



College of Science Tunghai University

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Dean

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Introduction

Departments	Divisions	B. S. degree established	M. S. degree established	Ph.D. degree established
Applied Physics	1.Materials and Nanotechnology 2.Photonics	1955	1998	2010
Chemistry	1.Chemistry 2.Chemical biology	1955	1974	2002
Life Science	1. Biomedical Science 2. Ecology and Biodiversity	1955	1973	1989
Applied Mathematics	-----	1970	1991	-----



Faculty members

Departments	Professor	Associate Professor	Assistant Professor
Applied Physics	6	10	1
Chemistry	6	7	4
Life Science	9	4	4
Applied Mathematics	4	8	2

Student numbers

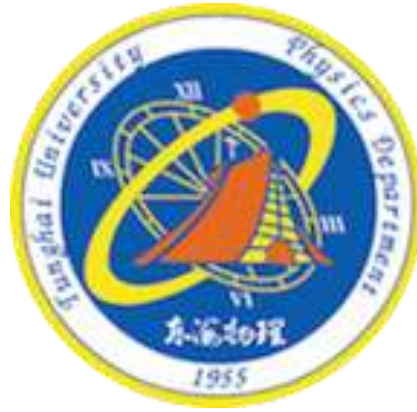
Departments	Undergraduate student	Masters student	Ph.D. student
Applied Physics	353	12	2
Chemistry	377	48	6
Life Science	363	23	15
Applied Mathematics	216	18	--

Research Grants & Projects (2015)

Departments	Major Research Areas	Grants
Applied Physics	<ol style="list-style-type: none">1. Nano-physics and Materials2. Laser Optics3. Theoretical Condensed-Matter Theory	9
Chemistry	<ol style="list-style-type: none">1. Nano and biomedical materials2. Drug discovery & Medicinal chemistry3. Biosensors & bioelectronics	13
Life Science	<ol style="list-style-type: none">1. Molecular medicine, cell biology, Developmental biology, and Immunology.2. Biodiversity, ecology, and evolution.	20
Applied Mathematics	<ol style="list-style-type: none">1. Mathematical physics2. Financial mathematics3. Information science	7

Research Funding & Projects (2015)

Departments	Researching Funding (US dollars)	Grants
Applied Physics	369,250	9
Chemistry	486,625	13
Life Science	668,343	20
Applied Mathematics	8,906	7



Department of Applied Physics

Introduction: Department of Applied Physics

- Established in **1955** as one of the founding departments of the Tunghai University.
- Renamed as Department of Applied Physics in 2013 consisting of both **material/nano-technology**, and **photoelectric divisions**.
- Offers undergraduate, **masters** and **Ph.D.** programs.
- A well balanced population of research fields
Experimental : Theoretical = 9 : 8
- Has exchange program with the school of materials science and engineering at **University of New South Wales, Australia**.

Faculty (1/3)

Name	Title	Degree/ Institution	Specialty
Yung-Chung Chen (chair)	Professor	Ph.D. National Tsing Hua Univ.	Condensed Matter (Theory) Computation Physics
Ming-Feng Yang	Professor	Ph.D. National Tsing Hua Univ.	Condensed Matter (Theory) Theoretical High Energy Physics
Hsiao-Hwa Wu	Professor	Ph.D. National Chiao Tung Univ.	Laser Optics
Chi-Ting Shih	Professor	Ph.D. National Tsing Hua Univ.	Computational Biophysics
Yu-Wen Lee	Professor	Ph.D. National Tsing Hua Univ.	Condensed Matter (Theory)
Forest Shih-Sen Chien	Professor	Ph.D. National Chiao Tung Univ.	Nanometer Physics Photoelectric Physics
Yi-Hsien Su	Assoc. Prof.	Ph.D. National Tsing Hua Univ.	Theoretical High Energy Physics

Faculty(2/3)

Name	Title	Degree/ Institution	Specialty
Chyun-Yi Ting	Assoc. Prof.	Ph.D. Univ. of Notre Dame ,USA	Biophysics
Hsiang-Lin Lou	Assoc. Prof.	Ph.D. National Tsing Hua Univ.	Theoretical High Energy Physics
An-Ban Yang	Assoc. Prof.	Ph.D. Univ. of Iowa State ,USA	Surface Science
Hsi-Lien Hsiao	Assoc. Prof.	Ph.D. National Tsing Hua Univ.	Semiconductor
Chang-Ren Wang	Assoc. Prof.	Ph.D. National Cheng Kung Univ.	Nanometer Physics Low Temp. Physics
Chuan-Tsung Chan	Assoc. Prof.	Ph.D. Univ. of Washington ,USA	Theoretical High Energy Physics
Kwai-Kong Ng	Assoc. Prof.	Ph.D. Univ. of Cincinnati ,USA	Condensed Matter (Theory)

Faculty(3/3)

Name	Title	Degree/ Institution	Specialty
Tsong-Shin Lim	Assoc. Prof.	Ph.D. National Cheng Kung Univ.	Single-molecule spectroscopy, Laser Dynamics, Biophysics
Huang-Wei Chang	Assoc. Prof.	Ph.D. National Chung Cheng Univ.	Solid-State Physics, Magnetic Physics
Chia-Yi Huang	Assist. Prof.	Ph.D. National Cheng Kung Univ.	Physics of Liquid Crystals Liquid Crystal-based Electro-Optic Devices, Physics of Metal materials
Wei Bin, Su	Assist. Prof. (adjunct faculty with Academia Sinica)	Ph. D. National Tsing Hua Univ.	Surface Science
Kang-Pei Wang (retired)	Visiting Prof.	Ph.D. Temple Univ.,USA	Condensed Matter (Theory)
David Newquist (retired)	Assoc. Prof.	Ph.D. Univ. of Arizona	Atmosphere

Research Focus

- Major research fields include:
 - **condensed matter theory/computational physics.**
 - **materials and nano-technology**
 - **photonics**
 - **theoretical physics**
- Continuous supports from M.O.S.T. research grants.
- Encourages undergraduates to participate in independent studies of research subjects.



Department of Chemistry

Introduction

- 1955 – Department Founded. Small-sized class teaching.
- 1972 – Undergraduate students gradually increased.
- 1973 – **Master's** Program established.
- 1989 – **Ph.D.** Program established.
- 2005 – **Chemical and Biological Divisions** established in undergraduate study.

Faculty

Name	Title	Degree/ Institution	Specialty
Feng-Di Lung	Professor, Chair	Ph.D. Univ. State of Arizona	Biochemistry and Bioanalytical Chemistry
Yu-Pin Wang	Professor	Ph.D. Univ. of Mass	Organometallics Organic mechanism
Cheng-Wen Whang	Professor	Ph.D. Queens Univ.	Analytical Chemistry
Chen-Tung Lin	Professor	Ph.D. Washington Univ.	Polyhydrocarbons Organic Synthesis
Hsiu-Yao Cheng	Professor	Ph.D. Univ. of Pittsburgh	Theoretical Chemistry
Ding-Yah Yang	Professor	Ph.D. Univ. of Minnesota	Organic Synthesis and Bioorganic Chemistry
Jso-Shen Lin	Assoc. Prof.	Ph.D. Virginia Polytechnic Institute and State Univ.	Polymer chemistry and Nuclear Magnetic Resonance
Chien-Chung Liou	Assoc. Prof.	Ph.D. Univ. of Texas Austin	Analytical Chemistry

Name	Title	Degree/ Institution	Specialty
Po-Ling Chang	Assoc. Prof.	Ph.D. National Taiwan Univ.	Analytical Chemistry
Yu-Shan Wu	Assoc. Prof.	Ph.D. Univ. of Cape Town	Medicinal Chemistry
Tsung-Wu Lin	Assoc. Prof.	Ph.D. Oxford University	Nanomaterials
Chen-I Yang	Assoc. Prof.	Ph.D. National Cheng Kung Univ.	Magnetic Material
Ying-Huang Lai	Asst. Prof.	Ph.D. National Tsing Hua Univ.	Surface Chemistry
Guang-Hua Liu	Asst. Prof.	Ph.D. U of N. Carolina-chapel Hill	Theoretical Chemistry
Yuan-Hao Hsu	Asst. Prof.	Ph.D. University of California, Riverside	Biochemistry
Yuan-Jay Chang	Asst. Prof.	Ph.D. National Taiwan Univ.	Organic & Optoelectronic Materials
Min-Chieh Chuang	Asst. Prof.	Ph.D. National Cheng Kung Univ.	Analytical Chemistry

Research Focus

- Major research fields include:
 - **Nano and biomedical materials**
 - **Drug discovery & Medicinal chemistry**
 - **Biosensors & bioelectronics**
- Continuous supports from M.O.S.T. research grants.
- Encourages undergraduates to participate in independent studies of research subjects.



Department of Life Science

Introduction

- 1955 – Department Founded. Small-sized class teaching.
- 1983 – **Master's** Program established.
- 2002 – **Ph.D.** Program established.
- 2005 – **Biomedical Science** and **Ecology and Biodiversity** established in undergraduate study.

Introduction

Name	Title	Degree/ Institution	Specialty
Yeong-Choy Kam	Professor	Ph.D University of Florida	Physiological Ecology, Herpetology, Conservation
Ming-Li Hsieh	Professor	Ph.D. University of California	Molecular Medicine, Gene Regulation, Molecular Biology
Hui-Chen Lin	Professor	Ph.D. Pennsylvania State Univ.	Animal Physiological Ecology

Name	Title	Degree/ Institution	Specialty
Guang-Yuh Hwang	Professor	Ph.D. Utah State Univ.	Virology, Molecular Biology, Immunology
Pi-Han Wang	Professor	Ph.D. University of Birmingham	Microbial Ecology, Mycology
Liang-Kong Lin	Professor	Ph.D. Kyushu Univ.	Wildlife Ecology, Conservation Biology, Mammalogy
I-Min Tso	Professor	Ph. D. Univ. of Michigan	Spider Behavioral Spider Diversity Investigation
Seng-Sheen Fan	Professor	Ph.D. Purdue Univ.	Neurobiology, Developmental Biology
Yi-Wen Liu	Professor	Ph.D. National Tsing-Hua Univ.	Molecular Endocrinology, Developmental Biology, Molecular Cell Biology

Name	Title	Degree/ Institution	Specialty
Yu-Chen, Tsai	Assoc. Prof.	Ph.D. National Yang-Ming Univ.	Developmental Biology
Yiching Lin	Assoc. Prof.	Ph.D. University of Illinois	Plant Ecology, Population and Community Ecology, Quantitative Ecology, Spatial Analysis
Jyh-Min Chiang	Assoc. Prof.	Ph.D. Ohio University	Ecosystem Ecology, Plant Ecophysiology, Plant Community Ecology
Wei-Ting Chao	Assoc. Prof.	Ph.D. Tunghai Univ.	Cell Biology, Cancer Biology
Shao-Lun Liu	Asst. Prof.	Ph.D. University of British Columbia	Molecular and Genome Evolution, Molecular Systematics, Molecular Ecology

Name	Title	Degree/ Institution	Specialty
Ren-Shiang Chen	Asst. Prof.	Ph.D. University of Illinois at Urbana- Champaign	Cellular Electrophysiology of Neuronal and Cardiac Tissues, Ion Channel Biophysics, Single- Channel Recordings
Yu-Wen Lin	Asst. Prof.	Ph.D. Oregon Health & Science University	Diabetes Mellitus, Cardiovascular Disease, Molecular Medicine, Electrophysiology
Kuo-Chang Wen	Asst. Prof.	James Cook Univ.	Coral Reef Fish Ecology, Marine Reserves, Environmental Impact Assessment, Marine Field Ecology and Conservation Biology

Research Focus

- Major research fields include:
 - **Molecular medicine, cell biology, Developmental biology, and Immunology**
 - **Biodiversity, ecology, and evolution**
- Continuous supports from M.O.S.T. research grants.
- Encourages undergraduates to participate in independent studies of research subjects.



Department of Applied Mathematics

Introduction

- 1970, Dept. of Math. was founded. It was dedicated to the teaching and research of all mathematics related fields in the University.
- 1991, offered Master's Program of Applied Math.
- 2012, changed name to Dept. of Applied Math.
- Emphasis including mathematical physics, financial mathematics, graphic theories, scientific computation, communication theories, operation theories, cryptology, etc.

Faculty's Research Interests (1/2)

- Dr. Huang, Huang-Nan, Control theory, Scientific Computation
- Dr. Shen, Yuan-Yuan, Number theory, Cryptography
- Dr. Tsaur, Gin-Yih, Mathematical physics, Quantum theory
- Dr. Yang, Tzi-Sheng, Differential equations, Dynamical system
- Dr. Chen, Wen-Haw, Differential geometry, Algebraic topology
- Dr. Hsieh, Wei-Hua, Computational biology, Biomathematics

Faculty's Research Interests (2/2)

- Dr. Ho, Chao-Pao, Dynamic systems, Mathematical biology, Mathematical Epidemiology
- Dr. Lee, Daniel T.Y., Scientific computation
- Dr. Lu, Shing-Liang, Partial differential equations
- Dr. Liu, Li, Stochastic process, Functional analysis, Procedure control and design, System assessment
- Dr. Wang, Tao-Ming, Discrete mathematics, Graph theory, Bioinformatics
- Dr. Chen, Chur-Jen, Operator analysis
- Dr. Pan, Ching-Yueh, associative rings and algebras

Research Focus

- Major research fields include:
 - **Mathematical physics**
 - **Financial mathematics**
 - **Information science**
- Continuous supports from M.O.S.T. research grants.
- Encourages undergraduates to participate in independent studies of research subjects.

Thank you for your attention



The Knowledge Blvd

