國立臺北科技大學

工程學院 簡介 2020

College of Engineering

National Taipei University of Technology Guidebook

College of
Engineering

100+
Faculty members

5 Undergraduate programs

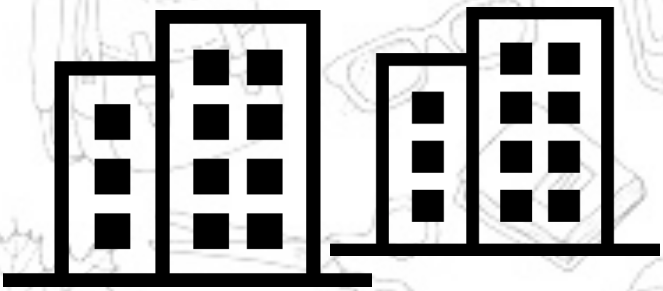
7 Graduate + **7** Ph.D degree

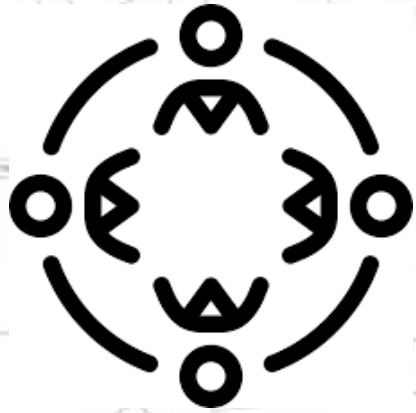
2,800+
Students

120+
Overseas and exchange students

$NT300,000,000/y+ Corporation

15 Centers

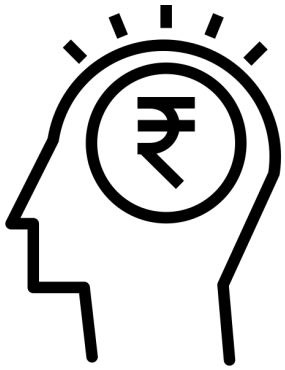




12+

Dual degree

400/y+ International publications



$NT100,000,000/y+

Technology transfer

工程學院 院長

Dean, College of Engineering

宋裕祺 教授

Professor Yu-Chi Sung

Email: sungyc@ntut.edu.tw

Tel:27712171-4521, 2655

學歷：

1. 國立臺灣大學土木工程學研究所博士
2. 國立清華大學動力機械研究所碩士
3. 國立台北工專土木工程科畢業

經歷

1. 國立台北科技大學工程學院 院長 (2018/08~迄今)
2. 國立台北科技大學土木工程系 特聘教授(2020~迄今)
3. 國立台北科技大學土木與防災研究所 系主任、所長 (2010~2013)
4. 國立台北科技大學土木與防災研究所 教授 (2009~迄今)
5. 國立台北科技大學土木與防災研究所 助理教授、副教授 (2003~2009)
6. 中國土木水利工程學會 理事長(2020~迄今)
7. 財團法人國家實驗研究院地震工程研究中心 組長 (2009~2019)
8. 行政院公共工程委員會 委員 (2009~2012、2018~迄今)
9. 中華民國結構工程學會 理事長 (2011~2013)
10. 中國工程師學會 榮譽理事 (2011~2013)
11. 中華民國地震工程學會 常務理事 (2013~迄今)
12. 中國土木水利工程學會 理事 (2016~2019)
13. 中國土木水利工程學會 土木水利雙月刊 主編 (2014~2018)
14. 行政院公共工程委員會 公共工程金質獎複審委員會 委員
15. 中國工程師學會 傑出工程師評獎委員會、工程論文評獎委員會 委員
16. 中華民國地震工程師學會 評獎委員會 主任委員
17. 中華民國結構工程師學會 評獎委員會 委員
18. 新北市政府都市韌性發展委員會 委員
19. 台北市政府都市發展局建築物耐震能力評估及補強諮詢小組 諮詢委員
20. 交通部運輸研究所 橋梁工程 諮詢委員
21. 行政院公共工程委員會「橋樑基礎結構與河川沖

工程學院 院長

Dean, College of Engineering

宋裕祺 教授

Professor Yu-Chi Sung

Dr. Yu-Chi Sung is a professor at the Department of Civil Engineering, National Taipei University of Technology (Taipei Tech). He received his Ph.D. in Civil Engineering from National Taiwan University. He is a licensed professional engineer with the experience of being the bridge engineer at Taiwan Highway Bureau and China Engineering Consultant Inc., respectively, for over 12 years before his teaching at Taipei Tech. He handled some important projects of bridge engineering and was awarded the Excellent Youth Engineer (1997) offered by the Chinese Institute of Engineers in Taiwan. Some of the bridges he designed won the awards of Best Design of Structure Engineering in 1998, 1999, 2002 and 2003, offered by the Chinese Society of Structural Engineering.

Dr. Sung has published for more than 250 journal and conference papers. His research focused on structural design, performance-based seismic design/evaluation of the structure and structural optimization, etc. He was awarded the Best Paper (2005, 2007, 2013, 2014, 2016, 2017 and 2018) offered by the Journal of Structural Engineering. He was also awarded the Excellent Paper (2005, 2007, 2014, 2015 and 2017) and the Excellent Engineering Professor (2018) offered by the Chinese Institute of Engineers.

Dr. Sung was responsible to the following important positions.

1. Chair, Department of Civil Engineering at Taipei Tech (2010 to 2013)
2. President, the Chinese Society of Structural Engineering (2011 to 2013)
3. Committeeman, Public Construction Commission, Executive Yuan (2009 to 2012 and 2018 to date)
4. Head, Bridge Division, National Center of Research on Earthquake Engineering (NCREE) (2009 to date)

Email: sungyc@ntut.edu.tw

Tel:27712171-4521, 2655

工程學院 副院長

Associate Dean, College of Engineering

林祐正 教授

Professor Yu-Cheng Lin

Email: yclin@ntut.edu.tw

Tel:27712171-2673

學歷：

1. 國立臺灣大學土木工程學研究所博士
2. 美國紐約科技大學土木工程研究所碩士
3. 國立臺北工專土木工程科

經歷：

1. 國立台北科技大學工程學院 副院長 (2018~迄今)
2. 技專校院招生策略委員會 副執行長 (2019~迄今
3. 國立臺北科技大學土木與防災研究所 教授 (2015~迄今)
4. 國立臺北科技大學土木與防災研究所 副教授 (2009~2015)
5. 國立臺北科技大學土木與防災研究所 助理教授 (2006~2009)
6. 清雲科技大學土木與防災研究所 助理教授 (2004~2006)

專業服務

1. 中國土木水利工程學會 資訊委員會委員 (2018~迄今)
2. 中國土木水利工程學會 工程管理委員會委員 (2017~2018)
4. 中國土木水利工程學會 會員委員會委員 (2018~迄今)
5. 中國土木水利工程學會 論文小組委員 (2018~迄今)
6. 中國土木水利工程學會 中國土木水利工程學刊常務主編 (2018~迄今)
7. 中華價值管理學會 評獎委員會委員 (2015~迄今)
8. 台灣物業管理學會 物業管理學報專門編審委員 (2015~迄今)
9. 中華民國營建管理協會 技術與研究發展委員會委員 (2015~迄今)
10. 中華民國營建管理協會 建築資訊模型(BIM)委員會 副主任委員 (2018~迄今)

工程學院 副院長

Associate Dean, College of Engineering

林祐正 教授

Professor Yu-Cheng Lin

Prof. Yu-Cheng Lin is a Professor in the Division of Construction Engineering and Management at the Department of Civil Engineering of the National Taipei University of Technology (Taipei Tech). He received the M.S. degree in the Construction Management Program of Civil Engineering from the Polytechnic University, New York, USA and received PhD degree from the National Taiwan University in Taiwan (2004). His major research interests are the application of project management and information management in construction projects. He has worked on a variety of research projects related to the development of integrated construction management systems for the construction industry and BIM-related systems implementation. He currently focuses on the research of construction management, construction knowledge management, building information modeling (BIM), web-based project management system, IT technology application, construction automation topics. He has completed numerous research and development projects in the area of BIM-based information systems, construction management information systems, and web-based construction management systems that has published several articles and papers on the role of academic support service in BIM and computer-based construction project management.

Email: yclin@ntut.edu.tw

Tel: (02) 27712171 ext. 2673

歷任工程學院院長

Previous Deans

工學院設立 (1999年8月~) Faculty of Engineering Established			
黃正義	Zheng-Yi Huang	民國88年8月～民國90年7月	August, 1999~July, 2001
章裕民	Yu-Min Chang	民國90年8月～民國91年3月	August, 2001~March, 2002
黃進益	Jin-Yi Huang	民國91年3月～民國94年3月	March, 2002~March, 2005
曾俊元	Tseung-Yuen Tseng	民國94年3月～民國96年10月	March, 2005~October, 2007
王錫福	Sea-Fue Wang	民國96年10月～民國99年10月	October, 2007~October,2010
張添晉	Tien-Chin Chang	民國99年10月～民國105年8月	October, 2010~August, 2016
楊重光	Tomas C.K. Yang	民國105年8月～民國107年8月	August, 2015~August, 2018
宋裕祺	Yu-Chi Sung	民國107年8月～迄今	August, 2018~until now

目錄 contents

沿革 History

西元1999年	工程學院成立	A.D. 1999	College of Engineering established.
	土木工程系、土木與防災研究所、材料與資源工程系(含碩士班)、化學工程系(含碩士班)、 紡織工程系、有幾高分子研究所。		Department of Civil Engineering, Department of Materials & Mineral Resources Engineering (master program), Department of Chemical Engineering (master program), Department of Textiles Engineering.
	有機高分子材料研究院土木防災工程研究院。		Graduate Institute of Civil & Disaster Prevention Engineering, Graduate Institute of Organic & Polymeric Materials.
西元2000年	環境規劃與管理研究所成立	A.D. 2000	Graduate Institute of Environmental Planning and Management started.
	水環境研究中心成立		Water Environment Research Center established.
西元2001年	工程科技研究所博士班成立	A.D. 2001	Graduate Institute of Engineering Technology-Doctor Program started.
西元2002年	紡織工程系更名為分子科學與工程系	A.D. 2002	Department of Textiles Engineering was renamed Department of Molecular Science & Engineering.
	循環型環境研究中心成立		Recycling-oriented Environment Research Center established.
西元2003年	生物科技研究所成立	A.D. 2003	Graduate Institute of Biotechnology started.
	奈米光電磁技術研發中心成立		Center of EMO materials & Nanotechnology established.
西元2005年	第一屆博士研究生畢業	A.D. 2005	First graduate of PhD program.
	結構及材料工程維護管理應用發展中心成立		Center for Research on Structural and Material Engineering established.
	化學材料分析技術研發中心成立		Chemical Material Analysis Research Center established.
西元2006年	資源工程研究所成立	A.D. 2006	Graduate Institute of Resources Engineering started.
	化學工程系更名為化學工程與生物科技系		Department of Chemical Engineering was renamed Department of Chemical Engineering & Biotechnology.

沿革 History

西元2007年	環境規劃與管理研究所更名為環境工程與管理研究所	A.D. 2007	Graduate Institute of Environmental Planning and Management was renamed Graduate Institute of Environmental Engineering and Management.
	有機高分子研究所博士班成立		PhD program of Department of Molecular Science & Engineering started.
西元2008年	生醫材料工程跨領域研發中心成立	A.D. 2008	Medical Engineering Research Team Multidisciplinary Technology Metro Taipei established
西元2009年	化學工程系博士班成立	A.D. 2009	PhD program of Department of **Chemical Engineering** started.
	材料及資源工程博士班成立		PhD program of Department of Materials & Mineral Resources Engineering started.
西元2010年	土木與防災研究所博士班成立	A.D. 2010	PhD program of Institute of Civil and Disaster Prevention Engineering started.
西元2011年	環境工程與管理研究所博士班成立	A.D. 2011	PhD program of Institute of Environmental Engineering and Management started.
西元2013年	智慧紡織科技研究中心成立	A.D. 2013	Research & Development Center for Smart Textile Technology established
西元2014年	防災工程科技中心成立	A.D. 2014	Disaster Prevention Center established
西元2015年	精密研發與分析中心成立	A.D. 2015	Precision Research and Analysis Center established
西元2016年	永續創新與評估中心成立	A.D. 2016	Sustainability, Innovation and Assessment Center established
西元2018年	工程科技博士班停止招生；與資源工程研究所整併為資源工程博士班。	A.D. 2018	Institute of Engineering Technology - Doctor Program ceased enrollment and merged with the Institute of Mineral Resource Engineering into **Institute of Mineral Resource Engineering - Doctor Program**
西元2020年	尖端材料研發中心成立 無機聚合技術研發中心成立	A.D. 2020	Advanced Materials Research Center established Geopolymer Technology Research Center established

管理營運體制

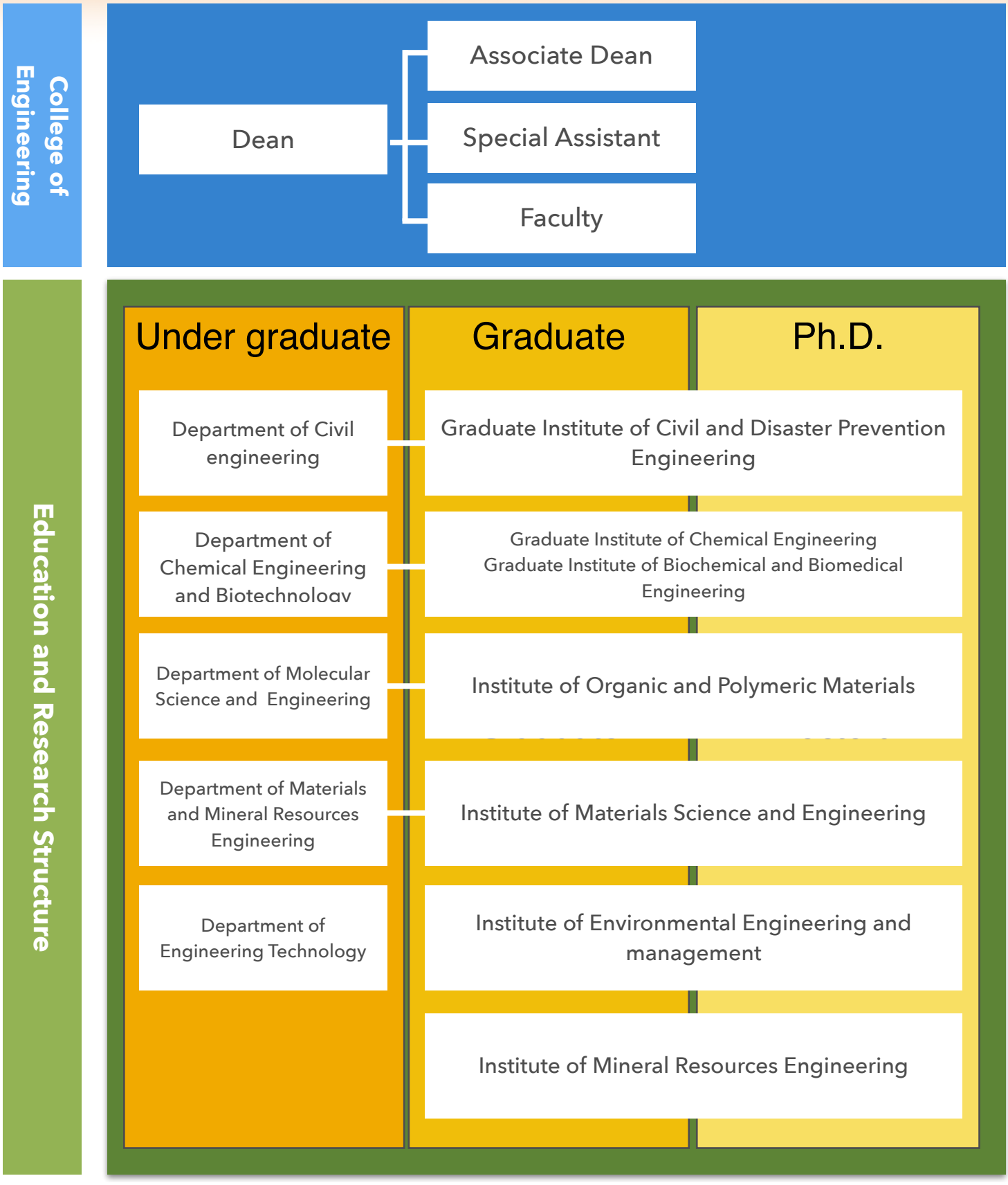
工學院

- 院長
  - 副院長
  - 特別助理
  - 職員

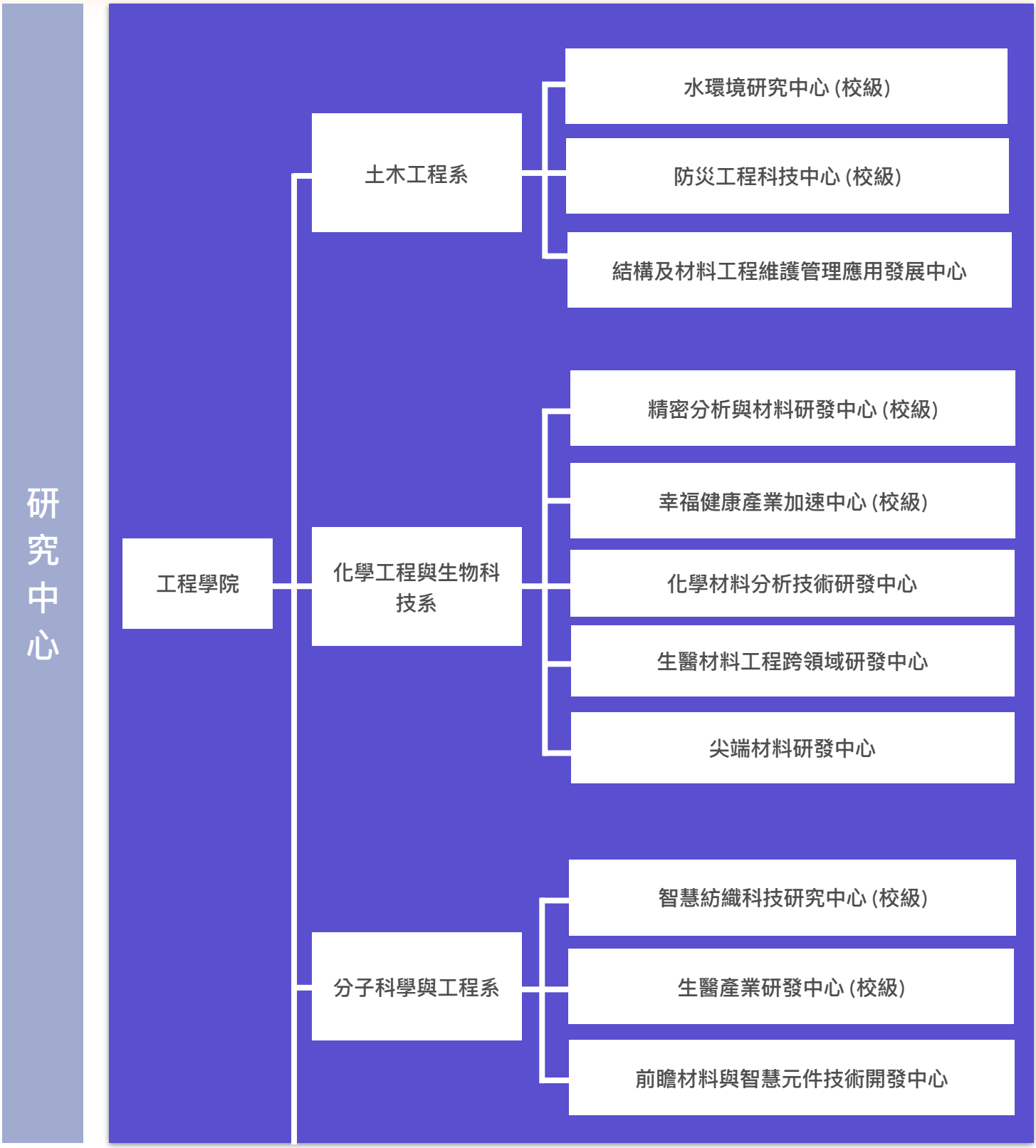
教育研究體制

大學部	研究所	博士班
土木工程系	土木與防災研究所	
化學工程與生物科技系	化學工程研究所/生化與生醫工程研究所	
分子科學與工程系	有機高分子研究所	
材料及資源工程系	材料科學與工程研究所	
工程科技學士班	環境工程與管理研究所	
	資源工程研究所	

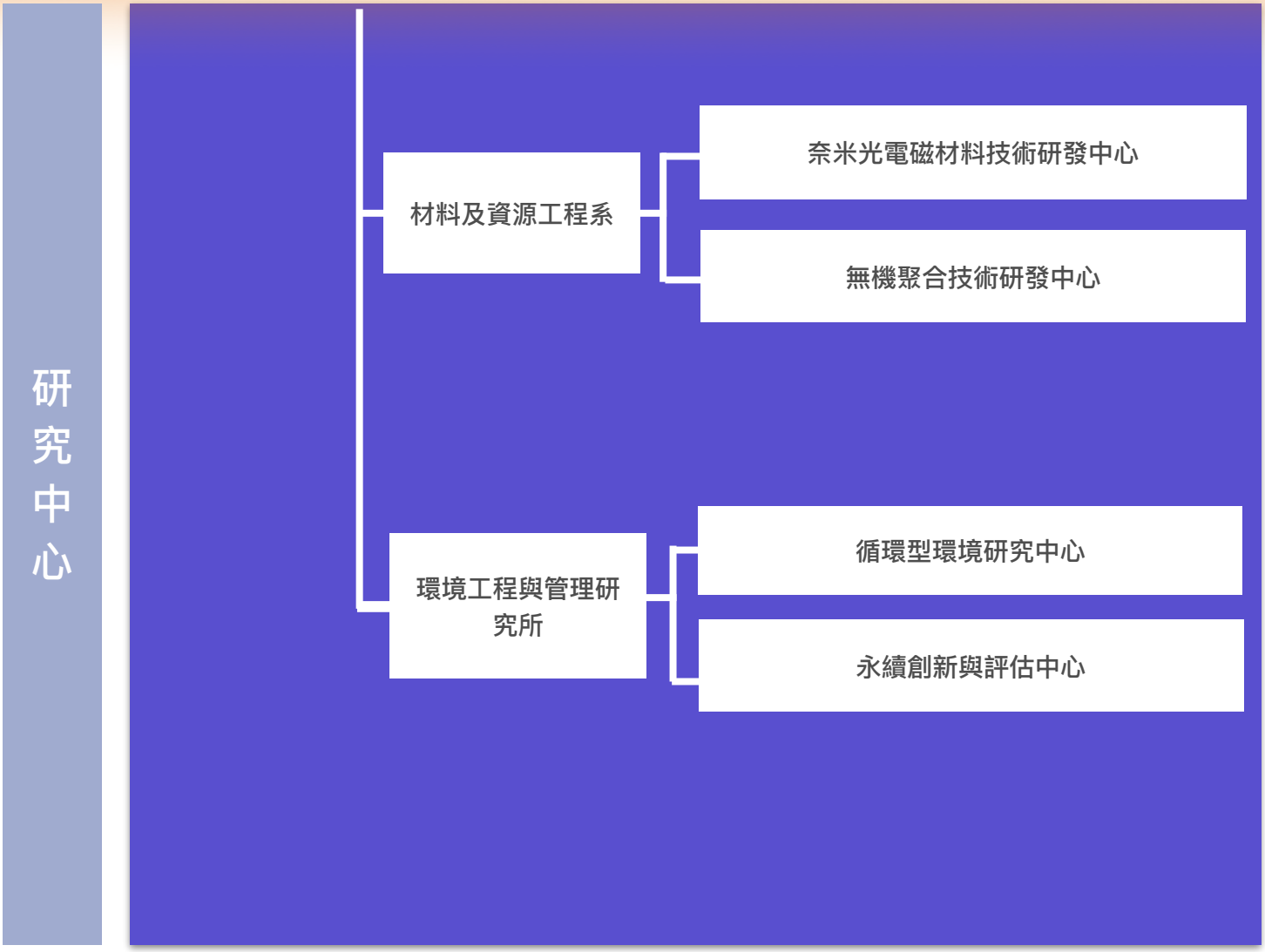
Management Structure



管理營運體制

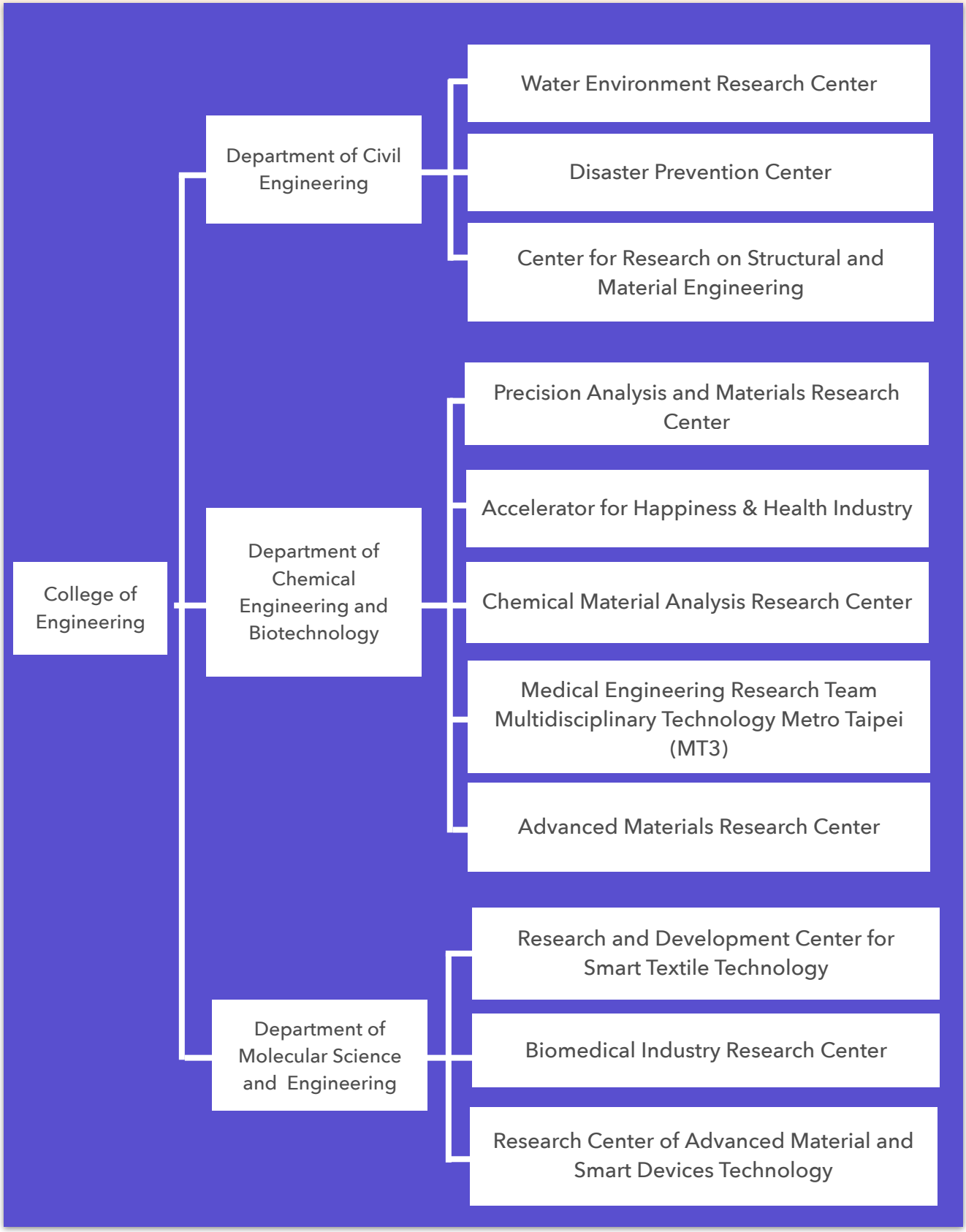

研究中心
工程學院
土木工程系
水環境研究中心 (校級)
防災工程科技中心 (校級)
結構及材料工程維護管理應用發展中心
化學工程與生物科技系
精密分析與材料研發中心 (校級)
幸福健康產業加速中心 (校級)
化學材料分析技術研發中心
生醫材料工程跨領域研發中心
尖端材料研發中心
分子科學與工程系
智慧紡織科技研究中心 (校級)
生醫產業研發中心 (校級)
前瞻材料與智慧元件技術開發中心

管理營運體制 (續)

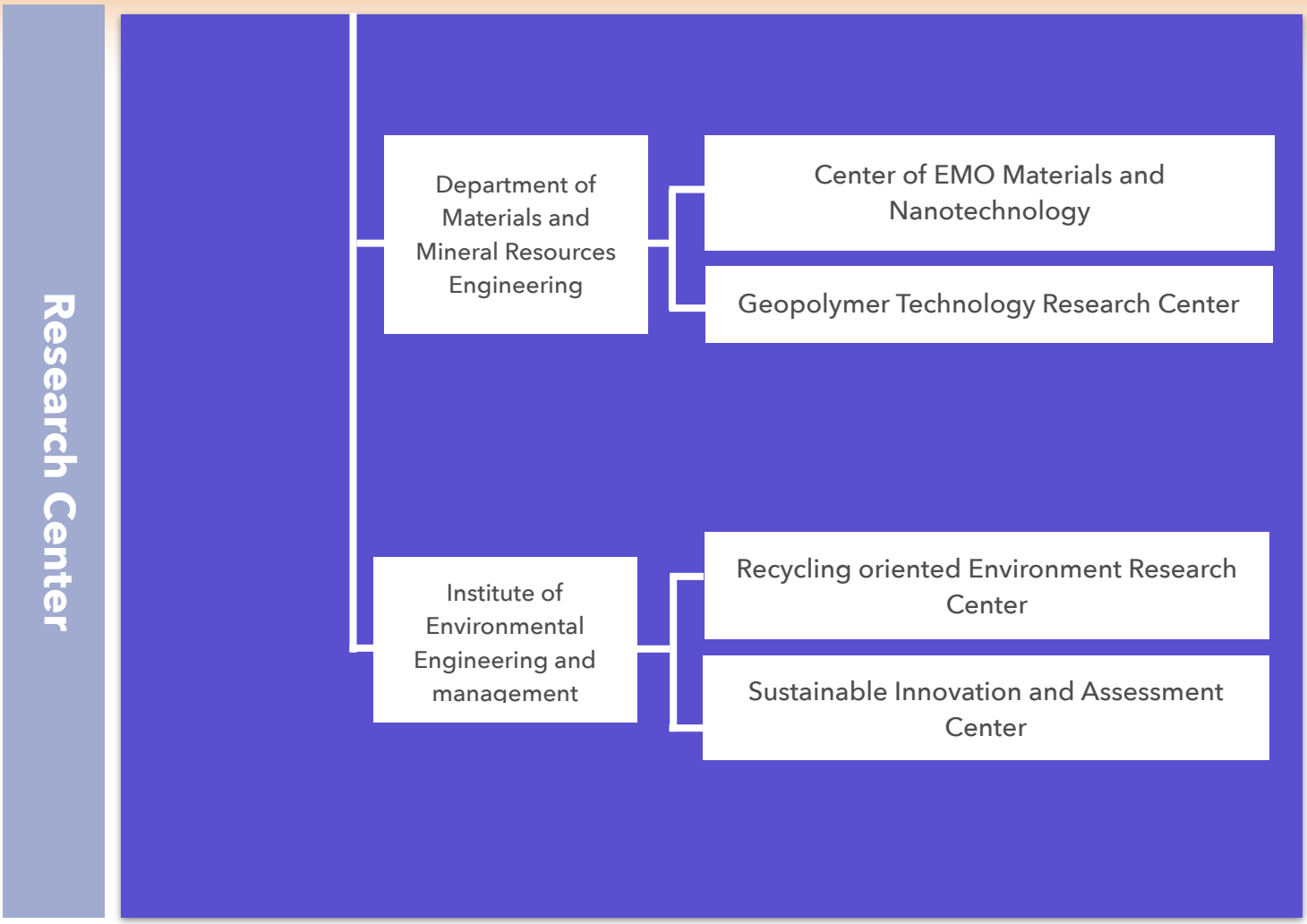

研究中心
材料及資源工程系
奈米光電磁材料技術研發中心
無機聚合技術研發中心
環境工程與管理研究所
循環型環境研究中心
永續創新與評估中心

Management Structure

Research Center



Management Structure (cont.)



教育研究體制

工程學院

國立臺北科技大學工程學院全力培育工程科技專業人才，設有土木工程系所、分子科學工程系、有機高分子研究所、化學工程與生物科技系所、生化與生醫工程碩士班、材料及資源工程系所、環境工程與管理研究所、資源工程管理研究所、材料科學工程研究所。

工程學院擁有許多實驗室及先進設備，例如測量實驗室、超臨界流體萃取實驗室、奈米光電磁材料技術研發中心、金相室、薄膜處理實驗室、資源處理實驗室、精密分析與材料研發中心、礦物與岩石標本陳列館等。

同時，學院也掌握了一流技術，包括鋼筋混凝土建築物耐震能力初步評估與詳細評估系統開發。奈米光電磁材料技術研發中心已取得「中華民國實驗室認證體系TAF」認可之「測試實驗室」資格，認證項目為熱傳導係數及介電常數。智慧紡織科技研究中心，將目前機能性紡織品的透氣、防皺、彈性等材料予以高度智慧化，並可在智慧衣製造時因軟體應強化縮短其製程。半導體光電池材料實驗室，專長紅外光材料及開發和應用、半導體構裝技術、生醫材料及生物為機電工程高效能計算/電腦程序模擬、頻譜及熱學分析技術。

豐富的資源、堅強的業界學界師資，工程學院期盼開闊學子的視野。

目標

1. 延續本校誠樸精勤之學風，有系統地培育土木防災、材料資源、有機高分子、化學工程、環境規劃 與管理及生物科技等具理論與實務專長人才。

2. 發展各系所特色，經由技術交流、產品開發、人才培訓，與工業界密切結合，培養具國際觀之工程人 才。

3. 配合國家永續發展政策，具前瞻性地發展各研究領域之特色，並順應世界潮流，培養國家急需具環境倫理、智德兼修之建設人才。

4. 均衡人文與專業教育，加強電腦應用及外語訓練，培養品德兼備且具工程倫理之人才。

5. 落實學術研究，強化技術研發，以提昇我國工程技術水準。

Education and Research Structure

College of Engineering

Features

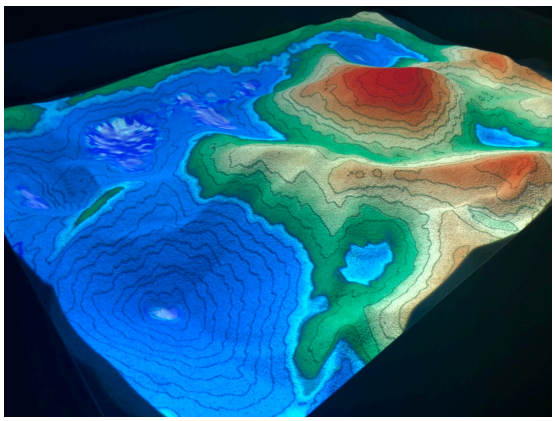
The college offers eight graduate institutes in the fields of Civil & Disaster Prevention Engineering, Materials Science & Engineering, Chemical Engineering, Organic & Polymeric Materials, Environmental Engineering & Management, Biotechnology, Engineering Technology and Mineral Resources Engineering. Undergraduate programs consist of the departments of Civil Engineering, Chemical Engineering & Biotechnology, Materials & Mineral Resources Engineering, and Molecular Science & Engineering. The total numbers of full-time faculty is 110. The eight institutes within the college have full-time and part-time master programs and doctoral program with a total of 978 students, 180 doctoral students were enrolled in academic year of 2010.The four departments in undergraduate programs offer 4-year and 2-year programs having a total of 2035 students. In addition, the four departments in undergraduate programs also have 2-year evening programs (with 412 students) as well as weekend programs (with 281 students).

To meet the demands of our teaching and research needs, there are complete instruments and facilities in each department within the college to provide students with adequate training and academic research needs. For the education aspects, this college cultivates practical, hardworking, vigorous, and worldview specialists continually to meet the demand for economic construction and industrial development of our country in the future. In the academic research, this college has built on a great foundation and continually elevates the level of research and to enhance the interaction of academic communities internationally. For the industrial service area, this college enhances cooperation between schools and industries continually and to fulfill engineering education and research achievements. In order to develop more advanced academic research, this college cooperates with other research institutes regularly, thrives to engage in technological developments for related significant infrastructures in our country, and heads to become first-class academic research institute.

教育研究體制

土木工程系

土木與防災研究所



教學目標

土木系教學目標為培育土木工程專業技術人才，使能從事土木工程有關之規劃、調查、測繪、設計、施工、檢驗及維護管理等專業工作，進而培養學生具有土木各專業領域之進修研究能力，以本系教學研究成果，促使國內土木工程環境向上提昇，以改善民生工程之技術與品質。

土防所為培育具備建設與防災知識，且專精實務的土木、生態與防災整合技術高級人才及師資，以務實性、寬廣性及應用性之理念為導向，土木領域為基石，生態與防災為研究重點及發展特色，建立一個國內在土木與防災研究及技術方面之重點研究學術單位，並培育具有宏觀視野之永續工程師。

教學特色

1. 強調理論與實務併重，與工程業界密切聯繫，增進教學效果。

2. 配合科技資訊之發展，進行土木工程電腦化及自動化之務實教學，以培育具有專精技能之土木技術人才。

3. 研究災害原理，並研發各種災害防救及災後復建技術。

4. 研究以安全為基礎，生態為導向，以永續為目標之近自然工法〔生態工法〕。

未來展望

本系未來之教學及研究．將繼續著重於結構、大地、營建、管理、生態與防災資訊、水資源等方向發展，期能培養專業技術人才，以改進國內土木工程環境，提昇生產力及工程品質，進而以教學研究成果，促進國內、外學術交流、提昇我國科技地位。

Education and Research Structure

Department of Civil Engineering

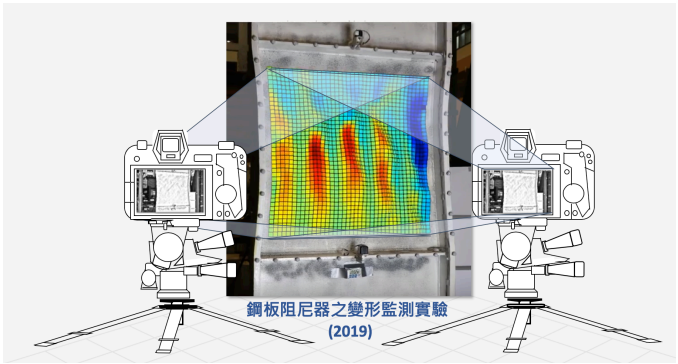
Graduate Institute of Civil and Disaster Prevention Engineering

The Department of Civil Engineering (CE) is devoted to offering professional knowledge and techniques in the planning, investigation, design, testing, construction, management, and maintenance of civil engineering related projects.

Both undergraduate and graduate programs of the CE department are IEET accredited. To earn an IEET accreditation, our programs must pass periodic evaluations by evaluators assigned by IEET. IEET assures that the students in the accredited institutions receive quality education. To conform to the requirements of IEET, our professors constantly improve their teaching materials, courses, etc., and the CE department uses student feedbacks to iteratively improve our course portfolio.

The research areas of laboratories are divided into traditional research areas and future research areas, including:

1. Structural Theory Analysis.
2. Earthquake Engineering and Earth-resistance Analysis.
3. Large-scale Structure Earthquake-resistance Experiment.
4. Engineering Material.
5. Structure Performance Design Regulation Research.
6. Structure Life Cycle Design Research.
7. Structure Safety Evaluation and Reinforcement.
8. Innovative Engineering Material Research.
9. Structure Health Diagnostics and Control.



教育研究體制

教職員

系所	職稱	姓名	研究領域
土木工程系/土木與防災研究所	**結構材料組**		
	教授兼系主任、所長	廖文義	結構力學、智能結構
	教授	李有豐	固體力學、新材料新工法
	教授	張順益	結構動力學與非線性動力分析、地震工程與耐震設計、大型結構實驗、先進隔震消能技術
	教授兼工程學院院長	宋裕祺	橋樑工程、建築工程、地震工程與耐震設計、結構最佳化分析與設計、結構非線性行為分析、人工智慧在結構工程之應用
	教授	尹世洵	結構力學、動力分析
	教授	張哲豪	空間資訊與水利模式整合、水利系統不確定性分析與風險分析、消防用水量評估分析、網際網路地圖伺服器設計與開發
	教授	楊元森	數值模擬、高速計算
	副教授	黃昭勳	耐震設計、RC結構
	副教授	黃中和	混凝土材料、智能材料、綠色材料、奈米技術、輕質骨材、營建安全
	副教授	羅元隆	耐風設計、隨機振動

Education and Research Structure

Faculty

Position	Name	Research Specialty	Position
Department of Civil Engineering/Graduate Institute of Civil and Disaster Prevention Engineering	**Structural / Materials Engineering Program**		
	Professor, Chairman	Wen-I Liao	Stress waves; Structural experiments; Seismic assessment
	Professor	Yeou-Fong Li	Inspection and retrofit of structures; Bridge management system; Soil mechanics; Plasticity mechanics
	Professor	Shuenn-Yih Chang	Structural experiment; Introduction to structural dynamics and introduction to earthquake engineering; Non-linear structural analysis
	Professor, Dean, College of Engineering	Yu-Chi Sung	Bridge engineering; Earthquake engineering; Structural optimization; Application of artificial intelligence in structural engineering
	Professor	Shih-Hsun Yin	Nonlinear dynamics and chaos; Structural health monitoring technologies; Application of smart materials on structural health monitoring and vibration control; Advanced high-sensitivity sensor technologies; Bridge engineering
	Professor	Che-Has Chang	Water conservancy information; Applicational measure information
	Professor	Yuan-Sen Yang	Parallel and high-performance computing on finite element structural analysis; Hybrid simulation on earthquake engineering; Numerical simulation of structural collapse; Image-based measurement for earthquake engineering experiments
	Associate Professor	Chao-Hsun Huang	Structural of reinforced concrete structure; Earthquake resistant design; Composite materials; Wood structure design
	Associate Professor	Chung-Ho Huang	Concrete technology; Intelligent materials; Green materials; Nanotechnology; Lightweight aggregate; Construction safety
	Associate Professor	Yuan-Lung Lo	Wind resistant design; Random vibration

教育研究體制

教職員

系所	職稱	姓名	研究領域
土木工程系/土木與防災研究所	**大地工程組**		
	教授	陳水龍	大地工程、透地雷達
	教授	陳偉堯	空間資訊、互動砂箱
	教授	魏敏樺	土壤力學、大地工程
	教授	張國楨	工程地質、模型模擬
	副教授	陳立憲	岩石力學、大地工程、非破壞檢測
	營建、交通、防災管理組		
	教授兼工程學院副院長	林祐正	營建管理、工程專案管理、資訊科技、建築資訊模型、營建自動化、防災管理
	教授	林利國	營建管理、計畫管制
	助理教授	林正平	奈米材料、奈米薄膜
	生態與防災組		
	教授	林鎮洋	生態工法、水質模擬、集水區管理、地下水/水資源工程、環境規劃與管理
	副教授	施邦築	結構工程、災害管理
	助理教授	陳映竹	循環經濟、潔淨水資源技術、綠色能源研發、溫室氣體模型
	助理教授	杜敏誠	海綿城市、低衝擊開發、遙測、地理資訊系統

Education and Research Structure

Faculty

Department of Civil Engineering/Graduate Institute of Civil and Disaster Prevention Engineering

Position	Name	Research Specialty	Position
Geotechnical Engineering Program			
Professor	Shong-loong Chen	Geotechnical engineering; Database system; Earthquake engineering
Professor	Walter Chen	Geotechnical engineering; Database system; Earthquake engineering
Professor	Meen-Wah Gui	Geotechnical engineering; Soil mechanics; Slope engineering; Foundation construction
Professor	Kuo-Jen Chang	Slope engineering; Distinct element method and applications; Engineering geology; Light detection and ranging; Morphotectonics and active structural analysis; Geographic information systems
Associate Professor	Li-Hsien Chen	Solid mechanics; Experimental destructive mechanics; Tunnel engineering; Nondestructive testing
Construction, Transportation, and Disaster Prevention Management Program			
Professor, Associate Dean, College of Engineering	Yu-Cheng Lin	Construction project management; Engineering information management; Web-based information management; Construction E-commerce and mobile E-commerce; Automation in construction; Knowledge engineering and management; System modeling and Petri nets application Computer-aided engineering & application; Supply chain management and enterprise resource planning; E-education and learning in construction
Professor	Lee-Kuo Lin	Construction management; Precaution plan and risks management; Construct material; Transport engineering
Assistant Professor	Cheng-Ping Lin	Building management; Engineering economics; Financial management; Compact management
Ecological and Disaster Prevention Engineering Program			
Professor	Jen-Yang Lin	Groundwater; Environmental engineering; Water resources; Policy for environmental engineering
Associate Professor	Ban-Jwu Shih	Structural mechanics; Earthquake engineering; Precaution system and information
Assistant Professor	Ying-Chu Chen	Circular economy; Clean water technology; Green energy development; Greenhouse gas modeling
Assistant Professor	Min-Cheng Tu	Sponge city; Low impact development; Remote Sensing; Geographic Information System

教育研究體制

教職員

系所	職稱	姓名	研究領域
土木工程系/土木與防災研究所	**水資源工程與水利防災組**		
	教授	陳彥樟	序率水文、序率水利
	副教授	陳世楷	水利規劃、地下水文
	助理教授	朱子偉	非點源污染、水生態系統

Education and Research Structure

教職員

Position	Name	Research Specialty	Position
Department of Civil Engineering/ Graduate Institute of Civil and Disaster Prevention Engineering	**Water Resources Engineering and Water Hazard Mitigation Program**		
	Professor	Yen-Chang Chen	Hydrology; Hydraulic power
	Associate Professor	Shih-Kai Chen	Soil and water conservation and erosion measurement; Soil-water interactions; Experiment and simulation for preferential flow; Well hydraulics and groundwater
	Assistant Professor	Tzyy-Woei Chu	Nonpoint source pollution control; Hydrologic and water quality modeling; Watershed protection/restoration; Ecosystem modeling; The incorporation of uncertainty analysis in hydrologic and water quality models; Fate and transport of chemicals in hydrologic systems

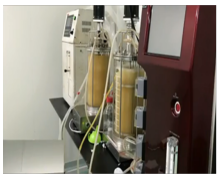
教育研究體制

化學工程與生物科技系

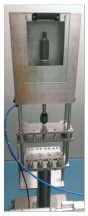
化學工程研究所/生化與生醫工程研究所

師資

本系現有專任教師30人，其中教授19人，副教授8人，助理教授3人，除具備傑出的學識素養與豐富實務經驗外，更擁有高度教學熱忱與研究精神。未來將積極規畫延聘具實務經驗之教師，以推動產學合作。








教學設備

本系現有化學館、化工館及生技館三幢大樓，共有系辦公室、會議室、多媒體電化教室，教師研究室，及普通化學實驗室、有機化學實驗室、分析化學實驗室、工業分析實驗室、化學技術實驗室　、化工技術實驗室、儀器分析實驗室、生化工程實驗室、物理化學實驗室、單元操作實驗室、工業儀器實驗室、程序控制實驗室、高分子物性實驗室、高分子化學實驗室、化工應用電腦研究室、貴重儀器研究室等教學實驗室。

教學

本系老師皆利用數位學習網站，進行輔助教學，提昇教師教學品質與成效。同時，每學期皆有部份課程以全程英文之授課方式進行，提昇學生具有國際化的競爭力。在大學部的課程方面，並配有研究生協助教學。同時在研究所的核心課程也逐步改以全程英文授課，以因應愈來愈多的國際留學生，同時也可培養學生具有國際化之能力。為完成本系才培育之目標，教學方面除授以基礎理論外，特別加強實習課程、專題研究、及校外現場參觀，培養實用技術。

研究方面

本系教師除努力提昇教學品質，增進教學效果外，並積極投入理論及實務之研究工作。在考量我國未來工業發展方向，及配合本系現有之師資、設備、及研究成果下，本系強調相關化工理論在生物技術、醫藥、高分子材料、污染防治、高科技材料之應用，且秉持潔淨生產原則，從事關鍵技術之開發，以協助提昇我國產業升級。

Education and Research Structure

Department of Chemical Engineering & Biotechnology

Graduate Institute of Chemical Engineering/Graduate Institute of Biochemical and Biomedical Engineering

Introduction

The graduate program of our institute aims to provide an excellent environment and facilities with an emphasis on the balance of theory and practice, as well as the independent research capability. The educational objective of the institute has been focused on specialized knowledge of chemical engineering and those related to technologies in biotechnology, nanotechnology, materials science and technology, semiconductor process, fine chemicals, separation technology, cleaner production, electrochemical engineering, polymer materials, process engineering, catalyst and reaction engineering, environmental engineering.

Research & Development

The faculty has been improving teaching and research qualities. Based on the trend in Taiwan industry as well as our faculty, facilities, and research results, our department focuses on the application of relevant chemical engineering theory in biotechnology, nanotechnology, special chemical products, pollution prevention, and high-tech. materials. In addition, it aims to develop key technologies for pollution-free production process.

Thesis and seminar courses are required in this institute. In addition to its process engineering related core courses, the institute offers elective courses and researches in the areas of transport phenomena, polymer materials, semiconductor materials, nanomaterials, biomaterials, optoelectronic materials, separation technology, biotechnology, biochemical process, fine chemicals, cleaner production, environmental protection and pollution prevention, electrochemistry, phase equilibria, thermophysical property, molecular interface technology, and process engineering.

Prospects

The curriculum will further be modified in line with the future prospects to synchronized with global Chemical Industry. In addition, to assist students in practicing their skills, the university enables students to work as interns in allied companies and industries, and positively arrange programs for students to visit and get known of enterprises. As for the experience heritage, many professional specialist faculties are invited to provide consultation and counseling with our entrepreneurial teams. Meanwhile, teachers are encouraged to go to relevant research institutes to engage in industrial research and development.

教育研究體制

教職員

系所	職稱	姓名	研究領域
化學工程與生物科技系/化學工程研究所/生化與生醫工程研究所	教授兼 系主任	鄭智成	程序系統工程、自動控制、系統模擬、燃料電池
	特聘教授 兼副校長	楊重光	穿戴式軟性材料開發及阻水氣膜技術、紅外光材料開發和應用、半導體製程及微電子構裝技術、生醫材料及生物微機電工程、奈米製造技術
	特聘教授	陳生明	儀器分析、分析技術、電化學、觸媒化學、 生物無機化學
	特聘教授	劉宣良	結構生物學、分子生物模擬、基因工程及蛋白質工程、環境生物學
	特聘教授	蕭勝輝	高分子合成、高性能高分子、功能性高分子
	特聘教授	方旭偉	生物醫學材料、組織工程、表面工程、生物磨潤學、奈米磨潤學、骨科醫學工程、創新產學平台
	特聘教授	黃聲東	分子設計、天然物全合成
	教授	陳文章	高分子科學與工程、質量傳輸技術、環境生物程序、膠體與界面科學
	教授	鄭國忠	高分子科學與工程、反應工程與模擬、光電及生醫功能性材料、奈米複合材料
	教授	段葉芳	有機化學、合成化學、物理有機
	教授	汪昆立	高分子合成、樹枝狀高分子、光電高分子材料
	教授	林忻怡	組織工程、動物細胞培養、生醫材料製造及檢測
	教授	陳奕宏	生質油、超重力技術、循環經濟
	教授	蘇文達	抗癌藥物篩選、中草藥物萃取、微生物發酵工程、幹細胞培養與應用
	教授	鍾仁傑	生醫材料、細胞生物、材料製成、奈米/超微粒材料、太陽能電池

Education and Research Structure

Faculty

	Position	Name	Research Specialty
Department of Chemical Engineering & Biotechnology/Graduate Institute of Chemical Engineering/ Graduate Institute of Biochemical and Biomedical Engineering	Professor, Chairman	Jyh-Cheng Jeng	Process systems engineering; Automatic control; System simulation; Fuel cell
	Distinguished Professor, Senior Vice President	Chung-Kuang Yang	Processing of semiconductors ; Inorganic biomaterials; Dye sensitized solar cell; Photocatalyst development for energy applications
	Distinguished Professor	Shen-Ming Chen	Instrumental analysis; Electrochemistry; Catalytic chemistry; Chemical sensors and biosensors
	Distinguished Professor	Hsuan-Liang Liu	Structural biology; Molecular simulations; Genetic & protein engineering
	Distinguished Professor	Sheng-Huei Hsiao	Polymer synthesis; High performance polymers; Functional polymers
	Distinguished Professor	Hsu-Wei Fang	Biomaterials; Tissue engineering; Tribology; Biotribology; Biomedical engineering; Surface engineering
	Distinguished Professor	Sheng-Tung Huang	Organic synthesis; Molecular design; Biosensor
	Professor	Wen-Jang Chen	Polymer sci & eng; Mass transport & delivery tech; Environmental bioprocess; Colloidal & surface Sci
	Professor	Kuo-Chung Cheng	Polymer science and engineering; Chemical reaction engineering; Functional materials; Nanocomposites
	Professor	Yeh-Fang Duann	Organic chemistry; Physical organic chemistry; Polymer synthesis; Light emitting material; Liquid crystal
	Professor	Kun-Li Wang	Polymer synthesis; Dendrimers; Optoelectronic polymer materials
	Professor	Hsin-Yi Lin	Tissue engineering; Mammalian cell culture and analysis; Biomaterials development and analysis
	Professor	Yi-Hung Chen	Bio-oil; Higee technology; Circular economy
	Professor	Wen-Ta Su	Biochemical engineering; Cell culture; Tissue engineering
	Professor	Ren-Jei Chung	Biomaterials; Cell biology; Materials processing; Nanobiotechnology

教育研究體制

教職員

系所	職稱	姓名	研究領域
化學工程與生物科技系/化學工程研究所/生化與生醫工程研究所	教授	翁文慧	分子生物學、細胞遺傳學、細胞培養、癌症及抗藥性基因研究
	教授	洪桂彬	復合材料製備、活性成份萃取技術及有效性評估、相平衡分離技術
	教授	蘇至善	流體相平衡、超臨界流體技術、藥物結晶技術
	教授	林律吟	奈米材料合成、電化學系統分析、能源轉換及儲存系統、人造光合作用、太陽能電池、光電材料、氫能科技
	副教授	蔡德華	薄膜分離技術、萃取及離子交換、相平衡、薄膜材料、藥物控制釋放、輸送現象
	副教授	蘇淵源	高分子材料合成、高分子材料加工、計算流體力學
	副教授	曾添文	孔洞材料、合成化學、無機奈米材料、觸媒化學
	副教授	侯劭毅	基因工程、細菌生理學、生化工程、分子生物學
	副教授	李文亞	高分子薄膜製程、場效應電晶體、有機穿戴式電子元件
	副教授	許哲奇	微生物抗藥性之研究、基因調控的機理、醫學用藥之最佳化
	副教授	崔宏瑋	層析滯流幾制、層析製程設計、模擬移動床、手性分離機制、膠體科學
	副教授	李瑞元	程序設計、程序整合與最適化、製程節能減廢、能源系統
	助理教授	黃志宏	細菌遺傳、分子生物學、基因工程、鏈黴菌端粒的結構功能
	助理教授	李旻璁	多尺度熱力學、分子模擬、自組裝系統、界面活性劑、聚電解質膜
	助理教授	魏暘	蛋白質結構與功能、AFM單分子作用力、仿生物黏著劑、蛋白質水凝膠、創傷水膠敷料

Education and Research Structure

Faculty

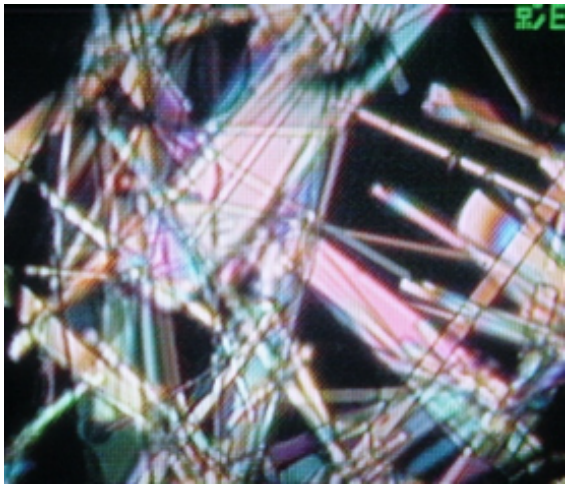
	Position	Name	Research Specialty
Department of Chemical Engineering & Biotechnology/Graduate Institute of Chemical Engineering/ Graduate Institute of Biochemical and Biomedical Engineering	Professor	Wen-Hui Weng	Molecular cytogenetic study; Cancer research; Drug resistance
	Professor	Gui-Bing Hong	Active component extraction; Composite material preparation; Thermophysical property measurement
	Professor	Chie-Shaan Su	Fluid phase equilibria; Supercritical fluid technology; Pharmaceutical crystallization
	Professor	Lu-Yin Lin	Nanomaterial synthesis; Electrochemical system analysis; Energy conversion and storage system; Artificial photosynthesis; Dye-sensitized solar cells
	Associate Professor	Teh-Hua Tsai	Membrane separation technology; Solvent extraction & ion exchange; Phase equilibria; Membrane material; Controlled release; Transport phenomena
	Associate Professor	Yuan-Yuan Su	Polymer synthesis; Polymer processing; Computational fluid mechanics
	Associate Professor	Tien-Wen Tseng	Catalyst chemistry; Metal-organic frameworks synthesis
	Associate Professor	Shao-Yi Hou	Gene engineering; Bacteria physiology; Biochemical engineering; Molecular biology
	Associate Professor	Wen-Ya Lee	Polymer solution processing; Field-effect transistor; Wearable electronics
	Associate Professor	Che-Chi Shu	Molecular biology; Stochastic model; System biology; Population balance equation
	Associate Professor	Hung-Wei Tsui	Chromatography; Chiral separation; Colloid science; Molecular recognition
	Associate Professor	Jui-Yuan Lee	Process systems engineering; Process synthesis and design; Process integration; Energy systems planning and optimization
	Assistant Professor	Chih-Hung Huang	Bacterial genetics; Molecular biology; Genetic engineering; The structures and functions of streptomyces telomeres
	Assistant Professor	Ming-Tsung Lee	Multi-scale thermodynamics; Molecular simulation; Amphiphilic self-assembly; Surfactant; Polyelectrolyte membranes
	Assistant Professor	Wei Yang	Protein structure & function on biomaterial surfaces; Single molecular force detection using AFM; Mussel protein inspired bio-glue design; Protein based hydrogel for wound healing

教育研究體制

分子科學與工程系

有機高分子研究所

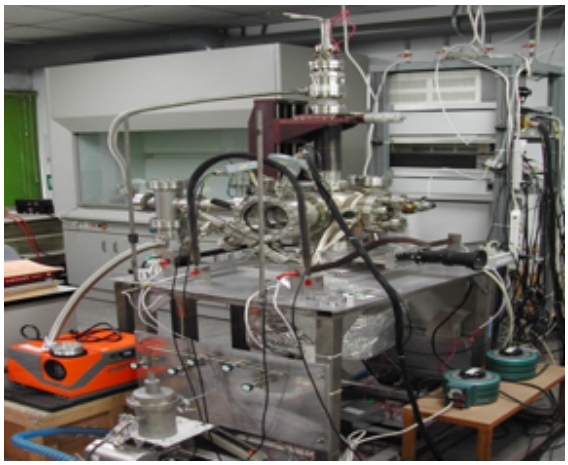
本所成立於民國八十八年，為一以相關高分子有機材料為研究之研究所，主要目標如下示：



配合國家發展

1. 配合政府十大新興高科技之久發展：發展十大新興高科技工業中之三項重點：電子有機材料應用、航太有機材料應用、生醫有機材料應用，此三項重點乃包羅於十大新興高科技產業規劃中。本所之設立，將可培育高科技產業研發及創業人才。

2. 配合政府亞太製造 中心的推動：如何立足傳統，進而發展出尖端應用之新產品，順利邁向高科技業之林，以使我國早日完成『亞太製造中心』的使命，是本所之標的。



3. 配合政府第二條教育國道──技職教育之推動：

因應社會需求

1. 科技研發對碩士需求日漸殷切：未國內產業界將以碩士級人員為研究主力，故本所之設立，將助益匪淺。

2. 提升國民生活品質：目前國內外民生產品均強調耐用、安全、舒適及符合環保等訴求。如何達成，即為本所發展重點之一。

3. 輔助醫療保健工業之發展：我國在目前民生物質充裕的情況下，對醫療保健的日益重視，將是全體國民次一追尋的目標，亦為本所之另一發展重點。

Education and Research Structure

Department of Molecular Science and Engineering

Institute of Organic and Polymeric Materials

Objectives

The department emphasizes both teaching and research in the areas of molecular science and enginnering. The goal is to prepare students for the advanced study of molecular science and molecular engineering to equip them with proficiency both in theory and in the application of it.

Organic materials, polymeric materials, and high added-value textile materials have been identified as our three primary direction in both teaching and research.

In order to better cooperate the development policy of our country, the following areas are also emphasized: biotechnology, nanotechnology and opto-electronic technology.

To establish integrated research activity with other research institutes and departments which offer related disciplines, such as China Textile Institute, Academia Sinica and Industrial Technology Research Institute.

The department has also established an advisory committee system to assist and counsel the teaching and research development of our department.

Features

The main feature of this department is to cultivate highly-trained professionals in molecular science and engineering, in particular, in the fields of organic, polymeric, and textile materials.Teaching focuses on theory as well as practice.It endeavors to refine traditional sub-disciplines(chemistry and chemical technology),develop interdisciplinary molecular materials, and design added-value textile products.The current research area in this department covers:opto-electronic materials, nanomaterials processing and related technology, and biotechnology.The department has also established an advisory committee system to assist and counsel the teaching and research development of the department.

教育研究體制

教職員

系所	職稱	姓名	研究領域
分子科學與工程系/有機高分子研究所	教授兼 系主任	張淑美	水性高分子合成、高分子化學、薄膜製備
	特聘教授	芮祥鵬	高分子加工、電磁流變、形狀記憶材料、融熔紡絲
	特聘教授	蘇昭瑾	半導體蝕刻、金屬催化固態表面分析技術、光譜技術、分子束、超高真空
	特聘教授	呂良賜	綠色化學、再生能源、氟化學、金屬有機、高分子化學、材料科學、循環經濟化學、結構學理論計算
	教授	蔡麗珠	蛋白質/蛋白質與受質結構與功能分析、生物分子檢測、分子模擬、感測器開發
	教授	蔡福裕	無機化學、有機金屬化學、均相及異相催化
	教授	程耀毅	高分子材料、高分子物理、低介電材料
	教授	郭霽慶	靜電紡絲奈米纖維技術、光電高分子與光電元件、鈣鈦礦與LED元件、智慧紡織品
	副教授	華國媛	基因體、蛋白質體、醣質科學、生物資訊管理、生物科技商務管理、醫療政策

Education and Research Structure

Faculty

Position	Name	Research Specialty	Position
Department of Molecular Science and Engineering/Institute of Organic and Polymeric Materials	Professor, Chairman,	Shu-Mei Chang	Synthesis of waterborne polymers; Optoelectronic materials; Polymer chemistry; Film fabrication
	Distinguished Professor	Syang-Peng Ruei	PLA crystallization kinetics & fiber aging; UV and thermal curing kinetics; Self crimp yarn; Self-heeling materials; Shape memory materials
	Distinguished Professor	Chao-Chin Su	Semiconductor etching; Metal-catalyzed surface analysis of solid material technology; Spectroscopy technique; Molecular beam; Ultra-high vacuum
	Distinguished Professor	Norman Liang-Szu Lu	Green chemistry; Renewable energy sources; Fluorochemistry; Metal organic; Polymer chemistry; Materials science; Circular chemistry; Structure computation
	Professor	Li-Chu Tsai	X-ray crystallographer; Molecular modeling; Protein chemistry; Biomolecular sensing; Sensor development
	Professor	Fu-Yu Tsai	Inorganic and organic-metallic chemistry; Homo and heterogeneous catalysis
	Professor	Yao-Yi Cheng	Polymer materials; Polymer physics; Low-k dielectric
	Professor	Chi-Ching Kuo	Electrospun nanofiber technology; Optoelectronic polymers and device; Perovskite and LED; Smart textile
	Associate Professor	Hsin-Ta Wang	Polymer synthesis and characterization; Instrumental analysis; Medical device; Optical-electrical device
	Associate Professor	Dao-Sing Deng	Textile handle; Clothing automation; Industrial textile research; Mechanical and functional property research of organic/inorganic polymeric composite; Functional characteristics research of organic/inorganic polymeric film; Development and manufacturing of functional polymeric composite; Automated functional testing system of polymeric composite
	Associate Professor	Kuo-Yuan Hwa	Genomics; Proteomics; Glycobiology; Bioinformatics; Biotechnology

教育研究體制

教職員

系所	職稱	姓名	研究領域
分子科學與工程系/有機高分子研究所	副教授	許益瑞	X光結晶學、X吸收與放射光譜、X光小角度散射、分子模擬與理論計算、無機化學
	副教授	余琬琴	生物質資源化、太陽能電池、金屬氧化物/金屬奈米材料的合成與應用
	副教授	陳秀慧	液晶材料合成與鑑定、人造金屬酶及有機金屬催化劑研究、導電高分子材料開發及應用
	助理教授	李宜桓	自組裝嵌段共聚高分子、導電高分子及光電元件應用、有機無機複合材料、自我修補材料、纖維材料
	助理教授	林群哲	新穎高效率螢光粉、鈣鈦礦量子點、自修復高分子材料、多功能纖維材料、白光發光二極體、生物螢光影像偵測

Education and Research Structure

Faculty

Position	Name	Research Specialty	Position
Department of Molecular Science and Engineering/ Institute of Organic and Polymeric Materials	Associate Professor	I-Jui Hsu	X-ray absorption spectroscopy; X-ray crystallography; theoretical calculation; Inorganic chemistry
	Associate Professor	Wan-Chin Yu	Biochemical engineering; Mammalian cell culture; Microbial fermentation; Plant cell and tissue culture; Recombinant protein production
	Associate Professor	Hsiu-Hui Chen	Synthesis and Application of Discotic Liquid Crystalline Materials; Efficient CO_2 Conversion as a Building Block for Chemical Structures; Design of Artificial Metalloenzyme/ Metalloproteins
	Assistant Professor	Yi-Huan Lee	Self-assembling block copolymer materials; Conducting polymers and their applications in optoelectronic devices; Organic/inorganic hybrid materials; Electron microscopy and X-ray scattering techniques for soft matter applications ; Self-healing materials; Textile materials
	Assistant Professor	Chun-Che Lin	Novel highly efficient phosphors; Perovskite quantum dots; Self-healing polymers; Multifunctional fabrics; White light-emitting diodes; Fluorescent nano materials for bio imaging

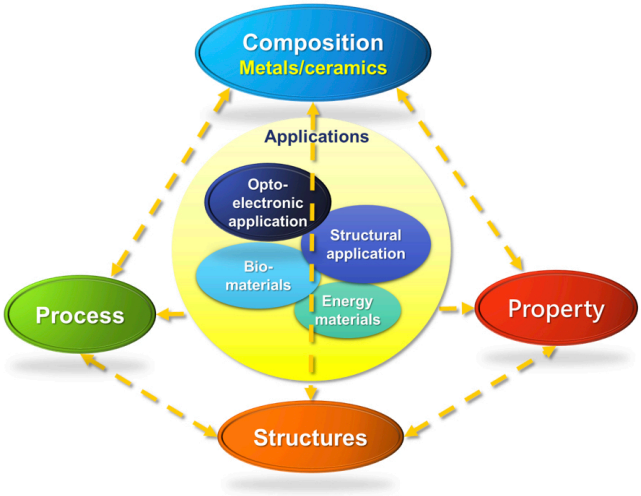
教育研究體制

材料及資源工程系

材料科學與工程研究所

本系於民國38年草創自台灣省立台北工業專科學校礦冶工程科，於77年改名為材料及資源工程科、83年隨本校改制為台北技術學院改名為材料及資源工程系，並於87年設置材料及資源工程研究所招收碩士生一班、95年改名為材料科學與工程研究所並另成立資源工程研究所，98年起成立材料科學與工程研究所博士班。

本系亦是全國唯一將材料科學與資源工程整合的學術單位，配合先進材料科技與現代資源永續發展，提供材料生命週期所需之專業知識與人文素養，由資源之開發、處理、應用、再生，以至於材料製程、組織、性質、性能與應用等專業實務科技，使學生得以進入科技或學術領域發展。



材料組所之發展重點在於培育材料科學與工程之專業技術人才，使能擔負材料之製造、加工、分析、品質管制、設計、開發、及研發等任務。

本系材料組主要教學及研究方向在金屬、陶瓷及其複合材料之成分、微觀組織、製程及性質間之相互關係，材料之性能與應用，以及材料之防蝕與保固研究，研究之材料依功能性以電子、奈米、生醫、能源、及民生材料為主。

材料所招收日間部碩士班、博士班、在職碩士班。

資源組所培育各種資源的開發、處理、應用、回收及再生等領域的專業人才，特別著重工業廢棄物(資源)之再生及處理、礦物 材料及陶瓷原料之合成及應用、地質工程技術等領域之教學。本系資源組主要教學及研究方向在資源開發及地質工程、資源應用及材料合成、以及資源處理及材料製程等三大領域。

資源所招收日間部碩士班與博士班。

Education and Research Structure

Department of Materials and Mineral Resources Engineering

Institute of Materials Science and Engineering

This department was founded in 1949 as Mining and Metallurgical Engineering Department of Provincial Taipei Institute of Technology (TIT). In 1981, the TIT was renamed National Taipei Institute of Technology (NTIT). The department has its current name as Department of Materials and Mineral Resources Engineering (MMRE) since 1988. The school was then renamed to her current name, National Taipei University of Technology, in 1997.

In 1998, the department commences her M.Sc. programs admitting graduate students. In 2006, the graduate institute was renamed to Institute of Materials Science and Engineering and a new Institute of Mineral Resources Engineering was founded. The Institute of Materials Science and Engineering starts admitting PhD students in 2009.

The department is the only academic program that integrates materials science with resources engineering in Taiwan. The department concentrates on combining the modern materials technology and sustainable resources to fill our students with the knowledge and techniques within the life cycles of materials. The development, applications, and processing of resources and the compositions, processing, structures, properties of materials are designed in our curricula to direct our students developing practical techniques and academic research careers.

The Materials Science and Engineering Program emphasizes on cultivating the professionals that are able to integrate the processing, characterizing, designing, research, and development of materials with the curricula designated for materials science and engineering.

The main research fields of the Institute of Materials Science and Engineering concentrate on the composition, microstructure, processing, and property designs of metals, ceramics, and their composites. The main applications of these materials include opto-electronics, nanomaterials, biomaterials, energy, and conventional structural materials. Bachelor, Master of Science, Doctoral, and on-job Master of Science degrees are offered.

The Mineral Resources Engineering Program cultivates professionals in the fields of mineral resources development, processing, applications, and recycling. The curricula emphasize on the recycling of industrial waste, the synthesis and applications of minerals and ceramic raw materials, and geological technologies. The Institute of Mineral Resources Engineering covers three major research areas in the development of resources and geological engineering, resources application and synthesis of materials, and the processing of resources and materials. Bachelor, Master of Science, and PhD degrees are offered.

教育研究體制

教職員

系所	職稱	姓名	研究領域
材料及資源工程系/材料科學與工程研究所	**材料組**		
	教授兼系主任、材料所所長	陳貞光	金屬與陶瓷材料製程開發、薄膜材料開發、金屬積層製造、相變態與介面結構分析、鋼鐵產品與製程研發
	終身特聘教授暨校長	王錫福	材料光電磁性質、能源材料、薄膜材料、材料製程
	特聘教授	楊永欽	生醫材料、奈米粉體、熱熔射噴塗技術、能源材料
	教授	徐永富	材料結構分析、電子顯微鏡、金屬與陶瓷製程、形狀記憶合金
	教授	陳適範	光電薄膜技術、材料電腦模擬解析學、複合材料
	教授	吳玉娟	陶瓷材料微觀結構分析、材料分析、晶體缺陷分析、陶瓷燒結製程
	教授	張世賢	金屬材料、表面工程、熱處理
	教授	邱德威	電子陶瓷、陶瓷薄膜、薄膜製程、有機金屬合成、超分子化學
	教授	吳明偉	粉末冶金、燒結理論、金屬材料、材料分析、材料機械性質及破壞行為、熱力學模擬計算
	副教授	梁誠	機械冶金、粉末冶金、燒結輕合金、材料表面處理製程
	副教授	王錫九	高溫超導體、固態電子材料、半導體元件、有機發光二極體

Education and Research Structure

Faculty

Position	Name	Research Specialty	Position
Department of Materials and Mineral Resources Engineering/ Institute of Materials Science and Engineering	**Materials Science and Engineering Program**		
	Professor, Chairman	Jhewn-Kuang Chen	Metals and composite processing; Structure and properties of metals; Additive manufacturing of metals; Development of ferrous and non-ferrous metals
	Distinguished Professor, President	Sea-Fue Wang	Electrical, magnetic, and optical properties of materials; Energy materials; Thin materials; Materials processing
	Distinguished Professor	Yung-Chin Yang	Biomedical materials; Nano powders; Thermal spray technology; Energy materials
	Professor	Yung-Fu Hsu	Structure analysis of materials; Metals and ceramics processing; Energy materials; Shape memory alloys
	Professor	Shih-Fan Chen	Opto-electronic thin film technology; Materials simulation and modeling; Composite materials
	Professor	Yu-Chuan Wu	Characterization and microstructures of ceramic materials; Defects of crystals, Sintering process of ceramics
	Professor	Shih-Hsien Chang	Metal surface treatment; Heat treatment; Powder metallurgy and composites
	Professor	Te-Wei Chiu	Electronic ceramics; Ceramic thin films; Thin film processing; Synthesis of organic metals; Supermolecular chemistry
	Professor	Ming-Wei Wu	Powder metallurgy; Sintering theory; Material analysis; Mechanical property and fracture behavior; Thermodynamic simulation
	Associate Professor	Cheng Liang	Mechanical metallurgy; Powder metallurgy; Physical metallurgy
	Associate Professor	Shea-Jue Wang	High temperature superconductors; Solid-state electronic material semiconductor device and processing; Organic conducting polymers and applications

教育研究體制

教職員

系所	職稱	姓名	研究領域
材料及資源工程系/材料科學與工程研究所	**材料組**		
	副教授	陳柏均	生物相容性電刺激電極、金屬/金屬氧化物能源材料、電化學鍍膜與表面處理技術、功能性合金奈米材料
	助理教授	徐曉萱	電子材料與元件技術、熱電材料與模組製程、半導體製程、薄膜製程與分析、材料熱動力學模擬
	助理教授	李紹先	新世代能源材料開發、光電元件、高品質石墨烯薄膜及其他新穎二維原子層材料之開發、新穎二維材料在能源、光電及生醫領域的應用
	講師	張啟凡	應用化學、金屬組織學、工程數學、工程經濟

Education and Research Structure

Faculty

Position	Name	Research Specialty	Position
Department of Materials and Mineral Resources Engineering/ Institute of Materials Science and Engineering	Associate Professor	Po-Chun Chen	Bio-compatible stimulating electrodes; Metals and metal oxide energy materials; Electro-plating and surface processing technology; Functional alloy nano materials
	Assistant Professor	Hsiao-Hsuan Hsu	Electronic materials and devices; Thermoelectric materials and modules; Semiconductor processing; Thin film processing and analyses; Simulation of thermodynamics and kinetics of materials
	Assistant Professor	Shao-Sian Li	Development of next generation energy materials; optoelectronics; Development and growth of high quality graphene and other 2-dimensional materials; Application of 2-dimensional materials in energy, Optoelectronics and biomedical devices
	Lecturer	Chi-Fan Chang	Applied chemistry; Microstructures of metals; Engineering mathematics; Engineering economy

教育研究體制

教職員

系所	職稱	姓名	研究領域
材料及資源工程系/資源組	**資源組**		
	教授兼資源所所長	張裕煦	無機化學、無機材料合成、奈米材料合成、表面化學改質、碳化矽及氮化矽複合材料、高純度電子級碳化矽合成、軟性電路板金屬化/線路化製程研發
	特聘教授	鄭大偉	礦物處理工程、資源再生利用、採礦工程
	教授	丁原智	礦山設計與機械、炸藥與爆破
	教授	陳志恆	化學工程、膠體及界面科學、資源再生技術、環境工程
	教授	余炳盛	結晶學、寶石學、經濟地質學、地球化學、礦物應用
	教授	羅偉	構造地質學、工程地質學、環境地質學、地質災害調查與分析
	副教授	王玉瑞	晶體合成、粉體製程、精密陶瓷製程
	副教授	柯明賢	環境工程、資源再生處理、廢棄物處理、資源環境性驗證、環境監測
	副教授	蔡子萱	電化學、腐蝕工程、半導體製程、光電元件製程、能源科技
	助理教授	殳國俊	單晶成長、新材料研發、磁性
	助理教授	林家正	奈米晶體、孔洞材料、電催化、再生能源
	助理教授	邱家吉	岩石力學、大地工程、數值分析、離散元素法

Education and Research Structure

Faculty

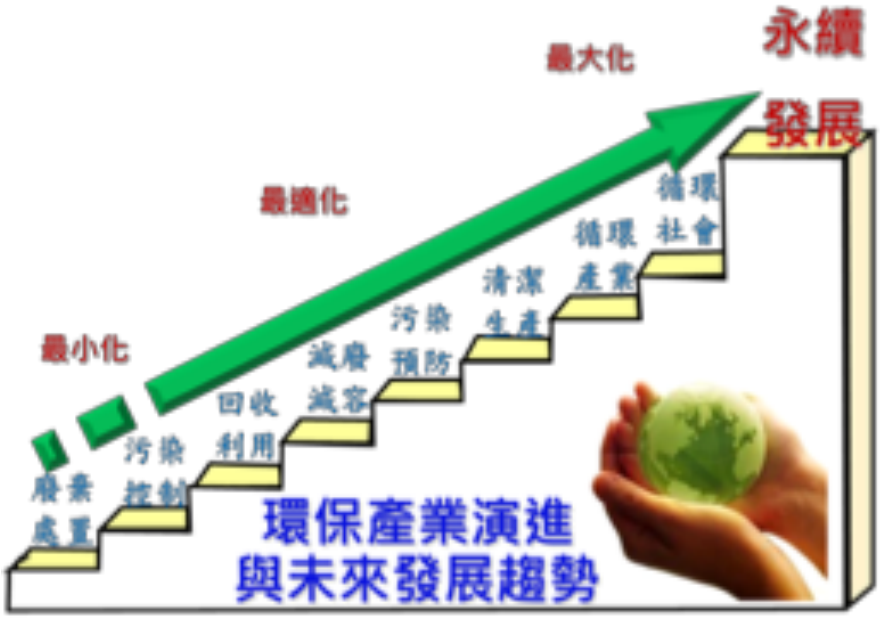
Position	Name	Research Specialty	Position
Department of Materials and Mineral Resources Engineering/ Mineral Resources Engineering Program	**Mineral Resources Engineering Program**		
	Professor	Yu-Hsu Chang	Inorganic chemistry; Inorganic materials chemistry; Nanomaterials synthesis; Surface modification; Silicon carbide & Silicon nitride composite; Electronic grade SiC synthesis; FPCB metallization processing
	Distinguished Professor	Ta-Wui Cheng	Mineral processing engineering; Resource recycling and reuse; Mining engineering
	Professor	Yung-Ching Ding	Mine design and machinery; Explosives and blasting
	Professor	Jyh-Herng Chen	Chemical engineering; Gel and interface science; Resource recycling; Environmental engineering
	Professor	Bing-Sheng Yu	Crystallography; Gemmary; Economic geology; Earth chemistry; Mineral applications
	Professor	Wei Lo	Structural geology; Engineering geology; Environmental geology; Control of geological hazard
	Associate Professor	Yuh-Ruey Wang	Synthesis of crystals; Powder processing; Ceramic processing
	Associate Professor	Ming-Sheng Ko	Environmental engineering; Resources recycling and processing; Waste processing; Environmental verification of resources; Environmental monitoring
	Associate Professor	Tzu-Hsuan Tsai	Electrochemical engineering; Corrosion; Separation technology
	Assistant Professor	Guo-Jiun Shu	Single crystal growth; New materials; Magnetic properties
	Assistant Professor	Chia-Cheng Lin	Nanocrystals; Porous materials; Electrocatalysis; Renewable energy
	Assistant Professor	Chia-Chi Chiu	Rock mechanics; Geotechnical engineering; Numerical analysis; Discrete element method

教育研究體制

環境工程與管理研究所

環境工程與管理研究所以「配合國家發展需求，培育環境工程與管理專業人才」為宗旨，進而以教學研究成果促進國內環境品質之提昇。本所以工程為背景，發展環境相關技術與管理理論，本所教學與研究方向分三大主軸，課程規劃結合學生就業與實習課程，兼顧專業能力、實用能力與競爭力，內涵聚焦三大主軸：

- 環境污染與控制技術。
- 資源循環與環境永續。
- 永續系統工程與管理。



本所教育目標為：

一、傳授專業知識

二、啟發創新能力

三、培養團隊精神

四、累積實務經驗

五、拓展全球視野

本所已分別與德國University of Applied Sciences Trier及美國University of Cincinnati簽訂碩士雙聯學位, 為**全國唯一有歐洲及美國雙聯學位的環境研究所**。

Education and Research Structure

Institute of Environmental Engineering and management

Introduction

Founded in 2000, the Institute of Environmental Engineering and Management (IEEM) with a core philosophy on the base of engineering, IEEM develops environmental skills and management theory. We have strong connection to industry in order to solve problems in real-world and apply professional knowledge to develop breakthrough technology accordingly. IEEM continue to improve our hardware and software to make a professional learning environment for our students.

Institute Objectives

Education on environmental planning and management that leads to bring up students to be outstanding high-tech engineers.

Research on innovative environmental technologies to solve global environmental problems, and to meet the criteria of environmental sustainability.

Development on systematic management including practical auto monitoring and computerized planning that promote graduated student's knowledge for the environmental benefit of current and future generations.

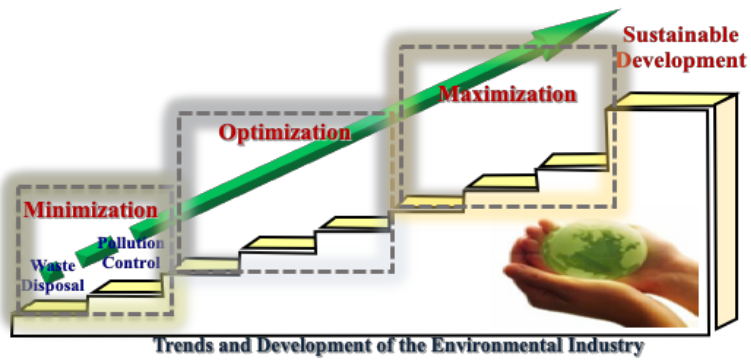
Features

Striving and realization are the essential education characteristics of the Institute of Environmental Engineering and Management (IEEM). Based on engineering background, the IEEM offers a series of education programs in three subjects:

(1) Environmental Pollution and Control Technology.

(2) Resources Circulation and Environmental Sustainability

(3) Sustainable System Engineering and Management.



教育研究體制

教職員

系所	職稱	姓名	研究領域
環境工程與管理研究所	副教授兼所長	王立邦	資源回收再生、環境淨化、礦物處理
	特聘教授	張添晉	廢水高級處理、水再生利用、廢棄物資源化、有害物質管理
	特聘教授	陳孝行	自來水污水高級處理、精密儀器分析、物化程序、環境工程
	特聘教授	胡憲倫	企業環境管理、清潔生產與工業生態
	教授	章裕民	環境策略與管理、粉塵控制、空品規劃與管理、微量分析、廢棄物處理
	教授	林文印	氣膠學、空氣污染管制、環境監測與管理
	教授	曾昭衡	空氣資源＆溫室氣體管理、室內空氣品質、空氣污染控制、廢棄物工程與管理

Education and Research Structure

Faculty

Position	Name	Research Specialty	Position
Institute of Environmental Engineering and management	Associate Professor, Chairman	Li-Pang Wang	Resources recovery; Environmental remediation; Mineral processing
	Distinguished Professor	Tien-Chin Chang	Resource recovery; Advanced wastewater treatment; Water reclamation and reuse; Soil remediation
	Distinguished Professor	Shiao-Shing Chen	Advanced drinking water removal process; Air pollution removal by physical-chemical processes; Environmental forensic
	Distinguished Professor	Hsien-Lun Hu	Sustainable development; Corporate environmental management; Green design; Industrial ecology
	Professor	Yu-Min Chang	Air pollution control; Waste management
	Professor	Wen-Yinn Lin	Air pollution control; Aerosol engineering; Environmental system
	Professor	Chao-Heng Tseng	Air pollution control; Air quality and green house gases management; Indoor air quality; Solid waste management; Pollution prevention

教育研究體制

資源工程研究所

資源開發及地質工程：探索地質環境的科學知識，研究開發保育的應用技術，發展大地資源有效與永續利用的相關科技。技術發展方向：

1. 天然礦業資源如油氣、石材、地熱及地下水等之探勘、鑽採與生產
2. 礦區環境與礦場設計等技術之創新與育成
3. 炸藥與爆破技術之研究
4. 構造地質、環境地質、水文地質與地下流體等之科學研究

資源處理及材料製程：礦物材料之超微粒粉體技術應用，分離與純化及資源化再　利用技術之發展，　複合材料及功能性複合材料之研製。技術發展方向：

1. 礦物粉體技術
2. 新型之高效率分離回收技術
3. 新型資源化及複合材料之製備技術

資源應用及材料合成：近年來最受世界矚目，最具前瞻性的科技，莫過於新穎材料科技。本組延究方向著重於由物質的最基本單位-即原子和分子的層次來操控或改變物質，組合成新材料，進一步探討催化、熱穩定、光學、磁性、電子傳輸、熱傳導、原子排列等性質。技術發展方向：

1. 積體奈米陶瓷元件模組
2. 新穎奈米材料合成及其應用
3. 太陽能電池材料新開發
4. 天然礦石原料、人工化學原料、各種資源廢棄物晶體材料之合成
5. 陶瓷粉體開發與應用研究

Education and Research Structure

Institute of Mineral Resources Engineering

The fields of resource engineering are extensive and broad, including the development, synthesis, fabrication, recycling and reutilization of energy, resources and green materials. Hence the intention of resource engineering is to integrate the technology of resource and materials with industry techniques. The main purpose of the Institute of Mineral Resources Engineering (IMRE) is to cultivate professionals in these fields of exploitation and processing of resource, application and fabrication of resource materials, recycling and regeneration. At present, the institute has 12 full-time faculty members coming from domestic and abroad well-known universities, all are of specialists in both theory and practice.

IMRE was established in 2006. Together with Department of Materials and Mineral Resources Engineering and Institute of Materials Science and Engineering, IMRE is part of the one-department and two-institute conformation. IMRE is a multidisciplinary research institute that is not limited to the traditional departmental framework constrains and encompasses materials science, chemistry, chemical engineering, environmental engineering, geology, and mining engineering to implement integrated research projects aiming to tackle sophisticated systematic problems encountered both in academia and in industry.

The three main research fields of the IMRE devote on Resource Processing and Materials Processing, Resource Application and Materials Synthesis, and Resource Development and Geological Engineering. The scope of Mineral Resources Engineering is extensive, and the development of human civilization is highly correlated to the discovery and utilization of resources.

教育研究體制

教職員

系所	職稱	姓名	研究領域
資源工程研究所	教授兼資源所所長	張裕煦	無機化學、無機材料合成、奈米材料合成、表面化學改質、碳化矽及氮化矽複合材料、高純度電子級碳化矽合成、軟性電路板金屬化/線路化製程研發
	特聘教授	鄭大偉	礦物處理工程、資源再生利用、採礦工程
	教授	丁原智	礦山設計與機械、炸藥與爆破
	教授	陳志恆	化學工程、膠體及界面科學、資源再生技術、環境工程
	教授	余炳盛	結晶學、寶石學、經濟地質學、地球化學、礦物應用
	教授	羅偉	構造地質學、工程地質學、環境地質學、地質災害調查與分析
	副教授	王玉瑞	晶體合成、粉體製程、精密陶瓷製程
	副教授	柯明賢	環境工程、資源再生處理、廢棄物處理、資源環境性驗證、環境監測
	副教授	蔡子萱	電化學、腐蝕工程、半導體製程、光電元件製程、能源科技
	助理教授	殳國俊	單晶成長、新材料研發、磁性
	助理教授	林家正	奈米晶體、孔洞材料、電催化、再生能源
	助理教授	邱家吉	岩石力學、大地工程、數值分析、離散元素法

Education and Research Structure

Faculty

Position	Name	Research Specialty	Position
Institute of Mineral Resources Engineering	Professor, Chairman	Yu-Hsu Chang	Inorganic chemistry; Inorganic materials chemistry; Nanomaterials synthesis; Surface modification; Silicon carbide & Silicon nitride composite; Electronic grade SiC synthesis; FPCB metallization processing
	Distinguished Professor	Ta-Wui Cheng	Mineral processing engineering; Resource recycling and reuse; Mining engineering
	Professor	Yung-Ching Ding	Mine design and machinery; Explosives and blasting
	Professor	Jyh-Herng Chen	Chemical engineering; Gel and interface science; Resource recycling; Environmental engineering
	Professor	Bing-Sheng Yu	Crystallography; Gemmary; Economic geology; Earth chemistry; Mineral applications
	Professor	Wei Lo	Structural geology; Engineering geology; Environmental geology; Control of geological hazard
	Associate Professor	Yuh-Ruey Wang	Synthesis of crystals; Powder processing; Ceramic processing
	Associate Professor	Ming-Sheng Ko	Environmental engineering; Resources recycling and processing; Waste processing; Environmental verification of resources; Environmental monitoring
	Associate Professor	Tzu-Hsuan Tsai	Electrochemical engineering; Corrosion; Separation technology
	Assistant Professor	Guo-Jiun Shu	Single crystal growth; New materials; Magnetic properties
	Assistant Professor	Chia-Cheng Lin	Nanocrystals; Porous materials; Electrocatalysis; Renewable energy
	Assistant Professor	Chia-Chi Chiu	Rock mechanics; Geotechnical engineering; Numerical analysis; Discrete element method

研究中心簡介

水環境研究中心

水環境研究中心由下列三大單位合設：經濟部水利署、國立台北科技大學，以及美國維吉尼亞大學(University of Virginia, VA)。其中又以水利署為主導單位。

本研究中心位於台北科技大學台北校區之土木館中，除基本的硬體設備已經日趨完備外，並將在未來協調利用其他相關系所，甚或校外公私立研究單位之儀器設備及試驗場所。至於經費部份，截至目前為止，本研究中心主要經費來源除經濟部 水利署所提撥出來的研究計畫經費外，另有行政院國家科學委員會針對細部研究項目以予補助。而隨著生態工法與防災觀念的日益興盛，營建署亦有相關計畫經費，此外由於業務的推廣與人才之彙集，本中心也將向其他相關機構，如教育部、環保署、農委會、經濟部水利 署、林務局、水土保持局等提出計畫經費申請或接受委託。

中心主任：林鎮洋教授
聯絡方式：(02)2771-2171#2647 / jylin@ntut.edu.tw

防災工程科技中心

本中心推動目標著重於災害管理之實務產品與技術服務研發，對應「災前整備」、「災中應變搶救」與「災後復興」等三大區塊，分述如下：

(一)　災前整備技術：重點結構物監測與結構耐震評估、水情偵測網與模式之建置與適時更新、地震災損推估與救災佈署規劃、無人機空間資訊建置及邊坡與隧道安全評估。

(二)　災中應變搶救技術：救災橋梁與多功能救災動力載台、結構損壞快速判別與無人機偵蒐系統、即時淹水範圍測預報、應變派遣系統。

(三)　災後復興技術：緊急救難能源供應、結構永久性補強、隧道評估與補強技術。

綜合統計本中心於近五年研發成果之期刊論文、專利、產學合作與技術轉移成果如下所示，總計國內外正式期刊與研討會論文共504篇，審查中與已獲得之國內外發明專利共58件，產學合作件數為92件共約一億四千餘萬，技術轉移件數為19件共約四百五十餘萬。

中心主任：張哲豪教授
聯絡方式：(02)2771-2171#2665 / chchang@ntut.edu.tw

Education and Research Structure

Water Environment Research Center

The Water Environmental Research Lab is devoted to improving water resilience by harnessing the science of ecological engineering. For the next 30 years, this will be one of the sites of the Infrastructure Development Program to provide access to safe drinking water and basic sanitation. The Taiwan government annually grants this lab thousands of dollars for research projects to collaborate with industries and private companies. Highlights of the lab include:

1. The MSL system, to remove a wide variety of contaminants including organic and nutrients.

2. The tree box filters, to act as mini bioretention systems to promote infiltration.

3. The LA-300, using Mie Scattering Theory to measure particle size over the range of 0.1-600 μm.

4. The Green BMPs, for stormwater management including detention ponds, rainwater harvesting systems, permeable paving, and more.

Disaster Prevention Center

48The Center promotes the development of practical products and technical services for disaster management, and corresponds to the three major blocks of “pre-disaster preparedness”, “disaster relief in disaster” and “post-disaster recovery”, which are described as follows:

1. Pre-disaster preparation technology: monitoring and structural seismic assessment of key structures, establishment and timely updating of water regimes and models, estimation of earthquake damage and disaster relief planning, construction of drone space information and Slope and tunnel safety assessment.

2. Disaster rescue techniques in disasters: disaster relief bridges and multi-functional disaster relief power stages, rapid identification of structural damage and drone detection systems, instant flooding range measurement and forecasting, and strain dispatching systems.

3. Post-disaster recovery technologies: emergency rescue energy supply, permanent structural reinforcement, tunnel assessment and reinforcement technology.

A total of 504 papers on formal journals and seminars at home and abroad have been reviewed. A total of 58 pieces, the number of industry-university cooperation is 92 pieces totaling about 140 million, and the number of technology transfer is 19 pieces, totaling about 4.5 million.

研究中心簡介

結構及材料工程維護管理應用發展中心

中心主要的經費來源為政府機關委託計畫經費、產學合作計畫經費、教育訓練收入、材料試驗費用、產品開發設備之租用費用等，以自給自足為原則，並依規定額度提撥研究經費作為校方與土木系管理費，以為實質直接回饋。本中心各項計劃的相關研究成果將提供校內師生、校友與社會人士及產業界分享，預期將有效提升學校學術地位與聲望，更為國家、業界做出具體貢獻。

1. 技術顧問：品質診斷、技術鑑定、技術諮詢、技術輔導
2. 檢測服務：結構檢測、材料試驗、補強技術、儀器租用
3. 資訊服務：道路資訊、管理系統、技術調查、橋樑監測
4. 技術傳播：人員代訓、技術研討、技術講習、技術刊物
5. 委託開發：結構設計、軟體開發、補強設計、工法開發

中心主任：陳立憲教授
聯絡方式：(02)2771-2171 #2637 / wiliao@ntut.edu.tw

精密分析與材料研發中心

承蒙傑出熱心的校友一致認為精良的研究設備、環境與管理是邁向世界級大學的必備條件。因此，特別捐款協助母校成立本中心，設置各項檢測類貴重儀器，於104年(西元2015年) 8月1日正式落成啟用。

本中心致力於提供本校或外校師生及各業界研發新科技、新技術需要的精密分析設備與檢測技術。本中心亦建立一套管理系統並通過TAF國際認證，以維護實驗室檢測能力並提供諮詢服務平台，落實學校成為國內外企業研發的好夥伴，以利學校培育材料研發及檢測分析之科技人才。

中心主任：楊重光教授
聯絡方式：(02)2771-2171 #6060-6063 / van_wu@mail.ntut.edu.tw

Education and Research Structure

Center for Research on Structural and Material Engineering

The principle of self-sufficiency is self-sufficient, and research funds are allocated according to the prescribed amount. It is expected to effectively enhance the academic status and prestige of the school and make concrete contributions to the country and the industry.

1. Technical consultant: quality diagnosis, technical identification, technical consultation, technical guidance

2. Testing services: structural testing, material testing, reinforcement technology, instrument rental

3. Information services: road information, management systems, technical surveys, bridge monitoring

4. Technology Communication: personnel training, technical seminars, technical seminars, technical publications

5. Commissioned development: structural design, software development, reinforcement design, construction method development

Precision Analysis and Materials Research Center

Establishment:

Thanks to the outstanding and enthusiastic alumni who believe sophisticated research equipment, environment and management are the prerequisites for becoming a world-class university. Therefore, a special donation was made to assist the alma mater to set up the center with various valuable testing equipment, which was officially completed and opened on August 1, 2015.

Purpose:

The center is committed to providing precision analysis equipment and testing technology required by the school, academics, and various industries to research and develop new technologies. The center has also established a management system and passed the TAF international certification to maintain laboratory testing capabilities and provide a consulting service platform for the school as a good partner between domestic and foreign companies in term of research and development, so that the school are capable to cultivate scientific and technological talents for material research, testing and analyzing.

研究中心簡介

幸福健康產業加速中心

本中心目標為加速國內產業商品化，提升其競爭。透過豐富人脈網絡及金控人壽，輔助更多擁有前瞻性「創新力」與「執行力」的人才，帶領臺灣社會邁向「**整合戰略**」的幸福健康未來！

中心宗旨與目標：

- 促進大健康產業發展
- 結合學術機構、金融科技、醫療產業
- 聚焦產業前瞻創新技術
- 提供醫材商品化服務，驅動初創公司成長
- 評估臨床應用與市場佈局後投資

中心主任：方旭偉教授
聯絡方式：(02)2771-2171 #4773 / hwfang@ntut.edu.tw

化學材料分析技術研發中心

研發方向：

1.調查與研究化學材料的成分、物性、化性、導電性、導熱性、機械性、難燃性、腐蝕性、分解、分離、回收等化學材料分析技術研發。

2.銅資源等貴重金屬回收技術之研發。

3.木材防腐劑材料分析技術研發。

4.高分子材料分析技術研發。

5.光電與能源材料分析技術研發。

中心主任：蔡德華教授
聯絡方式：(02)2771-2171#2543 /thtsai@ntut.edu.tw

Education and Research Structure

Accelerator for Happiness & Health Industry

AhHi aims at accelerating domestic industry commercialization and promoting competitiveness. Through networking and financial holding company, AhHi can assist more people with creative ideas and executing ability to lead Taiwan toward an **integrating strategy** for happiness and health future!

Aims and goals:

- Facilitate healthcare industry development.
- Integrate academic institutes, financial technology industry and medical industry.
- Focus industrial leading and innovative technology.
- Provide medical devices commercialization services and promote the growth of Startups companies.
- Evaluate clinical application and marketing arrangement before investing.

Chemical Material Analysis Research

R&D direction:

1. Investigate and research chemical materials such as composition, physical properties, chemical properties, electrical conductivity, thermal conductivity, mechanical properties, flame retardancy, corrosion, decomposition, separation, and recovery.

2. Research and development of precious metal recycling technologies such as copper resources.

3. Research and development of wood preservative material analysis technology.

4. Research and development of polymer material analysis technology.

5. Research and development of optoelectronic and energy materials analysis technology.

研究中心簡介

生醫材料工程跨領域研發中心

中心宗旨：近年來，生醫材料工程技術已廣泛地運用在醫療器材、組織工程、生物感測器等新興之生物技術產業上，亦屬於政府推動「兩兆雙星」之重點產業之要項。本中心掌握本校在材料、化學化工、生物技術、幹細胞與組織工程相關技術的優勢，進一步結合臨床醫師等跨領域的知識技術，致力於跨領域工程技術之前瞻角色。

任務：「以終為始」從需求看創新。

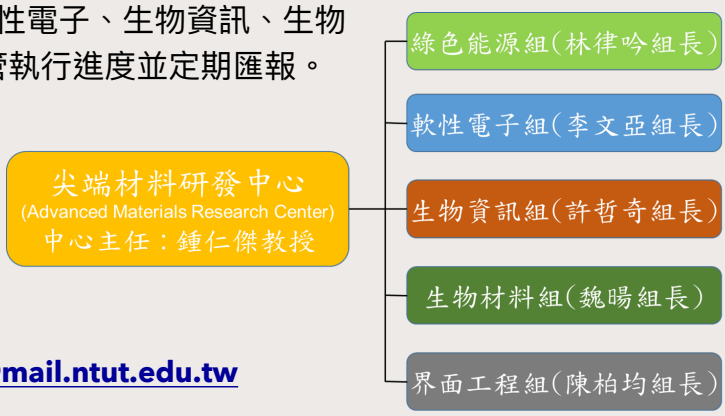
願景：落實醫材商品化、推動醫療器材產業發展、提升醫療品質、增進人類福祉。

中心主任：方旭偉教授
聯絡方式：(02)2771-2171#2521 / hwfang @ntut.edu.tw

尖端材料研發中心

科技的進步仰賴材料的發展，基礎材料的研發到跨領域的整合係目前產業重大的挑戰與產業升級方向，於諸多發展領域中，材料的表現為影響效能的決定性因素。「尖端材料研發中心」成立於2020年8月，其宗旨在協助產、官、學、研以開發先進的尖端材料，達成整合性的尖端材料研發，並結合實務教學以帶領學生縮短學用落差，組成團隊爭取校內外大型計劃與資源。

本中心依研究及應用主題分為: 綠色能源、軟性電子、生物資訊、生物材料與界面工程等五組。各組均設有組長控管執行進度並定期匯報。各小組成員依組長實驗室組成編制為5至20人，可提供完善詳盡的製程、設備與分析，滿足各領域對材料開發與製程整合的要求。



中心主任：鍾仁傑教授
聯絡方式：(02)2771-2171 # 2547 / rjchung@mail.ntut.edu.tw

Education and Research Structure

Medical engineering research Team Multidisciplinary Technology Metro Taipei (MT3)

Recently, biomaterials engineering has been widely used in medical devices, tissue engineering, biosensors, and other emerging biotechnology industry ; biomaterials engineering is part of the key industries in the government campaign "Two Trillion, Twin Stars". Our center grasped the advantages of technology in Materials, chemical engineering, biotechnology, stem cells and tissue engineering and combined with the knowledge of clinicians, further committed to the future of interdisciplinary engineering role.

Mission: 『 Begin with the Need 』 Clinical needs to guide the development of commercialization of medical material

Vision: Implementation of the commercialization of medical material; Promote the Medical Device Industry; Enhance the quality of medical care; Enhance human well-being

Advanced Materials Research Center

The advancements of science and technology depend on material developments. The development of basic materials to cross-field integration is a major challenge for the industry and the direction of industrial upgrading. In many developing fields, the performance of materials is the decisive factor affecting the final successfulness. The “Advanced Materials Research Center” is established in August 2020. Its purpose is to assist the industry, government, university, and academia institutes to develop advanced materials and integrate cutting-edge technologies. Furthermore, it combines with practical teaching to lead students to shorten the gap between the industry and university, and form a team to strive for large project and resources inside and outside the school.

This center is divided into five groups: green energy, soft electronics, bio-information, bio-materials, and interface engineering, according to research and application topics. Each group with 5 to 20 members has a team leader to control the progress of implementation and report regularly. To fulfill the requirements of R&D for advanced materials in various fields, they will provide accomplished services on materials processing, facility supporting and analyzing.

研究中心簡介

智慧紡織科技研究中心

本中心成立的核心目的，為召集國內「功能性紡織品、布膜加工、紡織染整材料、高分子膜及複材加工之業者」，從事共同研發的工作，以促進台灣塗佈相關應用領域之產、學界永續發展。

中心依據研究主題分為「聚酯新材料」、「尼龍新材料」、「自我修復塗佈材料」、「聚氨酯新材料」、「電子輔助智慧紡織品」、「塗佈技術精進」等六組。中心佔地約150坪，建置包含熔融塗佈實習工廠、全潤式複材製作工廠及濕式塗佈實習工廠等三個pilot plant試量產工廠。並有物性檢測等儀器設備，可進行高分子合成加工，塗佈加工材料等樣品檢測。

中心主任：芮祥鵬教授
聯絡方式：(02)2771-2171#2432 / f10714@ntut.edu.tw

生醫產業研發中心

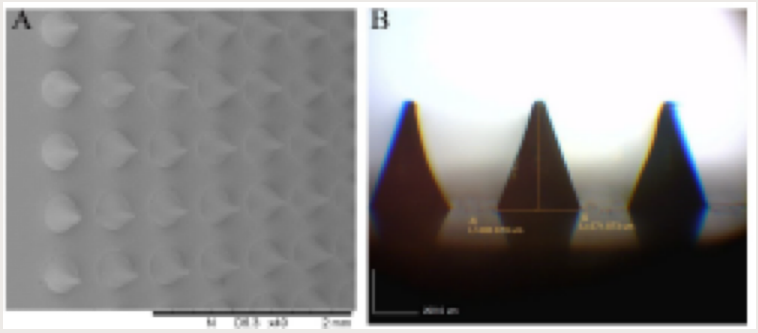
本中心核心目的為組成跨領域團隊，致力於開發新型高分子材料於醫材產業應用。

研究主題以配合生醫產業中心的業務為主，目前有微針藥物輸送技術、石墨烯複合材料之biosensor、石墨烯導電散熱高分子。

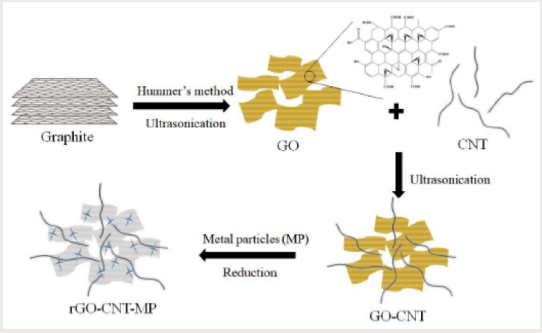
具備3D材料建模機組、HPLC、Bio-Centrifuge、cyclic voltammetry、真空凍乾機等專業儀器，提供研究開發使用。

除了在專業上的研究，我們也負起科學家對社會的責任，著力於原住民醫學及原住民科學教育上的工作。

中心主任：華國媛教授
聯絡方式：(02)2771-2127 #2419 / kyhwa219@gmail.com



可溶性微針之製作與應用



複合石墨烯配方製備

Education and Research Structure

Research and Development Center for Smart Textile Technology

The core purpose of the establishment of the center is to convene domestic "functional textiles, film processing, textile dyeing and finishing materials, polymer film and composite materials processing", and work on joint research and development to promote Taiwan's coating-related applications. The production and academic circles will continue to develop.

According to the research theme, the center is divided into six groups: “Polyester New Materials”, “Nylon New Materials”, “Self-Repair Coating Materials”, “Polyurethane New Materials”, “Electronic Assisted Smart Textiles” and “Coating Technology Improvement”. The center covers an area of about 150 pings, and it has three pilot plant production plants including a melt coating internship factory, a full-run composite material production plant, and a wet coating internship factory. It also has equipment for physical property testing, such as polymer synthesis processing, coating processing materials and other samples.

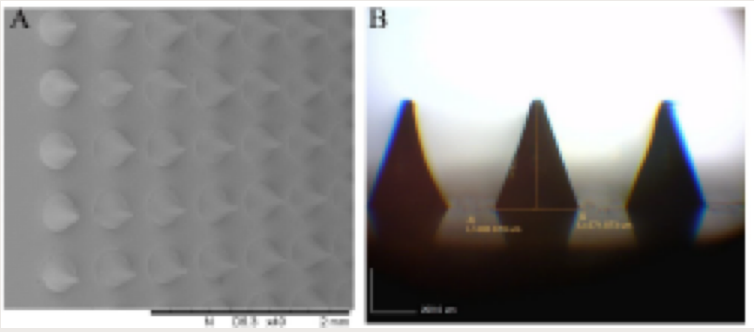
Biomedical Industry Research Center

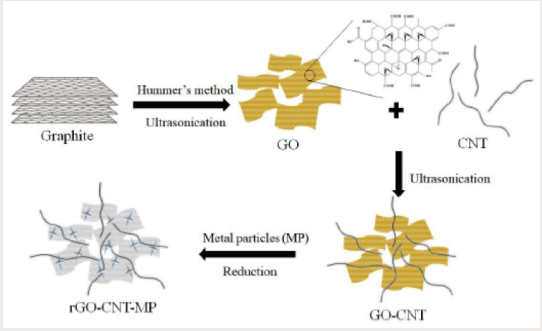
The main target of the biomedical industry research center is to form a cross-field team dedicated to the development of new polymer materials for medical material industry applications.

The research theme is mainly to cooperate with the business of the biomedical industry center. Currently, there are microneedle drug delivery technology, biosensor of graphene composite materials, and graphene conductive & thermal dissipation polymer.

We have instruments with 3D material modeling unit, HPLC, Bio-Centrifuge, cyclic voltammetry, vacuum freeze dryer and other professional instruments for research and development.

In addition to professional research, we also take up the responsibilities of scientists to society, focusing on aboriginal medicine and aboriginal science education.





研究中心簡介

前瞻材料與智慧元件技術研發中心

本中心成立之核心目的為召集「光電元件國內業者」與「鈣鈦礦材料之國際學術研究人員」從事共同研發的工作。根據研究主題我們將中心分為：(1) 鈣鈦礦太陽能電池元件組裝模組，提供網印臺、熱壓機、手套箱、旋轉塗佈機、蒸鍍機、雷射光系統性的檢測等機台，亦提供基礎元件組裝教學，讓學生與合作廠商可於實驗室中自行組裝完成模組太陽能電池或鈣鈦礦電池元件，達到學習與應用加成之效果。(2) 發光鈣鈦礦材料元件(LED)製成與材料合成模組，製程產線有手套箱、旋轉塗布機、蒸鍍機等機台，檢測方面有PR670，材料合成主要研發有機高分子材料應用於LED元件發光層、電子電洞傳輸層和環境感測相關領域、相關光物理現象檢測及分析製作。此中心因應發展迅速的資訊化世代，透過分析光學、物理、化學與材料的跨領域學門，發展新世代穿戴式透明元件，並透過上游材料端的鑑定至下游元件製程檢測的總概括，如基礎材料物性分析、LED元件組裝技術，讓學生更貼近實務與技術的學習。

中心主任：郭霽慶教授
聯絡方式：(02)2771-2171#2407/
kuocc@mail.ntut.edu.tw

奈米光電磁材料技術研發中心

研發方向：

1.積體奈米陶瓷元件及模組。

2.陶瓷基板及機體陶瓷模組。

3.功能性奈米粉體製備。

4.奈米鑽石材料開發及應用研究。

5.奈米催化劑及其應用。

6.有機高分子光電磁應用。

中心主任：王錫福教授
聯絡方式：(02)2771-2171#2735 / sfwang@ntut.edu.tw

Education and Research Structure

Research Center of Advanced Material and Smart Devices

The major purpose of this research center is to develop and deepen cooperation with the optoelectronic device industry in Taiwan and international research center working on perovskite-based material. According to our research focus, we divide our research objectives into two groups: Group I works on solar cell devices designed around luminescence dye and perovskite. Group II main work focus is the development of light-emitting diode devices and novel perovskite devices.

The center has the proper equipments to let students make experiments and devices by themselves, such as spin coater, glove box, evaporation machine and PR670 LED testing machine. Through working and collaborating in the research groups, students are able to combine their knowledges they learnt from each others and receive feedback and advices offered by industrial experts.

Center of EMO Materials and Nanotechnology

R&D direction:

1. Integral nano ceramic components and modules.
2. Ceramic substrate and body ceramic module.
3. Functional nano powder preparation.
4. Nano diamond material development and application research.
5. Nanocatalyst and its application.
6. Organic polymer light electromagnetic application.

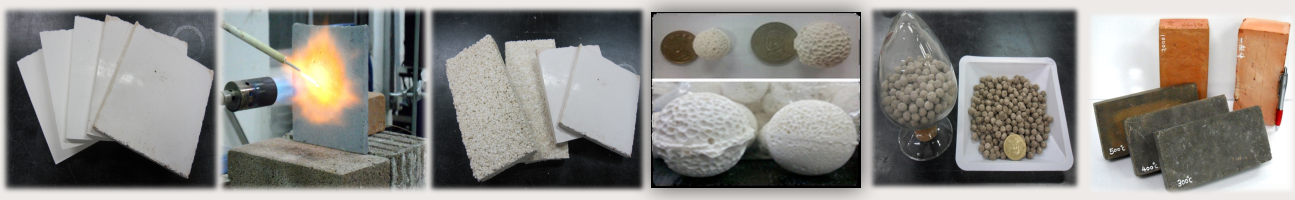
研究中心簡介

無機聚合技術研發中心

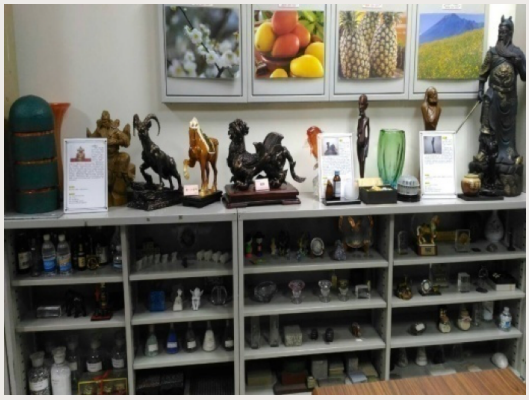
近年來對於「無機聚合材料」(Geopolymer)之研究開發，各國紛紛地展開投入相關的研究。近五年SCI國際期刊所刊登相關Geopolymer的論文超過1500篇以上，每年均有數個研討會討論此一主題，証明無機聚合材料正逐漸的受到各國的重視。由於無機聚合物基本原料取得容易，且製程及設備簡單，在常溫環境下即可製得，節能減碳，將其發展成為新一代環保材料實具有相當的潛力，在各方面之研究成果令人甚為期待。

本團隊在此領域已經研究近20年，因此成立本中心的宗旨除了部分取代傳統波特蘭水泥混凝土外，並擴大此技術的應用範圍至廢棄物處理、混凝土補強、防火隔熱材料、吸附重金屬、無機塗料、環保磚等技術領域。

中心主任：丁原智
聯絡方式：(02)2771-2171 #2732 / ycding@ntut.edu.tw



循環型環境研究中心



循環型環境研究中心（RERC）成立於2002年。
RERC主要關注五大主題：

1. 生態城市
2. 生態工業
3. 創新回收技術
4. 綠色技術與規則
5. 環境績效評估

基於技術和管理背景，RERC擁有優秀的教師和高科技設施。通過執行計畫和計畫人員，RERC培養學生的思維和分析能力。RERC也鼓勵進行國際交流。培養在循環環境領域可以成為優秀國際人才的學生，展現出融合研究，教育和實際應用。

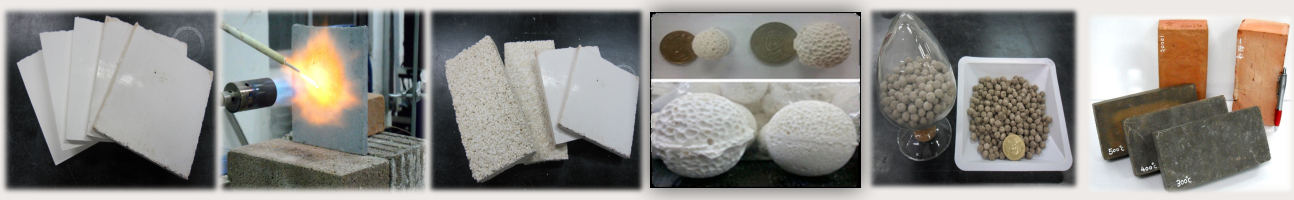
中心主任：張添晉
聯絡方式：(02)2771-2171#4132 / tcchang@ntut.edu.tw

Education and Research Structure

Geopolymer Technology Research Center

Geopolymer, similar to natural zeolite minerals, is a class of three-dimensionally networked alumino-silicate materials. Due to its superior mechanical and physical properties, such as non-combustible, heat-resistant, fire/acid resistant, easy to make it, and formed at low temperatures, geopolymer have been gradually attracting world attention as potentially revolutionary green materials.

The team has been researching in this field for nearly 20 years. Therefore, the purpose of establishing this center is to partially replace traditional Portland cement concrete, and expand the application scope of this technology to waste treatment, concrete reinforcement, fire/heat insulation materials, heavy metal adsorption, Inorganic coatings, environmental protection bricks and other technical fields.



Recycling oriented Environment Research Center

The Recycling-oriented Environment Research Center (RERC) was established in 2002. RERC focused on five major themes:

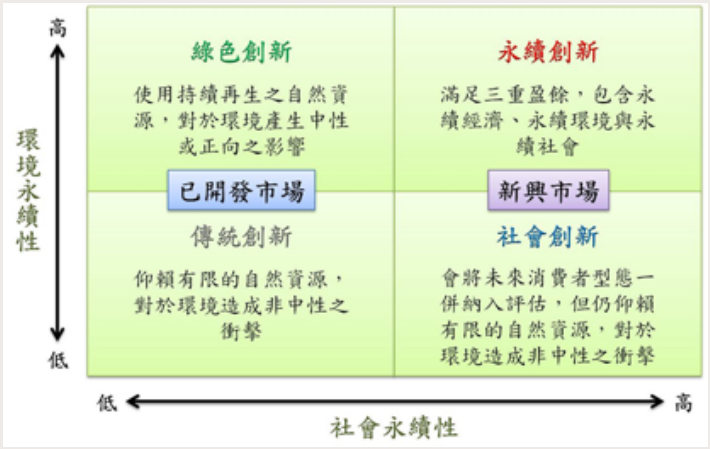
1. Eco-town
2. Eco-industrial
3. Innovative recycling technology
4. Green technology and regulation
5. Environment performance evaluation

Based on technologies and management background, the RERC possesses superior teachers and high-tech facilities. By carrying out projects and programmers, RERC trains up students thinking and analysis ability.RERC also encourage in international exchange. We intend to train students who could be superior international talents in recycling environment field and display unique characteristics that integrate research, education and practical application.

研究中心簡介

永續創新與評估中心

永續創新與評估中心設置之宗旨乃是透過產學合作與研究相輔相成，並協助企業於永續發展推動、環境管理落實以及環境與永續性評估等項目，進而達到培育永續性與環境專業之人才之目的。本中心實務上分為兩大組別：環境系統與生命週期評估組與企業永續創新與環境管理組，主要任務為爭取國內外政府、民間研究機構及產業界之委託案，透過蒐集彙整企業環境管理與企業永續性評估相關之研究成果，建立環境管理之資料庫，提供政府及產業界參考。而主要經費來源有科技部、水利署、行政院原子能委員會核能研究所、財團法人工業技術研究院、財團法人中技社、日月光集團、中興工程(股)公司、台灣大哥大(股)公司等。本中心位於臺北科技大學億光大樓12樓，除擁有國際上通用的SimaPro生命週期評估軟體、Stella系統評估軟體以及Umberto物質流分析軟體外，並每年定期更新國際最新資料庫，以提升數據品質及評估之準確性。



中心主任：胡憲倫
聯絡方式：(02)2771-2171#4151、4183 / allenhu@ntut.edu.tw

Education and Research Structure

Sustainability, Innovation and Assessment Center (SIAC)

The Sustainability, Innovation and Assessment Center (SIAC) was established in 2016, which is focusing on corporation environment management, life cycle assessment and sustainable development. The purpose of SIAC aims to assist corporation toward to sustainable development, climate change transition and cultivate talents for professionalism. The SIAC is divided into two group, one is Environmental Systems and Life Cycle Assessment Group and other one is Enterprise Sustainable Innovation and Environmental Management Group. The main activity include practicing industry-university cooperative research project with government, company, foreign organization, establishing the environmental database by collected researches related to environmental management and providing some research results to be reference for the government and industry. The main partner is including the Ministry of Science and Technology, Industrial Technology Research Institute, CTCI Foundation, Advanced Semiconductor Engineering, Inc. and Taiwan Mobile Co., Ltd. and so on. The SIAC is located on the 12th floor of the Everlight Building of the National Taipei University of Technology. The SIAC is good at applying SimaPro software for life cycle assessment, Stella software for system evaluation and Umberto software for material flow analysis. All of these database will regularly updates every year to improve data quality and the accuracy of the assessment.

教職員 Staff

工程學院 Faculty of Engineering

職稱 Job Classification	姓名 Name
院長 Dean	宋裕祺 Yu-Chu Sung
副院長 Associate Dean	林祐正 Yu-Cheng Lin
特助 Special Assistant	陳映竹 Ying-Chu Chen
職員 Staff	陳亭華 Ting-Hua Chen

教職員數 Number of Faculty

As of August 1, 2020

人數 Number 系所 Division	教授 Professor	副教授 Associate Professor	助理教授 Assistant Professor	講師 Lectures	職員 Staff	小計 Subtotal
土木工程系/研究所 Civil Engineering	14	7	4	0	5	30
化學工程與生物科技系/研究所 Chemical Engineering	19	8	3	0	7	37
分子科學與工程系/有機高分子研究所 Molecular Science and Engineering	9	3	2	0	3	17
材料及資源工程系/材料科學與工程研究所 Materials and Mineral Resources Engineering	9	6	4	1	6	26
環境工程與管理研究所 Environmental Engineering and Management	6	1	0	0	1	8
資源工程研究所 Mineral Resources Engineering	6	0	1	0	1	8
小計 Subtotal	63	25	14	1	23	126

教職員 Staff

研究中心資訊 Information of Research Center

As of August 1, 2020

研究中心 Research Center	系所 Department	中心主任 Director	聯絡方式 Contact Information
結構及材料工程維護管理應用發展中心 Center for Research on Structural and Material Engineering	土木工程系 Department of Civil Engineering	陳立憲 Li-Hsien Chen	(02)2771-2171#2622、2612 lhchen@ntut.edu.tw
水環境研究中心(校級) Water Environment Research Center	土木工程系 Department of Civil Engineering	林鎮洋 Jen-Yang Lin	(02)2771-2171#2647 jylin@ntut.edu.tw
防災工程科技中心 (校級) Disaster Prevention Center	土木工程系 Department of Civil Engineering	張哲豪 Che-Hao Chang	(02)2771-2171#2665、2642 chchang@ntut.edu.tw
精密研發與分析中心 (校級) Precision Research and Analysis Center	化學工程與生物科技系 Department of Chemical Engineering and Biotechnology	楊重光 Chung-Kuang Yang	(02)27712171#6060-6063 van_wu@mail.ntut.edu.tw
幸福健康產業加速中心 (校級) Accelerator for Happiness & Health Industry	化學工程與生物科技系 Department of Chemical Engineering and Biotechnology	方旭偉 Hsu-Wei Fang	02)2771-2171 #2521、4773 hwfang@ntut.edu.tw
化學材料分析技術研發中心 Chemical Material Analysis Research Center	化學工程與生物科技系 Department of Chemical Engineering and Biotechnology	蔡德華 The-Hua Tsai	(02)2771-2171#2577、2522 thtsai@ntut.edu.tw
生醫材料工程跨領域研發中心 Medical Engineering Research Team Multidisciplinary Technology Metro Taipei	化學工程與生物科技系 Department of Chemical Engineering and Biotechnology	方旭偉 Hsu-Wei Fang	(02)2771-2171#2521、4773 hwfang@ntut.edu.tw
尖端材料研發中心 Advanced Materials Research Center	化學工程與生物科技系/材料及資源工程系 Department of Chemical Engineering and Biotechnology/ Department of Materials and Mineral Resources Engineering	鍾仁傑 Ren-Jei Chung	(02)2771-2171 #2547 rjchung@mail.ntut.edu.tw
智慧紡織科技研究中心(校級) Research and Development Center for Smart Textile Technology	分子科學與工程系 Department of Molecular Science and Engineering	芮祥鵬 Syang-Peng Ruei	(02)2771-2171#2432、1061 f10714@ntut.edu.tw
生醫產業研發中心 (校級) Biomedical Industry Research Center	分子科學與工程系 Department of Molecular Science and Engineering	華國媛 Kuo-Yuan Hwa	(02)2771-2171#2419 psjan1111@gmail.com

教職員 Staff

研究中心資訊 Information of Research Center

(續 cont.)

As of August 1, 2020

研究中心 Research Center	系所 Department	中心主任 Director	聯絡方式 Contact Information
前瞻材料與智慧元件技術開發中心 Research Center of Advanced Material and Smart Devices Technology	分子科學與工程系 Department of Molecular Science and Engineering	郭霽慶 Chi-Ching Kuo	(02)2771-2171#2407 kuocc@mail.ntut.edu.tw
奈米光電磁材料技術研發中心 Center of EMO Materials and Nanotechnology	材料及資源工程系 Department of Materials and Mineral Resources Engineering	王錫福 Sea-Fue Wang	(02)2771-2171#2735、2759 sfwang@ntut.edu.tw
無機聚合技術研發中心 Geopolymer Technology Research Center	材料及資源工程系 Department of Materials and Mineral Resources Engineering	丁原智 Yung-Ching Ding	(02)2771-2171 #2732 ycding@ntut.edu.tw
循環型環境研究中心 Recycling oriented Environment Research Center	環境工程與管理研究所 Institute of Environmental Engineering and management	張添晉 Tien-Chin Chang	(02)2771-2171#4132、4133 tcchang@ntut.edu.tw
永續創新與評估中心 Sustainability, Innovation and Assessment Center	環境工程與管理研究所 Institute of Environmental Engineering and management	胡憲倫 Allen H. Hu	(02)2771-2171#4151、4183 allenhu@ntut.edu.tw

學生 Students

大學部學生數 Number of Undergraduate Students enrolled

As of August 1, 2020

人數 Number 系所 Division	一年級 1st year	二年級 2nd year	三年級 3rd year	四年級 4th year	小計 Subtotal
土木工程系 Department of Civil Engineering	118	119	115	144	496
化學工程與生物科技系 Department of Chemical Engineering and Biotechnology	115	129	141	146	531
分子科學與工程系 Department of Molecular Science and Engineering	48	41	47	46	182
材料及資源工程系 Department of Materials and Mineral Resources Engineering	87	121	97	118	423
小計 **Subtotal**	368	410	400	454	1,632

學生 Students

研究生數 Number of graduate/doctoral Students enrolled

As of August 1, 2020

系所 Division / 人數 Number	研究所 Master's degree programs			博士班 Doctoral degree programs	在學總計 Subtotal
	一年級 1st year	二年級 2nd year	三年級以上 3rd year above	在學 Present	
土木與防災研究所 Graduate Institute of Civil and Disaster Prevention Engineering	94	83	23	43	243
化學工程研究所/生化與生醫工程研究所 Graduate Institute of Chemical Engineering/Graduate Institute of Biochemical and Biomedical Engineering	94	87	22	44	247
有機高分子研究所 Institute of Organic and Polymeric Materials	64	59	9	48	180
材料科學與工程研究所 Institute of Material Science and Engineering	50	50	14	14	128
環境工程與管理研究所 Institute of Environmental Engineering and Management	39	36	15	23	113
資源工程研究所 Institute of Mineral Resources Engineering	22	24	11	18	75
小計 **Subtotal**	363	339	94	190	986

國際交流 International Exchange

雙聯學位件數 Number of Dual Degree

As of August 1, 2020

合作學校 Partner University	國家 Country	合作系所 Division	學程 Program	件數 Number of projects
University of Akron Department of Polymer Science/Engineering	美國 USA	分子科學與工程系/有機高分子研究所 Molecular Science and Engineering	學碩士 3 + 2 Dual Bachelor and Master	2
Hochschule Trier: Trier University of Applied Sciences Institute for Applied Material Flow Management	德國 Germany	環境工程與管理研究所 Environmental Engineering and Management	雙碩士 1 +1 Dual Master	10
University of Cincinnati Master of Engineering(MEng) Program	美國 USA	工程學院 College of Engineering	學碩士 3 + 2 Dual Bachelor and Master 雙碩士 1 +1 Dual Master	2

國際交流 International Exchange

交換學生件數 Number of exchange students

As of August 1, 2020

件數 Number of projects / 系所 Division	2017年			2018年			2019年		
	境外學生 Foreign students	來臺交換生 Exchange students for overseas	出國交換學生 Students overseas	境外學生 Foreign students	來臺交換生 Exchange students for overseas	出國交換學生 Students overseas	境外學生 Foreign students	來臺交換生 Exchange students for overseas	出國交換學生 Students overseas
土木工程系/研究所 Civil Engineering	39	3	3	47	3	5	12	8	1
化學工程與生物科技系/化學工程碩士班/生化與生醫工程碩士班 Chemical Engineering	12	11	13	18	21	12	12	2	6
分子科學與工程系/有機高分子研究所 Molecular Science and Engineering	8	1	1	8	3	7	8	0	3
材料及資源工程系/材料科學與工程研究所 Department of Materials and Mineral Resources Engineering/Institute of Materials Science and Engineering	7	1	11	8	0	8	4	2	2
環境工程與管理研究所 Environmental Engineering and Management	16	2	1	13	2	0	16	0	0
資源工程研究所 Mineral Resources Engineering	2	0	0	3	0	1	1	0	0
小計 Subtotal	84	18	29	97	29	33	53	12	12

國際交流 International Exchange

跨校研究合作件數 Number of Inter-Universities Collaboration

As of August 1, 2020

件數 Number of projects / 系所 Division	2017年		2018年		2019年	
	國內 Domestic	國際 International	國內 Domestic	國際 International	國內 Domestic	國際 International
土木工程系/研究所 Civil Engineering	0	2	0	1	0	3
化學工程與生物科技系/化學工程碩士班/生化與生醫工程碩士班 Chemical Engineering	12	4	10	7	11	7
分子科學與工程系/有機高分子研究所 Molecular Science and Engineering	1	2	2	1	4	2
材料及資源工程系/材料科學與工程研究所 Department of Materials and Mineral Resources Engineering/ Institute of Materials Science and Engineering	0	1	1	5	2	4
環境工程與管理研究所 Environmental Engineering and Management	0	1	0	2	0	4
資源工程研究所 Mineral Resources Engineering	0	1	0	2	0	1
小計 Subtotal	13	11	13	18	17	21

產學金額 Budgets of commissioned/collaborative research

金額(新臺幣千元)
Research Founding (thousand NT dollar)

件數 Number of projects / 系所 Division	2016年		2017年		2018年		2019年	
	科技部 MOST	私人合作 Private	科技部 MOST	私人合作 Private	科技部 MOST	私人合作 Private	科技部 MOST	私人合作 Private
土木工程系/研究所 Civil Engineering	13,926	27,693	15,898	45,765	12,077	53,975	17,611	60,273
化學工程與生物科技系/化學工程碩士班/生化與生醫工程碩士班 Chemical Engineering/ Biochemical and Biomedical Engineering	35,820	10,468	85,588	10,894	49,789	19,502	46,997	34,016
分子科學與工程系/有機高分子研究所 Molecular Science and Engineering	27,435	7,490	57,335	22,694	32,870	6,437	31,284	14,182
材料及資源工程系/材料科學與工程研究所 Department of Materials and Mineral Resources Engineering/Institute of Materials Science and Engineering	27,507	26,572	30,253	4,122	35,086	23,392	48,317	37,401
環境工程與管理研究所 Environmental Engineering and Management	4,309	15,820	10,871	30,681	6,004	15,418	6,648	6,497
資源工程研究所 Mineral Resources Engineering	10,268	5,641	8,604	13,508	5,761	13,572	11,357	12,536
小計 Subtotal	119,301	93,684	208,549	127,664	141,587	132,295	162,214	164,905

專利、技術移轉 Technology Transfer

專利件數 Number of Patent

As of August 1, 2020

年度 Year / 系所 Division	2015	2016	2017	2018	2019
土木工程系/研究所 Civil Engineering	3	1	3	0	2
化學工程與生物科技系/化學工程碩士班/生化與生醫工程碩士班 Chemical Engineering/Biochemical and Biomedical Engineering	3	3	6	9	7
分子科學與工程系/有機高分子研究所 Molecular Science and Engineering	11	7	7	2	7
材料及資源工程系/材料科學與工程研究所 Department of Materials and Mineral Resources Engineering/Institute of Materials Science and Engineering	1	4	8	6	8
環境工程與管理研究所 Environmental Engineering and Management	1	1	1	1	3
資源工程研究所 Mineral Resources Engineering	3	1	1	0	0
小計 **Subtotal**	23	17	26	18	27

專利、技術移轉 Technology Transfer

技轉件數 Number of technology transfer

金額(新臺幣千元)
Research Founding (thousand of NT dollar)

年度 Year / 系所 Division	2015	2016	2017	2018	2019
土木工程系/研究所 Civil Engineering	4 ($660)	12 ($2,881)	7 ($1,345)	6 ($1,330)	10 ($3,102)
化學工程與生物科技系/化學工程碩士班/生化與生醫工程碩士班 Chemical Engineering/Biochemical and Biomedical Engineering	22 ($4,268)	10 ($947)	14 ($2,047)	10 ($3,082)	8 ($1,091)
分子科學與工程系/有機高分子研究所 Molecular Science and Engineering	1 ($500)	3 ($6,335)	4 ($2,640)	2 ($555)	4 ($1,362)
材料及資源工程系/材料科學與工程研究所 Department of Materials and Mineral Resources Engineering/Institute of Materials Science and Engineering	9 ($1,499)	13 ($2,980)	7 ($12,475)	4 ($374)	2 ($147)
環境工程與管理研究所 Environmental Engineering and Management	3 ($356)	1 ($77)	1 ($87)	0 ($0)	2 ($300)
資源工程研究所 Mineral Resources Engineering	7 ($13,814)	4 ($662)	7 ($2,167)	2 ($800)	3 ($530)
小計 **Subtotal**	46 ($21,098)	43 ($13,882)	40 ($20,761)	24 ($6,140)	24 ($6,534)

研究成果 Search Contribution

論文發表件數 Number of publications

As of August 1, 2020

年度 Year / 系所 Division	2015	2016	2017	2018	2019
土木工程系/研究所 Civil Engineering	47	44	42	61	50
化學工程與生物科技系/化學工程碩士班/生化與生醫工程碩士班 Chemical Engineering/Biochemical and Biomedical Engineering	190	181	223	214	227
分子科學與工程系/有機高分子研究所 Molecular Science and Engineering	46	48	57	42	54
材料及資源工程系/材料科學與工程研究所 Department of Materials and Mineral Resources Engineering/Institute of Materials Science and Engineering	120	76	109	102	83
環境工程與管理研究所 Environmental Engineering and Management	41	36	32	30	23
資源工程研究所 Mineral Resources Engineering	16	2	17	15	20
小計 **Subtotal**	460	387	480	464	457

建物配置圖 Building Layout

1.光華館	1.Dept. of Electro-Optical Engineering	11.化學工程館	11.Dept. of Chemical Engineering	21.校友會館	21.Alumnus Association
2.國父百年紀念館	2.Sun Yat-Sen Memorial hall	12.第二教學大樓	12.Second Academic Building	22.紅樓	22.Red House (Historic Monument)
3.土木館	3.Dept. of Civil Engineering	13.第三教學大樓	13.Third Academic Building	23.迴廊	23.Corridor
4.材資館	4.Dept. of Materials and Mineral Resources Engineering	14.共同科館	14.General Studies Building	24.研展中心	24.Innovation and Exhibition Center
5.設計館	5.Design Building	15.分子科學工程館	15.Dept. of Molecular Science and Engineering Building	25.育成產學館	25.Cooperative Education Building
6.宏裕科技研究大樓	6.Hong-Yue technology Research Building	16.化學館	16.Chemistry Building	26.學生宿舍	26.Dormitory
7.第六教學大樓	7.Sixth Academic Building	17.圖書館	17.Library	27.網球場	27.Tennis Court
8.第一教學大樓	8.First Academic Building	18.行政大樓	18.Administration Building	28.籃球場	28.Basketball Court
9.第四教學大樓	9.Fourth Academic Building	19.中正紀念館	19.Chiang Kai-Shek Memorial Hall	29.運動場	29.Track & Field
10.生活科技館（第五教學大樓）	10.Biotechnology Building Biotech	20.綜合科館	20.Integrated Technology Complex	30.億光大樓	30.Everlight Building

國立臺北科技大學
工程學院

College of Engineering, NTUT

10608 台北市忠孝東路三段一號

Tel: 886-2-2771-2171#4522　Fax:886-2-2776-3980

https://coeng.ntut.edu.tw/bin/home.php