國立虎尾科技大學 NATIONAL FORMOSA UNIVERSITY

虎科大國際處 Office of International Affairs, NFU

Formosa Talent Internship Program

Unlock Your Potential Unleash Your Success

If you are ambitious and willing to strive, excelsior, the bright future would be yours.
Welcome to National Formosa University!

Formosa TIP is an international collaboration established by NFU and enhances the spirit of the **Taiwan Experience Education Program** supported by the Ministry of Education in Taiwan.

Formosa TIP encourages foreign students from partner Universities to participate in **short-term internship/project work** at NFU Laboratories & Research Centers.

Formosa TIP features **cultural immersion activities** to improve language, cultural fluency and to ease participants into students' internship in Taiwan.

Formosa TIP is for students interested in studying abroad and doing a lab internship. Participants will stay at NFU for one semester.

Formosa TIP Training Curriculum

- **Project Work (A), (B), (C)** – 9 credits (Lab Internship)
- **Three elective professional courses** – 3 credits each (Total: 9 credits)
- **Basic Mandarin course** – 0 credits (4 hours/week)
- **Total:** 18 credits / 22 hours per week

SPRING SEASON

- 1st Round (Priority Review): **May 31**
- 2nd Round (Waiting List Review): **Jun 30**
- Program Duration: **Sep 8 - Jan 31**

★ Schedule may be subject to change

FALL SEASON

- 1st Round (Priority Review): **Oct 31**
- 2nd Round (Waiting List Review): **Nov 30**
- Program Duration: **Feb 23 - Jun 30**

Further Info

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Scan QR Code for Online Application

Formosa Talent Internship Program

PROJECT WORK

DEPARTMENT OF MECHANICAL & COMPUTER-AIDED ENGINEERING

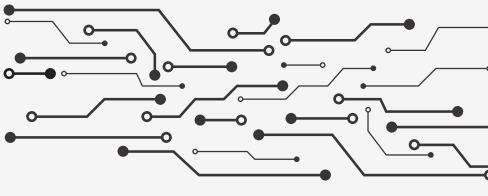
1. Vacuum Technology and Coating Design, Surface Engineering of Materials, Plasma Processing Technology, and Material Structure Analysis
2. Mechatronic Integration of Vacuum Coating Machinery
3. System Integration and Control, Autocontrol and Vision Integrated
4. MEMS Design and Fabrication, and Flexible Electronic Sensors
5. Machine Vision and Image Processing
6. Machining Difficult-to-Cut Materials, and Real-Time Monitoring of Machining Dynamics
7. Mechanical Vibration and Noise, Mechanical Modal Analysis, and Mechanical Structural Design
8. Plastic Forming, Mechanical Dies, Advanced Forging-Stamping & Engineering, and Metallography
9. Footwear Manufacturing Practices
10. Forming Mold and Biomedical Systems, Medical Molds and Devices, Digital Design for Dental Devices, Design & Fabrication of Zirconia Dental Implant, 3D-Printed Titanian Device with Micro-Structure, Customized Hip Joint Design & 3D Printing, Novel Curved Bone Plate Design & Analysis, and Customized Skull Formed Bone Mesh
11. Intelligent Robotics: Theory and Applications, Robotic Arms, Surgical Robots, Biomedical Robotic Navigation Systems, VR Endoscopic Surgery Training System, and AR Spine Surgery Navigating System
12. Soft & Hard Tissue Modeling & Analysis
13. Smart Machines & Precision Mechanical Design, Precision Machining, Machine Tool Dynamic Characteristics Analysis and Testing, Machine Tool Design, and Smart Manufacturing & Measurement
14. Micro/Nano Manufacturing Technologies
15. Computer-Aided Structural Analysis, and Automatic Balancing Device Design

DEPARTMENT OF AUTOMATION ENGINEERING

16. Biomimetic Mechanisms, and Precision Mechanical Components and Systems
17. Power Design & Energy Application, Energy Storage Devices, Power Electronics, LLC Resonant Converter, and Switched Capacitor Battery Balancing Circuits
18. Control Circuits, Industrial IoT Control, and Intelligent Algorithms
19. Embedded Control, Automated Image Inspection, and Automated System Modeling

DEPARTMENT OF MATERIALS SCIENCE & ENGINEERING

20. Energy Storage Batteries, Lead-Carbon Electrodes, Graphene, Nano-Metal/Graphene Composites, and Electroless Plating & Composite Plating Processes
21. Thin Film Fabrication Technology, Semiconductor Processing, Microelectronic Materials, Flat Panel Display Processing, and Thin-Film Solar Cell Devices
22. Optoelectronic Devices, Nanostructured Magnetic Materials, and Magnetoresistive Thin-Film Materials
23. Ceramic Materials, Metal-Ceramic Joining, and Molten Salt Batteries
24. Magnetic Materials, Perpendicular Magnetic Anisotropy, Perpendicular Exchange Bias, Dye-Sensitized Solar Cells, Nanocomposite Materials, and Semiconductor Thin-Film Processing



Formosa Talent Internship Program

PROJECT WORK

DEPARTMENT OF MECHANICAL DESIGN ENGINEERING

25. Dynamic System, Solid Mechanics, Multibody Dynamics, and Vibration Measurement and Modal Analysis
26. Biomechanics, and CAD/CAE
27. Engineering System Design and Analysis, Mechanical Design, Thermal-Fluid and Energy Engineering, and Automation Production Operation Module Development
28. Intelligent Sensing and Actuation, Pyroelectric Sensors and Energy Harvesting, and Sensor Applications
29. Development of Industrial Equipment, Mechanical Design and Mechatronic Systems Integration, Computer Numerical Control (CNC) Machining, and 3D Reverse Engineering

DEPARTMENT OF POWER MECHANICAL ENGINEERING

30. Mechanical Component Design, Gear Design and Manufacturing, and Gear Principles
31. Fluid Mechanics Experiments, Viscous Fluid Mechanics, and Engineering Thermodynamics
32. Net-Zero in Combustion Technology, Combustion & Green Energy, and Combustion & Rocket Propulsion

DEPARTMENT OF VEHICLE ENGINEERING

33. Internal Combustion Engine Simulation and Analysis, Design of New Intake Mechanisms, Design of New Hybrid Electric Systems, and Design of New Active Torque Distribution Differential
34. Vehicle Powertrain Control and Energy Management, and Optimization Design

DEPARTMENT OF AERONAUTICAL ENGINEERING

35. Computational Mechanics, Fracture Mechanics, and Vibration Analysis
36. Drone Swarm, Development and Applications of AI-powered Drones, Outdoor Group Drone Performances and Applications, and Intelligent Robots
37. Mechatronic Integration and Automatic Control
38. Aerospace Technology and Aerodynamics, Natural Convection and Nanofluid Heat Transfer, Virtual and Mixed Reality (VR/MR) Technologies for Civil Aviation, and Flow Field Analysis of Unmanned Aerial Vehicles
39. Aircraft Structures, Wind Power Generation, and Composite Materials Analysis
40. UAV Vehicle Design/Build/Flight: Fix Wing, eVTOL, Multi Rotor, UAV Traffic Management: Flight Control, Navigation, Guidance, and UAV Applications: Cargo, Inspection, Agriculture
41. CubeSat Design, Build & Test, Rocket Design, Build & Test, and Flight Guidance and Control
42. Civil Aviation Engineering Management, Database Planning for Decision Support Systems, Interactive Digital Instructional Material Design, and Numerical Simulation
43. Mechanical Thermo-Fluid Sciences
44. Traffic Accident Investigation and Reconstruction, Aircraft Maintenance Operations, and Quality Assurance System Auditing in the Aviation Industry
45. Engine Diagnostics and Monitoring, Airside Safety, Avionics System Maintenance, Flight Operations Management, Principles of Flight, Civil Aviation Regulations, Aviation Meteorology, and Airline Operators/Maintenance Management

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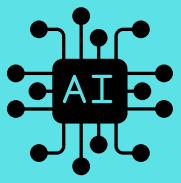
PROJECT WORK



DEPARTMENT OF AERONAUTICAL ENGINEERING

46. Deep Learning, and Programming Languages
47. Antenna Engineering, Radio Frequency Circuits, Computational Electromagnetics, Telecommunication Engineering, and Optimization Techniques
48. Drone Piloting Training, Drone Aerial Photography and Applications, Mechatronic Integration and Automatic Control, and UAV Vehicle Design/Build/Flight: Fix Wing, eVTOL, Multi Rotor

DEPARTMENT OF ELECTRICAL ENGINEERING

49. System on Chip (SoC), Embedded Multimedia Network Application, Multiple Signal Localization of IoT Devices, Dynamic Resource Allocation System for Cloud Computing, Photocatalytic Display Devices, Localization of Multiple Wireless Devices, and Communication Networks, Network Security, High-Speed Networks
50. Artificial Intelligence of Things (AIoT), Microprocessor Applications, Digital Power Management Chip, and Sports, Health, and Chip Application Design
51. AI in Medical Imaging

DEPARTMENT OF ELECTRONIC ENGINEERING

52. Error Control Codes, Wireless Communication, and Fiber Optic Communication
53. Intelligent Robots, Induction Heaters, Embedded Systems, and Robotic Arm

DEPARTMENT OF ELECTRO-OPTICS ENGINEERING

54. Creative Development with Microcontrollers, Microcontroller Application Design, and Digital Signal Processing (DSP)
55. Electro-Optical Detection Technology, Optoelectronic Sensing and High-Frequency Integrated Circuit Design, Micro Opto-Electro-Mechanical Systems (MOEMS), Optical Sensors and Systems, Guided-Mode Resonance Sensors, Surface Plasmon Resonance (SPR) Sensors, and Nanoimprint Technology
56. Optoelectronic Integration Technology, Fiber Optic Component Design and Programming, and Fiber Optic Communication and Sensing

DEPARTMENT OF COMPUTER SCIENCE AND INFORMATION ENGINEERING

57. Cloud Computing and Applications, Database System Design, Big Data Analysis and Security, Artificial Intelligence of Things (AIoT) and Security, Information and Communication Security, and Mobile Applications and Software Engineering
58. Embedded Heterogeneous System Application Design, In-Vehicle Communication and Electronic Network Design, Smart Agriculture Application Design, Smart Machinery Sensing Application Design, and Medical Electronics Design

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PROJECT WORK

DEPARTMENT OF COMPUTER SCIENCE AND INFORMATION ENGINEERING

59. Technology Development for Artificial Intelligence and Neural Network, Technology Development for Big Data Data Analysis and Web Service, Technology Development for Natural Language, Speech and Text Data Mining, Technology Development for Intelligent Control and Industry 4.0, and Technology Development for Intelligent Network Control and Robot
60. Technology Development for Microarray and Semiconductor Component, Bioinformatics, and Genomic Computing and Computational Intelligence
61. Technology Development for Short-distance wireless Communication and Vehicle Applications
62. Open Source Cloud Computing, Cloud Computing and Intelligent System, Hybrid Cloud and Interdisciplinary, Artificial Intelligence Service and Big Data Management, Bio-Information Interdisciplinary AI Application, Data Mining and Interdisciplinary AI Application, and Artificial Intelligence of Things (AIoT)
63. XR & Digital Twins Development, Security Device Development and Module Implementation, and Optimal Solution Searching
64. Artificial Intelligence of Things (AIoT), Robot Operating System, and Information and Communication Security
65. Human-Machine Collaboration, Deep Learning, Interdisciplinary System Integration Design and Application for Robotics, and Image Processing & Intelligent Control

DEPARTMENT OF INFORMATION MANAGEMENT

66. Production Scheduling Theory and Applications, Data Mining, Machine Learning, and Big Data Analytics and Applications
67. Artificial Intelligence Optimization Applications
68. Artificial Intelligence Optimization Applications, Artificial Intelligence and Big Data, Algorithm Development, Heterogeneous Data Integration and Analysis, and Cross-disciplinary Information Integration
69. Internet of Things (IoT), and Cloud Computing
70. Athletics & Information Technology
71. System Analysis and Programming, Network Security, Wireless Sensor Networks, and Computer Network Management
72. Social Media Image Marketing, E-commerce System Integration, and Smart Services
73. Smart Business Applications, Business Intelligence Analytics, Medical Imaging, VR/AR and Digital Dentistry, Biomedicine and Big Data Research, and Mathematical Programming & AI Algorithms

DEPARTMENT OF INDUSTRIAL ENGINEERING & MANAGEMENT

74. Smart Manufacturing Systems, Lean Smart Manufacturing, Lean Production Management, Carbon Emission Monitoring Systems, and Green Supply Chain Management
75. Simulation Studies, Material Handling Systems, Business Automation, and Industrial E-commerce

Revised: May 17, 2025

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PROJECT WORK

DEPARTMENT OF INDUSTRIAL ENGINEERING & MANAGEMENT

76. Cloud Computing, Internet of Things (IoT), Human-Computer Interaction (HCI), and Smart Health Promotion Research
77. Smart & Virtual Manufacturing

DEPARTMENT OF FINANCE

78. FinTech & Carbon Emission Trading, High Frequent Data Analysis & Behavioural Finance, Assets & Portfolio Management, Securities Investment & Financial Analysis, and Investment & Risk Management
79. Credit Risk, Capital Asset Pricing, and Financial Engineering
80. Consumer Behaviour Analysis, Corporate Finance & Governance, Financial Econometric and Empirical Research, and Capital Market

DEPARTMENT OF BUSINESS ADMINISTRATION

81. Service Science, Business Data Communications, Telecommunications Industry Analysis, Electronic Commerce, Data Mining & Analysis, Queueing Behaviors & Marketing, and Network Marketing
82. Corporate Governance, Behavioral Finance, and Information Economics
83. Marketing Management, Consumer Behavior, Service Industry Management, Marketing Research, Statistical Data Analysis, and Innovation Management, Applications of AI in Digital Marketing
84. Technology Innovation Management, Technology Commercialization, and Entrepreneurship Management
85. Organizational Behavior, Human Resource Management, and International Business Management

DEPARTMENT OF MULTIMEDIA DESIGN

86. Product Semantics, Visual Semiotics, Typography, and Human-Computer Interface Design
87. Network Multimedia System Design
88. Interactive Media and Website Visual Design, and User Interface Design
89. Computer Multimedia, Graphic Design, Web Design, Digital Editing and Image Processing, Visual Communication Design, Interactive Media Design, and Computer Graphics
90. VR Digital Content Industry Design, AR Mobile IoT (Internet of Things) Design, XR User Interface Design, and Mixed Reality Creative Industry Research

DEPARTMENT OF BIOTECHNOLOGY

91. Environmental Toxicity Assessment, Nano-Safety Assessment, and Nanomaterials Applications
92. Biomimetic Applications, and Biodegradable Materials
93. Biochemical Engineering, Food Biotechnology, and Biomaterial Chemistry
94. Protein Engineering, Bee Biotechnology, Molecular Biology, and Food Biotechnology
95. Molecular Immunology, and Anti-Allergic Activities of Natural Compounds
96. Analysis of Bioactive Constituents from Chinese Medicines

DEPARTMENT OF APPLIED FOREIGN LANGUAGES

97. Language Tutor (English Teaching)
98. Language Tutor (Japanese Teaching)
99. Language Tutor (German Teaching)
100. Language Tutor (French Teaching)
101. Language Tutor (Spanish Teaching)