

## SDG4: Quality Education



### SDG 4.3.1 Public resources (lifelong learning)

Provide free access to educational resources for those not studying at the university – e.g. computers, library, online courses, and access to lectures.

#### Free access to campus facilities and equipment

##### 1. Training Program for Interdisciplinary Talents of Biomedicine and New Agriculture

In order to strengthen Taiwan's competitive advantage in developing the biomedical industry and new agriculture industry, and make the biomedical industry and new agriculture a new driving force for the rapid development of Taiwan's overall industry, the Ministry of Education launched the "Training Program for Interdisciplinary Talents of Biomedicine and New Agriculture. NTOU offers free summer courses for credit, and our target students include (1) teachers, students (including the undergraduate, master, and doctoral students) from public and private universities, (2) researchers, technicians, and assistants from academic research institutions, (3) people related to agriculture and food industry, and (4) people who are interested in innovative issues in agriculture and food industry.

Evidence: NTOU-Training Program for Interdisciplinary Talents of Biomedicine and New Agriculture

<https://reurl.cc/le3p4A>

<https://fs.ntou.edu.tw/p/406-1073-60397,r44.php?Lang=zh-tw>



##### 2. Fish-eating marine education experience promotion activities

Keelung fishery is well-known in Taiwan, especially the annual neritic squid season series of activities that attract a thousand of people to Keelung for sightseeing and experience, but it is not easy for people to receive complete neritic squid information when participating in neritic squid season activities. While in-depth tourism is becoming more and more popular, through slow-travel and slow-

taste activities, in addition to improving the quality of Keelung's sightseeing and tourism, it can also upgrade Keelung's marine industry, especially the experience activities that combine industry and education are also important. Therefore, the purpose of this course is to bring Keelung's famous neritic squid into the classroom through the experiential learning mode. Through a series of courses, students can learn about the structure of the neritic squid, the ecology of the neritic squid, and the relationship between the neritic squid and the environment, and finally, we will teach how to cook the neritic squid so the neritic squid could integrate with the closer connection of life to cultivating students' marine literacy. The course is based on an experiential learning circle and is designed with a simple anatomy course, allowing elementary school children to observe the internal and external structure of the neritic squid through the process of the learning circle. With presentations and videos, the ecology and structure of the neritic squid are explained, and scientific knowledge is provided to support the content of their observation so that students build awareness of biological anatomy and associations with neritic squid season.



### 3. Joint Research Growth Series Courses

Five teachers from the Department of Aquaculture, the Department of Food Science, the Institute of Marine Environment and Ecology, and the Bachelor Degree Program in Marine Biotechnology jointly organize the "Joint Research Growth Series". Invite university students and freshmen of research institutes to participate, train in basic research skills, and receive certificates after class as a bonus for application and employment.

Evidence: Course Introduction

<https://pse.is/4hh6me>

### Free access to campus facilities and equipment

#### 1. Our library open to the public

The public can use our reading space for reading or use our collections and e-resources for studying. They also can use our free wi-fi in the library. We provide 50 temporary library passes

available per day. In responding to the spread of COVID-19, the library may depend on the epidemic situation temporarily close to visitors. In 2021, 3831 visitors used our library.

"Dream Ocean" is a marine-themed multi-functional room. There are four areas: marine-themed book area, multimedia viewing area, virtual reality (VR) experience area, and information retrieval area. In addition, readers can participate in the "Dream Ocean" video appreciation activity. The library provides readers with the library's rich multimedia resources and high-quality space to give readers a deeper understanding of the ocean

Evidence :

(1)Library Open Hours.

<https://reurl.cc/3Yd5vM>

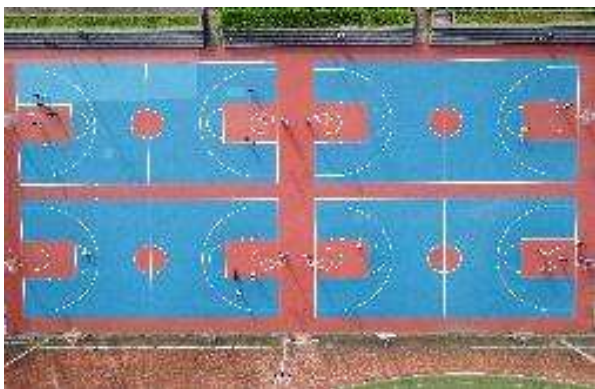
(2)Evidence 2: Dream Ocean

<https://reurl.cc/1mrlM9>



## 2. Our sports facilities open to the public

It is equipped with indoor and outdoor athletic facilities, including an indoor track, an artificial grass soccer field, a beach sand volleyball court, a gymnasium, water sports facilities, and sailing and dugout canoes. You can frequently see teachers and students exercising together.



## Free access to online resources

1. National Taiwan Ocean University Annual Fixed Fee Purchasing Electronic Book. The first point is to expand the electronic book reader, which is a multi-reader recognition electronic book platform. The second point is the SDGs concept. For this reason, I have been promoting two projects in an electronic book.

(1) Linear Theme Exhibition:

The HyRead platform (website: <https://ntou.ebook.hyreadtw/>) is used by teachers and students of the National Taiwan Ocean University, which provides licensed e-books. Selected 118 e-books from the tens of thousands of books in the library. Two types of e-books, such as challenge selection in science, environment protection ecology, etc., are compatible with the United Nations Sustainable Development Goal SDG13. Teachers and students of the whole school can read directly at the site.

(2) Real Book Exhibition:

Design exhibition marine report printed seal on a plastic plate, Kagami QR CODE, and SDGs logo. Exhibition space in the second building of the bookstore, where the actual books are displayed in large and small sizes. You can see it immediately when the reader enters the library. Quickly scan QR CODE, instantly borrow ebooks, and promote SDGs goals.

Evidence: Free access to online resources

<https://reurl.cc/qNMajg>

## 2. Open Educational Resources

Free 36 full audio-visual online courses for self-learning, no time and place restrictions on learning.

Evidence: NTOU OpenCourseWare

<https://www.o-channel.org/ocw>

## 3. Enhance knowledge of APCS and cognition of CSE for high school students.

We provide access to educational resources for high school students. The educational resources include the knowledge of APCS(Advanced Placement Computer Science) and the cognition of CSE(Computer Science and Engineering). The measure could expand quality education to the public.

Evidence: Conduct 9 seminars for high school students.



#### 4. Develop the habit of lifelong learning

##### (1) Credit courses for non-degree-seeking student

National Taiwan Ocean University offers credit courses for non-degree-seeking students who are not admitted into a degree program at the university or applying for formal admission afterward.

##### (2) Senior citizens learning camp

National Taiwan Ocean University offers senior citizens learning camps annually for senior learners (over 55 years old, but usually retired and older than 65). In 2021, the total number of enrolled students was 55, and the total credit hours were 216.

#### 5. After-school camp activities

To fulfill the university's social responsibility, give back to the local community, and enhance the service work of students after school in Beigan for the purpose of fostering interaction and communication between school and local residents, students assisted local elementary school students with after-school camp activities and tutoring activities with the knowledge they learned in school. This semester's tutoring activities began on October 29, 2021, and ended on December 16, 2021, three days a week for eight weeks. Each day, nine students from the Matsu School District went to Tongqi Elementary School to teach students.



### SDG 4.3.2 Public events (lifelong learning)

Host events at university that are open to the general public: public lectures, community educational events.

#### On programmed basis

##### 1. Promoting general ocean science education

- (1) The 6th International Conference on Ocean Law & Policy was held in 2021. It focuses on the discussion of the policy, law, economy, and risks of offshore wind power energy.



- (2) NTOU invites NTOU alumni to return to the university and share their academic and entrepreneurial experiences. NTOU students will be therefore inspired to help our society via their professions in the future.



Evidence :

<https://mprp.ntou.edu.tw/p/404-1017-55394.php?Lang=zh-tw>

(3) Lecture on the Application of artificial intelligence to innovative services



(4) Lectures on Oceanic Culture



(5) Cross-school marine experience course—SUP (including the teaching of rowing, paddling, and standing)



(6)Cross-school marine experience course—surfing (including the teaching of rowing and standing)



## 2. 2021 The First Ocean Law and Politics Learning Experience Contest

The topic of the activity is "The balance between marine development and marine environmental protection". We hope to show the importance and urgency of the balance between marine development and marine environmental protection to the nation from the perspective of high school and college students.

Evidence: 2021 The First Ocean Law and Politics Learning Experience Contest

<https://dolp.ntou.edu.tw/p/406-1069-58896,r11.php?Lang=zh-tw>



**2021 全國海洋能源創意實作競賽** 大專級 / 高中職 / 國中級

**競賽主題**  
 探討海洋能源開發對全球之環境與經濟、社會與政治、生態與國際、國際、國際、國際關係與發展對全球環境與能源開發與利用之影響。

**組別與名額**  
 組別：大專級、高中職、國中級  
 名額：大專級 30 隊、高中職 20 隊、國中級 10 隊

**參賽資格**  
 1. 大專級：由本校或他校（含附屬）大專學生組成之團體。  
 2. 高中職：由本校或他校（含附屬）高中職學生組成之團體。  
 3. 國中級：由本校或他校（含附屬）國中學生組成之團體。

**競賽時間**  
 報名日期：2021 年 8 月 15 日（星期四）上午 9 時至 2021 年 8 月 20 日（星期三）下午 5 時  
 抽籤日期：2021 年 8 月 21 日（星期四）上午 9 時至 11 時  
 決賽日期：2021 年 8 月 21 日（星期四）下午 2 時至 4 時

**報名辦法**  
 1. 報名日期：2021 年 8 月 15 日（星期四）上午 9 時至 2021 年 8 月 20 日（星期三）下午 5 時  
 2. 報名地點：國立海洋科技大學 海洋教育推廣基地  
 3. 報名電話：(02) 2652-1000 轉 33333  
 4. 報名網址：[dolp.ntou.edu.tw](http://dolp.ntou.edu.tw)

**備註**  
 1. 本競賽之經費由主辦單位負擔。  
 2. 本競賽之報名費為 1000 元，由主辦單位負擔。  
 3. 本競賽之抽籤費為 1000 元，由主辦單位負擔。  
 4. 本競賽之決賽費為 1000 元，由主辦單位負擔。  
 5. 本競賽之獎品由主辦單位提供。



### 3. 2021 Ocean renewable energy creativity and implementation competition

In recent years, energy access and environmental protection have become inseparable issues, leading to the rapid development of alternative energy technologies other than fossil fuels, of which offshore wind and ocean energy are the most important areas requiring innovative human investment. Offshore wind and ocean energy are the areas that require the most innovative human investment. The combination of the two has become a trend due to technological evolution and cost considerations; in particular, the combination of wave energy converters is a new trend in renewable energy research and development. These combinations also bring new opportunities for cross-disciplinary technologies.

Since 2011, the National Taiwan Ocean University (NTOU) has established the Marine Energy Technology Talent Training Resource Center and started to hold marine energy-related competitions to design and calculate the cost and installation of wave and current energy converters. The competitions have been very fruitful. The National Taiwan Ocean University's hydrodynamic laboratory was utilized to allow the teams to operate and verify the finished products and to encourage students to combine textbook knowledge with practical work. The team was encouraged to combine textbook knowledge and practical work to achieve the effect of applying the knowledge to practice.

Evidence:

<https://www.facebook.com/energyntou/>

### **SDG 4.3.3 Vocational training events (lifelong learning)**

**Host events at university that are open to the general public: executive education programmes (this refers to short courses for people who are not attending the university; this specifically excludes courses like MBA) and/or vocational training.**

#### **On programmed basis**

##### 1. Develop the habit of lifelong learning

###### (1) Credit courses for non-degree-seeking student

NTOU offers several bachelor-level courses for students with high school degrees and graduate-level courses for students with a bachelor's or another post-secondary degree who is not admitted to or are currently active in NTOU program. The goals of credit courses for non-degree-seeking students are several, including enhancing knowledge for the public, increasing competitiveness for professionals, improving quality of life, and achieving win-win outcomes for industry and the university.

###### (2) Senior citizens learning camp

NTOU offers senior citizens learning camps annually for senior learners (over 55 years old, but usually retired and older than 65). Our goals are to achieve targets such as increasing seniors' skills and general knowledge (health, art, history, ICT, food safety, etc), but they also encourage them to remain active (voluntarily and through intergenerational activities) by creating an environment that allows the fluent exchange of knowledge and increases their competences as citizens (capable of discussing, defending their rights, taking on an active role in other areas, etc.). Overall, the university aims to increase senior citizens' well-being, integration, and quality of life. In every academic year, 2 camps are open for at least enrolling 50 seats. Admissions fees are discounted for those with low-income, low-to-middle income, or persons who are with disabilities. In 2021, the total number of enrolled students was 55, and the total credit hours were 216.

##### Evidence :

- (1) Senior students were taught in a boat-building course. By doing this, senior students got a general knowledge of shipping and practiced hand-eye coordination.



(2) Lecturer taught general knowledge about chemistry with illustrations of daily life and cautions.



(3) <https://sites.google.com/email.ntou.edu.tw/ntousenior/>

## 2. Conduct several STCW professional training courses

The Maritime Development and Training Center (MDTC) of National Taiwan Ocean University (NTOU) has been organizing and providing STCW professional training courses for national seafarers for years. Such STCW Training courses are mandatory for all flag states for all working seafarers. The STCW instrument is the international standard, approved by MCA, USCG, the Marshall Islands Registry, and nearly every leading flag state in the world.

Since 1981, MDTC has been commissioned by the Maritime and Port Bureau of the Ministry of Transportation and Communications to conduct various maritime professional training courses for seafarers, including pre-service and on-the-job training every year to help national crews gain proficiency for safe working practices, emergency procedures and teamwork within the maritime environment.

Evidence :

(1) Proficiency in Survival Craft and Rescue Boats.



(2) Radar Navigation, Radar Plotting, and use of ARPA Radar Navigation at the Management Level.



(3) <http://www.stc.ntou.edu.tw/courses/>

### 3. 2021 Marine Educators Basic Training Program for Underwater Cultural Heritage

Underwater cultural heritage (UCH) belongs to every citizen, and UCH includes many important historical artifacts, e.g. the shipwreck General No. 1. The investigation of UCH involves several scientific issues. Underwater archaeologists use different equipment and tools to find the UCH relics on the sea floor. The UCH conservation is related to physical and chemical professional knowledge. So let the teachers and students understand the UCH research process is a meaningful science popular activity. Our work was to hold one lesson plan workshop for teachers. This two-day workshop had 30 attendees. The attendees of the workshops learned the UCH knowledge (e.g. ROV) and converted the knowledge into their daily teaching. We expect that 900 students would be benefited from this activity.

## Evidence 1 : Seed Teacher Training Camps

<https://coch.boch.gov.tw/Achievement/Detail/7931d2a8-44e1-45ad-8d97-08e6106ba7a1>

## 4. Seasonal Mandarin Intensive Course

In order to help foreigners learn Chinese and to create a Chinese learning environment in Keelung, the Chinese Language Center offers an intensive Chinese language class (seasonal class) every year for those who wish to learn Chinese and to arouse the interest of foreign students to study in our department. The classes are small in size and provide tailor-made courses to increase the interaction between students and teachers in the classroom, thus enhancing the effectiveness of learning and enabling students to acquire basic Chinese language skills and learn about Chinese culture in a short time.

Evidence: Seasonal Course

<https://r083.ntou.edu.tw/p/412-1100-9952.php?Lang=zh-tw>



## 5. Extra-curricular Chinese Language Enhancement Programme

The Chinese Language Center offers extra-curricular classes for foreign students who have learning difficulties or who wish to use their time to improve their Chinese language skills. The classes are arranged and attended by students who need to take the initiative to address their learning gaps.

Evidence: Seasonal Course

<https://r083.ntou.edu.tw/p/412-1100-9952.php?Lang=zh-tw>



## SDG 4.3.4 Education outreach activities beyond campus

**Undertake educational outreach activities (e.g. tailored lectures or demonstrations) beyond campus – in local schools, in the community. This can include voluntary student-run schemes.**

### On programmed basis

#### 1. Developing University Features

NTOU continues to further the development of ocean science in the public, private, academic, and institutional sectors, including research and developing marine-themed research, pushing distinct university ocean science education and learning materials, promoting national ocean awareness, fostering student ocean literacy, cultivating student watersports clubs, and aligning with international marine industries. NTOU is committed to establishing international education and research partnerships and strives toward its vision of becoming one of the top universities in the world for teaching excellence and research in the fields of maritime and ocean-related studies.

NTOU exhibited the results with 12 innovative achievements of agricultural-university industry linkage at Taipei Nangang Exhibition Center, Hall 2 from 2nd, December 2021 to 4th, December 2021. including ‘Agricultural drones facing the future’, ‘Cultivation techniques for copepods’ and ‘Application of food safety management system in Aquaculture and Aquatic Products Processing’, etc.

Evidence: 2021 Taiwan Fishery Technology Publication

<https://mprp.ntou.edu.tw/p/406-1017-67815,r1031.php?Lang=zh-tw>



#### 2. Green Level Marine Educators Training Course

The Taiwan Marine Education Center was established to integrate national marine education resources, review and plan marine education policies and help promote local marine education. For four years, Taiwan Marine Education Center has worked continuously with local marine education centers and schoolteachers on projects entrusted to them by the Ministry of Education. It has

identified several issues confronting the White Paper on Marine Education Policy (promulgated in 2007) since its implementation. First, marine educators were scattered everywhere without an integrated system; second, work conditions for marine educators varied significantly, leading to a big difference in teaching quality and lack of commonality; third, marine education promoted by local marine education centers lacked systematic integration in human resources; fourth, the Ministry of Education had not set up a central marine education counseling team; fifth, some grassroots teachers had not yet touched marine education.

To resolve the above-mentioned issues, Taiwan Marine Education Center further conceived and proposed the "Training Mechanism for Marine Educators" hoping to achieve the following main objectives:

- (1) Integrate the power of marine educators, including school teachers, volunteers from social education institutions, marine professionals, and members of private marine organizations
- (2) Build a professional culture for marine education and provide common competencies to improve the quality of marine educators.
- (3) Assist cities/counties in setting up talent databases, promoting the systematic integration of human resources, and forming marine education counseling teams.
- (4) Develop marine educator facilitators in schools to build a sustainable mechanism for marine education.

Evidence: <https://tmec.ntou.edu.tw/p/412-1016-6269.php?Lang=zh-tw>

Marine Educator Training Course (ntou.edu.tw)



### 3. Exploring Taiwan's Marine Culture—Directions of Marine Education for Elementary and Secondary School Students

To popularize marine education and cultivate talents with ocean literacy, the K–12 Education Administration of the Ministry of Education commissioned the Taiwan Marine Education Center to



plan the directions of marine education in the northern, central, and southern regions of Taiwan and provide marine education-related activities for students of elementary and secondary schools.

The Taiwan Marine Education Center invited Yehliu Elementary School (Wanli District, New Taipei City), Wenchang Elementary School (Beitun District, Taichung City), and Yizai Elementary School (Anping District, Tainan City) to serve as pilot schools. According to the learning topics of marine education in each region, 1-day age-appropriate courses were arranged from November to December.

The educational direction in the northern region focused on marine geology and culture. In the morning, the students visited the National Museum of Marine Science and Technology. The museum guide introduced students to marine culture in Taiwan and used special exhibitions to explain how countries at different latitudes use their marine resources. For lunch, students enjoyed a sumptuous seafood meal at their school, where the principal provided an introduction to the “slow fish diet.” In the afternoon, students visited the Yehliu Geopark and Yehliu Fishing Village to learn about the formation and appearance of various terrains created by marine erosion. In addition, students were introduced to different navigation methods through learning activities offered by the school. Students also learned more about their hometown through the fishing village visit and gained an understanding of changes in fishing resources and fishing methods related to Wanli crabs.

The educational direction in the central region focused on marine culture and society. Students visited the Fishery Exhibition Hall of Wuqi District Farmers’ Association, Wuqi Fishing Port, Lukang Old Street, and Yunlin Geloina Erosa Exhibition Pavilion. At the Fishery Exhibition Hall, students explored various Taiwanese fish and aquaculture exhibits. Through a detailed explanation by Director Huang of the Wuqi District Farmers’ Association, students gained an in-depth understanding of the evolution of Taichung Port and Taiwan’s marine culture. Moreover, with a visit to the nearby Wuqi Fishing Port, students learned about local fishery culture. At the invitation of the Inspection Office, students also visited the Rockfish Marine Station in Wuqi Fishing Port set up by the Ocean Affairs Council to learn about the daily work of coast guards and related assistance projects; this experience increased students’ understanding of coast guards and how they rescue people. Subsequently, students visited Lukang, which is famous for maritime trade, for a guided tour of trade history. They also participated in a do-it-yourself course on lion necklaces, which are closely related to temple culture. These experiences enabled students to understand the importance of maritime trade to local development and its cultural and historical influence. Finally, students visited the Yunlin Geloina Erosa Exhibition Pavilion. The vivid explanation and guidance of the guide enabled students to learn about the differences of bivalvia and the most effective means to select them. After the explanation, students attended a do-it-yourself course involving sea shells; students turned marine debris into small artworks. Finally, activities such as canoeing and clam handling were organized to provide students with opportunities to experience the ocean.

For the educational direction in the southern region, students visited the LOHAS Ocean Maritime Academy in Anping District, Tainan to experience canoeing. Several professional coaches and schoolteachers led the students on their first canoeing activity, and everyone had a great time. At noon, the students went to the Milkfish Exhibition Pavilion at Yuguang Island. The exhibition guide introduced milkfish culture to the students. Students were given the opportunity to prepare their own fish balls, which were then incorporated into the fish ball soup that the students had for lunch. Through the activities at this exhibition, students learned about the fish-eating culture in Tainan. Finally, they visited the Erren River in Kaohsiung which was once heavily polluted. Students took a motorized bamboo raft to observe various birds that returned to the habitat and mudskippers and fiddler crabs in the Baishalun Wetland at a close range; this experience along with the information provided by the guide helped instill in students a sense of caring for the ocean.

Evidence: (1)Fishing Explanation



(2)Directions of Marine Education for Elementary and Secondary School Students

<https://tmec.ntou.edu.tw/p/412-1016-10069.php?Lang=zh-tw>

#### 4. Fishery Community Travel Itinerary Planner Training Courses

We conducted the training courses for fishery community travel itinerary planners at Neicheng Community Activity Center in Yilan County on October 6-7, 2021, and at the Xingang Community Activity Center in Kaohsiung City on October 18-19, 2021. And we invited the Fisheries Agency, the lecturer at the Department of Tourism and Leisure Management, the local community development association, and the travel agency operators to share, and let students communicate with each other.

Evidence: Project introduction

<https://reurl.cc/jGbj7L>

#### 5. Marine Education Experience Camp

The Courses include marine career exploration, fish-eating education, and sustainable oceans are conducted for teachers and students from elementary to high school. In 2021, there were 5 sessions and 242 participants.

#### 6. Teaching Practice Research and Digital Multimedia Workshop

Teaching Practice Research and Digital Multimedia Workshop: The three-day workshop was held for 35 teachers to refine their teaching quality and stimulate teachers' diversified teaching methods to enhance student's learning effectiveness.

Evidence: Project introduction

<https://ctl.ntou.edu.tw/files/11-1014-7392.php>

#### 7. 2021 Extracurricular Activities Diversity Sustainable

NTOU has created more than 103 clubs and organizations in various fields, such as Entertainment Clubs, Academic Clubs, Departmental Student Associations, Sports Clubs, Servicing Clubs, Friendship Clubs, Arts and Crafts Clubs, and Volunteer groups. The gender of student leaders in clubs and organizations is 67 male and 36 female, and the gender ratio is 2:1. There are many types of clubs, suitable for both movement and stillness. It is suitable for students of this school to participate freely according to their own interests. It is not restricted by department, grade, or gender. Students are encouraged to actively participate in their spare time. The Ministry of Education promotes activities such as community development plans and social services in primary and secondary schools, so as to cultivate students' enthusiasm for public welfare and service to the community.

Since 2003, NTOU has committed to promoting the development of primary and secondary school clubs, so it encourages students using the characteristics and expertise of clubs to cooperate

with local primary and secondary schools, to create a diverse learning environment on campus, and to promote the development of students' social education. So far, 14 clubs in NTOU have arranged eight services. For example, our services were held in Heping Elementary School, Zhengbin Elementary School, Zhongxiao Elementary School, Badou Elementary School, Anle Elementary School in Keelung City, Keelung Zhongshan High School, Keelung Girls' High School, Haida High School and Ruifang Middle School in New Taipei City. 134 volunteers(included 73 males,and 61 females) and 350 participants(included 190 males and 160 females), were involved in the programs. Our activities encouraged club members to participate in service courses, and the feedback was excellent.

Our students went to schools located in Xinguang Elementary School in Jianshi Township, Hsinchu County, Sanzhan Elementary School in Xiulin Township, Hualien County, Gengfang Elementary School in Toucheng County, Yilan County, Penglai Elementary School in Suao Township, Yilan County, and Songluo Branch in Datong Elementary School in Datong Township, Yilan County, etc. 101 volunteers from NTOU participated in five service activities, including 56 males and 45 females. served 221 people and provided 161 service hours.

In order to promote the arts and cultural performances, our student clubs hold annual music performances, such as orchestra concerts in Keelung Cultural Center.

The Longgang Ecological Park is located on our campus, which is an ecological environment with rich biological species. NTOU plays a significant role in environmental education. During April, we have the Firefly season in Longgang Ecological Park, which attracts more than 1,500 people from New Taipei City, Taipei City, and Keelung City to watch fireflies. This year, there were more than 2,500 people participating in our firefly season activities.

Evidence: Introduction of extracurricular activities diversity sustainable

<https://stu.ntou.edu.tw/p/405-1023-76795,c10827.php?Lang=zh-tw>



## 8. Relocation teaching program

The Matsu three Department's relocation program is an important annual teaching activity. Through the curriculum, students are able to strengthen their practical experience in society, visit outstanding corporate units in different places (both at home and abroad), understand the operation mode of local enterprises, experience local cultural differences, conduct interactive dialogues and on-site visits, and understand the development and operation of enterprises. They all enhance students' international competitiveness and make them become professionals with extensive knowledge.

The total number of participating students and teachers in 2021 is 79, the participating units are as follows:

### (1) Bachelor's Degree Program in Marine Biotechnology:

Taiwan Tobacco and Liquor Corporation Taoyuan Sake Brewery, TAIWAN CHLORELLA MANUFACTURING CO., LTD, Kavalan Whisky Distillery, Jim & Dad's Brewing Company, Taitung Branch Aquatic Ecology Exhibition Hall, Shin Tong Yang Aquaculture Farm, Li Chuan Aquafarm, and Donghe Food Factory.

### (2) Bachelor's Degree Program in Ocean Engineering and Technology:

Hualien Port, Ninth River Management Office, Water Resources Agency, Ministry of Economic Affairs, Taifei Marine Deep Water Park, Su'ao Port, First River Management Office, Water Resources Agency, Ministry of Economic Affairs, Wushi Port.

### (3) Bachelor's Degree Program in Ocean Business Management:

DECATHLON Warehouse, Ruifang Logistics Republic, Anping Port Branch Office, Argo Yachts Development Co., Ltd, Kao Ming Container Terminal Corp. (KMCT), Kaohsiung Port Branch, YES LOGISTICS CORP.

Evidence: Introduction of relocation teaching program

<https://matsu.ntou.edu.tw/files/15-1004-44377,c85-1.php?Lang=zh-tw>

## 9. New Taipei City Coral Marine Education Promotion Program

A free coral education program (珊瑚小學堂) **was held at the Marine Resources Restoration Park(新北市政府海洋資源復育園區) in Gongliao.** This course introduced the coral species, characteristics, and ecological challenges in Taiwan. The coral planting course let the participants plant coral by themselves. This course inspired them to protect the ocean and coral reefs by planting coral with their own hands.

In addition, in the Marine Resources Restoration Park, a coral farm has been set up to provide professional coral farming techniques and advice on coral conservation to the technical staff of the New Taipei City Fisheries and Fishing Harbor Management Office to conserve the corals in Northeast Taiwan. 1295 corals are currently being cultivated at the Marine Resources Restoration Park.

Evidence: Introduction of coral education program

<https://fishery.ntpc.gov.tw/cht/index.php?act=album&code=view&id=51>



#### 10. Disaster relief volunteer resilient community in Keelung City

The Keelung City Fire Department held the "110 Years First Disaster Prevention Personnel Training Course", inviting the chiefs and officers of the Zhongzheng District and Nuannuan District. The Keelung City Fire Department and the cooperation team assisted the city government in coordinating the "Disaster Prevention Training Program". A total of four training programs were carried out in 109-110, and the disaster prevention personnel system was extended to the four administrative districts of the city, including: Zhongshan District (echelon 1), Renai District, Qidu District (echelon 2), Zhongzheng District, Nuannuan District (echelon 3), Anle District, Xinyi District (echelon 4), strengthen the three elements of disaster mitigation: "self-help, mutual assistance, public service" "Assistance", inviting citizens to participate in disaster prevention.

Evidence: Introduction of program

<https://www.klfd.klcg.gov.tw/tw/klfd1/2024-106987.html>



## 11. The disaster prevention training

To enhance the ability of the Keelung city disaster, the prevention personnel were held using meteorological information, interpreting disaster potential, and planning the map data of evacuation shelters. About 30 people from disaster prevention personnel and fire department business units participated in the training. This course includes two major themes: (1) meteorological information application and disaster prevention propaganda, and (2) basic map production and interpretation. The purpose of the course is to enhance Keelung city's disaster prevention and relief capabilities, enhance the national awareness of risks and disaster prevention, and strengthen the resilience of various regions.

Evidence: Introduction of training

<https://www.facebook.com/social.klcg/posts/2015764041904490>



## 12. Simulation exercises in Shazi Village, Zhongzheng District, Keelung City

The education training on Simulation exercises in Shazi Village, Zhongzheng District, Keelung City was held on September 17, 2021, in the Badou elementary school in Keelung City. More than 30 representatives from the Industrial Development Department, the Fire Department (Zhongzheng Unit), the Police Department (Badouzi Sub-station), and the Environmental Protection Bureau were specially invited to participate in the education training. During typhoons and torrential rain, all units are monitored and alerted to prepare for the preventive evacuation of dangerous areas at any time. When the government support fails to arrive in time, how should the people carry out rescue and rescue actions independently, and finally carry out the post-disaster environmental cleanup and restoration work to restore the appearance of their pre-disaster homes? In addition, this drill also combined the earthquake prevention and disaster prevention propaganda small theater to promote the three steps of earthquake protection in an entertaining way through drama performances, "get down, cover, and stabilize", as well as the purchase of drinking water and dry food in the disaster prevention area of the store.

Evidence: Simulation exercises in Shazi Village

<https://www.youtube.com/watch?v=xz2buDJOtbg>



### 13. Blue Ocean Green Energy training course

The National Museum of Marine Science and Technology opened the "Marine Science and Technology Research and Development Achievement Exhibition Base" and launched a special training program for the Blue Ocean Green Energy Course, which focuses on the basic principles and commercial applications of marine green energy. Volunteers and partners who are interested in green energy and our base are welcome to visit and join us.

Evidence: Introduction of ocean power

<https://www.facebook.com/NMMST.TW/posts/4761979650483966>

<https://www.youtube.com/watch?v=VkrmQtFurK8>





### SDG 4.3.5 Lifelong learning access policy

A policy that ensures that access to these activities is accessible to all, regardless of ethnicity, religion, disability immigration status or gender.

#### 1. Create an open university learning environment and develop lifelong education channels

- (1) Open to alumni to return to the university for free: National Taiwan Ocean University (NTOU) has revised the "Regulations for the elective course of NTOU" to provide alumni (those who are currently not enrolled) with one course per semester for free, and in 2021, three alumni returned to the university to take courses, establishing a lifelong learning pipeline for alumni.
- (2) To promote marine education, promote the public's foreign language skills, and integrate the teaching resources of NCU, the University has developed eight MOOCs courses, including "Food with Confidence, Food with Peace of Mind", "English Tour of Food, Medicine, Housing and Transportation", "Easy Writing of English Abstracts", "Application of Artificial Intelligence in Technology", "Practical Research in Teaching", "Knowing Green Gold - Algae in the 21st Century", "Knowing More about Sharks", and "APCS Supplement".

Evidence: (1) Service-Learning system

<http://news1p.ntou.edu.tw/>

(2) TronClass system

<https://tronclass.ntou.edu.tw/>

(3) Regulations for the elective course of NTOU

<https://academic.ntou.edu.tw/p/405-1005-5105,c1143.php?Lang=zh-tw>

(4) Podcasting My Campus

<http://plus.ntou.edu.tw/>

(5) NTOU Regulations for Extension Education

<https://academic.ntou.edu.tw/p/405-1005-16041,c3058.php?Lang=zh-tw>