



National Chiayi University

College of Life Sciences



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College of Life Sciences

website : <http://www.ncyu.edu.tw/cls>



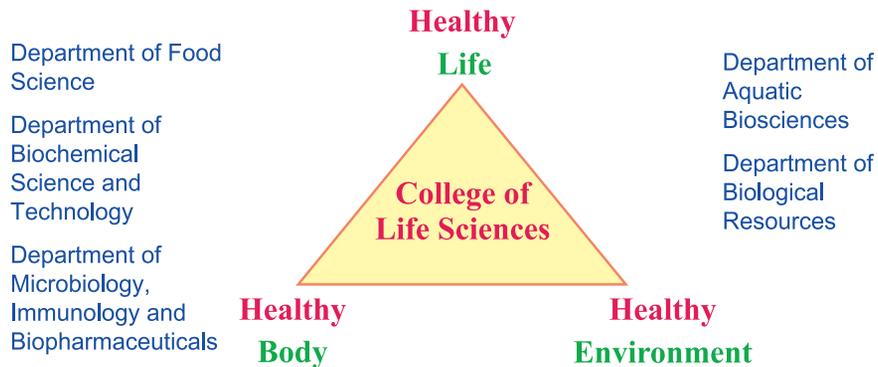
- The theme of the College is targeting “**Health**” for education.
- Under the theme, “**Healthy Life**”, “**Healthy Body**” and “**Healthy Environment**” are pursued to explore the state-of-the-art life sciences, technologies, researches and extensions based on creativity, innovation, modernization and globalization (internationalization).





Health:

Theme for Education and Multi-disciplinary Developments of College of Life Sciences



NCYU Regulations Governing Admission of International Students

Article1 The regulations are provided in accordance with the Ministry of Education (MOE) Regulations Regarding International Students Undertaking Studies in Taiwan, R.O.C. and the academic regulations of National Chiayi University (hereafter abbreviated as NCYU).

Article2 An international student, as provided in this regulation, shall be confined to as an individual who has never held a Republic of China nationality and does not hold a current identity as overseas Chinese students.

Individuals who are not nationals of the Republic of China, have been living overseas for more than 6 consecutive years and meet the following qualifications are eligible to apply for admission in accordance with the regulation:

- a. Individuals who hold Republic of China nationality at the time of application should not have a registered permanent residence of Taiwan.
- b. Individuals who formerly held Republic of China nationality and have forfeited it for at least 8 years since the date, on which a revocation was issued from the Ministry of the Interior.
- c. Individuals who have never registered to the universities/colleges in Taiwan as an overseas Chinese student, and have not accepted an offer in the current academic year from the University Entrance Committee for Overseas Chinese Students.

Foreign nationals who were selected by a foreign government, organization or educational institution to study in Taiwan and never held a permanent residence of Taiwan are not subject to the limitation as prescribed in the preceding paragraph after the approval of authorized government educational institutions.

The six year period as prescribed in the second paragraph shall be calculated from the date of when the semester begins (February 1st or August 1st).

The overseas as prescribed in the second paragraph refers to countries and regions outside People's Republic of China, Hong Kong, and Macau. During the 6 consecutive year period you are not allowed to stay in Taiwan for more than 120 days in a calendar year.

Individuals who once held both foreign and Republic of China nationalities, and applied to renounce the latter one before the MOE Regulations Regarding International Students Undertaking Studies in Taiwan, R.O.C. came into effect on February 1st, 2011 are not subject to the limitation as prescribed in the second paragraph and are eligible to apply for admission in accordance with the original regulation.

The application for admission as prescribed in this regulation shall conform to the semester start date set by NCYU.

Article3 If a student requests admission to a higher degree program after a lower degree has been conferred at NCYU, the admission shall be handled in a manner identical to that of R.O.C. students.

Article4 The basic admission requires that applicants have never failed any previous courses. The main teaching language used at NCYU is Chinese. The intended department or institution of study sets the language proficiency requirement.

Article5 Applicants should submit all of the documents in the list below during the application acceptance period each year. An admission certificate will be issued to those who have been admitted. Upon registration, new international students should present proof of insurance which includes both medical and personal accident coverage valid for at least 4 months from the date of their arrival in Taiwan. Those who have been in NCYU should provide the related documents of National Health Insurance. The aforementioned foreign insurance proof should be certified by the consulates or representative offices of Republic of China, or agencies authorized by Ministry of Foreign Affairs, Taiwan, R.O.C.

Applicants shall submit the following documents:

- a. Two application forms and two recent 2-inch photos (attached)
- b. A photocopy of an original diploma and transcript of the highest academic degree attained at a foreign school. (In addition to the copies in the original language, certified Chinese or English versions must be submitted.) All the certificates should be issued from the foreign school (sent to NCYU in sealed envelope), or certified by consulates or representative offices of Republic of China, or agencies authorized by Ministry of Foreign Affairs, Taiwan, R.O.C.
- c. Two letters of recommendation
- d. An official Physical Examination Medical Report (including a HIV virus blood serum immunity test report)
- e. Study plan written in Chinese or English
- f. A financial statement (sent to NCYU in sealed envelope) issued by financial institutes which shows sufficient financial support for the applicant's entire stay of study (A bank statement showing a balance of about US\$20,000)

The aforesaid "diploma" issued by foreign schools (excluding that issued by overseas Taiwan schools) shall be certified in accordance with "MOE Procedural Guidelines for Verification and Recognition of Foreign Educational Qualifications." If the University has doubt about the documents, the applicant must consent to seek verification from consulates or representative offices of Republic of China, or agencies authorized by Ministry of Foreign Affairs, Taiwan, R.O.C. For certified documents, the University has the right to check validity through the aforementioned offices.

International students who have completed their bachelor's degree (or above) in Taiwan and applies for a master's degree program are required to present the graduation certificate received from such a school when applying for admission to NCYU, and shall not be subject to the restrictions set forth above.

International students who have graduated from schools that enroll foreign residents in Taiwan, or from bilingual programs affiliated with local high schools must submit graduation certificates and transcripts for each academic semester to apply for admission to undergraduate studies under Article 6, and are exempt from the rules listed above.

Article 6 Applicants are required to submit formal applications to NCYU. Each applicant can only apply to one department or graduate school institute.

Article 7 The procedure for evaluation of admission is as follows:

- a. Applications submitted should first be collected by the Office of Academic Affairs and then evaluated by the department/institute that students are applying to. At this stage, applicants may be asked to take tests on specialized subjects or Chinese language proficiency.
- b. The related department or institute needs to submit the evaluation result and application documents to the Foreign Student Admission Evaluation Committee for a final-stage evaluation in two weeks.
- c. The Foreign Student Admission Evaluation Committee is composed of the Dean of Academic Affairs, deans of the colleges, the head of the related department/institute and the Dean of Student Affairs. The result will be forwarded to the President for approval and then an individual notice of admission will be sent to accepted applicants. NCYU shall prepare a roster of admitted and registered foreign students and submit it to the MOE for recordation by November 30.

Article 8 The University's admission quota for foreign students shall be limited to no more than ten percent of the number of R.O.C. citizens admitted that year. The University is responsible for reporting this information to the MOE for approval.

When the admission quota for R.O.C. citizens is not full, more international students can be accepted for admission.

The admission quota, as prescribed in last paragraph, does not include students with a non-degree status.

- Article 9 Upon the condition that it will not interfere with normal educational activities, NCYU may recruit and accept foreign students holding R.O.C. alien resident certificates as non-degree seeking students.
- Article 10 Foreign students are allowed to enroll in classes for the first semester of the academic year in which one third of the first semester has not yet passed. Foreign students are allowed to enroll in classes for the second semester of the academic year in which one third of the first semester has already passed.
- For foreign graduates who receive approval of internship in Taiwan from organizations recognized by the Taiwan government, their student status can be extended for one additional year after graduation.
- Applying for the initial household registration or registration of moving in Taiwan, or acquire naturalization or restoration of R.O.C. Nationality during their period of study would result in the loss of their status of foreign students and discontinuation of their student status at the University.
- Article 11 Foreign students should submit medical and injury insurance or National Health Insurance documents upon registration. The students without insurance shall pay the insurance fee for an insurance program that NCYU is obliged locate for registered foreign students.
- Article 12 The procedure for foreign students' postponement of study or returning to study is set according to academic regulations of NCYU.
- Article 13 After foreign students are admitted, they should follow regulations set forth by NCYU regarding their academic progress and conduct.
- Article 14 Fee regulations for foreign students who pursue degree study or take non-degree programs are as follows:
- a. The standard fees for foreign students shall conform to the announcement of the year, which shall not be lower than that of the private universities at the same level and shall be reported the MOE.
 - b. Foreign students are allowed to apply for a scholarship in accordance with the NCYU Scholarship Guidelines for Foreign Postgraduate Students.
 - c. For foreign students who apply for admission in accordance with Article 2, Item 2, shall conform to the relevant regulations.
- Foreign students who were accepted for admission before the MOE Regulations Regarding International Students Undertaking Studies in Taiwan, R.O.C. came to effect on February 1st, 2011 shall follow the original fee regulations.
- Article 15 Foreign students who have been expelled from a university or college in R.O.C. due to failure in conduct grades, academic grades, or being indicted guilty by the criminal law, are not eligible to re-apply for foreign student admission. Violation of this rule would result in immediate cancellation of the applicant's admission or the removal of the applicant's recognized status as a NCYU student.
- Article 16 The Office of Academic Affairs is in charge of foreign students' applications, academic evaluation and progress; the Office of Student Affairs is in charge of foreign students' guidance and networking. Related guidance activities will be held when NCYU sees fit every school year. NCYU may apply for financial aid from the MOE to sponsor those activities.
- Article 17 Foreign students shall follow the MOE Regulations Regarding International Students Undertaking Studies in Taiwan and related regulations issued by NCYU if encountering any issue not covered in the above regulations.
- Article 18 The regulations herein will take effect after the approval from the University Academic Affairs meeting and the MOE. Any revision of the regulations will follow the same procedure of approval. The regulations were passed by the University Academic Affairs meeting on February 17th, 2011 and came effect on February 1st, 2011.

Guidelines for International Student Scholarships of National Chiayi University

passed by the Administration Council on September 13, 2005
amended by the Administration Council on January 17, 2006
amended by the Administration Council on September 12, 2006
amended by the Administration Council on April 17, 2007
amended by the Administration Council on December 11, 2007
amended by the Administration Council on May 13, 2008
amended by the Administration Council on November 11, 2008
amended by the Administration Council on August 18, 2009
amended by the Administration Council on January 12, 2010
amended by the Administration Council on April 12, 2011
amended by the Administration Council on November 13, 2012
amended by the Administration Council on August 01, 2013

- Article1 National Chiayi University (hereafter NCYU or the University) encourages outstanding international postgraduate students enrolled at the University to promote internationalization. In accordance with the “Regulations Regarding International Students Undertaking Studies in Taiwan” Article 14, the University promulgates “Guidelines for International Student Scholarships of National Chiayi University” (hereafter the Guidelines).
- Article2 The financial sources of International Student Scholarships at National Chiayi University (hereafter the Scholarships) include subsidies from the Ministry of Education, donations, and the University funds.
- Article3 According to the application of Regulations Regarding International Students Undertaking Studies in Taiwan of MOE, the international postgraduate students can apply for the scholarships before the students have the qualifications for admission.
- Article4 Scholarships are divided into:
- tuition fee waiver
 - tuition and credit fee waiver
 - monthly scholarship: graduate students will receive NT\$6000. There are two scholarship streams: the first fall semester scholarship stream begins in August and carries through to the following July; the second spring semester scholarship stream begins in February and carries through to the following January. The scholarship will be given from the month of registration until the month of graduation.
- Article5 The new international postgraduate students may submit an application for Scholarships to the Office of International Affairs, while they are filling out the application form for admission. The awardees will be decided by the Scholarships Review Committee. Scholarships are provided according to academic performance (on a 4-point GPA scale), and proof of beginner level of Chinese proficiency is required. There are four categories of scholarships:
- Category 1 (GPA 2.80~2.99): a waiver of half of the tuition fees.
- Category 2 (GPA 3.00~3.19): a waiver of tuition fees.
- Category 3 (GPA 3.20~3.39): a waiver of tuition and credit fees.
- Category 4 (GPA above 3.40): a waiver of tuition, and credit fees, as well as a monthly scholarship.
- Article6 For continuing Scholarships for international graduate students, in and after the second year of study, the awardees must apply again, and submit the previous semester’s transcript to the Office of International

Affairs before July 20th (awardees enrolling in fall semester) or before February 5th (awardees enrolling in spring semester) and achieve the following qualifications:

- a. Completes the minimum amount of 4 credit in course taking in each semester of the previous school year with a grade of 80 Senior graduate students without course load can submit research papers for review.
- b. Acquires a conduct evaluation result of 80 or above and enclose the report and grades over 60% of a mandarin studies activity or higher mandarin abilities proof offered by the Language Center.
- c. Recommendation letter.

Students who suspend because of pregnancy could apply for the Scholarship with transcripts of academic years after reinstatement.

Article7 The international postgraduate students' scholarship will be transferred directly to a personal post office account by the 5th of every month. The Scholarship for August awarded to the second-year graduate students will be issued in September. For new awardees enrolling in fall and spring semesters, those students will receive both the September and October scholarships in October and February and March scholarships in March respectively.

Article8 The Scholarships granted to international students are dependent on the financial conditions of the University. In principle, the budget for scholarships will be evenly allocated among the colleges.

Article9 The Scholarships are offered only to students without any other kinds of scholarship, for example, special or general scholarships provided by Ministry of Education, doctoral assistantship provided by National Science Council or other full-time job salaries.

Article10 The awardees have to attend a mandarin class, offered by the Language Center, for at least two semesters, or submit proof of higher mandarin abilities, and, also, participate in any international students' activities.

Article11 The Scholarships are awarded on a year-by-year basis and annual applications are necessary. The maximum term for master's students 2 years, and for doctoral students 4 years. The scholarship will be terminated in the case of :

- a. Failure to uphold the standard of the minimum credit hours or GPA, which are specified in Article 6 above.
- b. Recipient's suspension, withdrawal, or graduation.
- c. Violating the Article 9 above.
- d. Receiving the request to move out of the dormitory.
- e. Disqualification for admission of Regulations Regarding International Students Undertaking Studies in Taiwan (under this circumstance the scholarship awarded must be returned in full amount)

Article12 In and after the second year of study, the Scholarship candidates are reviewed by the International Student Scholarship Review Committee which make decisions on the final recipients, with approval of the University's President.

Article13 Related issues not specified in the Guidelines are subject to the related regulations.

Article14 The Guidelines shall come into force as passed through the University Administration Council and with approval of the University's President.

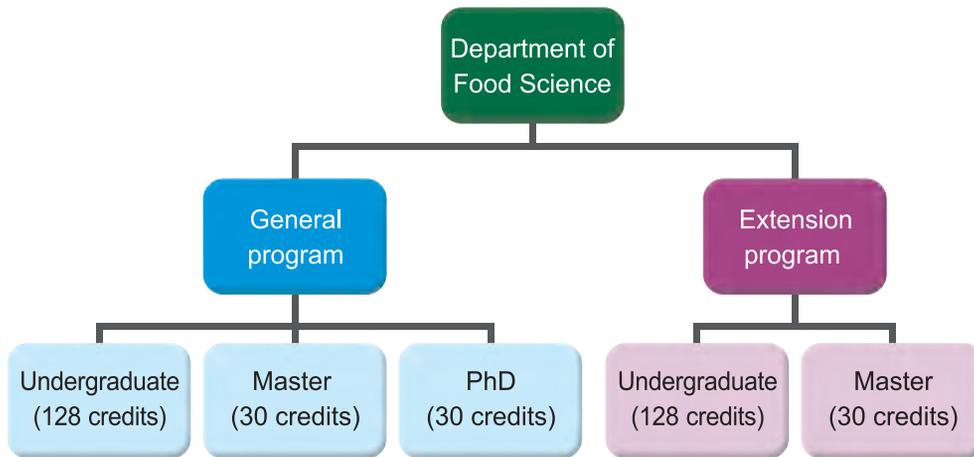
The Guidelines are enacted in Chinese, which shall prevail in case of any discrepancy between the English translation and the Chinese original.



Department of Food Science

website : <http://www.ncyu.edu.tw/fst>

Department of Food Science



Core Courses

Year1 : Introductory Food Science, Organic Chemistry, Microbiology

Year2 : Analytical Chemistry, Biochemistry, Food Microbiology, Food Engineering, Food Processing, Food Freezing, Food Dehydration, Food Law and Regulation

Year3 : Food Analysis, Food Chemistry, Nutrition, Food Unit Operation, Canning, Food Sterilization Technology.

Year4 : Food Plant Management, Food Edible Oils and Fats, Food Biotechnology, Fermentation, Brewing, Food Safety & Sanitation, Therapeutic Nutrition



Academic Staff

Photo	Name	Education	Specialty
	Chiou, Robin Y. Y.	Ph. D. in Food Science, University of Georgia, USA	Peanut Physiology, Biochemistry and Processing; Scale-up Extraction, purification, Identification and Biological Activity Characterization; Applied Microbiology; Food Technology and Biotechnology; Health Enhancement and Development of Functional Foods and Supplements; Characterization of Phytochemicals and Nutraceuticals.
	Lee, Yi-Rong	Ph. D. in Institute of Food Science and Technology, National Taiwan University	Experiment Design, Statistical Analysis, Product and Process Improvement and Optimization, Food Engineering, Unit Operation and Separation Techniques. Innovation Techniques and Strategy.
	Weng, Yih-Ming	Ph. D. in Food Science, Cornell University	Food Packaging, Food Microbiology, Food Safety and Sanitation, Food Toxicology
	Shyu, Shyi-Liang	Ph. D. in Institute of Food Science and Technology, National Taiwan University	Edible fats and oils chemistry, Food sanitation and safety, Food engineering, Food flavor chemistry.
	Wang, Be-Jen	Ph. D. in Food Nutrition, Cornell University	Food nutrition, Biochemistry, Food Chemistry, Nutrition Biochemistry
	Wu, She-Ching	Ph. D. in Department of Food Science and Biotechnology of National Chung Hsing University	Food chemistry, Food safety, Food industry.

Photo	Name	Education	Specialty
	Huang, Jan-Jeng	Ph. D. in Department of Food Science, National Taiwan Ocean University	Analytical Chemistry, Food Proteins, Food Colloid, Food Freezing
	Tim K. Tso	Ph. D. in The Ohio State University Nutrition (OSUN) Graduate Program, The Ohio State University, Columbus, Ohio, U.S.A.	Nutrition for Health, Fitness and Sport, Nutrition Biochemistry
	Cheng-Kuang Hsu	Ph. D. in Bioresource Engineering, Oregon State University	Food Processing, Food Engineering, Food Biotechnology
	Shu-mei Lin	Ph. D. in Nutritional Sciences University of Kentucky, USA	Molecular Mechanism of Diabetic Cardiomyopathy, Cellular Redox Modulating Function of Natural Product, Phytochemicals in Preventing Cardiac Injury
	Chih-Yu Lo	Ph.D. in Food Science Rutgers, The State University of New Jersey	Flavor Research, Nutraceutical, Instrumental Analysis and Analytical Chemistry.



Photo	Name	Education	Specialty
	Hung-Ju Liao	Ph. D. in Food Science Cornell University	Food Engineering, Food Rheology, Cereal Food Processing, Computer Simulation in Food Processing
	Huai-Wen Yang	Ph. D. in Department of Biological Systems Engineering, University of Wisconsin-Madison.	Microwave proofing Reducing the amount of trans-fatty acid usage in bakery Consumer behavior for healthy food Low-sodium meal plan design using flavor- enhanced materials
	Ying-Chen Lu	Ph. D. in Department of Life Sciences, NTHU	Microbiology
	Ferng, Sophia	Master in Department of Horticultural Science, National Taiwan University	Food processing, Bakery, Cereal processing, Food fermentation
	Jyh-Cheng Chen	Ph. D. in Department of Chemistry, National Chung Hsing University	Electrochemistry, Analytical chemistry



Student Activities

Industrial visits



Summer Internships



Student Social Events



Student Work Showcase





Department of Aquatic Biosciences

website : <http://www.ncyu.edu.tw/aquabio>

Department of Aquatic Biosciences

History

- 1989 **National Chiayi Institute of Agriculture Division of Aquaculture** was set up
Education system: **Five-year Junior Colleges**
Admission: Junior High School graduates
- 1999 **National Chiayi Institute of Technology Department of Aquaculture** was set up
Education system: **Two-year Senior Colleges**
Admission: **Five-year Junior Colleges** graduates Bachelor's degree
- 2000 **National Chiayi University** was formed by merging the National Chiayi Institute of Technology and National Chiayi Teachers College (NCTC). **Department of Aquatic Biosciences** was set up
Education system: **Undergraduate Program**
Admission: Senior High School graduates
- 2002 **Graduate Institute of Aquatic Biosciences** was set up
Admission: **Undergraduate**



Mission

The main role of Department of Aquatic Biosciences is **to support research and education on basic and applied biology of aquatic organisms**, with the ultimate goal of fostering the supply and conservation of aquatic resources.

For this purpose, it is fundamental to understand the **life-history of many organisms and their interactions with the surrounding environment**.

Based on this knowledge, methods to promote the reproduction and growth of animals and plants as well as for the wise use of natural living resources can be developed.

Sea-farming and intensive aquaculture are two methods to artificially raise resources and implement their programmed harvesting.

The study in the undergraduate course emphasizes the acquisition of basic knowledge and practical skills whereas students in the fourth year attend seminars on more specialized subjects and conduct research.

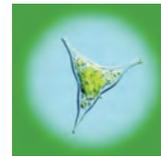


Conservation Research Center of Fish



Development Goals

Aquatic Biotechnology Cluster:
Enzyme Purification and Algae Natural Products Extraction
Microbiology and Immunology
Molecular biology and Molecular Evolution
Physiological of Crustaceans
Aquatic Breed and Aquaculture Science Group:
Drug Residue Analysis
Ornamental Fish and Freshwater Fish Propagation and culture
Aquatic Animal Nutrition and Feed Processing
Endangered Fish
Aquatic Environmental Science Group:
Heavy Metals Pollution, Aquatic Environment Adaptation
Conservation of Freshwater stream fishes
Fish Taxonomy and Ecology
Environmental Management of Aquaculture
Pharmaceutical Residues in Aquatic Environment



Faculty

the department of Aquatic Biosciences has

5 full professors:

Dr. **Chen-Huei Huang**
Dr. **Tzong-Shean Chin**
Dr. **Su-Mei Wu**
Dr. **Hong-Thih Lai**
Dr. **An-Chin Lee**

3 associate professors

Dr. **Che-Chun Chen**
Dr. **Shih-Rong Kuo**
Dr. **Su-Mei Chen**

2 assistant professor

Dr. **Chien-Hsien Kuo**
Dr. **David Dung**





Department of Biological Resources

website : <http://www.ncyu.edu.tw/biors>

Strength

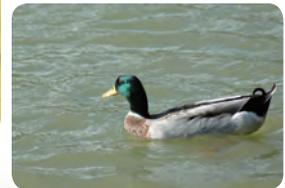
- We facilitate the utilization and management of biological resources through studying the ecology and biology of them.
- We offer the Program of Environmental Education to train teachers to meet the needs of the Act of Environmental Education.

Faculty

We have the most comprehensive academic members for biology and ecology in Taiwan.

-The expertise of our faculty covers:

- The two important ecosystems on Earth- Aquatic and terrestrial ecosystems
- From primitive to advanced fauna and flora



Facilities and equipments

- 4 general classrooms, 3 undergraduate laboratories, 2 small meeting rooms, 2 small classrooms, 1 audiovisual classroom, 1 instrument room, 1 laboratory for molecular biology, 1 specimen room, 1 green house for plants and 1 green house for aquatic animals
- 110 optical microscopes and 50 dissecting microscopes

Academic Staffs

Photo	Name	Education	Expertise
	Jong, Koa-Jen	Ph.D., National Taiwan University	Aquatic ecology Aquaculture
	Huang, Chii-Chuang	Ph.D., National Taiwan University	Plant pest and disease control Insect Ecology
	Hsu, Fu-Hsiung	Ph.D., National Taiwan University	Wildlife ecology Animal behavior
	Fang, Yin-Ping	Ph.D., National Taiwan University	Animal evolutionary ecology Animal molecular systematics
	Liu, Yea-Chen	Ph.D., National Sun Yat-sen University	Plant systematics Plant evolutionary ecology
	Tsai, Jo-Szu (Ross)	Ph.D., Texas Tech University, USA	Avian Ecology Landscape Ecology Wildlife Habitat Management
	Song, Guo-Zhang M.	Ph.D., University of Queensland, Australia	Vegetation ecology Application of photography on ecological research
	Chen, Hsuan-Wien	Ph.D, National Taiwan Normal University	Food web model Ecological network Ecology of parasite

Student Social Events

- Annual student activities: Making mascots for the university anniversary celebration, Week of Bioresources and Big collections.



Student Social Events

- Fruitful awards in inter-university competitions





Department of Biochemical Science and Technology

website : <http://www.ncyu.edu.tw/biotech>

Department of Biochemical Science and Technology



The research in the Department covered a wide range including natural products, plant pathology and microbiology, biomechanics, cancer biology, neuroscience, pharmacology and toxicology, and reproductive biotechnology. The long-term goal is to develop a platform for the analysis and functional study of bioactive compounds and metabolites. The department is keen on government funded research projects and university-industry cooperation.



Academic members in Department of Biochemical Science and Technology

The department of Biochemical Science and Technology has 11 academic members include 2 professors, 7 associate professors and 2 assistant professors. What unites us all is a keen interest in biochemistry and passion for teaching about the marvels of realm of science.

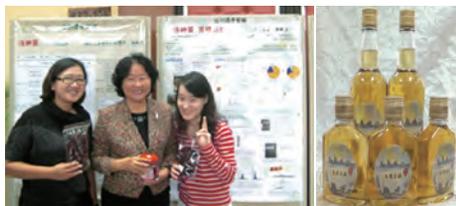
Department of Biochemical Science and Technology		
Name	Education	Academic Expertise
Wei-Mou Chou	Ph.D., The University of Tokyo	Development of health food formulas from plant bio-active components
Jyan-Gwo Su	Ph.D., University of California at San Diego	Effects of drugs and any materials in cellular activity, toxicity, and antioxidative activity
Ruey-Shyang Chen	Ph.D., Texas A&M University	Molecular identification and genetic analysis of microorganisms
Yi-Ling Yang	Ph.D., National Cheng-Kung University	Evaluation of natural compounds on neurodegenerative disease
Hui-Fen Liao	Ph.D., National Yang-Ming University	Analysis of the active components and bioactivities from natural products
Ping-lin Ong	Ph.D., University of Pittsburgh	Protein purification and enzymatic assay
Yun-Wei Lin	Ph.D., National Tsing Hua University	Cytotoxicity assay of natural compounds
Cheng-Nan Chen	Ph.D., National Defense Medical Center	New product development
Hsin-I Chang	Ph.D., The University of Sydney	Bioactivity analysis for uterine relaxing and intestinal immunity
Yu-Yuan P. Wo	Ph.D., Purdue University	Nucleic acid and protein techniques
Chia-Li Wei	Ph.D., National Yang-Ming University	Bioactivity analysis for uterine relaxing and intestinal immunity

University-Industry Cooperations

University-Industry Cooperations in the Department of Biochemical Science and Technology :
Exland Biotechnology Ltd
(臺萃生技股份有限公司)
Shun Tong Wine Ltd
(舜堂酒業股份有限公司)



The Invention & New Product Exposition



Professor Wei-Mou Chou used plant mutation method (γ -ray irradiation) to breed 2 new varieties of Roselle: Chiayi number1 and 2.

In University-Industry Cooperation projects, we used oolong tea in Ali mountain, Taiken No. 9 Premium Rice and corn with fermentation technique to develop “ Chiayi Univeristy Ali mountain oolong tea wine”.

Student Placement program



Student Placement program in our department can arrange internships for students in a variety of well-known industries for using and developing their skills which have learned at university and promoting student employment opportunities.



Mission

The Department's mission is to pursue excellence in biochemical education and to provide research environment for students to develop professional or research careers in the medical and biological sciences.

The relative activities are including:

- Biochem Winter Camp
- Creative 3-D Model competition of DNA structure
- Master student oral presentation competition



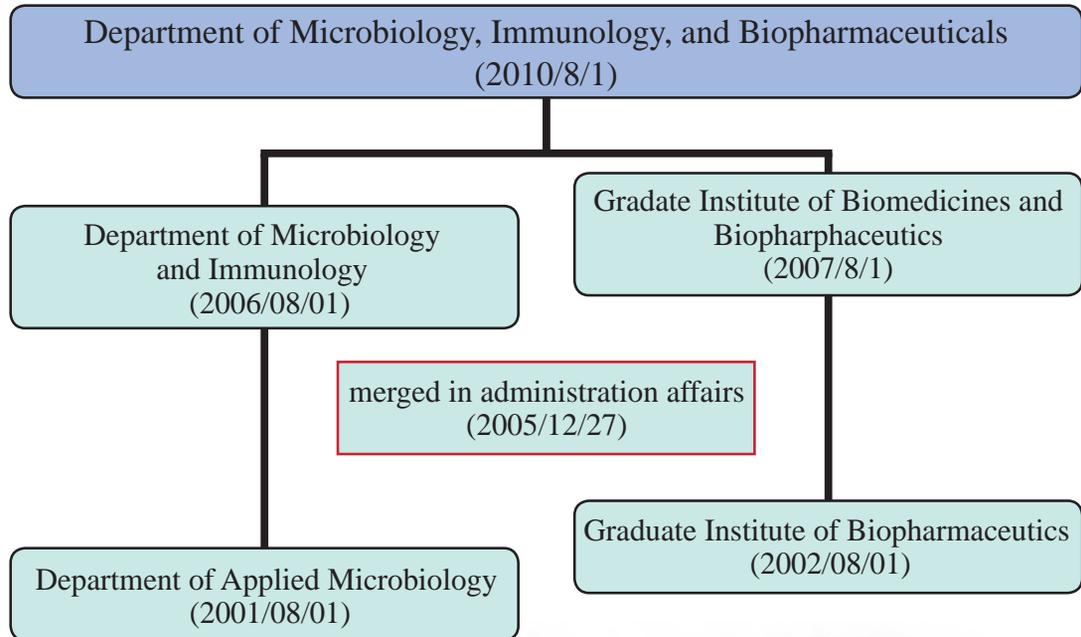


Department of Microbiology, Immunology, and Biopharmaceuticals

website : <http://www.ncyu.edu.tw/apmicro>

Department of Microbiology, Immunology,
and Biopharmaceuticals

History



Mission

- The education goal: to educate students to be a expertise in microbiology, immunology, and bio-pharmaceutics for research and Bio-tech industry.
- To educate our students not only to learn the basic knowledge of microbiology, immunology, and bio-pharmaceutics but also to apply this knowledge for human benefit and health.



Curriculum

- Beside the general core courses, we emphasize that our student shall complete 3 major area:
 - 1. Research and knowledge in microbial pathogenesis and applied microbiology
 - 2. Knowledge of basic immunology and disease as well as drug development
 - 3. Knowledge of natural product and drug design and functional analysis
- Beside to complete 128 graduate credits, we encourage our students to have laboratory experience before graduated.
 - 15 Laboratory course and 1 out-campus practice course
 - Specialized courses:research practice and seminar in sophomore and senior



Research Practice and Off-Campus Practice



The course of research practice enhances students' basic research capabilities.



Essay contest for seniors after completed the program.



Off-campus practice and industry visit improve student employability.



Laboratory practice in Saint Martin De Porres Hospital during summer vacation.



Academic staffs

Group	Photo	Name	Research Fields
Microbiology		Chishih Chu	Infectious disease, Antibiotic resistance mechanism and genes, Molecular Diagnostics, Molecular evolution, Genomics Biosensor and Biochips vaccine development
		ChiaWen Hsieh	Fermentation, Bioenergy, Bioactive compound development
		Tzung-Chieh Tsai	Cancer Biology, Protein-Protein Interaction, Gene Transcription Control, Molecular Virology, Characterization of gene function by RNA interference (RNAi)
		Shao-Hung Wang	Microbial Infections, Opportunistic Infections, Molecular Diagnostics

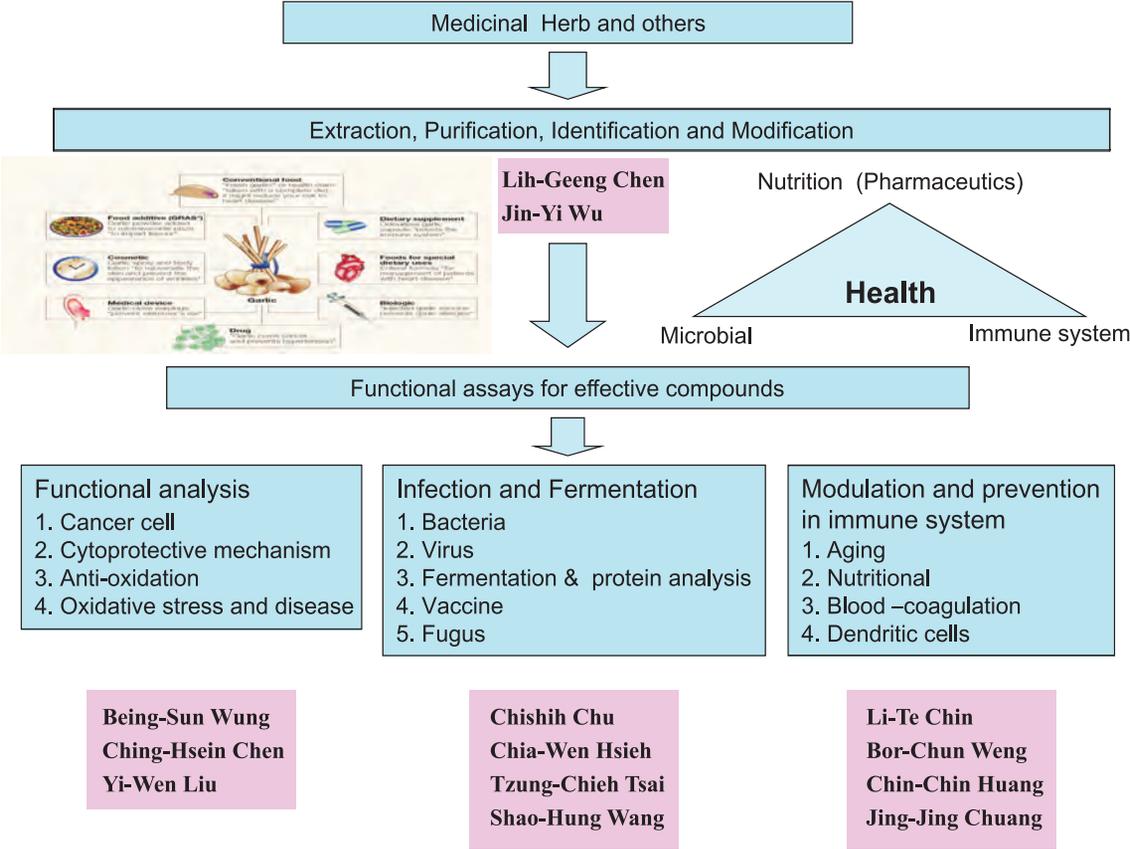
Group	Photo	Faculty	Research Fields
Immunology		CHIN, LI-TE	Immunology, Hematology, Cell Biology, Virology, Molecular Biology, Diagnostics, Biotech IPO
		Weng, Bor-Chun	Phytochemicals and, Phytonutrients Studies, Nutritional Immunology, Feed additives and Animal immunity, Aging and Immunohomeostasis
		Chin - Chin Huang	coagulation pathway, Microbiology and Immunology, probiotics in Feed additives
		Jing-Jing Chuang	Generation and Induction of Immunotogenic Dendritic cells, Molecular Mechanisms of Autoimmune Diseases, Immune Tolerance

Group	Photo	Faculty	Research Fields
Biomedicine		Being-Sun Wung	Anti-inflammatory and anti-oxidative effects, Protective mechanism in cardiovascular system, Protein thiol modification
		Yi-Wen Liu	anti-bladder cancer drugs, bladder disease using animal model, Bladder infection and inflammation, Ketamine-induced bladder disorder
		Lih-Geeng Chen	Free radical in biomedicine, phytochemical in anti-cancer, chemoprevention, apoptosis, Toxology
		Lih-Geeng Chen	natural product chemistry, pharmacognosy, quality control of Chinese herbal medicines, instrumental analysis
		Jin-Yi Wu	Organic chemistry, Drug modified, antioxidant and anti-cancer drugs

- Average 1.5 projects per years
- Average 1.6 journal publication per year



Research Groups



- Functional analysis**
1. Cancer cell
 2. Cytoprotective mechanism
 3. Anti-oxidation
 4. Oxidative stress and disease

- Infection and Fermentation**
1. Bacteria
 2. Virus
 3. Fermentation & protein analysis
 4. Vaccine
 5. Fugus

- Modulation and prevention in immune system**
1. Aging
 2. Nutritional
 3. Blood –coagulation
 4. Dendritic cells

**Being-Sun Wung
Ching-Hsein Chen
Yi-Wen Liu**

**Chishih Chu
Chia-Wen Hsieh
Tzung-Chieh Tsai
Shao-Hung Wang**

**Li-Te Chin
Bor-Chun Weng
Chin-Chin Huang
Jing-Jing Chuang**

Research Practice and Off-Campus Practice

- Total area available for research and education more than 2,734 mm.
- 6 faculty members in life sciences hall and 7 members in multi-purpose instruction building sixth floor.



Chinese Medicine
Research Laboratory



Microbiology
Laboratory



Applied Microbiology
Laboratory



Bioactive Natural
Products Laboratory



Flow Cytometry
and Real-time PCR



Immunology
Laboratory



Molecular Biology
Laboratory



Incubation System for
Fluorescence Microscope



Analytical and Technical Service Center

website : <http://www.ncyu.edu.tw/atsc>

Nuclear Magnetic Resonance

- Bruker AVIII 500 MHz NMR
- Upgrade to Ultrashield Plus Magnet with special vibration isolator
- Gradient Accessory
- BVT3200
- SampleXpress Lite
- BBFOplus with ATM (Automatic Tuning and Matching) and Z-Gradient



Analytical and Technical Service Center

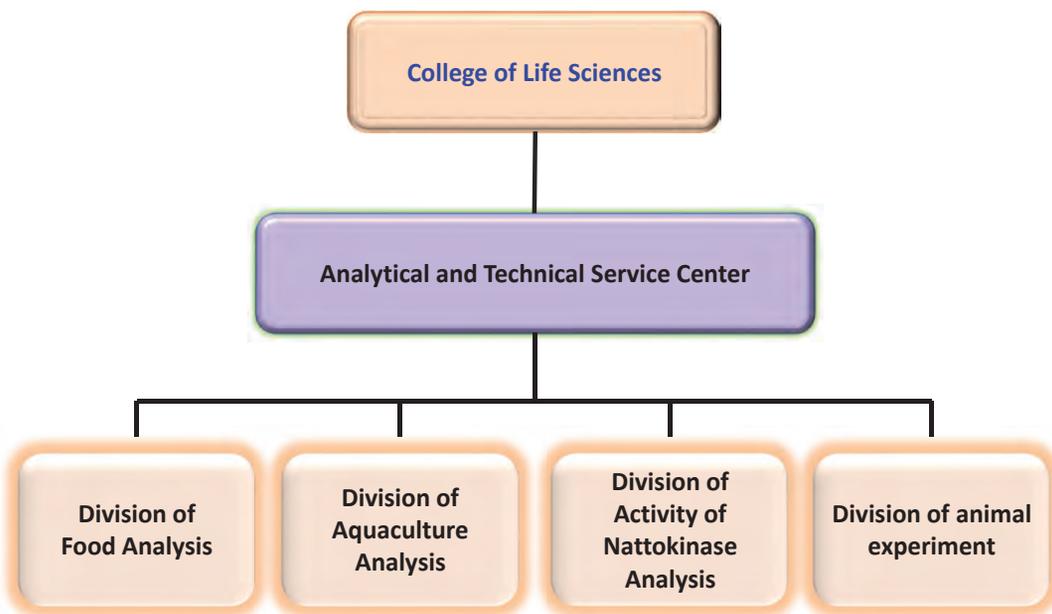


About Us

In June 14, 2004, The center affiliated with college of life sciences was created by following the resolution in 8th annual executive conference.

Objectives and targets

Due to the changing of society and rise of life quality, manufacturers and general public has put more effort on health awareness; Thus, We focus on the main mission - "health" to pursuit "healthy body", "healthy living" and "healthy environment". The Center is looking the cooperation with biotechnology research companies in Science Park to increase consumer protection in health and safety and equity.



Analytical Items

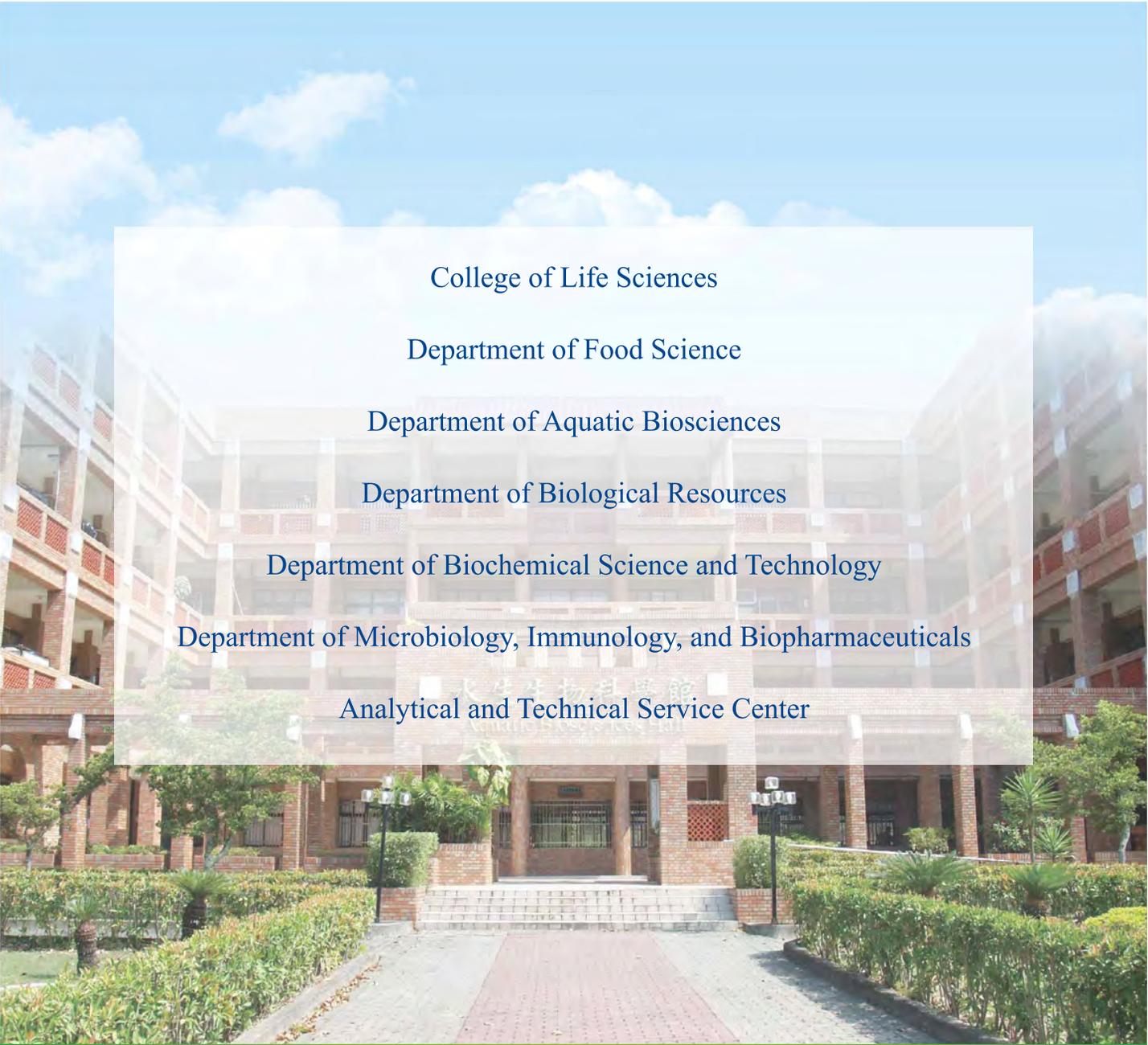
- Malachite green
- Chloramphenicol
- Nitrofurans
- Tetracyclines
- Antibiotics
- Metals : Copper (Cu) 、 Zine (Zn) 、 Lead (Pb) 、 Cadmium (Cd) 、 Arsenic (As) 、 Mercury (Hg)
- Resveratrol
- Total anthocyanidins



Analytical Items

- **Flavonoids**
- **Genistin**、**Genistein**、**Daidzin**、**Daidzein**、**Glycitin**、**Glycitein**
- **Vit.A**、**Vit.C**、**Vit.E**
- **SOD like activity**
- **Methanol**
- **Benzoic acid**、**Sorbic acid**、**Dehydroacetic acid**
- **Tartaric acid**、**Citric acid**、**Lactic acid**、**Acetic acid**
- **Aerobic plate count**
- **Coliform bacteria**
- *Escherichia coli*
- **Lactobacilli count**
- **Yeast count**
- *Staphylococcus aureus*
- *Salmonella*
- **Asp, Cys, Phe, Thr, Val, Lys, Ser, Met, His, Glu, Ile, Arg, Gly, Leu, Pro, Ala, Tyr**
- **trans fat**、**Saturated fatty acids**、**Fatty acid composition**
- **Total nitrogen**
- **Total sugar**、**Reducing sugar**、**Fructose**、**Sucrose**、**Lactose**
- **Moisture**、**Crude fat**、**Crude protein**
- **Nattokinase**
- **NMR**
- **GC-MS**
- **LC-MS**





College of Life Sciences

Department of Food Science

Department of Aquatic Biosciences

Department of Biological Resources

Department of Biochemical Science and Technology

Department of Microbiology, Immunology, and Biopharmaceuticals

Analytical and Technical Service Center

College of Life Sciences

Tel : +886-5-2717000

Fax : +886-5-2717095

Add : No.300 University Rd., Chiayi City 60004, Taiwan (R.O.C.)

Mail : lifescience@mail.ncyu.edu.tw