



7.1 citations per paper in 2019.

Cleanup 325 kg
garbage in 2019.

In 2019, NCTU offered
32 related courses.



Collaborating with Hiin Studio to clean up marine garbage

Taiwan is an island country that is surrounded by water. It only takes 15 minutes to drive from the Guangfu Campus of NCTU to the nearest Nanliao Beach. NCTU Service-Learning Center leads students to truly look into the challenges and problems which the environment is facing, and to mitigate the impacts of pollution on marine ecology through practical actions. In 2019, NCTU teamed up with Hiin Studio with 61 students participating in a 2-hour beach cleanup, removing a total of 325 kg garbage from the coast. In spite of the short period of the beach cleanup, students were personally impressed by the profound meaning of environmental protection and started to take action to reduce plastic use in their daily life.

Inventing an intelligent aquatic garbage cleanup vessel to protect marine ecology

The Autonomous Underwater Vehicle (AUV) team, composed of students from the Department of Mechanical Engineering of NCTU, developed the "intelligent aquatic garbage cleanup vessel" by using the "Rabboni sensor" as the core component, combined with machinery, sensing, solar energy, software, and wireless communication. The team also applied the system of Artificial Intelligence and the Internet of Things (AIoT) to marine ecological protection to collect wastes on the lake or on the sea via intelligent remote-control sensors.

In addition, the AUV team was invited to the "Little Edison—Ocean Cleanup Vessel Experience Camp" to share the achievement of the "intelligent aquatic garbage cleanup vessel" with high school and elementary school students. The teenagers were introduced to the AIoT system, marine education, environmental protection issues and other interdisciplinary knowledge, and were expected to apply these ideas to develop an "ocean cleanup vessel" to salvage the garbage floating on the surface of ocean.

