the Higher Education SPROUT Project, reimbursed after auditing based on the program. Includes photography equipment rentals, editing equipment rentals, and video production equipment rentals.
	Printing costs				1. Printing costs for various tasks required by the Higher Education SPROUT Project, reimbursed after auditing. Includes production of various printed materials, design and printing of meeting agendas, activity handbooks, production and printing of posters and other printed materials, meeting and activity banners, annual proposals, midterm

					outcomes report, end-of-term completion reports. 2. Printing student competition or activity outcomes collections.
	Payment for materials				Costs of teaching materials required by each course as part of the Higher Education SPROUT Project, reimbursed after auditing.
	Transportation costs (domestic and local)				Reimbursement of domestic travel fees shall be handled in accordance with the Reimbursement Regulations Governing Domestic Transportation Allowances. Includes the costs of domestic travel to conferences, courses, and exchange sessions, as well as other miscellaneous costs, reimbursed after auditing. 1. Domestic travel (reimbursed after auditing based on the origin, destination, and transportation mode)

					2. Car rental (reimbursed after auditing): Taipei/Taichung to Kaohsiung return trip: NT\$10,000 per session; eastern region to Kaohsiung return trip: \$18,000 per session. 3. Daily miscellaneous fees: (collated according to the Domestic Travel Allowance Claim Form for Civil Servants and the Reimbursement Regulations Governing Domestic Transportation Allowances) miscellaneous fees, NT\$400 per person, lodging NT\$2,000 per person per day (junior rank and below). and transportation costs, reimbursed after auditing. 4. Car rentals for organizing field trips to enterprises.
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	Missed meal allowance (main meals)				1. Meal allowance for organizing conferences and activities as part of the Higher Education SPROUT Project.
	Missed meal allowance (snacks)				2. Meal allowance for students and teachers when participating in topical competitions, seminars, off-campus visits, and other relevant activities. 3. Auditing of meal allowances in activities, including staff meal allowances, meal allowances for tasks conferences, etc.
	Lodging fees				Lodging fees for students and teachers when participating in topical competitions, seminars, off-campus visits, and other relevant activities. Limit of NT\$2,000 per person per day.
	Equipment usage fees				Costs of using equipment and software that enhance teaching quality as part of the Higher Education

					SPROUT Project.
	Miscellaneous expenditures				Unlisted office supplies including stationery, paper, audio tapes, information consumables, files, postage fees, etc.
	Subtotal				Limit of NT\$150,000 for funding the functional expenses of each program
Total					
Principal Investigator (seal and signature)		Department Director (seal and signature)		College Dean (seal and signature)	

Funding allocation and verification standards shall comply with the following:

1. Funding usage principles of the Higher Education SPROUT Project.
2. Ministry of Education Directions Governing the Remittance and Reimbursement of Funds for Ministry-Subsidized and -Commissioned Projects and Commissioned Funding
3. NKUST's Higher Education SPROUT Project funding allocation and verification measures

Attachment 1 Course syllabus

Code:

Course syllabus of “course title” for the ____ Semester of the ____ Academic Year

[Credit course]

Course title			Credits	
Course-offering unit			Grade	
Is this a new course?	☐ Yes ☐ No (provide the original syllabus as Attachment 2)		Enrollment	
Instructor	☐ Single instructor: (name) ☐ Dual instructors: (names) ☐ Industry professional: list the names of the instructor and professional and indicate the latter			
Learning objectives/ course objectives	Describe the course, its core themes and interdisciplinary features, and plans for implementing the program			
Teaching content and progress	Date/time	Course contents		Capacities to be developed
	Week 1			(Rows may be merged downwards)
	Week 2			
	Week 3			
	Week 4			
	Week 5			

	Week 6		
	Week 7		
	Week 8		
	Week 9		
	Week 10		
	Week 11		
	Week 12		
	Week 13		
	Week 14		
	Week 15		
	Week 16		
	Week 17		
	Week 18		
Student competency development plans	1. Development objectives (the expected capabilities and categories to be developed) 2. Development strategies		
Description of interdisciplinary co-construction and outcomes	1. Plans for interdisciplinary co-construction 2. Plans for showcasing outcomes		
Learning outcomes and evaluation tools	1. The expected learning outcomes 2. The design of corresponding methods for evaluating learning outcomes 3. The evaluation tools used in the course		
Innovative	Describe the innovative design of the course. Leave blank if none.		

design of the course	
Description of sustainable plans	1. Description of the program's association with the department's plans for interdisciplinary development 2. Plans for improvement and sustainability

Code:

Course syllabus of “course title” for the ____ Semester of the ____ Academic Year

[Microcredit course]

Course title		Credits (teaching hours)	☐ 0.1 credits (2 hours) ☐ 0.2 credits (4 hours) ☐ 0.5 credits (9 hours) ☐ 1 credit (18 hours)
Course-offering unit		Grade	
Is this a new course?	☐ Yes ☐ No (provide the original syllabus as Attachment 2)	Enrollment	
Instructor	☐ Single instructor: (name) ☐ Dual instructors: (names) ☐ Industry professional: list the names of the instructor and professional and indicate the latter		
Learning objectives/ course objectives	Describe the course, its core themes and interdisciplinary features, and plans for implementing the program		
Teaching contents and progress	Date/time	Theme and activity contents	Capacities to be developed
			(Rows may be merged downwards)

Student competency development plans	1. Development objectives (the expected capabilities and categories to be developed) 2. Development strategies		
Description of interdisciplinary co-construction and outcomes	1. Plans for interdisciplinary co-construction 2. Plans for showcasing outcomes		
Learning outcomes and evaluation tools	1. The expected learning outcomes 2. The design of corresponding methods for evaluating learning outcomes 3. The evaluation tools used in the course		
Innovative course design	Describe the innovations in the course design. Leave blank if none		
Description of sustainable plans	1. Description of the program's association with the department's plans for interdisciplinary development		

	2. Plans for improvement and sustainability
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Attachment 2 The original syllabus

Code:

Course syllabus of “course title”

Course title		Credits	
Course-offering unit		Grade	
Instructor			
Teaching objectives			
Teaching progress	Week	Course contents	
	Week 1		
	Week 2		
	Week 3		
	Week 4		
	Week 5		
	Week 6		
	Week 7		
	Week 8		
	Week 9		
	Week 10		
	Week 11		
	Week 12		
	Week 13		
	Week 14		
	Week 15		
	Week 16		
	Week 17		

	Week 18	
Results		

Attachment 3 Meeting minutes of the curriculum committee meeting or other relevant meetings