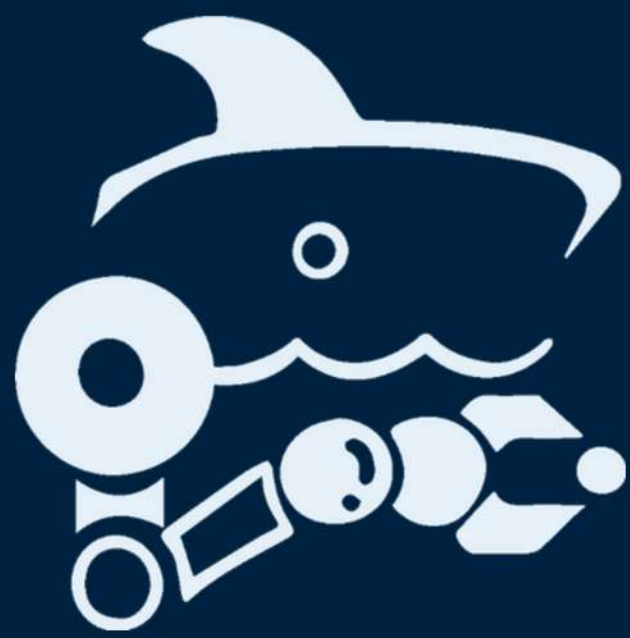




# NKUST

## 2026 Specification Worksheet



國立高雄科技大學  
National Kaohsiung University of  
Science and Technology

ROV 後勁  
**HouJing**



### Members

**CEO**  
Cheng Ying Ho (year 2)

**CTO**  
Wei Yu Lai (year 3)

**CFO**  
I Chen Lin (year 2)

**Safety Officer**  
Cheng En Ho (year 2)

**Chief Engineer**  
Jun Ting Zhu (year 2)

**Project Manager**  
Guan Syuan Fang (year 1)

**Software Engineers**  
Chuan Li Wei (year 2)  
Yu Chen Hsieh (year 1)

**Mechanical Engineers**  
Bo Yan Chen (year 2)  
Ke Sin Chen (year 2)  
Chueh Hsuan Hsieh (year 1)

**Supervisor**  
Dr. Chieh Wei Hsu

### Special Features

- 1.Reinforced Hybrid Chassis:** Combines a PE frame with rigid aluminum extrusions for high stability in strong currents.
- 2.Offline Image Recognition:** Locally processes real-time video without internet dependency to autonomously identify and count invasive species.
- 3.Multi-View Camera Switching:** Allows the pilot to alternate between viewing angles for seamless task monitoring.
- 4.Custom Payload Tools (2026 Mission):**
  - a.Micropile Installer:** Custom tool for secure underwater anchoring.
  - b.Basket Star Collector:** Dedicated mechanism for retrieving basket stars.
  - c.High-Friction Gripper:** Custom rubber-lined jaws that boost grip reliability for heavy objects while ensuring delicate handling to protect coral reefs.

**Company**

**NKUST**

**School**

National Kaohsiung University of  
Science and Technology

**Home state**

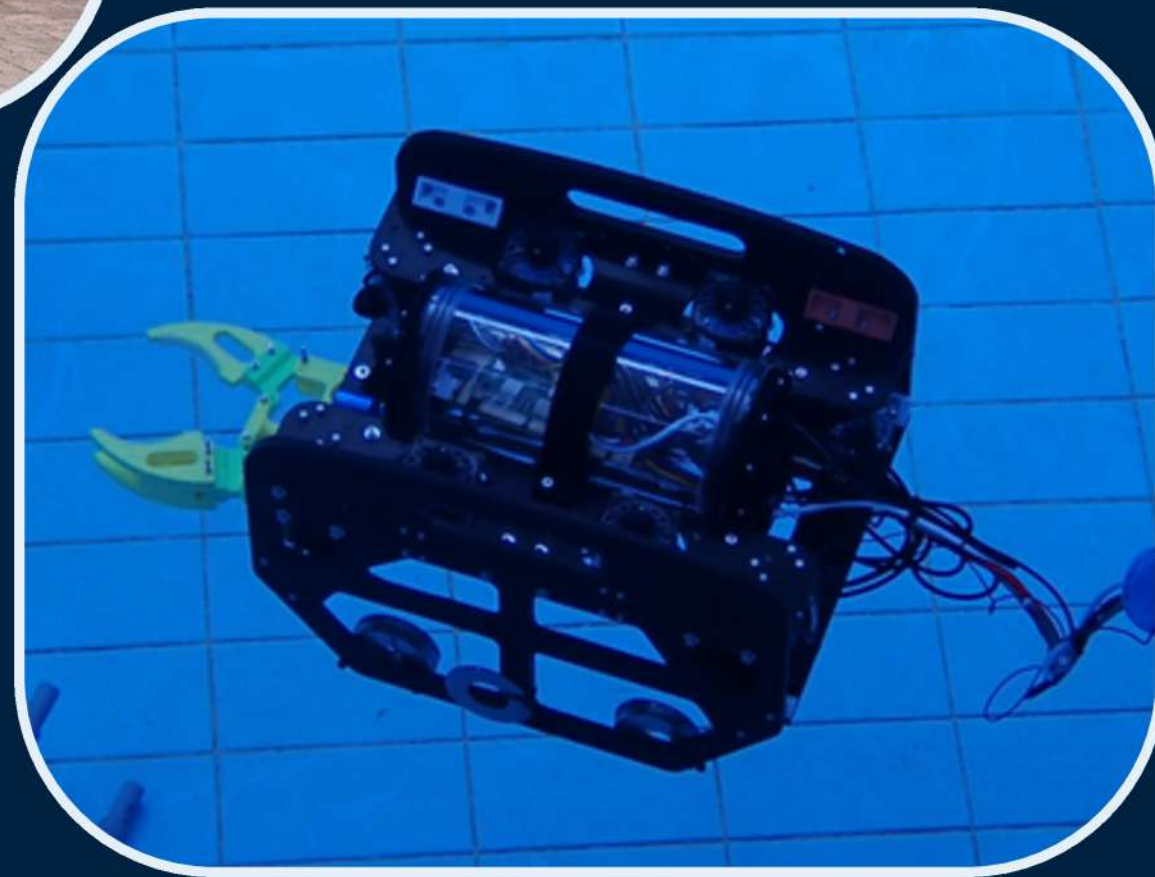
**Kaohsiung, Taiwan**

**Distance traveled**

**12,167.9 km**

**MATE Participation**

**1 Competition**



**2026 ROV HouJing**

**2026 Float**

**Cost**

**6,947.88 USD**

**Design & Build**

**409 student-hours**

**Size**

**370×340×500 mm**

**Weight**

**12.8 kg**

### Safety Features

- 1.Control Box:** Clean internal wiring with zero exposed conductors; all AC/DC circuits explicitly labeled.
- 2.Thruster Guards:** Fully shrouded with custom 3D-printed guards complying with IP-20 standard (mesh openings < 12.5mm).
- 3.No Sharps:** All surfaces and edges passivated to eliminate sharps or pinch points (protecting personnel and pool liners).
- 4.Strain Relief:** Anchored directly to the chassis to protect internal connections from cable pulling.