長庚大學
CHANG GUNG UNIVERSITY

Chang Gung University

2023 Sustainability Report

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A Letter from the President

“Exercise humanitarian care and creativity, and move towards sustainability and innovation together!”

Chang Gung University is committed to advancing sustainable development. The university has implemented various important initiatives to promote this goal, including the establishment of a dedicated office and sustainable development committee, as well as the incorporation of medium- and long-term school development projects and regularly-published sustainability reports. Additionally, the university actively engages with stakeholders to ensure their understanding of our implementation progress and to encourage their participation in further improvements. With regard to university governance, we are continuously striving to enhance the importance of sustainable development and integrate it into all aspects of our daily operations.

We understand the impact of the development of artificial intelligence (AI) technology on professionals and acknowledge that we are in the middle of the AI era. We hope that our students not only apply AI, but also learn to control it and exert care and creativity to become leaders and innovators in the field. Our university actively promotes interdisciplinary learning and integrates real-world experiences into the curriculum, allowing students to truly experience genuine societal and community needs, and actively contribute to problem-solving and community development.

Furthermore, the university has launched an innovative joint degree program, designed for students, that combines elements from American private universities in order to encourage students to enhance their skills and capabilities and successfully adapt to diverse careers in the future. We firmly believe that an interdisciplinary learning model can help foster innovative thinking and problem-solving skills in students, enabling them to become future leaders and reformers of society.

We also conduct greenhouse gas inventories, have installed solar panels, categorize and recycle waste, promote energy conservation and carbon reduction measures, and have strengthened our efforts to install electric vehicle charging devices to fulfill our commitment to environmental protection through practical action. In addition to our educational mission, we also aim to promote participation in environmental protection and sustainable development measures. We invite scholars and experts in the field of ESG to share their experiences on campus, and attend related activities to enhance our students' understanding of and emphasis on ESG. The concept of a green university is deeply rooted in practical action; environmental protection and sustainable development are the guiding principles and goals of our actions.

In addition, we have held many diverse cultural festivals and international events to promote the connection between multicultural and interdisciplinary talent and the international community. These events aim to encourage students to engage in interdisciplinary learning and improve their professionalism and international competitiveness. Students at Chang Gung University come from all over the world, and their multicultural and multidisciplinary backgrounds contribute to the innovation and development of our academic programs.

Moving forward, we will continue to emphasize our compassion and creativity with the aim of making the school more influential and dynamic in the future and driving sustainability and innovation together!

President

Special Edition

CGU won the 2023 Global Views University Social Responsibility Award for supporting the employment of people with physical and mental disabilities.

Winning the 2023 Global Views University Social Responsibility Award in the Talent Co-Learning category, CGU has received recognition for its "Function Building and Community Common Good" project, which focuses on creating employment opportunities for individuals with mental and physical disabilities to integrate into the community. This achievement is particularly significant considering the competition's low overall award rate of 19.1%. Vice President Chih-Wei Yang expressed gratitude for the honor and emphasized the university's commitment to talent cultivation and sustainable practices.

The Function Building and Community Common Good project, led by Kuan-Yi Li, Chair of the Department of Occupational Therapy, is a USR Seed Project to address the stigma and labeling associated with mental disabilities in society. The project seeks to enhance the job skills of individuals with cognitive disabilities, introduce sheltered employment opportunities, and facilitate interaction between individuals and the community to promote personal recovery and community integration.

Vice President Chih-Wei Yang (on the left in the photo) encouraged Chair Kuan-Yi Li(on the right in the picture), and the USR team to continue their efforts in talent cultivation and workplace sustainability.

The CGU's USR project was successful, earning two gold and two bronze awards in national competitions.

CGU upholds the values of university social responsibility and actively promotes the participation of teachers and students in USR course activities with a focus on three significant goals: Establishment of Health Care System, Social Support for Disadvantaged Groups, and Local Development and Sustainable Innovation. This year, we submitted four schemes to compete in the 2023 TSAA Taiwan Sustainable Action Awards. As a result, CGU was honored with two gold awards and two bronze awards, showcasing the university's commitment to practicing the United Nations SDGs.

Vice President Chih-Wei Yang received the awards on behalf of CGU. He emphasized the university's unwavering support for USR-related initiatives, integrating them into the focal points of the school's development projects and establishing diverse reward systems and support measures. Additionally, CGU publishes the annual Sustainability Report and Social Responsibility Report to present tangible results regarding university social responsibility. Looking ahead, CGU will collaborate with the Office of Sustainable Development to continue planning and promoting local social co-prosperity and common good, integrating university resources to address regional issues and contribute to society.

As university social responsibility becomes an increasingly prominent global trend, CGU will leverage its medical humanities expertise to persistently advance various social and industrial issues. It will ensure that school operations, teaching, research, and campus infrastructure align with sustainability and fulfill social responsibility, thereby setting a standard for advanced learning.

The USR project led by CGU achieved outstanding results in the national competition. Vice President Chih-Wei Yang (pictured on the right) accepted the award on behalf of the university.

CGU's Sustainability Report was first published in 2023 and won the 2023 University Platinum Award

CGU's Sustainability Report was first published in August 2023, distinguishing the university among 45 other institutions and earning the prestigious Platinum Award at the Taiwan Corporate Sustainability Awards. This accomplishment was a significant recognition for CGU. President Ming-Je Tang accepted the award on behalf of the university and pledged to uphold the United Nations Sustainable Development Goals, championing economic, social, and environmental sustainability through the power of education and knowledge.

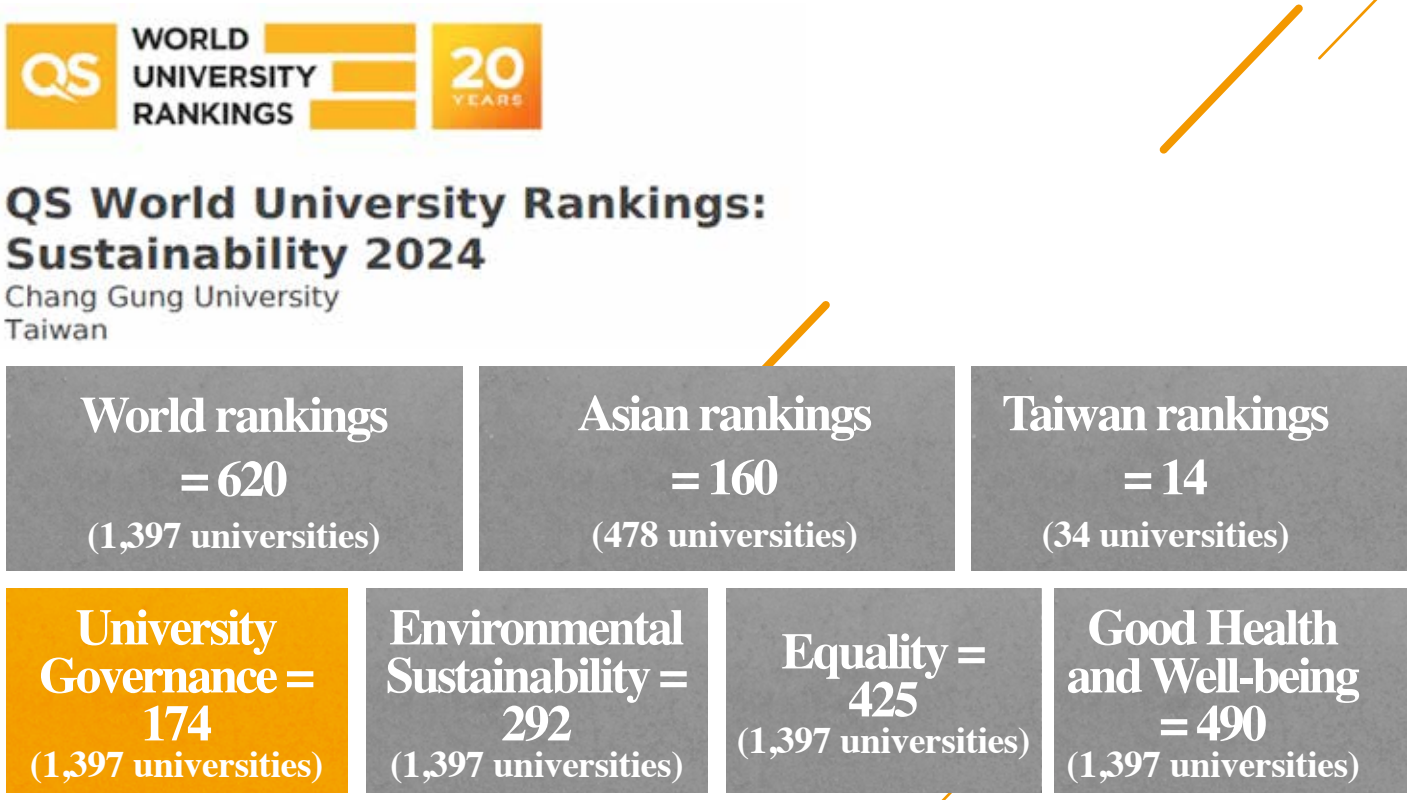
The inaugural sustainability report published by CGU in 2023 aimed to illustrate the university's accomplishments in three dimensions: environmental coexistence, social inclusion, and academic collaboration. The report targeted various stakeholders, including current and prospective students, parents, faculty and staff, alums, NGOs, social communities, employers, and regulatory bodies. Furthermore, CGU is committed to addressing the United Nations Sustainable Development Goals through social engagement, educational initiatives, research activities, and administrative alignment to fulfill its sustainable social responsibility.

In 2023, CGU won the University Platinum Award at the 16th Taiwan Corporate Sustainability Awards, and President Ming-Je Tang (pictured on the right in the photo) received the award on behalf of the university.

CGU ranked fourth in Taiwan in the QS Sustainability Rankings 2024 (University governance category)

Quacquarelli Symonds (QS) published the QS World University Rankings: Sustainability 2024 on December 5, 2023. A total of 34 universities and colleges in Taiwan were included in the rankings. CGU participated in this project for the first time and ranked 620th in the world, 14th in Taiwan, and 2nd among private universities in Taiwan, representing a remarkable achievement.

The QS World University Rankings seek to assess the educational and research accomplishments and the overall impact of each university in terms of environmental protection, social responsibility, and university governance (ESG). In 2023, 1,397 universities globally took part in the rankings. Li, the Director of ESG, expressed that CGU's exceptional performance in this year's QS rankings represents a significant recognition of the university. CGU plans to continuously enhance its initiatives related to sustainable development, including greenhouse gas inventory, campus sustainable action plan, sustainable development curricula, and sustainable development report, to implement comprehensive sustainable management strategies further. Additionally, CGU is committed to adhering to the United Nations SDGs and promoting humanity's economic, social, and environmental sustainability through education and knowledge.



The QS World University Rankings: Sustainability 2024 has acknowledged GU for its exceptional performance in the University Governance Category.

Contents of the Report

This is the second "Sustainability Report" issued by Chang Gung University, first released in August 2023. The report shares the critical issues of Chang Gung Memorial University and its performance in three dimensions: environmental coexistence, social inclusion, and academic co-learning. The university aims to implement sustainable development and social responsibility with stakeholders in response to the United Nations Sustainable Development Goals (SDGs).

Compilation Guidelines

This report is prepared using the latest version of the Sustainability Reporting Standards (GRI Standards). The appendix provides a GRI content index, outlining the relevant sections and references to the GRI guidelines.

Reporting Period

The information and data in the 2022 report cover the period from August 1, 2022, to July 31, 2023. Comparative data from August 1, 2020, to July 31, 2023, is also included. The first semester is denoted as "-1," and the second as "-2." Specific data, such as CH 4 Environmental Safety and CH 7 Community Participation, is expressed annually to maintain data integrity. The primary disclosure period for this data is from January 1, 2023, to December 31, 2023, with comparable statistical data from January 1, 2021, to December 31, 2023. Any differences in the statistical scope are addressed with additional notes.

Reporting Boundary and Scope

The report outlines the critical topics identified by Chang Gung University, including economic, environmental, and social issues that greatly influence the school's sustainable development. During the reporting period, there were no significant changes in the school's size, structure, ownership, or supply chain.

Issuance Frequency

This is CGU's second sustainability report. We promise to issue it annually. For more details, please visit the Office of Sustainable Development's website.

Department in Charge and Quality Management

To enhance the completeness and credibility of our CSR Report, we adhered to the Rules Governing the Preparation and Filing of CSR Reports by TWSE Listed Companies and have established a process for compiling the CSR Report and conducting internal audits or external verifications.

Process	Method	Responsible Department/ Position
Compilation	The Office of Sustainable Development is responsible for the overall planning of this report. Data and information, strategic objectives, and performance indicators disclosed in the report are provided by relevant departments and reviewed by the Office of Sustainable Development.	Office of Sustainable Development
Internal Review	This report must be confirmed by each department and authenticated by the director of the Sustainable Development Committee.	Relevant responsible departments and the Sustainable Development Committee
External Assurance	To enhance the accountability of the report, ● The financial statement complies with the second point of the Regulations Governing the Auditing and Attestation of Financial Statements of Private Schools and Private Colleges or Higher. The printed statement is available for review in the library. ● A third-party agency verified greenhouse gas inventory data, BSI Group Taiwan Inc., according to the ISO 14064-1: 2018 and ISO 14064-3: 2019 standards. The verification was conducted with a reasonable assurance level to confirm the emission facilities, activities, technologies, and processes within the organizational boundary. This also covered greenhouse gas sources, types, periods, and other relevant provisions for the expected users.	Ernst & Young Global Limited /BSI Taiwan
Finalization	Finally, the report is submitted to the Sustainable Development Committee for review and finalization.	Sustainable Development Committee

Contact Information

If you have any feedback or questions regarding Chang Gung University's 2023 Sustainability Report, please get in touch with us via the following channels. As part of our commitment to corporate information disclosure, we have also made this report available on our official website for future reference.

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Sustainable Highlights

Dimension	Description
Environmental protection	● **Greenhouse Gas Inventories** In 2023, CGU introduced ISO 14064-1 to implement a greenhouse gas inventory and obtained a verification statement. In 2023, our greenhouse gas emissions reached 22,402.4110tCO2e/year. ● **Installation of green-energy solar power generation facilities** The first phase of this project was completed and connected to the power grid in April 2023. From April to December 2023, 458,856kWh of electricity was generated through solar power generation and sold to Taipower. ● **Air Quality Management** The CGU library has been designated as a Unit with Outstanding Indoor Air Quality, ensuring a high-quality environment for faculty, staff, and students. ● **Establishment of a Center for Sustainability and Energy Technologies** This center addresses the main issues related to carbon neutrality and energy transition. It involves exploring the use of highly efficient and clean energy sources through collaboration across different schools and disciplines and advanced research methods. The center also conducts research and develops innovative technologies to reduce carbon emissions. ● **Intelligent Information Computer Room** An intelligent computer room monitoring system has been installed to provide instant information such as climate, power consumption, carbon emissions, and PUE and further information on energy consumption relations of related equipment in the computer room. ● **Plenty of beds in the dormitories** Provide 80% of the accommodation for all students at the school, significantly reducing CO2 emissions from student transportation to and from campus. ● **Plastic reduction in restaurants** The restaurant provides reusable tableware to reduce waste.
Social responsibility	● **Taoyuan Elementary and Secondary School Moral Education Award** The Formosa Plastics Group Museum has collaborated with the Department of Education, Taoyuan City Government, to co-sponsor the Moral Education Practice Award. This initiative aims to commend students who exemplify the virtues of Diligence and Simplicity in their daily lives. ● **Practicing of Social Responsibility** The university promoted the implementation of three university social responsibility projects and seven HUB development projects for students and faculty to practice social responsibility. ● **Equal Opportunities in Education** The university established a dedicated scholarship and grant fund for socio-economically disadvantaged students. It is supplemented by funds from the Ministry of Education as part of efforts to enhance access to higher education and improve the overall student assistance mechanism annually. ● **Honors and Recognition** 1. Talent Co-learning Model Award in USR Awards presented by Global Views Monthly-Function Building and Community Common Good project 2. CGU's USR project won 2 gold awards and two bronze awards from the competition of 2023 TSAA Asia-Pacific and Taiwan Sustainable Action Awards 3. <Trailblazer> team of CGU won the 12th KYMCO Design Challenge Cup championship. ● **Promote industry-academia cooperation and the transfer of technology** We actively promote industry-academia cooperation to develop new technology for detecting "neutralizing antibodies" for the coronavirus. Once developed, we plan to transfer this technology to Formosa Biotech for mass production. In 2023, there were 158 instances of industry-academia cooperation and technology transfer, amounting to NT$480 million.
Governance	● **Cultivation of Sustainable Talents** 1. A total of 100 sustainable development-related courses were established from 2021 to 2023. The total number of students engaged in these courses has reached 1,927. Furthermore, relevant interdisciplinary micro-programs pertaining to sustainable development were established. 2. Artificial intelligence-related courses have been introduced to the university and integrated into the professional courses of each department to promote the development of minors and dual degrees, thereby cultivating students' interdisciplinary, digital technology, and innovation capabilities. 3. We've jointly nurtured innovative and sustainable talents across boundaries by fostering innovative collaboration between the university and industry through inter-faculty teaching, cross-domain, and transnational practice. Our partners include 3M Taiwan, Pfizer Inc., TST Biomedical Electronics Co., Ltd., Hon Hai Technology Group, Ipsen S.A., Lotus Pharmaceutical Co. Ltd., and GlaxoSmithKline. ● **Honors and Recognition** 1. The university won 8 awards at the 20th National Innovation Awards in 2023, including one in the academic research category, 1 in the clinical category, and 6 in the improvement category. 2. According to the QS World University Rankings for Sustainability 2024, our university ranks 4th in Taiwan and 174th globally in the category of "University Governance," 292nd in "Environmental Sustainability," 425th in "Equality," and 490th in "Good Health and Well-being." 3. 2023 CommonWealth USR University Citizenship Survey-Ranking the 5th place in the group of private general universities. 4. The Sustainability Report of CGU won the University Platinum Award at TCSA Taiwan Corporate Sustainability Awards.

To fulfill its social responsibility, CGU integrates school resources and collaborates to advance SDG development projects. The university has designed courses, promoted industry-university cooperation, and assessed the impact of university activities on SDGs. In 2023, the university's colleges linked SDG3, SDG4, SDG5, SDG8, and SDG9 to the university's highlighted governance areas, which include Good Health and Well-being, Implementation of Higher Education, Gender Equality, Employment and Economic Growth, and Industry-Academy Cooperation respectively.

	SDG1	SDG2	SDG3	SDG4	SDG5	SDG6	SDG7	SDG8	SDG9	SDG10	SDG11	SDG12	SDG13	SDG14	SDG15	SDG16	SDG17
Teaching courses (Number of courses opened)	159	100	923	817	332	83	238	281	318	243	79	97	88	56	67	205	122
Industry-university research (Number of cases)	4	3	74	14	0	4	18	27	11	2	7	12	3	0	1	0	33
University activities (Sessions)	4	0	22	73	2	1	0	7	23	5	1	0	1	0	0	1	8
Total	167	103	1,019	904	334	88	256	315	352	250	87	109	92	56	68	206	163

Notes:
1.A same course/industry-university research/activity includes a maximum of 3 SDG indicators. If multiple SDG indicators are fulfilled, they will be calculated once.
2.The teaching courses referred to the statistical number of courses opened in the 2nd semester of the 2022 academic year and the 1st semester of the 2023 academic year.
3. The industry-university research referred to the statistical number of industry-university cooperation cases in 2023.
4. Since the system officially launched in the first semester of the 2023 academic year, statistics have only been gathered for university activities held during this period.

Analysis of Material Topics

We identified important aspects based on the sustainable issues listed in the GRI Standards. Then we considered Inclusiveness, Materiality, Responsiveness, and Impact in accordance with the Accountability Principles, 2018. We prioritized using the GRI General Standards 2021 and disclosed the impact, management strategy, and practice status of each critical aspect. We used these results to set our sustainable development goals and strategies and to improve our external communication.

Material Topics Identification Process

Collecting issues concerned

- Collect relevant topics from both internal and external sources. These topics should be appropriate for inclusion in the university's sustainable development report and should be aligned with global standards such as GRI, United Nations SDGs, and industry norms. A total of 18 topics were identified from the sources mentioned above.

Identifying stakeholders

- Identify stakeholders concerning the definitions of GRI standards. Preliminarily discuss the stakeholder groups who may interact with each university unit, compare them with the common stakeholder groups in the academic organization, and review their integrity. A total of eight stakeholders were identified.

Evaluating the significance of impact

- **Analyze the level of concern of our stakeholders:** To investigate the level of concern of stakeholders over eighteen topics, online questionnaires were distributed to each stakeholder. One hundred and thirty-four questionnaires were recovered in total.
- **Evaluation of the degree of operational impact:** To investigate the degree of impact of each topic on this university, online questionnaires were distributed to the level-1 supervisor of each unit for filling. Twenty-two questionnaires were received.
- **Sorting and selecting material issues concerned:**The matrix graph used stakeholders' score of concern as the longitudinal axis and the score obtained from evaluating the degree of impact as the horizontal axis to draw the matrix of material topics.
- **Advanced resolutions and information disclosure:** Following a decision by the Sustainable Development Committee, eleven critical issues were identified and included in the report using a matrix analysis. These 11 topics were then disclosed in accordance with GRI standards.

Regular check

- The Sustainable Development Committee jointly confirms the integrity, inclusiveness, and macroscopic nature of material topics.

Stakeholder Engagement

Based on the characteristics of our operations and industry, and using the five main areas of Dependency, Responsibility, Tension, Influence, and Diverse Perspectives from the Stakeholder Engagement Standard (SES), we have identified seven major categories of stakeholders. Our direct stakeholders include 1) Current students, 2) Prospective students, 3) Parents, 4) Faculty and staff, 5) Alumni, 6) NGOs and social communities, 7) Employers, and 8) the competent authority.

To fully understand the issues concerning stakeholders with an actual or potential impact and to confirm the degree of influence, the school uses two-way and continuous communication channels to actively engage with stakeholders and collect and respond to their concerns.

We gather information from stakeholder meetings, phone interviews, suggestion and feedback mailboxes, and other business communications. Additionally, we consider national policy trends, various international standards (TCFD), initiatives (SDGs), and other relevant topics. We focus on the 18 sustainable issues highly relevant to the school, covering economic, environmental, and social aspects. We then analyze these topics according to the school's development strategy, industry status, value chain practices, and expert advice to confirm their impact on the economy and the environment. We also assess the degree of influence on people and their human rights. The results of our analysis form the basis of information disclosure in this report, providing stakeholders and information users with the necessary information for practical evaluation and decision-making.

Notes:
1.Task Force on Climate-related Financial Disclosures (TCFD)
2.Sustainable Development Goals (SDGs)

Stakeholder Engagement of Chang Gung University

Faculty and Staff	Current students	Prospective Students	Parents	Faculty and Staff	Alumni	NGOs and social communities	Employers	Competent Authorities
Significance of Chang Gung University	As the subjects of CGU, current students receive learning resources and services and act as a motivation to impact the overall operating direction of the university. Students and the school mutually reinforce each other.	Prospective students are the primary source of promoting the sustainable management of Chang Gung University.	Parents play an essential role in pushing students to learn and grow and are prominent supporters of school education.	As essential assets of the university in sustaining its competitiveness, faculty and staff provide teaching, research, and other services, as well as sustain the university's administrative operations.	As achievements are accomplished by Chang Gung University, excellent talent serves as a bridge between the campus and industries, supporting common prosperity and development.	NGOs and social communities are crucial partners of the university in establishing a comprehensive co-learning life cycle and ensuring the availability of healthy and safe living resources.	NGOs and social communities are vital partners of the university in establishing a comprehensive co-learning life cycle and ensuring the availability of healthy and safe living resources.	Supervise the development of university affairs,
Topics of concern	Career Counseling for Students Quality and Innovation of Education International connections Campus health and safety Gender equality	Quality and Innovation of Education Career Counseling for Students International connections Campus health and safety	Quality and Innovation of Education Career Counseling for Students Campus health and safety	Research Faculty and professional development Faculty salary and benefits Campus health and safety Gender equality	Research International connections Industry-university cooperation	GHG emissions Campus health and safety Community participation	Quality and Innovation of Education Research Results Energy management Industry-university cooperation	Education achievements Information / Personal Data Security Financial performance GHG emissions Chemical hazards and toxic substance management
Responsible unit	Office of Academic Affairs / Office of Student Affairs / Office of General Affairs / Office of International Affairs / Each department (Institute) / Office of President	Office of Academic Affairs / Office of Student Affairs / Office of General Affairs / Office of International Affairs / each department (Institute)	Office of Academic Affairs/Office of Student Affairs / Office of General Affairs / Office of President	Office of Personnel/ Office of Research and Development/ Office of Environmental Safety & Hygiene/ Office of President	Alumni Association (Institute) / each department (Institute) / Office of Secretariat	Office of General Affairs/ Office of Environmental Safety & Hygiene / Office of Sustainable Development	Office of Academic Affairs/ Office of Technology Development and Industry Liaison/ Office of Research and Development	Office of Accounting/ Center for Institutional Research/Office of Hygiene/Office of Secretariat
Engagement method (communication frequency)	Announcements on the official website of CGU (updated at any time) IG/FB/YouTube Social media IG/FB/ Youtube (irregular update) President and mailboxes of each unit Tutor time (irregular update) Teacher-student symposiums (twice per semester) Instructional evaluations (twice per semester) University Affairs Meeting (four times per semester) Teaching Opinion Survey (once per semester)	Enrollment information network (irregular update) Social media IG/FB/ YouTube (irregular update) Promotional activities for high school enrollment in each district and foreign recruitment (irregular update)	Network media publicity (irregular update) Seminar for parents of first-year students (once a year) President and mailboxes of each unit (irregular update) Sustainability Report (once a year)	Committees at all levels (handled according to establishment regulations) Monthly Administration Meetings Labor-Management Meetings (once every quarter) University Affairs Meetings (four times per semester) Tutor Meetings (once per semester) Sustainability report (once a year) President and mailboxes of each unit (irregular update)	Official website of CGU (updated at any time) Alumni Association and Faculty-based Alumni Associations (irregular update) Alum questionnaire and telephone surveys (irregular update)	Official website of CGU (updated at any time) Interviews (irregular update) Symposiums (irregular update) Sustainability report (once a year)	Dedicated section for disclosure of university affairs and financial information (updated regularly) Sustainability report (once a year) Employer Satisfaction. Survey (once a year)	Dedicated section for disclosure of university affairs and financial information (updated regularly) Each plan report (updated per stipulated schedule) Sustainability report (once a year) Board of Trustees (twice a year) Evaluation of university affairs and departments/ institutes (once every six years) IEET certification (once every six years) AACSB certification (once every five years)

Identification of Material Topics

Stage 1: Identification

In addition to the eight significant stakeholders, including current students, prospective students, parents, faculty and staff, alums, NGOs and social communities, employers, and the competent authority. Additionally, it is essential to identify and confirm other relevant stakeholders. We have gathered 18 issues related to campus sustainable development from various sources, such as international standards and norms, campus evaluations/competitions, domestic and foreign school reports, school development plans, and communications with stakeholders.

Stage 2: Analysis

We collected relevant information from 134 stakeholders through online questionnaires to understand their concerns over specific issues. Additionally, we enlisted the help of 22 level-1 supervisors to assess the impact of each topic on the campus operation of CGU and determine its significance for sustainable university management. The stakeholders' level of concern scores were plotted on the vertical axis of a matrix graph, while the assessment scores for the degree of impact were placed on the horizontal axis, resulting in a matrix of material topics. Based on this information, the Sustainable Management Committee consolidated and prioritized 11 material topics. The committee also reviewed relevant processes and standards to ensure no important details were overlooked before preparing the sustainability report.

Notes:
1.The original topics, including energy management, chemical hazards, toxic substance management, water resource management, waste management, and GHG emissions, were combined into Environmental and Energy Sustainability.
2.The original topics of faculty salary and benefits and faculty and professional development were combined into Faculty Benefits and Career Development.
3.The original topics of campus health and safety and gender equality were combined into Campus Health and Safety.
4.The original topics of life counseling for students and career counseling for students were combined into Student Life and Career Counseling.

To facilitate effective communication with various stakeholders through the Sustainability Report, we have created a Dedicated Section for Stakeholders on the Office of Sustainable Development's website. Additionally, we have set up a dedicated contact channel for our stakeholders (cgu_sdgs@mail.cgu.edu.tw). This email can address any concerns, suggestions, or complaints about the information on material topics or other content in the report.

List of Material Topics

Dimension	Material topic	Significance and Importance to Chang Gung University	Chapter
Environmental	Environmental and energy sustainability	To achieve its energy conservation and carbon reduction goals, CGU is actively promoting strategies such as greenhouse gas inventory and reduction measures. Additionally, the university is implementing power-saving initiatives, utilizing renewable energy sources, enhancing production capacity, and integrating energy storage technology to create a more sustainable and eco-friendly learning environment.	Chapter 4 Environmental Protection
Social	Community participation	CGU integrates the classroom with the local community through the university's social responsibility to demonstrate its social impact. This approach aims to address the limitations of traditional classroom teaching and actively engage with local needs. Additionally, the university leverages its local advantages to tackle problems through division of labor and collaboration, integrating innovative thinking with social needs to build a thriving society for all.	Chapter 7 Community Participation
Social	Industry-university cooperation	CGU combines intellectual property transfer, entrepreneurship development, and industry-university cooperation. It also connects with government programs and legal entities. CGU actively mentors small and medium-sized enterprises (SMEs) with innovative products and key technologies. Additionally, CGU's Research and Development Technology is integrated with venture capital to drive industry improvement and foster the development of innovative scientific and technological advancements aimed at commercialization and product development.	Chapter 3.6 Industry-university Cooperation
Social	Campus health and safety	Campus health and safety are not only crucial for the school but also have an impact on society. Creating a safe and healthy school environment ensures the physical and mental well-being of students, faculty, and staff and contributes to a healthier and safer living environment for the general public.	Chapter 6 Campus Health and Safety
Social / Economic / Governance	Faculty benefits and career development	The faculty and staff are essential assets of the university, contributing to teaching, research, service, administration, and overall competitiveness. We have a well-structured system for efficiently utilizing and allocating administrative manpower, ensuring the right people are in the right roles. In addition, we provide a comprehensive welfare system for faculty and staff, including talent retention, remuneration, welfare, education and training, and promotion assessment. We also offer various training opportunities, including intensive teaching, knowledge, and skills courses.	Chapter 5.2 Faculty and Staff Treatment Chapter 5.3 Human Resource Development
Economic / Governance	Quality and innovation of education	CGU prioritizes high-quality teaching and innovative instructional methods. It updates course content using an Internal and External Dual-cycle Course Planning and Management Mechanism focused on achieving results. Additionally, CGU has established the Three Networks information platform for teaching and learning to enhance the assessment of teaching effectiveness and promote innovative instructional practices. Furthermore, CGU offers an interdisciplinary environment for innovative and entrepreneurial learning, aimed at strengthening students' foundational skills and improving their proficiency in English and programming languages. This approach enhances their employability and boosts their international competitiveness and mobility.	Chapter 3.4 Quality and Innovation of Education

Dimension	Material topic	Significance and Importance to Chang Gung University	Chapter
Economic / Governance	International connections	In 2020, the International Academic Exchange Center at CGU consolidated relevant international activities within the university and was subsequently renamed the Office of International Affairs. Adhering to the principles of internationalization and globalization, the Office has established academic ties with renowned universities worldwide and actively explores international academic collaborations. Its goal is to enhance the global perspectives and competencies of students and faculty, preparing them for the challenges of the new era.	Chapter 1.3 School Characteristics
School Characteristics / Governance	Research results	To foster interdisciplinary collaboration and cutting-edge research, CGU combines research resources and enhances international cooperation with research centers to enhance international mobility for students and teachers. This includes recruiting exceptional scholars from abroad and establishing high-level academic and research guidelines. At present, CGU has established eight advanced research centers.	Chapter 3.5 Research Results
Economic / Governance	Information security	To actively enhance campus information security, CGU has established an Information Security Committee. This committee oversees campus cybersecurity, information security management, personal data protection, and related educational and training initiatives. Additionally, it offers comprehensive information security training and consulting services to students, faculty, and staff.	Chapter 2.4 Information Security
Economic / Governance	Financial performance	To keep pace with the evolving landscape of higher education, enhance the quality of education, and improve fund planning and allocation to ensure financial sustainability and effective school development, our institution regularly discloses pertinent information to the public for review.	Chapter 3.3 Stable Finance and Abundant Resources
Economic / Governance	Student life and career counseling	CGU offers a government-funded program in collaboration with Formosa Plastics Group and Chang Gung Medical to enhance students' practical skills and improve their chances of finding employment. CGU also arranges various career-focused activities such as workshops, recruitment seminars, interviews, corporate visits, and career counseling provided by the Learning Planning Office. Additionally, each faculty and department actively helps students find internship opportunities, enabling them to gain valuable experience in real workplace environments, thus improving their skills and employability.	Chapter 3.7 Career Counseling for Students

Description of changes in material topics:
Compared to the 2022 Sustainability Report, the material topics in this report have been readjusted based on stakeholder concerns and the evaluation of operational impact. Specifically, two material topics, faculty benefits, career development, and financial performance, have been added.

Chapter 1

About Chang Gung University

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1.1 History and Brief Introduction

Diligence, perseverance, frugality, and trustworthiness	Holistic education	Integration of theory and practice

Yung-Ching Wang and Yung-Tsai Wang, brothers and co-founders of Formosa Plastics Group, established Chang Gung Memorial Hospital in 1976 in honor of their father, Chang-Gung Wang. Recognizing the limited availability of medical personnel in Taiwan, in April 1987 they founded the Chang Gung University College of Medicine at 259 Wen-Hwa 1st Road, Kwei-Shan District, Taoyuan City, with the objective of developing exceptional medical professionals and enhancing local medical services. In response to Taiwan's need for economic advancement, the university consequently extended its offerings to encompass departments and institutes in engineering and management. This expansion aimed to provide comprehensive educational resources and cultivate outstanding medical, engineering, and management teams. The institution was renamed to the Chang Gung College of Medicine and Technology in 1993. Subsequently, in August 1997, upon receiving approval from the Ministry of Education, it was formally restructured to become Chang Gung University (CGU). The University of Smart Computing was established in 2022 to promote AI research and relevant talent training. The university prioritizes delivering high-quality education and improving students' practical skills through cooperative education and enterprise internships. CGU also focuses on clinical and foundational medical knowledge in research, and takes on the role of a prospective study center for enterprises, aspiring to become a leading university with international distinction that excel in research, teaching, and innovation.

17 administrative units

- President's Office
- Office of Academic Affairs
- Office of Student Affairs
- Office of Research and Development
- Office of Technology Development and Industry Liaison
- Office of International Affairs
- Office of General Affairs
- Computer Center
- Library
- Office of Environmental Safety & Hygiene
- Office of Physical Education
- Office of Sustainable Development
- Center for Institutional Research
- Formosa Plastic Group Museum

Note: Please visit Chang Gung University's official website for a detailed organizational structure.

Teaching units

Four colleges + one Center of General Education:

- College of Medicine (ten departments, eleven institutes, and six degree programs)
- College of Engineering (six departments, seven institutes, and one degree program)
- College of Management (five departments, five institutes, and three degree programs)(The Department of Digital Financial Technology was added in 2023)
- College of Intelligent Computing (one department and one institute)
- Center of General Education (4 divisions)

The Number of Students of Chang Gung University in the 2022 Academic Year

College	Number of teachers	Professors	Associate professors	Assistant professors	Lecturers
College of Medicine	3,647	2,803	550	294	0
College of Engineering	1,965	1,425	391	96	53
College of Management	1,282	926	192	34	130
College of Intelligent Computing	93	82	11	0	0
Total	**6,987**	**5,236**	**1,144**	**424**	**183**

Note:
The statistics include the number of students in the first semester of the 2022 academic year (October 15, 2022).

Number of Teachers of Chang Gung University in the 2022 Academic Year

College	Number of teachers	Professors	Associate professors	Assistant professors	Lecturers
College of Medicine	357	126	105	111	15
College of Engineering	106	62	25	19	0
College of Management	54	20	15	18	1
College of Intelligent Computing	5	3	0	2	0
Others [Note 2]	56	18	11	21	6
Instructors	4	-	-	-	-
Total	**582**	**229**	**156**	**171**	**22**

Notes:
1. The number of students in the first semester of the 2021 academic year (October 15, 2021) is included in the statistics.
2. Others include the Center of General Education, Office of Physical Education, and Center for Institutional Research.

1.2 Sustainability Commitments and Strategies

Chang Gung University is fully committed to upholding the United Nations' Sustainable Development Goals (SDGs) and advancing economic, social, and environmental sustainability through the dissemination of education and knowledge. The university established an Office of Sustainable Development in July 2022 and formed a Sustainable Development Committee in November 2022. These strategic endeavors seek to integrate sustainable development practices across the university's administrative and academic units and to devise sustainability strategies that align with the objective of sustainable management as part of the university's corporate social responsibility.

Innovative Teaching

- CGU is committed to innovative teaching through the implementation of a flexible educational system aimed at creating a high-quality learning model. This model is supported by a digital transformation system and emphasizes campus resilience to offer inclusive, fair, and high-quality education and lifelong learning opportunities.
- In addition, we offer courses in artificial intelligence (AI) that focus on developing skills in "Computational Thinking" and "Design Thinking." These courses emphasize the integration of interdisciplinary knowledge and enable students to apply this knowledge through practical research.
- The curriculum also addresses issues related to science, technology, and sustainable development within the context of society, nature, and humanity. This approach encourages reflection on infrastructure limitations and future development trends, ultimately producing interdisciplinary talent capable of driving future innovation.

Research and Development

- CGU promotes a diverse research reward and subsidy system and enhances core laboratory and technical platforms to support interdisciplinary academic programs in research centers. This fosters high-quality research that leverages students' knowledge and technical expertise.
- We are also committed to conducting green energy and technology research to explore possible actions and remedies against climate change to solve its current impact on society.
- The university is expanding its efforts to match and integrate industry, university, and research. Multiple funds provided by the university are intended to improve technological maturity and offer students and teachers innovative and entrepreneurial resources. The university is dedicated to fostering industry innovation and providing relevant assistance in establishing startups. Additionally, it is working on arranging and developing relevant technologies to promote internationalization and build global partnerships.

Social Responsibility

- We strive to establish a resilient and sustainable campus, demonstrate social responsibility based on the university's unique specialties, and leverage resources to develop critical green-energy technologies for the creation of affordable, reliable, and modern energy solutions.
- Our efforts to advance sustainable development education courses aim to foster students' comprehension of ESG and cultivate their ability to prioritize both ESG factors and the advancement of sustainable development.
- CGU provides scholarships for disadvantaged students and implements various USR programs. The organization collaborates with local medical groups to promote community health and encourages others to take similar actions. Additionally, CGU emphasizes the inclusivity, safety, resilience, and sustainability of communities. The organization recognizes the role of communities in reducing resource disparities among vulnerable groups, ensuring a healthy life for all age groups, and working together to create an ideal society.

Chang Gung University prioritizes teaching, research, and social responsibility, with a focus on the United Nations' 17 Sustainable Development Goals. The university is committed to developing innovative teaching models to improve students' fundamental skills, professional capabilities, and interdisciplinary employability. Additionally, Chang Gung University aims to attract international high-level talent in its pursuit of becoming an internationally-recognized first-class university.

1.3 School Characteristics

Chang Gung University is committed to becoming a leading international, interdisciplinary institution in the field of medicine and biotechnology. Our focus includes integrating advanced disciplines such as engineering, energy, materials, information, artificial intelligence, and management. We harness the substantial practical industry knowledge and research capabilities of the Formosa Plastics Group to strive for excellence in line with our mid- and long-term university development plans. Strategically, the university aligns its key policies with government directives and addresses healthcare challenges arising from social demographic shifts. We leverage our research centers to advance the fields of medicine, medical engineering, medical management, intelligent healthcare, intelligent manufacturing, and digital commerce. We also collaborate with government departments and local entities to establish a multidimensional, interdisciplinary, cross-institutional, and international industry-university-research cooperation platform. By attracting exceptional local and international talent, we seek to drive innovation and develop platforms for growth. Through our research-driven approach, we aim to foster high-quality, skilled professionals, create a beneficial cycle, enhance the translation efficiency of research, and fulfill our university's societal responsibilities.

International Connections

Management Status of Material Topic "International Connections" of Chang Gung University in 2022 (Academic Year 2021)

Material Topics	International Connections		
Corresponding GRI Index	Self-selected topics	Effectiveness Tracking Mechanism	● Number of courses lectured in English and number of professional required courses. ● Number of participants in exchange programs, joint degrees, and short-term credits. ● Number of participants in the foreign scholars' speeches and international exchange activities. ● Number of international teachers.
SDGs Principle	8 DECENT WORK AND ECONOMIC GROWTH; 10 REDUCED INEQUALITIES; 17 PARTNERSHIPS FOR THE GOALS		
Policy Commitments	Strengthen the international connections of the university, and establish a high-quality, local, and internationalized campus.	Actions and Measures	● Promote English teaching and increase the number of courses complying with EMI (English as a Medium of Instruction): The number of EMI courses has reached 478. ● Planning English programs and promoting small class teaching for English courses: 45 small classes taught in Chinese and one English credit program. ● Recognize outstanding performance by international students in graduate programs by awarding those scholarships and grants, and by offering them part-time assistant positions. Currently, 27% of scholarships and grants are given to foreign students, and 152 foreign students are working as part-time assistants. ● Promotion of joint degrees: The number of cooperative schools reached 18, and the number of participating students reached 27. ● Hosting talks by international scholars, organizing bilingual symposiums, and coordinating cultural activities. There have been 100 speeches by international scholars and a total of 643 participations in bilingual activities. ● International interdisciplinary student studies and communication (College of Medicine): 20 occasions. ● Student exchange program: Students from CGU went abroad for further education on 46 occasions, while foreign students came to CGU for further education on 108 occasions. ● Foreign internship cooperation with well-known international enterprises or academic institutions: Two new foreign internship institutions and students participated in foreign internships on 93 occasions. ● Participated in international education exhibitions and educators' annual meetings: 36 new overseas partner schools and 680 overseas students applied for admission. ● Number of international students and their ratio in the 2022 academic year: The number of foreign students reached 340, accounting for a ratio of 4.87% of the total students.
Metrics and Targets			
Short-term targets	▬ Provide sufficient English lectures to improve local students' English proficiency and meet foreign students' course learning demands. ▬ Assign dedicated personnel to handle international and foreign-related administrative affairs and recruit additional counselors as tutors for foreign students.		
Mid-term targets	▬ Promote exchange programs, joint degrees, and short-term credits to increase the university's international engagement.		
Long-term targets	▬ Continually promote the link between global issues and the international community, and create a high-quality, local, and internationally oriented campus. ▬ Subsidize various international exchange activities to enable students to learn about foreign and local cultures. The percentage of foreign exchange students will reach 3% within five years, and the percentage of foreign students will reach 5% within five years. ▬ Recruit international full-time and jointly-appointed teachers to improve the international visibility of the university and promote international academic cooperation. ▬ Promote the international administration support system and optimize bilingual campus information to enhance the international atmosphere of the campus.		

Enhance global connections and create a top-tier international campus in the local area

CGU's Office of International Affairs is dedicated to promoting the principles of internationalization and globalization. We seek to forge strong academic partnerships with esteemed international universities, actively engage in exploring international academic collaborations, and foster a broad international perspective among both faculty and students, equipping them with the skills to effectively navigate international affairs and adapt to the demands of the new era.

- Establishing partnership with foreign universities and institutions
- Enriching international and multicultural perspectives of teachers and students
- Organizing international activities
- Recruiting international students
- Developing a bilingual campus

Number of foreign students

2022 Academic year:

Number of foreign students	Foreign students	Students from Hong Kong and Macao	Foreign Chinese students	Chinese students
340	151	96	75	18

Number of international students and their ratio in academic years from 2020 to 2022:

Academic year	Number of foreign students	Number of current students	Ratio of foreign students
109 (2020)	328	6,811	4.82%
110 (2021)	335	6,930	4.83%
111 (2022)	340	6,987	4.87%

International academic communication agreements

In the 2022 academic year, a total of 125 schools from 24 countries in four continents established sister school relationships with CGU.

Jointly appointed international teachers

The College of Engineering at CGU has made a significant stride towards promoting research and teaching cooperation in the field of engineering by jointly appointing Prof. Chun-Chih Tung from the Department of Chemical System Engineering at The University of Tokyo and Prof. Lih-Sheng Turng from the Department of Mechanical Engineering at The University of Wisconsin Madison.

Recommending and sending teachers for further education abroad

Prof. Chih-Hsiu Cheng from the School of Physical Therapy attended Mayo Clinic, Minnesota, in the United States for further education.

Promoting diversified learning through a bilingual university

Strengthening EMI teaching and enrollment of more exchange students	We have gradually increased the university's EMI course offering and leveraged the opportunities for co-learning and communication with schools abroad to help students expand their international exposure, become more proficient in English, and increase their motivation to learn. ● English degree programs: International Master's Degree Program for Molecular Medicine in Emerging Viral Infections, International Master's Science Program in Reconstructive Microsurgery, and Master's Program in Nano-Electronic Engineering and Design. ● Number of EMI courses: 236; there are 175 professional required courses.
Promotion of small classes featured teaching for English courses	Over the next three years, we have planned a series of courses. These courses will consist of small English classes designed to comprehensively improve students' English proficiency. Additionally, we will increase the number of courses that are taught entirely in English within each schooling system to align with international standards. This will help us build a strong foundation for exchange students and dual-degree systems. ● In the 2022 academic year, there were 45 classes with 15-20 students each with English as a teaching medium, and one English credit program was offered.
Improvement of measures to reward and support foreign students	We extend an invitation to exceptionally talented international students to pursue their studies at CGU's research institute, and pay scholarships and grants for their tuition, fees and living bursaries to those who comply with our provisions. We also encourage each teaching unit to hire teaching assistants (TA) with English teaching skills. ● In the 2022 academic year, foreign students on scholarships and grants accounted for 27% of total students, and international students worked as part-time assistants on 152 occasions.
Deep cultivation of joint degrees to improve international mobility	We promote the joint cultivation of talent with transnational joint degrees to generate international mobility for Chang Gung University. ● In the 2022 academic year, we cooperated with 18 schools, and students participated on 27 occasions. ● The universities participating in collaborative programs for joint degrees include the University of Nebraska Medical Center, University of California, Irvine, University of Southern California, University of Minnesota, University of Colorado Denver, University of Wisconsin-Milwaukee, University of Maryland, Baltimore, The University of Danang - University of Technology and Education (UD-UTE), Singapore University of Technology and Design, Atma Jaya Catholic University of Indonesia, Universitas Atma Jaya Yogyakarta, Universitas Muhammadiyah Surakarta, Yonsei University, Management and Science University, Rennes School of Business, Chiang Mai University, and The University of Queensland.
International exchange activities	We host international speakers, bilingual symposiums, and various cultural activities to promote international exchange. ● In the 2022 academic year, we held 7 international exchange events, invited international speakers on 100 occasions, and held bilingual symposium activities that were attended by a total of 643 people.

Furthering the "New Southbound Policy", and keeping up with world trends

Launching international cross-domain student discussions and communications	In order to enhance international exchange opportunities for students and teachers, we have developed a platform for transnational learning activities. This platform enables students and teachers from the College of Medicine to participate in online international exchanges with their counterparts from relevant departments at Okayama University, focusing on professional fields. ● In the 2022 academic year, our students participated in international cross-domain discussion and communication on 20 occasions.
Featured courses over the summer vacation and laboratory visits	CGU PRE-MED combines Chang Gung Memorial Hospital's clinical resources in its courses, including basic medicine discipline lecturing, basic medical studies, clinical simulation, and clinical internships, and recruits international students preparing for post-bachelor medical examinations to visit CGU. ● This program began in the 2022 academic year with eleven foreign students from the University of British Columbia, the University of California Los Angeles, the University of Washington, Stony Brook University, and Northwestern University was admitted.
Promotion of students' exchange programs	We have expanded the two-way exchange student program between CGU and foreign universities in order to enhance our students' international learning experience. This will also facilitate substantial communication between CGU and sister schools, and will help attract outstanding exchange students to apply to study at our research institutes. ● In the 2022 academic year, students from CGU went abroad for further education on 46 occasions, while foreign students came to CGU for further education on 108 occasions. ● The exchange partner schools involved in the 2022 academic year include the University of Minnesota, Johns Hopkins University, the University of Wisconsin-Milwaukee, the University of New York in Prague, the National University of Singapore, Singapore University of Technology and Design, NEOMA Business School, and Rikkyo University.
Expansion of internship cooperation with well-known international institutions	We promote foreign internship cooperation with well-known international enterprises and academic institutions to enhance our students' international exposure. ● In the 2022 academic year, two new foreign internship institutions were offered, and students participated in foreign internships on 93 occasions. ● The list of foreign internship institutions involved in the 2022 academic year comprises esteemed organizations including member institutions and schools of the International Federation of Medical Students Associations, the International Iberian Nanotechnology Laboratory, Chubu University, Gifu University, National Institute of Technology Tsuruoka College, Okayama University, Tohoku University, Kurume University, Yonsei University, Inteplast Management Services Inc., Formosa Plastics Corporation, Inteplast Group Corporation, University of Pennsylvania, Case Western Reserve University, Chiang Mai University, Mahidol University, National University of Singapore, Monash University, Singapore General Hospital, KK Women's and Children's Hospital, and Tan Tock Seng Hospital (TTSH).
Participation in international education exhibitions and educators' annual meetings	The Office of International Affairs collaborates with teachers selected from each college to participate in international education exhibitions or educators' annual meetings held by the University Entrance Committee for Foreign Chinese Students, the Foundation for International Cooperation of Higher Education of Taiwan (FICHET), education centers in Taiwan, and diplomatic offices. ● In the 2022 academic year, 36 new foreign cooperative schools were offered, and foreign students applied for admission to CGU on 680 occasions.

CGU X Go International, All-English Multicultural Series Activities

International students' experience of Spring Festival scrolls

Teaching Characteristics

CGU expects its students to develop high-quality advanced skills, including holistic skills, core professional competency, interdisciplinary ability, technological and digital proficiency, international mobility, practical industry knowledge, and innovation and entrepreneurship capabilities. To achieve and maintain these objectives, each department continually undergoes certification by professional agencies to ensure teaching quality.

Innovative and featured teaching by focusing on students and the R&D Plan

- Strengthen the evaluation of teaching effectiveness through the teaching and learning using the Three Networks information platform.
- Establish an Honors Program and combine it with admission scholarships and grants for outstanding first-year students to improve their leadership skills and critical thinking, and implement holistic education.
- Actively promote the University Enrollment Specialization Plan to improve the reliability and validity of selection ratings.
- Provide a diverse, Flexible Course System and Enhanced High School Link-up Education. Lower the requirements for changing majors, minor majors, and double majors. Promote the MS/MBS dual degree program and advance the Excellent Graduate Plan and advanced learning courses.
- Allocate each course to a student learning planning office and full-time tutors to provide comprehensive guidance for diversified learning.
- Introduce the Future Classroom in September 2023, establish virtual-real hybrid teaching, create a digital and innovative teaching environment, and expand programming and program design-related courses to cultivate students' digital competitiveness.
- Create a learning environment that meets industry requirements by establishing a College of Intelligent Computing, a Memory Profession Credits Program, the Department of Biomedical Engineering, and the Department of Digital Financial Technology. In addition, attract international students to participate in joint programs aimed at nurturing global talent through international and industry-university partnerships.

Research Characteristics

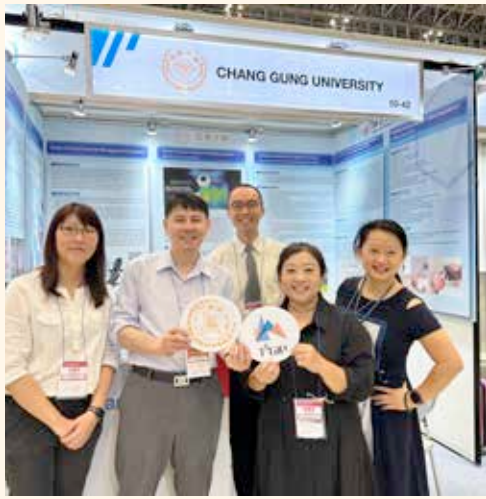
With our research centers as the driving force, we have developed interdisciplinary partnerships and high-quality, innovative research, integrated resources to form the Key R&D Team, and deepened transnational cooperation to recruit outstanding foreign scholars and foster forward-looking technological capabilities.

The Key R&D Team, and diversified R&D projects

- Epidemic prevention against emerging viruses
- Precision and regenerative medicine
- Regenerative medicine
- Smart medical care
- Neuroscience
- Medical imaging and sensing
- Immunoregulation of diseases
- Biomedical and energy materials
- Artificial intelligence and information science
- Biomedical engineering and sustainable energy technology

Industrial Innovation Characteristics

We are enhancing industry, university, and research cooperation matching and integration. We have established the Innovative Technology Matching Platform to strengthen industry partnerships. Additionally, we are working to obtain resources through the T5GIP Scientific Research Platform and the CGU SPARK program to promote the commercialization of innovative industrial technologies. Furthermore, we are organizing courses and activities related to innovation, creativity, and entrepreneurship to encourage practical engagement and innovative applications among students and teachers, fostering an entrepreneurial ecosystem and sustainable industrial innovation system.



1.4 Future Development

Top international university for interdisciplinary medicine		
Internationalization	Digitalization	Interdisciplinary learning and cooperation

With the support of the Board of Trustees, government rewards and grants, and subsidies from large competition plans, we are promoting the execution of mid- and long-term university development plans. Our aim is to drive teaching and industrial innovation through research and achieve excellence in three key areas. By focusing on internationalized, digital, and interdisciplinary learning and cooperation, we have established a student-centered learning model. Our vision is to become the first-choice interdisciplinary medicine university and be recognized as an international, first-class university.

- **Short-term development goal:**
  More than four renowned research centers in Taiwan
- **Mid-term development goal:**
  More than three renowned research centers in Asia
- **Long-term development goal:**
  More than two globally-renowned research centers as an international, top university of interdisciplinary medicine

Future Pilot Plan

1. **Cultivation of future talents with innovative teaching**
   (1) Excellent Graduate Plan and Advanced Course
   (2) Promotion of future classrooms with technology-aided teaching
   (3) Improvement of scholarship schemes and recruitment strategies
   (4) Cultivation of diversified, disciplinary talent with flexible learning
2. **Allocation of required teaching facilities to benefit the development of students and teachers**
   (1) Improved teaching and coaching evaluation mechanism
   (2) Strengthening of tutoring to promote active learning
   (3) Import of the UCAN functional course map
3. **Development of forward-looking applied scientific and technological research**
   (1) Integration of research centers to cultivate elite teams
   (2) Promotion of forward-looking research fields with international standards
   (3) Improvement of core laboratories and technology platforms
4. **Allocation of resources to empower learning and research**
   (1) Promotion of a diversified research reward and subsidy system
   (2) Collaboration and communication with universities and colleges to create a win-win situation
   (3) Participation in alliance organizations to enrich teaching and research resources
   (4) Fostering profound research self-restraint through learning ethics and practicing self-discipline

International Connections Plan

1. **Promotion of diversified learning at a bilingual university**
   (1) Strengthening of EMI teaching and enrollment of more exchange students
   (2) Promotion of small class teaching for English courses
   (3) Improvement of measures to reward and support foreign students
   (4) Deep cultivation of joint degrees to improve international mobility
2. **Deepening of communication to expand transnational cooperation**
   (1) Improvement of international network connections for industry-university cooperation
   (2) Promotion of cooperation by hiring more international teachers
   (3) Participation in meetings held by international academic organizations
3. **Improvement of global competitiveness and influence**
   (1) Enhanced scientific impact to further promote industry-university-research development
   (2) Profound participation in world university rankings appraisals
   (3) Promotion of international certifications to improve school operations
4. **Furthering the New Southbound Policy and keeping up with the world**
   (1) Launching of international cross-domain student discussions and communication
   (2) Featured courses in the summer vacation and laboratory visits
   (3) Promotion of students' learning series exchange program
   (4) Expansion of internship cooperation with well-known international institutions
   (5) Participation in international education exhibitions and educators' annual meetings

Sustainability Responsibility Plan

1. **Deepening of social responsibility and offering of feed**
   (1) Strengthening of community connections to establish partner trust
   (2) Deep cultivation and promotion of industrial activation in local areas
   (3) Enhancement of practicing social responsibility by dedicated units
   (4) Strengthening moral education and participation in volunteering activities
   (5) Enhanced the coaching and supporting system for disadvantaged students
2. **Construction of a low-carbon, sustainable university environment**
   (1) Transformation to a green university and energy conservation and carbon reduction
   (2) Promotion of a circular management and assessment mechanism for sustainable development
   (3) Publication of the sustainability report to demonstrate governance performance
   (4) Creating sustainability courses to promote the participation of students and teachers
3. **Improvement of the university affairs organization and promotion of development**
   (1) Establishment of a big data integration platform for handling university affairs
   (2) Promotion of automatic indexes and an early-warning mechanism
   (3) Study of topics on university affairs and implementation of professional management
   (4) Publication of annual reports of university affairs for self-management and assessment
4. **Advertising of strategies to create a brand reputation**
   (1) Improvement of brand identity by centering on students
   (2) Strengthening of communication with the media to operate brand community
   (3) Establishment of international alum connections to expand networks

Disciplinary Collaboration Plan

1. **Refining of core quality to develop all-round individuals**
   (1) Provision of coaching for participation in clubs and encouragement of competition and communication
   (2) Promotion of screening and coaching of students of high concern
   (3) Deep cultivation of life education and gender equality
   (4) Promote human rights, law-related and safety education in campus
   (5) Promotion of career exploration and employment competitiveness
2. **Development of interdisciplinary features of artificial intelligence**
   (1) Offering interdisciplinary courses centering on intelligence sciences
   (2) Promotion of interdisciplinary digital technology micro-program
   (3) Deepening of general education courses focusing on the theme of artificial intelligence
   (4) Expansion of cultivation and fostering of STEM talent
3. **Expansion of industry-university-research matching and integration**
   (1) Expansion of cooperation with the industry to commercialize technologies
   (2) Strengthening and promotion of an innovative technological matching platform
   (3) Development of sustainable green energy to promote net-zero emissions
   (4) Two-way industrial connection of biomedical clinical trials
4. **Cultivation of an innovative and entrepreneurial ecosystem**
   (1) Construction of a cluster for innovative and entrepreneurial industries in the field of biomedical and medical technology
   (2) Promotion of a sustainable entrepreneurial coaching environment on campus
   (3) Expansion of entrepreneurial coaching of international cooperative connections

Excellence Transformation Plan

1. **Improvement of additional and multiplicative efficiency of administrative services**
   (1) Internationalized university administration supporting system
   (2) Upgrade library facilities and software resources
   (3) Expansion of the application of official documents on the online sign-off system
   (4) Improvement of the digital transformation of library resource services
2. **Strengthening of empowerment and source expansion for talent retention and recruitment**
   (1) Enhanced teacher benefits to select and retain outstanding talent
   (2) Division of teaching and research to guide adaptive development
   (3) Promotion of diversified promotion and career development opportunities
3. **Building an intelligent campus with digital technology**
   (1) Strengthening campus information services and safety
   (2) Development of next-generation web pages and mobile applications
   (3) Establishment of an automatic parking identification system on campus
   (4) Implementation of a diversified and convenient mobile payment technology
4. **Spatial reconstruction to revitalize campus functions**
   (1) Promotion of improvement and creation of a new dormitory environment
   (2) Enhancement and improvement of spatial functions of the students' dining hall
   (3) Improvement of greening to create a campus ecosphere
   (4) Improvement of the brand-new era for campus humanity and arts

1.5 Memberships of Associations

▼Associations, initiative organizations, and alliances that play a significant participating role

Item	Name of the Organization	Strategic Significance	Position Held
1	Association of Private Universities and Colleges	To improve the level of education of higher learning and promote the development of university affairs of private universities.	Supervisor
2	Taiwan Association of Medical Education	To improve the quality of medical education and strengthen academic communication in medical education.	Corporate membership
3	Foundation for International Cooperation in Higher Education of Taiwan (FICHET)	To participate in activities concerning foreign study in Taiwan, including global marketing and international communication of higher education.	Silver member
4	Northern Taiwan Alliance for Human Research Protection	To improve the ethical quality of academic research at the university, strengthen research in humanitarian fields, and enjoy diversified academic ethics resources.	Alliance membership
5	The Phi Tau Phi Scholastic Honor Society of the Republic of China	To reward outstanding graduates and promote academic research.	Corporate membership
6	Chinese Business Incubation Association	To promote experience communication and resource sharing among incubation centers.	Corporate membership
7	Library Association of the Republic of China	To promote the library's professional services through a domestic library association.	Corporate membership
8	Interlibrary Cooperation Association	To broaden the approaches of acquiring data for the library and expanding the scope of use of data by readers by participating in mutual borrowing and document delivery services among libraries in Taiwan.	Corporate membership
9	Consortium on Core Electronic Resources in Taiwan (CONCERT)	To assist national academic institutions in collecting electronic resources and drafting subscription rates by participating in the consortium to improve the utilization efficiency of funds and resources.	Corporate membership
10	ORCID's Taiwan Consortium	Integrating the unique permanent identifiers of publications of scholars in the university and including them in the relevant systems of institutions by participating in international organizations improves the visibility and influence of the university's research findings.	Corporate membership
11	Taiwan OCLC Governing Members Consortium	To strengthen academic research's vision and improve papers' international visibility by participating in relevant international library cooperative organizations.	Corporate membership
12	RapidILL	To broaden the approach to acquiring data for the library and expanding the scope of the use of data by readers by participating in mutual borrowing and document delivery services among libraries in Taiwan.	Corporate membership
13	The Chinese Association of Museums (CAM)	To acquire and improve professional awareness in the library industry and promote inter-library communication.	Group member B
14	GREEN UNIVERSITY UNION OF TAIWAN (CGU applied to join this organization in August 2022)	To conduct complete green university interschool and internationalized promotion strategies, connect the strength of each university, advance the green university work of Taiwan, popularize the concept of environmental sustainability, and duly exercise university social responsibility.	Permanent membership
15	University Sustainable Development Association (CGU signed to join this organization in September 2022)	To jointly promote net-zero emissions by 2050, keep up with the international vision, promise to publish university sustainability reports regularly, promote local recognition and development, and focus on sustainable university governance as the core of the university's sustainable development.	Member
16	TALENT, in Taiwan	To encourage more students and teachers at the university to practice university social responsibility, and assist students in learning about the actual needs of society and local communities, understanding the future benefits of the knowledge and skills learned, and maintaining sustainable competitiveness in the context of low birth rates in Taiwan.	Member
17	Taiwan Medical Library Association, TMLA	By participating in the Taiwan Medical Library Association (TMLA), the university aims to expand communication with medical libraries and relevant research institutions in Taiwan and acquire the professional knowledge and ability to provide better academic research services; at the same time, TMLA also assists its members in jointly negotiating discounted subscription fees for electronic resources and improve the cost-effectiveness of funds.	Corporate membership
18	Private School Staff Retirement Pension and Severance Fund Management Committee	To better and effectively protect private school teachers' retirement rights and benefits.	Director

Chapter 2

University Governance

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2.1 Governance Structure

Policy commitments

Chang Gung University has implemented a series of internal control and audit measures to assess the risks, significance, and suitability of each business operation, with each matter, audit, and follow-up action conducted according to the internal control schedule formulated by the President. The university has established an Internal Control Regulations Committee to study and define internal control points and strengthen internal control measures in accordance with the Implementation Measures for the Internal Control System of the School Consortium and Private Schools. This System has been in effect since it was approved by the board on November 26, 2010, subject to regular amendments and revisions. In accordance with the Enforcement Rules of the University Act, the Degree Conferral Act, and other relevant laws and regulations issued by the Ministry of Education, the university has established the Student Standards and Requirements, which outline the relevant rules governing students' academic pursuits and related matters. To create a more conducive work environment, CGU is committed to achieving gender equality on campus and profoundly cultivating and establishing education resources and an environment intended for gender equality to safeguard the physical and mental health of all teachers and students. Furthermore, in accordance with Article 6-2 of the Occupational Health and Safety Act, we have established the Illegal Infringement Prevention Plan, and set up a Gender Equity Education Committee according to Article 6 of the Gender Equity Education Act. We have also established the Prevention and Handling of Sexual Assault, Sexual Harassment, and Sexual Bullying on Campus policy in accordance with the relevant regulations, taking necessary health and safety measures to prevent unlawful infringements imposed by others, either physically or mentally, on those who execute their official duties. CGU actively promotes education on the prevention and handling of sexual assault, sexual harassment, and sexual bullying on campus, and aims to enhance awareness and respect for gender and physical autonomy, promote gender equality, eliminate discrimination, and uphold human dignity.

Additionally, in response to evolving external factors and the pursuit of the "Future Pilot" goal, Chang Gung University is planning innovative and student-centered teaching approaches, focusing on the key R&D plan to develop students into high-quality, advanced talent with holistic skillsets, core professional competence, interdisciplinary abilities, technological and digital abilities, international mobility, industry practicality, innovation, and entrepreneurship capabilities. By adjusting systems and courses, we provide a more diversified "Flexible Course System" and promote the "Excellent Graduate Plan" and "Deep Bowl" learning courses to encourage students to pursue excellence.

- We promote innovative teaching, operate a flexible educational framework, reduce the prerequisites for internal transfers and dual majors, implement specialized teaching through the application of artificial intelligence, oversee the formulation of medium- and long-term university development plans, adapt the use of artificial intelligence to the unique attributes of each academic department, and nurture advanced interdisciplinary talent to achieve the sustainable growth of the university.
- To cultivate the talent required by enterprises, we encourage students to enrich their skills and abilities necessary for employment in various industries and acquire professional internship opportunities during their studies through industry-university cooperation, to enhance their employment competitiveness and career development prospects.
- Chang Gung University is focused on advancing its unique strengths, particularly in the medical arena, with a specific focus on six major topics. These topics include "Virus Infection Study," "Immunity Study," "Microorganism Study," "RNA Biological Study," "Study of Neuroscience and Related Diseases," and "Study of Smart Medical Care and Healthcare," with the aim of establishing a strong international research-oriented university.
- The university places a strong emphasis on internationalization, boasting an outstanding team of educators and an extensive network for international cooperation. We offer professional English language courses to augment students' international competitiveness, thereby bolstering the international reputation and influence of CGU.
- We carry out technological and industrial innovation development, make good use of abundant industry backgrounds and enterprise resources, promote the application and transformation of research findings, and cultivate interdisciplinary innovation ability and entrepreneurship.

Composition of the Board of Trustees

Chang Gung University is guided by the school concepts of Holistic Education and Integration of Theory and Practice, which prioritize the cultivation of students' interdisciplinary qualities through Interdisciplinary Collaboration and encourages students and teachers to engage in practical learning and innovative application by organizing courses and activities related to innovation, creativity, and entrepreneurship in order to develop an entrepreneurial, sustainable ecosystem.

Based on practicing education concepts and for the purpose of talent cultivation, the Board of Trustees of Chang Gung University executes, assists, and supervises university operations per its functions and powers. The Board of Trustees does not include resident trustees, and the President of CGU is fully responsible for university affairs. To enhance university governance and optimize the functionality of the Board of Trustees, the CGU Internal Control System has been established in compliance with the Implementation Measures for the Internal Control System of the School Consortium and Private Schools. This system aims to self-supervise personnel, finance, operations, and other relevant matters under the management of the Board of Trustees, the university, and their members. Additionally, we conduct annual audits of the university, covering budgeting, final accounting of revenue and expenditure, and procedures for a change of legal representative and for convening and recording board meetings.

The current Board of Trustees is comprised of 15 trustees with tenure from November 2022 to November 2026. Relying on the diverse industry experience and professional background and capabilities of its members, the Board of Trustees can reflect on diversified perspectives and lower the overall operational risks of the university. In the 2022 academic year, CGU's Board of Trustees held a total of four meetings (four board meetings were convened in total, including two routine board meetings and two board meetings for the reelection of trustees and election of chairman of the 12th Board of Trustees). The average attendance rate of all trustees reached 91.6% this year. No key major incident requiring communication with the Board of Trustees occurred in the 2022 academic year.

Tenure of the Board of Trustees	The trustees' tenure lasts for four years, and the post-holder can be re-elected and re-appointed in accordance with the Support and Donation Regulations of CGU.
Meetings of the Board of Trustees	At least one board meeting must be convened each semester. Trustees shall attend board meetings in person, and not entrust proxies.
Functions and powers of the Board of Trustees	Changes to the Support and Donation Regulations of CGU; the selection, employment, and dismissal of trustees and supervisors; the election and dismissal of the chairperson; the selection, employment, supervision, assessment, and dismissal of the president; investments to help increase the financial resources of CGU; the disposal, encumbrance setup, acquisition or leasing of real estate; auditing of reports and plans of university affairs, and important rules and regulations, and supervision of their execution; fundraising and application; auditing of budgeting and final accounting of CGU's revenue and expenditure; school fund management and supervision of finance administration, etc.

Information of the members of the 12th Board of Trustees and their attendance at board meetings during the 2022 academic year

Title	Name	Gender	Age	Attendance record at board meetings	Position
Chairman	William Wang	Male	76	4	Chairman of Formosa Plastic Group
Trustee	Wilfred Wang	Male	72	4	Chairman of Formosa Plastics Marine Corporation
Trustee	Kuei-Yun Wang	Female	76	4	Senior Vice General Manager of Nan Ya Plastics Corporation
Trustee	Jui-Yu Wang	Female	61	3	Chairman of Formosa Biomedical Technology Corporation
Trustee	Che Chen	Male	80	4	Trustee of Chang Gung University
Trustee	Chien-Nan Lin	Male	81	4	Chairman of Formosa Plastics Corporation
Trustee	Chia-Chao Wu	Male	79	4	Chairman of Nan Ya Plastics Corporation
Trustee	Fu-Yuan Hong	Male	78	4	Chairman of Formosa Chemicals & Fibre Corporation
Trustee	Pao-Lang Chen	Male	80	4	Chairman of Formosa Petrochemical Corporation
Trustee	Chen-Ching Huang	Male	63	4	Executive Vice General Manager of the Formosa Plastics Group Medical Development Center
Trustee	Yu-Jui Chen	Male	76	3	Honorary Chief Commissioner of the Chang Gung Steering Committee
Trustee	Cheng-Ta Yang	Male	61	4	Superintendent of Taoyuan Chang Gung Memorial Hospital
Trustee	Cheng-Neng Chang	Male	72	2	Consultant in Brain Tumor and Neurology of Linkou Chang Gung Memorial Hospital
Trustee	Wen-Neng Weng	Male	73	3	Honorary Superintendent of Linkou Chang Gung Memorial Hospital
Trustee (Newly Appointed)	WEN-CHUN CHENG	Male	68	2	Chairman, Chang Gung Steering Committee
Supervisor (Newly Appointed)	CHUN-CHENG LI	Male	65	2	Senior Executive Vice President of General Office of Formosa Plastic Group

Nomination and selection of the Board of Trustees

The term of office for members of the Board of Trustees is set at four years, with the possibility of re-election or re-appointment as per the Support and Donation Regulations of CGU. Upon re-election, incumbent eligible for re-election can be considered as candidates for the next term, with the exception of those who do not meet the trustee qualifications outlined in relevant laws and regulations, such as the Private School Law or the Support and Donation Regulation of CGU. Based on the total number of trustees defined in the bylaws (15 trustees), one-third of the eligible individuals will be selected as candidates for the succeeding term and added to the candidate list. Incumbent trustees will then choose the required number of trustees for the upcoming term from the candidate pool, and the trustees for the next term will subsequently elect the chairman.

Recusal Due to Conflicts of Interest

William Wang serves as the chairman of the Board of Trustees of Chang Gung University and does not hold any other concurrent administrative position within CGU; the Board of Trustees standardizes the principle of recusal due to conflicts of interest in accordance with the provisions of Article 81 of the Private School Act and Article 29 of CGU's Support and Donation Regulations. The Board of Trustees strictly abides by the principle of recusal due to conflicts of interest and requires board members to fulfill their moral obligations as good managers and faithfully execute their business and authority with a high degree of self-discipline and prudence. It is stipulated that if a trustee or the legal person they represent has any conflict of interest with the matters discussed in a meeting, they shall explain the important content of such conflict of interest in the current board meeting. If such interest poses a risk of damage to the interests of the school, such trustee shall not join in the discussion or voting and shall excuse themselves from the discussion and voting. This trustee shall also not exercise any other trustee's voting rights by proxy.

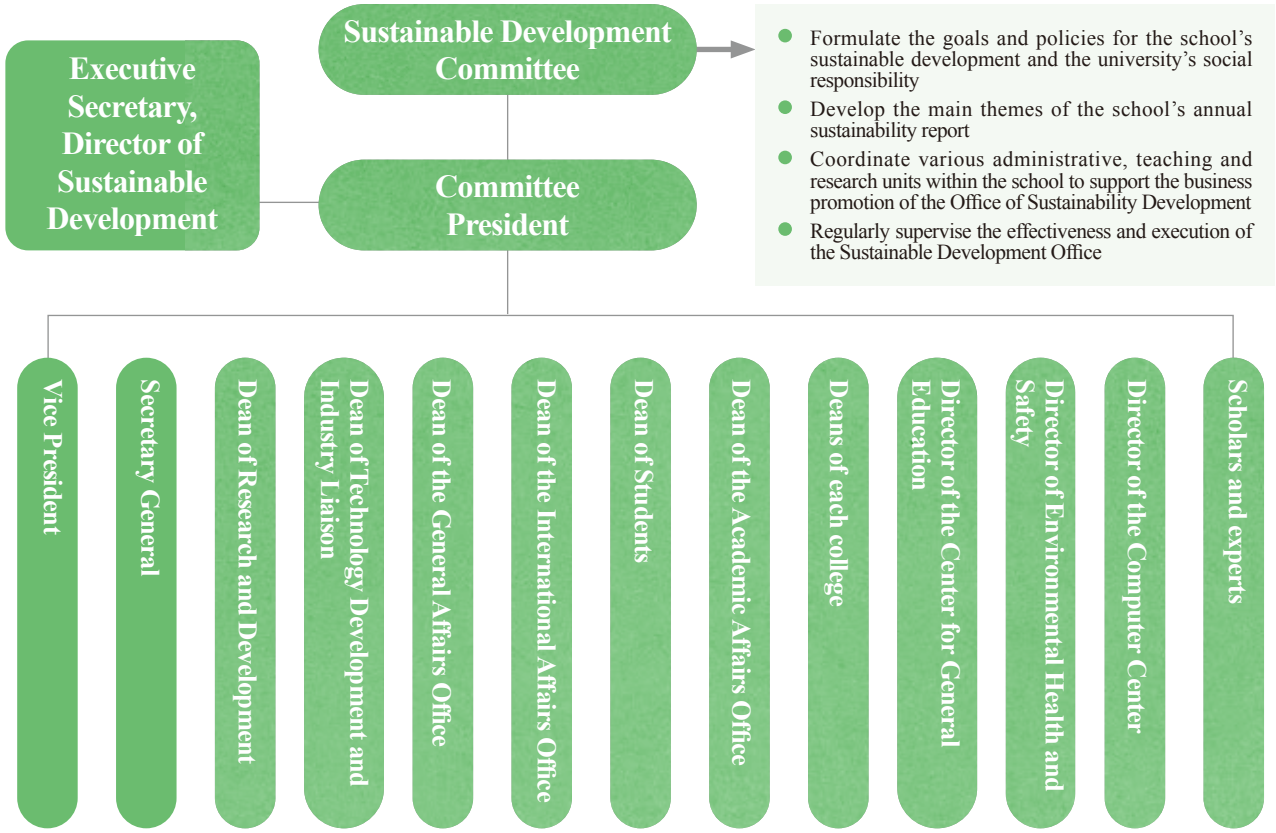
Trustee Remuneration Policy

Article 28 of CGU's Support and Donation Regulations clearly stipulates that "No post is provided for the chairman, trustees, and supervisors, but an attendance fee and transportation expenses shall be paid to them". No post has been given to the chairman, trustees, and supervisors and they do not hold any other concurrent administrative positions in CGU.

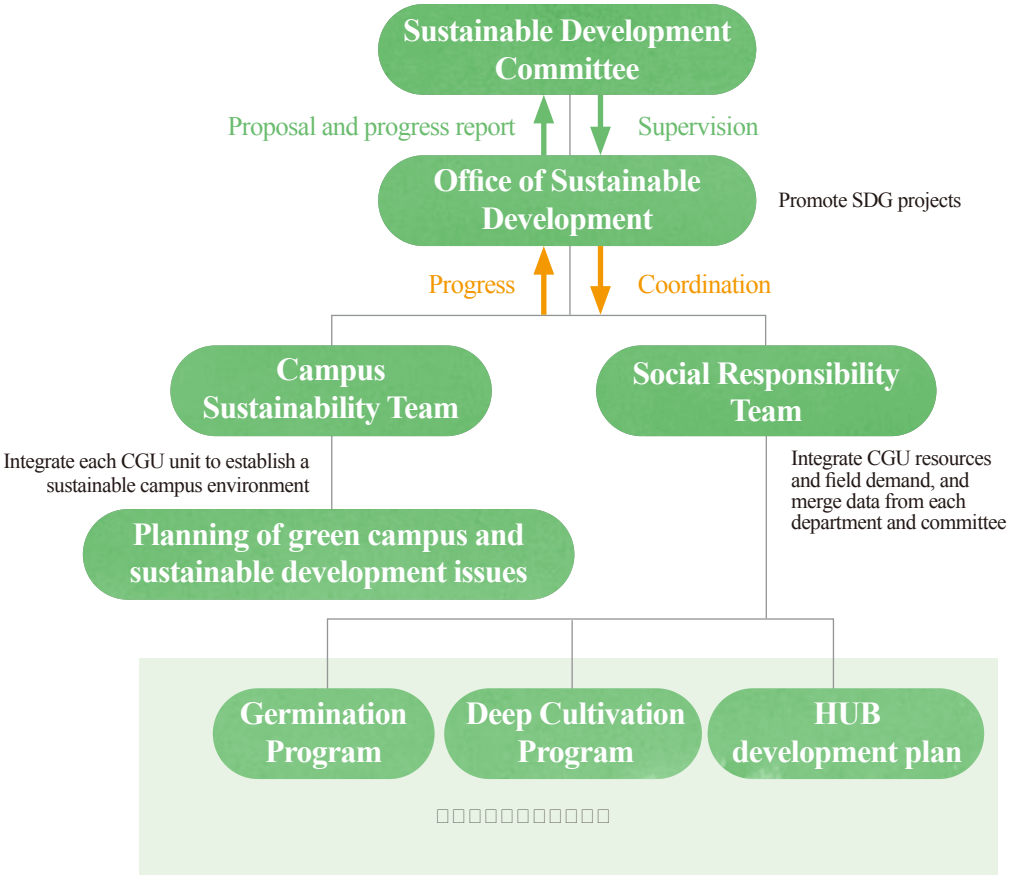
2.2 Sustainable Development Committee

In response to the United Nations Sustainable Development Goals, and in pursuit of integrating sustainable development as a fundamental value within CGU, we have partnered with the Formosa Plastics Group to fulfill our social responsibility. This led to the establishment of the Office of Sustainable Development in July 2022 as a formal top-level unit, sanctioned by the Ministry of Education at the conclusion of 2023, to comprehensively advance the agenda of sustainable development. In November 2022, we established the Sustainable Development Committee for the purpose of integrating sustainable development affairs across the university's administrative and academic units. The president of the CGU presides as the chairman of the Sustainable Development Committee, and the chief administrators of each university unit, along with the deans of each college (including the Center for General Education), are designated as committee members. The committee's mandate involves orchestrating resources from administrative, academic, and research units, passing resolutions on sustainable development matters, and formulating developmental objectives and policies. Furthermore, our Office of Sustainable Development also engages in horizontal collaboration and cooperation with the Center for Sustainability and Energy Technologies and School of Sustainability and Innovation on campus to foster interdisciplinary integration of research and teaching related to sustainability issues, thus collectively advancing our objective of a sustainable future.

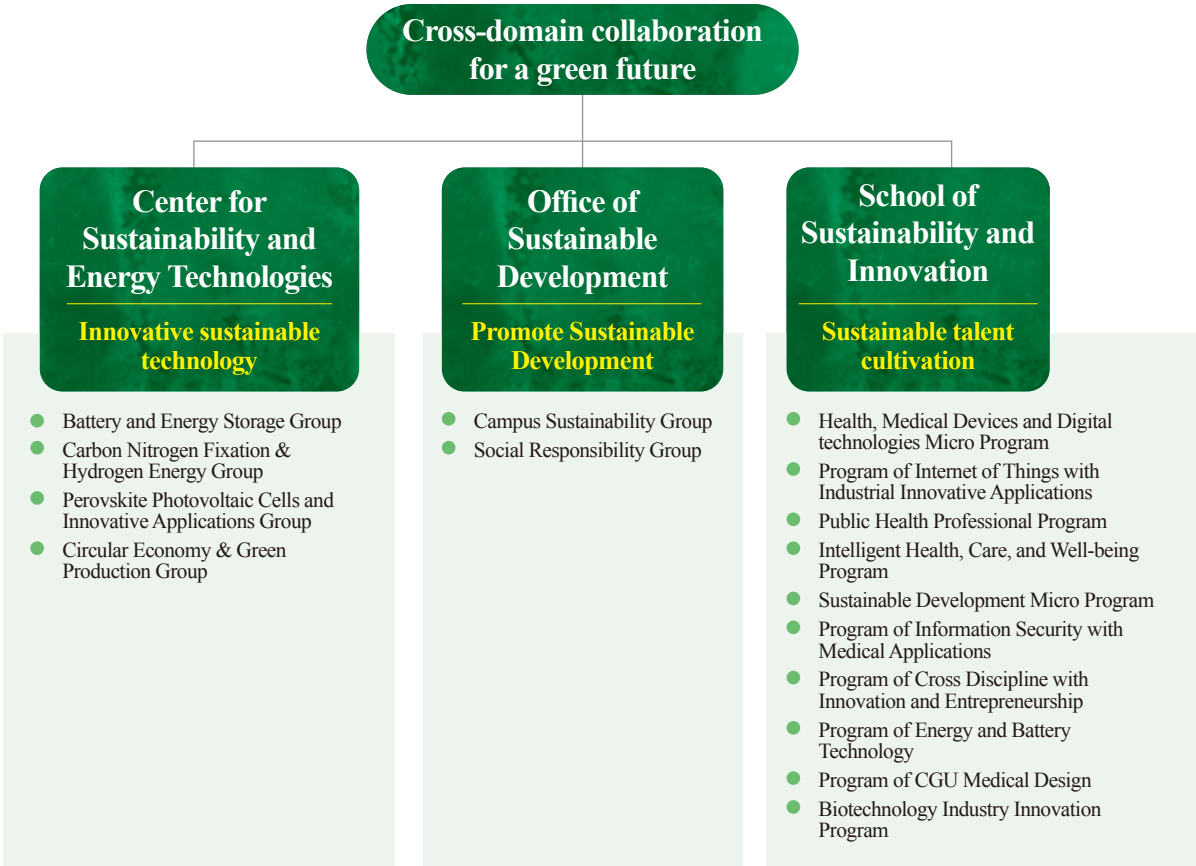
▼ Organizational structure of the Sustainable Development Committee



Administration and coordination of the Sustainable Development Department



Research projects related to cross-domain collaboration to promote sustainability



2.3 Internal Control and Risk Management

To ensure the smooth implementation of each operational matter at CGU through internal control, CGU has established an Internal Control Committee. This is in accordance with the Implementation Measures for the Internal Control System of School Consortiums and Private Schools issued by the Ministry of Education. The committee assesses the risks and significance of each business activity, ensures their appropriateness, and reviews and strengthens internal control processes.

To align with relevant laws, regulations, and practical work requirements, CGU's internal control system was reviewed, and each control item was revised in March 2023 (academic year 2022). Each department applied for revisions to the internal control system after functional staff carried out the following steps:

(1) **General Chapters:** The amendments covered six general chapters: internal organizational structure, finance, teaching affairs, student affairs, industry-university cooperation, and detailed rules for the implementation of internal audits.

(2) **Operating procedures:** The provisions of six operating procedures were revised, including those on personnel, two on financial affairs, one on academic affairs, one on general affairs, one on R&D affairs, and one on industry-university cooperation and PE affairs.

(3) The contents above were resolved at the second meeting of the Internal Control Committee in the 2022 academic year, and were deliberated and approved by the Board of Trustees on November 15, 2023.

To assist the president in reviewing the effectiveness of the internal control system, measuring the effect and efficiency of school operations, providing suggestions for improvement, and ensuring the continual and effective implementation of the internal control system, we have established the Regulations Governing the Implementation of CGU's Internal Audits. An audit group has been set up to develop the annual audit plan, submit audit and follow-up reports periodically, and present these reports to the president for verification and review, with copies sent to each supervisor. If major violations are found and there is a risk of significant damage to the legal representative of the university or the university itself, the audit group will immediately evaluate and address such violations, report them to the Board of Trustees, and provide copies of the reports to supervisors for review.

Risk Management and Internal Audit

CGU's Internal Control Committee distinguishes 14 management matters, including personnel, finance, academic affairs, student affairs, general affairs, research and development, industry-university cooperation, international academic exchange, information management, library management, physical education, the Office of the Secretariat, environmental safety & hygiene, and Formosa Plastic Group Museum. These distinctions are based on the types and traits of each impacting risk. The committee evaluates and reviews the results summarized by each unit and reports to the Board of Trustees once every academic year.

The internal audit group prepared an audit plan for the 2022 academic year in accordance with the Detailed Implementation Rules for Internal Audits of the Internal Control System. This plan aimed to verify (1) the integrity and compliance of existing systems, rules, and regulations, and (2) the payment of relevant expenses, as well as to provide suggestions for improvement to ensure the normal operation of university affairs. In the 2022 academic year, the internal audit group conducted routine audits on 17 administrative units and audited four projects, including NSTC fundings, personal information, document and administration management, and the university development project, totalling 44 audits. These audits identified 54 abnormal discrepancies and produced 53 suggestions for improvement. Thirty-six items requiring improvement were listed for continual tracking and improvement in the following academic year. Audit reports and follow-up reports were countersigned by the audited units and presented to the president for verification and review. Copies of the reports were also delivered to each supervisor for review before the end of the academic year.

2.4 Information Security

▼ Management Status of the Material Topic "Information Security" of Chang Gung University in 2023 (2022 Academic Year)

Material Topics	Information security		
Corresponding GRI Index	GRI 418-1 Substantiated complaints concerning breaches of customer privacy and losses of customer data	Effectiveness Tracking Mechanism	● Check the number of CGU's core cybersecurity systems every year. ● Ensure cybersecurity risk evaluations are executed every year. ● Complete annual internal and external cyber security audits. ● Complete internal personal data protection management audits every year. ● Conduct continual business operation drills once every two years. ● Extend the scope of application of the Information Security Management System (ISMS) to the whole university. ● Allocate full-time cybersecurity personnel. ● Assist full-time cybersecurity personnel in acquiring licenses related to information security. ● Organize cybersecurity advocacy, education, and training. ● Centrally manage the core cybersecurity systems of CGU and lower the number of idle cybersecurity systems. ● Reduce the utilization rate of official cybersecurity products provided by brands in mainland China.
SDGs Principle	4 QUALITY EDUCATION; 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE; 12 RESPONSIBLE CONSUMPTION AND PRODUCTION		
Policy commitments	Strengthening the overall information security protection of the university to achieve sustainable development.		
Metrics and Targets			
Sustainability targets	– Regularly evaluate information security risks and continually pass international ISO 270001 Information Security Management and ISO 27017 Cloud Service Information Security Management certifications. – Organize cybersecurity advocacy, education, and training every year, and assist full-time cybersecurity personnel in acquiring relevant cybersecurity licenses to strengthen their professional competency.		
Mid-term target	– Pass the verification of the new version of the ISO 27001:2022 Information Security Management System by 2025.	Actions and Measures	● No events or complaints regarding personal data or confidential information leaks occurred in the current year. ● Internal and external cybersecurity audits and internal personal data protection management audits were already completed, and no major discrepancies were found in the audit results. We successfully acquired ISO 27001 and ISO 27017 licenses. ● CGU held university cybersecurity education and training three times, personal data protection education and training once, and education and training for dedicated information personnel three times. ● CGU conducted a cybersecurity risk evaluation and identified two high-risk areas among 179 information assets. A budget has been prepared for 2024 to address these equipment risks and implement measures to mitigate the corresponding risks. ● CGU completed checks on core cybersecurity systems which included a total of 24 systems at medium level and above. ● In the 2022 academic year, the personal information audit of four units, including the Office of the Secretariat, Library, Office of General Affairs, and Office of Physical Education, was completed. ● In the 2022 academic year, we organised two sessions of social engineering drills to enhanced cybersecurity awareness among our staff members.
Long-term target	– Maintain constant vigilance on international information security specifications, keep up with global information security trends, and enhance campus information protection measures to gradually achieve the goal of strengthening the overall information security protection of the university to realize sustainable development.		

Policies and Measures for Information Security Management

To enhance information security management, CGU's Computer Center is responsible for overseeing information security governance policies and supervising the operation of information security management. In line with the Ministry of Education's provisions, the Regulations on the Classification of CyberSecurity Responsibility Levels for level-B units, and the Regulations Governing CyberSecurity and Personal Data Management, we have drafted the Information Security Management Regulations and the Personal Data Protection Management Regulation for CGU. Additionally, we are considering incorporating the Information Security Management System (ISMS) and Personal Information Management System (PIMS) into the university's framework. The four-level documents within the ISMS and PIMS comprehensively outline the policies and measures CGU has adopted to address information security and personal data protection. Our aim is to establish a robust information security protection mechanism, raise colleagues' awareness of information security, regularly evaluate information security risks, and achieve certification for international standards ISO 27001 (Information Security Management) and ISO 27017 (Cloud Service Information Security Management). This will be accomplished through effective management, planning, supervision, guidance, promotion, and implementation by our dedicated professional information security unit.

Certificate TW09/00027

SGS

The management system of

Chang Gung University Computer Center

has been assessed and certified as meeting the requirements of

ISO/IEC 27001:2013

For the following activities

The Computer Center provide following services to university campuses in accordance with the Statement of Applicability version 2.6 :

1. Computer hardware and network management
2. Software application design and development
3. Server room management
4. Chang Gung University (CGU) Cloud : Virtual Machine Cloud Service (VMCS) and Classroom On Cloud Service (COCS)
5. Computer classroom
6. Computer maintenance center

The certificate is valid from 27 November 2022 until 31 October 2025 and remains valid subject to satisfactory surveillance audits.

Issue 7. Certified since 21 January 2009

Authorised by
Jonathan Hall
Global Head - Certification Services

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Certificate TW16/01099

SGS

The management system of

Chang Gung University Computer Center

has been assessed and certified as meeting the requirements of

ISO/IEC 27017:2015

For the following activities

The provision of operation, maintenance and management for Virtual Machine Cloud Service (VMCS) and Classroom On Cloud Service (COCS) and relating infrastructure and data center, and associated applications, systems and data communication networks. This is in accordance with the Cloud Security Statement of Applicability version 1.1 and in association with ISO 27001 certificate TW09/00027 (UKAS).

The certificate is valid from 27 November 2022 until 31 October 2025 and remains valid subject to satisfactory surveillance audits.

Issue 3. Certified since 28 November 2016

Authorised by
Stephen Pan
Deputy Director

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ISO 27001 Information Security Management Certification

ISO 27017 Cloud Service Information Security Management Certification

Daily Information Security Maintenance and Personal Information Management

The Computer Center of Chang Gung University oversees and coordinates information security efforts, encompassing the relevant information services provided by the Computer Center and other university departments. We regularly conduct vulnerability scans, assess the efficiency of protection systems, centrally manage the university's core information systems, implement information security responsibility levels, and consistently update our intrusion prevention equipment. To comprehensively enhance the campus's network protection capabilities, we continually review the achievement rate of performance indicators, propose specific improvement plans, and offer courses for information security advocacy, education, and training.

We have successfully obtained third-party certifications for ISO 27001 Information Security Management System and ISO 27017 Cloud Service Information Security Management System. The verification process involves the following steps: a consulting company conducts an internal audit, necessary improvements are made based on their suggestions, and relevant management review meetings are held. SGS Taiwan then provides third-party verification. Once the verification is passed, a certificate is issued. The scope of verification includes seven aspects: computer hardware and network management, application software design and development, server room management, virtual host cloud (VMCS), virtual desktop cloud (COCS), computer room, and computer maintenance center.

Regarding personal data protection, we provide PIMS content through our webpages, support the personal data protection efforts conducted by the university's administrative units, and enhance education and advocacy on personal data knowledge. Currently, 14 administrative units of the university are included in the personal data audit scope. We plan to gradually extend this auditing scope to all units year by year. Each year, we conduct risk assessments, evaluate the effectiveness of the internal control system, and offer suggestions for improvement.

The Personal Information Management System (PIMS)

In 2023, we further strengthened our information security measures in the following aspects:

1. Updating and Management of Information Security Equipment: We regularly update and optimize the intrusion prevention system to improve protection efficiency.
2. University-wide audit and risk assessment: We have extended the auditing scope to include more administrative units and conducted university-wide risk assessments to ensure the effective operation of each unit’s information security practices.
3. Information security education and training: We have strengthened information security advocacy by holding multiple education and training courses to improve the information security awareness and skills of the university's faculty and staff.
4. Review and improvement of performance indicators: We continually review and improve information security performance indicators to ensure their achievement rate and effectiveness.
5. Reinforcement of personal data protection: We have further improved PIMS, enhanced personal data protection measures, and reinforced the education of personal data knowledge within the university.

Additionally, in accordance with the Ministry of Education (MOE) regulations on cybersecurity and personal data management, we have reduced the use of cybersecurity products from mainland brands to comply with the special chapter on information security in the aforementioned regulations. We hold regular meetings of the Personal Data Protection Committee and the Information Security Committee to review annual information security operations and develop a plan for the following year.Through these measures, we provide a safe information security environment and ensuring the security of each school's services. Furthermore, we regularly review our information security policy to reflect the latest developments in government regulations, technology, and business practices, ensuring the continued effectiveness of our information security practices.

What does Chang Gung University do to maintain its daily information security?

- The Information Security Management System (ISMS) has been implemented university-wide based on the cybersecurity system and risk evaluation. Internal and third-party audits have been completed in accordance with the ISO 27001 international information security standard.
- Strengthen university personnel's awareness of cybersecurity and provide corresponding training: We hold seminars and training courses each year, requiring all faculty and staff to undergo training. We allocate full-time information security personnel and assist them in acquiring professional licenses to ensure they are well-equipped to handle cybersecurity challenges.
- Ensure the management efficiency of the cybersecurity system: We continually check the university's core cybersecurity systems every year, implement cybersecurity responsibility levels, and regularly update information security equipment to prevent invasions. We also consistently review the achievement rate of performance indicators and propose specific improvement measures to comprehensively strengthen the overall network protection capabilities on campus.
- Implement management products that harm the cybersecurity of Taiwan: We continually require each unit (including leased fields) to avoid adopting cybersecurity products provided by mainland Chinese brands when purchasing new equipment. Existing products of concern are listed for management and are prohibited from being connected to the network. Such products must be replaced within a specified time frame.
- Implement personal data protection management: Fourteen administrative units within the university have been designated as audited units for personal data protection. Internal auditors and external consultants conduct onsite audits annually to ensure compliance and improve data protection measures.

In response to the change of ISO 27001 version: Import ISMS management measures to strengthen information security management performance

The international information security management standard ISO 27001 was updated at the end of 2022. The new version (2022 edition) emphasizes strengthening the effectiveness of information security control, reducing the number of control measures from 114 to 93, and adding 11 new control measures. These new measures cover dimensions such as threat intelligence, information security for cloud services, and data leak prevention, better aligning with the security needs of the current information environment. To effectively and comprehensively improve the cybersecurity protection level at Chang Gung University, we have set a five-year overall objective to include CGU's core cybersecurity systems within the scope of the Information Security Management System (ISMS). We will assist each unit in implementing ISMS management measures to meet all information security management performance metrics.

2.5 Regulatory Compliance and Complaints

Regulatory Compliance

It is the fundamental responsibility of a school to operate in compliance with regulatory requirements, which is key to sustainable management. To ensure that operating activities conform to laws, regulations, and local government rules, Chang Gung University pays close attention to regulations that may impact the school. In accordance with the Regulatory Work Regulations of CGU, we are required to address newly established regulations as follows, in addition to reviewing and revising relevant content based on actual needs: General reviews are carried out after new regulations have been implemented for two years, and general reviews may be carried out once every three years if the new regulations have not been revised and provisions remain the same within two years. This ensures that the practical operations of each unit comply with the required specifications.

When handling relevant affairs, Chang Gung University strictly adheres to all applicable laws and regulations, fulfilling its social responsibility. In the past five years, CGU has not been involved in any civil or criminal cases, nor has it violated the Private School Act or labor and environmental regulations. Consequently, the university has not been subject to any penalties.

Channels for Appeals and Suggestions

CGU has established a variety of channels for appeals, reporting, and suggestions, encouraging its stakeholders to report, appeal, and provide relevant suggestions regarding dishonest and unethical behavior. Stakeholders are also urged to report when any operating activity negatively impacts the environment, economy, society, or human rights.

Chang Gung University's appeal and reporting channels, and appeal cases in the 2022 academic year

Appeal channel	Description
Student appeals	To guarantee students' rights to live, learn, and receive an education, and to enhance campus harmony, we have established the Student Grievance Regulations of Chang Gung University and set up a Student Appeal Committee to handle student appeals. Students, the student union, and other relevant autonomous student organizations may submit a written appeal to the Student Appeal Committee if they believe that penalties, other measures, or resolutions imposed by the university are illegal or improperly damaging their rights and interests. If they do not agree with the decision made by the committee, they may file a petition to the Ministry of Education or pursue legal action. In the 2022 academic year, there was a total of one student appeal case, which has subsequently been closed.
Teacher appeals	To handle teacher appeal cases, we have set up a Teacher Appeal Committee and established the Key Points of Organization and Deliberation of the Teacher Appeal Committee of CGU. Teachers may appeal to the Teacher Appeal Committee if they believe that the measures imposed by the university are illegal or improperly damaging their rights and interests. If they do not agree with the decision made by the committee, they may file an appeal to the Central Teacher Appeal Committee of the Ministry of Education. In the 2022 academic year, no teacher appeal cases occurred.
Staff appeals	To safeguard employees' rights and interests, we have established the Guidelines for Staff Appeals and set up an Employee Appeal Committee to handle staff appeals. If an employee believes that his/her personal rights and interests have been damaged due to any punishment or other administrative measures adopted by the university, including job transfer, discharge, dismissal, or rewards and punishments, and does not agree with the result through general administrative procedures, he/she may appeal to the Employee Appeal Committee. In the 2022 academic year, no staff appeal cases occurred.
Other cases	Internal and external personnel may directly report unlawful incidents to CGU through the open complaint mailbox (president@mail.cgu.edu.tw) available on our website. We also provide an option for anonymous reporting. The unit receiving the report shall keep the whistleblower's identity and the details of the incident confidential and shall not disclose information to any irrelevant third party, to avoid causing unfair and adverse treatment to the whistleblower, unless otherwise required for the investigation. In the 2022 academic year, 91 cases were received via the complaint mailbox, all of which were closed. The cases mostly related to university dormitories, equipment failures, student catering, and course selection.

Student appeal case statistics of Chang Gung University in the last three academic years

Academic Year	109 2020		110 2021		111 2022	
Type of case	Number of cases	Case closing rate	Number of cases	Case closing rate	Number of cases	Case closing rate
Students' rights and interests	8	100%	8	100%	1	100%
Gender equality cases	1	100%	9	100%	0	N/A
Human rights related cases (e.g., inequality)	0	N/A	0	N/A	0	N/A
Total	**9**	**100%**	**17**	**100%**	**1**	**100%**

Note:
The student appeal cases taking place in the academic year of 2022 was mainly resulted from students' dissatisfaction with the resolutions made by the Student Reward and Punishment Committee. This case was already closed, and the complainants haven't applied for reconsideration.

Chapter 3

Education Performance

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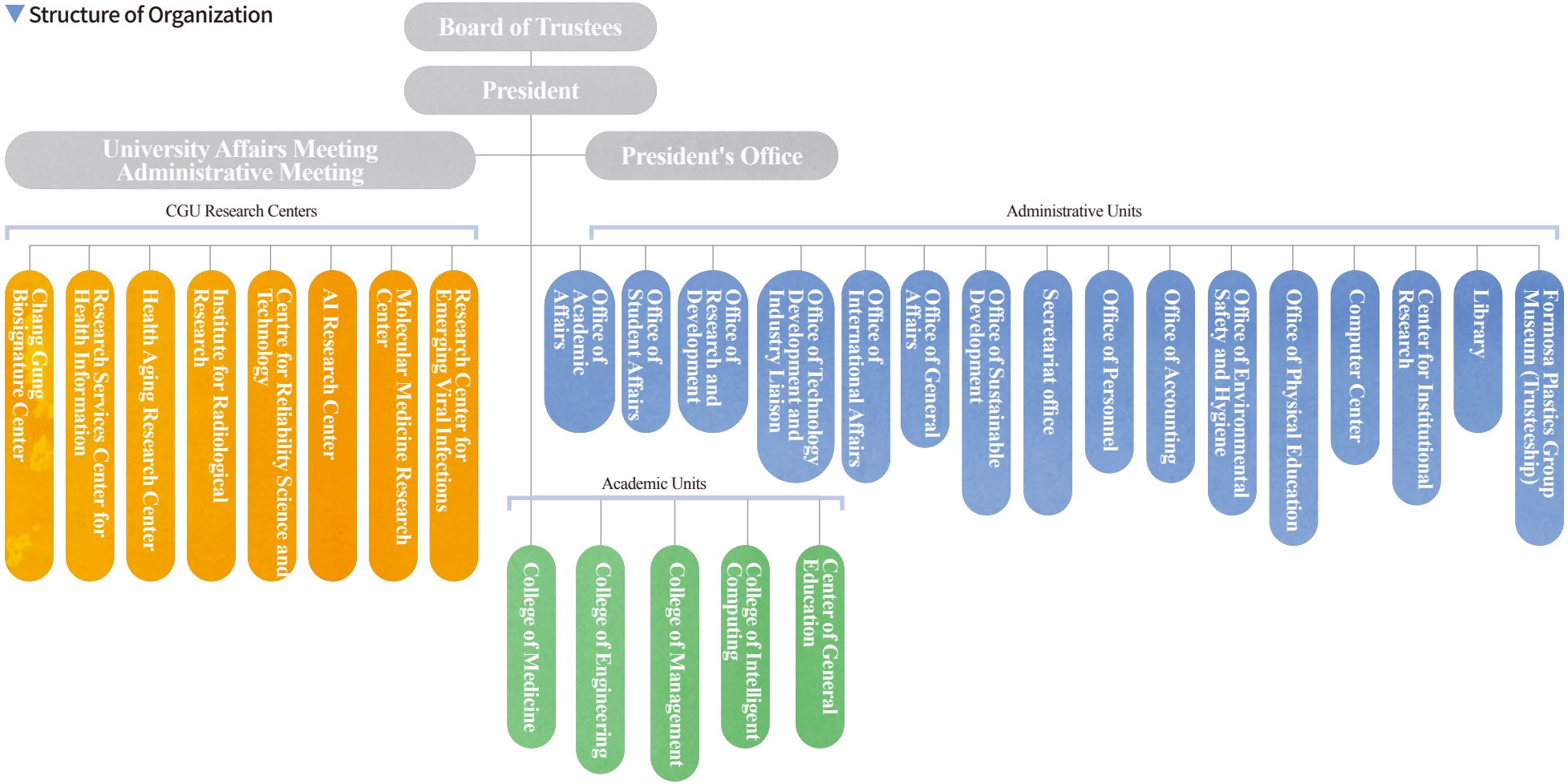
3.1 Organization

There are a total of four colleges, one Center of General Education, twenty-one departments, and nine CGU Research Centers. The dean and chair are the administrative managers of the academic unit, and the dean is the primary coordinator of academic affairs.

▼ Structure of Organization



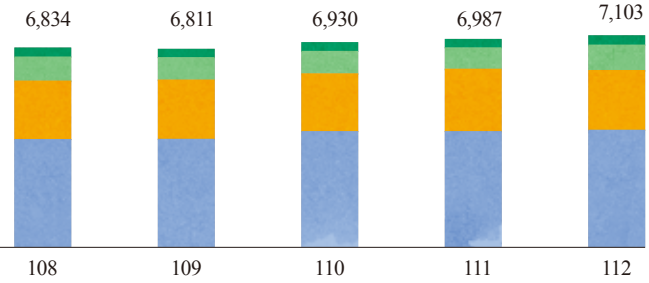
3.2 Admissions Information

In the last five years (2019-2023 academic years), the total number of students at Chang Gung University has remained around 6,900. The number of students is expected to increase slightly in the 2021 academic year, and by the 2023 academic year, the total number of students in the school will exceed 7,100. The Ministry of Education has been promoting the expansion of admissions quotas in semiconductors, AI, and mechanical engineering, contributing to an annual increase of 70-80 students at the university. Due to low admission quotas in the past, the number of PhD programs and In-Service master's programs at our school has declined year by year. In response, our school has adopted a strategy of cooperating with enterprises to cultivate talents. For example, enterprises provide scholarships in the Memory Program of the College of Engineering, and the school nurtures talents after graduation. The ability to provide services to companies in order to attract students to enroll is also one of the reasons for the increase in the number of students.

Student numbers and changes across CGU departments and institutes in the past five years

Academic year Education System	108 2019	109 2020	110 2021	111 2022	112 2023
Bachelor programs	5,095	5,099	5,236	5,236	5,272
Master programs	1,074	1,088	1,062	1,144	1,199
PhD programs	472	443	443	424	454
In-Service master programs	193	181	189	183	178
Total	**6,834**	**6,811**	**6,930**	**6,987**	**7,103**

Note: The numbers of in-school students as of October 15 of the first semester were used.



Enrollment and registration statistics across all CGU departments and institutes

Bachelor programs

Academic year	108 2018	109 2019	110 2020	111 2021	112 2022
Admission quotas	1,197	1,197	1,197	1,197	1,197
Enrollment	1,120	1,120	1,164	1,198	1,164
Registration rate	93.57%	93.57%	97.24%	100.08%	97.24%

Master programs

Academic year	108 2018	109 2019	110 2020	111 2021	112 2022
Admission quotas	549	495	495	495	495
Enrollment	430	403	408	450	449
Registration rate	78.32%	81.41%	82.42%	90.91%	90.71%

PhD programs

Academic year	108 2018	109 2019	110 2020	111 2021	112 2022
Admission quotas	76	76	76	76	76
Enrollment	60	58	64	59	63
Registration rate	78.95%	76.32%	84.21%	77.63%	82.89%

In-service master programs

Academic year	108 2018	109 2019	110 2020	111 2021	112 2022
Admission quotas	100	100	100	100	100
Enrollment	79	88	95	87	77
Registration rate	79.00%	88.00%	95.00%	87.00%	77.00%

Equal opportunities in education

Approximately 400 socio-economic disadvantaged students are enrolled in CGU annually, making up about 5.7% of the total student population. These students are primarily facing economic disadvantages. To mitigate the impact of limited resources and financial challenges and ensure equal learning opportunities for all students, we have established a comprehensive support system providing academic, economic, and counseling assistance to help these students improve their academic performance. Our initiatives include providing financial aid to students from low-income families, reducing or waiving accommodation fees for students from economically disadvantaged backgrounds, creating internal and external part-time job opportunities for these students, and offering personalized academic counseling. We aim to alleviate the financial burden on financially disadvantaged students, allowing them to focus on their studies until completion.

A. Enhancing and securing admission opportunities

We offer educational opportunities for underprivileged students from remote rural areas. We actively promote the Deep Cultivation Student Aid Program to ensure schooling for economically disadvantaged students, especially those from low- or medium-income households. We continue to allocate additional admission slots for students with physical and mental disabilities, Indigenous students, and students from remote rural areas outside the island. We also do not require interviews for the aforementioned students, preferring a written review instead, except for the School of Medicine and School of Traditional Chinese Medicine. This is to ensure the admission of disadvantaged students to CGU. Additionally, we are enhancing our recruitment efforts to increase opportunities for disadvantaged students to study at CGU.

B. Increasing financial subsidies to enable students to study without financial burden

Our goal is to reduce the financial strain on underprivileged students so they can concentrate on their studies. We achieve this by lowering or waiving tuition and fees, offering living grants, applying transportation & housing subsidies for enrollment, creating payment plans for socio-economic disadvantaged students, providing part-time summer jobs at Formosa Plastics Group, setting up fundraising and fund allocation mechanisms, and implementing other relevant strategies.

C. Strengthening the tutor network

There are a total of 216 class tutors and 26 departmental tutors. Over 400 socio-economic disadvantagedstudents are assisted yearly, with tutors coaching them on nearly 1,000 occasions, resulting in a counseling rate of above 200%.

D. Improving a learning-friendly environment

Allocate a special fund of NT$1-2.8 million to a dedicated account to provide scholarships and grants to financially socio-economic disadvantaged students each year. Additionally, each academic year, we receive subsidies from the Ministry of Education under the Improvement of the Public Nature of Higher Education, Completion of Schooling Assistance Mechanism, and Effective Promotion of Social Mobility Program. These funds include scholarships for academic excellence, study grants, and study aids, including subsidies for various skill tests, to create an encouraging learning environment.

Effectiveness of counseling socio-economic disadvantaged students

Statistics regarding the effectiveness of counseling socio-economic disadvantaged students at CGU have been collated in recent years. This data shows that the rate of economically vulnerable students applying for scholarships, grants, or subsidies has increased year-on-year from the academic year 2018 to 2020. In the 2021 academic year, due to the influence of the pandemic, CGU implemented distance teaching (May-October), and the number of students coached and assisted declined to 48.6%. The assistance ratio was above 60% (including the given figure) from the academic year 2022 to 2023.

▼ Statistics on socio-economic disadvantaged students receiving counseling and assistance

Academic Year / Project	107	108	109	110	111	112
Number of socio-economic disadvantaged students to assist	100	281	282	209	243	263
Total number of socio-economic disadvantaged students	469	512	385	430	405	408
Rate	**21.32%**	**54.88%**	**73.25%**	**48.60%**	**60.00%**	**64.46%**

3.3 Financial Stability and Abundant Resources

▼Management Status of Material Topic "Financial Performance" of Chang Gung University in 2023 (2022 Academic Year)

Material Topics	Financial Performance		
Corresponding GRI Index	GRI 201-1 Direct economic value generated and distributed.	Effectiveness Tracking Mechanism	● CGU's financial information is regularly disclosed. ● The financial data is verified and certified by a relevant accounting firm.
SDGs Principle	8 DECENT WORK AND ECONOMIC GROWTH		
Policy commitments	Ensure the sustainable operation of school funds and achieve the goal of university development through appropriate and reasonable resource allocation.	Actions and Measures	● As stipulated, the annual budget, final accounts, monthly financial statements, financial statements, and auditors' review report of CGU for the 2022 academic year were disclosed on the Office of Accounting's webpage. ● Ernst & Young reviewed and certified the settlement date for the 2022 academic year, and the financial statements were disclosed and reported on the webpage.
Metrics and Targets			
Metrics and Targets	CGU features sound finance and favorable income and expenditure. The annual budget is prepared by each department, institute, and college according to CGU's development plan and characteristics. Once reviewed and approved by the University Affairs Meeting and the Board of Directors, the budget is submitted to the competent authority of CGU for future reference. To implement the budget, a system automatically generates a difference analysis table every month, and each unit will review and provide relevant information. These documents will serve as the basis for improving the budget preparation for the new year. CGU has established a complete accounting system, internal control system, and operating procedures for financial budget matters.		
Mid-term target	CGU has established standards for providing affordable tuition and fees. However, without additional external financial support, CGU's equity funds will decrease in the long run. Therefore, working actively to increase income and reduce expenditure is necessary. CGU plans to organize various summer programs for international students and strengthen the recruitment of international students. Additionally, the management fee for industry-academic projects will increase by 15-20%. Furthermore, we will avoid purchasing expensive equipment and make existing equipment available for public use to enhance effectiveness. In order to minimize expenditure, the budget for each academic year should mainly support teaching, research, and counseling expenses to prioritize coordination with the university's medium- and long-term development. Other costs, such as electricity, energy, and water, should be conserved, and unnecessary expenditure should be reduced.		
Long-term target	CGU's long-term financial planning strategy is to invest the past contributions from the Board of Directors and half of the annual cash surplus in an investment fund. A professional financial team is assigned to utilize such funds to invest in stocks of high-performing TWSE-listed companies under the principles of stable and flexible investment, increase financial income from cash dividends, fill the income and expenditure gap each academic year, realize CGU's sustainable development, and continually provide a portion of financial sources.		

The main source of financial revenue for Chang Gung University is from investments in stocks of listed companies and donated stocks in accordance with the Regulations Governing the Investment and Circulation of Remaining Funds of Private Schools. The annual cash dividends are included in the financial revenue. Over the last three years, the average financial revenue has been approximately NT$ 1.781 billion, which accounts for 43% of the total average revenue in the last three years (NT$ 4.142 billion). This makes financial revenue the most critical factor in ensuring the sustainable management of CGU and allocating resources for mid- and long-term development. As of the academic year 2022, the total assets of CGU amounted to NT$ 49.906 billion with a liability ratio of 1.27% and liabilities of NT$ 632 million. Overall, the finances and financial structure of the university are in good condition.

The income source from industry-university cooperation includes revenue generated from research projects commissioned by institutions such as the National Science and Technology Council, the Ministry of Health and Welfare, the Ministry of Economic Affairs, the National Health Research Institute, and Chang Gung Memorial Hospital.

Direct economic value generated and distributed (EVG&D) from the organization's operations

Item (Unit: NT$ Thousand)		109 2020	110 2021	111 2022
Direct economic value generated (A)	Revenue	1,029,204	1,034,469	1,049,538
	Non-operating revenue	2,424,345	3,850,952	3,037,527
Economic value distributed (B)	Operating costs	2,005,273	1,944,136	2,100,646
	Employee compensation and benefits	1,772,951	1,842,995	1,936,552
	Scholarships and grants for students (including government subsidies and CGU self-payments)	100,241	122,003	146,197
Economic value retained (A-B)		**-424,916**	**976,287**	**-96,331**

Note:
Revenue includes tuition and fees, income from subsidies, examination-related fees, accommodation fees, etc.; non-operating revenue includes industry-university cooperation income, financial revenue, etc.

Financial revenue, industry-university cooperation income and subsidies of Chang Gung University over the past three years

Item (Unit: NT$ Thousand)	109 2020	110 2021	111 2022
Financial revenue	978,770	2,893,433	1,472,249
Industry-academia collaboration income	1,360,376	881,992	1,456,599
Subsidies	375,631	371,424	369,063

Note:
Income from subsidies are mainly awards granted by the Ministry for Education to private universities and colleges for their university/college development programs, and deep cultivation project programs of higher education, etc.

3.4 Quality and Innovation of Education

▼Management status of the material topic "Quality and Innovation of Education" of Chang Gung University in 2023 (2022 academic year)

Material Topics	Quality and innovation of education
Corresponding GRI Index	Self-selected topics
SDGs Principle	4 QUALITY EDUCATION; 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE; 11 SUSTAINABLE CITIES AND COMMUNITIES
Policy commitments	Improving the quality of education and students' learning effectiveness and cultivating students' global professional and cross-domain capabilities.
Metrics and Targets	
Short-term targets	1. Enhance students' current professional competency and ability to communicate in professional English. 2. Each specialized department shall revise the contents and suitability of courses through the "Results-oriented Internal and External Dual-cycle Course Planning and Management Mechanism" to deepen students' basic core capabilities and develop their employability. 3. Promote AI+X courses and apply generative AI to professional courses in various departments.
Mid-term target	1. Improve the teaching appraisal and feedback system and evaluate the teaching effectiveness and basis for improvement based on the study results of information regarding university affairs. 2. The university is expected to participate in the Ministry of Education's "Flexible Academic System and Future University Plan" and establish bachelor's degree programs in high school and college. A plan will be submitted for the 2024 academic year, including the formulation of regulations, curriculum development, application requirements, application procedures, and guidance mechanisms. The plan is expected to be implemented from the first semester of the 2025 school year.
Mid-term target	Create an international research-oriented university that focuses on students.

Effectiveness Tracking Mechanism

- The number of professional courses, cross-domain courses, and integrated courses opened by each professional department.
- The ratio of graduates who have learned and practiced cross-disciplinary courses, innovation and entrepreneurship courses, full-English courses, and program design courses.
- The ratio and quality of courses lectured using digital online platforms.
- Quality and application of students' feedback on courses and teachers' education.
- Teachers' professional growth.
- The number of teachers who have applied for teaching practice research programs with the Ministry of Education or education-related research programs of the National Science and Technology Council.
- Annual report for the higher education Deep Cultivation Program.

Actions and Measures

- Apply UCAN to inspect students' career paths, lower the threshold for cross-departmental studies, and guide students' adaptive development.
- Establish "Three Networks," a teaching and learning platform structure to strengthen the connection between courses, teachers, and students.
- All action strategies and plans must be included in CGU's management and assessment mechanism for the university development program and higher education Deep Cultivation Program to regularly track progress and performance metrics.
- Opening of innovation and entrepreneurship courses and students' learning effectiveness: In the 2022 academic year, 88 courses were opened. Among graduates in the 2020 to 2022 academic years, 98.4%, 93.6%, and 67.3% studied the courses above. (Source: Center for Institutional Research AAA02)
- Strengthening programming language capabilities: In the 2022 academic year, over half of the 20 departments offered programming courses. Among students specializing in fields other than information, 73.1% studied programming courses. Furthermore, the university opened 164 programming courses for students in departments unrelated to information, accounting for 8% of the total number of courses offered.
- Strengthening English competence to improve international competitiveness and mobility:
  1. In the 2020 academic year, the number of sophomores and first-year master's students who studied full-English EMI courses reached 28.42%. This ratio reached 35.29% in the 2021 academic year and 54.42% in the 2022 academic year, respectively.
  2. Since the 2021 academic year, CGU has provided English teaching workshops and certifications annually, and all lecturers have served as foreign English teachers employed externally or by CGU. Around 10-20 teachers with full English lecturing abilities are certified annually. In the 2022 academic year, 155 teachers had full English lecturing abilities.

Education Performance

Excellent Performance in Evaluation

Evaluation of university affairs	During the "University Affairs Evaluation in the Second Half of 2018," handled by the Higher Education Evaluation & Accreditation Council of Taiwan under the Ministry of Education's entrustment, four major CGU projects passed the evaluation.
Evaluation of departments and institutes	Department of Medicine passed TMAC evaluation in August 2023. 5 departments and six institutes of the College of Engineering received the third periodic review of IEET Engineering and Technical Education Accreditation Certification. On January 31, 2019, it was announced that all the facilities mentioned above passed the review. Three departments and two institutes of the College of Management continually passed AACSB international certification in June 2022. CGU entrusted Taiwan's Higher Education Evaluation & Accreditation Council with self-evaluating its departments and institutes. On March 31, 2022, it was announced that all 14 departments and institutes passed the self-evaluation.
Evaluation of research centers	Six research centers, including Healthy Aging, Emerging Viral Infections, Molecular Medicine, Reliability Science and Technology, Biomedical Engineering, Green Technology, conducted self-evaluation in December 2022, and three research centers, including Artificial Intelligence, Radiation Medicine, and Molecular and Clinical Immunology, conducted self-evaluation in March 2023, respectively. The evaluation result was "approval" of renewal.

Remarkable Achievements in the Implementation of Higher Education Sprout Project

As of 2023, CGU had accumulated subsidy funds from the Ministry of Education of NT$930 million, with an annual average of approximately NT$160 million. The ministry deeply recognized the university.

Excellent Ranking in the World Universities

- According to The Young University Rankings 2024, CGU ranked 121st among world universities and 4th among universities in Taiwan. It was at the same level as national universities, surpassing second-tier universities in Taiwan.
- In 2022-23 CWUR (The Center for World University Rankings), CGU ranked 579th globally and 6th place in Taiwan, with excellent performance.
- In the 2022 CWTS Leiden Ranking, CGU ranked 254th globally in the category of scientific impact and 2nd in Taiwan only after National Taiwan University; it was even included in the top 100 (92nd place) globally and ranked 1st in the category of biomedicine and health science research.

Excellent Performance of Teachers

- Research.com 2023 "Best Scientists): 10 full-time teachers were listed in their professional fields.
- World's Top 2% Scientists 2023: 33 teachers were included in the lifetime achievement list, and 48 were included in the current year's list, among whom 27 teachers were included in both lists.
- National Science and Technology Council "Outstanding Research Award" 2020-2022: Prof. Cheng-Lun Ku from the Graduate Institute of Clinical Medical Science, Prof. Sen-Yung Hsieh from the Graduate Institute of Biomedical Engineering, Prof. Ching-Chi Chi, Prof. Wen-Hung Chung, and Prof. Cheng-Hsun Chiu from Department of Medicine, and Prof. Jui-Yang Lai and Prof. Min-Hsien Wu from Department of Biomedical Engineering
- Awardees of National Science and Technology Council "Ta-You Wu Memorial Award" 2020-2022: Prof. Kun-Mu Li from the Department of Chemical and Materials Engineering, Assoc. Prof. Yu-Wei Hsieh from the Department of Occupational Therapy and Assoc. Prof. Tsung-Hsien Chao and Prof. Wen-Jui Cheng from the Department of Medicine
- "Excellent Senior Teacher" with 40 Years of Service by the Ministry of Education in 2023: Prof. Lien-Cheng Wang from the Department of Public Health and Parasitology, College of Medicine
- Eight special honors received from National Innovation Award 2023: Prof. Tsung-Chieh Yao, Asst. Prof. Hsuan-Kai Kao, Prof. Chih-Yuen Fu, and MD Chang-Fu Kuo from Department of Medicine; Asst. Prof. Chin-Kuo Chen from School of Traditional Chinese Medicine; Prof. Po-Hsiang Tsui from Department of Medical Imaging & Radiological Science; Prof.Meng-Tsan Tsai from Department of Electrical Engineering; Prof. Mu-I Hua from Department of Chemical and Materials Engineering
- Honors of fellow and associate fellow from the Association for Medical Education in Europe (AMEE): Prof. Yu-Zhe Chang and Assoc. Prof. Tsung-Hsien Chao from the Department of Medicine.
- Honor of fellow from the International Society of Nephrology (ISN): Prof. Chih-Wei Yang from the Department of Medicine.

Acquisition of Subsidies of Featured Research Centers from the Ministry of Education and Outstanding Performance of Key Research Centers

- **Research Center for Emerging Viral Infections：** Obtained approximately NT$120 million =subsidies and partnered with the College of Engineering in the Epidemic Prevention Campaign—Accurate Testing in Taiwan.

Papers Published on International Journals

In 2022, the number of papers published in international journals (SCI/SSCI/EI) reached 2,534 (4.2 papers per capita), and the number of papers with high impact (IF≥5) accounted for 46%.

Outstanding Performance of Students

- **Department of Medical Biotechnology & Laboratory Science:** Won the Research Creation Award in the 2022 NSTC Research Project Achievement Competition for College Students.
- **Department of Biomedical Sciences:** Ranking the First Place in the 2023 "Hyper-concentration Research Briefing Competition."
- **Department of Computer Science & Information Engineering:** Winning Excellence Prize in 2022 Gold Medal Entrepreneur Innovation and Entrepreneurship Competition.
- **Department of Chemical and Materials Engineering:** Winning Excellence Award in Poster Session Competition at the Annual Meeting of The Polymer Society, Taipei in 2023.
- **U-start Plan for Innovation and Entrepreneurship":** 3 teams of CGU were included in this plan in 2023 and obtained NT$ 1.5 million of startup grants.
- **SOS-IPO:** 5 teams of CGU were featured in 2022-2023 and obtained NT$ 500 thousands of startup grants.
- **Global Student Innovation Challenge (gSIC):** CGU team received the Outstanding Design Award in 2023

Continual Expansion of Cooperation Objects and Cultivation of Industrial Talents

- **Industrial Government-supported Student System:** To cultivate talents in relevant fields, including artificial intelligence, intelligent manufacturing, electronics, and electrical engineering, chemical materials, information and communication, machinery, cell culture, and nursing through cooperation with Formosa Plastics Group and Chang Gung Memorial Hospital.
- **Enterprise Scholarship and Grants Project of Memory Program:** To address the urgent demand for memory industry talents, we will cultivate employment opportunities with leading enterprises such as Nanya Technology Corporation, ESMT, MXIC, Etron Technology, Inc., and Intelligo Technology Inc.
- **AI Enterprise Scholarship and Grants Project:** To enhance the screening process for gifted students, we plan to collaborate with renowned enterprises such as TSMC, MTK, and Hon Hai. Our focus will be on intensively recruiting individuals from Central and East Europe and leveraging the overseas resources of the College of Intelligent Computing to improve international engagement and attract outstanding international students.
- **Dragon Jumping Over the Sea Scholarship Plan:** Through our partnership with Formosa Biomedical Technology Corp., we will provide doctorate candidates with NT$5 million for four years and give equal consideration to theory and practice through joint research and guidance, thus cultivating elite talents for the regenerative medicine and new energy industries.
- **Delta Electronic Scholarship and Grants Project:** To establish scholarships and grants through cooperation with Delta Electronic and join hands with famous universities in Thailand (e.g., KMITL, CMU, KMUTT, etc.) to launch bachelor and master twinning programs and cultivate professional talents in the engineering field.
- **Lotus Student Scholarship:** To cultivate management and biotech interdisciplinary talents, CGU signed a MoU with Lotus Pharmaceutical to provide 1 – 3 months internship programs for undergraduates and master's students as well as providing scholarship of NT$ 200,000 for each student from the Master's Program of the Department of Medical Biotechnology & Laboratory Science and the Graduate Institute of Biomedical Engineering to pursue an MS/MBA Program.

Excellent Performance in National Examination Pass Rate

In the academic years 2021-2023, the national examination pass rate of the Department of Medicine, School of Nursing, Department of Medical Biotechnology and Laboratory Science, Department of Medical Imaging and Radiological Science, Department of Occupational Therapy, School of Physical Therapy, and Department of Respiratory Therapy of CGU was above the average rate in Taiwan, with remarkable performance.

Academic Year	Physician (II) (Medicine)	Traditional Chinese Physician (II) (Traditional Chinese Medicine)	Medical Technologist	Radiographer	Physiotherapist	Occupational Therapist	respiratory therapist	Registered. Nurse
110 2021	6[Note1] /10[Note 2]	1/2	4/10	3/6	1/7	1/6	1/4	4/15
111 2022	5/9	2/2	3/9	2/5	4/8	1/6	2/4	6/13
112 2023	3/9	1/2	3/8	2/5	5/9	1/6	1/4	4/12
112 Pass rate%	93.14	100	75.86	79.17	54.05	96.88	96.55	93.18
112 National average %	81.57	96.68	28.61	33.25	22.85	54.41	62.66	45.73

Notes:
1. Ranking of Chang Gung University
2. Number of colleges and universities in Taiwan with such departments and institutes

Improvement of Entrance Opportunities and Subsidies for Economically and Culturally Vulnerable Students

- Deep Cultivation Student Aid Plan: This program was first introduced in the 2015 academic year. It allows children and grandchildren of low-income and medium-income families, families facing extraordinary circumstances, and new immigrants and their children to apply for admission to the university through a special entrance process. If the number of applicants for a particular department does not exceed the department's capacity, they will be admitted directly without needing to participate in interviews. In the 2024 academic year, 31 spots were reserved for these students.
- Continuously provide additional entrance pathways for individuals with physical and mental disabilities, indigenous peoples, and those from remote regions. Additionally, they offer subsidies for accommodation and transportation expenses for socio-economic disadvantaged students during the second stage of interviews to alleviate their financial burden.
- Plan for admission of economically vulnerable students from remote rural areas: Students from low-income families registered in townships and towns defined as “remote regions” by the Ministry of the Interior, as well as Mailiao Township, Taixi Township, Dongshi Township, Baozhong Township, and Lunbei Township in Yunlin County, may enter the university through the particular talent selection pipeline. CGU additionally verifies and provides NT$ 10,000 of grants and one laptop to each student. In 2020, CGU provided grants to one student with a verified and paid amount of NT$ 60,000.

Employment Rate of Graduates

The five-year employment rate of graduates from 2021 to 2023 reached 90% or above.

College of Medicine

Development goals

We cultivate professional biomedical talent with a modern foundation, clinical knowledge, and skills while instilling caring for society with humanitarian literacy. We pursue excellence in research, provide an internationalized learning environment to cultivate talent with international mobility, and encourage the integration of medical devices and digital technology with the industry.

Special intelligent technology in the College of Medicine

Courses that combine artificial intelligence and programming language with medicine and health applications have been opened as required courses for undergraduate students of the College of Medicine to develop professional medical talent with knowledge of intelligent technology. We have established multiple programs that apply artificial intelligence in medical healthcare, and these programs are available for double majors and optional programs. They may also be utilized to cultivate creative and innovative designs.

Improving cross-domain teaching

We own the largest Center for Clinical Skill & Simulation among all colleges of medicine in Taiwan. This center allows students from each department to simulate and learn clinical operations. Students from each department have very high pass rates in national public servant examinations, demonstrating our excellence. Flexible course learning is provided, and diversified programs, micro-programs, and a third semester during summer vacations have also been established so students can freely select the programs they desire to improve their cross-domain capabilities. The threshold for minor subjects and double majors has been lowered, a map of minor courses has been designed, and double majors at each institute are available.

Developing digital teaching materials

We have developed and applied VR-aided teaching in traditional Chinese medicine, nursing, and care, simulated training for respiratory therapy, elderly care, and multi-field evaluation technique internships, among other subjects. We also have a digital dissecting table to assist students' learning.

Developing precision medicine and intelligent medical devices

We have integrated and applied biomarkers and multibody theory to treat diseases like cancer and illnesses in the elderly. We have also developed antivirus vaccine agents, medical virus vectors, health screening devices, and medical devices for healthcare, which we use on patients at hospitals, healthcare facilities, and community residential homes.

Outstanding scientific research capacity and performance

We have upgraded our experimental equipment and research environment, including advanced analytical equipment for genomes, transcriptomes, proteomes, and metabolites. We are focusing on integrating clinical medicine and basic biomedical research to transition from basic studies to translation and personalized medicine studies. We have designed extensive collaborative research programs that meet international standards. To drive research development, we have established a Molecular Medicine Research Center, a Healthy Aging Research Center, a Research Center for Emerging Viral Infections, and a Center for Molecular and Clinical Immunology.

Diverse international exchange activities

Our departments have partnered with institutions abroad to offer mentorship, internships, and practical learning opportunities in foreign laboratories, hospitals, and medical-related companies. This allows our students to study overseas and participate in interdisciplinary exchanges. We have also established joint degree programs, enabling students to earn academic degrees from both CGU and a foreign university. In 2022, we launched CGU PRE-MED, welcoming international students to learn and interact at our university. Furthermore, we offer complete English courses and programs, allowing domestic students to learn alongside their global peers.

Development of VR-aided teaching

3D Organon VR anatomy teaching system equipment is utilized to help students from all departments of the College of Medicine learn the scientific principles of anatomical physiology. This is done through high-fidelity 3D presentations of the human body structure and organs, complemented by animations in virtual reality. Users can interact with and explore the 3D representations of bones, muscles, blood vessels, and organs from various perspectives. By simulating the teaching process, both students and teachers can provide feedback and reflection, which enhances the learning experience and aids in memory retention. Ultimately, this approach increases the effectiveness of real clinical applications.

Application of a digital dissecting table to aid students' learning

A virtual dissecting table has been developed and used to visualize anatomy in anatomy education. This tool provides students with a clear understanding of the detailed structure of each body part through multi-angle dissection and from multiple perspectives. In addition, an innovative simulation interactive teaching model allows students to simulate anatomical physiology and improve their understanding of systematics and clinical techniques. This tool also facilitates two-way communication and feedback with teachers, allowing for self-improvement and learning evaluation to enhance the effectiveness of anatomical teaching and learning.

Clinical medical science and nursing

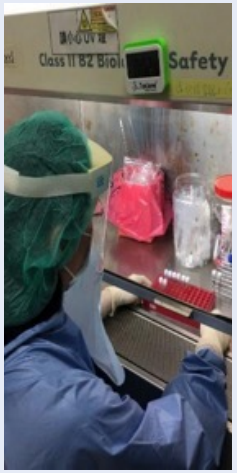
Students majoring in traditional Chinese medicine received guidance from physicians at a TCM ward to improve their knowledge of diagnosis and treatment. Continuously provide additional entrance pathways for individuals with physical and mental disabilities, indigenous peoples, and those from remote regions. Additionally, they offer subsidies for accommodation and transportation expenses for economically vulnerable students during the second stage of interviews to alleviate their financial burden.

Intensive summer courses in 2023, including the "Intelligent Health, Care, and Well-being Micro Program" and "Health, Medical Devices, and Digital Technology Micro Program".

To develop forward-looking medical devices, health, and well-being majors and combine digital technology, CGU is developing towards cross-domain practical applications. We now offer courses including "Smart Applications for Health Promotion and Livable Communities," "AIoT Cross-Domain Applications," “Biomedical Device Design and Development,” "Industrial Collaboration: Mentoring and Internships," and "Digital Technology Innovation and Cross-Domain Applications," “Industrial Collaboration: Mentoring and Internship.” Led by lecturers and mentors, students learn about healthy aging and diseases. Furthermore, by employing diverse and lively teaching methods, including integrating digital technology applications, aging experience activities, and visits to enterprises, we guide students to think about the problems brought by aging and creatively consider how to enhance and improve them.

Field mentoring and internships

We provide clinical mentoring and internships for students in the fields of medical facilities and communities (or assistive device centers, etc.) so students can convert theoretical knowledge obtained in lectures with practical applications, for example, undergoing mentoring at a laboratory and wearing high-standard protective equipment to handle and operate infectious specimens, and using professional skills and operating techniques at teaching hospitals evaluated and qualified by the Ministry of Health and Welfare and in the community to practice long-term care under clinical teachers' and field personnel supervision. By relying on the interactive relationship between individual cases in local communities and interventional therapy, students can accumulate practical clinical experience, comply with the qualifications to pass national-specific skills tests, and obtain relevant medical licenses to enhance their employability.



College of Engineering

Development features

The College of Engineering focuses on developing talent in cyber security and artificial intelligence and excelling in biomedical engineering, green energy, and reliability science and technology. It has also launched the Master's Program in Nano-Electronic Engineering and Design and the Memory Profession Program. The Memory Profession Program has established partnerships with various enterprises, offering students seamless employment opportunities with these enterprises after graduation. The Department of Biomedical Engineering was established in the 2022 academic year. Combining engineering science and applied life sciences, the department integrates clinical practices and industry-based curriculum design to cultivate the skills needed to address issues in biology and medicine. This fosters cross-domain cooperation and the development of new-generation intelligent medical engineers and devices.

Integrate AI in engineering education

In response to the promotion of global intelligent technology, each department of the College of Engineering has opened more than 20 courses related to AI practice and advanced applications to assist students with future practical applications and cross-domain integration. In 2022, an AI application group was added to the Memory Profession Program; the Department of Electrical Engineering has opened multiple courses to cultivate students' technical capacity in computer vision, deep learning algorithms, and boundary operation. Courses, including "Neural Networks and Deep Learning" and "Intelligent Manufacturing and Practice," are now offered by the Department of Mechanical Engineering to cover the practical applications of AI in mechanical diagnosis. The Department of Biomedical Engineering also provides courses on the methodology of modern stereo-lithography and intelligent manufacturing. The importance of the College of Engineering to engineering design and manufacturing technology has been further emphasized. Also, they can be combined with computer-aided mapping and three-dimensional modeling technology so that students can acquire a more comprehensive education in the design and manufacturing fields. Through this course, students will learn how to apply advanced digital technologies, such as 3D printing, to achieve the goal of intelligent manufacturing. These technologies align with the development focus of the College of Engineering and will contribute to students' professional growth in engineering and manufacturing, preparing them for the future Industry 4.0 society.

Focusing on new energy, materials, and sustainability

The College of Engineering has designated professional teaching resources in Chemical and Materials Engineering, Electronic Engineering, and Mechanical Engineering to address critical issues related to carbon neutrality and energy transition. Notable research areas include solar cells, lithium batteries, hydrogen energy, biomass energy, and biomass-based polymers. Additionally, through collaboration across schools and interdisciplinary partnerships, the college explores emerging energy development and innovative technology for carbon reduction. The College of Engineering also actively promotes education on energy technology, continuously cultivating professional talents in advanced optoelectronic technology and green process simulation. The college also strengthens research efforts in new energy sources, efficient energy utilization, and factory production resource optimization required to achieve the goal of Net Zero by 2050. Furthermore, the College of Engineering is implementing the "Energy Battery Industry Talent and Technology Incubation Base" plan in collaboration with the Ming Chi University of Technology. The college aims to cultivate professional talents specialized in energy and environmental issues and develop forward-looking sustainable techniques for commercialization through practical teaching and research initiatives.

Comprehensively promoting cross-domain learning

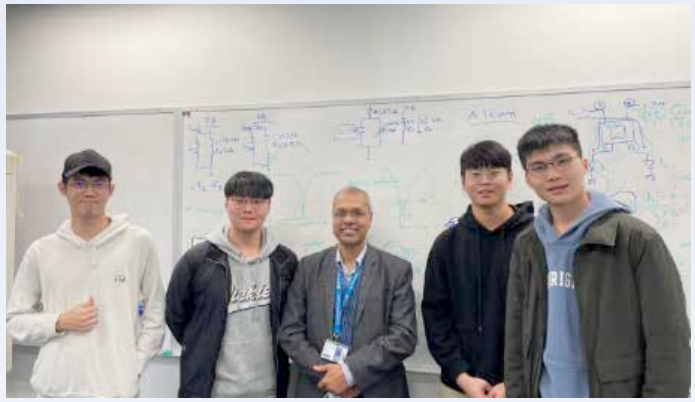
In addition to the joint opening of cross-disciplinary summer vacation programs and the Memory Profession Program under six departments, the College of Engineering has introduced cross-disciplinary summer vacation programs. Furthermore, the college has launched a course map for minor subjects and double majors, promoting mutual matching to encourage students' diversified development and expand their professional knowledge and capabilities in different fields. This initiative allows students from various departments to cross boundaries, improve their academic vision, and enhance their problem-solving abilities across different domains. The goal is to help students make breakthroughs in their professional fields, develop comprehensive capabilities, and prepare them to excel in their future careers by tackling various challenges.

Sustainable entrepreneurship counseling

The College of Engineering offers "Creativity and Innovative Technology" and "Creative Biomedical Sensing Electronics and Experiments" courses to help students become familiar with and proficient in creative and innovative technologies flexibly. Additionally, the college provides a comprehensive teacher-student entrepreneurship counseling mechanism based on real industrial innovation cases.

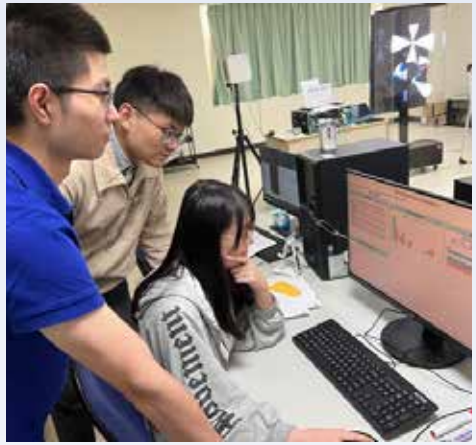
Dedication to international connections

The College of Engineering has established a joint degree program and international academic exchange model with several foreign universities. This allows students to study abroad at a reduced cost, immerse themselves in international culture, develop language skills, and become well-rounded individuals capable of competing in the global job market. In May 2023, a delegation from the College of Engineering visited multiple universities in Thailand, including Chiang Mai University, Khon Kaen University, Kasetsart University, KMITL, and King Mongkut University of Technology North Bangkok. They discussed the implementation of a 3+2 Bachelor and Master Joint Degree Cooperation Plan. In collaboration with Delta Electronic, this initiative provides scholarships and future employment opportunities for Thai students. As a result, the College of Engineering at CGU and Chiang Mai University signed a "3+2 Bachelor and Master Linked Joint Degree Agreement" in July 2023. This allows students from both institutions to earn a bachelor's degree from their home university and a master's degree from the partner university in just five years. Furthermore, the College of Engineering delegation attended an education exhibition in Vietnam in July 2023 and visited Ho Chi Minh City University of Technology, Industrial University of Ho Chi Minh City, HCMC University of Technology and Education, University of Economics Ho Chi Minh City, and Can Tho University. They aimed to facilitate admission and negotiate agreements for 2+2 Joint Bachelor's Degree or 3+2 Bachelor and Master Linked Joint Degree programs.
In addition, various departments of the College of Engineering collaborate with laboratories at renowned foreign universities to offer students summer internship opportunities. For instance, the Department of Mechanical Engineering engaged in international academic communication projects in the 2023 academic year. For example, 6 students from Sepuluh Nopember Institute of Technology (SIT) and 3 students from Universitas Muhammadiyah Surakarta of Indonesia applied to study in our Year 3 programme. During the summer vacation, 4 undergraduate students and 2 postgraduate students participated in internship programme at Gifu University, Japan. A bachelor graduate received a scholarship for a master's degree from the mechanical department of Gifu University and is expected to graduate in June 2024, with plans to pursue a doctoral degree. The College of Engineering also facilitated academic research and communication by appointing Prof. Lih-Sheng Turng from the Department of Mechanical Engineering at the University of Wisconsin Madison for three years of teaching and research collaboration. They also invited Prof. Hiroshi Ito, deputy head of the Faculty of Engineering at Yamagata University, to deliver a keynote speech in December 2023. Furthermore, the Department of Chemical and Materials Engineering organized the Taiwan-Japan-South Korea annual polymer international conference in January 2023 in collaboration with The Polymer Society, Taiwan. This initiative aimed to provide opportunities for teachers and students from the College of Engineering to engage with international scholars and enhance their international execution capabilities.



International connections: Summer internship of students at Monash University; international cross-domain communication workshop for students from Taiwan and Japan (Okayama University); group photo of guests from Chiang Mai University

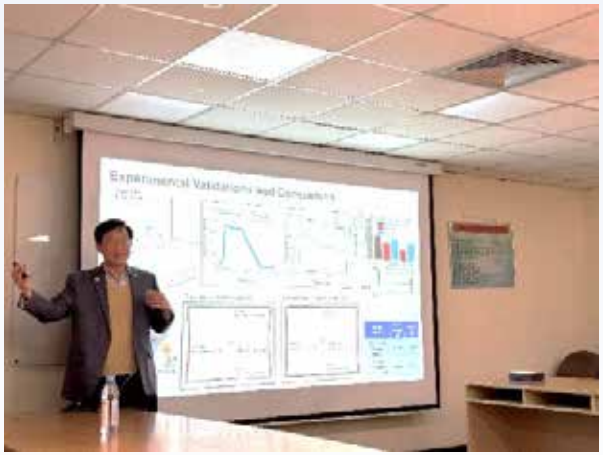
International connections: Group photos of the delegation of the College of Engineering and supervisors of Kasetsart University, Khon Kaen University, and Ho Chi Minh City University of Technology



B5G 3D Holographic Communication Erection Experiment of the Department of Electrical Engineering & Visiting Chunghwa Telecom International (CHTI) Banqiao Telecommunications College’s 5G Laboratory

The Department of Chemical and Materials Engineering's Special Lecture Course on Chemical Industrial Practices includes a visit to the cutting-edge equipment at TSMC Newcomer Training Center and the green, sustainable building of 3M Taiwan.

【国際交流】台湾、長庚大学（Chang Gung University）
黄教授の来訪（8月2日）



Group photo featuring Prof. Ching-An Huang from the Department of Mechanical Engineering and Prof. UEMATSU Yoshihiko, the Dean of the Faculty of Engineering at Gifu University; delivered by Prof. Lih-Sheng Turng, an internationally appointed teacher at the Department of Mechanical Engineering; group photo of Hiroshi Ito, the deputy head of the Faculty of Engineering at Yamagata University, along with the teachers and students of the Department of Mechanical Engineering

Three-dimensional Modeling and Intelligent Manufacturing of the Department of Biomedical Engineering: Teachers lecture on how to apply a 3D printer to relevant content related to three-dimensional modeling and intelligent manufacturing.

Creative Biomedical Sensing Electronic Experiment Course of the Department of Electronic Engineering - Students practicing Moresensors and testing EGFET sensor reading circuit

College of Management

Development features

The College of Management has implemented a teaching model that emphasizes "Individual Case Discussion and Practice Orientation," aligning with the teaching guideline of "Equal Emphasis on Theory and Practice." They have also integrated the management experience of Formosa Plastics Group into their courses to enhance students' practical learning. Furthermore, the college focuses on research in decision-making optimization, digital finance, health information, intelligent medical technology, and technology-aided elderly care to encourage interdisciplinary research and teaching.

Digitalization and cross-domain integration

In response to digital trends, we aim to promote the learning of artificial intelligence and programming languages in the college. We are dedicated to strengthening the cultivation of industry talent and empowering students with the skills and vision needed for success. The College of Management is committed to integrating cross-disciplinary teaching approaches and providing a conducive learning environment with flexible and comprehensive facilities. Our goal is to assist students in overcoming future career development challenges.

A new department in response to future development

The College of Management has established a new department—the Department of Digital Financial Technology. This department aims to integrate courses involving digital technology, finance, innovation, and entrepreneurship to embrace new opportunities for the development of industries related to digital finance. Additionally, the department aims to cultivate cross-domain professional talent with expertise in digital information and finance.

Research and Development Centers

- The Business Analytics Research Center has been established to apply intelligent technology based on the development focus of the College of Management, solve problems with the industry, from data analysis to optimization of decision-making, to realize the operation management of big data, create enterprise value, and develop students into the professional talent needed in the industry.
- The Shengen Development Center has been consistently developing training courses essential for the industry. The center also actively engages in enterprise consulting and industry-university cooperation to promote innovative teaching through industrial innovation, and enhance the overall research and teaching quality of the College of Management.

Actively expanding international exchange

The College of Management actively enhances students' international competitiveness through various programs such as exchange student program, joint degree program, and international cooperative research program with schools in Europe, the United States, Japan, and Southeast Asia. Teachers are also encouraged to guide students to participate in industry-academia cooperation projects, attend seminars, join competitions, and engage in activities like overseas co-study to improve students' international mobility. The College of Management also actively seeks opportunities for students and teachers to collaborate with advanced industry enterprises.

Association to Advance Collegiate Schools of Business (AACSB) Certification

The College of Management obtained the Association to Advance Collegiate Schools of Business (AACSB) certification in 2016 and was re-certified in 2022. Following the principle of "All-college Participation and Continual Improvement," the College of Management is committed to ensuring the quality of teaching and the effectiveness of student learning.

Internship Visit and International Communication of Chiang Mai University

Visiting Taiwan Stock Museum

Visiting Taiwan International AIoT Show

Prof. Chin-Hung Chang making a speech at the Dean's Conference of AACSB "2022 Asia-Pacific Annual Conference (APAC)" in Bangkok, Thailand

Experience at McDonald College

Internship at Beijing Tsinghua Changgung Hospital

International Symposium on Business and Healthcare Management co-sponsored by Seijo University, Japan

English Corner & Practice Activity

ASIA-Link Thailand International Design Workshop

College of Intelligent Computing

(New College established in the 2022 academic year)

Type of course	Description	Representative courses
Basic Course	Introduction to the basic background knowledge of mathematics, statistics, and information engineering	Data Structure and Algorithms and Introduction to Computers
Core Course	Professional academic courses in various AI fields	Artificial Intelligence, Machine Learning, Deep Learning, and Image Processing
Advanced Course	Special knowledge theory and practice of AI in each professional field and scientific applications	Parallel Programming, Natural Language, and Intelligent Robot
Practical Course	A course that converts theory to practical applications through practical work	Deep Learning Practice, Network Application Software Design, Intelligent IoT, and Cloud System
Cross-disciplinary Program	Encouraging students' diversified development and cultivating and expanding the learning of professional knowledge and capabilities in different fields	Bioinformatics Analysis, Clinical Information Engineering, and Medical Imaging System

	Professional teachers successfully recruited	Former employers of teachers recruited	Expertise
1	Chair Professor Kwei-Jay Lin	University of California, USA	Computer Vision, IoT, Service-oriented Computing, Real-time Systems, and Distributed Systems
2	Professor Chen-Mou (Doug) Cheng	Kanazawa University, Japan	Cryptography, Functional Programming, and Blockchain Technology
3	Assistant Professor Yen-Ling Kuo	Massachusetts Institute of Technology, USA	Robot Learning and Interaction, Multi-modal Machine Learning, Human-Machine Interaction, and Commonsense Reasoning
4	Professor Von-Wun Soo	National Tsing Hua University, Taiwan	AI and Bioinformatics, Virtual Singer, Multi-agent Coordination, and Text/Image Generation

Development features

The technology landscape has progressed from electronics, digitalization, and networking to the current era of artificial intelligence. With the rise of AI applications, CGU received approval from the Ministry of Education on July 18, 2022, to establish a fourth college, the College of Intelligent Computing. This college is the first academic unit at the college level in Taiwan dedicated exclusively to the education and research of artificial intelligence. Focused on providing a foundational education to nurture AI talent, the college aims to address the global trend of AI application across various disciplines and everyday life. The Department of Artificial Intelligence was established within this college in the 2023 academic year, offering both bachelor's and master's programs. In the future, the college will provide comprehensive degrees, including Bachelor's, Master's, and PhD programs in AI.

Excellent teaching resources for AI intelligent engineering

The college has hired several full-time professors specializing in AI theory and intelligent engineering. Additionally, there are jointly appointed professors who work across different domains, colleges, and borders. The College of Intelligent Computing customizes basic and practical AI courses, drawing inspiration from established AI programs at prestigious schools worldwide. By focusing on intelligent applications, engineering, and sciences, the college helps students build a strong foundation in AI knowledge and engineering skills. Furthermore, the College of Intelligent Computing collaborates with other colleges to advance the cross-domain application of AI in various fields.

Strengthening international connections

The College of Intelligent Computing is an international institution that boasts a team of full-time teachers with extensive international teaching experience. The college has also partnered with local and foreign AI schools to offer remote lectures and has established a dedicated research team. It encourages direct dialogue between students and both foreign teachers and student teams. Furthermore, the college actively facilitates student participation in exchange programs, internships, and joint research abroad, thereby creating an internationally oriented educational and scientific research environment. Teachers from the College of Intelligent Computing have been invited to numerous schools in Japan, Kuwait, Poland, and the Czech Republic for academic exchanges and speeches. Additionally, foreign scholars, including Prof. Marco Aiello (Head of the Department of Service Computing at the University of Stuttgart), Prof. Urban Westergren (Chief of International Affairs at KTH Royal Institute of Technology), and Dr. Hanlin Tang (CTO of Mosaic ML), have visited the college on several occasions.The College of Intelligent Computing and the Office of International Affairs have collaborated to organize Europe Day activities for students in the Bachelor's Department. Moreover, the dean of the Department of Industrial Design at Eindhoven University of Technology was invited to provide an online introduction to current education in Europe and the Netherlands.Students at CGU are strongly encouraged to participate in overseas summer programs or short-term continuing education.

Industry training

The College of Intelligent Computing actively collaborates with renowned enterprises, both domestically and internationally, for the Enterprise Internship Scholarship Program. As part of this program, students undertake internships with these companies. The enterprises provide research direction and work with tutors to guide the students' graduation theses in a way that aligns with the companies' needs. The college has signed internship contracts with leading technology companies such as TSMC, Pfizer, and Hon Hai, providing students with valuable real-world experience and helping them plan for their future.

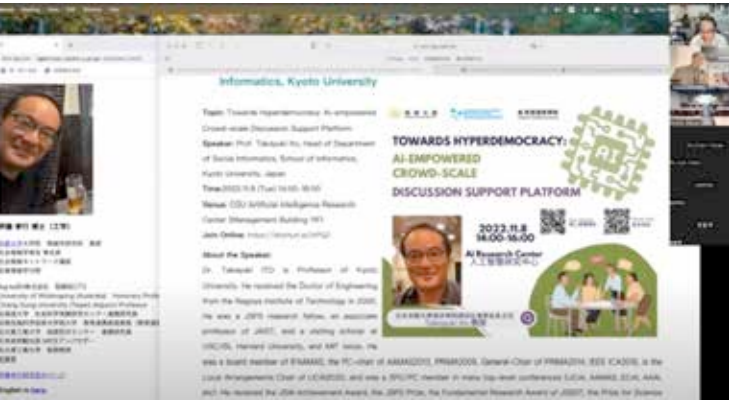
Artificial Intelligence Research Center

CGU has established the Artificial Intelligence Research Center. The center is equipped with state-of-the-art AI servers, IoT equipment, and multifield research schemes to provide students with practical training on the scale of a modern enterprise. It aims to enhance industry competitiveness through industry-academia cooperation. The College of Intelligent Computing is expected to become a great example in the new model of higher education through cross-college and cross-center cooperation. The goal is to cultivate elite AI leaders in the next generation and lead the university into intelligent science education while improving intelligent research skills. The center held a ChatGPT creative application competition at the university and offered students free OpenAI accounts to enable all teachers and students to learn how to use the latest AI technologies and tools.

Kwei-Jay Lin, Dean of the College of Intelligent Computing, visited Kuwait, Poland, Czech Republic, et. For academic communication and speeches

Assoc. Prof. Anna Kobusińska from the Institute of Computer Science of Poznan University of Technology, Department of Theoretical Computer Science, College of Information Engineering, Czech Technical University in Prague, Faculty of Electrical Engineering and Informatics of Budapest University of Technology and Economics, and Faculty of Mathematics and Information Science of Warsaw University of Technology

Prof. Urban Westergren (Chief of International Affairs of KTH Royal Institute of Technology) and Dr. Hanlin Tang (CTO of Mosaic ML) also visited the College of Intelligent Computing for communication and academic speeches.



Online Speeches by International Scholars-Takayuki Ito from Kyoto University

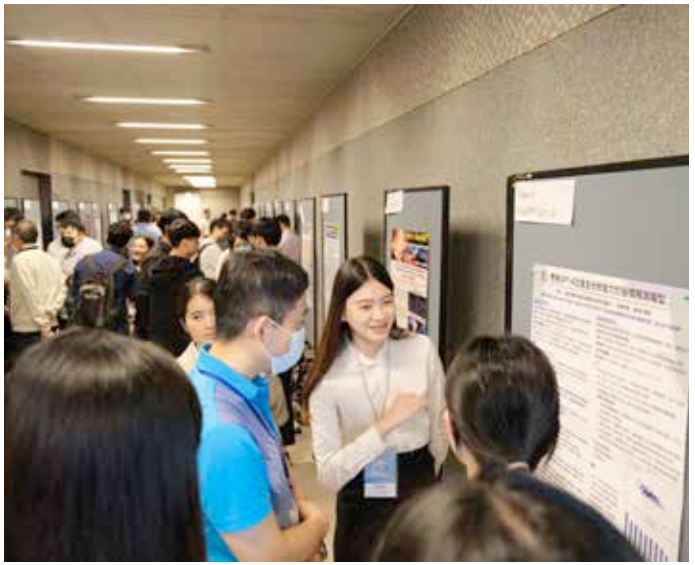
Online Speeches by International Scholars-Assistant Prof. Yanning Shen from the Department of Electrical Engineering and Computer Science, University of California, Irvine

During the Europe Day event, Dean Lin-Lin Chen from the Department of Industrial Design at the Eindhoven University of Technology was invited to present the current state of education in Europe and the Netherlands online.

Contract Signing Ceremony of Enterprise Internship Cooperation-Pfizer Inc.

AIM Scholarship Propaganda Poster

Contract Signing Ceremony of Enterprise Internship Cooperation-Hon Hai Technology



Release of Poster for ChatGPT Creative Application Competition

Group Photo of Winning Teams in ChatGPT Creative Application Competition

AI Forum International Academic Seminar

Let's Chat: A Forum on AI and Everything

Center of General Education

Development features

The Center of General Education at CGU has planned a variety of comprehensive courses to implement the concept of holistic education. These include the Core Course, USR Course, Innovation, Creativity and Entrepreneurship Courses, Microcredit Course and Campus Course. The aim is to improve students' moral development, enhance social care, and foster arts and humanities.

Arts and Humanities activities

To enhance students' cultural awareness and humanistic qualities, the Center of General Education organizes various events such as Summer and Autumn Art Festival, the CGU Cultural Lecture, CGU Literature Award, CGU Indoor Music Collection and Art Performance, and English learning activities each year. Additionally, it publishes the CGU Journal of Humanities and Society, Special Editions of Cultural Lectures, Collection of Works with Literary Awards, and the Exhibition Volume of Works of Art to promote arts and humanities activities on campus.

Social Responsibility Practice Course

Learning is confined to the classroom. The Social Responsibility Practice Course goes beyond the confines of the classroom by encouraging students to engage with local issues in their community. Through practical learning experiences, students apply their knowledge and skills to address real-world problems. This innovative course design responds to local needs. It aims to enhance students' observation and professional competence through social practice, providing them with a unique learning experience during their university studies.

Special editions of works with the CGU Literature Award over the years

Chia-Fu Sung, Assoc. Prof. of National Taiwan University: "History, Education and Life"

2023 Spring Art Festival

3.5 Research Results

▼ Management Status of Material Topic "Research Results" of Chang Gung University in 2023 (Academic Year 2022)

Material Topics	Research Results
Corresponding GRI Index	Self-selected topics
SDGs Principle	4 QUALITY EDUCATION; 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE; 17 PARTNERSHIPS FOR THE GOALS
Policy commitments	Allocating resources, creating excellence, recruiting and cultivating highly cited scholars, and leading academic empowerment based on the self-discipline of academic ethics and cultivating research connotation.
Metrics and Targets	Lectures and seminars on research ethics and human experimentation are held annually. Additionally, workshops are held to exchange research experiences, share results, and improve research plan writing skills. These activities engage at least 1,000 people every year, with the number increasing annually.
Sustainability goal	
Short-term goals	– We have offered the CGU Research Seminar since 2022 to promote cross-domain cooperation and communication between teaching and research staff and improve research energy and effectiveness. – We began inviting teachers to offer summer vacation projects in 2022. We provide students in bachelor's programs with channels to enter laboratories or research centers for research so they can experience research work, develop their research abilities, and improve their interest in and motivation for research, enhancing their sense of identity in CGU. As a result, more excellent students will stay to study and enhance CGU's research energy. – We will strengthen students', teachers', and research staff's understanding of academic ethics and key journals and meetings prior to the academic year 2025.
Mid-term goals	– Motivate teaching and research students to engage in research every year; develop international cooperation and enhance visibility; develop innovative scientific research; and establish R&D capabilities. – Enhance research every year, jointly develop new technologies, improve R&D results, and recruit international scholars to participate in developing colleges and research centers and improve academic reputation. Implement college joint appointment mechanisms and cooperation to promote and strengthen the resources and academic position of research fellows.
Long-term goal	– Actively recruit and cultivate research talent and encourage the teaching and research staff of CGU to positively influence academic research to further CGU's research and gradually establish international visibility.

Effectiveness Tracking Mechanism

- Number of participants (occasions) in research ethics lectures and human experimental research seminars.
- Research program funding: Number of SCI, SSCI, and EI papers.
- Number of applications for promotions to reward R&D measures.
- Dr. TC Wu, scholar from Johns Hopkins University was hired as the university's scientific research consultant to offer regular guidance every year.

Actions and Measures

- In the 2022 academic year, 653 participants attended research ethics lectures and human experimental research seminars.
- In the 2022 academic year, funds for research programs (data from the school information publicity platform of junior colleges and universities) reached NT$807,417,419; in 2022, 2,534 SCI, SSCI, and EI papers were published.
- In the 2022 academic year, 45 applications were submitted for promotions to reward R&D measures, of which 25 were approved.
- Fifty-four teachers were included in the "World's Top 2% of Scientists", ranking ninth in Taiwan and first among private universities.

CGU demonstrated brilliant research performance through four major action plans.

Communication activities

1 Hold academic ethics seminars and invite local and foreign experts and scholars to offer guidance and make speeches at CGU; inspect and check the status of participation of hosts/researchers who execute National Science and Technology Council (NSTC) and National Health Research Institutes (NHRI) programs in academic ethics education.

Provision of a system for subsidizing and rewarding research programs

2 Appropriate the corresponding subsidy funds from NSTC and NHRI programs and providing research rewards to teaching and research personnel with excellent performance. The school also includes a personal bridging program, an innovative pilot integrated program, international collaborative paper awards and subsidies, a startup program for new teachers and researchers, and a startup program for researchers.

Promotion of cross-domain institutional cooperation

3 Strengthen research efficiency and establish a research network, promote collaboration with top institutions and experts at home and abroad, and advance the cross-institutional joint appointment or alliance system.

Recruitment and cultivation of talent

4 Recruitment and cultivation of talent: Externally recruit and cordially invite excellent international scholars, actively help and promote newly hired teachers and researchers in executing relevant programs internally to cultivate and explore more outstanding young scholars, and promote diverse research reward measures to encourage teachers to engage in academic research.

Chang Gung University has presented extraordinary research performance since its founding. CGU has participated in the Cancer Moonshot (a five-year program) since 2016 and signed up for continual participation in 2021. The university participated in the creation of the first comprehensive "Cancer Multi-omics Knowledge Base" in Taiwan to develop novel cancer precision medical strategies. CGU held the Formosa Immunology Spring School & Symposium (FISS) in 2019; as a well-known academic activity focusing on immunology in Taiwan, the FISS offered an opportunity for world-class immunology scholars and local immunology experts to gather to exchange ideas. In 2022, CGU handled the Summer Special Program and plans to hold a meeting again in 2023; in 2020, Chang Gung University researched and developed the "Immunity Passport," a technological transformation executed to enable Formosa Biomedical Technology Corp. to go global. Furthermore, COVID-19 virus-neutralizing antibody detection technology has been taken to the next level and effectively assisted countries in lowering the development time and cost of vaccines and antibody drugs globally, effectively containing the further spread of the virus. Chang Gung University, as part of the Research Center for Pandemic Prevention Science of the National Science and Technology Council, has contributed to strengthening Taiwan's pandemic prevention capabilities. This has been achieved through organizing meetings, participating in international organizations, and collaborating with global anti-pandemic technical forces.

In 2023, CGU presented numerous research findings, and its researchers and research teams achieved outstanding records, demonstrating its significant contribution to society. 54 CGU teachers were included in the "World's Top 2% of Scientists," ranking ninth in Taiwan and first among private universities. This achievement has placed the university in the international spotlight, highlighting Chang Gung University's exceptional research vitality and performance.

Highlighted Research

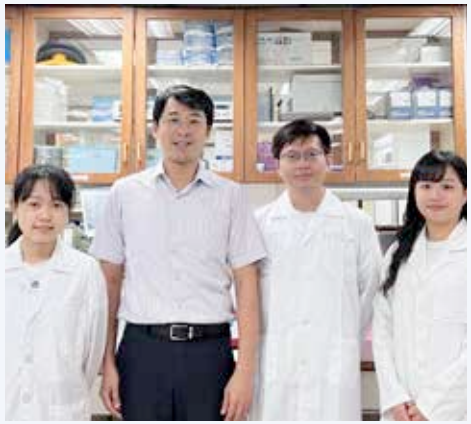
Are you hungry? CGU's research results indicate that hungry fruit flies were particularly sensitive to heat.

A team led by Prof. Chia-Lin Wu from the Department of Biochemistry and Molecular Biology of the College of Medicine and Graduate Institute of Biomedical Engineering conducted research showing that hungry fruit flies were more sensitive to heat compared to when they were full. This sensitivity was a result of insulin regulation in the brain. The research results were published in PLOS Biology, a top international biology journal. This finding may help explain why diabetic patients are more sensitive to heat and more prone to discomfort in high-temperature environments compared to non-diabetic individuals. Further research on this topic is warranted.

The research team addressed the impact of different physiological statuses on biological behaviors, a topic of great interest in the field of neuroscience. Under the guidance of Professor Chia-Lin Wu, Meng-Hsuan Chiang, a doctoral student at the Graduate Institute of Biomedical Engineering, along with Yu-Chun Lin and Peng-Hsuan Li, students of the Department of Biomedical Sciences, collaborated with Dr. Sheng-Fu Chen from the National Health Research Institutes (NHRI), Professor Tsai-Feng Fu from National Chi Nan University, and Dr. Yu-Li Wu from the Department of Neurology at New Taipei City Tucheng Hospital. The team observed that hungry fruit flies became highly sensitive to high-temperature environments using the preferential temperature analysis equipment for fruit flies, which the team researched and developed. Essentially, they found that hungry fruit flies exhibited a particular aversion to heat.

To understand the mechanism and physiological significance hidden behind this phenomenon, the research team used living organism brain imaging technology to observe the change in neural activity in the brains of live fruit flies when exposed to high-temperature stimulation. The results showed that, compared to when they were satiated, fruit flies in a hungry state presented higher neural activity in a specific brain region, namely the mushroom body.

The diagram above is a live fruit fly. The green signal indicates the location of the neutral structure of the mushroom body that processes satiety, hunger, and temperature signals in the brain; the diagram below shows all neural fiber structures (carmine) in the brain of the fruit fly, and the green signal is the neutral structure of the mushroom body.



Group photo of Prof. Chia-Lin Wu from CUG (the second person on the left) and team members Peng-Hsuan Li (the first person on the left), Meng-Hsuan Chiang (the second person on the right), and Yu-Chun Lin (the first person on the right)

Additionally, the research team found that being hungry can make organisms more sensitive to high temperatures, and this sensitivity is regulated by insulin in the brain. Professor Chia-Lin Wu explained that humans prefer an environmental temperature around 25°C and feel uncomfortable when the temperature deviates from this. Even though fruit flies are cold-blooded animals, their temperature preferences are similar to those of humans. Therefore, the findings of this research could help explain why diabetic patients with insulin secretion disorders often feel more uncomfortable in hot environments compared to others. The research team suggested that organisms in a state of severe hunger should avoid activities in high-temperature environments. Therefore, those trying to lose weight through dieting should pay attention to the heat in their environment.

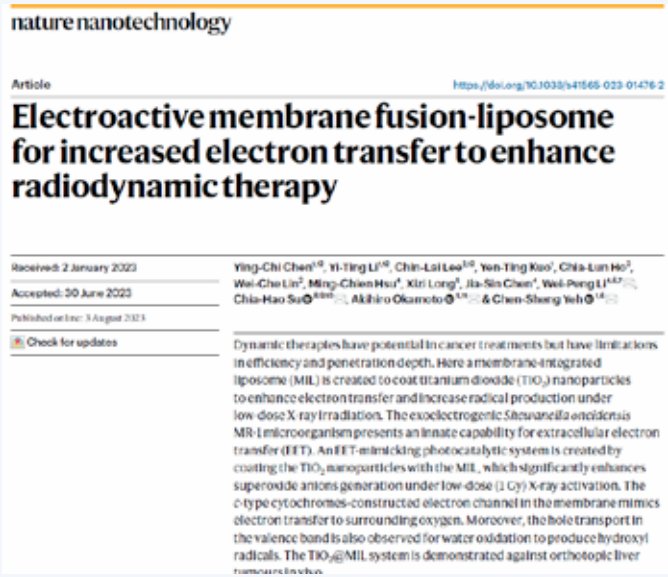
This research was funded by the National Science and Technology Council, Chang Gung Memorial Hospital, and Chang Gung University. The research results were published on October 17, 2023, in PLOS Biology, a top international biological journal. This journal ranks in the top 5% among global biology journals and has been included as one of 145 Nature Index Journals globally since 2014.

The new therapy of electroactive membrane nanotechnology developed through Taiwan-Japan cooperation was published in the International Journal of Nature Nanotechnology

Through transnational cooperation, Professor Jia-Hao Su of the Center of General Education at CGU, Professor Chen-Sheng Yeh of National Cheng Kung University, Professor Wei-Peng Li of Kaohsiung Medical University, and Professor Akihiro Okamoto of the National Institute for Materials Science conducted research and developed a new method called "Electroactive membrane fusion-liposome" to increase electron transfer and enhance radiodynamic therapy. This method creates composite nanoparticles that act like "laser warriors with an X-ray weapon" to target and fight cancer cells. Their research findings were published in the prestigious International Journal of Nature Nanotechnology and can potentially be used in future anti-cancer drugs to benefit human well-being.

The team used the natural extracellular electronic transfer property of "Shewanella spp." and the characteristic of electron transfer to combine with titanium dioxide nanoparticles to create an "electroactive membrane composite nanoparticle." When activated by low-dose X-ray, it effectively killed cancer cells and enhanced the effectiveness of radiodynamic therapy. Furthermore, in a mouse model of liver tumors, the treatment showed a high level of safety.

The team emphasized the growing importance of nanotechnology in research and industrial applications in the 21st century. However, the integration of nano biomedical technology into clinical applications still poses significant challenges. For instance, nano photodynamic therapy is limited by the depth of light penetration, restricting its application to superficial cancers. Overcoming the limitations of electronic transfer efficiency of nano photodynamic materials is crucial for advancements in this field. To address these challenges, a collaborative international research effort leveraged the tissue penetration capabilities and widespread clinical use of X-ray technology to enhance the feasibility of technical clinical applications. Additionally, an innovative electroactive membrane composite nanoparticle was developed to improve electronic transfer efficiency and overcome the limitations of depth of light penetration. Moreover, using a mouse model, the efficacy of radiodynamic therapy in treating deep-seated liver tumors was demonstrated, showing significant inhibition of tumor growth.


nature nanotechnology

Article

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Electroactive membrane fusion-liposome for increased electron transfer to enhance radiodynamic therapy

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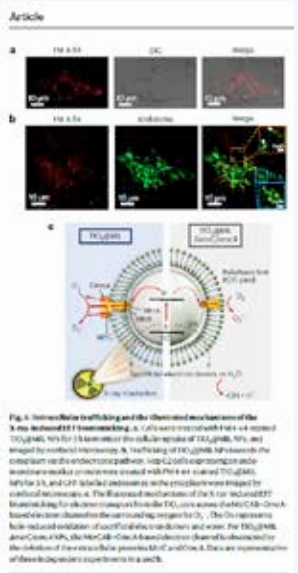
Dynamic therapies have potential in cancer treatments but have limitations in efficiency and penetration depth. Here a membrane-integrated liposome (MIL) is created to coat titanium dioxide (TiO_2) nanoparticles to enhance electron transfer and increase radical production under low-dose X-ray irradiation. The exoelectrogenic *Shewanella oneidensis* MR-1 microorganism presents an innate capability for extracellular electron transfer (EET). An EET-mimicking photocatalytic system is created by coating the TiO_2 nanoparticles with the MIL, which significantly enhances superoxide anions generation under low-dose (1 Gy) X-ray activation. The *c*-type cytochromes-constructed electron channel in the membrane mimics electron transfer to surrounding oxygen. Moreover, the hole transport in the valence band is also observed for water oxidation to produce hydroxyl radicals. The TiO_2@MIL system is demonstrated against orthotopic liver tumours in vivo.

Publication of the Research on the International Journal of Nature Nanotechnology



Charts Excerpted from the Journal

Drug-loaded nanocarriers for treating inflammatory diseases

Professor Jia-You Fang of the Graduate Institute of Natural Products, School of Traditional Chinese Medicine, focuses on drug formulation design and drug delivery targeting in his research. His emphasis lies in the research and development of nanocarriers of drugs and active ingredients. He also works on developing natural medicines used to regulate and treat immune-inflammatory skin diseases. In recent years, Professor Fang has been primarily involved in the development of relevant drug dosage forms and corresponding research on drug delivery. He has significantly emphasized the application of nanotechnology to develop targeted dosage forms of drugs. The experimental results have shown that properly designed and prepared nano-drug formulations can effectively target areas such as skin follicles, tumors, or the brain to treat diseases like acne, melanoma, and Parkinson's. Professor Fang's research team has utilized passively or actively targeted drug-loaded nanocarriers for the research and development of drugs to address inflammatory skin diseases and lung conditions, including alopecia areata, psoriasis, acute lung injury, and sepsis. Additionally, Professor Fang developed a siRNA drug delivery system based on PLGA nanoparticles and combined this nanosystem with low-energy medical cosmetic lasers to enhance skin absorption capabilities for localized psoriasis treatment. The laser treatment has promoted the transmission volume of nanoparticles in the epidermis. Corresponding animal experiments indicated that the laser-mediated nanocarrier delivery could significantly lighten psoriasis plaques and scales. This research showed the advantages of siRNA targeting by using lasers to deliver nanocarriers and treat psoriasis inflammation. The drug-loaded nanocarrier system developed by Professor Fang presents both safety and cell-specific targeting characteristics. In the future, it can be effectively applied to treat inflammatory skin diseases.

Professor Fang is actively involved in industry-university collaborations, focusing on developing and optimizing drug and cosmetic prescriptions, pharmacological testing, drug safety and stability testing, and antiseptic efficiency testing. He has executed 31 industry-university collaboration plans, including a 505(b)(2) plan with the Central Taiwan Science Park Bureau and the National Science and Technology Council. In addition, Professor Fang serves as a review member in pharmacy-related fields for the Ministry of Economic Affairs, the Ministry of Health and Welfare, and the Ministry of Education to support government efforts in promoting research on pharmacy and traditional Chinese medicine. Moreover, he has contributed to the development and commercialization of skincare products, including resveratrol liposomes skincare products, and has been involved in research related to the treatment of psoriasis using indigo naturalis. Furthermore, he has transferred relevant technology to a French company named Galderma. His current research is progressing toward clinical trials and commercialization and is expected to provide new development directions for international pharmaceutical research.

Prof. Jia-You Fang was awarded the "Outstanding Contribution Award of Academic Research Results Benefiting Pharmaceutical Technological Development, National Health, and National Society" at the "33rd Wang Ming-Ning Award" in 2023 for his work with drug-loaded nanocarriers. This year, only three excellent talents in Taiwan received this prestigious award.

8 full-time professors of CGU led a team to win 2023 20th National Innovation Award

The National Innovation Award, organized by the Research Center for Biotechnology and Medicine Policy, is the top award in the field of biomedicine and public health in Taiwan. In 2023, full-time teachers at CGU achieved outstanding performance in the National Innovation Award, receiving a total of eight awards. These include one award in the academic research category for Dr. Chin-Kuo Chen, a full-time clinical associate professor in the Department of Traditional Chinese Medicine, College of Medicine; one award in the clinical category for Dr. Tsung-Chieh Yao, a full-time clinical professor in the Department of Medicine, College of Medicine; and six awards in the improvement category. The recipients of the improvement awards are: Professor Po-Hsiang Tsui from the Department of Medical Imaging & Radiological Science, College of Medicine for the New-generation Ultrasonic Fatty Liver Diagnosis System; Professor Meng-Tsan Tsai from the Department of Electrical Engineering, College of Engineering for the 3D skin tomography scanner; Professor Mu-Yi Hua from the Department of Chemical and Materials Engineering, College of Engineering for the Multi-functional hydrogen peroxide, glucose, choline, and acetylcholine electrochemical sensor; full-time clinical Associate Professor Chang-Fu Kuo from the Department of Medicine, College of Medicine for the Chinese and English medical natural language processing integration platform; full-time clinical Associate Professor Chih-Yuen Fu from the Department of Medicine, College of Medicine for the Dual-band pelvic fracture circular wrapping device; and full-time clinical Assistant Professor Hsuan-Kai Kao for the AI ultrasonic detection of developmental dysplasia of the hip joint in children.

Representatives of CGU Winning Team of National Innovation Award

"National Innovation Award in the Academic Research Category" Chin-Kuo Chen, full-time clinical associate professor, Department of Traditional Chinese Medicine: New Single-handled Otitis Media Measuring Device

With a high prevalence rate, Otitis media is a disease commonly treated with antibiotics in children. Almost 90% of people experience otitis media before the age of four. Diagnosis of middle ear effusion is typically done using otoscope and tympanogram examinations. However, misdiagnosis can occur due to narrow ear canals, earwax blockage, and the lack of objective assessment and diagnostic tools. Assoc. Prof. Chin-Kuo Chen and the team published an article on the effective detection of mastoid process effusion using ultrasonic signals. This device is designed for diagnosing otitis media and is easy to use and carry, not restricted by the environment. It can also reduce discomfort and reluctance to undergo traditional examinations. Unlike conventional methods, it provides non-invasive examinations that overcome challenges related to patients' age, ear canal size, and fear of traditional examinations. The core technology uses an array-based measurement method and a determination device, with a probe testing echo signals and transmitting them to an analysis unit for calculation to determine otitis media. This technology holds promise for diagnosing otitis media-related diseases in the future.

Assoc. Prof. Chin-Kuo Chen received the award on behalf of his team.

"National Innovation Award in the Clinical Category" Full-time clinical Prof. Tsung-Chieh Yao from the Department of Medicine: Establishment of a Clinical Decision-making System for Personalized Risk Assessment of Pediatric Allergic Diseases through Application of AI

Prof. Tsung-Chieh Yao received the award on behalf of his team.

The diagnosis and treatment of pediatric allergic diseases currently depend on physicians' experience, leading to differences in methods among different departments and physicians. This can result in inaccurate predictions of patient risks. To address this, Prof. Tsung-Chieh Yao's team developed a Clinical Decision-making System for Personalized Risk Assessment of Pediatric Allergic Diseases using AI. This system can quickly and accurately analyze large amounts of clinical, genetic, and biological data to establish personalized risk assessment models. These models help physicians predict disease risks more accurately and provide personalized therapeutic schedules for patients. This technology improves the standards of diagnosis and treatment for pediatric allergic diseases, reduces misdiagnosis and treatment failures, and enhances medical quality and efficiency. Unlike traditional methods, this system processes a vast amount of data quickly. It provides instant decision-making support based on patients' specific conditions, leading to shorter wait times for diagnosis and treatment, which is crucial for pediatric allergic diseases requiring quick decisions.

Outstanding Research Scholars

Winner:
Professor Lee-Yung Shih, Department of Medicine, Chang Gung University

Award:
2023 Outstanding Contract Research Fellow

Award description:

Prof. Lee-Yung Shih focuses her research on translational applications. She employs comprehensive, high-quality molecular genetic variation detection for leukemia and precise quantitative detection of residual microcells to provide the basis for precision medicine and improve the survival rate of patients with leukemia.

Winner:
Professor Yung-Hsin Yeh, Department of Medicine, Chang Gung University

Award:
2023 Outstanding Research Award

Award description:

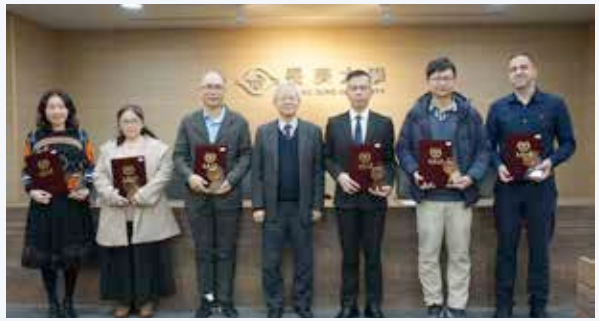
Prof. Yung-Hsin Yeh's primary research focuses on the discovery of endothelial-to-mesenchymal transition as an essential mechanism in atrial fibrosis, atrial fibrillation, and intimal thickening in arteriovenous fistula (AVF) stenosis. Through extensive research, Prof. Yung-Hsin Yeh aims to enhance public understanding of the pathogenesis of cardiovascular diseases and to bring new hope and possibilities for the treatment and prevention of related diseases in the future.

Teachers of Chang Gung University included in the World's Top 2% of Scientists, earning great recognition

The expert panel of Stanford University published the latest World's Top 2% of Scientists. Fifty-four scholars among full-time teachers at Chang Gung University were included in this ranking in the name of the university, ranking ninth in Taiwan and first among private universities, showing its strong academic influence and scientific achievements worldwide.

To recognize the outstanding performance of the teachers included in the World's Top 2% of Scientists ranking, President Ming-Je Tang awarded trophies and certificates of merit to each of these teachers in person at the University Affairs Meeting on December 26, 2023. The awards presented included the 2022 World's Top 2% of Scientists and Lifetime Achievement (27 winners), first-time inclusion into World's Top 2% of Scientists and Lifetime Achievement (1 winner), and the 2022 World's Top 2% of Scientists (21 winners), continual inclusion into World's Top 2% of Scientists and Lifetime Achievement (5 winners).

2022 World's Top 2% of Scientists and Lifetime Achievement



2022 World's Top 2% of Scientists

First-time inclusion into the World's Top 2% of Scientists and Lifetime Achievement

Continual inclusion into the World's Top 2% of Scientists and Lifetime Achievement

3.6 Industry-University Cooperation

▼ Management Status of Material Topic "Industry-University Cooperation" of Chang Gung University in 2023 (Academic Year 2022)

Material Topics	Industry-University Cooperation
Corresponding GRI Index	Self-selected topics
SDGs Principle	4 QUALITY EDUCATION; 8 DECENT WORK AND ECONOMIC GROWTH; 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE; 11 SUSTAINABLE CITIES AND COMMUNITIES; 17 PARTNERSHIPS FOR THE GOALS
Policy commitments	Strengthening university-industry connections and assisting the industry in bettering sustainable development
Metrics and Targets	– Hold at least one sustainable development activity or entrepreneurship competition inside/outside the university every year. – Hold one cross-school industry-university technical matching meeting every year to link future development trends with industry needs. – Participate in the medical and biotechnology exhibitions organized by Nangang Exhibition Hall and World Trade Center annually. – One cross-school industry-university technology matchmaking meeting is held every year to link the industry's future development trends and needs. Partner schools include T5 scientific research platform schools (Chang Gung Memorial University, Ming Chi University of Technology, National Taiwan University, National Taiwan University of Science and Technology, National Taiwan Normal University), and the Taoyuan Alumni School Alliance (National Central University, Chung Yuan Christian University, Yuan Ze University). – Formosa Plastics Group Application Technology Seminar is held every three years to enhance industry-academic links.
Sustainability goals	
Short-term goal	– Strengthen the industrial connection with surrounding industrial areas, promote relevant technology, establish partnerships, and understand the industry's future demand for sustainable development in 2023.
Mid-term goal	– Establish technical courses or consulting services needed to improve sustainable development in the industry and assist with the comprehensive implementation of industry improvement and transformation through service cooperation related to sustainable development.
Long-term goal	– Develop core key technologies and strengthen industry-government-university-research collaboration to jointly improve the technical transfer of enterprises and the university and realize sustainable development.

Effectiveness Tracking Mechanism

- Number of enterprises' industry-university cooperation cases.
- Number and amount of technical transfer pieces.
- Number of technical seminars for sustainable development and number of participants.
- Number of sustainable development activities or competitions inside/outside the university and number of participants.

Actions and Measures

- In 2023, there were 146 industry-university cooperation cases involving a total of NT$ 408,791,210.
- In 2023, 12 technology transfer cases were conducted, with actual receipts of NTD 73,324,483.
- In 2023, four technical matching meetings were held with nearly 300 participants in total.
- In 2022, CGU held one entrepreneurship competition inside the university with 70 participants and one national entrepreneurship competition with 98 participating teams and 361 participants in total.
- Attended the 2023 Smart City Expo, BIO Annual International Convention, 2023 Bio Asia Taiwan, 4th Taipei International Care Technology Application Exhibition, Taiwan Innovation Technology Expo, and Taiwan Medical Technology Expo. And National Innovation Award.

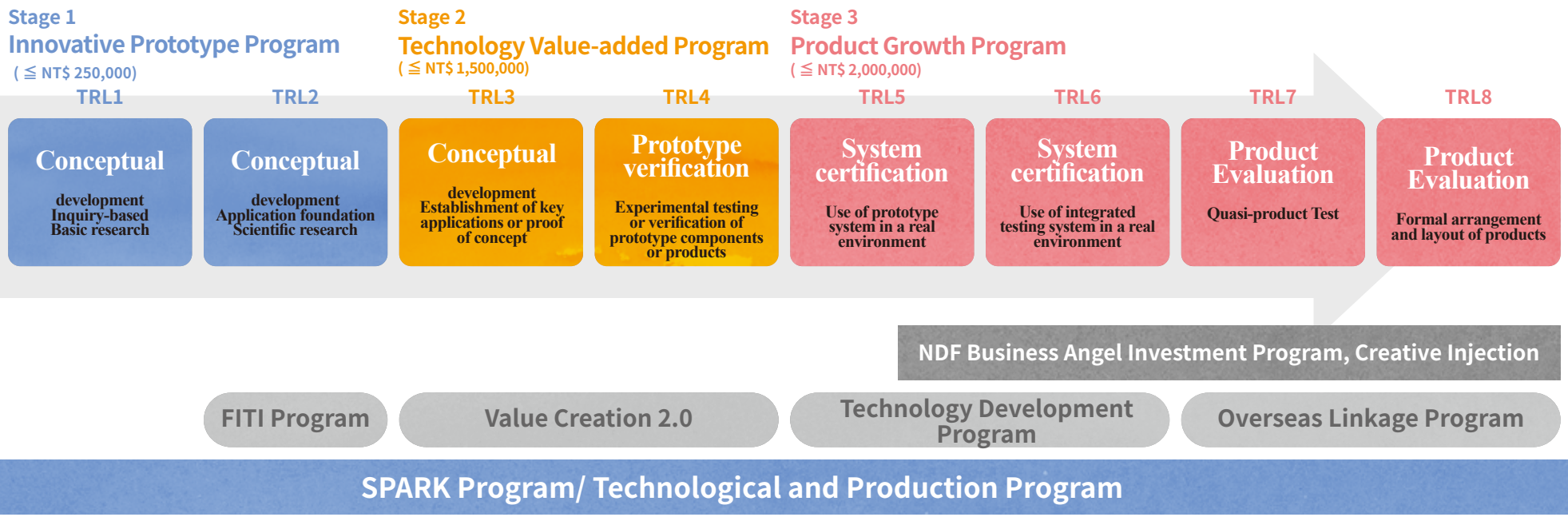
Industry-University-Research Linked Ecosphere

With research centers as the driving engine, CGU has opened cross-domain programs using single-center or multi-center cooperation to match talent cultivation across six major core industries. We have also established relevant teams by integrating teaching and research workforce to form an industry-university-research linked ecosphere and cultivate talent through internships, experiments, and practice to master key technical capabilities for forward-looking scientific and technological development. Additionally, we continue to integrate resources, including industry-university promotion, technical transfer, and innovation and entrepreneurship. We share resources based on the T5GIP Platform to improve Taiwan's competitiveness through collective effort. We also improve teachers' skills and add value to prototype products. People have been introduced to coach product development and promote school-enterprise cooperation. We connect relevant resources, coordinate industry contacts, and check in on crucial research teams and their R&D findings, coaching how industry-university programs can be applied from the public sector through the CGU SPARK Program.

Commercialization of Industrial Innovation Technology

We utilize school funds to assist teachers in developing technologies for prototype products and coach them to apply for the Innovative Prototype Program or Technology Value-added Program to build their prototypes. By using the external funds obtained from the NSTC for the CGU SPARK Program and T5GIP Global Industry Platform, we assist our colleges in strengthening their industrial innovation development teams through technology in terms of patent layout, market evaluation, regulatory certification, establishment of commercial models, and fundraising.

▼ Promotion of Industrial Innovation Technology Commercialization through Cooperation with External Institutions



Improving Internship-Industry Connections

CGU has always emphasized the integration of learning and application since its establishment. In the 2016 academic year, CGU became part of the Industrial-Academia Cooperation of the PhD Research and Development Talent Cultivation Program initiated by the Ministry of Education. This program was carried out by the Master's and PhD Programs in the Biotechnology Industry. Initially, we collaborated with three subsidiaries of United Biomedical Group — Union Clinbio Lab Int'l Co., Ltd., United Biopharma (UBP), and UBI Pharma Inc. (UBIP) — to jointly plan practical industry courses. Mentors from the United Biomedical Group delivered lectures, and internships were provided. Subsequently, we signed industry-university cooperation memorandums with more companies, including biotechnology and pharmaceutical companies like Roche, PharmaEssentia Corporation, Taimed Biologics (TMB), and OBI Pharma, Inc., testing reagent manufacturing companies like General Biologicals Corp. (GBC) and Formosa Biomedical Technology Corp., medical device companies like Blusense Biotech and Tai-Saw Technology, and biological information or big data analysis companies like ACT Genomics and DKABio. In the future, we will strengthen the close cooperation with these industry players and nurture R&D talent with diverse expertise. To date, CGU has produced a total of 4 doctors specializing in these industries. We have also introduced a master's program in the biotechnology industry and produced a total of 15 postgraduates in the 2018-2021 academic years.

Since the 2021 academic year, CGU has enhanced its internship system and partnered with four prominent memory companies to launch a Master's program in Memory Profession. This program allows students to receive scholarships and guidance from industry mentors as they specialize in the memory profession. As part of the program, students are required to conduct a thesis study at these companies during their second year of study, and they may have the opportunity to work for these companies after graduation. In the 2022 academic year, 43 master candidates participated in this program.

CGU has partnered with Formosa Plastics Group to support outstanding talent enrolling in a PhD program through an innovative industry-university cooperation model. They aim to promote the Dragon Jumping over the Sea scholarship. Enterprises are providing a total of NT$5 million in scholarships over four years to each award-winning student, creating an opportunity for exceptional PhD students to serve these enterprises. In the 2022 academic year, one student received this award. Formosa Plastics Corporation's publicly funded student system offers ten places for students from the following departments: Electrical Engineering, Mechanical Engineering, Chemical and Materials Engineering, Computer Science & Information Engineering, Information Management, and Artificial Intelligence. Selected students will receive a scholarship of NT$400,000 and an internship salary. This year, a total of seven students were selected. The joint system of Chang Gung Memorial Hospital provides nearly dozens of publicly funded student quotas for fresh graduates of the Department of Nursing every year. Those who pass the review receive scholarships and stipends covering tuition, miscellaneous fees, and insurance costs for up to 3 to 4 years. After graduation, the Chang Gung Memorial Hospital Joint System will refer to the hospital application procedures for publicly funded students to apply for employment and arrange the work location.

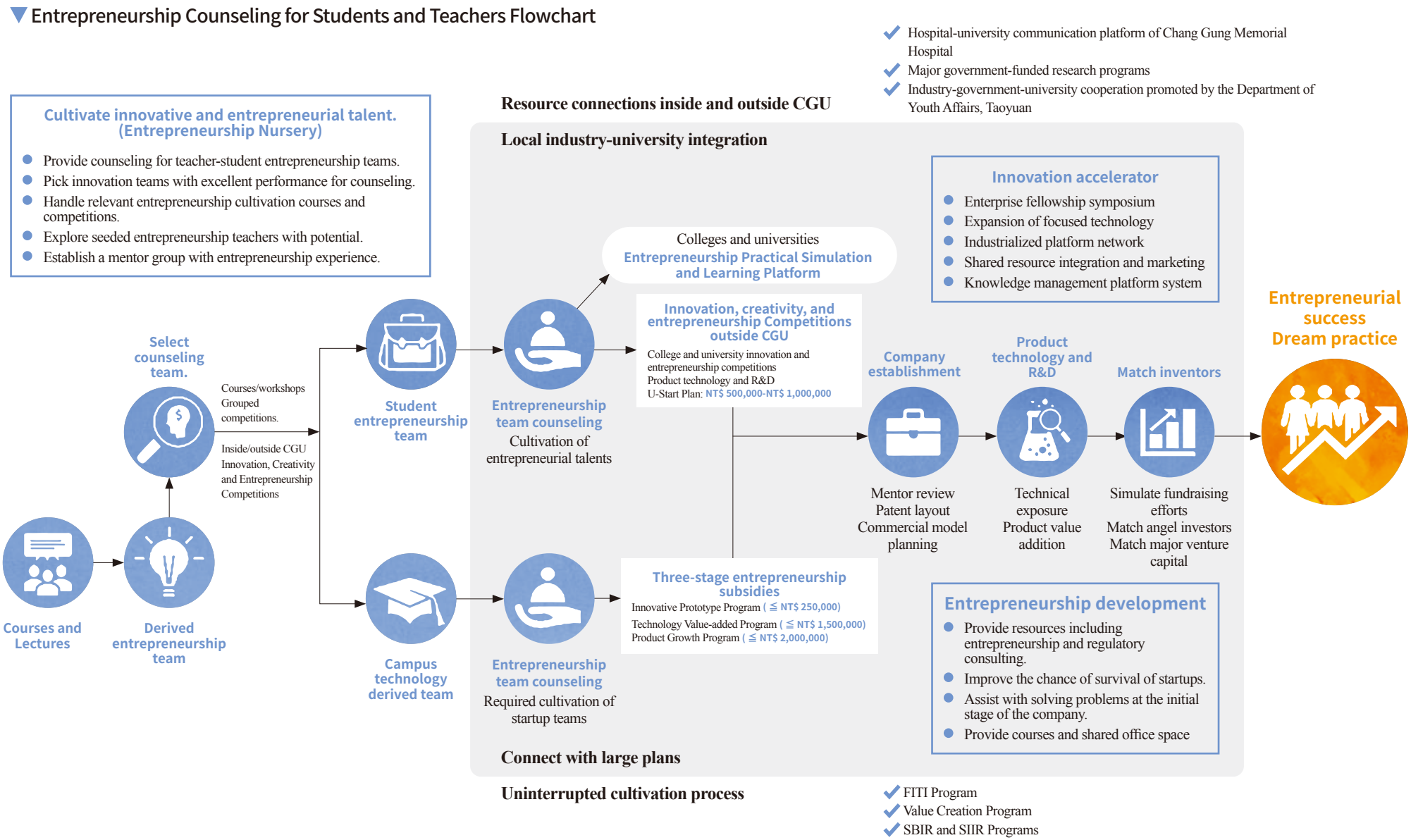
Deepening the Technical Connection with the Chang Gung Medical System

In the past, the scope of industry-university matching was often limited to north Taiwan. To expand the breadth of industry-university collaboration, we have invested in the development of the Innovative Technology Matching Platform to overcome geographical limitations. Through this platform's interactive mechanism, we can identify industrial needs or challenges and match R&D talent with academic research findings to promote technical cooperation between academic institutions and enterprises. This will help improve the technical value and industrial network of academic institutions and businesses.

Cultivating an Innovative and Entrepreneurial Ecosystem

We promote cross-domain innovation and entrepreneurship-related activities so that students and teachers have more opportunities to form innovation and entrepreneurship teams and participate in training and competitions in addition to academic research. With the planning of incubation centers in the last two years, in addition to trainee studies, students and teachers develop their practical operation and actual application skills. We also plan to establish an innovation center to conduct project development and entrepreneurial planning with the industry. This is aimed to facilitate the connection and discussion between different sectors. We also arrange symposiums to share R&D experiences of medical devices, technical transformation, industry-university cooperation, and industrial connections, integrating the energy of the Chang Gung medical system to encourage students and teachers to develop their cross-domain talent by specializing in practical operations and innovative applications. We also encourage them to engage in entrepreneurship counseling and start developing from grass-roots research to apply their ideas in practice and become entrepreneurs.

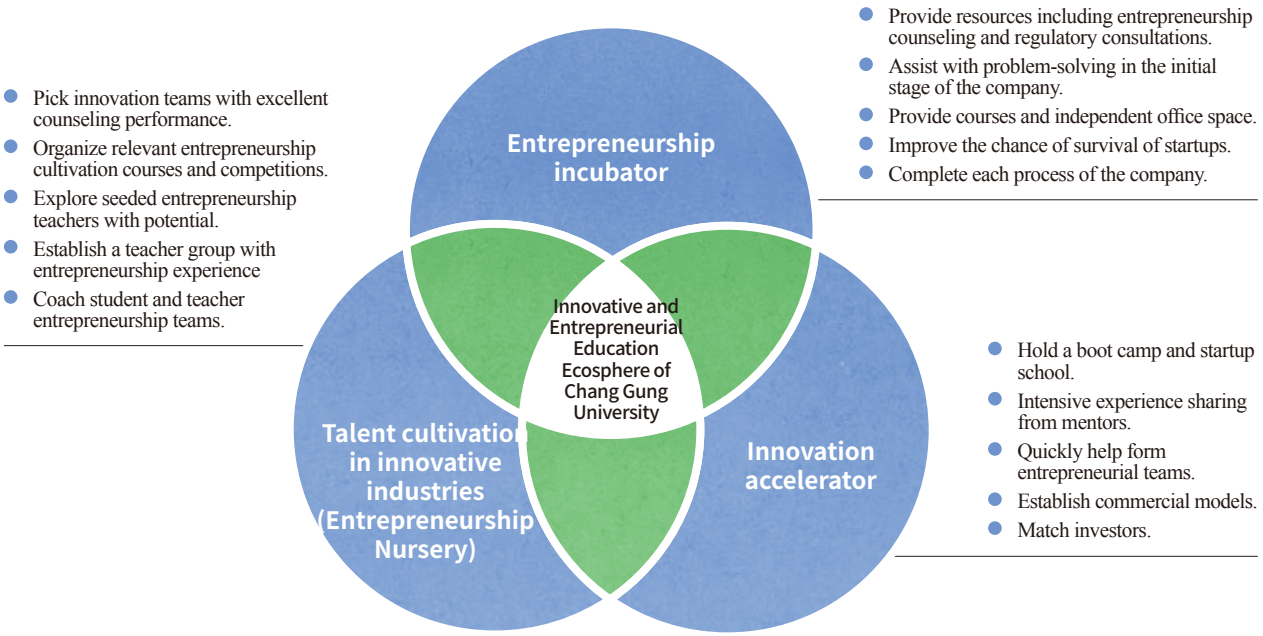
Entrepreneurship Counseling for Students and Teachers Flowchart



Promotion of a Sustainable Entrepreneurial and Counseling Environment

The curriculum objectives of CGU focus on innovation, creativity, and entrepreneurship, which feature flexible use of creative thinking, inspiration of innovative ideas, and embracing innovation and entrepreneurship. We have established an innovation and entrepreneurship education ecosphere based on knowledge and theory. We provide students with the knowledge and skills for cross-domain integration and entrepreneurship based on innovative project practice, entrepreneurship lectures, and creative learning. The College of Management now offers courses such as "Introduction to Cross-domain Innovation and Entrepreneurship," "Technology Entrepreneurship Practice," and "Innovative Marketing Practice," with the goal of students developing popular products and services from an innovative perspective. The College of Medicine provides courses such as "Innovation, Creativity and Entrepreneurship" and "Innovative Practices and Research" to help students establish their entrepreneurial goals. The College of Engineering has provided courses such as "Creativity and Innovative Technology" and "Creative Biomedical Sensing Electronics and Experiments" so students can become familiar with and flexibly use creative and innovative technologies; a holistic student and teacher entrepreneurship counseling mechanism is also offered based on actual industry innovation cases. The College of Intelligent Computing promotes courses in fields related to STEM and trains and develops students' ability to solve actual everyday problems using STEM knowledge, and strengthens the integration of different fields through practice. It has even applied the latest AI technology to traditional medicine, engineering, and commercial problems, seeking non-conventional solutions.

▼ Innovative and Entrepreneurial Education Ecosphere of Chang Gung University



Industry-university Highlights in 2023 academic year

CGU Joining Hands with Landseed International Hospital to Improve Medical Technologies

CGU signed an industry-university cooperation agreement with Landseed International Hospital. An investment of NT$ 5 million was made to partner with the university to promote talent cultivation, clinical teaching, and industry innovation research and development. It was expected that this cooperation would be able to develop innovative technologies to promote industrialization and commercialization progress.

CGU Cooperating with tst biomedical electronics Co., Ltd. to Joint Guide Doctorate Dissertations

The College of Medicine at CGU has signed a memorandum of understanding with TST Biomedical Electronics Co., Ltd. to extend their 3-year research and development collaboration. Students who have completed the "Biotechnology Industry Program" as undergraduates or master's students may participate in a 6-week summer internship at the company. TST Biomedical Electronics Co., Ltd. will also support the university in supervising student papers and striving for industry-academia cooperation under the Ministry of Education's PhD Research and Development Talent Cultivation Program. This program aims to develop professionals with both academic knowledge and practical skills for Taiwan's biotechnology industry.

CGU and Hon Hai Jointly Cultivating AI Talents with Million NTD Scholarship from the Enterprise

Artificial intelligence (AI) is unstoppable, and there is an urgent demand for AI talent in the industry. The College of Intelligent Computing of CGU has partnered with Hon Hai Technology Group to launch the "AI Scholarship Plan Industry-University Cooperation." This initiative aims to cultivate high-end AI talents by providing a million NTD scholarship, employment guarantee, and professional courses with practical training. The goal is to promote the continuous growth of the AI industry in Taiwan. The collaboration between the industry and academia is expected to foster more AI professionals with innovative thinking and practical capabilities, contributing to the development of the AI industry in Taiwan.

Stem Cell Therapy Taking Off: CGU Joining Hands with YJ Biotech Co., Ltd.

The College of Medicine of CGU has signed a memorandum of understanding with YJ Biotech Co., Ltd. The two parties will collaborate on research and development, technology transfer, and talent cultivation plans as part of the agreement. These plans will be established for the Bachelor's Department, Master's Program, and PhD Program. The collaboration will focus on research into immune cell and stem cell therapies to aid patients in repairing damaged tissues and rebuilding cells with normal functions. Additionally, the partnership aims to promote the development of the biotechnology industry and cultivate outstanding talent.

CGU Joining Hands with Anti-cancer Drug Manufacturer Lotus Pharmaceutical to Provide Summer Internship Opportunities

The College of Medicine of CGU has signed a memorandum of understanding with Lotus Pharmaceutical Co., Ltd, a manufacturer of anti-cancer drugs. As per the agreement, Lotus Pharmaceutical offers internship opportunities for students from the Bachelor's Department and Master's Program for 1-3 months. Additionally, Lotus Pharmaceutical is collaborating with the Master's Program and PhD Program of the College of Medicine in the biotechnology industry. They have proposed a joint talent cultivation plan, which will allow students to better understand different departments within the drug manufacturer and related positions. This initiative aims to enhance the students' skills beyond their knowledge and expertise. Moreover, Lotus Pharmaceutical is providing a scholarship of NT$ 200,000 for each student from the Master's Program of the Department of Medical Biotechnology & Laboratory Science and the Graduate Institute of Biomedical Engineering to pursue an MS/MBA Program. The purpose of this scholarship is to cultivate interdisciplinary talents with academic degrees in biomedicine/administration and to recruit them after graduation.

CGU Signing a Memorandum of Understanding with Honghwa International Corporation to Cultivate Professional Information and Communication Talents

CGU has formally signed a memorandum of understanding for talent cultivation with Honghwa International Corporation. The two parties will jointly focus on talent cultivation and industry-university communication. Honghwa International is a subsidiary of Chunghwa Telecom, with business operations in telecommunications-related technology, management, and services. The Department of Electrical Engineering, College of Engineering of CGU, has closely interacted with this company. This contract signing will expand the scope of communication between the two parties, with the hope of achieving mutually beneficial cooperation and a win-win situation.

3M Cooperating with CGU to Cultivate Biotechnology R&D Talents

The College of Medicine at CGU has signed a memorandum of understanding with 3M Taiwan. Starting from the summer vacation in 2023, Master's and PhD candidates in the Biotechnology Industry Program at CGU will be allowed to enter 3M Taiwan and participate in product research and development. This direct exposure to the industrial environment will enable students to gain a better understanding of the latest technologies in biotechnology R&D. The university and the industry are collaborating to nurture talent, and students will have better employment opportunities as a result. This creates a win-win-win situation. 3M has 51 technical platforms that require the assistance of numerous scientific and technological talents in Taiwan. Additionally, the company strongly supports Taiwan's economic and talent development.

Major BNT Vaccine Manufacturer Pfizer Signing a Contract with CGU to Cultivate Talents in Pharmaceutical Industry

The College of Medicine and College of Intelligent Computing at CGU have signed a memorandum of understanding for industry-university cooperation with Pfizer Inc. President Ming-Je Tang and Taiwan Country Manager Cellina Yeh signed the contract on behalf of their respective parties. Over the past three years, the global spread of the COVID-19 virus has tested each country's original healthcare systems and resource allocation models, accelerating innovation in the medical care industry. Considering this situation, through this cooperation, the two parties will use student internships and collaborative industry teaching to develop talents in the pharmaceutical industry in the post-pandemic era.

Taiwan Innotech Expo-2 Gold Awards, 4 Silver Awards, and 3 Bronze Awards

The Office of Technology Development and Industry Liaison of CGU has been actively promoting the commercialization of research and development (R&D) achievements in recent years. They have encouraged teachers to apply for high-quality patents and conduct technical transfers to reduce the risks for technology demanders and enhance the willingness for technical transfer. In 2023, CGU participated in the Taiwan Innotech Expo with ten technologies, which included five biotechnology and medicine technologies, two information and communication technologies, two medical engineering design technologies, and one semiconductor technology. They performed outstandingly, earning two gold, four silver, and three bronze awards. Notably, the nanocarrier developed by Distinguished Professor Jui-Yang Lai from the Department of Biomedical Engineering and its patent application can effectively reduce abnormal intraocular pressure and extend the duration of efficacy by 42 times compared to traditional eye drops. It has the potential to significantly improve multiple symptoms of glaucoma with a broad market potential. The patent for a head motion correction method in brain MRI developed by Associate Professor Yi-Ping Chao from the Department of Computer Science & Information Engineering has improved the accuracy of brain MRI and provided a reliable guarantee for clinical diagnosis.

Additionally, the patent for a urine test piece and urine testing system developed by Professor Mu-Yi Hua from the Department of Chemical and Materials Engineering has provided a convenient and highly efficient testing method. The patent for a limb function assessment method developed by Professor Wann-Yun Shieh from the Department of Computer Science & Information Engineering has creatively improved the precision and efficiency of limb function assessment. Furthermore, the use of patents for corylin and neobavaisoflavone for the treatment of aging-related symptoms developed by Professor Chin-Chuan Chen from the School of Traditional Chinese Medicine has shown potential in the treatment of aging-related symptoms. Other notable patents include a foot data collection device and a foot data collection method developed by Assistant Professor Ting-Ting Yeh from the Master's Degree Program in Health and Long-term Care Industry, which has improved the accuracy of foot data collection and enhanced the effect of foot health management. Also, a new high-efficiency and high-stability perovskite solar module developed by Professor Kun-Mu Lee from the Department of Chemical and Materials Engineering has significantly improved the efficiency and stability of solar modules. Another unique patent is a training device intended for lowering hypertonicity developed by Professor Ya-Ju Chang from the School of Physical Therapy, which has provided hypertonic patients with an effective training method. Lastly, the patent for a testing platform and narcotic drug testing method developed by Professor Huan-Tsung Chang from the Department of Biomedical Sciences has provided a reliable narcotic drug testing method to improve testing accuracy and efficiency. CGU will continue to dedicate itself to technological innovation and patent commercialization, promote technical transfer and industrial application, expand technical cooperation, further improve the social influence of R&D achievements, and actively participate in global sustainable development. Through persistent efforts, CGU aims to provide high-quality technologies and solutions for more people and achieve the long-term goal of university social responsibility in the future.

Business Opportunity Matchmaking Meeting with the Theme of Building Digital and Intelligent Future with Good Use of AI and Big Data

CUG held a Business Opportunity Matchmaking Meeting with the Theme of Building a Digital and Intelligent Future with Good Use of AI and Big Data. Professors from ten universities and scientific research platform experts from the National Science and Technology Council were invited to share AI and big data solutions in various fields, such as medical treatment, education, manufacturing, and vehicle-mounted applications. The event showcased a total of thirty groups of technical highlights from university teams and drew over two hundred participants from industry, associations, organizations, and students. Additionally, technical teams were available for one-on-one matchmaking negotiations with industry vendors at the venue. Thirty-six negotiation sessions were held to assist the industry and the university in learning about comprehensive information on technologies and sorting requirement highlights.

U-start Plan for Innovation and Entrepreneurship

"HADA TECH," "SENSOR TECH," and "It! Chia Liao Mou" are student entrepreneurship teams that were coached by the Center for Industry Sponsored Research and Collaborations. These teams stood out among many competitors, each obtaining a grant of NT$ 500,000. "HADA TECH" is dedicated to the research and development of a pressure relief pad for respiratory masks, aiming to address issues such as pressure sores, discomfort, infections, and air leakage on patients' faces. The team received a grant of NT$ 600,000 in the second stage. "SENSOR TECH" also received a subsidy for manufacturing technology. Their "Super-fast PCR Testing Technology" can generate test results within a short time using microfluid technology and a response platform. The team "It! Chia Liao Mou" received a subsidy for the social enterprise category and a grant of NT$ 350,000 in the second stage. Their. "Liao Yen Ming" developed by this team can effectively promote eye health for pets, and also sustainable environment and fallow economy are combined to achieve the vision of a circular economy.

HADA TECH Team

3.7 Career Counseling for Students

▼ Management Status of Material Topic "Career Counseling for Students" of Chang Gung University in 2023 (Academic Year 2022)

Material Topics	Career Counseling for Students
Corresponding GRI Index	Self-selected topics
SDGs Principle	3 GOOD HEALTH AND WELL-BEING; 4 QUALITY EDUCATION; 8 DECENT WORK AND ECONOMIC GROWTH
Policy commitments	Assisting students in learning about and strengthening their interests and skills and providing career services to connect them with the workplace and promote learning and application integration.
Metrics and Targets	– Apply UCAN to cooperate with the career counseling system, and assist students in exploring their vocational interests, identify vocations, and develop self-ability cultivation plans to improve their workplace competitiveness. – Provide career counseling services, including psychological testing and counseling, to help overcome challenges. – Organize activities, including special career counseling activities and lectures annually, with at least 600 participants. – Host resume building, mock interviews, and campus recruitment seminars every year to assist students in getting matched with suitable jobs.
Sustainability goals	
Mid-term and long-term goals	– Develop students to set goals, explore their motivation for jobs, and strengthen workplace and employment-related skills. – Develop an instinct for job-seeking, adapt to the workplace after graduation, and promote learning and application integration.

Effectiveness Tracking Mechanism	● Effectiveness reports were written after various career-related activities were completed and used as references to improve relevant subsequent activities.
Actions and Measures	● In the 2022 academic year, CGU organized career-related psychological testing and one-on-one psychological counseling involving 298 people. ● In the 2022 academic year, CGU organized 23 special career counseling activities and career counseling class lecture sessions involving 1323 people. ● In the 2022 academic year, CGU organized teacher-student connection activities on themes such as life education, emotional education, and careers. More than one-third of tutors select career counseling-related themes each semester. The university organizes at least ten activities around careers. In the academic year 2022, 24 activities were held with a total of 1,074 participants. ● In the 2022 academic year, CGU organized a series of activities concerning various employment services; thirteen activities were held with 408 participants. ● In the 2022 academic year, CGU held twelve career counseling activities and workshops for students with different physical disabilities, with 225 participants. CGU also held three Individualized Transition Plan (ITP) meetings for students with physical and mental disabilities based on their needs, with 23 participants in total.

Normal System Services

Tutors' Use of UCAN for Cooperation with the Career Counseling System

Tutors for each class receive a list of students who need extra help each semester from the E-counseling system. They then provide learning resources and career counseling and keep track of counseling records online. The Teaching Quality Assurance Section of the Office of Academic Affairs offers the University Career and Competency Assessment Network (UCAN), where tutors can help students explore career interests and identify job functions. This allows students to understand their characteristics, interests, and workplaces and plan self-improvement through self-evaluation. We also assist students in developing their career direction, strengthening skills related to employment, and learning how to fill skill gaps to improve their competitiveness in the workplace. Tutors can use this platform to help students in these areas:

(1) Assisting students in learning about vocational interests and career development.

(2) Enhancing students' understanding of workplaces based on industrial needs.

(3) Assisting students in coordinating career planning and understanding the gaps in their skill sets to benefit their development in a well-planned way, strengthening employment competitiveness.

Psychological Testing

Relying on one-on-one or group psychological testing, we assist students to explore and understand their character traits, interpersonal behaviors, vocational interests, and relationships, promote self-awareness, establish harmonious interpersonal relationships, and effectively plan career development.

Name of career test	Activity days	Number of users
Find Life Interest Exploration Cards	2022.9.27~2022.9.29	9
Career Barriers Inventory	2022.9.27~2022.9.29	7
Career Belief Checklist (Group Testing and Release)	2023.3.14	21

One-on-one Psychological Counseling

The Student Counseling Section's professional psychologists help students overcome career difficulties. Students can book appointments for one-on-one psychological counseling through CGU's Counseling Service System. We assist students in exploring themselves, clarifying career difficulties and problems, and establishing objectives for improvement to promote their career development.

▼ Ratio of Counselling of Career Difficulties of Chang Gung University in Academic Years 2019-2022

Academic Years	108-1	108-2	109-1	109-2	110-1	110-2	111-1	111-2
Number of people	119	64	128	60	118	118	135	126
Ratio of all issues discussed	14.7%	10.4%	15.1%	9.3%	12.5%	14.9%	15.8%	14%

Career Counseling and Employment Activities

Career Counseling Project Activities

To assist students in exploring their interests and careers and promote self-awareness, students of CGU may participate in special lectures by selecting optional courses. In these lectures, interview skills, workplace trends, career planning strategies, etc., are explained to students to improve their employment abilities and understand the workplace.

Career lecturers are invited to visit CGU, and we hold two special career counseling lectures or workshop activities at fixed times each semester. Lecturers of various fields are invited to CGU to share their experiences in future career and workplace interpersonal communication trends to help students explore vocational interests and motivation. This academic year, we held four career counseling activities with 556 participants.

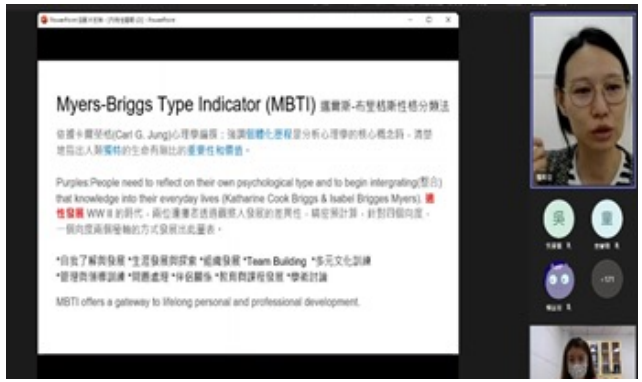


Photo of the activity of "Way of Survival for Introverts-Interpersonal Communication"

Photo of the activity of "You are better than imagined"

Summary of Career Counseling Activities of Chang Gung University in Academic Year 2022

Topics	Activity time	Number of participants
Master Thinking: Building a Self-centered Future Blueprint with Career Psychology	2022/11/8	170
Way of Survival for Introverts-Interpersonal Communication	2022/11/23	147
Future Workplace Capability Intelligence	2023/3/9	136
You are better than you imagined	2023/5/11	103
Total		**556**

Career Counseling Lectures

During classes each semester, students and tutors jointly discuss the themes of lectures based on professional class learning needs. Tutors in each class invite mentors, senior HR managers, and industry professionals to share their experiences. The Student Counseling Section also provides professional psychologists to explore and help plan careers for students in each class. This academic year, 19 career counseling classes were held with 767 participants.

School of Physical Therapy 3: Career Lecture "Sharing of Sweetness and Bitterness of Clinical Physiotherapists"

School of Physical Therapy 1: "Brief Introduction to Pilates and Spinal Spiral Movement"

Summary of Career Counseling Class Activities of Chang Gung University in Academic Year 2022

Class	Activity time	Number of participants	Topics
Dept. of Information Management 2B	2022/10/5	43	Industry Development of AIoT and Maker Competition
Dept. of Biomedical Engineering 1B	2022/10/12	32	Exploring My Career Blueprint
Dept. of Medical Imaging & Radiological Science 2	2022/10/13	38	Career Sharing Session of Department Friends
School of Physical Therapy 3	2022/10/18	49	Sharing of Sweetness and Bitterness of Clinical Physiotherapists
Dept. of Respiratory Therapy 4	2022/10/20	50	Holland Code Career Password, Self-exploration and Career Planning
AI 2	2022/10/27	24	How do I want to proceed on my future path?
School of Nursing 3B	2022/11/01	49	How to choose clinical work? Great Differences among Specialized Nurses
Dept. of Health Care Management 4	2022/11/21	46	Career Development of Senior Peers-Clinical Trial Industry
ept. of Industrial and Business Management	2022/11/23	50	Do what you love or love what you do?
Dept. of Occupational Therapy 2A	2022/11/23	36	Unlimited Careers-OT Career Development
Dept. of Industrial Design	2023/4/12	32	Bravely Living a Designer Life, Insights for Young Designers
School of Nursing 3A	2023/3/27	50	My Life My Way~
Dept. of Electronic Engineering 4B	2023/4/6	23	From my dance online to the topics of "Choice" and "Willingness" (Introduction to an Emerging Industry Called Offshore Wind Power)
School of Physical Therapy 3	2023/4/11	39	Pausing, Watching, and Listening of Physical Therapy Interns
Dept. of Occupational Therapy 3	2023/4/18	49	Sharing of Practicing Experience of Action Therapists
Dept. of Health Care Management 4	2023/4/25	24	Career Sharing of Chinese Hospitals
School of Nursing 3B	2023/5/2	52	How to choose clinical work?
Dept. of Industrial and Business Management	2023/5/10	53	Dear juniors, it's time to start preparing.
School of Physical Therapy 1	2023/5/15	28	Brief Introduction to Pilates and Spinal Spiral Movement
Total		**767**	

Teacher-Student Connection Activities

To encourage tutors to actively establish a favorable teacher-student relationship, create a harmonious class atmosphere, enhance students' physical and mental health, and cultivate students' attitudes toward positive learning, CGU grants relevant subsidies each semester up to NT$ 7,000 per class. When a department or combination of two classes applies for a subsidy with the required number of attendees, the upper limit of the subsidy is NT$ 14,000. We receive about 45 applications each semester for teacher-student connection activities.

The themes of the activities include life education, emotional education, careers, etc. More than one-third of tutors select career counseling-related themes each semester. The university organizes at least ten activities with career-related themes each semester. This academic year, 24 activities were held with a total of 1,074 participants. Career-related activities are provided in various forms, including special lectures, experience sharing by alums in specialized fields, enterprise visits, and others, to facilitate students' understanding of professional career fields.

School of Nursing Senior B: Career Plan Sharing Symposium

Dept. of Medical Biotechnology & Laboratory Science Junior: Career Sharing Session of Department Friends

Dept. of Respiratory Therapy Freshman A: Career Development Symposium

School of Traditional Chinese Medicine Senior: TCM Research and Development Symposium

Employment service series activities

The school conducts various career fairs every year. A total of thirteen career fairs were held, with a total of 408 participants.

Activity items	Activity time	Number of participants
Nanya Technology Recruitment Seminar	2023/4/11	53
Formosa Plastics Recruitment Seminar	2023/4/13	70
Delta Electronics Recruitment Seminar	2023/4/18	40
China Motor Recruitment Seminar	2023/4/19	10
Chroma ATE Recruitment Seminar & On-site Interview	2023/4/20	25
CHIN POON Industrial Recruitment Seminar & On-site Interview	2023/4/26	12
Quanta Computer Recruitment Seminar	2023/5/2	35
Chung-Hsin Electric & Machinery Recruitment Seminar & On-site Interview	2023/5/3	35
Everlight Chemical Recruitment Seminar	2023/5/9	40
Wellell Recruitment Seminar	2023/5/10	20
Resume Workshop	2023/5/15	31
Interview Skills Workshop	2023/5/16	12
Labor Right Lecture	2023/5/17	25
Total		**408**

Career Counseling for Students with Physical and Mental Disabilities (Resource Room)

We integrate internal and external career counseling resources, strengthen transitional counseling services for students with disabilities, assist them in transitioning to their careers, encourage proper career planning and preparation by utilizing the school's resources, and explore their capabilities for a smooth transition in the future. Based on the needs of various students receiving special education at CGU, we plan comprehensive career counseling strategic planning across the four dimensions of "Career Probing," "Function Development," "Workplace Internship Experience," and "Employment Transition."

(1) Career Probing of Students in Special Education

In accordance with the needs of disabilities, we assist students in exploring self-orientation, careers, and capabilities (physical and mental) to benefit their progress, learning, careers, and livelihoods.

(2)Function Development of Students in Special Education

In accordance with the needs of different categories of disabilities, we utilize an Individualized Support Plan (ISP) to improve these students' self-competence development in their studies, lives, and career planning to facilitate smoother studies and develop appropriate functional skills.

(3)Workplace Internship Experience for Students in Special Education

By providing resources inside and outside the university and professional internship courses from each department based on the individualized needs of students with disabilities, we assist students in experiencing workplace internships during school to learn about future trends and needs of workplaces and gaps in their current skillset so they can plan their careers and develop response strategies.

(4)Employment Transition for Students in Special Education

Through Individualized Transition Planning (ITP) meetings, we integrate employment transition resources inside and outside the university, such as referrals to employment services, vocational rehabilitation, and long-term care, in the hope that students in special education can transition more smoothly into the workplace. We keep up to date with students by tracking graduates and learn about their adaption to the workplace as a reference for further improvement for students in special education.

For students with different disabilities, we hold a variety of career counseling activities and workshops. In the 2022 academic year, CGU held twelve career counseling activities and various workshops with 225 participants. CGU also held three ITP meetings for students with physical and mental disabilities based on students' needs, with twenty-three participants in total.

Summary of Counseling Activities for Students with Physical and Mental Disabilities at Chang Gung University in the 2022 Academic Year

Semester	Activity topics	Activity time	Number of participants
1st Semester of academic year 2022	Study Week	2022/10/05~10/28	29
	Self-growth Group – Dr. Dog Stress Relief Workshop	2022/09/29	13
	Self-growth Group – Career Exploration Workshop	2022/11/21	9
	Self-Growth Group - Boardgame Social Interaction Workshop	2022/12/08	12
	Self-Growth Group - Galaxy Watercolor Workshop	2022/12/13	24
2nd Semester of academic year 2022	Department of Labour Campus Career Counselling Activity	2023/03/31~05/26	26
	Self-Growth Group - Boardgame Personal Growth Workshop	2023/03/28	11
	Self-Growth Group - Horticultural Therapy Workshop	2023/04/27	25
	Self-Growth Group - Resume Overview	2023/05/23	11
	Self-Growth Group - Time Management Master	2023/05/25	21
	Self-Growth Group – Coffee Brewing Class	2023/06/07	16
	End of Semester Seminar and Transition Activity	2023/06/13	28
	Total		**225**

Chapter 4

Environmental Protection

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Management Status of the Material Topic of Chang Gung University's Environment and Energy Sustainability in 2023 (2022 Academic Year)

Material Topics	Environment and Energy Sustainability
Corresponding GRI Index	GRI 302: Energy GRI 303: Water and Effluent GRI 305: Emissions GRI 306: Waste
SDGs Principle	7 AFFORDABLE AND CLEAN ENERGY 13 CLIMATE ACTION
Policy commitments	We are constructing a sustainable green campus and improving the utilization efficiency of the resources and energy sources we use.
Metrics and Targets	
Sustainability target	– Carry out a greenhouse gas inventory annually and obtain ISO 14064-1:2018 GHG verification.
Short-term targets (2025)	– Reduce carbon emissions by 10% in 2025 compared to 2023. – Improve the energy efficiency of the campus and aim to improve electricity savings by 1% every year. – Establish an intelligent campus digital platform to increase the smart management of energy, water resources, and waste. – Establish a sustainable development and energy technology center in 2023.
Mid-term targets (2030)	– Reduce carbon emissions in 2030 by 25% compared to 2023. – Improve the energy utilization efficiency of each building, and comprehensively replace all company internal combustion engine motor vehicles with electric ones.
Long-term targets (2050)	– Realize sustainable campus management and coordinate with the government to implement carbon-neutral goals. – Increase the ratio of renewable power to 50%. – Promote green buildings on campus and make plans to ensure that the enclosures of 50% of the existing buildings comply with thermal insulation effect requirements stipulated in green building standards. Please see the Net-zero vision and staged targets of Chang Gung University section for information on planning specific targets at each stage.

Effectiveness Tracking Mechanism	• Statistical figures of purchased electricity, water consumption, and waste volume • Tracking the supply of renewable power • Monitoring greenhouse gas emissions
Actions and Measures	• In 2023, the purchased electricity reached 40,617,231 kWh, the water resource consumption was 453,175 t, and the waste generated reached 756.84 t (recovery rate: 15.77%). • The first phase of green-energy solar power generation facilities was completed and connected to the power grid on April 26, 2023. From April to December 2023, 458,856 kWh of electricity was generated through solar power generation and sold to Taipower. • In 2023, CGU introduced ISO 14064-1 to implement greenhouse gas inventory operations. The total greenhouse gas emissions reached 22,402.4110 tCO2e/year.

4.1 Response to Climate Change

Climate change poses a significant risk in the current global context. This is evident in the increasing frequency and severity of extreme weather events in recent years. For instance, brief periods of intense heavy rainfall have resulted in flooding in low-lying areas, while prolonged droughts have led to reduced reservoir water levels in certain regions. To address the operational risks posed by climate change and mitigate potential financial losses, the Office of University Social Responsibility is responsible for coordinating relevant units and evaluating the impact and implications of pertinent factors on the operation of CGU, using the Task Force on Climate-related Financial Disclosures (TCFD) framework as a reference. Our focus encompasses the key core elements of Governance, Strategy, Risk Management, and Metrics and Targets in identifying potential climate change risks and opportunities. Proactive strategies and measures are being established to enhance CGU's climate resilience and address climate-related disasters.

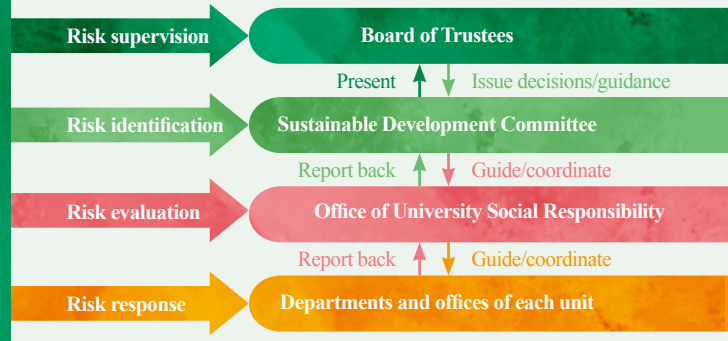
Four Core Elements of the TCFD

Core Elements of Climate-related Financial Disclosures

Core element	Action plan
Governance	• The Office of University Social Responsibility at Chang Gung University convenes relevant departments and offices to internally and externally assess the potential impact of various issues, focusing on identifying and evaluating climate change risks and formulating responses to mitigate these impacts. Following the identification of the climate-related effects, the office coordinates meetings for level-one supervisors in related units to deliberate on climate-related risks and opportunities. This process involves proposing measures and recommendations to address hazards associated with climate-related risks, adapt to and mitigate financial implications, and identify corresponding financial opportunities. • The Sustainable Development Committee reports its annual sustainable governance performance to the Board of Trustees every year, and the board assists with guidance and confirmation of short-, mid-, and long-term goals, including climate change-related issues.
Strategy	CGU considers the potential impact brought by climate change on overall operational considerations. It assesses the likelihood and magnitude of risks, identifies physical and transition risks and opportunities, and actively advocates for sustainable green energy and carbon reduction policies. In response to the global impact of climate change and the greenhouse effect, we have implemented energy conservation and emissions reduction measures. Our efforts extend to promoting energy-saving practices and waste reduction in offices and public areas. Additionally, we have endorsed green procurement practices by prioritizing energy-saving and environmentally friendly products to actively contribute to energy conservation and emissions reduction. **Short-term**: Energy conservation and emission reduction and environmental education. **Mid-term**: Executing a carbon emission reduction management mechanism to improve the energy utilization efficiency of each building. **Long-term**: Zero Carbon Neutrality by 2050 For information on the primary short-, mid-, and long-term risks and opportunities associated with CGU, please consult Impact of climate-related risks and opportunities on finance.

Core element	Action plan
Risk Management	The Office of University Social Responsibility regularly evaluates climate change risks to identify and assess significant operational impacts or risks. This clarifies the specific potential financial impact as a basis for formulating policies and objectives. We have also established and continuously monitored a comprehensive climate management procedure. For more details about the specific process, please refer to the Identification, Evaluation, and Management Flowchart for Climate-Related Risks.
Metrics and Targets	We use specific metrics to assess and manage these risks to minimize the impact of climate change and meet our goals of reducing carbon emissions and conserving energy. Additionally, we encourage long-term measures to reduce energy usage and emissions. • Short-term goal: Reduce carbon emissions in 2025 by 10% compared to 2023. • Mid-term goal: Reduce carbon emissions in 2030 by 25% compared to 2023. • Long-term goal: Achieve carbon neutrality by 2050. For detailed staged targets and action metrics, please see the "Net-zero vision and staged targets of Chang Gung University" section. For information regarding the management performance of Chang Gung University in energy, greenhouse gas emissions, water resources, and waste, please see the corresponding section "4.2 Environmental protection action performance".

Identification, Evaluation, and Management Flowchart of Climate-related Risks



The Impact of Climate-Related Risks and Opportunities on Finance

Chang Gung University evaluates climate risks and opportunities, analyzes the impact of climate change on its financial and operational conditions, and subsequently drafts appropriate responsive measures to improve the resilience of CGU in managing climate change risks and opportunities.

Climate-related Risks and Financial Impact

Type	Climate-Related Risk	Impacted Period	Potential Financial Impact	Adaption and Responsive Actions
Transition risk				
Policies and regulations	Regulations related to renewable energy and energy transformation	Long-term	● In response to the energy transformation policy, CGU has already spent NT$ 31.6 million in establishing the first phase of solar power generation facilities; it is estimated to pay NT$ 20.26 million in the second phase. The construction project in the third phase is currently being planned.	● The first phase of this solar power generation project was already completed and connected to the power grid in April 2023. Currently, the electricity is sold to Taipower; the second phase is expected to be completed at the end of December 2024.
	Regulations related to carbon reduction	Mid-term	● In response to the greenhouse gas reduction policy, CGU is expected to conduct ISO 14064 greenhouse gas inventory verification every year starting in 2023, with an estimated annual expenditure of approximately NT$ 690,000. In the future, CGU plans to spend NT$ 1.5 million to establish a greenhouse gas inventory E-system to systematically manage inventory documents, quickly generate a statistical list of carbon emissions, and improve accuracy. ● In the future, energy prices may rise, increasing energy costs.	● We stay updated on energy use through an annual inventory and formulate measures to improve efficiency based on related data. ● We establish an intelligent campus teaching platform to strengthen the intelligent management of energy, water resources, and waste.
Reputation	Impairment of school reputation	Short-term	● If energy conservation and emissions reduction strategies are not implemented, we will fall behind the world's sustainability trends, affecting our reputation.	● We have established the Sustainable Development Committee and the Office of University Social Responsibility to pay attention to related sustainability issues, continually promote policies, and achieve energy conservation and emission reduction goals.
Physical risk				
Instantaneousness	Abnormal climate events like extreme rainfall, etc.	Short-term	● Classrooms, student dormitories, and school buildings or equipment may be damaged due to climatic disasters, resulting in increased costs due to renovation or replacement. ● Work and classes may be suspended due to flooding, resulting in increased personnel costs.	● In 2023, waterproof gates were installed for approximately NT$ 200,000 to prevent flooding. ● In 2020-2023, water pumping machinery was purchased at NT$ 47,000 to prevent water accumulation. ● In 2023, the insurance expenses paid for preventing natural disasters reached NT$ 2,518,279.
Long-lasting nature	Rise of annual average temperatures	Long-term	● Increase in electricity fees due to the use of air-conditioning	● We upgraded the original air conditioning units with variable frequency, energy-saving units, and successfully applied for subsidies for energy-saving home appliances. During 2021-2023, CGU received a tax refund subsidy totaling NT$ 1.45 million to purchase energy-saving air conditioning home appliances.

Climate-Related Opportunities and Financial Impact

Type	Climate-related Opportunity	Potential Financial Impact	Responsive Action
Resource efficiency	● Recycling paper and waste ● Replacing electrical equipment with greater ● Reduction of water consumption ● Green procuremen	● Reduction of purchasing amount of consumables ● Reduction of electricity consumption and carbon emissions ● Reduction of water utilization costs	● An electronic document sign-off system is implemented in CGU. In 2023, the number of documents electronically transferred and signed accounted for 74.27% of the total documents in the year, with the ratio of use continually increased. ● In 2020-2023, 47 elevators were replaced in CGU. AC VVVF control system was applied in the new elevators, making them more electricity-saving than old ones. Also, a relevant energy feedback device has been added to save an extra 25% of electricity. ● Rainwater and reverse osmosis secondary water were collected and recycled in the ecological purification pool for reutilization through the raft foundation and seepage pool to optimize the environmental pool and irrigate the greenery on campus.
Energy sources	Solar power generation facilities	Solar power generation facilities are installed on the roof to lower the purchasing cost of electricity and to make a profit from selling electricity.	● The first phase of green-energy solar power generation facilities (on the roof of the Activity Center) was already completed and connected to power grid on April 26, 2023. In a period from April to December 2023, 458,856kWh of electricity was generated through solar power generation and sold to Taipower. ● It is expected to complete the second phase of the project (on the roofs of the Engineering Building and the 2nd Medical Science Building) at the end of December 2024.
Market	Promotion of ESG-related courses	Promote courses to attract students to study at the university.	● We applied for a total subsidy amount of NT$ 1,516,400 for purchasing energy-saving home appliances. ● In 2023, CGU applied for a subsidy for an energy conservation project of the business service system of the Ministry of Economic Affairs. The first stage of subsidy, i.e., approximately NT$ 930,000, was already appropriated.
	Acquisition of rewards from the public sector	● Subsidies for purchasing energy-saving electric appliances ● The energy-saving performance of CGU earns subsidies from the public sector.	● We applied for a total subsidy amount of NT$ 1,516,400 for purchasing energy-saving home appliances. ● In 2023, CGU applied for a subsidy for an energy conservation project of the business service system of the Ministry of Economic Affairs. The first stage of subsidy, i.e., approximately NT$ 930,000, was already appropriated.
韌性	Strengthening resilience in response to climate change	Strengthen the university's resilience to improve its strain capacity and lower losses caused by climate change.	In response to energy shortage and carbon reduction trends, the Net-Zero vision and staged targets of Chang Gung University have been established to achieve carbon reduction goals year-on-year.

Net-zero Vision and Staged Targets of Chang Gung University

Chang Gung University demonstrates a strong commitment to environmental preservation and actively advocates for energy conservation and emission reduction initiatives. In 2022, CGU established the Office of University Social Responsibility to oversee the university's sustainable development. This involved formulating objectives and action plans, consistently issuing sustainability reports, integrating measures and accomplishments related to teaching, research, and environmental governance, and fostering interdisciplinary efforts to create a sustainable campus. In line with the campus's drive for Net-Zero carbon emissions, CGU concentrates on energy conservation and eco-friendly transportation by implementing specific actions, such as deploying electric campus patrolling vehicles, upgrading obsolete energy-consuming equipment, installing energy-efficient lighting fixtures, and monitoring electricity consumption. Furthermore, CGU proactively encourages the adoption of renewable energy sources. Notably, solar power generation facilities are already operational on the activity center's rooftop, with an estimated annual generating capacity of 614,426kWh. Future endeavors will focus on expanding solar power generation to support the primary guideline of reducing purchased electricity (Scope 2) and pave the way for achieving campus carbon neutrality by 2050.

▼ Net-zero Staged Targets of Chang Gung University

Item	Targets	Measure and Action Guidelines
Short-term 2025	● Improve the energy efficiency of the campus. ● Achieve the goal of reducing electricity consumption by 1% per year. ● Reduce carbon emissions in 2025 by 10%.	● Promote energy transition education. ● Continue to replace energy-consuming equipment (air conditioning, elevators, refrigerators, etc.) with new ones. ● Establish an intelligent campus digital platform to strengthen the intelligent management of energy, water resources, and waste. ● Implement comprehensive digitization of official documents and meeting data to reduce the paper output. ● Installed license plate recognition system, mobile payment system, U-bike 2.0 (public bicycle) stations, and EV charging stations to encourage green transport choices. ● Conduct annual greenhouse gas inventory verification and obtain the ISO 14064-1:2018 GHG Verification Statement.
Mid-term 2023	● Improve the energy utilization efficiency of each building. ● Reduce carbon emissions in 2030 by 25%.	● Expand solar renewable power generation facilities. ● Establish EUI (Energy Usage Intensity) for buildings of each category and innovate improvement plans. ● Electrify fuel oil equipment. ● Promote green buildings on campus and ensure that the enclosures of the new buildings comply with thermal insulation effect requirements stipulated in green building standards. ● Gradually replace official petroleum motor vehicles with electric motor vehicles. ● Increase infrastructure for electric vehicles, e.g., installation of charging stations, to encourage the electrification of cars on campus.
Long-term 2050	● Achieve the goal of carbon neutrality in 2050.	● Plan the comprehensive electrification of traffic vehicles. ● Improve the ratio of renewable power to 50%. ● Promote green buildings on campus and make plans to ensure that the enclosures of 50% of the existing buildings comply with thermal insulation effect requirements stipulated in green building standards. ● Develop negative carbon technologies (e.g., CO2 recycling and synthetic chemicals) and establish a scientific foundation and R&D energy. ● Develop emerging carbon-reducing energy sources, e.g., hydrogen energy and ammonia energy.

Note: The comparative base year of the reduction target was 2023 (the year when ISO 14064–1 greenhouse gas inventory was conducted for the first time).

4.2 Environmental Protection Performance

To achieve Chang Gung University's energy conservation and emission reduction goals towards carbon neutrality and to appreciate the natural resources on Earth, CGU has developed various environmental protection action measures in the hope that they can be gradually promoted and implemented on campus. Through the effective supervision of data regarding energy, water resources, waste, and greenhouse gases, CGU evaluates consumption conditions, gradually improving emission reduction and improving the utilization efficiency of its energy resources.

Saving Energy Consumption and Improving Energy Efficiency

- Gradually replace traditional lights with LED lights. In 2023, we had replaced about 2,500 traditional lights in Ju De Dormitory, Ming De Dormitory, and restaurants. The traditional lights used in the laboratory area will be fully replaced within the next two years. It is expected to save electricity of 1,492,524 kWh/year and save electric charge of NT$ 4,477,572/year. The payback period lasts for 7.57 years.
- In 2020-2023, 47 elevators were replaced in CGU. AC VVVF control system was applied in the new elevators, making them more electricity-saving than old ones. Also, relevant energy feedback device has been added to save extra 25% of electricity
- High-efficiency CSPF/EER and variable frequency air conditioning units are 100% used throughout the university. Seven hundred fifty-one old student dormitories air conditioning units have been replaced since 2010. The electricity saved reached 2,942,179 kWh, involving an amount of approximately NT$ 8,826,538. The payback period lasts for approximately 1.94 years.
- The lighting of classrooms was improved. T8 lamp holders were replaced with T5 lamp holders and LED panel lamps. By replacing the lighting facilities, about 700 kWh of power consumption of all classrooms in CGU can be saved daily.
- The first phase of the green-energy solar power generation facilities (roof of the activity center) was completed on April 26, 2023, and in a period from April to December 2023, 458,856 kWh of electricity was generated through solar power generation and sold to Taipower.

Waste Reduction and Recycling

- An electronic document sign-off system is implemented in CGU. In 2023, the number of documents electronically transferred and signed accounted for 74.27% of the total documents in the year, with the use ratio continually increasing.
- Use tablet PCs in meetings to replace paper. In 2023, we saved 237,362 pieces of paper and reduced carbon emissions by approximately 1,709 kg CO2e. Photocopied paper, official dossiers, and document envelopes were recycled. Water destruction was applied to reutilize paper-like documents and examination papers.
- Recyclable Corelle tableware is used at students' restaurants to reduce the use of disposable bowls, chopsticks, and meal boxes. Students who bring their own food containers may enjoy meal discounts when dining at the restaurants.
- Relevant professional vendors have been entrusted to regularly recycle kitchen waste from the restaurants of CGU every week. After being treated through high-temperature digestion, the kitchen waste will be reused as feeds. In 2023, a total of 135,400 L of kitchen waste was recycled.
- Eighty-nine resource recycling points have been set up around the university. Dedicated resource recycling personnel and resource recycling, clearing, and transport vendors are appointed to jointly promote resource recycling.
- Three large recycling stations are set outside the students' dormitory. Eye-catching colored graphic signs are posted to advocate the concept of resource recycling. Also, multilingual signages are set up to improve the correctness of recycling and reduce the waste volume.
- Student clubs are encouraged to organize relevant activities for waste reduction and recycling and care for the Earth (e.g., use of environment-friendly bags and recycling of old clothes).
- Uniformly handle the delivery of valuable recyclables (e.g., iron materials/computers/screens/printers/bulb tubes/home appliances, etc.) to the warehouse and organize sales by tender.
- Recycle, collect, and centrally place dead branches, leaves, and plant residue cleaned up every day for natural decomposing and recycling.

Green Transportation and Other Environmental Protection Actions

- Adopt environmentally-friendly electric motor vehicles as official campus patrolling vehicles, and install motor vehicle charging stations.
- A comprehensive assessment has been carried out regarding the installation of electric vehicle charging stations. Subsequently, the university will oversee replacing the MOF feeder line and concurrently execute the process of awarding contracts for the charging stations. The projected completion date for the project is February 27, 2025. In addition, plans are in place to negotiate relevant agreements with KYMCO for motorcycle battery exchange stations. In the future, the university will consistently monitor the progress of these initiatives.
- CGU has allocated shared bicycles (UBIKE) within Zhongzheng Sports Park, Taoyuan.
- Buses have been introduced to the campus to provide transportation services. Additionally, shuttle buses are available for teachers and students traveling between MRT A7 Station and the campus. Public transportation is encouraged as part of our efforts to promote low-carbon transportation.
- We have held tree-planting activities on campus every year since 2013. It has been confirmed that 17,445 trees from 71 different tree species are planted throughout the university grounds.

Energy management

The energy consumption and energy density at Chang Gung University displayed a year-on-year decrease from 2021 to 2022, indicating the university's dedicated efforts toward energy conservation and environmental safeguarding. In 2023, the establishment of the College of Intelligent Computing, the Department of Biomedical Sciences, and the Department of Digital Financial Technology contributed to an increase in power consumption due to the implementation of equipment within the new college and departments, as well as an influx of students. The primary energy source utilized was electricity, with air-conditioning and lighting equipment accounting for most electricity consumption.

Furthermore, CGU actively promotes the use of renewable energy. The first phase of solar power generation facilities has been completed on the roof of the Activity Center. From April to December 2023, 458,856 kWh of electricity was generated through solar power and sold to Taipower. The second phase of solar power generation facilities will be installed on the roofs of the Engineering Building and the 2nd Medical Science Building, with completion expected in December 2024. CGU plans to apply to Taipower for self-generation and self-use of solar energy in the academic year 2024 (August 2024-July 2025). The utilization ratio of renewable energy at CGU has currently reached 4%. Furthermore, the university aims to continually expand the use of renewable energy, thereby achieving the main action policy of promoting the reduction of purchased electricity.

▼ Use of Energy Sources (Scope 1 + Scope 2) inside Chang Gung University (Unit: GJ)

Type of non-renewable energy	2021	2022	2023
Purchased electricity	144,702.72	143,637.12	146,222.03
Diesel	245.77	191.80	196.06
Natural gas	1,644.39	1,644.39	1,270.50
Gasoline	16.47	20.32	36.03
Total energy consumption	146,609.35	145,493.63	147,724.62
Density of Energy (GJ/Floor area, m^2)	0.3571	0.3544	0.3599

Notes:
1.The source of the energy conversion factor is version 6.0.4 of the Greenhouse Gas Emission Factor Management Table announced by the Environmental Protection Administration.
2.The electricity currently generated by the solar power facilities of Chang Gung University is all sold to Taipower; renewable energy is not currently in use on campus.

▼ Energy Use Intensity (EUI) per Floor Area Unit of CGU in Recent Years

Year	2021	2022	2023
Electricity (kWh/Year)	40,195,200	39,899,200	40,617,231
EUI (kWh/ square meter)	97.92	91.20	98.95

Total floor area: 410,500 m^2

GHG Emissions

CGU promotes ISO 14064-1 greenhouse gas inventory to provide quantification standards and monitoring methods for campus greenhouse gas emissions. This data will help analyze emission conditions and guide CGU in reducing greenhouse gases.

1. Selection of base year

Since 2020, CGU has independently conducted an annual greenhouse gas inventory in accordance with the methodology of the GHG Protocol. In 2023, CGU began to adopt the ISO14064-1:2018/CNS14064-1:2021 standard for inventory-taking instead. Due to the differences in inventory methodology, 2023 (January 1, 2023-December 31, 2023) was selected as the base inventory year.

2. The base year is handled according to ISO14064-1:2018/CNS14064-1:2021 and the requirements of the Operational Guidelines for Greenhouse Gas Emission Inventory of the Environmental Protection Administration, Executive Yuan.

3. Quotation sources of emission coefficients

(1) Category 1

a. The emissions of various generation sources (diesel/gasoline/septic tank/CO2 fire extinguisher/high-pressure switch-SF6/laboratory chemicals) are calculated according to the emission coefficients provided in "Greenhouse Gas Emission Coefficient Management Table 6.0.4" issued by the Environmental Protection Administration, Executive Yuan

b. Refrigerant dissipation factor of refrigerant-using equipment, i.e. refrigerant emission factor, is determined with reference to dissipation emission sources in Greenhouse Gas Emission Coefficient Management Table 6.0.4.

(2) Category 2

Power emission coefficient: The electricity purchased from Taipower has been calculated according to the power carbon emission coefficient of 0.494 $kgCO_2e/kWh$ announced by the Bureau of Energy, Ministry of Economic Affairs, in 2023.

(3) Category 4.3

a. "Incineration Carbon Emission Coefficient" published on the product carbon footprint information network is quoted for waste disposal with reference to the items included in the "Contract for Entrusted Disposal of General Industrial Waste" signed.

b. "Carbon Emission Coefficient of Operating Trucks (Diesel)" published on the product carbon footprint information network is quoted for clearing and transport vehicles.

4. Global Warming Potential (GWP)

The updated "Greenhouse Gas Emission Coefficient Management Table 6.0.4," announced by the Environmental Protection Administration, Executive Yuan on June 27, 2019, is quoted, and the Global Warming Potential (GWP) provided in the IPCC Sixth Assessment Report in 2021 is adopted. R-12 and R-22 are the controlled refrigerant items in the Montreal Protocol, and therefore, the GWP values of R-12 and R-22 are 0.

5. Calculation results of greenhouse gas emissions

In 2023, the total greenhouse gas emissions of CGU reached 22,402.4110 tCO_2e/year. The direct greenhouse gas emissions (Category 1) reached 3,283.241 tCO_2e/year, accounting for 14.66% of total emissions. The energy-related indirect greenhouse gas emissions (Category 2) reached 18,901.373 tCO_2e/year, accounting for 84.37% of total emissions. The greenhouse gas emissions of Category 4.3 reached 217.797 tCO_2e/year, accounting for 0.97% of total emissions.

▼Statistical Table of CGU' s Greenhouse Gas Categories and Emission levels of Different Emission Types

	Category 1				Category 2	Category 4.3	Total emission equivalents
	Fixed emission	Process e mission	Mobile emission	Fugitive emission	Energy-related indirect emissions Notes 1 and 2	Other indirect emissions	
Emission equivalent (tCO_2e/year)	3,283.241				18,901.373	217.797	22,402.411
	12.942	0.000	4.258	3,266.040			
Ratio per gas (%)	14.66%				84.37%	0.97%	100.00%
	0.06%	0.00%	0.02%	14.58%			

Notes:
1. Restaurants, convenience stores, shops, etc., are set up on campus. Each shop is equipped with electricity meter to record their power consumption. However, since there is only one general electricity meter (sharing of a same electricity bill) on campus, "Statistical Table of Water Used by Restaurants and Street Vendors, Dedicated Electric Charge, and Gas Fee" has been additionally established to record the monthly water and power consumption of each shop (gas meter reading: 0). Therefore, the electricity purchased and used by CGU is calculated by deducting the electricity consumption indicated in "Statistical Table of Water Used by Restaurants and Street Vendors, Dedicated Electric Charge, and Gas Fee" from the electricity indicated in the electric bill issued by Taipower.
2. CGU has installed green–energy solar power generation facilities. The first phase of this project was installed on the roof of the Activity Center, and it was already completed and connected to power grid on April 26, 2023. In a period from April to December 2023, 458,856 kWh of electricity was generated through solar power generation and sold to Taipower. Therefore, the aforesaid electricity was not included in green electricity for deduction.

▼Emissions of Seven Greenhouse Gases Generated in CGU

	CO_2	CH_4	N_2O	HFCs	PFCs	SF_6	NF_3	Annual total emission equivalents of seven greenhouse gases	Biomass emission equivalents
Emission equivalent (tCO_2e/year)	19,136.198	1,829.572	0.131	1,304.691	131.819	0.000	0.000	22,402.411	0.0000
Ratio per gas (%)	85.42%	8.17%	0.00%	5.82%	0.59%	0.00%	0.00%	100.00%	-

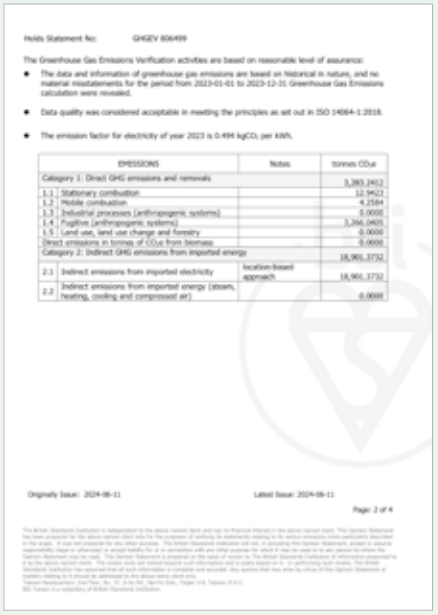
6. External verification operation

"BSI Group Taiwan Inc." (BSI for short) was entrusted to conduct third-party verification work.

7. Verification assurance levels

(1) Verification of Category 1 and Category 2; "Reasonable Assurance Level" is adopted.
(2) Verification of other indirect emissions: For example, agree-upon-procedures (AUP) are adopted for category GWP.

bsi.
Opinion Statement
Greenhouse Gas Emissions
Verification Opinion Statement
making excellence a habit.



Water Resource Management

In support of water conservation efforts, we have implemented various initiatives. This includes regulating the water flow in public restroom washbasins, and giving priority to selecting and using faucets and toilets with a "Water-saving Label" when upgrading existing facilities. These measures are projected to result in an annual reduction of water consumption by 1%.

We responsibly channel sewage to the Guishan Water Resource Recycling Center of Taoyuan City Government for recycling to reduce water drainage pollution. Furthermore, we use rainwater and reverse osmosis secondary water, gathered and recycled in the ecological purification pool through the foundation and seepage pool. This not only enhances the ecological pool but also facilitates the irrigation of the greenery on our campus.

In 2022, intelligent water meters were initially used in each building and water treatment plant, and relevant information was collected for the central monitoring system, which regularly sends water consumption data to the Energy Conservation Committee for energy-saving analysis and review.

Additionally, due to frequent heavy rains encountered irregularly in recent years, the original building drainage system was ineffective, resulting in overflow and backflow of water holes in the buildings. In consideration of the difficulty in obtaining water sources for greening irrigation in each area and the demand for solving the problem of rainwater backflow during heavy rains, CGU plans to install a rainwater recycling system to collect rainwater from the roof of each building, and lead it to the reservoir in each area. Also, booster pumps are used to supply water for irrigation and cleaning in each area.

In the future, CGU plans to continually promote water-saving and improve water consumption efficiency through water recycling.

▼ Total Water Withdrawal of Chang Gung University in the Past Three Years (Unit: ton)

	2021	2022	2023
Total water withdrawal	212,294	414,268	373,238

Notes:
1. The category of water withdrawn is freshwater with tap water from a third party as the source.
2. The region of water withdrawal is Taiwan. It is a region without pressure on water resources, as identified according to the "Aqueduct Water Risk Atlas" of the World Resources Institute.

Waste Management

Chang Gung University generates various types of waste, including general waste, recyclable waste (such as waste metals, host computers, screens, and printers), infectious waste (comprising laboratory needles, syringes, and animal remains from experiments), and waste liquid (involving organic and inorganic experimental chemical drugs, etc.). Improper disposal of waste can significantly impact both the environment and our operations. To address this, we actively advocate for waste reduction, proper classification, and recycling measures within the university. We are also engaged in multi-level interschool resource recycling competitions in Taoyuan City. Our efforts have been recognized, with our university receiving the excellence award in the competition group of junior colleges and universities in 2020 and the class-A award in the same group in 2018, 2019, and 2021, respectively.

In compliance with university regulations, infectious waste is processed, sterilized, and transported to a designated warehouse after registration and verification. Similarly, infectious sharp waste is dispatched to the warehouse every month and subsequently removed and transported by an approved vendor each week following proper registration. The collection and delivery of laboratory-generated waste chemical liquid are documented per the protocol and transported to the warehouse monthly. A delivery control form is completed upon delivery, and the waste liquid is removed and transported by an approved vendor every quarter. To ensure proper treatment or reutilization of waste, Chang Gung University rigorously selects waste clearing and treatment vendors, periodically evaluates the actual treatment and reutilization of waste at the vendors' facilities, and enhances vendor auditing by mandating GPS installation in waste clearing and vehicles for effective tracking and management.

This year's total waste generated reached 756.84 t, with a recycling rate of 15.77%. The trash generated in 2023 was down by 713.22t compared to 2022. However, due to specific differences in the waste calculation methods and recycling volume in these two years, the reduction reached 51.48% in 2023. The calculation standards will be unified in the future, and it is expected to reduce waste by 1% annually.

Waste Classified per Component in 2022~2023 (Unit: Metric ton)

		2022			2023		
Type of Waste	Composition	Total volume of waste	Total of waste diverted from disposal (Sold to the recycling practitioners)	Total of waste directed to disposal (Incineration)	Total volume of waste	Total of waste diverted from disposal (Sold to the recycling practitioners)	Total of waste directed to disposal (Incineration)
Non-hazardous waste	General waste	876	0	876	586.39	0	586.39
	Waste iron for recycling	529.2	529.2	0	116.37	116.37	0
	Host computers	6.03	6.03	0	1.978	1.978	0
	Computer screens	2.02	2.02	0	0.433	0.433	0
	Printers	1.7	1.7	0	0.6	0.6	0
	Laboratory waste liquid	10.645	0	10.645	11.045	0	11.045
	Total non-hazardous waste	1,425.595	538.95	886.645	716.816	119.381	597.435
Hazardous waste	Laboratory chemicals	1.2985	0	1.2985	0.7802	0	0.7802
	Infectious industrial waste	43.17	0	43.17	39.24	0	39.24
	Total hazardous waste	44.4685	0	44.4685	40.0202	0	40.0202
Total		**1,470.06**	**538.95**	**931.11**	**756.84**	**119.38**	**637.46**

Notes:
1. All waste was collected and transported offsite for appropriate treatment. The primary disposal method is incineration, and the disposal or transfer method involves selling to recycling organizations as scrap. The calculation method for general waste in 2022 was based on an average of 73 tons per month for 12 months as per the clearing and transport contract. In 2023, the calculation was based on the actual waste delivered to the incineration plant, resulting in a difference in the total general waste volume between the two years.
2. There were 826 host computers scrapped in 2022, with an average weight of 7.3 kg. Therefore, the total weight was 6.03 t (826 * 7.3 = 6,030 kg). There were 271 host computers scrapped in 2023, with an average weight of 7.3 kg. Therefore, the total weight was 1.978 t (271 * 7.3 = 1,978 kg).
3. There were 519 computer screens scrapped in 2022, with an average weight of 3.9kg. Therefore, the total weight was 2.02 t (519 * 3.9 = 2,024 kg). There were 111 computer screens scrapped in 2023, with an average weight of 3.9 kg. Therefore, the total weight was 0.433t (111 * 3.9 = 433 kg).
4. There were 182 printers scrapped in 2022, with an average weight of 9.5 kg. Therefore, the total weight was 1.7 t (182 * 9.5 = 1,729 kg). There were 100 printers scrapped in 2023, with an average weight of 6 kg. Therefore, the total weight was 0.6 t (100 * 6 = 600 kg). There were 100 printers scrapped in 2023, with an average weight of 6 kg. Therefore, the total weight was 0.6 t (100 * 6 = 600 kg).
5. Restated Information: In 2022, there was an error in the reported total volume of waste directly disposed of through incineration. The original figure of 2,142.51 was incorrect; the accurate value is 876. This error has been rectified in the current report.

4.3 Supply Chain Management

Supply Chain Management Policy

Chang Gung University has established specific regulations governing the purchase requisition, procurement, and management of materials and equipment, as well as critical points on procurement for scientific and technological research and development. These guidelines are adhered to in accordance with both university rules and government regulations. The procurement of CGU is entrusted to the Procurement Department of the General Administration Office of Formosa Plastics Group. The procurement team is responsible for facilitating price inquiries and negotiations based on objective factors such as product specifications, vendor quoted amounts and historical delivery performance. The staff of the Procurement Department at Formosa Plastics Group mainly handles communication with suppliers. The purchase requisition unit of CGU liaises directly with vendors only in cases where suppliers have queries regarding the product specifications requested for purchase.

Chang Gung University has successfully engaged in business with over 15,000 local and international suppliers through Formosa Plastics Group. Embracing the global movement towards sustainable development, environmental preservation, and resource conservation, we meticulously evaluate and validate the items procured by each department. Additionally, we actively promote eco-friendly materials and products bearing energy-saving labels to align with procurement standards and minimize the utilization of environmentally harmful products. In assessing the details pertaining to eco-friendly products and energy-efficient labeled items available on the websites of the Environmental Protection Administration, Executive Yuan, and the Bureau of Energy of the Ministry of Economic Affairs, CGU adheres to stringent environmentally-conscious and energy-saving protocols to advance green procurement practices.

Our company requires vendors to sign a "Notification of Safe Construction" after being awarded the contract for renovation projects and contracting management. This notification informs vendors about their workplaces, the surrounding environment, potential hazards, and required health and safety measures. This ensures that vendors have a comprehensive understanding of relevant regulations and precautions. Prior to commencing construction, our vendors are mandated to conduct health and safety training for their staff in accordance with the relevant provisions of the Occupational Health and Safety Act, among other regulations.

Sustainable Procurement

Chang Gung University is committed to engaging in local purchase projects within Taiwan in order to mitigate carbon emissions associated with overseas long-term transportation and to support local business development. Over the past three academic years, our local purchases have represented more than 98% of the total expenditure. As we look ahead, Chang Gung University aims to sustain this high proportion, explore the possibility of increasing the ratio of local purchases, and establish specific objectives in this regard.

▼ Ratio of Local (Taiwan) Purchases of Chang Gung University in the Past Three Years (Unit: NT$ 1,000)

Year	2021	2022	2023
Local purchase amount	834,283	615,091	704,894
Total purchase amount	842,425	619,915	716,302
Proportion of local purchases	99.03%	99.22%	98.41%

Chang Gung University has consistently promoted environmental protection and energy conservation policies in recent years. The university has strongly encouraged each department to prioritize using energy-saving and environmentally friendly products, including energy-efficient equipment such as frequency converters, high-efficiency IE3 motors, explosion-proof LED lights, air-conditioning hosts, and UPS. Furthermore, there has been an emphasis on procuring products bearing environmentally friendly, energy-saving, and water-saving labels. Benefiting from government initiatives, a total of 786 energy-saving home appliances met the requirements for energy-saving tax refunds, resulting in a substantial total subsidy amounting to NT$1,516,400. Notably, Chang Gung University's commitment to green procurement has garnered external recognition, winning the esteemed Private Enterprise and Group Green Purchase Excellent Performance Unit distinction for six consecutive years and the Taoyuan Private Enterprise and Group Green Purchase Performance Excellence Award from 2018 to 2023.

Tax Refund Subsidy Project for Energy-saving Home Appliances Purchased by Chang Gung University (January 7, 2021~December 31, 2023)

Type	Quantity (set)	Amount (NTD)
Air conditioning	725	1,450,000
Dehumidifiers	54	54,800
Refrigerators	7	11,600

Ratio of Green Purchases of Chang Gung University in the Past Three Years (Unit: NT$ 1,000)

Year	2021	2022	2023
Green purchase amount	15,105	43,535	18,395
Total purchase amount of specific projects	15,978	47,226	20,308
Proportion of green purchases	94.53%	92.18%	90.58%

Notes:
1. Green purchases are defined as products purchased with environmentally friendly labels, certificates issued by the health bureau, and energy-saving, water-saving, and green building labels.
2. The total purchase amount of specific projects is defined as the total annual purchase of products that comply with green procurement criteria.

CGU obtained the Taoyuan Environmental Sustainability Award in 2023.

Chapter 5

Faculty and Staff Wellbeing

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Management Status of Material Topic "Faculty Benefits and Career Development" of Chang Gung University in 2023 (Academic Year 2022)

Material Topics	Faculty Benefits and Career Development		
Corresponding GRI Index	GRI 201-3 Defined benefits plan obligations and other retirement plans. GRI 401-2 Benefits provided to full-time employees that are not provided to temporary or part-time employees. GRI 404-1 Average hours of training per year per employee. GRI 404-3 Percentage of employees receiving regular performance and career development reviews.	Effectiveness Tracking Mechanism	• Regularly assess promotion and salary adjustments every year and handle salary adjustments according to the salary adjustment standards of military and civil servants. • Regularly handle operations like teacher promotion and employee promotion screening tests yearly and continually optimize the incentive system. • Handle functional training courses for faculty and staff to improve their functionality. • Verify and pay flexible salaries and provide retirement increment to excellent teachers and researchers to motivate their teaching and research improvements. • Provide applications for preferential medical treatment at Chang Gung Memorial Hospital upon new faculty and staff registration. • Implement the selection of outstanding teachers and administrators, boost morale, and provide bonuses. • In 2023, four exceptional administrative personnel will be commended, with each individual receiving an incentive of NT$50,000.
SDGs Principle	4 QUALITY EDUCATION 8 DECENT WORK AND ECONOMIC GROWTH		
Policy commitments	Providing faculty and staff with a complete welfare system, cultivating diversified functions, and establishing a complete administrative workforce utilization and allocation mechanism that matches people with their jobs.	Actions and Measures	• CGU handled employee promotion and salary adjustments in August 2023. • 69 teachers applied for promotion in 2023; CGU handled employee promotion examinations in June 2023, and 4 employees applied for promotion screening tests. • In 2023, CGU held 159 teaching improvement activities and diversified functional training courses. 1,083 persons (6,482 person-times) participated in these activities and classes. Therefore, CGU continually implements education and training for its personnel through an appropriate career development system. • In 2023, 485 teaching and research personnel obtained flexible salaries. • In 2023, 246 new faculty and staff members received preferential medical benefits from Chang Gung Memorial Hospital.
Metrics and Targets	– Abide by human rights policy and ensure that no discrimination based on factors like age, gender, sexual orientation, religion, or political affiliation has existed. – Provide stable and favorable remuneration and discuss ranges of salary adjustments. – Improve employees' professional skills and provide a complete promotion and career development system. – Provide diversified welfare and health care and offer preferential medical treatment for Chang Gung Memorial Hospital employees and their immediate family members. – Create a high-quality work environment to attract and retain excellent talents.		

5.1 Employee Structure

CGU has anti-discrimination policies in place, emphasizing equality and respecting different values. Talent selection and retention are not discriminated against based on factors such as race, nationality, gender, age, and political or religious beliefs. Our goal is to establish a diversified, equal, inclusive, and friendly workplace that respects employees' differences and uniqueness and has a positive impact on CUG's operations.

In the 2022 academic year, there were 1,517 teaching staff, 6,987 students, 582 full-time teachers, 230 full-time staff members, and 689 non-regular employees, such as contracted administrative staff and research assistants. The teacher-student ratio is 1:12.

CGU has established regulations for the employment of personnel at every level, including guidelines and procedures for academic appointments, regulations for the recruitment of practitioners as instructional faculty, regulations for staff recruitment and appointment, guidelines and procedures for the recruitment of research personnel, directions for managing research personnel, and directions for managing contract administrative staff. These regulations are in place to recruit personnel at all levels and to develop the necessary job knowledge and skills. By creating rules and regulations, detailed procedures for handling relevant matters, and other codes of conduct for work, we can assess and retain the right talent and establish a comprehensive administrative workforce utilization and distribution system that matches our talent and the workplace.

The company hires employees based on their skills and job requirements. The recruitment announcements include information about salary, benefits, educational opportunities, technical licenses, and other qualifications. Once the screening process is complete and approved, the relevant personnel are hired. The hiring department will then assign specialists to contact the new employees and provide them with support, training, and necessary assistance.

Number of Faculty and Staff of Chang Gung University in Academic Year 2022

Category (unit: number of people)		Male	Female	Total
Full-time teachers	Professor	176	53	229
	Associate Professor	105	51	156
	Assistant Professor	101	70	171
	Lecturer	14	8	22
	Military Instructor	3	1	4
	Subtotal	399	183	582
Research personnel	Research personnel	10	6	16
Employee	Full-time employee	88	142	230
	Contract Administrative Staff	14	33	47
	Recruitment of contract research assistant	199	443	642
	Subtotal	301	618	919
Total		**710**	**807**	**1,517**

Note:
The statistics include the number of faculty and staff in the first semester of the 2022 academic year (as of October 15, 2022).

Manpower Distribution

In the first semester of the 2022 academic year, CGU employed 598 academic staff members and 919 employees, with a gender distribution of 710 males (46.80%) and 807 females (53.20%). The university is committed to developing a diverse and talented workforce, including providing job opportunities for people with disabilities, promoting diverse common prosperity, and enhancing the overall competitiveness of the university.

Statistics of Types of Employees Hired by Chang Gung University in Academic Year 2022

Category (unit: number of people)			Male	Female	Total
Employment contracts		Non-fixed term contract	14	33	47
		Fixed-term contract	314	560	874
		Subtotal	328	593	921
Employment types		Permanent (Full-time)	213	476	689
		Temporary (Part-time)	115	117	232
		Subtotal	328	593	921
Employee types	Academic Staff	Professor	176	53	229
		Associate Professor	105	51	156
		Assistant Professor	101	70	171
		Lecturer	14	8	22
		Academic Staff	10	6	16
		Military Instructor	3	1	4
		Subtotal	409	189	598
	Employee	Full-time employee	88	142	230
		Contract Administrative Staff	14	33	47
		Recruitment of contract research assistant	199	443	642
		Subtotal	301	618	919
Total			**710**	**807**	**1,517**

Notes:
1. The number of employees with labor contracts included 47 contract administrative staff members (full-time, non-fixed-term contracts), 642 research assistants (full-time, fixed-term contracts), and 232 part-time workers (part-time, fixed-term contracts). This applies to academic staff and regular employees who do not sign labor contracts.
2. Part-time workers include training students or part-time research assistants who are not included in the number of employees in the table above.
3. The statistics include the number of workers in the first semester of the academic year 2022 (as of October 15, 2022).

Changes to the Number of Workers at Chang Gung University in the Last Three Years

Worker category (Total number)		109 2020		110 2021		111 2022	
		Number of people	Ratio	Number of people	Ratio	Number of people	Ratio
Academic Staff	Male	403	25.97%	411	27.20%	409	26.96%
	Female	187	12.05%	197	13.04%	189	12.46%
Employee	Male	328	21.13%	287	18.99%	301	19.84%
	Female	634	40.85%	616	40.77%	618	40.74%
Total employees		**1,552**	**100%**	**1,511**	**100%**	**1,517**	**100%**
Total non-employees		**166**	**-**	**161**	**-**	**175**	**-**

Notes:
1. The number of faculty and staff in the first semester of each academic year (as of October 15, 2022) is included in numerical statistics.
2. Ratio of employees in each category = Number of employees in each category ÷ Total number of employees in current year * 100%.
3. The number of non-employed workers included in the statistics refers to contractors involved in work such as maintaining school environments and supplying restaurant meals.

Diverse Employment Opportunities

In alignment with Sustainable Development Goal 8 (SDG 8) of promoting Decent Work and Economic Growth, CGU is dedicated to providing unbiased employment opportunities for individuals of all genders, age groups, and minority ethnic backgrounds in accordance with respective regional government regulations, thus fostering employee diversity. As of the 2022 academic year, the gender distribution reflected a nearly equal representation, with approximately 47% male and 53% female employees, and an equitable ratio of 26% female supervisors. The median age of our workforce was 43 years, with the majority falling within the 31 to 50 age range. Moreover, 29% of our employees were aged 50 or above. In compliance with governmental provisions, CGU has recruited 33 employees with indigenous background, 22 employees with disabilities and 60 overseas employees, constituting 1.89%, 1.26% and 3.43% of the total workforce respectively, as per regulatory standards.

To promote local shared prosperity, we actively hire residents (Guishan District, Taoyuan City, and Linkou District, New Taipei City) as executives, e.g., administrative supervisors and supervisors of departments and institutions; a total of 30 people, accounting for 46.15% of the total number of supervisors.

Distribution of Employees' Job Categories of CGU

Job Category	Diversified Category	Gender		Age		
		Male	Female	Under 30	31-50	Over 51
Academic Staff (598 in total)	Number of people	409	189	1	243	354
	Ratio	68.39%	31.61%	0.16%	40.64%	59.20%
Employees (919 in total)	Number of people	301	618	220	610	89
	Ratio	32.75%	67.25%	23.94%	66.38%	9.68%
Supervisory Faculty and Staff (65 in total)	Number of people	48	17	0	14	51
	Ratio	73.85%	26.15%	0	21.54%	78.46%
Number of people in each category		**710**	**807**	**221**	**853**	**443**
Ratio in total employees		**46.80%**	**53.20%**	**14.57%**	**56.23%**	**29.20%**

Notes:
1. Ratio of people in each category = Number of employees of each gender and of each age group / Total number of people in this category
2. The number of employees includes supervisory faculty and staff.

Number of Indigenous People, People with Disabilities, and Foreign Workers Hired by CGU

		Indigenous People	People with Disabilities	Foreign Workers
Academic Staff (598 in total)	Number of people	1	9	15
	Ratio	0.16%	1.51%	2.51%
Employees (919 in total)	Number of people	12	10	40
	Ratio	1.31%	1.09%	4.35%
Part-Time Staff (232 in total)	Number of people	20	3	5
	Ratio	8.62%	1.29%	2.16%
Number of people in each category		**33**	**22**	**60**
Ratio in total employees		**1.89%**	**1.26%**	**3.43%**

Staff Turnover

New Employees

CGU expands recruitment sources through diversified pipelines and does not discriminate due to factors like age, ethnicity, gender, sexual orientation, religious belief, political party, native place, marital status, appearance, and physical and mental disability. In the 2022 academic year, CGU hired 46 new faculty members and staff, not including contract research assistant, with an employment rate of 5.26%.

Statistics of Distribution of Gender and Age of New Employees

Category/No. of people	Teacher		Employee		Subtotal by age	
	Male	Female	Male	Female	No. of people	Ratio of new employees
Under 30	0	0	0	0	0	0%
31-35	21	3	3	3	30	65.22%
Over 51	14	1	0	1	16	34.78%
Subtotal by gender	**35**	**4**	**3**	**4**	**46**	**100.00%**
Ratio of new employees	**76.08%**	**8.70%**	**6.52%**	**8.70%**		**-**

Notes:
1. The statistics reflect the number of new employees in the 2022 academic year (i.e., August 1, 2022~July 31, 2023).
2. Since research assistants often change due to funding fluctuations, the statistics of employees in this table do not include contract research assistant.
3. Ratio of new employees = Number of new employees in each age group and of different genders ÷ Total number of new employees * 100%.

Resignation and Retention

During the 2022 academic year, a total of 57 faculty and staff members, excluding contract research assistant, resigned, with 22 being male and 35 female. Of these individuals, 22 retired as per their planned schedule. Following the deduction of the retirees, the resignation rate stood at approximately 4%. This figure indicates a relatively low turnover rate, highlighting a stable overall work environment within the organization. In the future, our institution aims to further enhance work-life balance for employees, strengthen supervisors' competencies, and provide career development opportunities, all aimed at reinforcing retention efforts.

Statistics of Distribution of Gender and Age of Employees who have Resigned

Category	Teacher		Employee		Subtotal by age	
	Male	Female	Male	Female	No. of people	Ratio of employees who have resigned
Under 30	0	0	0	11	11	19.30%
31-35	3	3	3	11	20	35.09%
Over 51	4	0	0	0	4	7.02%
Retirement	9	6	3	4	22	38.59%
Subtotal by gender	**16**	**9**	**6**	**26**	**57**	**100.00%**
Ratio of employees who have resigned	**28.07%**	**15.79%**	**10.53%**	**45.61%**		**-**

Notes:
1. The statistics in this table reflect the number of employees who resigned during the academic year 2022 (i.e., August 1, 2022~July 31, 2023).
2. Since research assistants often change due to funding fluctuations, the statistics of employees in this table do not include research assistants.
3. The number of employees who have resigned is the total of employees who have retired and voluntarily resigned.
4. Ratio of employees who have resigned = Number of employees who have resigned at each age group and of different genders ÷ Total number of employees who have resigned * 100%.

Unpaid Parental Leave for Childcare

CGU implements the Act of Gender Equality in Employment in accordance with the law. It advocates for Sustainable Development Goal 5 on Gender Equality, supports employees' rights to care for the next generation, and guarantees their right to take unpaid parental leave for childcare. Employees of CGU may apply for unpaid parental leave during their tenure before each child reaches the age of three. The duration of this leave shall not exceed two years before each child reaches the age of three. During unpaid parental leave for childcare, employees may continue to participate in social insurance.

▼ Statistics of the number of employees on unpaid parental leave for childcare in academic year 2022

Item	Male	Female	Total
Number of employees who qualified for parental leave1	20	45	65
Number of people who applied for parental leave in the year	1	7	8
Application rate of parental leave[1]	**5.00%**	**15.55%**	**12.31%**
Number of people who are expected to resume work after parental leave in the year	0	6	6
Number of people who resumed work after parental leave in the year	0	4	4
Reinstatement rate (%)	**N/A**	**66.67%**	**66.67%**
Number of people who were reinstated from parental leave in the previous year	0	8	8
Number of people who were reinstated from parental leave and continued to work at least twelve months	0	6	6
Retention rate (%)[2]	**N/A**	**75.00%**	**75.00%**

Notes:
1. Based on employees who applied for maternity or paternity leave in the past three years (academic year 2020–2022)
2. Retention rate refers to the ratio of employees who were reinstated from parental leave and continued to work for at least one year, i.e., the reinstatement date fell in the 2021 academic year, and the employee remained for one full year after reinstatement.

5.2 Faculty and Staff Treatment

Rights Protection

CGU prohibits child labor for individuals under the age of 16, as well as forced labor and any form of inappropriate employment discrimination. We adhere to related international standards and labor laws of Taiwan on campus. We are committed to upholding everyone's labor rights, including minimum wage, working hours (including overtime), insurance, leave, pension, notice period for terminating contracts, freedom of association, and group negotiating rights. Furthermore, we provide equal job opportunities and do not discriminate based on factors such as race, color, gender, religious belief, politics, nationality, and social origin.

Description of Measures Taken by CGU to Address Working Rights and Interests

Working Hours	• Regular working time for employees may not exceed eight hours a day or 40 hours a week. • If overtime is required due to exceptional circumstances, the extended working hours plus regular working hours shall not exceed 12 hours a day; the total overtime shall not exceed 46 hours a month. • Overtime payment or compensatory leave is provided upon working more than eight hours daily. Mandatory overtime is not allowed. • A worker shall have two regular days off every seven days. One day is regular leave, and the other is a rest day.
Resignation and Retirement Measures	• Suppose the labor contract with the employee is terminated. In that case, the school will serve advance notice and provide severance pay and job-seeking leave in compliance with Article 16 of the Labor Standards Act.
Labor-Management Negotiation	• CGU has not signed a collective agreement with a trade union but has established relevant regulations according to the provisions of the competent authority, including the Policies and Working Regulations for Employees Governed by the Labor Standards Act, to standardize relevant contents, including salaries, employment, dispatching, and the reward and punishment assessment system of regular personnel and staff and non-staff workers. • CGU has established a labor-management meeting mechanism in accordance with Article 83 of the Labor Standards Act. This mechanism serves as a two-way communication and negotiation channel to address issues such as labor-management cooperation, coordination, improvement of working conditions, and planning of laborers' welfare. The first labor-management meeting was held on May 14, 2015, and subsequent meetings are scheduled to be held at least once every three months. In the academic year 2022, four labor-management meetings took place. Communication reports and reports in coordination with government policies include: 1) Contract staff of CGU were included as members of the "Faculty and Staff Welfare Committee." 0.5% of their salaries (remuneration) was allocated with a maximum of NT$ 59,250. 2) The monthly basic salary and hourly basic salary were adjusted to NT$ 26,400 and NT$ 176, respectively, starting from 2023.
Major Operational Changes	• Significant operational changes that affect employees' rights and interests and responsive measures will be implemented after being discussed at university affairs meetings, administrative meetings, and labor-management meetings. • Amendments to relevant procedures organized by CGU are passed at university affairs meetings and Board of Trustees meetings. They are then submitted to the Ministry of Education for verification and approval before implementation. Announcements are then made at the university. • In response to global developments and trends, CGU increased the number of colleges and institutes, including the College of Intelligent Computing, the Graduate Institute of Artificial Intelligence, and the Department of Biomedical Engineering in the 2022 academic year (August 2022). In accordance with the future teaching and R&D needs of these new colleges and institutes, CGU has hired additional teachers and staff members according to the organizational functions and workloads.

Friendly Measures

To promote respect for all genders and emphasize the importance of supporting women, the Gender Equity Education Committee at CGU has established gender-friendly facilities on campus. These spaces are intended to create supportive environments and ensure the safety of both teachers and students. Additionally, we have introduced a Gender Equality Education Zone on our official website. Furthermore, we will be organizing activities related to gender equality education for faculty, staff, and students.

1.Breastfeeding room

- A breastfeeding room has been set up in Zone B on the 3rd floor of the 1st Medical Science Building, furnished with a curtain to divide the room into two compartments for two women to use with privacy. Two sofa chairs, a wash basin, a refrigerator (for storing breast milk), a locker, and other equipment are provided.
- On the 6th floor of the Formosa Plastics Group Museum, one sofa chair, a changing table, a wash basin, and other facilities have been set up.

2.Childcare facilities

An experimental kindergarten has been set up for the Chang Gung University of Science and Technology, which neighbors CGU. Our colleagues may enjoy nursery services for children aged 2-6 in the vicinity.

3.Parking spaces reserved for pregnant women and drivers with children

CGU has reserved a parking area for pregnant women and drivers with children in the parking lot of the 2nd Medical Science Building and the parking basement of the Management Building. We have also established two outdoor parking spaces in the 1st Medical Science Building for pregnant women or drivers with children aged under six.

4.All-gender restroom

27 all-gender restrooms have been established at CGU and can be used as accessible toilets. In the future, we will transform the restrooms on the first floor of the activity center and public rooms of the student dormitory into all-gender restrooms.

5.Campus care map/Safe route at night

- Security guards patrol the university campus to ensure the safety of female students returning to the university at night from 21:00-24:00. They conduct patrols between the entrance of the campus and A7 Station of Taoyuan Airport MRT every half an hour from 21:00 to 23:30 to guarantee students' safety.
- Comprehensive digitalization of monitors: CGU has increased the number of monitors in each area of the campus and has comprehensively updated them to digital monitors with wider and clearer illumination. At present, 756 monitors have been upgraded.
- A Campus Gender Public Safety Space Reflection Zone has been set up on CGU's official website, and all teachers and students may provide suggestions regarding the space.

6.Other gender-friendly and safety measures

- Organize gender equality seminars for faculty and staff twice a year.
- We purchase gender-related books and films to enrich the learning resources at the university.
- Outdoor basketball court A and outdoor volleyball court B can be used by making a booking, and special times are reserved for use by women.
- Each restroom is regularly tested for pinholes, and partition boards have been added at the top and bottom of the stalls in women's restrooms to address concerns about photographs being taken secretly.

7.Prayer room

There are two gendered prayer rooms located on the third and eleventh floors of the 1st Medical Science Building, respectively, which provide a safe and comfortable praying environment for Muslim faculty and students.

Pay Level

CGU provides competitive remuneration, which is determined based on the position, professional competence, education, work experience, and seniority. The remuneration is adjusted according to the Ministry of Education's regulations, with a focus on equal pay for equal work without gender discrimination. Full-time teachers are protected by the Civil Servant and Teacher Insurance Act, as well as the Labor Standards Act based on their respective positions. CGU has established measures to govern the employment and salaries of various personnel. In order to enhance talent cultivation, academic performance, national competitiveness, and internationalization, CGU has implemented flexible salary, subsidy reward measures for teachers as well as AI and language expertise reward. These measures aim to recruit and retain exceptional talent by providing substantial support and encouragement through various reward systems to enhance their teaching and research. In the 2022 academic year, CGU granted a total of NT$ 281 million in rewards.

Overview of the Overall Remuneration in Academic Year 2022

- The ratio of basic salary and remuneration between male and female academic staff members was 1.13:1.
- The ratio of basic salary and remuneration between male and female academic staff members was 1.12:1.
- The position with the highest total remuneration was that of a professor. The median remuneration of a professor, compared to all employees excluding the professor with the highest total remuneration, was in the ratio of 8.85:1. Additionally, there was a 1.33:1 change in the ratio of the average annual total remuneration compared to the previous year.

Ratio of Remuneration of Male and Female in Each Employee Category of CGU in the Past Three Academic Years

Academic Year	109 2020		110 2021		111 2022	
Employee Category	Male	Female	Male	Female	Male	Female
Academic Staff	1.15	1	1.13	1	1.13	1
Employee	1.06	1	1.08	1	1.12	1

Notes:
1. Calculation method: Average remuneration of males in each category/Average remuneration of females in each category.
2. The monthly remuneration standard is calculated as the average salary of 12 months per year × 13.5 months (academic staff, research assistants, and some contract staff)/14.5 months (employees and some contract staff) ÷ 12 months. 13.5 months/14.5 months refers to the salary of 12 months in each year plus a year-end bonus amounting to the salary of 1.5/2.5 months.

Pay Level of Basic-level Personnel of CGU in the Past Three Years

Academic Year	Average standard salary of basic-level personnel		Average standard salary of basic-level personnel/ Local minimum salary	
	Male	Female	Male	Female
109 (2020)	42,274	35,129	1.76	1.46
110 (2021)	42,517	36,640	1.68	1.45
111 (2022)	43,128	35,799	1.71	1.42

Notes:
1. CGU has established salaries for employees and other workers based on the Ministry of Labor's announcement on the basic salaries in the current year to ensure salaries are at least the basic salary.
2. Basic-level personnel: This includes personnel with technical worker titles, high-level, mid-level, and specialty-level full-time assistants, and other relevant CGU personnel.
3. Standard salary: Including basic salary, food allowance, and other relevant recurring pay.
4. The minimum monthly salary for the academic years 2020-2022 was determined based on the local minimum wage in Taiwan from 2020 to 2022, NT$23,800, NT$24,000, and NT$25,250, respectively.

Welfare Measures

To safeguard the rights and well-being of our employees and strengthen CGU's unity, we offer a comprehensive welfare package to regular employees. In addition to the fundamental rights of statutory labor and health insurance, we also provide special leave, maternity leave, and parental leave, as well as additional benefits such as year-end bonuses, holiday bonuses, bonuses for outstanding personnel, tuition subsidies for employees' children, maternity allowance, medical subsidies, regional allowances, and meal allowances, etc. The Welfare Committee also collaborates with relevant departments to organize annual events to enhance our employees' well-being and foster a positive work environment.

Basic Statutory Benefits

Insurance	All regular faculty and staff are covered by public teacher insurance and health insurance. Additionally, family dependents may also be covered by this insurance. Meanwhile, all faculty, staff, assistants, and technical workers are covered by labor and health insurance. This insurance may also cover family dependents.
Leave	According to the Labor Standards Act, an employee is entitled to enjoy national holidays, special leave, marriage, funeral leave, sick leave, personal leave, sabbaticals, prenatal check-up leave, paternity leave, maternity leave, parental leave, and unpaid parental leave for childcare.
Retirement and bereavement compensation	• Those subject to the old Labor Standards Act system: CGU sets aside 2% of the total monthly employees' salaries as a pension and deposits it in a particular account at the Bank of Taiwan in the name of the Supervisory Committee of the Employees' Retirement Reserve. • Those who are subject to the new system of the Labor Pension Act: CGU withdraws the relevant amount to the employees' pension accounts according to the pension withdrawal rate of 6% of the employee's monthly salary and based on the scale of monthly salary withdrawal verified and approved by the Executive Yuan. • Under the Civil Servants and Teachers Insurance Act, pensions are paid to eligible personnel if they retire (resign from office) according to the law, receive severance pay, or have paid insurance expenses for at least 15 years and leave office, surrendering their insurance at the age of 55 or older without participating in public insurance again within 30 days. • For personnel subject to the Act Governing the Retirement, Bereavement Compensation, and Discharge with Severance Pay Benefits for Teaching and Other Staff of School Institutions and their Respective Private School(s), a lump-sum payment will be made to the insured if they retire (resign from office) according to law. They will receive severance pay and a pension with a seniority of less than 15 years. Those who have worked for more than 15 years may choose a lump-sum payment or payment in installments. • In the 2022 academic year, the total pension set aside reached NT$35,664,681, while the bonus for teachers who excelled reached NT$1,086,840.

Bonuses and Grants

Year-end bonus	1.5 months' full salary for teachers, 2.5 months' full salary for regular employees(Those with excellent performance will be given an additional 0.2 months; those with good performance will be given an additional 0.1 month.), and 1.5 months' full salary for contracted employees.
Holiday bonus	Employees may enjoy holiday bonuses of NT$6,500 for Mid-Autumn Day, NT$6,500 for the Dragon Boat Festival, and NT$6,500 for the Spring Festival.
Commemorative gold coin	Five years (1.2 Qian), 10 years (2.0 Qian), 15 years (3.0 Qian), 20 years (4.0 Qian), 25 years (4.8 Qian), 30 years (5.8 Qian), 35 years (6.8 Qian), 40 years (7.8 Qian), and 45 years (8.8 Qian) (Qian is a unit of weight, equal to 5g).
Bonus for excellent personnel	• Each selected excellent teacher will be granted one medal and a bonus of NT$ 50,000 and will be publicly recognized. • Each selected administrative staff member with excellent service will be granted a certificate of merit and a bonus of NT$50,000, which will be publicly recognized in CGU's periodical.
Marriage and funeral allowances	Marriage and funeral allowances are paid in the chair's name, and the subsidy amount for weddings and funerals is subsidized for direct supervisors at each level.
Preferential medical treatment	Faculty and staff and their family dependents enjoy medical subsidies at Chang Gung Memorial Hospital (discount: 30%- 40%). The number of subsidies is unlimited.
Tuition subsidies for employees' children's studies at CGU	Full-amount tuition is subsidized for employees who work for more than ten years. Half of tuition is subsidized for employees who work for over five years but less than ten years.

Health Promotion and Welfare Facilities

Health examination	We provide faculty and staff with health examinations once every two years (yearly for those above 65) and LDCT lung cancer screening once every four years.
Fitness center	Faculty and staff can obtain a preference of NT$600 per academic year for using the fitness center.
Teacher communication post	The "Post" space has been exclusively built for teachers as a comfortable space for them to socialize and relax. Free coffee and snacks are provided in a warm and light atmosphere. There are approximately 50 seats inside individuals, tables of two, or for groups to use in different partitions.

Welfare Committee and Annual Events

Fund sources	NT$ 5,000/year is allocated for each person. 0.5% of employees' salaries and 0.05% of tuition and fees are set aside (CGU subsidizes the remaining amount). In the 2022 academic year, CGU set aside welfare expenses totaling NT$ 2,653,859.
Scope of reimbursement	Gift coupons for the three festivals, birthday coupons, maternity allowance, subsidies for club activities, application assistance for children's scholarships, subsidies for spring and autumn events, recreational activities, and gifts for retirees, etc.

- The Welfare Committee advocates leisure and fitness activities for faculty and staff and encourages them to go outdoors and participate in activities on school sports day. The committee set aside funds to purchase gift coupons, and on school sports day, faculty and staff who participated in the cheerleading dance review each received a gift coupon worth NT$ 200 per person.
- Faculty and staff are encouraged to participate in the faculty and staff relay during the school sports event. Every participating staff member will receive a souvenir.
- Faculty and staff were encouraged to participate in a garden party. When signing in on school sports day, participants were given a garden party coupon worth NT$100.
- During the first semester, CGU organized a one-day autumn self-improvement activity called “Miaoli-Blossoms of Happiness. Meeting with Taro”.
- During the first semester, CGU organized a cultural and recreational activity related to Floriculture and Plants: Green Plant Moss Balls and Non-wilting Dandelions.
- During the second semester, CGU organized a one-day spring self-improvement activity of Miaoli-Seeing the Mountain City and A Date with Flowers.
- During the second semester, CGU organized a cultural and recreational activity of Handcraft Art-Soil-less Potted Succulents and Handcrafted Mosaic Candleholders.
- In the 2022 academic year, the Faculty and Staff Welfare Committee provided each faculty and staff member with a set of sportswear.

5.3 Human Resource Development

Diversity Training Channel

To enhance the skills of our faculty and staff, we offer various training courses tailored to different needs, such as orientation, professional development, and leadership management. These courses cover topics including teaching skills, computer proficiency, language competency, gender equality education, and communication skills. We provide various learning options, including in-person training, online video learning, and digital platforms. In the 2022 academic year, the total training hours at CGU amounted to 15,286, with an average of 10.08 hours per person. Additionally, we conducted 157 teacher improvement seminars with 468 participants.

CGU has established regulations to support teachers and administrative staff in continuing their education and professional development. These regulations include guidelines for attending academic conferences, sabbatical leave for professors and associate professors, and recommendations for participating in overseas research programs. Additionally, teachers can apply for on-the-job training, remain in their position with or without pay, and take part-time work with partial pay. Teachers under 45 may be recommended for paid research leave abroad for up to one year while retaining their position as associate professors if they have worked for more than seven years.

Training Status of Employees of Chang Gung University in Academic Year 2022

Employee Category	Calculation Method	Male	Female	Subtotal
Academic Staff	Total number of academic staff (A1)	409	189	598
	Training hours(B1)	6,565.5	4,817	11,382.5
	Average training hours (B1/A1)	**16.05**	**25.49**	**19.03**
Employee	Total number of employees (A2)	301	618	919
	Training hours (B2)	748.5	3,155	3,903.5
	Average training hours(B2/A)2	**2.49**	**5.11**	**4.25**
Total	**Hours (Q)**	**7,314**	**7,972**	**15,286**
	Total number of faculty and staff (R)	**710**	**807**	**1,517**
	Average training hours of each faculty and staff member (Q/R)	**10.30**	**9.88**	**10.08**

Note:
The statistics include the total number of employees in the first semester of the 2022 academic year (as of October 15, 2022).

Performance and Career Development

CGU prioritizes employee career development and has implemented a thorough promotion and compensation system to evaluate employee performance consistently. Alongside providing workshops for new employees, we also conduct performance reviews and hold discussions about career advancement and further education with employees after their first three months at the company.

To support the professional growth of our faculty and staff and to ensure that they have the necessary skills for their roles, CGU has implemented a regular assessment process. The results of these assessments are used to determine year-end and assessment bonuses, promote teachers, adjust salaries, make personnel changes, and recognize senior and dedicated employees. Additionally, unit supervisors may conduct evaluations and appraisals to provide employees with relevant training based on their experience, performance, and potential. By making adjustments within units and facilitating job transfers, we aim to develop our employees' expertise and ensure they are in suitable positions. If a department's needs cannot be met, they can be escalated to University Management for appropriate resource planning and personnel training.

Review of Employees' Performance of Chang Gung University in Academic Year 2022

Employee Category	Calculation Method	Male	Female	Subtotal
Academic Staff	Total number of academic staff (A1)	409	189	598
	Number of people regularly undergoing performance and career development assessments (B1)	107	57	164
	Percentage (B1/A1)	**26.16%**	**30.16%**	**27.42%**
Employee	Total number of employees (A2)	102	175	277
	Number of employees regularly undergoing performance and career development assessments (B2)	102	173	275
	Percentage (B2/A2)	**100.00%**	**98.86%**	**99.28%**
Total	**Total number of faculty and staff (R)**	**511**	**364**	**875**
	Total number of faculty and staff regularly undergoing performance and career development assessments (Q)	**209**	**230**	**439**
	The ratio of faculty and staff regularly undergoing performance and career development assessments (Q/R)	**40.90%**	**63.19%**	**50.17%**

Notes:
1. In accordance with relevant provisions of evaluations and assessments of academic staff and employees, the number of academic staff requiring evaluation and assessment in the 2022 academic year reached 164 due to different evaluation cycles stipulated for various types of faculty and staff, all of whom completed the evaluation.
2. Since contract research assistants are often changed due to changes in funds provided for relevant plans, the employee statistics in this table do not include the number of research assistants.
3. The statistics included the number of faculty and staff in the first semester of each academic year (as of October 15, 2022).

Chapter 6

Campus Health and Safety

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Chang Gung University prioritizes the safety of its campus and continually enhances its safety management efforts. This includes the establishment of a comprehensive incident reporting and handling system, the reinforcement of safety supervision mechanisms, and the implementation of campus patrols for student welfare. Our commitment extends to the physical and mental well-being of both students and faculty. We conduct health examinations, provide follow-up services, and organize diverse health promotion activities to raise awareness about illness prevention and healthcare among the campus community.

▼ Management Status of Material Topic "Campus Health and Safety" at Chang Gung University in 2023 (Academic Year of 2022)

Material Topics	Campus Health and Safety
Corresponding GRI Index	GRI 403: Occupational Health and Safety
SDGs Principle	3 GOOD HEALTH AND WELL-BEING; 4 QUALITY EDUCATION
Policy Commitments	Promoting the health and well-being of its students, while also fostering an understanding of the importance of health and imparting relevant skills; prioritizing the health and safety of the university's faculty and staff of the university, with the aim of reducing the occurrence of incidents and disasters on campus.
Metrics and Targets	
Short-term targets	– Upon initial enrollment, perform thorough health assessments for incoming students and distribute a health survey to faculty and staff members once every two years. Guide students based on their examination findings to seek additional consultations or participate in medical health education programs. – Conduct periodic spot checks and provide counseling on laboratory operations, regulations, and workflow enhancements on a semester basis to foster a superior, human-centric work environment.
Mid-term and long-term targets	– Provide counseling and track abnormal results in health examination reports. Provide education and advocate health services to improve health awareness. – Regularly conduct laboratory-related education and training, and hold incident and disaster simulation drills annually to improve relevant safety knowledge, cultivate incident response capabilities, and learn about the incident reporting processes. – Conduct health promotion activities, advocate disease prevention, and provide enhanced information related to physical and mental health. – Conduct dormitory disaster prevention drills twice each year when new students move in and during school sports meetings.

Effectiveness Tracking Mechanism

- Students requiring monitoring and management based on their health examination findings are to undergo additional consultations at relevant medical facilities within three months. Alternatively, CGU's resident physicians will offer consultations and health education during outpatient medical service hours every Tuesday and Thursday.
- Establish a laboratory purchasing review system and coordinate the implementation of the review system to lower the storage volume of toxic and chemical substances in the laboratory.
- Establish a verification form mechanism and track the subsequent progress of laboratory improvements more effectively.
- Conduct a Nordic Musculoskeletal Questionnaire (NMQ) and overload evaluation questionnaires regarding faculty and staff twice a year.
- Number of persons receiving health consultations and their related records.
- Conduct educational and training programs, as well as drills for incidents and disasters related to occupational health and safety, radiation protection, biosafety and biosecurity, and hazardous chemical substances. Keep records of the number of participants involved in these activities.
- Oversee the administration of physical and mental health assessments for incoming students, providing individual psychological counseling services, and addressing inquiries from campus psychiatrists.

Actions and Measures

- A total of 360 people received on-site occupational counseling services provided by doctors in 2023.
- 261 participants attended occupational health and safety training in 2022.
- In the last three years, there were zero level-3 and level-4 personnel under health management at CGU. No faculty or staff members had abnormal results in their health examinations due to special work.
- The response rate of the physical and mental health scale questionnaire for freshmen in the 2022 academic year was 86%, individual student psychological consultation services were provided to 1,743 persons, and psychiatrists were on campus for a total of 27 consultations.

6.1 Health and Safety Management

In adherence to the Occupational Safety and Health Act, an occupational safety management plan has been established to safeguard the well-being of our employees and mitigate workplace incidents. This plan applies to all operations within Chang Gung University. It enforces standardized practices for all faculty and staff, ensuring comprehensive coverage with 100% inclusion of workers. Moreover, in the case of non-employee workers such as contractors, we assume the role of a responsible authority, overseeing emergency reporting, workplace safety maintenance, and associated responsibilities.

We have formulated the Environmental Health and Safety Policy, the Occupational Health and Safety Regulations, and the CGU Occupational Health and Safety Code of Conduct in compliance with the Occupational Safety and Health Act, and have publicized them on our official website. Additionally, we continuously assess occupational hazards and enhance occupational health and safety management. Each department must designate a legally qualified occupational health and safety unit, management personnel, and first-aid medical staff. Furthermore, we oversee fire prevention education and training, occupational health and safety training, work environment monitoring, statistics of occupational hazards, health examinations, and on-site vocational physician services to comprehensively avert the occurrence of occupational disasters.

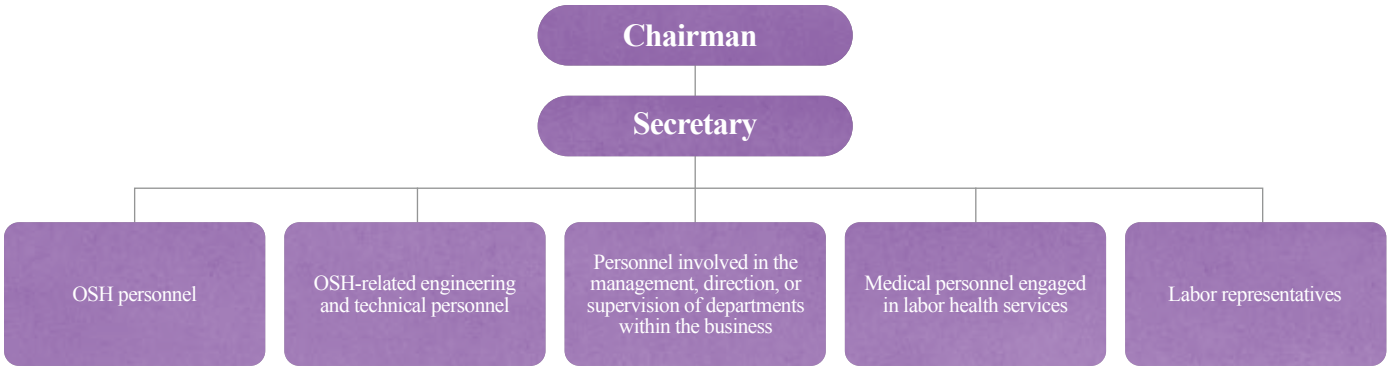
Occupational Health and Safety Committee

To uphold the rights and welfare of our employees, CGU has established an Occupational Health and Safety Committee in compliance with the Regulations Governing Occupational Health and Safety. The primary responsibility of this committee is to mitigate the occurrence of work-related incidents by enhancing occupational health and safety conditions. The committee consists of 17 members, including a chairperson, a secretary, occupational safety and health (OSH) personnel, two medical professionals, an OSH-related engineering and technical specialist, five individuals engaged in departmental management, direction, or supervision, and six labor representatives. Importantly, the labor representatives comprise more than one-third of the total committee membership.

The Occupational Health and Safety Committee holds a meeting every three months. The themes of these meetings include:

- Commenting on the occupational health and safety policy drafted by the employer.
- Coordinating and commenting on the occupational health and safety management plan.
- Deliberating plans for the implementation of health and safety education and training.
- Deliberating work environment monitoring plans, monitoring results, and implementing measures.
- Deliberating matters regarding health management, occupational disease prevention, and health promotion.
- Deliberating each health and safety proposal.
- Deliberating the automatic inspection and health and safety auditing matters of public institutions.
- Deliberating measures for preventing hazards from machinery, equipment, or raw materials.
- Deliberating occupational hazard investigation reports.
- Assessing on-site health and safety management performance.
- Deliberating health and safety management matters in contracted areas of business.
- Handling all other matters related to occupational health and safety management.

▼ Organizational Chart of the Occupational Health and Safety Committee



Occupational Health and Safety Education and Training

The Office of Environmental Safety and Hygiene provides annual occupational health and safety-related education and training. This includes programs on occupational health and safety, fire safety, toxic and controlled substance operations, biosafety, and biosecurity, as well as radiation safety education.

Course Category	Frequency	Number of Participants in Academic Year 2022
Occupational Health and Safety Education and Training	Once a year	New Academic Staff: 262
Fire Safety Education and Training	Twice a year	New Academic Staff: 319
Toxic and Controlled Chemical Substance Operation Education and Training	Once a year	Laboratory Academic Staff: 157
Biosafety and Biosecurity Education and Training	Once a year	Laboratory Academic Staff: 270
Radiation Safety Education and Training	Once a year	Laboratory Academic Staff: 112

Toxic and Controlled Chemical Substance Operation Education and Training

Occupational Health and Safety Education and Training

Biosafety and Biosecurity Education and Training

Fire Safety Education and Training

Radiation Safety Education and Trainingw

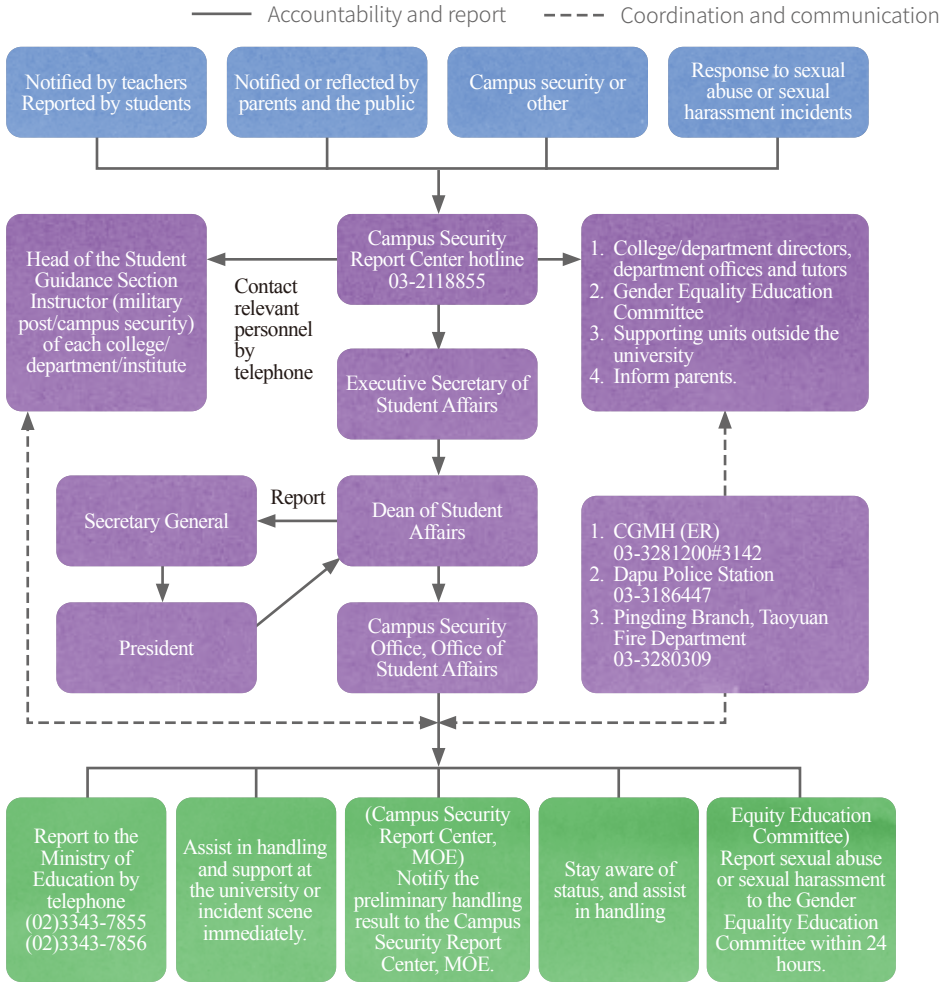
6.2 Incident Reporting and Emergency Response

To uphold the well-being of the university's community members, we have implemented a protocol for reporting incidents and responding to emergencies. In the event of any incidents or emergencies involving students, faculty, or staff, the prescribed procedure outlined in the Major (Special) Incident Emergency Handling Flowchart of the Campus Security Report Center of Chang Gung University and the Disaster Response and Reporting Process of Chang Gung University will be followed. If necessary, individuals will be transported to Chang Gung Memorial Hospital for medical assistance. Following any incident, a comprehensive investigation is conducted, and pertinent information is recorded for subsequent analysis and enhancement. Our objective is to continually mitigate the campus's hazards and ensure a secure environment for learning and work, prioritizing the safety of our students, faculty, and staff.

▼ Incident Investigation Process

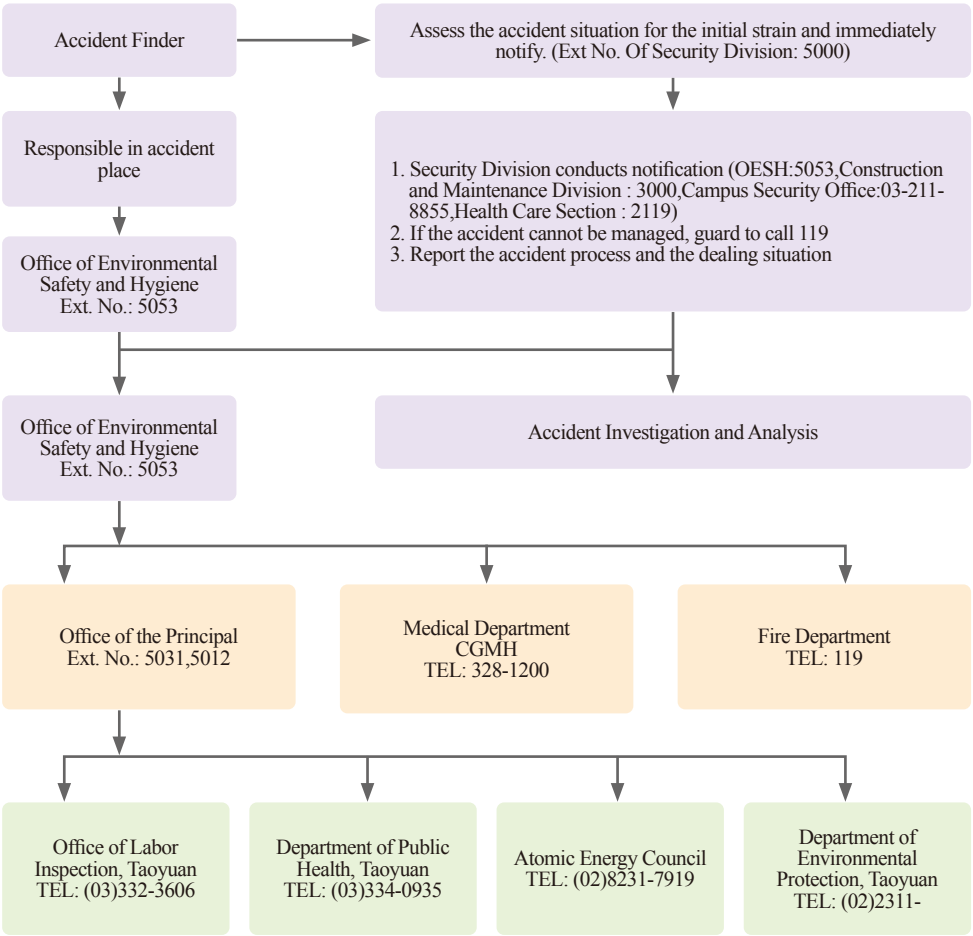
Steps	Students	Faculty and Staff
1 Occurrence of an incident	In the event of reported campus security incidents classified as emergencies, it is imperative for students to promptly respond and manage the situation upon awareness of the incident. Immediate notification must be made to the relevant hospital officer and the Campus Security Report Center, MOE, by phone, SMS, fax, or other electronic mode of communication in real-time within two hours.	In cases of major occupational disasters, employees are required to report directly to the on-site supervisor, immediate superior, the Office of Environmental Safety and Hygiene, and the Campus Security Section. Following this, the Campus Security Section will initiate communication with relevant departments for further handling and will contact the Office of the President, Fire Department, and hospitals if necessary, in accordance with established guidelines. Reporting major occupational disasters to the local labor inspection authority within eight hours of occurrence is mandatory. In compliance with Article 18 of the Occupational Safety and Health Act, CGU ensures the rights of workers' retreat and emphasizes the advocacy of these rights through comprehensive education and training for new employees, prioritizing personal health and safety in all situations.
2 Tracing the cause of the incident	To investigate various campus security incidents, each business management division or office shall provide incident investigation and analysis reports and conduct thorough cause tracing to facilitate enhancements.	In the case of a major occupational disaster, the Office of Environmental Safety and Hygiene is responsible for assembling an "Occupational Accident Investigation and Handling Team." After the disaster, the designated leader of the investigation team convenes relevant departments to form the team and conducts on-site inspections with the heads of the departments involved. Subsequently, a meeting with the head of the department where the accident occurred is held to review the investigation and document the conclusions as part of the disaster and accident investigation records.
3 Incident review and improvement	In response to the improvements specified in the incident investigation and analysis report put forth by the Occupational Accident Investigation and Handling Team, each unit must manage, track, and control until improvements are completed and conduct comprehensive reviews and enhancements to preempt the reoccurrence of similar events.	Capturing and submitting photographic evidence of the scene of a major occupational disaster to the Office of Environmental Safety and Hygiene, as part of the investigation report, serves as case material for subsequent educational purposes, contributing to the prevention of similar incidents.

Major (Special) Incident Emergency Handling Flowchart of the Campus Security Report Center, Chang Gung Universityw



Notes:
1. In the event of major incidents at the university, the Secretary-General will act as the spokesperson.
2. Upon being informed of a major incident, on-duty personnel will promptly address the situation.
3. On-duty staff will handle the issue and complete the necessary notification form.

Chang Gung University Disaster Emergency Response and Notification Process



Campus Safety Reporting Statistics

School Status

In CGU, several key buildings including the 1st and 2nd Medical Science Buildings, Management Building, Engineering Building, Formosa Plastics Group Museum, and Student Activity Center, in addition to other facilities, are present. Ongoing activities engage approximately 7,000 students during scheduled classes. To accommodate students facing commuting challenges, we have established five dormitory buildings – namely, Ming De Building, Yun De Building, Ju De Building, Chong De Building, and Yi De Building – providing a total of 6,200 beds. As a result, a substantial number of students can be housed on campus both during regular classes and semester breaks, ensuring comprehensive support for our student body.

Statistical Analysis of Campus Security Incidents in the Past Three Academic Years

Based on data from the Campus Security Report Center, MOE, CGU reported 473 campus security incidents in the 2020-2022 academic years. Excluding incidents such as gender equality issues and diseases, there were 33 reported traffic accidents, which accounted for the majority of incidents, leading to casualties. The increase in student suicides has been identified as a critical concern due to the challenges in prevention and the widespread impact on our student body. In response, we are committed to enhancing our traffic safety strategies to mitigate harm to students. Additionally, we will focus on improving life and death education, stress reduction mechanisms, and resilience skills among our students, offering essential support and care to foster emotional expression. We will establish the necessary network and resources to allow our students to seek assistance when they suffer from any form of difficulty. We will also continue to strengthen safety supervision and counseling mechanisms.

▼ Statistics of Campus Security Incidents of Chang Gung University in the Past Three Academic Years

Event Type/Academic Year	109 2020	110 2021	111 2022	Total
Traffic Accident	11	10	12	33
Suicide and Self-harm	6	1	15	22
Gender Equality Incidents	9	18	16	43
COVID-19	13	101	261	375
Total	**39**	**130**	**304**	**473**

Notes:
1. The data is taken from the 2020 academic year to the 2022 academic year 2022 (an academic year is calculated from August 1 of each year to July 31 of the next).
2. Data sources: Campus Security Report Center, MOE

Campus Safety Improvement Measures

The cause of traffic accidents can be attributed to factors such as driver inattentiveness, limited awareness of traffic safety and right of way, and suboptimal road design. Similarly, incidents of self-harm among students are primarily linked to inadequate support systems, psychological disorders, or poor emotional management. CGU has implemented comprehensive improvement plans aimed at enhancing traffic safety measures, preventing self-harm, and ensuring thorough incident management to reduce occurrences on campus.

Improving Traffic Safety Strategies

1. Establish a Traffic Safety Committee

The president of CGU chairs the committee, with the Dean of Student Affairs, Dean of General Affairs, representatives from each department, supervisors of administrative units, and representatives of students' autonomous bodies serving as members. Their roles include promoting, supervising, and guiding traffic safety education on campus, enhancing traffic safety activity facilities and equipment, coordinating education and advocacy activities across departments, and assisting in addressing traffic safety education issues both within and outside the university.

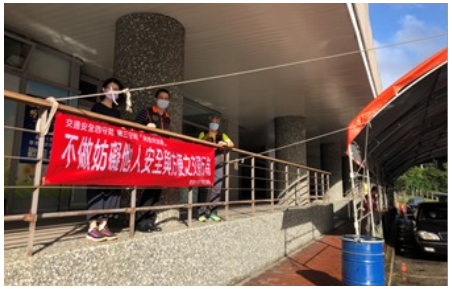
The Traffic Safety Committee holds regular meetings each semester to review statistics on student traffic accidents both inside and outside the university. They also assess traffic safety advocacy efforts and analyze suggestions from faculty, staff, and students on traffic safety. Following their analysis, they propose actions to reduce risk factors and ensure the safety of teachers and students on campus and the roads outside the university.

2. Improve traffic safety education

To ensure the safety of CGU's faculty, staff, and students, the Office of Student Affairs regularly gathers and disseminates the latest advocacy information from the official websites of the Ministry of Education, the Ministry of Transportation and Communications, the Department of Transportation in Taoyuan, and the Motor Vehicles Office. We use various methods such as posters, red cloth strips, promotional materials, electronic bulletin boards, and the school intranet and social media to promote traffic safety education.

Each year, as part of the first-year orientation program, esteemed educators are engaged to deliver lectures on fostering responsible driving habits, enhancing awareness of road safety, and understanding right-of-way principles. Emphasizing the significance of traffic safety is consistently integrated into the university's freshman enrollment process, tutor assemblies, and National Defense Education curriculum, all aimed at mitigating traffic-related incidents. The Office of General Affairs has also installed speed-detection devices at major intersections across the campus to remind drivers to drive safely.

Physical and Online Education, Lectures, and Advocacy for Safe Driving of Motor Vehicles by Instructors during the Freshmen Orientation Camp



Posters and Banners to Advocate Traffic Safety

Install speed-detection devices at major intersections to remind drivers to drive safely

Preventing Student Self-harm

1. Implementation of a Teacher Counseling System

The Student Counseling Section within the Office of Student Affairs at CGU has implemented specific measures for the involvement of teachers in student counseling. These measures outline the principles and responsibilities for counseling teachers and tutors in each department. Their role is to provide life, learning, career, psychology, and health counseling to students, guiding them towards adaptive development, rational learning and thinking, cultivating a healthy personality, and fostering good living habits. If counseling teachers and tutors have concerns about a student's well-being, they are encouraged to seek assistance from the Student Guidance Section and complete a referral form in the counseling e-service system. Following this process, the case can be referred to the Student Counseling Section for counseling and monitoring of the student's health.

2. Strengthening the Prevention of Student Self-harm

The Student Counseling Section within the Office of Student Affairs has implemented Operating Procedures for Three-level Prevention for Managing Student Self-harm. This program aligns with the three-level prevention work plan mandated by the Ministry of Education, targeting student self-harm on campus and offering counseling services for students at CGU. The key focal points of this initiative are as follows:

(1) Preparation of a student self-harm three-level prevention plan and three-level prevention treatment mechanism process at the university.

(2) Screening of students of high concern, assessing their achievements, regularly tracking their status, and arranging for psychologists to provide counseling services. Students evaluated as requiring further consultation will be referred to the psychiatry department for additional evaluation and support.

(3) Register and document the personal data of counseled students in the Student Counseling Service Management System, gather counseling statistics every semester, and retain data for reference.

(4) Provide a guidance skill workshop for professional counselors, teachers, instructors, and personnel engaged in student affairs on how to identify depression, signs of self-harm, crisis management, and psychological counseling.

▼ Follow-up on the overall development of first- and third-year students in the 2020-2022 academic year

Semester	Number of persons	Number of counseling courses
2020-1 First-year	70	211
2020-2 Third-year	45	104
2021-1 First-year	86	233
2021-2 Third-year	53	195
2022-1 First-year	89	293
2022-2 Third-year	64	202

Work seminars for all tutors for the 2023 academic year

Meticulous Labor Division for Handling Incidents

The Office of Student Affairs is tasked with managing student welfare and offering students access to incentives, financial assistance, healthcare, counseling, employment guidance, extracurricular activities, mentorship, housing arrangements, and other relevant services. We achieve this by collaborating with tutors and personnel from various university departments. To adeptly address diverse student emergencies, we harness our resources and workforce management capabilities to execute structured emergency response strategies through labor allocation and coordination with relevant university divisions. This ensures real-time control of critical situations and upholds the safety of students and the campus.

Handling Unit	Labor Division
Health Care Section	Promote the emergency rescue and assistance service which is available between 08:30-20:00 from Monday to Thursday and 08:30-17:00 on Fridays each semester.
Student Counseling Section	Promote student self-harm three-level prevention work on campus and strengthen the mechanism for the prevention of depression and self-harm.
Student Housing Section	The Student Dormitory Committee is responsible for establishing regulations for group life management, and dormitory supervisors provide safety protection and emergency assistance to ensure the safety of students' dormitories.
Student Guidance Section	Designate 24-hour standby personnel to serve as a platform for reporting, emergency assistance, and the handling of campus incidents, and take charge of the disaster prevention operations and rescue system.
Office of General Affairs	Responsible for ensuring peace and public order on campus as well as the safety of faculty, staff, and students, and executing campus incident onsite safety protection and handling as well as other related tasks to support emergency management at the university.

Laboratory Safety Management

In compliance with Article 42 of the Enforcement Rules of the Occupational Safety and Health Act, the Office of Environmental Safety and Hygiene has developed the Operating Instructions for Safety and Hygiene of Laboratories, Workplaces, and Other Premises at Chang Gung University. These guidelines serve to standardize safety and hygiene protocols across laboratory workplaces, internship rooms, internship factories, and research facilities. The submitted document has been shared with the appropriate regulatory body for future reference and disseminated to the central laboratories of each department and institute. The contents of the document are outlined below:

1.Occupational safety and hygiene management and rights and responsibilities at each level

2. Equipment maintenance and inspection

3. Work safety and hygiene standards

4. Education and training

5. Health guidance and management measures

6. First aid and rescue

7. Preparation, maintenance, and use of protective equipment

8. Incident notification and reporting

9. Other safety and hygiene-related matters

The Office of Environmental Safety and Hygiene conducts annual random patrols and provides guidance to laboratories to ensure compliance with safety and hygiene operational protocols.

6.3 Health and Safety Services

Occupational Injuries Statistics

During the 2022 academic year, Chang Gung University employees worked a total of 4,633,728 hours, and non-employee workers worked 369,600 hours. There have been no occupational injuries in the last three academic years. We are committed to reducing the occurrence of workplace accidents and strive to achieve the goal of zero occupational incidents, zero work safety issues, and zero workplace incidents.

▼ Statistics of Occupational Injuries of Faculty and Staff of Chang Gung University in the Past Three Years

Year	2020 Academic Year		2021 Academic Year		2022 Academic Year	
Type of worker	Employee	Non-employee	Employee	Non-employee	Employee	Non-employee
Total working hours	3,277,824	350,592	3,191,232	340,032	4,633,728	369,600
Number of deaths	0	0	0	0	0	0
Mortality	0	0	0	0	0	0
Number of serious occupational injuries	0	0	0	0	0	0
Rate of serious occupational injuries	0	0	0	0	0	0
Total Recordable Injury Frequency Rate (TRIFR)	0	0	0	0	0	0
Rate of recordable occupational injuries	0	0	0	0	0	0
Type of injury	N/A	N/A	N/A	N/A	N/A	N/A

Notes:
1. An occupational injury is defined as an unintentional injury sustained by an employee while carrying out work-related tasks or within the confines of the workplace. Statistical data pertaining to occupational injuries excludes incidents occurring during the employee's commute.
2. Total working hours: The sum of working hours of all workers for the whole year is calculated, including actual working hours plus overtime.
3. Serious occupational injury: Refers to an occupational injury that results in disability, or failure to recover to the same level of health as before the injury within six months (not including death).
4. Mortality = Number of deaths caused by occupational injuries × 1,000,000 ÷ Total working hours
5. Rate of serious occupational injuries = Number of serious occupational injuries × 1,000,000 ÷ Total working hours
6. Total Recordable Injury Frequency Rate (TRIFR) = Number of recordable occupational injuries (including the number of serious occupational injuries, number of deaths, and number of other recordable occupational injuries) × 1,000,000 ÷ Total working hours
7. Calculation methods of ratios in points 4~6: Calculated to two decimal points without rounding off.

Health Examinations

Health Examinations for Freshmen

In adherence with Article 8 of the School Health Act, first-year students (including transfer students) are required to undergo health examinations at Chang Gung Memorial Hospital, Linkou, the affiliated teaching hospital of CGU, or at a local medical institution of regional standing upon enrollment. The examination findings are documented in the Student Health Examination Form specific to each department, serving to preliminarily assess the students' health status and determine the need for counseling or referral to a medical facility.

The rate of health examinations has almost reached 100% over the past three years. Students identified as needing additional monitoring based on the physician's assessment will receive a follow-up form and will be required to seek further consultations at an appropriate medical facility within three months. In the event of non-compliance, resident doctors at CGU will offer medical consultations and health education as part of the outpatient services every Tuesday.

Academic Year	110 2021	111 2022	112 2023
Health examination rate of freshmen	98%	100%	100%
Number of students requiring follow-ups	85	159	168

Note 1:
The number of students requiring follow-ups refers to the number of students who receive the tracking reply sheet from their physician.
Note 2:
Due to COVID-19, a small number of students were unable to arrange health examinations at medical institutions during the 2021 academic year.

Regular Health Examinations for Faculty and Staff

To maintain a healthy workplace and safeguard the physical and mental well-being of our faculty and staff, CGU conducts health check-ups for all employees every two years. Additionally, employees aged over 65 and engaged in work exposed to specific health risks, such as formaldehyde and ionizing radiation, undergo annual health assessments. We also adhere to categorizing health management for specialized hazardous work as per legal requirements. Following the health check-up findings, our dedicated occupational health service team and medical specialists provide health education and necessary follow-up examinations, including on-site evaluations for suspected work-related illnesses. For employees under health management due to specialized hazardous work, those in level 4 receive personalized health counseling and guidance from professional physicians at the health center. Over the past three years, there have been no level-3 or level-4 personnel under health management at CGU, and no abnormal health examination results have been recorded for faculty and staff due to specialized work activities.

▼ Health Management Classification of Special Health Examinations in the Past Three Years (Unit: Number of Personnel)

Year	Total number of personnel receiving health examinations	Level-1 personnel under health management	Level-2 personnel under health management	Level-3 personnel under health management	Level-4 personnel under health management
2021	156	83	73	0	0
2022	147	89	58	0	0
2023	143	73	70	0	0

Campus Patrol

Since the student accommodation rate at CGU has reached 70%, our motto is "letting students take care of campus safety in person as a training program of great educational significance." This concept, promoted by Professor Cheng-Heng Kao and Instructor Chun-Lin Shih at the Center of General Education, led to the creation of the Student Campus Patrol group at CGU in September 2004. The group aims to ensure campus safety, maintain order on campus (including traffic), and assist in the execution of the campus energy-saving policy.

Objectives

(1) Let students take care of campus safety in person as a training program of great educational significance.

(2) Maintain order on campus, assist with the execution of the energy-saving policy on campus, and fulfill responsibilities as a modern citizen.

Membership Qualification

(1) Male and female students in the second year or above in a bachelor's program at Chang Gung University.

(2) An average academic performance of above 70 points.

(3) A conduct performance of above 80 points.

Work Tasks

(1) Inspection of classroom facilities: One hour from 12:10 to 13:10 to inspect the hardware facilities in each classroom every day.

(2) Parking Violation Enforcement: Daily time slots are allocated to register vehicles violating campus parking rules.

(3) Supporting traffic dispersion and maintaining order during major school activities (e.g., first-year orientation, graduation ceremony, anniversary of the founding of the university, etc.)

(4) Sending patients to the hospital at night: Assist with hospitalization by escorting patients from 0:00 to 06:00 every day.

(5) Assist and support the handling of emergencies or major incidents on campus.

Training Courses

The Office of Student Affairs conducts yearly training programs to enhance the skills and effectiveness of the student campus patrol. In the academic year 2022, there were twenty-one members in the student campus patrol. The training includes etiquette, physical fitness, firefighting, escape, CPR and first-aid, snake identification, traffic command, self-defense, legal practice, crisis management, and other relevant courses. Each course lasts for two hours, totaling 20 hours of annual training.

Etiquette Training

Traffic Command Training

Self-defense Training

Legal Practice Lecture

CPR and First-aid Training

Execution of Duties

Firefighting Training (Snake Identification)

Health Promotion and Care

Student Psychological Counseling

The Student Counseling Section, Office of Student Affairs, provides students with one-on-one individual psychological counseling services. Students can easily schedule appointments at their convenience using the Student Counseling Service Management System. Psychologists offer services throughout the school year. In addition to special lectures, workshops, psychological testing, experiential activities, and class counseling, we also provide a range of activities aimed at promoting students' physical and mental well-being.

Individual Psychological Counseling Services Provided by Chang Gung University for Students in Academic Year 2022

Semester	Duration	Number of sessions	Number of participants
1st semester	2022.08~2023.01	246	859
2nd semester	2023.02~2023.07	190	884
Total		**436**	**1,743**

Counseling and interviewing methods

The Student Counseling Section, Office of Student Affairs, provides students with one-on-one individual psychological counseling services. Students can easily schedule appointments at their convenience using the Student Counseling Service Management System. Psychologists offer services throughout the school year. In addition to special lectures, workshops, psychological testing, experiential activities, and class counseling, we also provide a range of activities aimed at promoting students' physical and mental well-being.

Statistics Table of the Top 3 Issues Consulted by Students of CGU in the Past Three Academic Years

Academic Year	109 2020		110 2021		111 2022	
	Topic	Ratio	Topic	Ratio	Topic	Ratio
Top 1	Self-Exploration	27.9%	Self-Exploration	25.8%	Self-Exploration	22.2%
Top 2	Interpersonal Relationships	18.7%	Interpersonal Relationships	18.9%	Mental Disorders or Trends (Emotional Mental Issues)	17.3%
Top 3	Mental Disorders or Trends (Emotional Mental Issues)	16.8%	Mental Disorders or Trends (Emotional Mental Issues)	13.3%	Interpersonal Relationships	12.6%

Note:
Statistics were gathered on counseling sessions. Issues discussed are classified into self-exploration, emotional distress, family relationships, mental disorders or trends, interpersonal relationships, learning and schoolwork, career exploration, accommodation, physical health, and others.

Handling Status of Group Counseling Activities of Chang Gung University in the 2022 Academic Year

Type	Semester	Duration	Sessions	Number of participants
Group Activity	1st semester	2022.08~2023.01	43	2,793
	2nd semester	2023.02~2023.07	42	2,909
	Total		**85**	**5,702**

Type	Semester	Duration	Sessions	Number of participants
Class Counseling	1st semester	2021.08~2022.01	77	4,435
	2nd semester	2022.02~2022.07	65	2,475
	Total		**142**	**6,910**

Key Activities

- Suicide prevention and control series activities
- No more pressure – Guide to stress relief for college students
- Anti-fragile Psychology – Interpersonal Awareness and Companionship
- Self-growth Group Activity in the Resource Room

- Lectures on gender equality, career counseling, and mental health, etc.

Promotion of Physical and Mental Health of Faculty and Staff

We expect our faculty and staff to achieve a good work-life balance, and we provide diversified medical resources and share health information to help them achieve this goal.

At CGU, our annual health examinations cover oral examinations, AFPs, CEAs, basic ECGs, and other health tests. Starting in 2023, we are planning to include low-dose lung cancer screening using computer tomography in these health examinations once every four years. Additionally, we work closely with the Family Medicine Department at CGMH, Linkou, to provide on-site health consultations for employees three times a month, each session lasting for three hours. In compliance with the Occupational Safety and Health Act, we have established various plans for hazard evaluation, including a maternal occupational health protection plan, a plan to prevent diseases caused by abnormal workloads, a human hazard prevention plan, and a plan to prevent unlawful infringement during the execution of official duties. In 2023, we provided counseling services for a total of 360 people

Professional assistance	Resident physicians: In accordance with Occupational Health Protection Rules, we coordinate with the Family Medicine Department, CGMH, Linkou, to provide onsite vocational physician services three hours per session, three times per month.
Counseling channels	Channel for reporting unlawful infringement in the workplace: D000018868@cgu.edu.tw Channel for reporting sexual harassment: Gender Equity Education Committee #2037
Self-testing	Psychological level: Use the stress index scale to coordinate a plan for the prevention of diseases caused by abnormal workloads, and reassess following health examinations every two years.
Information sharing	New health information: The latest health instructions are posted on the University's bulletin board and internal website. During the COVID-19 pandemic in 2020, CGU collected and announced relevant anti-pandemic information to strengthen colleagues' awareness of pandemic prevention measures.
Handling of activities	1. School sporting events are held. 2.The Office of Environmental Safety and Hygiene and the Office of Personnel jointly organized the seminar on Work Pressure Adjustment on Overall Health on April 25, 2023.

Chapter 7

Community Participation

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Management Status of Material Topic "Community Participation" of Chang Gung University in 2023 (Academic Year 2022)

Material Topics	Community Participation
Corresponding GRI Index	GRI 203-1 Infrastructure investments and services supported GRI 413-1 Operations with local community engagement, impact assessments, and development programs
SDGs Principle	1 NO POVERTY; 3 GOOD HEALTH AND WELL-BEING; 4 QUALITY EDUCATION; 10 REDUCED INEQUALITIES; 11 SUSTAINABLE CITIES AND COMMUNITIES
Policy commitments	Strengthening the connection between the university and communities, establishing a complete care model, and assisting with the realization of sustainable development in service fields.
Metrics and Targets	Strengthen community connections and establish trusted partnerships. We aim to continue operating in diverse fields, introducing teachers and students to professional development and skills training. We will engage in long-term cooperation projects while emphasizing students' moral education and participation in learning and volunteering activities. Our goal is to cultivate students to become exemplary modern social citizens. We aim to have at least 900 participants engage in practical service activities in social responsibility each year and obtain at least 20 questionnaires from essential stakeholders in various fields annually.
Short-term target	
Mid-term target	Implement innovative teaching methods and develop a curriculum for social practice courses. This includes offering foundational courses on social responsibility and integrating them with professional field courses. The goal is to create comprehensive microcredit program courses that incorporate social practice, cross-domain application, design thinking, and innovation and entrepreneurship-related courses. Ultimately, we aim to fully integrate teaching innovation by offering at least 20 courses in social responsibility practice and sustainable development annually at CGU.
Long-term target	Connect local innovations by 2030; encourage students to engage in technology transfer or return to their hometowns as entrepreneurs; and foster industry-government-university-research collaboration through local network alliances to enhance the regional economy and promote shared prosperity collectively.

Effectiveness Tracking Mechanism

- Number of questionnaires submitted by essential stakeholders in various fields.
- Number of community personnel participating in practical service activities in social responsibility.
- Number of occasions services have been provided.
- Number of students who have completed social responsibility practice courses.
- Social responsibility practice and SDG project results should be included in CGU's annual report.

Actions and Measures

- Important stakeholders in the field of social responsibility practice submitted 1,824 questionnaires.
- The number of students participating in practical service activities in the field of social responsibility reached 1,338, and 5,924 people received services.
- Student service learning: 13 service teams with 424 students participated.
- CGU opened 18 social responsibility practice courses, with a total of 267 students studying in such classes.
- In 2023, CGU published one annual social responsibility practice report and one sustainability report.

7.1 Social Responsibility Practice Blueprint of Chang Gung University

Based on the spirit of "Taking from society and paying back to society," Chang Gung University has always prioritized research and development in advanced medical science and technology and the long-term cultivation of specialized medical professionals. The university's impact on society includes reducing illness risks, lowering mortality rates, and enhancing overall quality of life. Through the Ministry of Education's USR plan, CGU has developed a blueprint for university social responsibility and has provided services to neighboring communities. In recent years, CGU's social responsibility efforts have centered on three main areas: Establishment of a Healthcare System, Local Development and Cultural Conservation, and Social Support for Disadvantaged Groups.

	Program	Main Focus	District	Object	Target
Deep Cultivation Program	Establishment of a Healthcare System for Communities with an Ageing Population-Local and Remote Rural Areas	Establishment of a Healthcare System	Guishan District Linkou District Fuxing District	Elderly	Establish a complete care model to assist with the sustainable development in the field
Germination Program	Innovative Practice Program for Early Childhood Intervention and Health Promotion			Infants and children	
	“Occupation, Inclusion, and Sustainability”-Practicing Program for Working Capacity Cultivation of People with Physical and Mental Disabilities	Social Support for Disadvantaged Groups	Taoyuan District Linkou District	Patients with chronic mental diseases Groups of people with autism	
USR HUB Program	CGU Program for Ecological Survey of Woodland Nearby	Local Development and Cultural Conservation	Guishan District	Local community culture and ecology	
	Linkage of Rice Produced by Small Farmers with the Wine-making Industry				
	Common People’s Integration and Cultural Continuity: Educational Courses and Activities for Undergraduates and New Residents to Gain Insight into Natural Ecology.				
	Spelling Scheme for Children in Remote Rural Areas Based on Feelings of Competence and Self-adjustment	Establishment of a Healthcare System	Fuxing District	School-age children	
	Children and Teenagers in Native Tribes and Family-Centered Health Promotion			Infants and children	
	Remote Rural Medical Community Building			Elderly	
	From “Recovery” to “Empowerment”: Happy Food 1000 Co., Ltd. with Co-farming by the Youth and the Seniors		Guishan District	Elderly	

Achievements of R&D Energy and Matching of Innovative Teaching with Social Needs of Chang Gung University

Executed theme	Social issue	Description of the allocation of resources in the university (R&D energy and innovative teaching)
Value-added medical services	**Family Clinic in Fuxing District** Shortage of native medical specialty resources and nursing workforce	● Utilize the technologies researched and developed by teachers from the Department of Medical Biotechnology and Laboratory Science of CGU (e.g., portable ultrasonic technology) and cooperate with physicians from CGU's emergency department. ● Introduce technical training courses for local personnel and support screening activities.
Health promotion intervention for the elderly	**Neighborhood in Guishan District** Many elderly people do not have sufficient health awareness and believe that movement means working	● Combine the specialties of comprehensive assessments and prevention of disabilities and dementia of teachers from the School of Physical Therapy, Department of Occupational Therapy, and School of Nursing of CGU. ● Introduce professional courses of the Department of Occupational Therapy and School of Physical Therapy, e.g., physical therapy for the elderly and long-term care, special discussion on innovative community solutions, field practice of community solutions, and strategies for the prevention of disabilities and dementia in communities.
Health promotion services for the elderly	**Tribe in Fuxing District** Provision of customized insole services based on elderly people's needs	● Combine the specialties of foot evaluations and insole development with the production of teachers from the School of Physical Therapy of CGU. ● Introduce professional courses from the School of Physical Therapy, such as scientific assessment of rehabilitation, design and analysis, and field practice of technological aids for rehabilitation.
Health promotion for children	**Cooperative School in Fuxing District** Provision of teaching content based on school needs, including health education, life education, sexual education, and anti-pandemic advocacy	● Combine teachers' specialties from the School of Nursing of CGU with human development theory, pediatric nursing, children's health, etc. ● Introduce professional courses to the iHealth School, e.g., health issues of local children, local health services and counseling, local health services, counseling internships, children's life education counseling, and children's life education.
Value-added local resources	**Tribe in Fuxing District** Design and teaching of the creative application of grass plants of the tribe	● Combine teachers' specialties from the School of Traditional Chinese Medicine and the Department of Industrial Design with Chinese herbal medicine, design thinking, etc. ● Introduce professional courses of the School of Sustainability and Innovation, including Recognition and Creative Application of Grass Plants and Recognition and Creative Application of Grass Plants-Field Practice.
Conservation of local culture	**Neighborhood in Guishan District** Promote local culture and keep records on the natural ecological environment	● Combine teachers' specialties from the Center of General Education of CGU in areas like field literature and history investigation, natural ecological observation, etc. ● Introduce professional courses from the Center of General Education, e.g., the diversified rice industry in the Guishan District-sake brewing, and natural eco-literature.
Promotion of altruistic behaviors	**Neighborhood in Guishan District** Learn about organ donation and explore the concept of life and death	● Combine teachers' specialties from the Center of General Education of CGU in fields such as social psychology, science of life and death, organ donation, etc. ● Introduce professional courses from the Center of General Education, e.g., The Concept of Life and Death and Social Altruism (1): Basic Knowledge and The Concept of Life and Death and Social Altruism (2): Field Practice and combine remembrance and thanksgiving ceremonies for organ donors of CGU.
Support for disadvantaged groups	**Taoyuan "Come A New Halfway House"/Yang-Feng Psychiatric Community Rehabilitation Center** Assist patients with chronic mental diseases in returning to workplaces	● Combine teachers' specialties from the Department of Occupational Therapy in fields such as occupational therapy, psychological medicine, psychology, sociology, etc. ● Introduce the Department of Occupational Therapy's community internship course and cooperate with local psychological rehabilitation institutions in Taoyuan City to offer more support.
	New Taipei City Linkou Autistic Children Farm/Society for the Welfare of People with Autism Assist high-functioning autistic children and implement a public housing cooperative	● Combine teachers' specialties from the Department of Industrial and Business Management of CGU in areas like tax processing assistance, operation management consulting, etc. ● Introducing professional courses (e.g., medical financial management), utilizing the Autistic Children's Farm as a demonstration site, and establishing a public housing cooperative to plan a Care Home for People with Autism.

Community Service Performance in 2023

Number of practical service activities in the field of social responsibility

250

Number of students participating in practical service activities in the field of social responsibility

1,338

Number of community personnel participating in practical service activities of CGU in the field of social responsibility

5,924

Number of social responsibility practice courses provided

18

Number of students studying social responsibility practice courses

267

Notes:
1. Data regarding the planned execution period of 2023 (January 1, 2023~December 31, 2023) was included in the statistics.
2. The course study data of the second semester of 2022 and the first semester of 2023 plus course withdrawal was adopted for the statistics on the number of courses provided and the number of students studying these courses.

7.2 Establishment of a Healthcare System

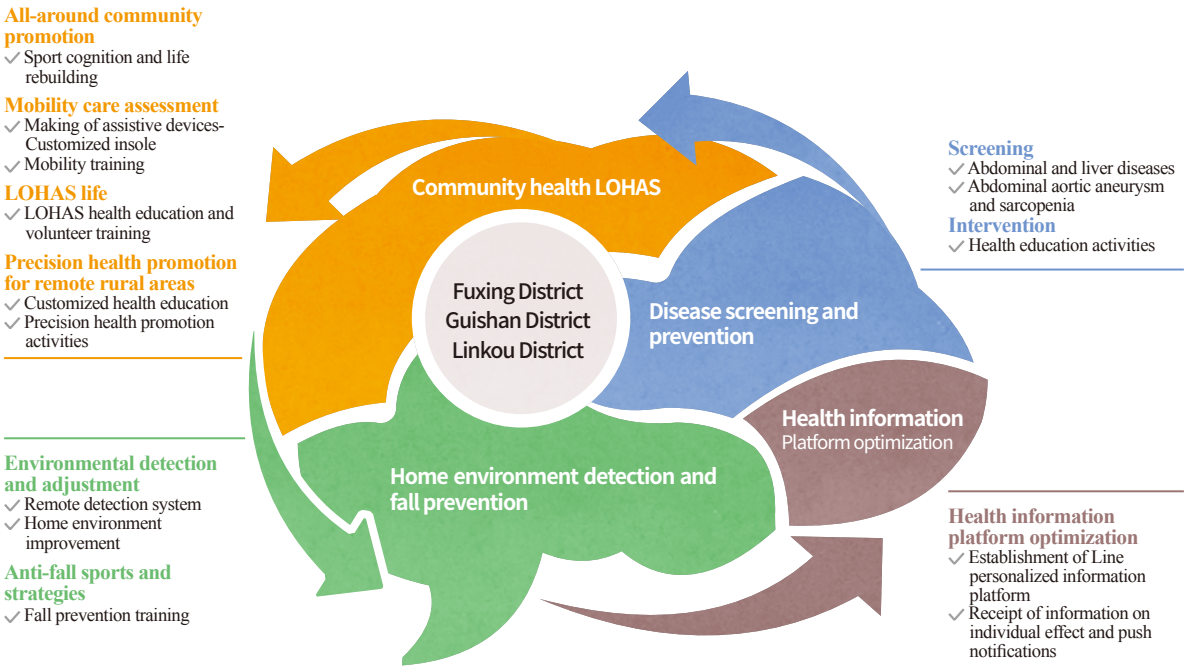
– Establishment of a Healthcare System for Communities with an Ageing Population-Local and Remote Rural Areas

The main focus of the program: Establishment of a Healthcare System

Taiwan has already officially become an aging society, and providing the elderly with a more comfortable care environment is, therefore, currently an important issue. During the initial planning phase, our team identified an escalating exposure of younger individuals to health risks, necessitating urgent screening services and health intervention measures. The program focuses mainly on the following areas: (1) Innovating and extending health screening and health promotion services; (2) Building a community health system with a focus on communities; (3) Cultivating sustainable community development; (4) Cultivating interdisciplinary talents with practical experience to provide suitable health knowledge and innovative services for individuals and fields and to link local resources to implement health promotion activities and services, develop diversified learning pipelines, cultivate professional talents, and achieve university social responsibility.

The program's primary goal is to develop an innovative curriculum and nurture talent through practical field work, focusing on four key areas. "Disease Screening and Prevention": This involves enhancing the knowledge and skills of local medical teams in mobile ultrasonic technology through ultrasonic screening and health education activities. "Community Health LOHAS": This entails providing health promotion, mobility care assessment, customized health education, and introducing health LOHAS, sports, mobility training, and disease cognitive interventions. "Home Environment Detection and Fall Prevention": The focus here is on home environments. The program integrates local fall prevention resources and provides systematic environmental detection services. "Health Information Platform": This component involves establishing a cloud health platform to integrate health information and data from cooperative agencies, ensuring accurate health management.

▼ Structure Chart for the Execution of the Program



Disease screening and prevention

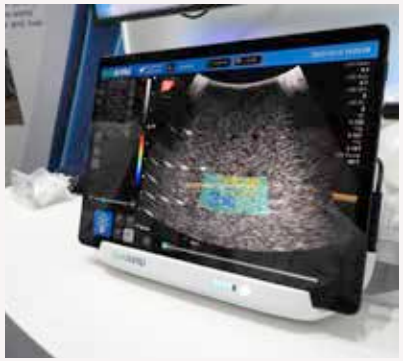
Main focus:

To address liver and gallbladder diseases among remote rural residents, we collaborated with the local Kao Yang-Wei Clinic to plan ultrasonic health promotion activities. These included ultrasonic screening, teaching and training workshops aimed at deepening local connections, providing convenient mobile medical services to residents, and laying a strong foundation for medical services in remote rural areas. Our team utilized AI technology to develop an assisted image interpretation system, and established mechanisms for remote transmission of images and related image databases.

Ultrasonic screening activity in Fuxing istrict

Highlight:

The team applied AI technology to establish an assisted image interpretation system and simultaneously built a remote image transmission mechanism and related image database. This technology enables the medical professionals at CGU and local clinics to implement image diagnosis together to improve medical care.



AI-assisted image interpretation system

Community health LOHAS

Main focus:

To improve healthcare access for communities near CGU, our team has developed training programs that align with school curricula. These programs are designed to engage students in various fields, promoting interaction and communication with elderly community members and creating a health-oriented and sustainable lifestyle atmosphere. Additionally, we provide USR courses and industry resources to remote rural areas, aiming to enhance mobility and health awareness among the elderly population. Utilizing advanced assessment testing, we create tailored intervention programs, including customized insoles and field education workshops, to address specific needs and deliver health education activities. Throughout the field service process, we enable our partners to achieve recognition and retain local health awareness and technology through positive interactions.

Highlight:

We incorporate field programs into the strategic development of psychological health and life patterns, aiming to enhance the physical and psychological well-being, social integration, and autonomy of elderly community members. Our approach includes providing fundamental education on physiology, psychology, and social health to students, thus improving their professional capabilities. Moreover, we organize field placements for students to gain practical experience and skills in community settings, enabling them to apply classroom knowledge effectively and contribute to the overall physical and mental well-being of elderly community members.

VR-combined community health promotion

Precision health promotion activities at remote rural areas

Community health LOHAS handmaking course

Making of customized insoles

Home environment detection and prevention

Main focus:

We prioritize preventing elderly falls at home by first eliminating home environmental hazards. We leverage the resources of Chang Gung University and Chang Gung Memorial Hospital, as well as the expertise of the school team in Guishan District, Taoyuan. Our goal is to introduce services from communities to residents and provide personalized fall prevention plans. This is aimed at systematically preventing elderly falls and extending their ability to safely live at home.

Community Health Fall Prevention Workshop

Highlight:

We have established a system via LINE to disseminate resources for fall prevention and to simultaneously deliver recommendations aimed at reducing the risk of falls. Throughout the system development process, we have maintained a focus on designing interfaces catering to the needs of the elderly. Our objective is to enable the elderly and community long-term care workers to perform remote home environment assessments and communication effectively, with the ultimate goal of reducing fall-related risks. Additionally, we have launched a publicly available webpage featuring information on potential home environmental hazards. This webpage is intended to serve as a resource for elderly community members, caregivers, and students, allowing them to independently access health education materials for fall prevention.

Home Environment Hazard Information Network

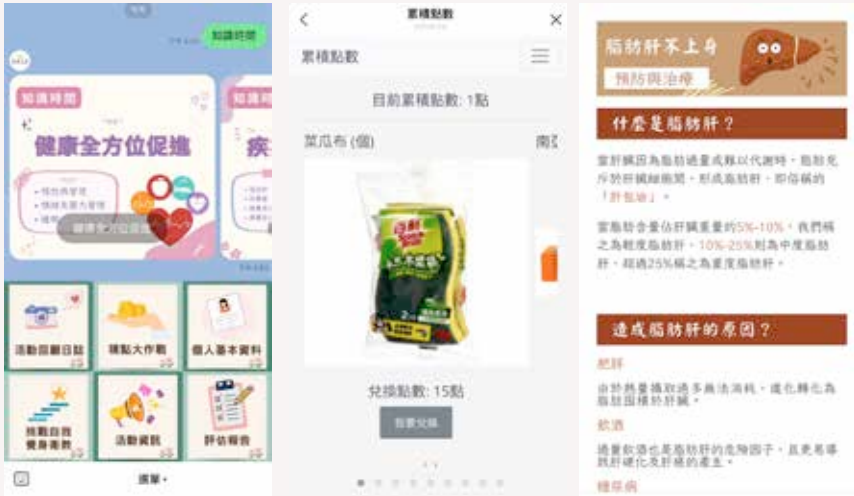
Health information platform optimization

Main focus:

The direction of efforts for each country is to create a supportive environment for the elderly, promote their health, encourage an active lifestyle as they age, and prevent disability. Currently, the international focus is on promoting various health interventions including exercise, cognitive activities, nutrition, and social interaction. Previously, the program concentrated on establishing a personalized health information platform to help community sites provide health promotion and care services for the elderly. The goal was to create a model for community-based promotion and care services that is based on the continuity and integration of PHR through the platform.

Highlight:

Our team has adopted the "User-centered LINE BOT System" as a bridge between the medical health units and the community residents. Through this system, we provide health screening information services from medical health units and CGU's USR team, as well as personalized health education services to improve elderly community members' health knowledge and understanding.



Integrated LINE BOT system

7.3 University Social Responsibility Practice-Germination Program

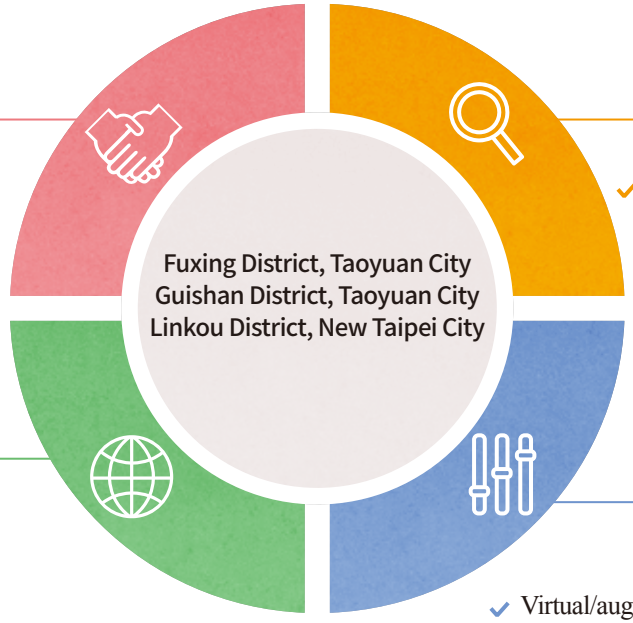
– Innovative Practice Program for Early Childhood Intervention and Health Promotion

The main focus of the program: Establishment of a Healthcare System

We plan to provide care for children in various areas including Linkou District, New Taipei City, and Guishan, Fuxing, and Daxi Districts in Taoyuan City, with the aim of improving the overall health of children who require early childhood intervention. Previous findings from CGU's social responsibility program have revealed challenges such as limited transportation, disparities between urban and rural areas, low reporting rates of developmentally delayed children, and health issues such as childhood obesity and attention deficit. Therefore, it's important to raise awareness and improve community members' knowledge about early childhood interventions and health promotion. Additionally, through technology assessment and intervention, we will offer health consulting services for remote early childhood interventions, monitor the long-term effectiveness of interventions, and expand our services across Taiwan.

In the process of field services, each "Community for Early Childhood Intervention" field service can be provided based on "Technology Assessment", "Technology Intervention" and "Network Platform". After establishing trust through onsite services, we will conduct technology assessments and interventions in early childhood interventions to achieve sustainable operation, improve resource accessibility, and reduce the time and cost for medical professionals.

▼ Structure Chart for the Execution of the Program



Community for early childhood intervention

- Seminars and symposiums
- Onsite medical treatment
- Children family services
- Volunteer community service

Technology assessment

- Brain wave test
- Mobile AI evaluation system
- Body composition

Network platform

- Early Childhood Intervention Network platform
- Telemedicine consultation
- Taiwan child development survey data

Technology intervention

- Assistive device intervened toy modification
- Virtual/augmented reality healing system
- Intervention of digital teaching materials
- Application of customized insole

Community for early childhood intervention

During discussions with directors and teachers from Angel Dandelion Parent-child Center in Daxi District, Taoyuan City, Wen-Hua Non-Profit Preschool in Guishan District, Taoyuan City, and Wen-Chuang Non-Profit Preschool in Linkou District, New Taipei City, we conducted field screening and assessment. We aim to establish long-term cooperative relationships with these institutions. Students have the opportunity to learn about the relevant contents and procedures related to joint child development assessments through observation. We have also collaborated with Linkou Chang Gung Memorial Hospital and partnered with Gao-Yi Elementary School and Balang Elementary School in Fuxing District to organize joint assessment activities. Additionally, we have hosted parent symposiums in Daxi District and seminars in Guishan District focusing on early childhood intervention. Furthermore, we have worked with the Cerebral Palsy Association of Taoyuan to organize the CP (cerebral palsy) angel parent-child growth camp. This camp is designed to help children improve their limb and hand movements through relevant games.

Technology assessment

In partnership with Ton-Yen General Hospital, we conducted brain wave testing and attention assessments at Wen-Hua Non-Profit Preschool in Guishan District, Taoyuan City. We also used Inbody composition analysis to screen for potential obesity in the children. Our goal was to help the students learn about children's physical fitness tests by observing and participating in the brain wave testing to assess attention levels. Through the combination of field practice, we can attach greater importance to the status quo of children's ability in the early development stage.

Technology intervention

Relevant courses have been held to teach students how to create simple piezoelectric switches and basic positioning aids, to improve their interest in developing relatively low-cost universal toys, tools and positioning aids. Students can also gain inspiration for designing innovative toys or tools by observing individual CP cases and attempting to recreate existing toys or tools. The reconstructed toys will be donated to children and families with special needs, who can use these special switches and toys as educational materials or for daily training purposes. The goal is to build successful experiences with self-controlled items, inspiring learning potential and improving motivation for participation. Additionally, we are using virtual-reality combined computer games to help children improve their concentration. We have collaborated with several organizations, such as the Angel Dandelion Parent-child Center, Daxi District, Taoyuan City, and Gao-Yi Elementary School and Balang Elementary School in Fuxing District, to organize activities where students can interact with children through VR game practice and exercise. Furthermore, we have partnered with Wen-Hua Non-Profit Preschool in Guishan District, Taoyuan City, and Gao-Yi Elementary School and Balang Elementary School in Fuxing District to provide early intervention and treatment for patients with flatfoot and create customized insoles as prescribed.

Online resources

We have partnered with the Department of Computer Science & Information Engineering and National Taipei University of Technology to create an E-system and remote early childhood intervention health consulting service. We promote and advocate for field services, providing recommendations on E-screening, E-home intervention activities, and remote early childhood intervention health consulting services to bridge the gap in the field. We also follow up to make early childhood intervention community-oriented and intelligent. People can download an electronic early intervention handbook from the network platform of early childhood intervention and implement interventions at home. Since August, we have regularly provided remote early childhood intervention health consulting services. By participating in such health consulting, students are expected to learn about the application of telemedicine consultation in remote rural areas as well as practical operation modes of such health consulting, thereby stably providing remote early childhood intervention health consulting.

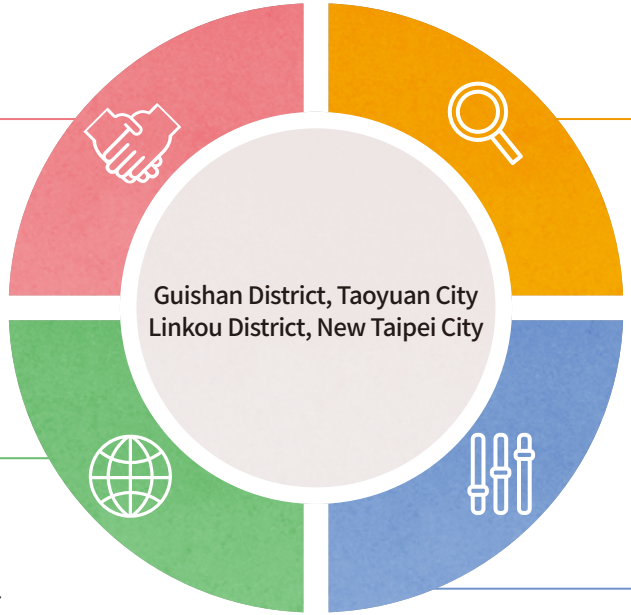
"Occupation, Inclusion, and Sustainability" -Practicing Program for Working Capacity Cultivation of People with Physical and Mental Disabilities

The main focus of the program: Social Support for Disadvantaged Groups

This program aims to enhance the employment capabilities and productivity of individuals with physical and mental disabilities, as well as promote their social participation and overall inclusion. The target groups for this initiative are community members with mental disabilities in Taoyuan City and adults with autism in Linkou District, New Taipei City. The lifestyle patterns of these groups present challenges in terms of community participation and inclusion. By collaborating with professionals from the College of Medicine, College of Engineering, and College of Management, our goal is to improve the employment capabilities of people with disabilities, create a diverse work environment, and market the products created by these groups through physical street vendors and e-commerce platforms. This will ultimately enhance the independence and quality of life for individuals and contribute to the vision of local placemaking, sustainable development, and social inclusion.

The core concept is to help individuals become more involved in productive work projects. We plan to optimize existing sheltered employment training, create a supportive employment model, and coach suitable individuals to succeed in a competitive work environment. The program will focus on four main areas: enhancing the working ability of people with physical and mental disabilities, creating a workplace-like environment, developing e-commerce and marketing models, and using activity-guiding robots. Our methods will involve holding activities and workshops led by experts, designing university courses, and encouraging teachers and students to participate. Overall, our aim is to improve the employability and independence of individuals with physical and mental disabilities within their communities.

▼ Structure Chart for the Execution of the Program



Cultivation of working ability of people with physical and mental disabilities

We identify suitable employment opportunities for vulnerable target groups by analyzing and training individuals with physical and mental disabilities. We also extend our focus to designing food-related handicrafts and agricultural education work items.

Network platform

We will develop an appropriate local business model, promote products using various marketing strategies, and increase visibility on the e-commerce platform of Imia (伊米亞). Additionally, we will connect with the resources of the enterprise's welfare committee and improve familiarity with the e-commerce platform of "Reassuring 'Autistic Adults' with One Mu Field" to boost sales and support target groups in achieving sustainable operations.

Establishment of workplace-like work environment

Through our partnerships with Linkou Chang Gung and Taoyuan Chang Gung Memorial Hospitals, we aim to leverage the high visitor traffic in hospitals to generate significant industrial output value and offer students opportunities for diversified learning experiences. Additionally, our goal is to expand our support to more individuals with mental disabilities by providing sheltered work training programs.

Activity-guiding robots

After collecting photos and videos of activities and creating digital learning materials, we developed an emotional identification AI model using a convolutional neural network called You Only Look Once (YOLO). This model measures changes in the facial expressions of individuals with autism in real time and uses accompanying robots to guide them to complete specific tasks through video and sound prompts.

Based on our previous analysis and the training of individuals with physical and mental disabilities, we will continue selling well-received products such as "Happy Yellow Cake", "Rice Ball", and the e-commerce platform for autistic children. Considering the unique characteristics of our trainees, we plan to enhance training in "fabric products" and introduce new beverages, light meals, and related items. The original "Star Egg" will be available for quantified sales at "Intervention Farm". We're also actively introducing "Rain Man Coffee" to expand our product offerings. Additionally, we aim to transition products initially sold in physical carts to our e-commerce platform, creating a barrier-free sales approach that accommodates more trainees and establishes a sustainable operational sales model.

In order to broaden the learning opportunities for students and allow them to gain practical experience, we have partnered with Linkou Chang Gung Memorial Hospital and Taoyuan Chang Gung Memorial Hospital. We will be setting up sheltered stall carts to sell items such as "Happy Yellow Cake," beverages, and light meals. The stall carts will be placed on the first floor of the rehabilitation building of Linkou Chang Gung Hospital and a shop located on the basement street of Taoyuan Chang Gung Memorial Hospital. These initiatives will enable students to gain insight into the challenges faced by people with physical and mental disabilities and the support they require. Additionally, individuals with disabilities will be encouraged to work in various roles to interact with the public and develop their vocational skills. Moreover, Linkou Autism Rights Promotion Association has obtained approval to operate an early childhood intervention farm in Jiabao Village, Linkou District. This initiative aims to develop materials related to natural food and agricultural education. Students will have the opportunity to participate in food and agricultural education, enhancing their interdisciplinary learning and practical field operations.

Although no formal cooperation agreements have been signed with field partners such as the Yang-Feng Psychiatric Community Rehabilitation Center and Linkou Autism Rights Promotion Association, the cooperation has started as part of the USG Seed Project at CGU. The person in charge of the Yang-Feng Psychiatric Community Rehabilitation Center is mainly responsible for field contact and activity arrangements. They lead students to learn workplace rebuilding for individual cases in the fields. Additionally, relevant mentors have been invited to provide courses and training. Furthermore, relevant workshops and field activities that are jointly organized by the university and relevant institutions have enabled students to participate in field practices and apply what they have learned. The course "Occupational Rebuilding" has been used to help people with mental disabilities conduct job analysis and gradually improve their working skills. The primary goal of the Linkou Autism Rights Promotion Association is to provide adults with autism with the opportunity to develop their working skills, increase social participation, and make their own living in society. The two major work fields are e-commerce platform and farm ("Reassuring 'Autistic Adults' with One Mu Field"), in which students are led to learn the operation of business models suitable for those with physical and mental disabilities and assist them in improving their e-commerce platforms and ways to optimize sales web pages. Therefore, students can accumulate practical experience.

In 2023, CGU applied to participate in the appraisal of the University Social Responsibility (USR) Award presented by Global Views Monthly for the first time. Later, they won the award with an overall award rate of only 19.1%. Specifically, they won the “Talent Co-learning” Model Award in the USR Award. CGU also won the gold award in the category of “SDG10 Reduced Inequalities” in the 2023 TSAA Taiwan Sustainable Action Awards competition. These awards further motivated the team and highlighted the high-degree matching of the program's social issue with the sustainable development goals. The awards injected continual motivation to the team and encouraged more CGU teachers, students, and the general public to pay attention to this social issue. Additionally, this program drew attention and was published in the column of “CGU Assisting People with Mental Disabilities in Occupational Rebuilding-Returning to Society” of Vita News in the teaching and experimental media of the Department of Journalism & Communication Studies at Fu Jen Catholic University. Relevant interview invitations were received from “In-News” of Public Television Service and the theme was “Great Challenges Faced by People with Mental Disabilities in Seeking Jobs and ‘Egg Cake Stall Cart’ Supporting the Employment Path,” allowing the general public to learn how people with mental disabilities can be smoothly integrated into communities and provided with suitable jobs.

7.4 USR HUB Program

The Main Focus of the Program: Local Development and Cultural Conservation

CGU Program for Ecological Survey of Woodland Nearby

Linkou Plateau is situated in a subtropical climate zone and is known for its mild climate and beautiful mountainous landscapes. This environment has given rise to a wide variety of plant and animal species. However, there is currently a lack of comprehensive ecological surveys in the area. Thus CGU has collaborated with the Formosa Plastics Group, teachers and students from CGU, and five nearby villages: Wenqing Village, Leshan Village, Jiulu Village, Longhua Village, and Huiling Village to conduct the CGU Program for Ecological Survey of Woodland Nearby. This program involves collaboration between. Together, they will conduct ecological surveys, educational activities, and local placemaking initiatives in the planted areas of Formosa Plastics Group (including Chang Gung Memorial Hospital) and CGU, with the ultimate objective of creating an ecological pathway.

This program focuses on conducting an initial exploration of the woodland near CGU and promoting a shared understanding among local villagers for local ecological conservation. The preliminary exploration provides an opportunity to study the terrain, surface features, plant and animal conditions in the area. Local villagers are invited to participate to learn about the ecology of their habitats. We also collaborate with experts to establish ecological survey fields and develop ecological survey programs. The program's achievements serve as a basis for planning the content of ecological courses. In the future, students can learn from villagers to achieve the goals of Local Connections and Talent Cultivation together.

Woodland exploration activity

Highlights

Strengthening of local connections and cross-domain resource integration

Through the planning of two symposiums and two exploration activities, we successfully established partnerships and shared resources with communities, providing education services to the villagers. Additionally, we integrated resources across three parties, including Formosa Plastics Group, CGU, and experts, leveraging their combined expertise to assist in surveying the local ecological culture and inspiring the concept of local placemaking. This initiative allowed the local villagers to experience the substantial benefits brought by the university to the region.

Field exploration and photography to unveil ecological species in the woodland

During the on-site exploration and installation of infrared cameras, we discovered the reforested areas of Formosa Plastics Group and the rich ecological diversity within the woodland. The infrared cameras captured many images showing the existence of numerous species in the woodland, including the conserved animal Paguma larvata taivana, a ferret badger (a unique species in Taiwan), and rare winter migratory birds such as woodcock and emerald dove. We expect that continuous ecological surveys in the future will significantly contribute to ecological research in the Linkou area.

Holding a meeting to gain consensus on how to promote ecological courses

After discussing with experts and villagers, the Formosa Plastics Group Museum reached a high consensus on the learning content and methods for future ecology courses. Villagers expressed their willingness to attend these courses in the hope of learning about the ecology of their habitats and improving their passion and care for the homeland. Currently, two ecology courses, "Natural Ecology Near CGU and Ecological Survey Methods" and "Humanistic Landscape Survey and Woodland Ecological Investigation around CGU," have been opened for the second semester of the 2023 academic year.

Consensus meeting

Linkage of Rice Produced by Small Farmers with Wine-making Industry

The main objectives of this program are to establish stronger connections between the industries and to ensure economic sustainability. The program focuses on the traditional agriculture in Guishan District and its relationship with the newer industries that have been introduced in recent years. The aim is to address the sales channels for farmers' agricultural products, increase the promotion of featured agricultural products and agricultural tourism, as well as tackle the instability of raw materials imported by local breweries and the susceptibility to international price trends. Local agricultural products will be used as raw materials for wine-making, which will help reduce grain wastage, promote local industrial collaboration, and contribute to sustainable development.

The main focus of this program centers on the "Diversity of Rice Industry in Guishan District-Sake Brewing" course offered by CGU. Students use rice from the fields to brew sake and learn about rice production and the challenges faced by farmers. They also study the differences between industrialized brewing and laboratory brewing. The program includes visits to breweries to enhance university social responsibility and understanding of Guishan fields. It also promotes commercialized trial production and facilitates discussions with farmers and breweries to develop new beers using rice from local farmers.

Field activity-A local farm in Guishan

Highlights

Course and presentation of achievements

During the course, students learned and practiced the art of sake brewing using both Taiwanese and Japanese rice. They compared the manufacturing methods and raw materials to understand the similarities and differences. At the end of the course, there was a presentation where participants sampled the sake they had brewed and had discussions with industry professionals. In the previous semester, Mr. Ichishima Hajime from Tian-Shoei Co., Ltd., mentored the students, and Miss Euka Isawa from Micura is scheduled to lecture in the upcoming semester. The finished products created by the students received recognition from themselves, their teachers, and industry professionals.

Presentation of brewing achievements of the course

Industry visits

Participants visited two breweries to learn about the practices of using local agricultural products as raw materials for brewing. The local breweries have made significant contributions in terms of reducing waste of agricultural products and the carbon footprint associated with importing raw materials.

Trial production and promotion

The trial production of "Fengho Beer" was successfully implemented with unhusked rice from Full Eco-Farm, technology and equipment from Yongjin Brewery, funds from CGU, and label design from students from CGU's Department of Industrial Design. This greatly inspired partnership in the field, opened up new possibilities for agricultural products, and created featured products for agricultural tourism.

Ecological Education and Cultural Integration: Program for Natural Ecology Courses and Activities for Undergraduates and New Residents

The program aims to organize activities that help new residents learn about the local natural environment and enhance the university's ecological education. This will be achieved through the participation of undergraduates, elementary school students, residents, and new residents. The activities include outdoor ecological teaching for elementary school students, with the goal of increasing awareness about natural ecology, promoting nature and culture preservation and inheritance, exploring sustainable development issues, conducting field visits, and engaging with community residents. The program is a continuation of the "Kulon Lecture" at Zhentian Temple, focusing on educational promotion activities and experiential teaching or practice. The aim is to further develop and integrate community-oriented courses with the local communities.

Students participating in the natural ecology literature courses will have the chance to explore the local environment and ecology. Residents will also be able to join weekend activities to learn about the nature in their area. Additionally, trainees from the community university will be invited to participate in these activities, promoting ecological education by involving undergraduates, elementary school students, local residents, and new residents.

Highlights

Milestone achievements

A total of approximately 150 individuals participated in the event. The members' identities and ages were diverse, and their impact was significant. Additionally, they received relevant benefits. Moreover, the original collaboration areas were expanded to include Fengshukeng and Xucuogang in the Guishan District to observe the natural coastal ecology.

Cross-domain teaching innovation

Knowledge of history, sociology, ornithology, botany, and baking was added to the lectured courses, and cross-domain teaching was increased.

Talent cultivation

Talent development was promoted across all levels, involving faculty from Linkou Community University and Taoyuan Community College, as well as students from an affiliated kindergarten of Chang Gung University of Science and Technology.

Sustainable development of the field

Two handbooks, including Linkou Plateau Fauna and Linkou Plateau Flora, were published based on the achievements of previous cooperation in the field.

Value creation

Knowledge of local animal and plant species was created together with information on the drinking and eating of local natural food ingredients.

The Main Focus of the Program: Establishment of a Healthcare System

Spelling Scheme for Children in Remote Rural Areas Based on "Feeling of Competence" and "Self-adjustment"

The project team discovered that children in remote rural areas struggled with writing characters and words, lacking autonomy and competence in writing. There were no effective intervention strategies to address these issues. Therefore, through the implementation of USR HUB, we aim to develop a solution that combines literacy, autonomy, self-adjustment, and the establishment of a sense of competence to enhance children's writing skills. We also supported field teachers in teaching and provided them with a spelling program to provide ongoing assistance to children in remote rural areas. Key aspects of this program include (1) Developing a spelling program for children in remote rural areas, (2) Assessing and intervening with school children, (3) Teaching field teachers, and (4) Adapting to unexpected situations.

Highlights

- Integrate the self-adjustment scheme, enhance the schemes adopted in 2020-2022, and stress children's ability and performance regarding autonomy and self-adjustment.

Examples of the formation of strategies through the autonomy and self-adjustment exhibited by school children in the new scheme

- It is regularly executed every month. In 2023, 112 person-times of school children were served.

- Two field lectures were held with themes of (1) theory, assessment, and intervention of executed functions; (2) accessibility of computers and assistance for students with special needs. These two themes were not only independent of each other but also related to children's development, teaching sites, and writing issues.

Children and Teenagers in Native Tribes and Family-Centered Health Promotion

The field studies showed that school children could become addicted to the Internet and electronic devices, leading to problems such as sleep disorders, emotional distress, poor self-care, and even aggressive behavior. There were also concerns about poor oral hygiene, obesity, and skewed values. In response, the program team developed special camps to be held during summer and winter vacations at Kui-Hui Elementary School, Taoyuan Municipal Luo Fu Senior High School, and the activity center of Zeren Village. The camps included activities to help children express their emotions, learn about balanced diets and exercise, and engage in dynamic and static activities to reduce their reliance on electronic devices. The goal was to help children and teenagers manage their time and develop good habits.

This program focuses on "Local Connections," "Talent Cultivation," and "Sustainable Development" while also aligning with the "United Nations Sustainable Development Goals (SDGs)." The program team's goal is to instill correct health knowledge in rural children from an early age and enhance their knowledge, abilities, and habits through long-term intervention, guidance, and support. In addition to the standard university social responsibility (USR) courses, students gained an initial understanding and evaluation of the physical and mental health status of children in rural areas through participation in rural social practice activities. They also reflected on the impact of national children's healthcare policies and social trends. As a result, students gained a deeper understanding of university social responsibility and its true significance.

Winter Camp of Life Education and Therapy

Summer Camp of Equation of Love

Highlights

Fields

According to feedback from the principal and counseling director of Kui-Hui Elementary School, this school had the highest obesity rate among elementary schools in the entire Taoyuan City, and extraordinary intervention was deemed necessary. As a result, a camp activity was specifically organized to promote a balanced diet, nutrition, and physical health. Additionally, Teacher Po-Hsiang Tsui's team conducted ultrasonic fatty liver screenings, which revealed that some overweight students had fatty liver issues, drawing attention from the school and their parents. As a result of this camp activity, teachers and students paid close attention to the prevention and control of obesity and fatty liver issues.

Student feedback

“If there is another camp in the future, what would I like to bring to the children?” Bullying is a prevalent issue on school campuses. That's why our camp activities focus on advocating against violence. It's not just about learning alone but understanding the underlying motives behind potential behaviors. Perhaps children who bully others seek companionship and sensory stimulation, imitate authoritative figures in their environment, or need attention. By fostering situational companionship and using design thinking through observation, students can help guide these children in expressing their emotions, learning self-awareness, and addressing their needs appropriately.

Remote Rural Medical Community Building

In the Fuxing District of Taoyuan City, residents often encounter challenges due to the remote location of their residential areas, limited access to medical devices, and the inconvenience of acquiring necessities compared to those living in flatlands. The establishment of the Lokahda Mountain Medical Care Team of CGU aims to address these difficulties by implementing a program-oriented approach to reach out to the local tribes. This will enable the team to closely listen to the residents' voices, understand their actual needs, and provide assistance accordingly.

The program includes the "Long-term Home Companionship Program," "Recreation Camp Program," "Elderly Visit Program," "Field Investigation Program," and "Health Education Lecture Program." This program aims to improve the living standards of residents in Fuxing District and cultivate the medical humanities capabilities of university students, including those from the School of Medicine, School of Traditional Chinese Medicine, and School of Nursing. By exposing students to different environments, it is expected that they will broaden their horizons. Additionally, their experiences during the service process will profoundly impact the students. After graduation, with more capabilities and resources, they will be able to give back to society and become a new force. Their junior peers will learn from them through inheritance, benefiting more people in need in society.

In this year's program, we organized a recreation camp that combined educational courses with games to provide health education and scientific knowledge to local children. The goal was to promote companionship and care. Additionally, we conducted health education lectures in a fun, recreational manner to teach correct health knowledge to children and teenagers. Our team also assisted in the annual integrated prevention and healthcare services from the Public Health Center of Fuxing District to the Kui-Hui Cultural and Health Station. We provided health promotion services, launched long-term home companionship and elderly care programs, and conducted field investigation programs to promote spiritual enhancement. We also participated in church worship activities and provided health checkups for the elderly, including measurements of blood sugar, blood pressure, and blood oxygen levels. We also provided volunteer medical consulting to the local residents, offering diabetes health education and daily life function assessments. Through these efforts, the program team has established good friendships with local residents, aiming to help them maintain a healthy body and mind and prevent loneliness.

Volunteer Haircut Activity

Health Promotion Activity for Children in Remote Rural Areas

From "Recovery" to "Empowerment": Happy Food 1000 Co., Ltd. with Co-farming by the Youth and the Seniors

Under the sustainable goal of "Good Health and Well-being," this program aims to encourage elderly individuals living alone to leave their homes and regain joy and a sense of accomplishment in life. The program involves activities such as planting to help elderly people interact with others, establish interpersonal networks, improve muscular endurance, reduce falls, and alleviate feelings of isolation and depression. Targeting the mitigation of the physical and psychological decline of these elderly people, this program focuses on "Empowerment" to create a new health promotion model; at the same time, this program explores the potential benefits of digital media for the elderly, which can bring possible development opportunities in the future. The ultimate goal of this research is to establish a supportive environment linking people with healthy diets and land, introduce university designs and professional medical devices, and help those living alone to rediscover meaning in life through participation in horticultural therapy of the "Happy Farm" for empowerment.

The faculty and students of CGU collaborate with local elderly neighbors in horticultural therapy and community activities to create and activate supportive community spaces. We aim to help the elderly regain their capabilities and promote reemployment opportunities. We provide digital tools for teaching during the activities and establish interpersonal networks for elderly individuals living alone through regular communication, education, and training. This helps improve their physical and mental health and alleviates feelings of isolation and depression. Our program not only connects the elderly with people, healthy diets, and the environment but also establishes a model for local placemaking and self-sufficiency to achieve the goal of "Local Aging." Additionally, by involving students in social practice actions, we aim to enhance their understanding of community elderly care and develop their future career opportunities.

During agricultural education activities, many grandparents voluntarily assisted others and naturally took on mentoring roles, which positively impacted their socialization. Additionally, the implementation of afternoon tea for grandparents proved to be very effective in achieving community dining and promoting social inclusion. These elderly individuals not only participated in hands-on activities and interpersonal interactions but also willingly left their homes. Furthermore, relevant institutions aimed to assist the elderly in operating community-friendly agricultural shops. As a result, booths will be provided during the Chinese calendar period for them to sell products cultivated and made by them. The university will introduce a simple employment and entrepreneurship model to help the elderly regain vocational capabilities and resilience, aiming to achieve the transformation from "recovery" to "empowerment" and build a society where the elderly are useful, cared for, and can have a fulfilling end of life.

Agricultural Education

Bakery-Afternoon Tea for Grannies and Grandpas

7.5 University-level Activities

By organizing a variety of sustainability promotion activities, such as the Deep Cultivation Lecture and the FUN Tan She Chi Cup, Chang Gung University enhances students' understanding of sustainable development, actively fulfills social responsibility, and extends its positive social impact.

Deep Cultivation Lecture

The Office of University Social Responsibility organizes celebrity lectures every semester to encourage teachers and students to participate in out-of-classroom teaching and social responsibility initiatives. The goal is to promote the practice of university social responsibility and to integrate creative thinking with social needs.

Celebrity Lectures

Environment lecture of A must-take trash class in life-Lecturer Hsin-Wei Liu from Taiwan Environmental Information Association (TEIA)	Given the recent trend of simplifying life, people are increasingly taking the time to review their possessions and get rid of things they no longer need. However, items that cannot be resold or donated end up causing environmental burden, and those that are not correctly classified and recycled can create issues for cleaning personnel. To address this, we encouraged people to attend a lecture by environmental educator Hsin-Wei Liu to gain basic environmental knowledge and embrace a more eco-friendly lifestyle in 2023!
Handicraft Experience of Atayal-Making of Bamboo Preservation Jar-Walis Hayung, an artist in Fuxing District	During the handicraft experience of preserving bamboo jars in the Atayal culture, this lecture aimed to enhance people's understanding of indigenous culture. The time significance of indigenous culture was also described through bamboo products that the Atayal people rely on in the Fuxing Region, emphasizing their cultural heritage.
Environment lecture of Eat Well Naturally with Green Dishes on the Table!-Lecturer Min-Hua Chiang from Taiwan Environmental Information Association (TEIA)	Centering on food, the lecturer shared how the rich and diverse seasonal foods were cultivated, raised and harvested on this precious island of Taiwan. People are encouraged to become consumers that safeguard biodiversity, select environmentally friendly sources for planting and breeding, and stand shoulder to shoulder with farmers, eat locally and seasonally, and reclaim a green Earth with their dietary choices.
Handicraft Experience of Atayal-Bracelet Weaving-Walis Hayung, an artist in Fuxing District	During the handicraft experience of preserving bamboo jars in the Atayal culture, this lecture aimed to enhance people's understanding of indigenous culture. The time significance of indigenous culture was also described through bamboo products that the Atayal people rely on in the Fuxing Region, emphasizing their cultural heritage.

Environment lecture of A must-take trash class in life

Handicraft Experience of Atayal-Making of Bamboo Preservation Jar

Environment lecture of Eat Well Naturally with Green Dishes on the Table!

Handicraft Experience of Atayal-Bracelet Weaving

2023 FUN Tan She Chi Cup

In order to promote sustainability on campus and in local communities, we actively engage students' creative ideas and innovative thinking. We encourage campus sustainability and regional collaborations to improve sustainable living. We recently launched the FUN Tan She Chi Cup competition, inviting students from partner schools of USR, including Chang Gung University, Chang Gung University of Science and Technology, Ming Chi University of Technology, Hsin Sheng Junior College of Medical Care and Management, and National Taiwan Sport University, to submit their proposals. This initiative aims to raise students' awareness of sustainable society through innovative thinking.

In addition to the substantial bonus for participating in the FUN Tan She Chi Cup, we aimed to nurture different forms of creative thinking based on students' ideas to enhance campus sustainability and local collaborations and collectively create a more sustainable life. The competition's themes included "Healthcare" and "Local Culture and a Sustainable Campus". The first theme focused on caring for the elderly and school children. In contrast, the second one encouraged participants to brainstorm ways to enhance the local culture and promote sustainable campus development.

FUN Tan She Chi Cup Competition

2023 Sustainability Forum

On October 17, 2023, we hosted the "2023 CGU Sustainability Forum". This event focused on two key issues: the challenge of achieving net zero emissions by 2050 and the University's sustainable vision, and the United Nations Sustainable Development and Corporate ESG (Environmental, Social, and Governance) - Doing Well by Doing Good. We were honored to have Professor Pen-Chi Chiang from National Taiwan University and Consultant Jack Huang from the UN Office of Information and Communications Technology as our keynote speakers. Their expertise helped to enhance the understanding of sustainability issues among CGU's faculty and students, foster interdisciplinary knowledge and skills, and encourage collective efforts towards sustainable practices on campus.

2023 CGU Sustainability Forum

2023 USR Exhibition of Engaged Scholarship, North Taiwan

CGU participated in the 2023 USR Exhibition of Engaged Scholarship in North Taiwan from October 6 to October 7, 2023. Several USR program teams and schools from North Taiwan, Yilan, and Hualien participated in the exhibition. They showcased their accomplishments in promoting university social responsibility and environmental sustainability. The event aimed to use new technology and innovation to help improve local communities and revitalize urban and rural areas. Additionally, it sought to support junior college students' efforts to contribute their expertise to regional areas.

Sciences of the exhibition

2023 Cross-domain Cooperative Sustainable Development Forum Co-sponsored by Three Universities

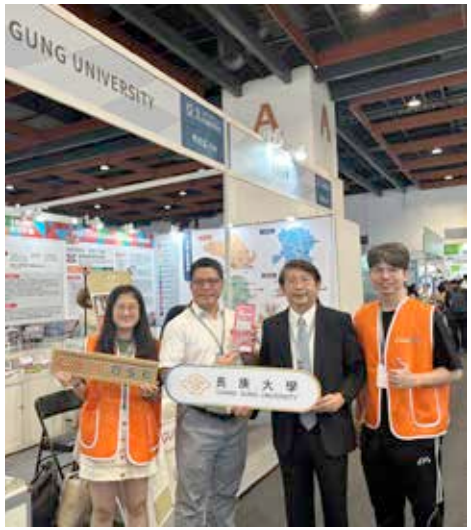
On August 14, 2023, Chang Gung University, Chang Gung University of Science and Technology, Ming Chi University of Technology, and the Graduate Institute of Environmental Engineering and Center for Artificial Intelligence and Advanced Robotics of National Taiwan University collaborated to host a sustainable development forum at the seminar room of the Graduate Institute of Environmental Engineering of National Taiwan University. The forum focused on three themes: "AI and Dementia Care Research," "Sustainable Campus Benchmark Learning," and "Climate Action and Healthcare." The forum aimed to facilitate communication and exchange of ideas among experts in each field, strengthen academic and green sustainable development, and collectively lay a foundation for sustainable development.

Group photos taken at the venue of the forum

2023 SDGs Asia

CGU participated in the 2023 SDGs Asia event from July 21 to July 23, 2023. The company showcased its achievements in promoting social responsibility through an exhibition demonstrating how to implement sustainability concepts. The exhibition was organized in collaboration with government, city, business, and educational partners and featured over 100 local and international exhibitors. The event included diverse activities such as exhibitions, summits, forums, award ceremonies, and initiatives. In addition to parent-child interaction and sharing sustainability issues with the youth, activities like coffee exchanges and the daily distribution of gifts were organized, and people were encouraged to use low-carbon transportation and reusable tableware to practice sustainability together.

TSAA & APSAA Awards Ceremony



SDGs Asia

2023 Sustainability Achievement Exhibition Themed "Long-term" Sustainability · Deep Local "Cultivation"

From October 16 to October 27, 2023, CGU held the 2023 Sustainability Achievement Exhibition with the theme of "Long-term Sustainability" and "Deep Local Cultivation". The exhibition showcased the accomplishments of the Office of Sustainable Development of CGU in practicing campus sustainability, local cultivation, and university social responsibility, as well as its efforts for sustainable operation. The exhibition was divided into several areas, including the Sustainable Development Information Area, Campus Sustainable Development Area, and University Social Responsibility Area. Based on the United Nations Sustainable Development Goals (SDGs), the event highlighted the actual implementation effects of the Office of Sustainable Development in creating a green campus and promoting sustainability. It also introduced various social responsibility policies aimed at aligning field operations with the school's internal and external resources and promoting a supporting system for social responsibility. The exhibition aimed to inspire teachers and students to use their expertise to contribute to sustainability, practice social responsibility, and collaborate with local communities to bring about positive changes.

Opening Ceremony of the Achievement Exhibition

7.6 Students' Involvement in Social Services

Local Community Services

We aim to enhance social services, develop students into exemplary modern citizens, and promote active involvement in various student associations. These associations are encouraged to participate in community services, support middle and elementary schools, and engage in service projects during winter and summer vacations. Additionally, we urge students to explore remote mountainous areas in Taiwan and offer healthcare services, child education, and counseling to marginalized groups.

Statistics of Various Associations Providing Services

Public	Religion and services	Music	Artistic skills	Sports	Region
Student Association of the School of Medicine, Student Association of the School of Traditional Chinese Medicine, Student Association of the School of Physical Therapy, Student Association of the Department of Occupational Therapy, and Student Association of the School of Nursing	Lokahda Mountain Medical Care Team, Sun Club, Dandelions Working Team, Doctor Dogs Club, Tzuching Club, Light & Salt Fellowship Club, and Chongde Young Club	Wind Band, Chinese Music Club, and Piano Club	Chinese Medicine Club, ICC Club, Handmade Club, and the Wisteria Flower Etiquette Club	Martial Arts Club, Karate Club, and Runner's Club	Taoyuan Alumni Association, Tainan Alumni Association, and Kaohsiung Pingtung Alumni Association

Implementation of Volunteer TCM Consultation and Organizing of Elementary School Camp Activity by Chinese Medicine Club in Zhenshan Village, Yuanshan Township, Yilan County (January 14-January 18, 2023)

Statistics on Service Regions

Public welfare institutions	Medical healthcare institutions	Regional elementary schools	Remote rural areas	Government agencies
Zhenshan Community Development Association, Yuanshan Township, Yilan County, Muhsiang Home, Hong-Hua Children's Home, Yi Kuang Orphanage, Banqiao Animal Shelter, Bali Nursery for Animals, ZhuoMama Dog Shelter, and Xinwu Cat Shelter Volunteer Team Care Center	Linkou Chang Gung Memorial Hospital, Chang Gung Health and Culture Village, Chang Gung Nursing Home, Yujian Nursing Home, Chinjen Rehabilitation Home, New Taipei Private Care Center for the Elderly, Chungmin Nursing Home, Xin An Nursing Home, and Honeycomb Community Rehabilitation Center	Hushan Elementary School, Guang-Chun Elementary School, Ciaotou Elementary School, Sing-gong Elementary School, Xinpo Elementary School, Chang Gung Elementary School, DaPu Elementary School, and Da Gang Elementary School	Gauyi Village, Sanguang Village, and Hualing Village in Fuxing District, Taoyuan City	Department of Education, Taoyuan, Department of Environmental Protection, Taoyuan

The Lokahda Mountain Medical Care Team visited Fuxing District, Taoyuan City, to implement a long-term home companionship program, recreation companionship program, field investigation program, and health education lecture program from January 17 to January 20, 2023.

International Volunteer Service Activities

Due to the pandemic in 2020, our international volunteer service team was adjusted to focus on providing remote rural area and off-island volunteer services. As the pandemic situation improved in 2023, the international volunteer service team was reactivated. The Penghu Off-island Volunteer Team was retained to continue providing moral education for students through ongoing volunteer service learning.

▼ Statistics on the Effectiveness of the International (Off-island) Volunteer Service Team

Time period	Winter vacation of 2022	Summer vacation of 2022		Summer vacation of 2023
Name of the service team	Hualien Remote Rural Area Volunteer Team	Penghu Off-island Volunteer Team	Penghu Off-island Volunteer Team	Malaysia Volunteer Team
Place of service	Changed to a remote rural area in Hualien due to flight restrictions during the pandemic	Wangan Island in Wangan Township and Le Pont institution in Magong City	Wangan Island in Wangan Township and Le Pont institution in Magong City	Han Chiang Primary School in Penang
Number of attending team members	18	24	21	26

∧ 2023 Penghu Off-island Volunteer Team and Malaysia International Volunteer Team

Appendix

GRI Standards Index

Statement of use	Chang Gung University has already reported the contents for the 2022 academic year (August 1, 2022 to July 31, 2023) and the period from January 1, 2023 to December 31, 2023 according to the GRI standards.
GRI 1 Version	GRI 1: Foundation 2021
GRI Sector Standard	N/A (GIR industry standards of relevant industry haven't been published yet.)

General Disclosures

GRI Code	GRI Code Disclosure Title	Corresponding Chapter/Explanation	Page
GRI 2: General disclosures 2021			
GRI 2-1	Organizational details	1.1 History and Brief Introduction	16
GRI 2-2	Entities included in the organization's sustainability reporting	Contents of the Report	7
GRI 2-3	Reporting period, frequency and contact point	Contents of the Report	7
GRI 2-4	Restatements of information	Waste Management	102
GRI 2-5	External assurance	Contents of the Report	7
GRI 2-6	Activities, value chain and other business relationships	1.3 School Characteristics Supply Chain Management Policy	20
GRI 2-7	Employees	5.1 Employee Structure	108
GRI 2-8	Workers who are not employees	5.1 Employee Structure	108
GRI 2-9	Governance structure and composition	Composition of the Board of Trustees	31

GRI Code	GRI Code Disclosure Title	Corresponding Chapter/Explanation	Page
GRI 2: General disclosures 2021			
GRI 2-10	Nomination and selection of the highest governance body	Nomination and selection of the Board of Trustees	32
GRI 2-11	Chair of the highest governance body	Recusal Due to Conflicts of Interest	32
GRI 2-12	Role of the highest governance body in overseeing the management of impacts	2.2 Sustainable Development Committee 2.3 Internal Control and Risk Management	33
GRI 2-13	Delegation of responsibility for managing impacts	2.2 Sustainable Development Committee 2.3 Internal Control and Risk Management	33
GRI 2-14	Role of the highest governance body in sustainability reporting	Contents of the Report	7
GRI 2-15	Conflicts of interest	Recusal Due to Conflicts of Interest	32
GRI 2-16	Communication of critical concerns	Composition of the Board of Trustees	31
GRI 2-17	Collective knowledge of the highest governance body	Reason for omission: Not applicable Issues regarding governance of the Board of Directors do not apply to the university.	-
GRI 2-18	Evaluation of the performance of the highest governance body	Reason for omission: Not applicable Performance evaluation of the Board of Directors is not involved at the university.	-
GRI 2-19	Remuneration policies	Trustee Remuneration Policy	32
GRI 2-20	Process to determine remuneration	Trustee Remuneration Policy	32
GRI 2-21	Annual total compensation ratio	Pay Level	115
GRI 2-22	Statement on sustainable development strategy	A Letter from the President 1.2 Sustainability Commitments and Strategies	2 19
GRI 2-23	Policy commitments	Policy Commitments	30

GRI Code	GRI Code Disclosure Title	Corresponding Chapter/Explanation	Page
GRI 2: General disclosures 2021			
GRI 2-24	Embedding policy commitments	Policy Commitments 2.2 Sustainable Development Committee	30 33
GRI 2-25	Processes to remediate negative impacts	Channels for Appeals and Suggestions	40
GRI 2-26	Mechanisms for seeking advice and raising concerns	Channels for Appeals and Suggestions	40
GRI 2-27	Compliance with laws and regulations	Regulatory Compliance (There were no regulatory violations this year.)	39
GRI 2-28	Membership associations	1.5 Memberships of Associations	28
GRI 2-29	Approach to stakeholder engagement	Stakeholder Engagement	11
GRI 2-30	Collective bargaining agreements	Right Protection	113

Major Material Topics

GRI Code	GRI Code Disclosure Title	Corresponding Chapter/Explanation	Page
GRI 3: Material Topics 2021			
GRI 3-1	Process to determine material topics	Analysis of Material Topics	11
GRI 3-2	List of material topics	Identification of Material Topics	13
GRI 3-3	Management of material topics	Identification of Material Topics	13

GRI Code	GRI Code Disclosure Title	Corresponding Chapter/Explanation	Page
Environmental and energy sustainability			
GRI 3-3	Management of material topics	Chapter 4 Environmental Protection	92
GRI 302-1	Energy consumption within the organization	Energy management	99
GRI 302-2	Energy consumption outside of the organization	Reason for omission: Relevant information is currently unavailable. Statistics on the organization's external energy data are still unavailable.	-
GRI 302-3	Energy intensity	Energy management	99
GRI 302-4	Reduction of energy consumption	Reason for omission: Relevant information is currently unavailable. Statistics on the University's energy conservation projects and energy-saving data are not yet available.	-
GRI 302-5	Reductions in energy requirements of products and services	Reason for omission: Not applicable As an educational institution, the University does not engage in manufacturing or selling products.	-
GRI 303-3	Water withdrawal	Water Resource Management	102
GRI 305-1	Direct (Scope 1) GHG emissions	GHG Emissions	100
GRI 305-2	Energy indirect (Scope 2) GHG emissions	GHG Emissions	100
GRI 305-3	Other indirect (Scope 3) GHG emissions	Reason for omission: Relevant information is currently unavailable. Statistics on greenhouse gas emissions in Scope 3 are currently unavailable.	-
GRI 305-4	GHG emissions intensity	GHG Emissions	100
GRI 305-5	Reduction of GHG emissions	Reason for omission: Relevant information is currently unavailable. Statistics on carbon reduction data of the University are still unavailable.	-

GRI Code	GRI Code Disclosure Title	Corresponding Chapter/Explanation	Page
Environmental and energy sustainability			
GRI 305-6	Emissions of ozone-depleting substances (ODS)	Reason for omission: Not applicable The University has not emitted or discharged relevant substances; therefore, the contents of this metric are not related to this material topic.	□
GRI 305-7	Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions	Reason for omission: Not applicable Air pollution is not an issue of concern for the University, so no emission data statistics are available; thus, this metric is not applicable.	□
GRI 306-1	Waste generation and significant waste-related impacts	Waste Management	102
GRI 306-2	Management of significant waste related impacts	Waste Management	102
GRI 306-3	Waste generated	Waste Management	102
GRI 306-4	Waste diverted from disposal	Waste Management	102
GRI 306-5	Waste directed to disposal	Waste Management	102
Community Engagement			
GRI 3-3	Management of material topics	Chapter 7 Community Engagement	135
GRI 203-1	Infrastructure investments and services supported	Chapter 7 Community Engagement	135
GRI 413-1	Operations with local community engagement, impact assessments, and development programs. Back to homepage	Chapter 7 Community Engagement (The University has a single campus, and the execution rate of community development plans has reached 100 %.)	135
Industry-university cooperation			
GRI 3-3	Management of material topics	3.6 Industry-University Cooperation	76
Self-selected topics	-	-	-

GRI Code	GRI Code Disclosure Title	Corresponding Chapter/Explanation	Page
Campus Health and Safety			
GRI 3-3	Management of material topics	Chapter 6 Campus Health and Safety	120
GRI 403-1	Occupational health and safety management system	6.1 Health and Safety Management	122
GRI 403-2	Hazard identification, risk assessment, and incident investigation	6.2 Incident Reporting and Emergency Response	124
GRI 403-3	Occupational health services	Health Examinations	130
GRI 403-4	Worker participation, consultation, and communication on occupational health and safety	Occupational Health and Safety Committee	122
GRI 403-5	Worker training on occupational health and safety	Occupational Health and Safety Education and Training	123
GRI 403-6	Promotion of worker health	Health Promotion and Care	133
GRI 403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	Campus Safety Improvement Measures	127
GRI 403-8	Workers covered by an occupational health and safety management system	6.1 Health and Safety Management	122
GRI 403-9	Work-related injuries	Occupational Injuries Statistics	130
GRI 403-10	Work-related ill health	Regular Health Examinations for Faculty and Staff	131
Faculty Benefits and Career Development			
GRI 3-3	Management of material topics	□□□□□	106
GRI 201-3	Defined benefit plan obligations and other retirement plans	□□□□□□	116
GRI 401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	□□□□	116
GRI 404-1	Average hours of training per year per employee	□□□□□□	118
GRI 404-3	Percentage of employees receiving regular performance and career development reviews	□□□□□□□	119

GRI Code	GRI Code Disclosure Title	Corresponding Chapter/Explanation	Page
Quality and innovation of education			
GRI 3-3	Management of material topics	3.4 Quality and Innovation of Education	47
Self-selected topics	-	-	-
International connections			
GRI 3-3	Management of material topics	1.3 School Characteristics	20
Self-selected topics	-	-	-
Research Results			
GRI 3-3	Management of material topics	3.5 Research Results	68
Self-selected topics	-	-	-
□□□□			
GRI 3-3	Management of material topics	2.4 Information Security	36
GRI 418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	No related situation occurred this year.	-
□□□□			
GRI 3-3	Management of material topics	3.3 Financial Stability and Abundant Resources	45
GRI 201-1	Direct economic value generated and distributed	3.3 Financial Stability and Abundant Resources	45
Student Life and Career Counseling			
GRI 3-3	Management of material topics	3.7 Career Counseling for Students	86
Self-selected topics	-	-	-

Non-Material Topic

GRI Code	GRI Code Disclosure Title	Corresponding Chapter/Explanation	Page
GRI 201: Operation Performance 2016			
GRI 201-2	Financial implications and other risks and opportunities due to climate change	The Impact of Climate-Related Risks and Opportunities on Finance	95
GRI 201-4	Financial assistance received from government	3.3 Financial Stability and Abundant Resources	45
GRI 202: Market Presence 2016			
GRI 202-1	Ratios of standard entry level wage by gender compared to local minimum wage	Pay Level	115
GRI 202-2	Ratios of standard entry level wage by gender compared to local minimum wage	Diverse Employment Opportunities	110
Procurement Practices 2016			
GRI 204-1	Proportion of spending on local suppliers	Sustainable Procurement	104
GRI 401: Employment 2016			
GRI 401-1	New employee hires and employee turnover	Staff Turnover	111
GRI 401-3	Parental leave	Unpaid Parental Leave for Childcare	112
GRI 405: Diversity and Equal Opportunity 2016			
GRI 405-1	Diversity of governance bodies and employees	Composition of the Board of Trustees Diverse Employment Opportunities	31 110
GRI 405-2	Ratio of basic salary and remuneration of women to men	Pay Level	115