វិទ្យាស្ថានបច្ចេកវិទ្យាកម្ពុជា

Institut de Technologie du Cambodge

Academic Booklet

Message from Direcor General

Institute of Technology of Cambodia (ITC) has made tangible progress toward its founder's dream to create a community of learning that crosses and indeed effaces science and technology boundaries.

By mounting rigorous engineering's programs, articulating increasing numbers of academic partnerships, and hosting national and international conferences that foreground ITC faculty scholarship and that of renowned scholars, and practitioners worldwide. The institution has taken its place as the leading engineering academic, intellectual and research center at the confluence of France, Japan, ASEAN and the world. In this unique learning environment inflected by the remarkable demographic diversity of student, faculty and staff bodies'attention is brought to bear on the role of engineering knowledge across multi-lingual of Khmer, French and English.

Our faculty accomplishes innovative multidisciplinary research in the science and technology fields. ITC also hosts annually over hundred international lectures and seminars, workshops seminars, and working papers series in sciences and engineering. The Institution has articulated partnerships with other academic institutions, such as in Europe, Japan, ASEAN, Korea, as well as a consortium of 18 other members from France, Belgium, Japan, and Thai universities.

Together with the Board of Trustees (Board Council of Administration), the Director's cabinet, the student's alumni, industries, I take great pride in welcoming you to our academic community and in inviting you to explore the world of learning that goes on at our institution by availing yourself of the wealth of information on ITC website. I look forward to hearing from you.

Welcome to the Institute of Technology of Cambodia (ITC). Since its establishment in 1964, ITC has a proud record of success and achievements contributed toward nation building through human resources development for Cambodia economic growth. ITC has, for more than four decades, established a link between the French and the English speaking networks in the region and in the world. With its numerous collaborators, administrators, students, faculty staff and alumni, this institution offers a unique multilateral context for an exchange of views with ministries, local authorities, NGOs, the private sector and partner institutions. ITC has a mission to train students with high quality education in the fields of engineering, sciences and technologies and to equip graduates to meet the rapidly changing, economic demands and increasing innovative skills towards technology transfer to the community and entrepreneurship. Students are provided with a strong scientific base and technical know□ how and skills which allow their integration and evolution in the labor market. This is possible because of highly competitive students which are selected through entrance examination, research oriented faculty and infrastructure that is most suited towards quality of teaching and learning. Apart from focusing on academics, ITC also lays emphasis on R&D activities toward skills for innovation by turning research output to business and technology transfer. Based on the decision of the annual board meeting, the future orientation of ITC is to expand the engineering education in response to the needs of Cambodia future economy and to develop research platforms in order to sustain the development of the country. This requires strengthening the basic scientific knowledge, developing research programs in connection with the private sector and national and international stakeholders, supporting communities, fostering economic development through entrepreneurship programs, and to help our graduate students integrating the global economy and to prepare them for the professional world. On behalf of ITC, I am thankful to government and collaborators from academia local and international and industry for their support. Best wishes!

Prof. Dr. PO Kimtho

About ITC

BACKGROUND

Institute of Technology of Cambodia (ITC) is a Cambodian Higher Education Institution which was founded in 1964 and supported by cooperation between the Cambodia and the former Soviet Union. More than 10000 executive members have been graduated from ITC. They are currently working intensely on the economic and social infrastructure development of Cambodia.
In the current context of globalization and fast transformations of new technologies ITC's main concerns are to play an efficient role in the Cambodian society and to be at the cutting edge of development to improve our educational system. Our goal is to provide students with a high quality education in the fields of engineering sciences and technologies. Students are provided with technical know-how and skills of analysis which allow integration and evolution in the labor market. To achieve this, the academic and international scientific research requires development.

HISTORY

ITC is a Public Institution producing Human Resources in the field of Engineering:

- 1964-1975 : Institut Technique Supérieur des Amétiés Khméro-Soviétique
- 1975-1979: Closed under Khmer Rouge
- 1979-1982: Renovation
- 1983-1992 : Institut Technique Supérieur des Amitiés Kampuchea-Soviétique
- 1992-1994 : Institut de Technologie de Phnom Penh
- 1994-Present : Institut de Technologie du Cambodge

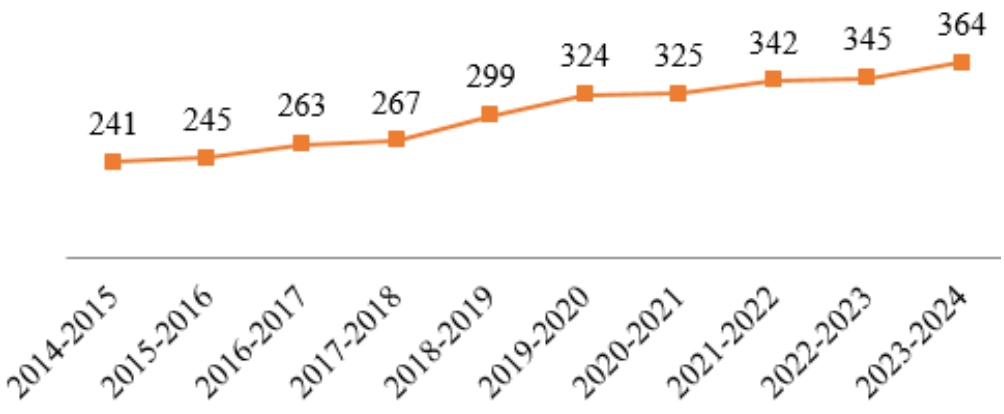
Besides our academic activities, ITC contributes to maintain sustainable development and decrease the inequalities within our society through its internal functioning and opening-up to foreign countries and the way their students get admitted. The current development of ITC owes a lot to the support of the national community and the great efforts made by staffs and students from generation to generation.

In 1993, Cambodian and French governments agreed to renovate ITC with a view to improve performance of the administration and financial services along with the educational system of the institution and the human resources. ITC enjoys numerous cooperative agreements with European, Regional, and local Universities. Those agreements help improve the quality of the educational program, create new degrees, and enable collaboration in new research projects and mobility of teachers and students. ITC also enjoys privileged relations with a great number of Cambodian companies and multinationals which have branches throughout Cambodia. Beyond regular exchanges, ITC has developed a Continuing Education programs and a large laboratory services proposal.

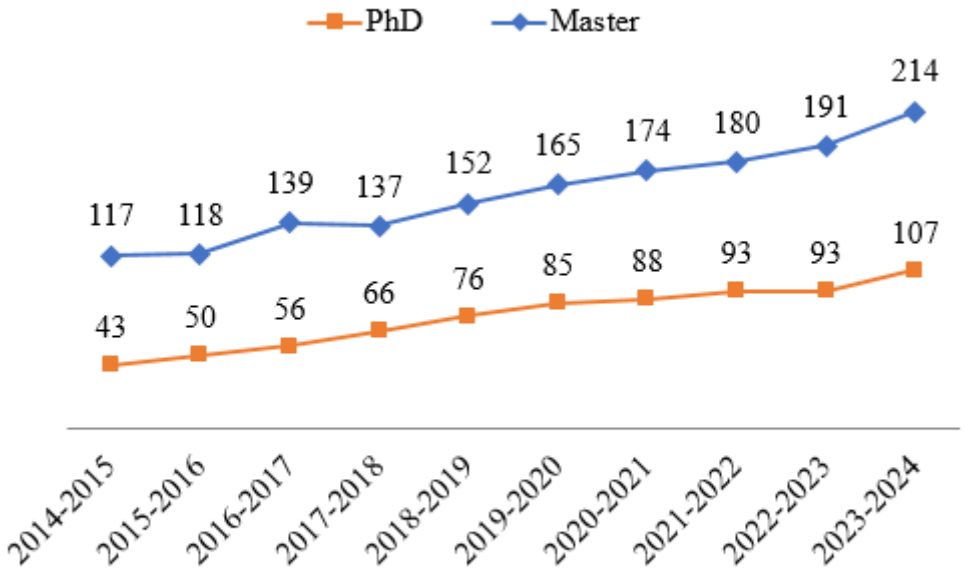
STAFF

In 2023-2024, ITC has 364 (101 females) full-time, trainee and part-time lecturers, lecturer-researchers and full-time researchers. Table below shows the number of lecturers in different departments. Among these 364 lecturers, there are 107 PhD (29.4%), 214 Masters (58.8%) and 43 other degrees (11.8%). They give lectures and also participate in research project, as well as other administrative

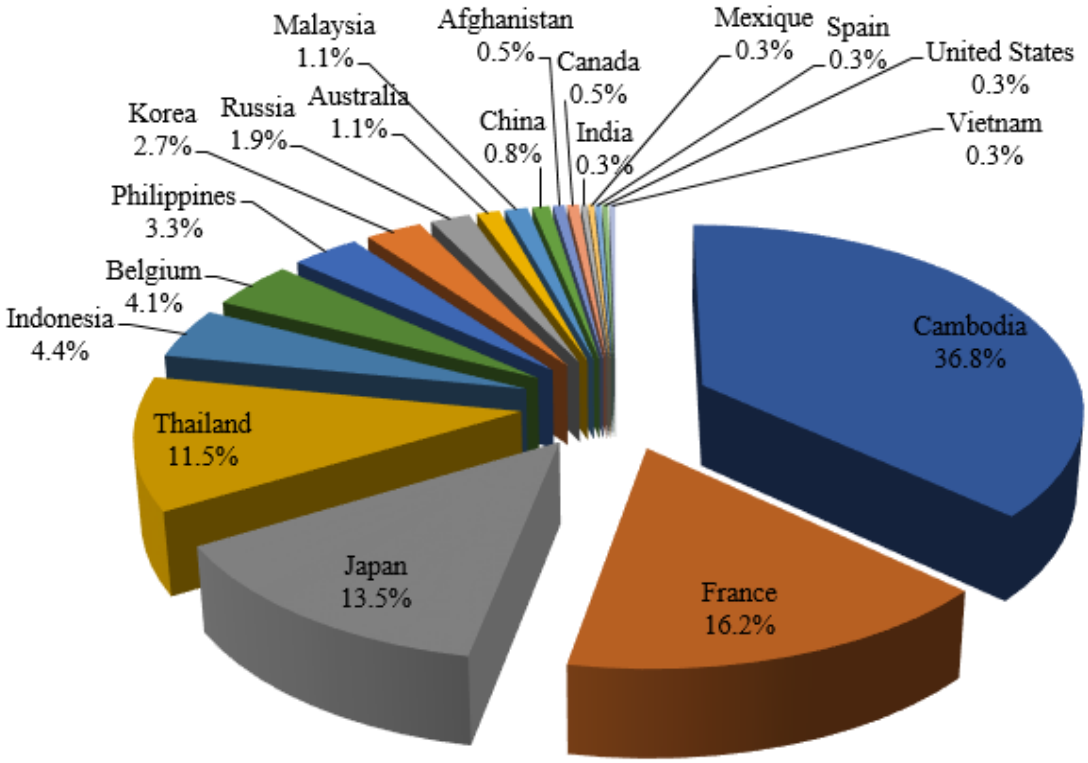
Degree		GCA	GCI	GAR	GEE	GGG	GIC	GIM	GRU	GTR	GTI	MAS	DTC	SF	SA	Total
PhD	Full-time	14	15	0	6	8	2	7	11	5	1	3	0	0	0	**72**
	Trainee	5	4	2	0	5	0	1	5	0	1	0	0	0	0	**23**
	Part-time	4	1	0	0	1	0	0	2	1	1	2	0	0	0	**12**
Sub-Total 1		**23**	**20**	**2**	**6**	**14**	**2**	**8**	**18**	**6**	**3**	**5**	**0**	**0**	**0**	**107**
Msc.	Full-time	2	3	0	6	4	8	14	6	4	1	4	10	5	2	**69**
	Trainee	18	2	5	15	7	9	10	4	0	0	0	0	0	0	**70**
	Part-time	4	5	7	1	1	2	2	5	2	6	15	6	8	11	**75**
Sub-Total 2		**24**	**10**	**12**	**22**	**12**	**19**	**26**	**15**	**6**	**7**	**19**	**16**	**13**	**13**	**214**
Bsc.	Full-time	0	0	0	0	0	0	0	0	0	0	0	3	4	0	**7**
	Trainee	0	0	0	0	0	6	0	0	0	0	0	0	0	0	**6**
	Part-time	0	0	5	1	0	0	0	3	0	0	0	1	14	6	**30**
Sub-Total 3		**0**	**0**	**5**	**1**	**0**	**6**	**0**	**3**	**0**	**0**	**0**	**4**	**18**	**6**	**43**
Total		**47**	**30**	**19**	**29**	**26**	**27**	**34**	**36**	**12**	**10**	**24**	**20**	**31**	**19**	**364**



Evolution of Number of Lecturers/Researchers.



Evolution of number of PhD and Master holders.



ITC lecturers/researchers graduated from different countries.

Vision

ITC aspires to be the foremost university in Cambodia, excelling in education and research in Science, Technology and Engineering. Our vision extends to become one of the premier institutions in the region, excellence in Science, Technology and Engineering.

Mission

ITC has set 2 main missions as following:

- Cultivate talented and skilled graduates in science, technology and engineering by 2030
- Drive applied research aims at fostering start-up and technology transfer by 2030

Objectives

Goal By 2030:

- 17,200 talented and skilled graduates aligned with evolving needs of the job markets produced
- 175 applied researches dedicated to fostering innovation, start-up and tech transfer developed

Strategy for 2021-2030

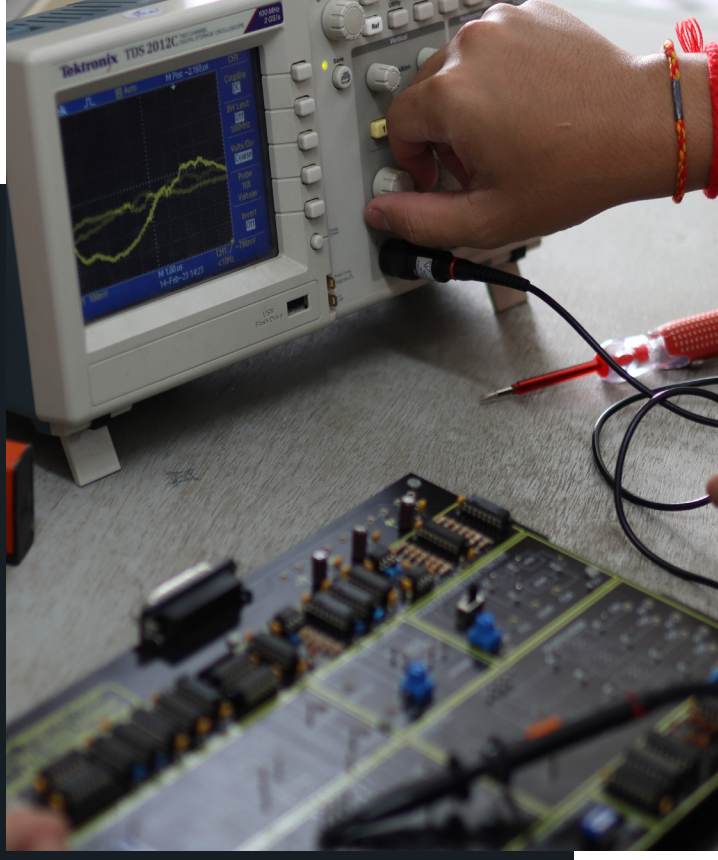
To achieve its goal, ITC has set 5 main strategies as following:

1. Implement academic programs to comply with national or/and international standard and develop a new academic program response to Cambodia's labour market need
2. Build human capitals and modernize technology for improving effectiveness of institutional governance, management systems, and financial system
3. Develop Infrastructure and modernize equipment and technology
4. Conduct an investment project linked with applied research, start-up, and technology transfer
5. Modernize school management information system and increase ITC's visibility by sharing education and research outcomes with public

1st Strategy

Implement academic programs to comply with national or/and international standard and develop a new academic program response to Cambodia's labour market need

- Improve academic program by partnership with partner universities and industries.
- Conduct self-assessment of each program toward accreditation and implement student's learning outcome assessments and teacher's performance
- Develop investment project for the establishment of a new academic program in response to the needs of market
- Promote and award faculty who achieved curriculum to meet national standards or/and undertake an investment project.
- Use of technology for improving teaching and learning (digital transformation)



2nd strategy

Build human capitals and modernize technology for improving effectiveness of institutional governance, management systems, and financial system

- Prepare and undertake HR development and qualification upgrading plan for faculty and capacity building of supporting staff
- Develop and undertake staff policy for awarding and promoted system according to staff annual result agreement
- Undertake the decentralized system to faculty/department and train staff for implementable on governance and management
- Invest in physical infrastructure to support decentralized implementation
- Develop and undertake information management system for administrative and financial management.

3rd strategy

Develop Infrastructure and modernize equipment and technology

- Make a plan on the needs of physical infrastructures and equipment for supporting from MoEYS, MEF, and development partners.
- Enabling a good environment at each department by installing sufficient equipment, tools and technology
- Reinforce and expand cooperation and memberships with national and international development partners for the development of lab equipment and technology
- Develop and undertake information system for managing lab equipment and create entity/office for the operation and maintenance of equipment.
- Develop guideline and conduct M&E for the use of facility and

4th strategy

Conduct an investment project linked with applied research, start-up, and technology transfer

- Build the capacity of researchers to apply for big funding projects from local and international agency/partner
- Develop and implement an investment program to achieve the result framework of the research and innovation center
- Carry out applied research for start-up and technology transfer linked with development
- Create legal documents related to public-private partnership, intellectual property rights, and expansion of industrial cooperation
- Provide a support for presentation, publication, and incentive to outstanding researchers

5th strategy

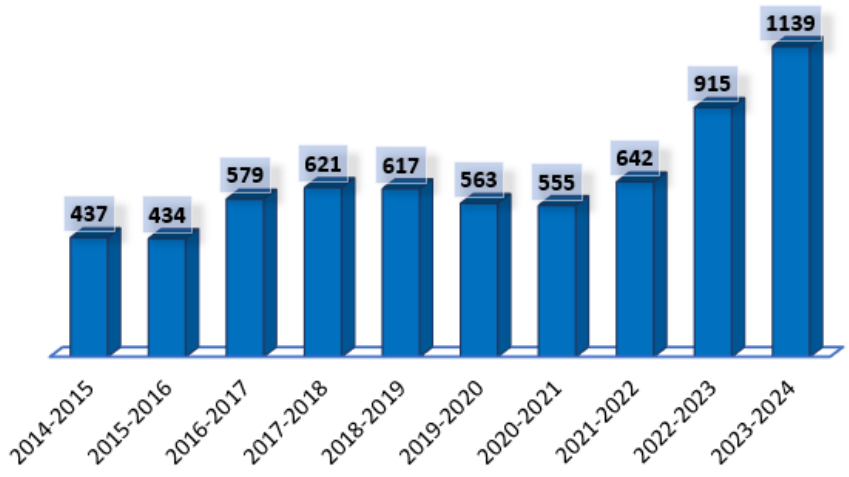
Modernize school management information system and increase ITC's visibility by sharing education and research outcomes with public

- Create a 10's year result framework at each department/faculty on curriculums and research to be achieved
- Use enterprise resource planning
- Develop a school management information system for outreaching program standards, curriculums, enrolled students, graduates, and student's generating income to stakeholders
- Meet with upper-secondary school students to share the program standards, curriculum, and results achieved,
- Organize competitive events related to incubation programs, start-up, and technology transfer.

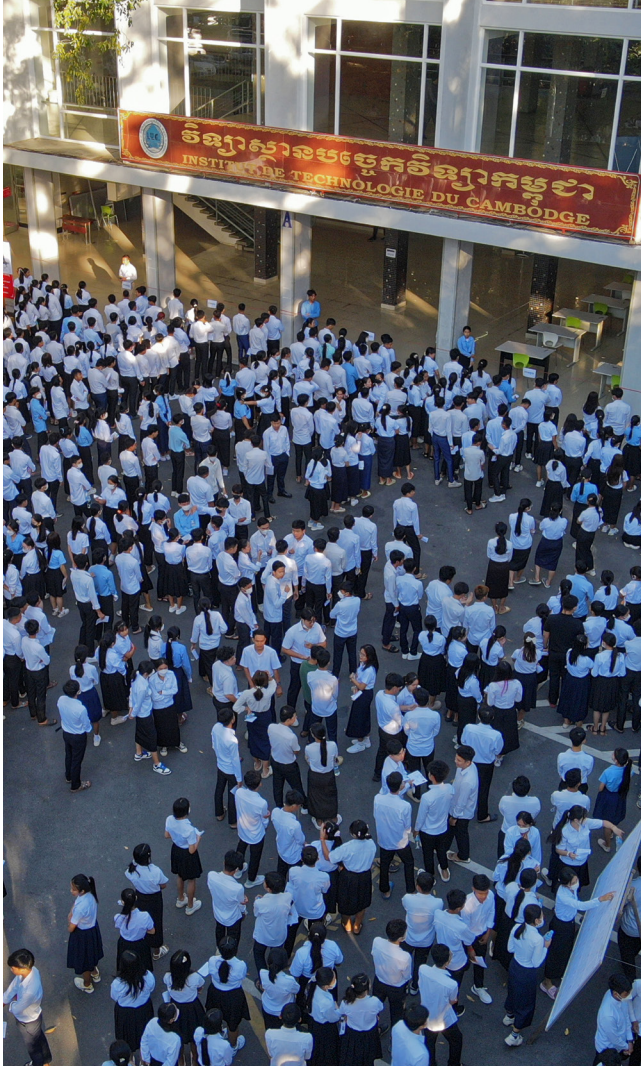
IV. Academic Program

1. Associate Program of Engineering

As of February 2024, there are 1139 students in Technician programs in academic year 2023-2024. Total number of students are 437 in 2014-2015 and 434 in 2015-2016. From the academic year of 2015-2016, this number increases to about 200 in next 6 years and continues increasing up to 700 in 2023-2024.



Total number of technician students since 2014-2015



2. Engineering program

Registration to the entrance exam of Engineering Program took place from 29 November 2023 to 18 December 2023. In total, 3684 candidates (1326 females) registered to the examination in Phnom Penh.

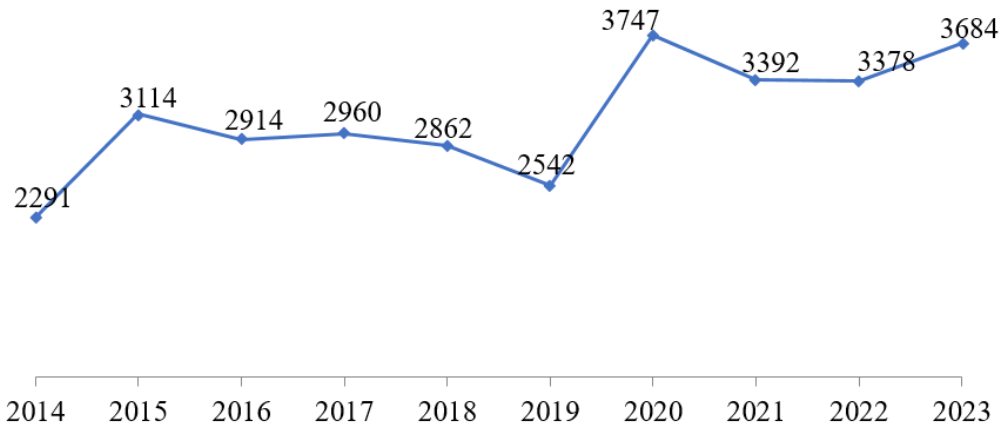
Result of the Entrance Exam was announced on 22 December 2023. There are 1551 successful candidates (502 Females) and 409 candidates in reserved list (174 Females).

The number of successful candidates remained around 800 from 2014 to 2016. Due to new building and equipment, number of successful candidates were increased every year from 1002 in 2017 to 1700 in 2020 but slightly decreased to 1551 in 2023.

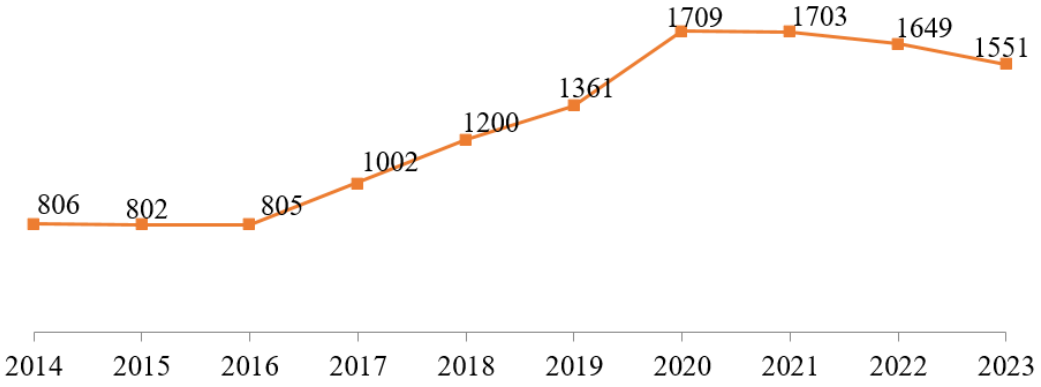
In total, 1380 students (474 females) have enrolled to Engineering Program in 2023-2024.

As of February 2024, there are 6913 students in Engineering programs in academic year 2023-2024 shown figure below.

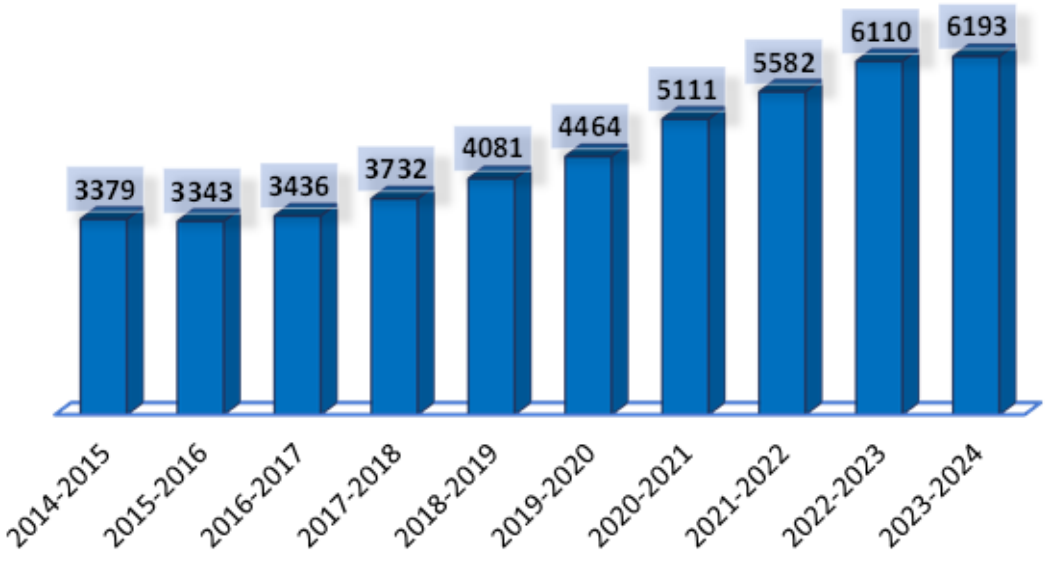
There is an increase of total number of engineering students from 3379 in 2014-2015 to 6913 in 2023-2024.



Number of Candidates registered in the entrance exam.



Evolution of number of successful candidates



Total number of engineering students since 2014-2015

Faculty of Chemical Engineering and Food Technology

Faculty of Chemical and Food Engineering is advancing and excellent in the two fields of Engineering: Chemical Engineering, and Food Science Technology Engineering. The Food Science Technology Engineering program is one of the older programs under the faculty, established in 1986. This Food Engineering program is a combination of food science, technology, and engineering with the core focus on problem-solving, process optimization, Food industrial design, Food Processing Technology, Food product development, valorization of by-products to reduce food waste, applied science and technology in food manufacturing, and integration of digital solutions in the processes (process optimization) to improve traceability, quality, safety, and efficiency in the production, and distribution system of Food. This program is highly relevant to the local needs and national development goals in Cambodia.

Chemical Engineering is a 5-year engineering program established in 2017 under the Faculty of Chemical and Food Engineering. This program is a combination of industrial process, bio-process, environment, chemistry, and engineering. Chemical engineers

could be responsible for chemical production, synthesis, industrial development and design, and purification of materials that are associated with fuels biodiesel, and lubricants (petroleum), pharmaceuticals, cosmetics, fertilizers, synthetic fibers, microelectronic components, plastics, and food products. Chemical engineers are involved in minimizing and reducing waste, and energy use to make these products in safe and sustainable ways and lower the impact on the environment. This Chemical Engineering program shapes the students to different specializations of chemical engineering such as agro-chemical process and analysis engineering, pharmaceutical and cosmetic engineering, application of advanced organic chemistry, etc.) that could support applied chemistry for industrial engineering, pharmaceutical, and cosmetic engineering, etc.

Academic Program

The faculty of Chemical and Food Engineering offered two Engineering programs (Chemical Engineering, and Food Science Technology and Engineering) and Associate Degrees (two-year program). For the academic year 2023-2024, the faculty has 860 students, 45 teaching staff, 8 lab assistants, and 18 laboratories. The faculty is also associated with a master's program namely “Agro-Industrial Engineering” and PhD program, and a research unit on Food Technology and Nutrition.

Vision

To sustainably develop highly trained human resources in the fields of chemical engineering and Food Science Technology and Engineering.

Research Interest

The faculty of Chemical and Food Engineering is linked to two main research units. Food Science Technology and Engineering is related to the Food Technology Nutrition research unit, and Chemical Engineering is related to material science, Waste Water, and industrial waste management. Chemical engineers are involved in minimizing and reducing waste, and energy use to make these products in safe and sustainable ways and lower the impact on the environment.

- To be an excellent unit for research, innovation, training, and consultancy services in the field of food science, technology, and chemical engineering contributing to the sustainable development of Cambodia. Kjeldahl system (Donated by CIUF, Belgium)
- To increase the visibility of the Food Technology Nutrition research unit, and Waste Water, and industrial waste management by strengthening researchers' capacity in food-related fields to be nationally and regionally recognized
- To create standardized laboratories for research and hall technology for pilot scale
- To boost the research activities through local and international collaborations (Universities, Government, SMEs, NGOs)
- To promote prototyping and technology transfer; and to provide training and consultancy services to food industries and relevant stakeholders
- To disseminate scientific outputs through national and international publications and scientific events

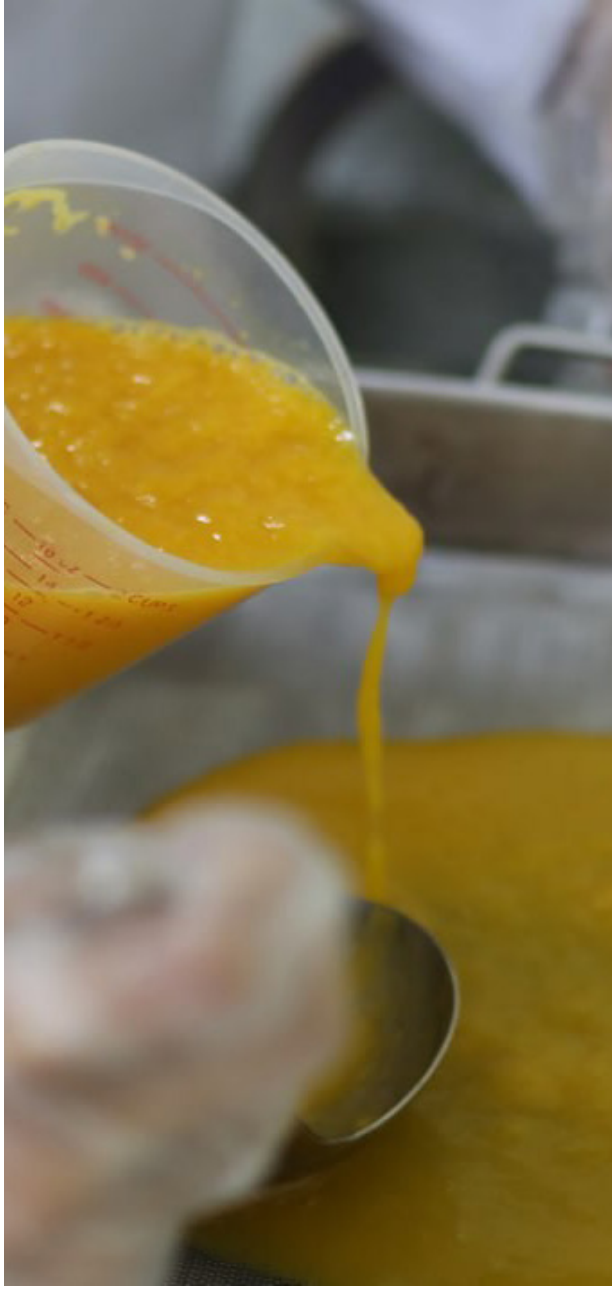
Research Theme

- Biotechnology (fermentation, microbiology, plant, wastewater)
- Extrusion technology
- Extraction and purification technology
- Beverage technology
- Food product development and innovation
- Food safety and shelf life improvement
- Food composition and food contaminant analysis
- Bio-fertilizers and bio pesticides
- Material Sciences, and bio-packaging
- Wastewater: Water & Wastewater Treatment, Water Quality Monitoring and Control • Arsenic Removal System and Drinking Water System, Low-Cost Wastewater Treatment System
- Solid waste management: Composting as Treatment and Organic Waste Recovery, Biogas as Energy Recovery from Livestock Waste

Laboratories and Facilities

Food Hall Technology

Drying equipment: Oven dry, Vacuum oven dry, Food dehydrator, freeze dryer, and Mini Spray Dryer and Encapsulator; Packing machine: Vacuum packing, Capping machine, Vacuum Sealing Machine, Mini can seamer, Capping Machine machine, Full automatic desk Boxy Cup sealer, Packaging machine; Grinder: Frut grinder, grinder, mixer, meat grinder, Spice grinder machine, deep frying twin tank, oven baking, Sausage Filler, filter press, Screw press, Baking microwave, Double chamber Steamer, Slicing Machine, Wafer rolls machine, Juice extractor, Cold Press Juicer, Soy milk making machine, Brew Fermenter, Incubator, bioreactor, 50L-pasterize Machine, UV stelilizer, Pasteurizer Machine with stirrer, Vacuum Evaporator, Vertical autoclave, Pressure Steam Autoclave Sterilizer, Autoclave



Rice base Rice-based Laboratory

Pressure Cooker, Mixer, Twin Screw Extruder, Variable Speed Rotor Miner, Air fryer, Rotary mixer bar for tube extraction, Texture analyzer, Rotary mixer bar for tube extraction

Physico-chemical analysis, Food Chemistry

Absorption Atomic Spectrometry and HVG (AAS-SHIMAZU-AA7000 & HVG), High-Performance Liquid Chromatography: HPLC-UV-DAD Detector, UFLC, GC-MS, Bench-top spectrophotometer (Color measurement), chroma meter, UV-VIS Spectrophotometer, Automatic Kjeldahl System Set, Digital Disperser, Moisture analyzer, Oven (for moisture analysis), Muffle Furnace, Soxhlet apparatus, Microwave Green Extraction, pH meter, Water activity meter, High Performance Fume Hood, Rotary evaporator, Fiber machine, Digital Multimeter, centrifuge, Cleaner Ultrasonic, Microwave digestion system, Microviscometer, Viscocity bath

Water Chemistry and Wastewater Laboratory

Spectrophotometer, Total dissolved solid meter, Viscosi-Meter, Titronic-SCHOTT, Turbidity meter (2100 Q Portable Turbidity, HACH), Dissolved Oxygen meter (HI 9146, HANNA), Conductivity meter (HI 8663, HANNA), Total dissolved solid (TDS meter)

Microbiological Laboratory

Orbit shaker, Incubators (Memmert, donated by CIUF, Belgium), Microscope, Ultra-Low Temperature Freezer (donated by JICA), Autoclave, Safety Cabinet (1300, Series A2, Thermo Scientific), Smasher (AES CHEMUNEX), Incubate shaker, plant growth chamber, Microscope, Mini PCR machine.

Services

- Testing services (Food, water, wastewater)
- Training service
- Technical consulting service
- Food Product development
- Join Research collaboration
- Lab and Equipment rental

Faculty of Civil Engineering

The Civil Engineering Faculty is advancing and excellence in the field of forming the undergraduate and graduate students, in areas of civil engineering to have a global approach to engineering projects in design, Construction and management of large construction projects of building, multi-function buildings, transport management and infrastructures. Moreover, our laboratory is well equipped equipment operated by experienced persons and has a well-known reputation and expertise.

- Civil Engineering
- Architectural Engineering
- Transports and infrastructure engineering

Research Interest

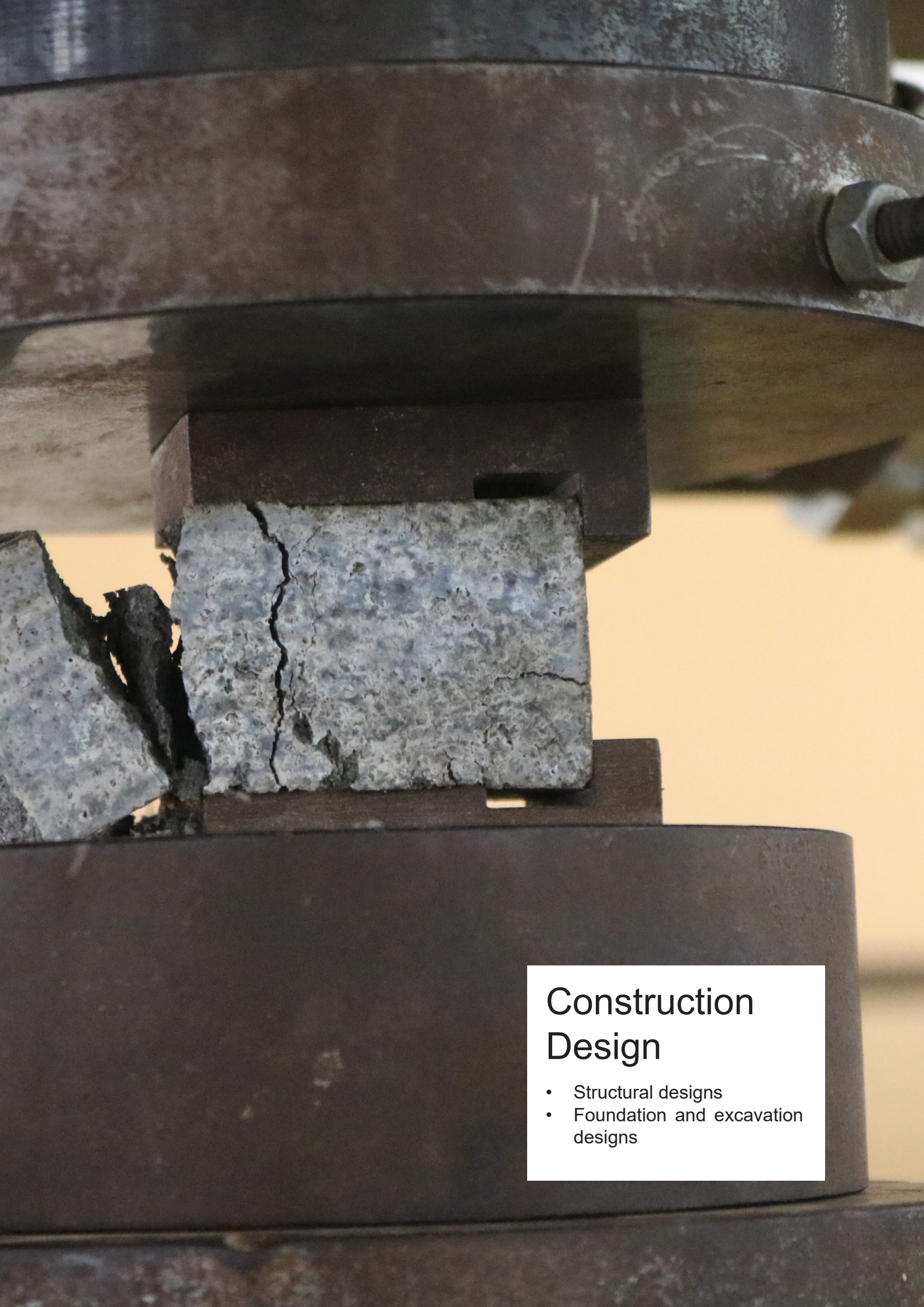
Our laboratory help processes the material behavior test for both institutions and private companies, in the mains purpose to improve the relationships for the future of our young engineering students.

Construction Materials

- Physical property tests of Sand, Coarse aggregate, Cement
- Steel test for construction
- Concrete mix design
- Soil tests for foundations, Roads and dams

Quality Control

- In situ concrete quality test
- In situ soil test
- Safety implementation



Construction Design

- Structural designs
- Foundation and excavation designs

Laboratories and Facilities

Laboratory Construction Material Testing:

- Universal Compression machine, 3000 KN: (Walter and Bay, donated by CIUF, Belgium)
- Compression Machine (500 KN)
- Marshall Compression Machine (donated by France)
- Vicat apparatus (donated by France)
- Slump cone,
- Diamond Coring Machine (B152/430P4, Donated by France)
- Diamond Core bit (DD-B152/430P4, Donated by France)
- Jetting Machine (Simplex)
- Flexural Machine,
- Tensile Machine,
- Viscosity Apparatus (Euromatest Sintco, donated by France),
- Bulk density apparatus (donated by France)
- Penetration Apparatus (Donated by France),
- Hand Compaction Apparatus,
- Cylinder molds 16x32cm and 15 x 30 cm
- Concrete test hammer
- Ultrasound Apparatus TICO.

Soil Testing Laboratory:

- Direct Shear Box Machine (Perrier Labotest, donated by France)
- CBR Compression Machine (Perrier, donated by France)
- CBR Compression Machine (CBR Tester-MATEST, donated by JICA)
- Hydrau-meter Apparatus (C-NTRDLS)
- Permeability Apparatus
- Oedometer Machine (donated by CIUF, Belgium)
- Tri-axial Machine (Wykeham, France13060, France, donated by CIUF, Belgium)
- Tri-axial Machine (Triatronic, Matest, donated by JICA)
- Proctor Machine (Proeti SA, Controlan, donated by CIUF, Belgium)
- Sieve Machine (Roto Lab, donated by France)
- Sand Cone apparatus (C-NTRDLS)
- Pycnometer (Gry-II Mortar Density meter, SHHZ, China, donated by France)
- Oven for testing moisture content (THERMOSI SR 1000, donated by France)

Bitumen laboratory:

- Air Entrainment Meter,
- Cement Mortar Mixers,
- Cement Bulk Density Apparatus,
- Jolting apparatus (Euromatest Sintco, donated by France)
- Ultrasound Apparatus for Steel,
- Ultraviolet Apparatus,
- CBR compaction machine,
- Mixer CONTROLAB,
- Los Angeles Abrasion Machine
- Hand compaction apparatus (Tecnotest, donated CIUF, Belgium)
- Kumagawa Extraction Apparatus (Controlab, donated CIUF, Belgium)
- Centrifuge Extractors
- Ring and Ball Apparatus
- Mortar mixer (EuromatestSintco, donated by France)

Services

Concrete Laboratory:

Test all properties of :

- Sand
- Coarse aggregate
- Cements and cement materials
- Steel

Soil Laboratory

Test soil properties used for

- Foundation construction
- Road construction and
- dame construction

Bitumen Laboratory

- Test bituminous properties and Pavement strength
- Penetration, Ring and ball, Marshall, Viscosity, Centrifuge extraction, Kumagawa test

Architectural Engineering Deparment

Architectural Engineering is a unique major in the construction field in Cambodia which is designed to provide students with the knowledge and skills that focus on the study of architectural and building design concepts, as well as knowledge of urban planning, landscape architecture, interior design, construction materials, topography, bill of quantities, project and site management, BIM in the construction sector, and GIS for data maps under the aim of producing the highly capable human resources to foster the implementation of sustainable architecture through the education research and engagement in the society.

Our mission is to educate and encourage the new generation of architects and engineers to shape the built environment with a practical function, aesthetic, and sustainable environment. We commit to fostering in creating a community learning atmosphere with creativity, analytical thinking, and combining technical skills.

Workshop Space

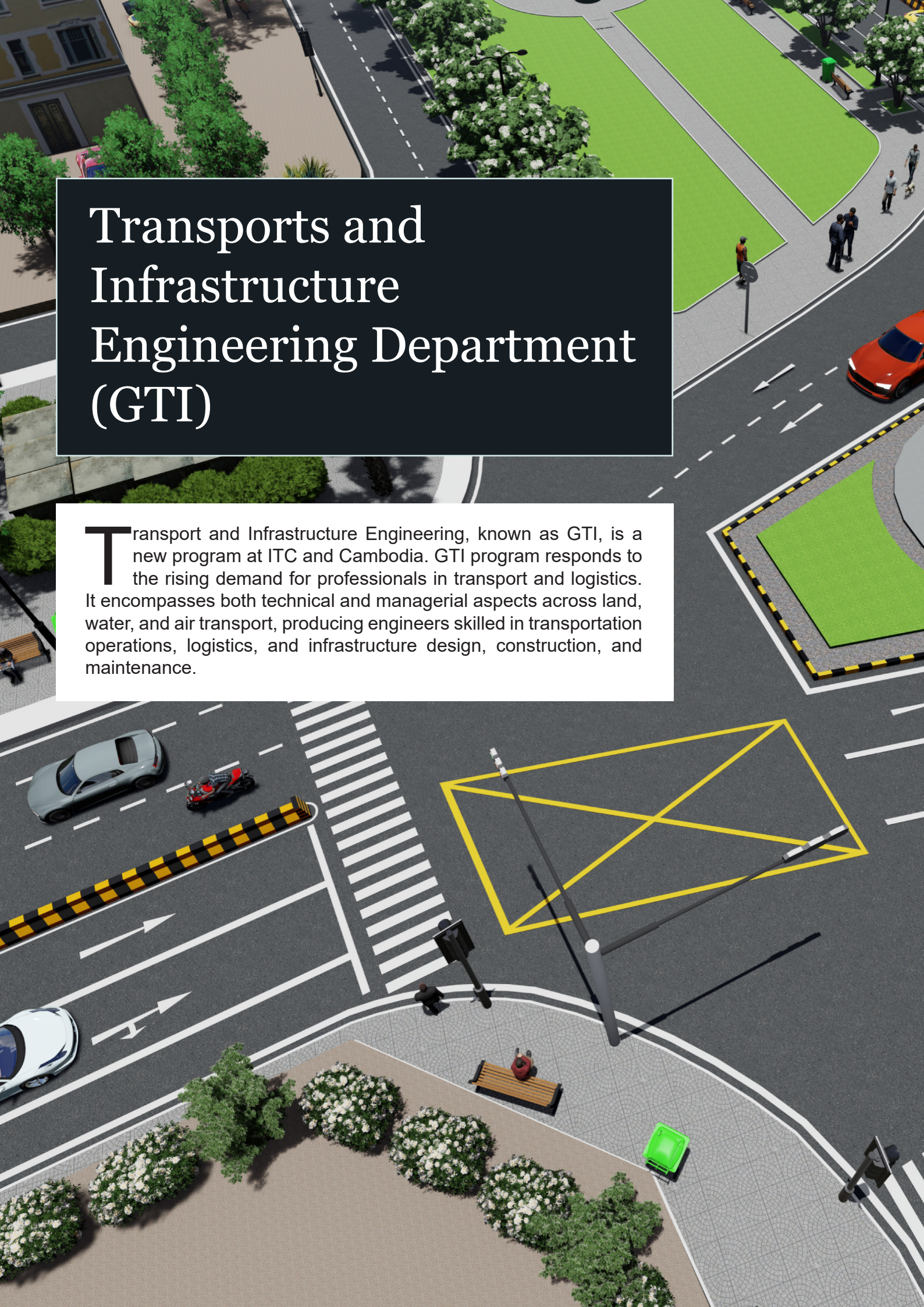
Our workshop hall is located on the ground floor of Building K. This space allows the students to work on their architecture model-making, and do their assignments. This room is also a space for the students to exhibit their works such as architecture models and posters.

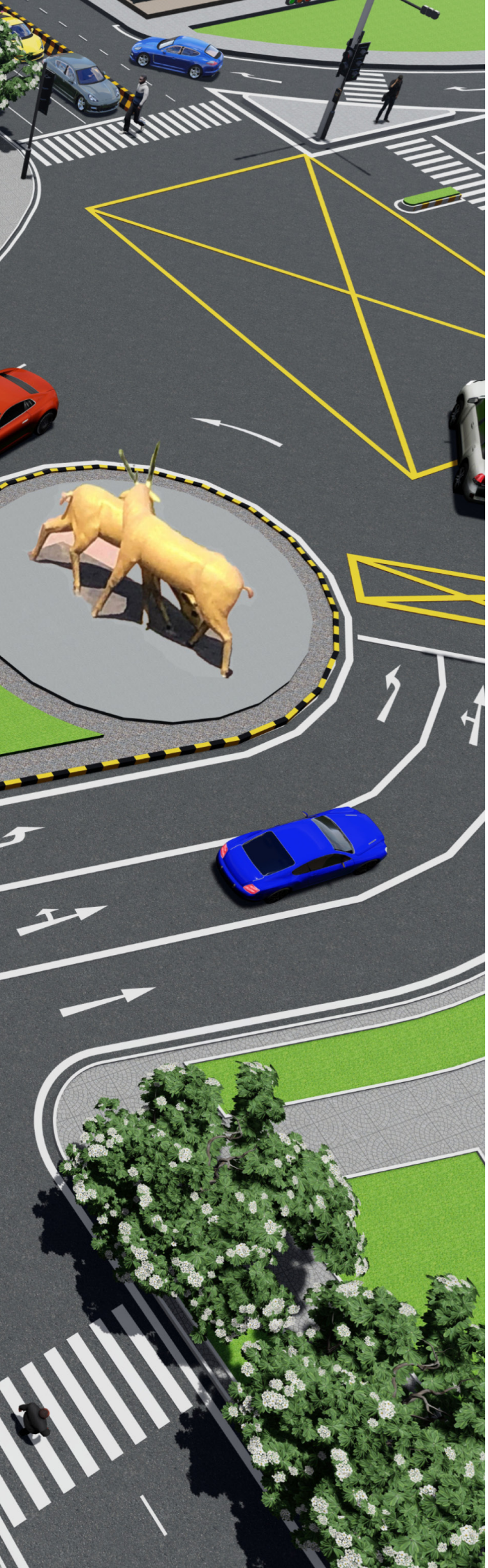
Virtual Lab

Our Virtual lab is located on the second floor of Building K, room K-304. Virtual lab (bureau virtuel) is for graphic collaboration meetings around a large size digital tablet with a pen connected to video-conference devices and a graphical interaction system, SketSha. Intended for project reviews among architectural engineering students and experts/lecturers, it allows remote interactors to annotate and draw together in real-time, from a blank page or on shared documents.

Transports and Infrastructure Engineering Department (GTI)

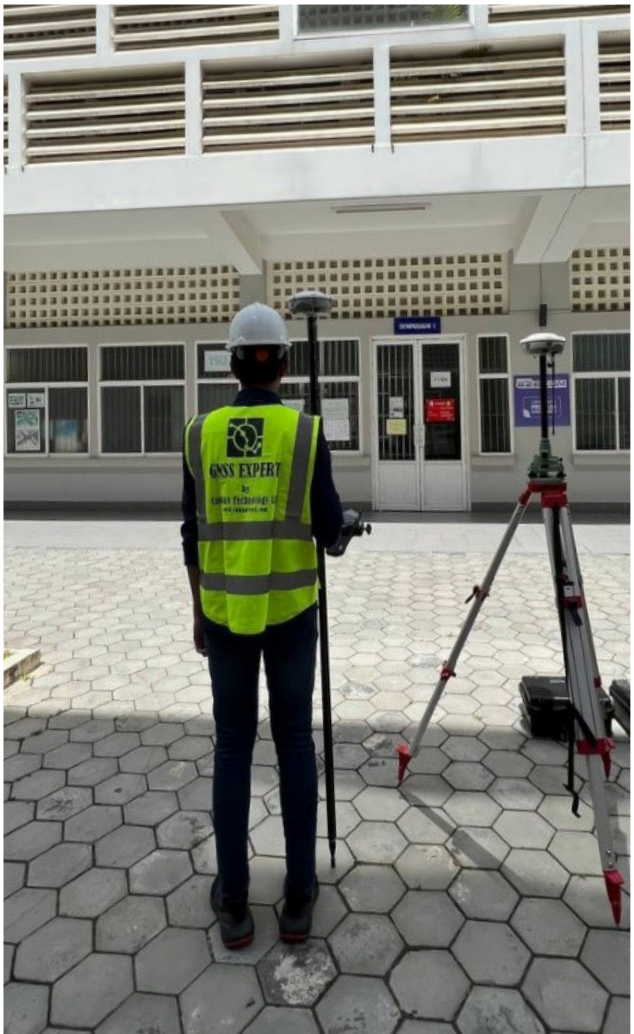
Transport and Infrastructure Engineering, known as GTI, is a new program at ITC and Cambodia. GTI program responds to the rising demand for professionals in transport and logistics. It encompasses both technical and managerial aspects across land, water, and air transport, producing engineers skilled in transportation operations, logistics, and infrastructure design, construction, and maintenance.



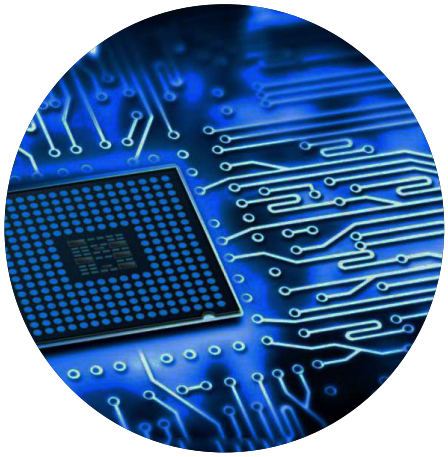


Traffic Engineering Laboratory:

- Traffic Simulation Software (PTV Vissim)
- Topo Survey Device (SinoGNSS T300 Plus)
- Speed Gun (Bushnell)
- GPS Devices (Garmin Glo 2, GPSMAP 64s)
- Air Particles Measure
- Measurement Sensor (RPLi-dar-A2)
- Statistical Software (IBM SPSS Academic + Amos)



Faculty of Electrical Engineering

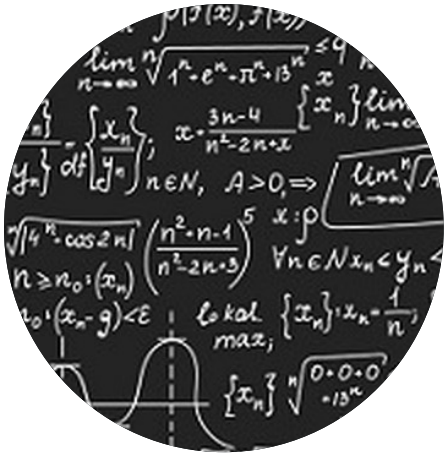


Department of Information and Communication Engineering

Department of Telecommunication and Network Engineering

Department of Electrical and Energy Engineering

Department of Industrial and Mechanical Engineering



Department of Applied Mathematics and Statistics

Department of Information and Communication Engineering

The Department of Information and Communication Engineering (GIC) was established in 1992 to respond to the demand of ICT skill workers for the development of Cambodia's economy. GIC is advancing and excelling in the field of Natural Language Processing (NLP), Information Security, Software Engineering and e-Learning development.

Academic program

Master program (2 years)

- Master of engineering in Computer Science

Engineering program (5 years)

- National engineering program in Computer Science
- International engineering program in Software Engineering
- International engineering program in Artificial Intelligence Engineering and Cybersecurity

Research Interest

Language Processing (Khmer)

Khmer document image analysis
- Khmer document image analysis
- Khmer word spotting: Khmer word detection and localization
- Khmer text recognition
- Khmer historical document analysis
- Reparation of Khmer historical documents

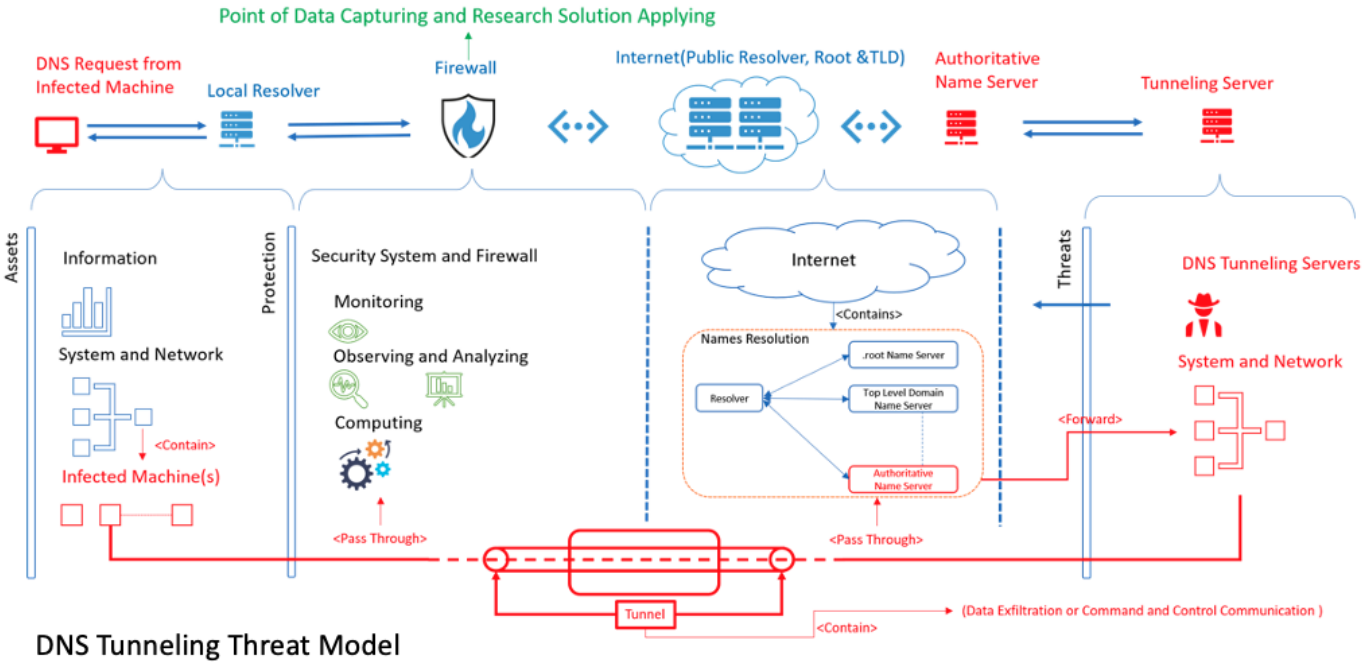
Air writing
- Learning tools
- User identification/authentication

Khmer language model
- Question and answer in Khmer
- Khmer chatbot
- Plagiarism detection

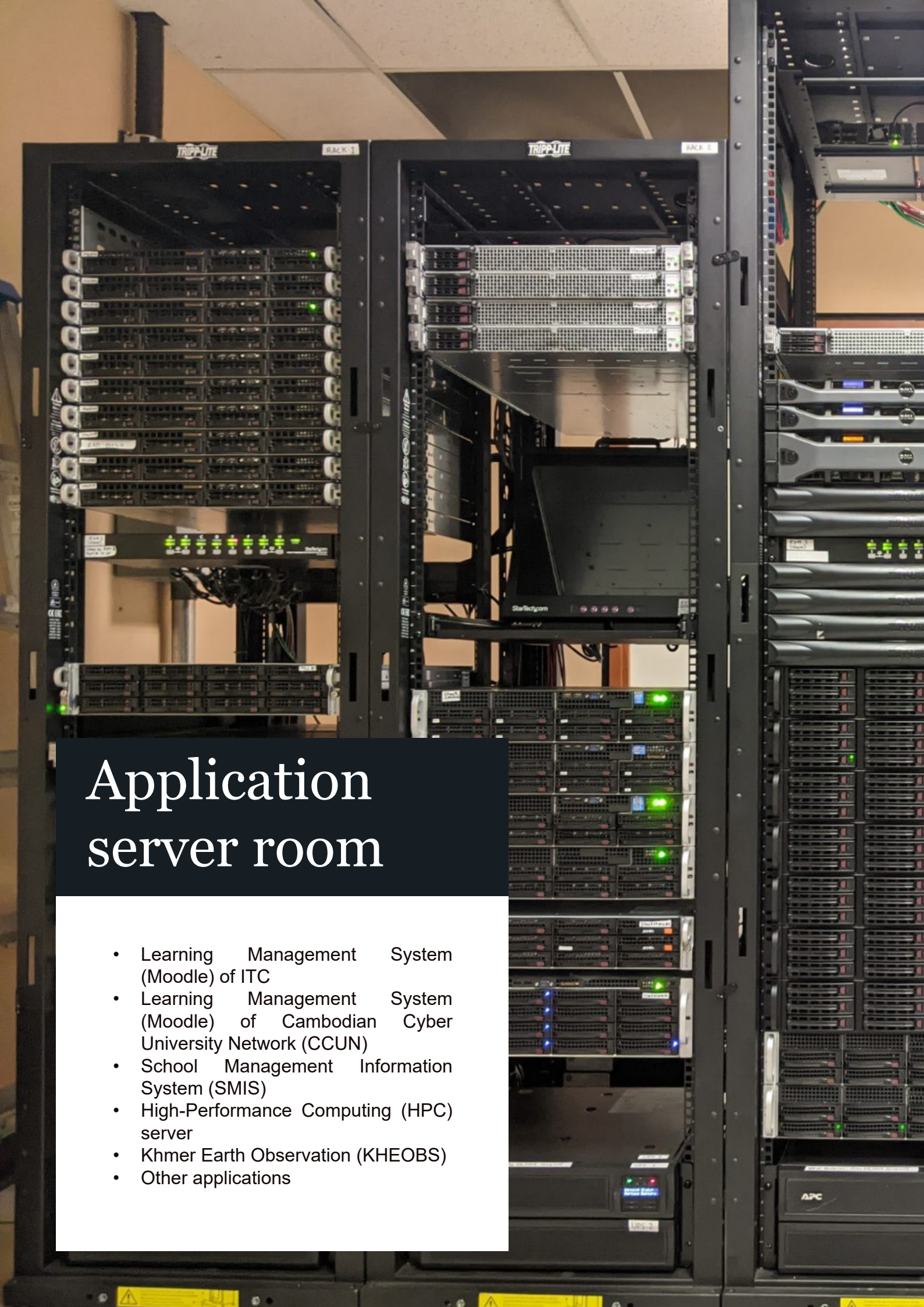
Reinforcement learning
- Khmer chess
- Robotics (collaboration with DCLab)

Information security

Malicious internet traffic detection
- DNS over HTTPs Tunneling Traffic Detection
- Dataset reconstruction based on the existing dataset and build new testbed environment to formulate the additional dataset



DNS Tunneling Threat Model



Application server room

- Learning Management System (Moodle) of ITC
- Learning Management System (Moodle) of Cambodian Cyber University Network (CCUN)
- School Management Information System (SMIS)
- High-Performance Computing (HPC) server
- Khmer Earth Observation (KHEOBS)
- Other applications


APC
APC

E-learning Services

- e-Learning development consultancy
- e-Learning content development and production
- e-Learning content operation and hosting
- Training on e-learning content development
- Studio renting and recording

Services

Laboratories and Facilities

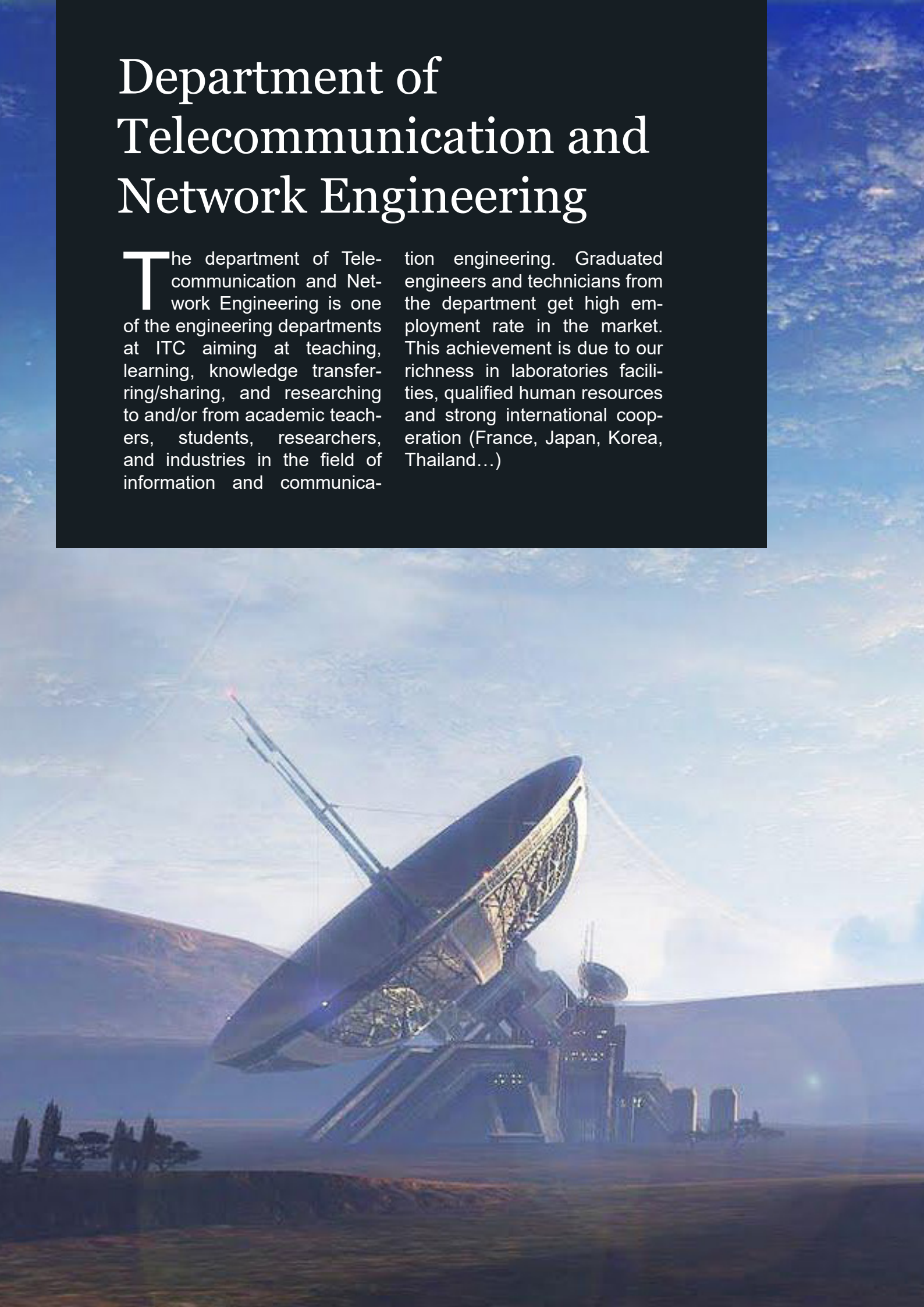
- General-purpose computer lab
- Computer hardware maintenance and repair lab
- Software programming lab
- Web programming lab
- Computer networking and server lab
- Advance computer networking and security lab
- Cloud computing lab

Services and consultancy

- IT solution consultation
- Database analysis and design
- System analysis and design
- Software development
- System hosting
- Language processing (Khmer OCR)
- Setting up School Management Information System (SMIS)
- Setting up Point of Sell (POS)

Department of Telecommunication and Network Engineering

The department of Telecommunication and Network Engineering is one of the engineering departments at ITC aiming at teaching, learning, knowledge transferring/sharing, and researching to and/or from academic teachers, students, researchers, and industries in the field of information and communication engineering. Graduated engineers and technicians from the department get high employment rate in the market. This achievement is due to our richness in laboratories facilities, qualified human resources and strong international cooperation (France, Japan, Korea, Thailand…)



Research Interest

The main priority of research area in the department is electrical energy and systems with more focus on:

- Applied IoT for various applications (agriculture, energy, healthcare, …)
- PCB design and fabrication
- Embedded electronics
- Wireless communication
- EMC measurement
- Computational method for electromagnetics

Through these main researched areas, the department is involving in many research projects

- Higher Education Improvement Project (HEIP): two research projects related to EMC testing and standards, digital fabrication LAB for various applications such as IoT in agriculture, healthcare, and energy sectors.
- Skill for Competitiveness (S4C) Project: to improve the technician program and also help to transform the work-based to skill-based workers
- Laboratory Based Education (LBE)-JICA project: to strengthen research activities and management by proposing numerous Ph.D. and master researched topics, and so on.

Laboratories and facilities

With the support from the Royal Government of Cambodia and partners, several laboratories and facilities have been established.

Communication and Security Lab

- Digital Communication Kits and PBX
- USRP (Ettus N210)
- Blade RF
- Access Control System
- Intrusive Detection System

Network Lab

- Computer Network
- Wireless LAN
- Ethernet Switches, Routers
- LoRa gateway
- IoT Integration System

Digital FabLab

- 3D printers
- Pick and Place Machine
- Reflow Oven
- Soldering Stations
- Label/Sticker Printer
- CNC Milling Machine
- CNC Laser Cutter Machine
- Function Generators
- Digital Oscilloscope
- Bench Power Supply
- Bench Digital Multimeter

EMC room

- Semi Anechoic Chamber
- Radiated and Conducted EMI Test System
- EMI Test Receiver
- Vector Network Analyzer
- Microwave Spectrum Analyzer
- Optical Splicer
- OTDR
- RF Power Reflector
- RF Sensor

Services

Besides providing education services and conducting research, the department of Telecommunication and Network Engineering also have the following services:

- Consultation Services in Project Development
- EMC Measurement and Testing Service
- IoT & Industrial IoT Project Development
- PCB Fabrication and Diagnosis
- Electronics Product Development
- Wireless System Design and Optimization
- RF Product Development and Product Training
- Baseband Modem Design and Development


REDLAB 310 / 25 KVA
Output Voltage
Output Current
Main Switch
On
Off
Output Contactor
Control Voltage
Set Point
Bus
Operating Mode
Auto
Manual
Min. Position
Bus Mode
Auto Mode

Department of Electrical and Energy Engineering

The Department of Electrical and Energy Engineering is a leader in practical-based education, covering a diverse range of specializations like electrical energy, automation, and electronics. The department's curriculum seamlessly blends theoretical foundations with practical, hands-on training, ensuring that students are adept at using the latest technologies. Equipped with state-of-the-art laboratories and collaborative research spaces, the department fosters a multidisciplinary approach to problem-solving. Graduated engineers and technicians of the department consistently achieve high employment rates, reflecting the quality and relevance of the training they receive. This success stems from state-of-the-art laboratory facilities, highly qualified faculty and staff, and robust international collaborations.

Research Areas

Research Areas in the Department of Electrical and Energy Engineering are electrical power and energy systems with more focus on:

- Power system: Planning, Architecture, Operation, Quality, and Reliability.
- Renewable energy and energy conversion: Solar PV, Pico hydropower, and hybrid energy system, and Electric vehicle.

Beside the above priority research theme, we are also interested in applied:

- Control and automation systems,
- Lifecyle Assessment of power and energy systems
- Wireless sensor network intelligence,
- Image and audio signal processing and recognition,
- Embedded device, and
- Internet of Thing (IOT).

Laboratories and Facilities

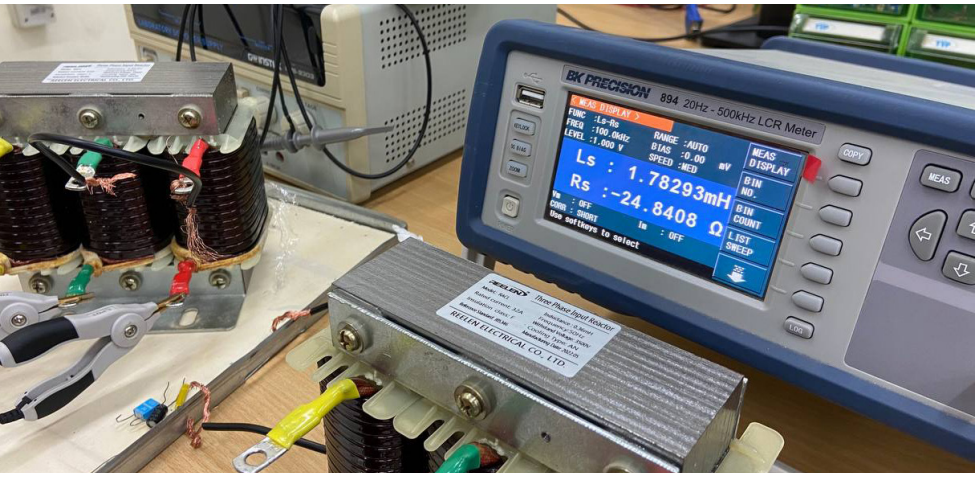
With strong support from international donors and our partners, numerous practical and research labs have been established. Each lab can be cooperated with the industries such as:

Power and Energy Engineering

- Building management system training (Schneider Electric): Struxure ware panel making kit, power monitoring making kit, security panel making kit, HVAC control panel making kit, HVAC control panel making kit (testo 435, donated by JICA),
- Universal Relay trainer (DL2108T23, De Lorenzo, donated by JICA),
- Solar Reference Cell (RC2-B-R, donated by JICA),
- Pyranometer (CMP 21, donated by JICA),
- Photovoltaic Inverter Ser (SB2500TLST-21, SMA Sol-

Industrial Electronic Lab and workshop:

or Technology, donated by JICA),
- Programmable Electronic Load (4760-6, NH Research, donated by JICA),
- Electrical Network Analyzer (AD6830-07, AD Instrument, donated by JICA)
- WT500 Power Quality Analyzer (Yokogawa),
- Electrical Safety Checker (multifunction Installation Tester) (C.A 6116, donated by JICA),
- Energy efficiency audit tool,
- PV array and its peripheries,
- Data acquisition system, DSPACE, Pica hydro turbine emulator,
- Insulation Tester 240643-E (donated by JICA),
- Digital Power Meter WT 3000 760302-02-SV-Q/G6/C12/B5 (donated by JICA),
- Electronic design, PCB Making Machine (Eleven Lab, MITS Electronics CNC, donated by JICA),
- Laser Cutting Machine (Epilog Mini 18 (30W), EPILOG Laser, donated by JICA)
- Lathe Machine (K-16, Hozan, donated by JICA),
- Milling Machine (NK-1, Mitutoyo corp., donated by JICA),
- Bench grinder,
- Microprocessor Experimental set (HP Prodesk400, Hewelett-Packard, donated by JICA)
- Network Development Kit (DM240001, microchip, donated by JICA),
- Development Board for Open Source OS.
- Research Oscilloscope (DPO5054B, PS2, donated by JICA)
- Digital Oscilloscope, DLM2052710/125-Q-HE/M1S (donated by JICA)
- Automation Control kit (541113, donated by JICA)
- Mechatronic Control kit (MECHKIT, donated by JICA)
- Automation Panel for Industrial 4.0 (supported by ASEAN Factori 4.0, Eurasmus+)



Services

Besides providing education services and conducting researches, the Department of Electrical and Energy Engineering also has the following services:

- Short course training: Energy efficiency in building, Rooftop solar PV system design, LV switchboard design, Electrical installation design, Power distribution modeling and analysis, Building management system, Industrial automation, Embedded device and electronic design.
- Consulting: Electrical installation design, Automation system design, Energy inspection and audit, Electrical safety audit, Hybrid energy system, and Power system planning and operation.
- Manufacturing: High quality PCB board manufacturing, small mechanical pieces, and Engraving services.

Department of Industrial and Mechanical Engineering

The Mechanical Engineering Department vision is to become the leading faculty in industrial and mechanical engineering in Cambodia by 2030. Through excellence in education, training, research, and technology transfer, we aim to produce highly competent human resources. Our graduates will be ready to become leaders and the backbone supporting Cambodia's journey toward becoming an advanced industrial nation.

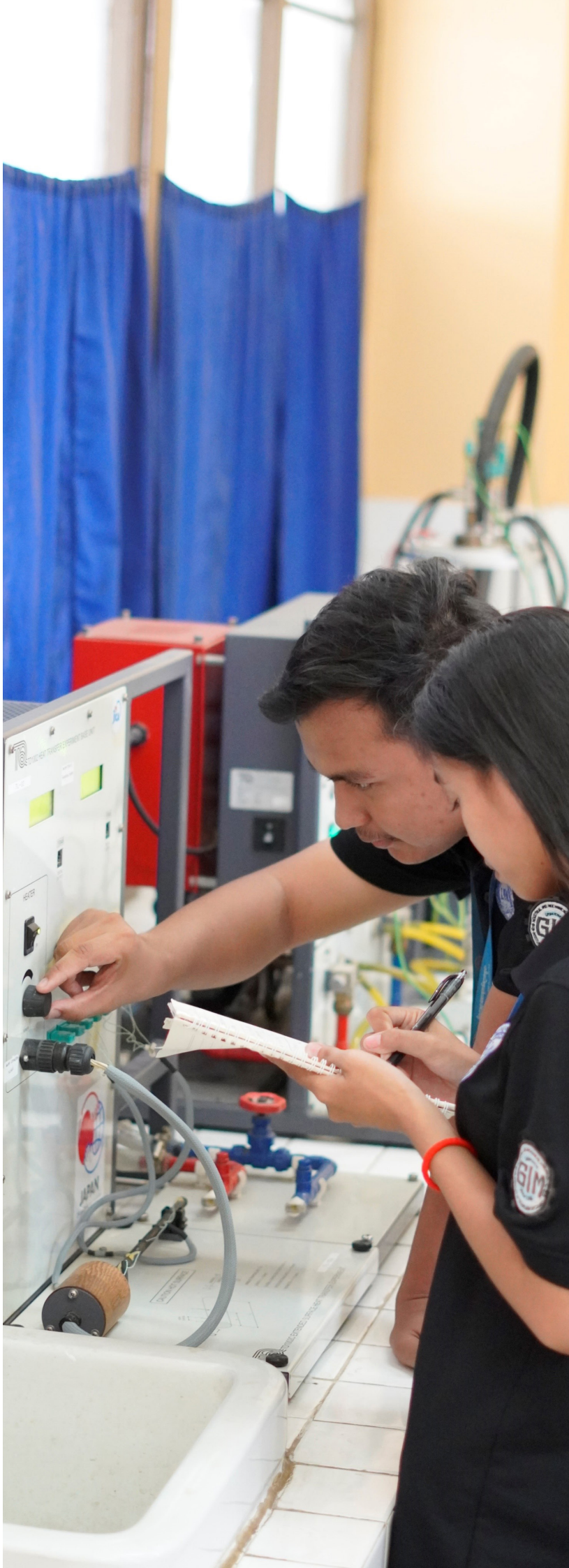
Research Interest

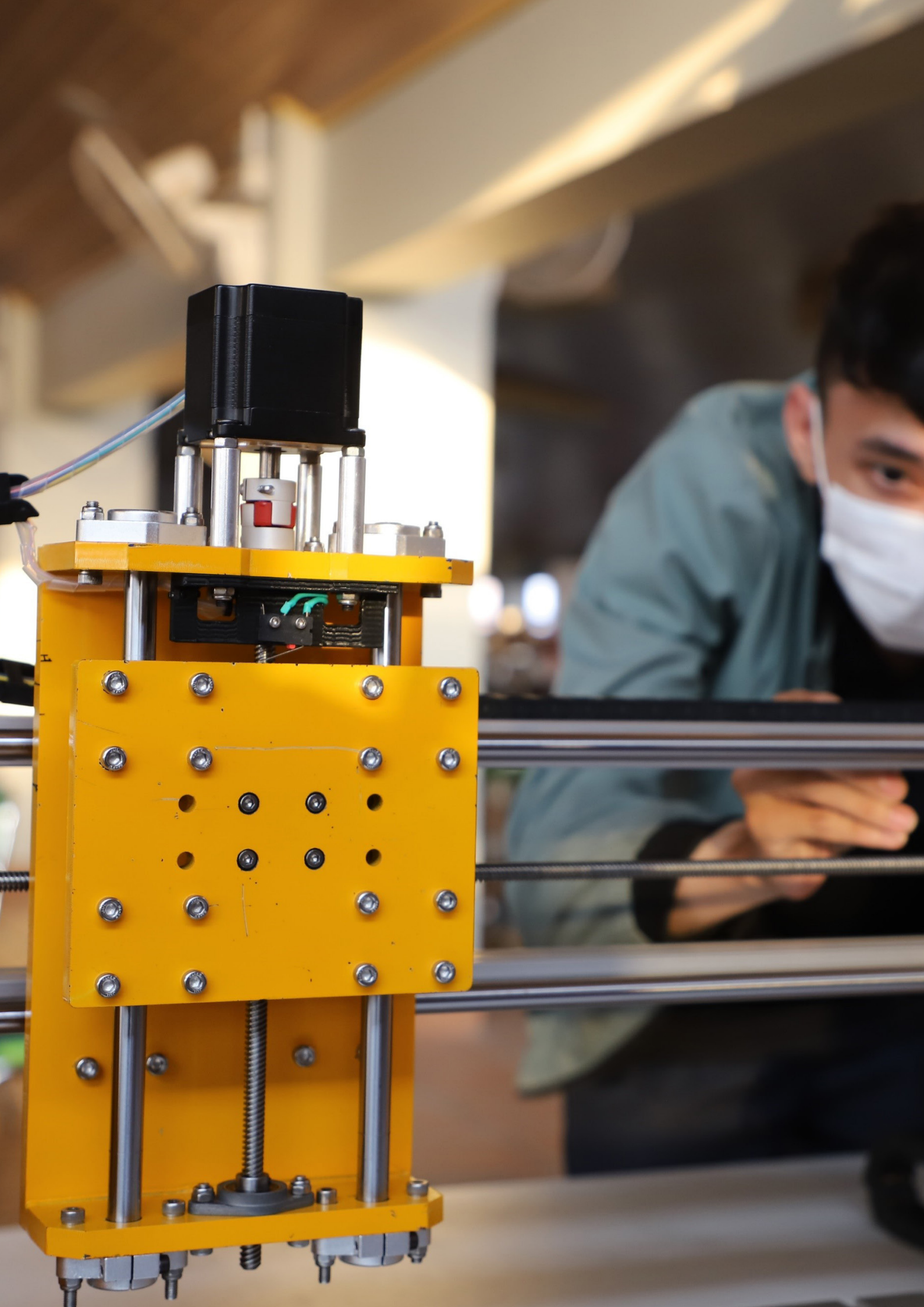
- Dynamical System Modeling, Control Systems, Estimation and Nonlinear Filtering, Identification, Robotics, Space Flight Control, and AI
- Renewable energy: Solar drying, Biomass and biogas, Alternative fuels
- Energy management and Energy efficiency: Energy audit, Heat recovery, Energy storage, Heat-activated and evaporative cooling systems,
- Heat Stress impact on productivity
- Failure analysis and prevention
- Characterization of materials properties: sandstone, construction steel, die and mold, and 3D printed polymers
- Non-destructive testing: ultrasonic, eddy current, and infrared thermography

Laboratories and Facilities

- Applied Thermal Energy Laboratory (Thermal Lab)
- Dynamics and Control Laboratory (DC Lab)
- Materials Science and Engineering Laboratory (MSE Lab)
- Metrology Laboratory
- Air-Conditioning Laboratory
- CAD/CAM Laboratory
- Fluid Mechanic Laboratory
- Internal Combustion Engine Laboratory
- Mechanical Workshop
- Welding Laboratory
- Air flow meters,
- Pressure sensors,
- Current sensors,
- Infrared temperature meter (Horiba H-545N)
- Noise measurement device
- Diagnostic Refrigerant Analyzer (Bacharach's PurChek™Pro)
- IEQ Checker (Bacharach IEQ Chek)
- Refrigerant & combustible gas leak detector (BACHARACH Informant 2)
- Heating-refrigerated circulator-bath (PolyScience SD07R-20-A12E)
- Exhaust gas analyzer (TESTO 350)
- Cloud Point and Pour Point Tester (Koehier K46195)
- Fuel analyzer (eralytics ES01)
- Oxidation Stability Testing Machine
- (Koehier K12290)
- Titrator (AUT-701)
- Flash point tester (PM4)
- Oxidation Stability Testing Machine (K12290)

- Strain gauging and data loggers
- A furnace for heat treatment
- Charpy impact test
- Micro Hardness tester (Shimadzu HMV- 2TADW)
- Digital Microscope and high speed camera (KEYENCEVW-9000 and VH-Z250R)
- Oscilloscope (Hameg HMO2022)
- Stroboscope
- Tensile tester 10kN (SHIMADZU AG-X plus)
- Torsion test (GUNT WP510)
- Laser Displacement Sensor (KEY-ENCE LK-G405) Engine
- Dynamometer with load control assembly (DE150 Eddy Current Dyno, Taylor)





Services

Engineering Services

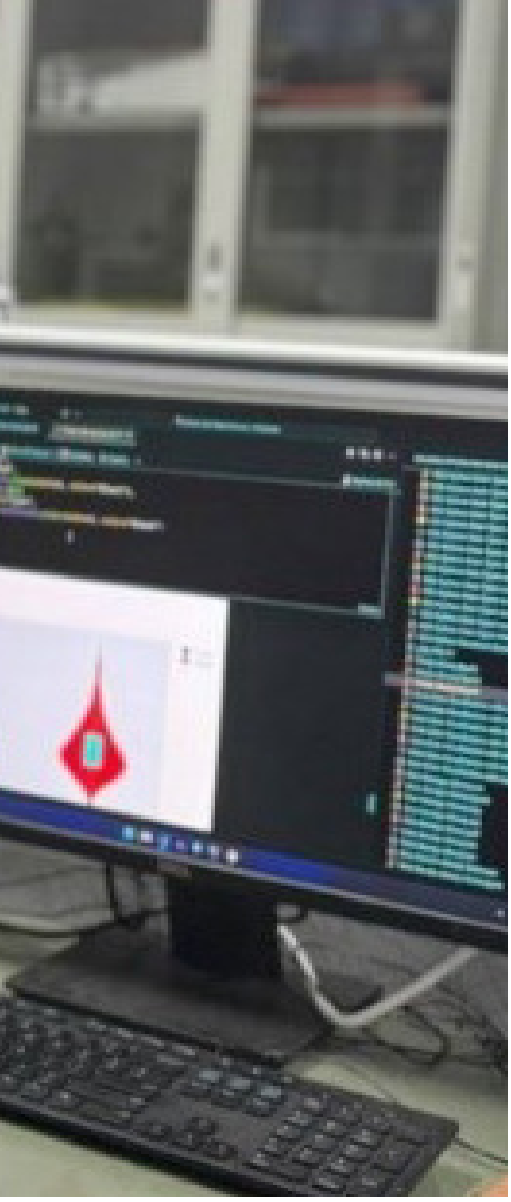
- Energy Audit
- Energy measurement, Performance analysis and troubleshooting
- CAD/CAM design
- Mechanical design, Fabrication and assembly
- Exhaust gas and fuels analysis
- Fluid and piping system design
- Indoor air quality check
- Short and intensive training courses
- Mechanical properties of materials analysis
- Product design consultation
- Thermal system analysis, Design and consultation
- Maintenance of cooling and heating systems

The Department of Applied Mathematics and Statistics (AMS)

The Department of Applied Mathematics and Statistics (AMS) is a hub of academic excellence, offering premier programs in Data Science and Financial Engineering. In the Data Science program, students immerse themselves in the multifaceted realm of data analysis, mastering techniques in machine learning, data mining, and statistical modeling. They gain hands-on experience through projects that tackle real-world challenges, honing their skills in extracting actionable insights from complex datasets.

Similarly, the Financial Engineering program equips students with the quantitative tools and financial acumen needed to thrive in the dynamic world of finance. With a curriculum that blends mathematical rigor with practical financial knowledge, students learn to develop innovative solutions for risk management, derivative pricing, and portfolio optimization.

Both programs benefit from a distinguished faculty composed of experts in their respective fields, who guide students through rigorous coursework and mentorship. Through interdisciplinary collaboration and industry partnerships, students gain invaluable exposure to real-world applications, preparing them for successful careers in sectors ranging from technology and finance to healthcare and beyond.



Research Interest

- Healthcare Analytics: Exploring ways to utilize data analytics to improve patient outcomes, optimize healthcare delivery, and identify trends in disease management and prevention.
- Financial Data Analysis: Investigating patterns in financial markets, risk management strategies, algorithmic trading, and predictive modeling for investment decisions.
- Environmental Data Science: Analyzing environmental data to understand climate change impacts, biodiversity trends, and develop strategies for sustainable resource management.
- Social Media and Communication Analysis: Studying patterns in social media usage, sentiment analysis, and information dissemination to understand public opinion and behavior.
- Educational Data Mining: Applying data mining techniques to educational datasets to enhance learning outcomes, personalized learning, and improve educational interventions.
- Marketing and Consumer Behavior Analysis: Analyzing consumer data to understand purchasing behavior, market trends, and develop targeted marketing strategies.
- Predictive Analytics in Manufacturing: Utilizing predictive analytics to optimize production processes, minimize downtime, and improve supply chain management in manufacturing industries.

Laboratories and Facilities

Research and Data Analytics Laboratory

- Cutting-edge Facility: The Research and Data Analytics Laboratory at ITC boasts state-of-the-art infrastructure and equipment dedicated to data analysis and research.
- Research Opportunities: The lab provides opportunities for students to engage in cutting-edge research across fields such as healthcare, finance, and technology.
- Workshops and Seminars: The lab hosts workshops, seminars, and guest lectures by experts in data analytics, providing students with valuable insights and networking opportunities.
- Community Engagement: The lab engages with the local community through outreach programs, workshops, and collaborative projects aimed at addressing societal challenges.
- Career Development: The lab equips students with the skills and knowledge needed to pursue successful careers in data analytics, research, and related fields, preparing them for the demands of the modern workforce.

Data Science Laboratory at ITC

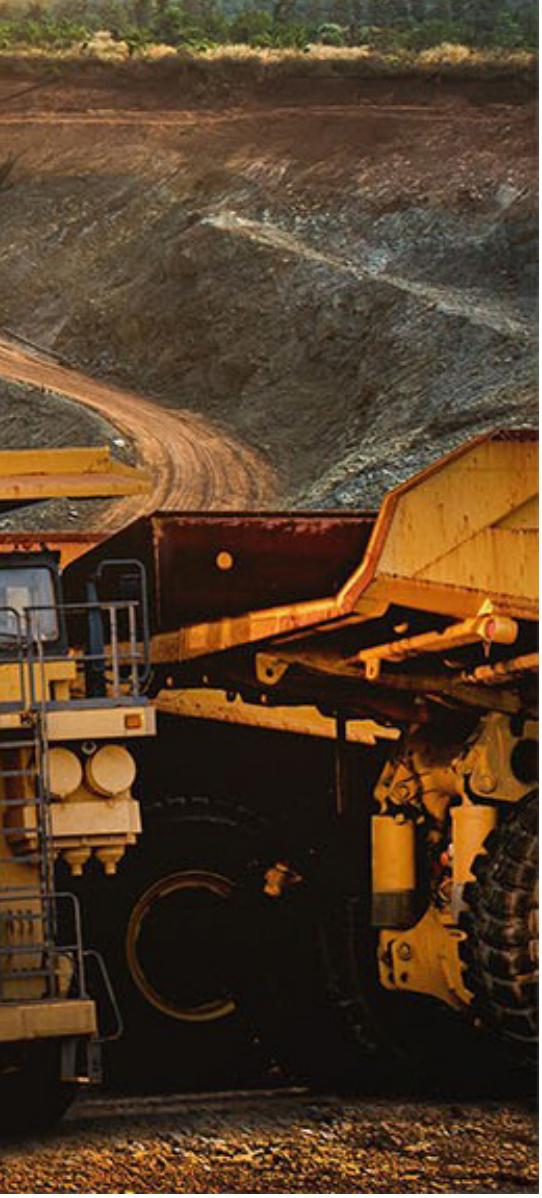
- Practical Application: This lab provides students with a hands-on environment to apply theoretical concepts learned in courses to real-world datasets and problems.
- Cutting-edge Tools and Technologies: Equipped with the latest software tools and technologies, the laboratory enables students to explore data using industry-standard platforms and techniques.
- Project-based Learning: Through project-based learning experiences, students tackle diverse data science challenges, from data wrangling and preprocessing to predictive modeling and visualization.
- Mentorship and Guidance: The laboratory offers mentorship and guidance from experienced faculty members and industry experts, supporting students as they navigate complex data science projects and methodologies.
- Collaboration Opportunities: The laboratory fosters a collaborative atmosphere where students can work together on multidisciplinary projects, sharing ideas and insights to solve challenging data science problems.

Services

- Energy Audit
- Energy measurement, Performance analysis and troubleshooting
- CAD/CAM design
- Mechanical design, Fabri cation and assembly
- Exhaust gas and fuels analysis
- Fluid and piping system de sign
- Indoor air quality check
- Short and intensive training courses
- Mechanical properties of materials analysis
- Product design consultation
- Thermal system analysis, Design and consultation
- Maintenance of cooling and heating systems

Faculty of Geo-resources and Geotechnical Engineering

Geo-resources and Geotechnical Engineering (GGE) is advancing its excellence in the fields of Minerals Resources, Petroleum, Geotechnics, and Geo- environment.



PROGRAM OFFERED

Engineering Degree

- Geo-resources and Petroleum Engineering
- Geotechnical Engineering

Associate Degree

- Geotechnical Engineering

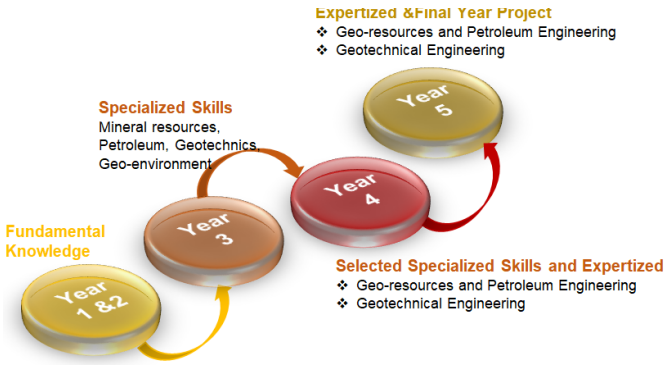
Program Competencies

Geo-resources and Petroleum

- Mine design
- Geological mapping
- Rock blasting and fragmentation
- GIS and remote sensing
- Exploration geophysics
- Oil and gas resources estimation
- Reservoir engineering
- Production engineering
- Well logs analysis
- Subsurface data analysis
- Resources management and development

Geotechnical Engineering

- Foundation design
- Slop stability and deep excavation design
- Ground improvement
- Soil and rock investigation
- Laboratory analysis and management
- Survey (road, building, land, mine site, etc.)
- Drawing design using Auto-CAD

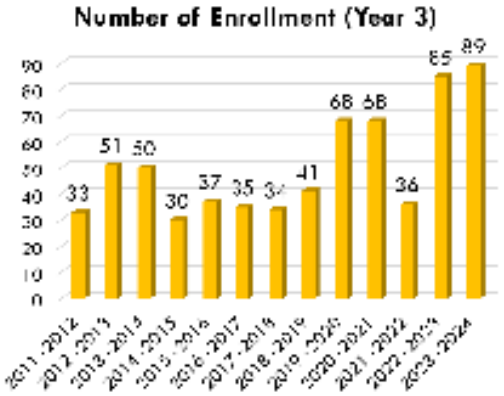


Associate Degree in Geotechnical Engineering

- Soil testing and analysis
- Field investigation techniques
- Geotechnical instrumentation
- Deep excavation design
- Slop stability and foundation design
- Survey (road, building, land, mine site, etc.)
- Drawing design using Auto-CAD
- Geotechnical report writing

Student Enrollment

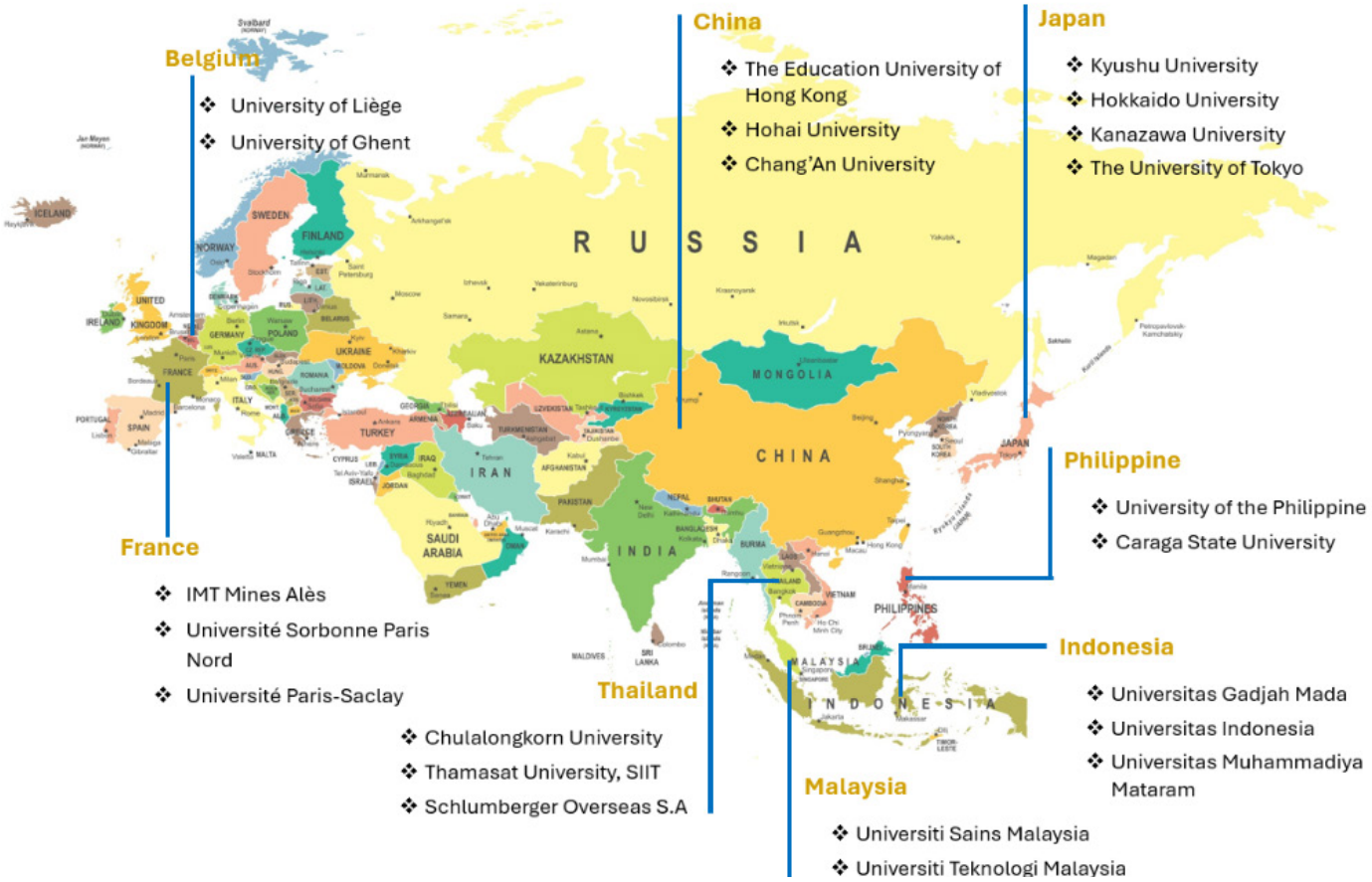
From establishment until 2023.



Human Resources

- 25 Academic staffs
- Associate Prof.: 2
- Assistant Prof.: 6
- Doctor Degree: 11
- Master’s Degree: 6

Collaboration with International Partners



Establishment of Internatioal Conference, EraGET

The faculty established the annual International Conference on Earth Resources and Geo-Environment Technology (EraGET) in 2022. The purposes are:

- Created gathering opportunities for students, lecturers, and researchers
- Shared the current research trends
- Reinforced collaboration with industries and international partners

Inbound- Outbound Students Mobility

The faculty started to host exchange program for foreign students in academic year 2022 -2023. The 1st batch students are from Kyushu University, Japan.

Research Areas

Geotechnics

- Soil and rock investigation
- Foundation design
- Slop stability design

Geo-environment

- Acid mine drainage
- Mining wastes treatment and

Geophysics Exploration

- Near-surface geophysics investigations
- for landfills, geotechnics site, road
- construction site, archeology site etc.
- Seismic interpretation

Energy Exploration

- Sedimentology and stratigraphy
- Oil and gas reservoir characterization
- Geothermal reservoir characterization
- Reservoir simulation
- Bioenergy

Economics Geology/Mining

- Mineral exploration/ exploitation
- Geological mapping
- Geological survey
- Mine design
- Mineral processing

Materials

- Rubber products processing
- Latex products processing
- Polymer composites
- Glass strengthening and recycling
- Ceramic products processing
- Metal casting and hardening
- Heritage materials

Laboratories andFacilities

Microscope Lab

- Optical polarizing microscope
- Heating/Freezing Stage

Petroleum Lab

- Gas Permeameter and Porosimeter
- Pressure Valum Temperature (PVT) apparatus
- Gravimetric Capillary Pressure System
- Viscometer
- Densitometer
- Gasometer

X- Ray Lab

- X- Ray Fluorescence (XRF) and handheld XRF
- X- Ray Diffraction (XRD) and handheld XRD

Exploration Geophysics Lab

- 48 channels Seismograph
- Magnetometer

Sample Preparation Lab

- Floor Stand Manual Drill Press
- Large- and Small-Scale Cutting Machines
- Precision Cutting Machine
- Automatic Rock Polishing
- Magnetic Separation machine

Nanostructure and Chemical Analysis Lab

- Scanning Electron Microscope with Energy Dispersion X-ray Spectrometer (SEM-EDS)
- Microwave Plasma Atomic Emission Spectroscopy (MP-AES)
- UV –Vis Spectrophotometer

Simulation and Modeling Lab

- High-Capacity Workstation for simulation and modeling on oil and gas reservoir, subsurface data visualization and analyses, and slop

Geotechnics Lab

- Unconfined Compression Test Apparatus
- Point Load Index Test Apparatus
- Total Station
- Hydrometer Analysis
- Universal Strength Testing

Services

Professional Training

- Mineral and rock identification under microscope
- Geological map
- Deep foundation design
- Slop and mine design

Consultation

- Geological exploration
- Geophysical exploration
- Geo- environment exploration
- Geotechnical exploration
- Archaeology exploration

Lab Testing

- Soil and rock properties analysis
- Mineral characterization
- Chemical analysis for soil, rock, alloy, rubber, water, food, fertilizer etc.
- Morphology and composition analysis of semi-conductor, blood cells, ceramic, artifact, etc.

Faculty of Hydrology and Water Resources Engineering

Faculty of Hydrology and Water Resources Engineering (GRU) was founded in 1964 with the mission to produce high-quality engineers at the undergraduate level, graduate level, and technician level in the field of water and environmental engineering, rural infrastructure, and green business to meet the need of societal development and to support the green growth. We practice the interdisciplinary education and research to promote sustainable development and to serve to the society in solving environmental problems. Our main objective is to make the students be able to gain knowledge, practical skills and soft skills, and professional ethics to fill the labor market requirement for sustainable development and research.

Research Interests

- Hydrological assessment: Water balance, Modeling
- Soil-plant-water relation
- Remote sensing and GIS application to water resources development
- Hydraulic and River morphology
- Soil erosion and sediment transport at catchment scale
- Irrigation management and development
- Groundwater assessment and evaluation
- Climate change and adaptation
- Environmental management: Solid waste and Waste water
- Integrated Water Resources Management
- Coastal Environment

Laboratories and Facilities

Laboratories

- Soil Analysis Laboratory
- Hydrology and Hydraulic Laboratory
- Topography Laboratory
- Water Quality Laboratory
- Plumbing Laboratory
- Water Environment Laboratory
- Coastal & Wetland Environmental Laboratory
- HydroMet and Disaster Management Laboratory
- Irrigation experimental station
- The KHmer Earth OBServation

Equipments

- Acoustic Doppler Current Profiler (ADCP): River Surveyor SonTek M9
- Current meter
- Water level sensor: HOBO
- Hydrometer
- Weather station
- Total Station (Topcon, Leica)
- GNSS RTK systems (Leica)
- Differential GNSS Receiver GPS: Handheld differential global positioning (DGPS) real-time kinematic (A3 RTK Pro)
- Sounding devices with acoustic and light signal (Eijkelkamp)
- Double rings (Eijkelkamp)
- Hand augers
- Sieves
- Direct shear test
- UV/Vis spectrophotometer
- Portable water quality multi-meter (pH, ORP, DO, EC)
- Turbidity meter
- Brand new COD analysis set (COD digester and reader)
- BOD analysis (Incubator and BOD sensor system)
- Brand new Digital orbital shaker
- Outdoor Air Quality Test Kit (Pro)
- DR900 Multiparameter Portable Colorimeter
- Particulate Matter sensor model Dylos 1700
- Class 2 Data Logging Sound Level Meter
- Color of water portable photometer

Consultation Services

Hydrological and Disaster Management

- Hydrology and hydrometeorology
- Disaster management and early warning systems
- Flood modelling and forecasting
- Hydraulic and river dynamic
- Urban drainage modelling
- Water resources assessment and analysis
- Groundwater modelling and assessment
- River basin management plan
- Climate change and adaptation

Water and Wastewater

- Provide experimental laboratory research on water and wastewater
- Provide services on water and wastewater analysis
- Provide consultation service on water and wastewater treatment, sewage design

River Surveying and Monitoring

- River cross section and water discharge measurement using ADCP
- Stream velocity surveying
- Meteorological monitoring
- Suspended sediment sampling
- Monitoring of riverine macroplastic fluxes and spatiotemporal variability

Soil Test Analysis

- Soil-hydro physics
- Soil texture and bulk density
- Soil water capacity and scanning
- Soil fertility, salinity, pesticide and trace element
- Toxic substance and organic compound
- Field test and sampling expertise
- Practice irrigation scheduling
- Soil water crop productivity analysis
- Soil infiltration measurement
- Smart irrigation and IoT for water monitoring

Topographic Survey and GIS

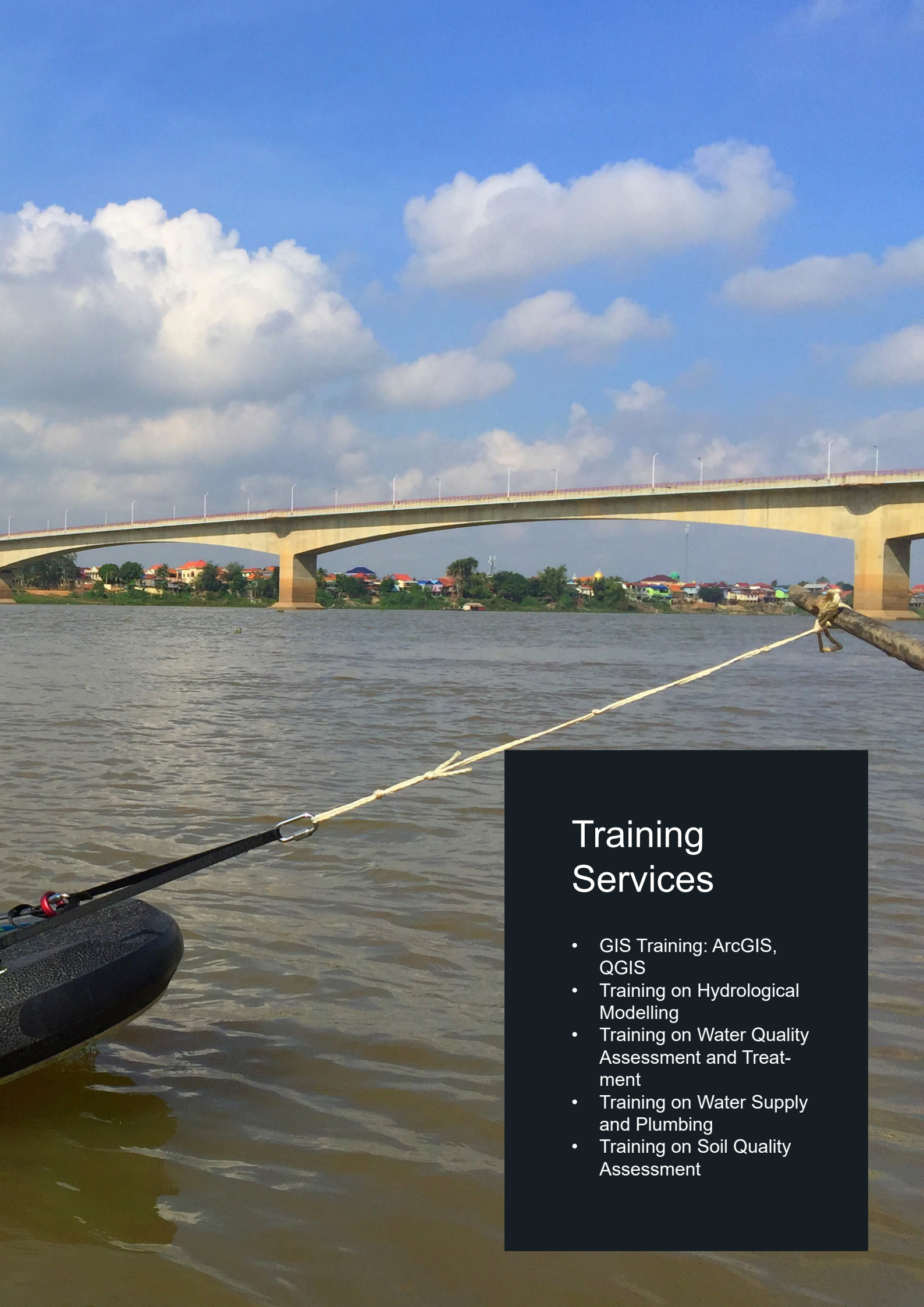
- High accuracy coordinates measurement
- Mapping and GIS solutions
- Master plan and mapping
- Topography survey and land management

Air Quality Test and Analysis

- Monitoring particulate matter-PM2.5
- Measuring chemical emission (SO2, CO2 etc.)
- Measuring air velocity: ventilation
- Ambien air quality measurement
- Background noise measurement

Coastal and Wetland Environment

- Bathymetry survey
- Coastal erosion and bank erosion protection
- Slop stability assessment and design
- Coastal hydrodynamic analysis
- Groundwater intrusion assessment
- Sea level rise assessment
- Coastal mapping



Training Services

- GIS Training: ArcGIS, QGIS
- Training on Hydrological Modelling
- Training on Water Quality Assessment and Treatment
- Training on Water Supply and Plumbing
- Training on Soil Quality Assessment

International Engineering Programs

Background

The Institute of Technology of Cambodia (ITC) opened eight new international engineering programs in cooperation with international partner universities in France, Australia, the EU, Malaysia, Thailand, and Indonesia. There are double degree program opportunities for the students to receive two degrees from ITC and international partner.

International Program in form of:

- 1+3, 2+2 (Science) | 1+4, 2+3 (Engineering) with Curtin University, Australia and Malaysia
- 3+2 double degree with Griffith Universi- ty, Australia
  2+3 double degree with ECAM LaSalle, France
- 4+1 double degree with Toulouse INP-ENSEEIHT, France

Oversea student exchange with international universities partner

Why international engineering program at ITC?

- Double degrees/overseas study exchange with international partner universities
- Experience project-based learning
- Adoptive learning environment, smart classroom, student club
- Leadership and entrepreneurial mindset

The 8 new international engineering programs are

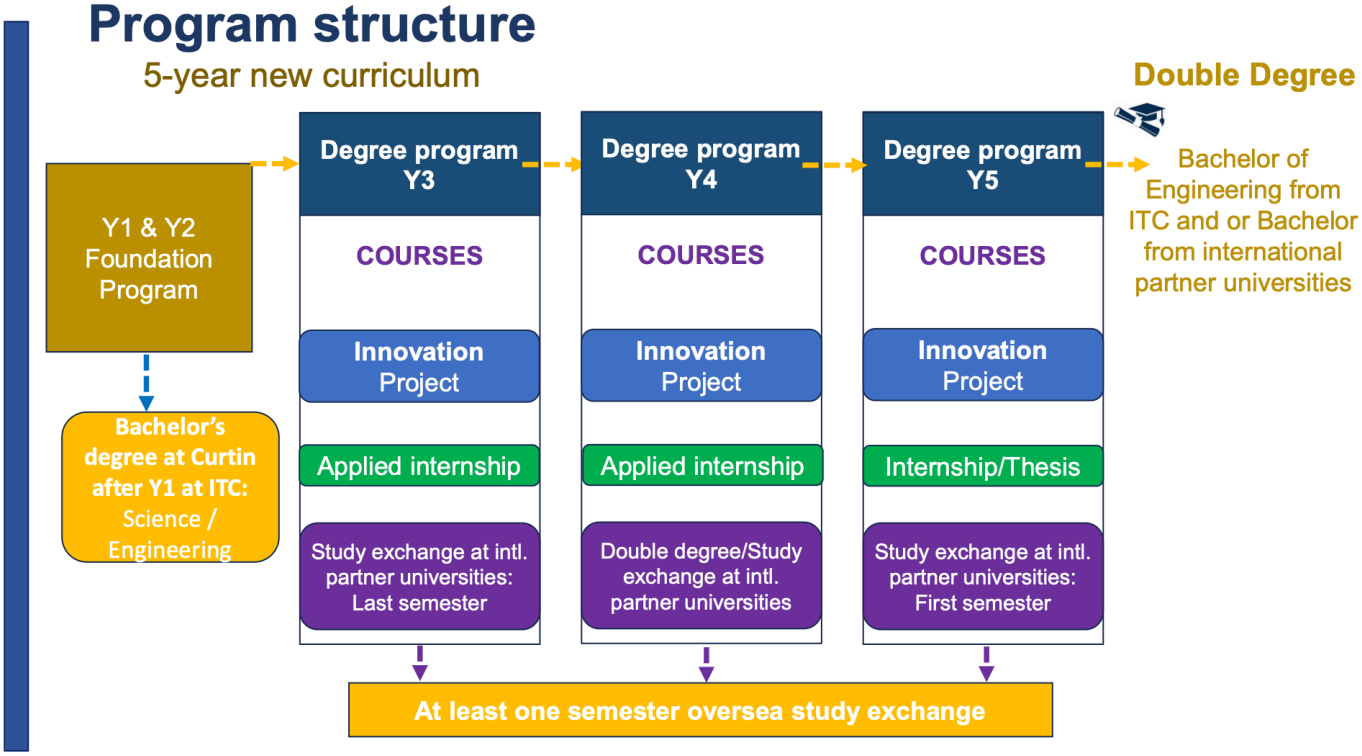
1. Artificial Intelligence Engineering and Cybersecurity
2. Software Engineering
3. Materials Science and Engineering
4. Electronics and Smart Automation System
5. Sustainable Engineering and Business
6. Construction Management and Infrastructure Engineering
7. Robotics and Automation Engineering
8. Industrial Engineering and Supply Chain Management

Pre-degree Foundation Program in Eng. and Information Technology

- Signed PA Implementation with Curtin on 9 Jan 24
- Implementation under co-moderation
- Enrollment for 2023-24: 41 (SE: 25; AIECS:16)
- 1+3/1+4; 2+2/2+3
- Obtain co-branded certificates

Program structure

5-year new curriculum



Program Requirement

Candidates must meet at least one of following criteria:

- 1) English proficiency:
- IELTS≥4.5, TOFLE iBT≥60 , Other English proficiency equivalent certificate
- 2) Candidates must have Bac II or equivalent certificate
- 3) Take the entrance exam at ITC (in English): Math, Physics & Chemistry and Logic

Scholarship

Merit-based scholarships are awarded as follows:

- 15% of the enrollments get 50% scholarship
- 15% of the enrollments get 30% scholarship

ECAM ENGINEERING

International Double Diploma Program at ITC

under Department of Industrial and Mechanical Engineering (GIM)

ECAM Engineering program is an international double diploma program between ECAM LaSalle Lyon, France and Institute of Technology of Cambodia. Created in 1900, ECAM LaSalle is recognized as one of the best private engineering schools in France. An excellent and world-renowned education system of French "Grande Ecole".

Key attributes

- French Engineering degree: ECAM Engineering
- Medium of instruction is English
- Student mobility inbound/outbound ITC/ECAM LaSalle
- Language level C1 in English and B1 in French to be a graduate
- International Bachelor degree of Engineering delivered by ECAM LaSalle and Engineer's degree delivered by ITC after completion.
- Double Degree at Master Level with various partnered universities

Goal:

- Train multidisciplinary engineers for industry in Cambodia

How:

- Implement ECAM LaSalle's engineering program at ITC starting in October 2021

Target Students:

- ITC students Y3, especially from
  - Industrial and Mechanical Eng. (Dépt. GIM)
  - Electrical and Energy Eng. (Dépt. GEE)
- Foundation Year (Y2) of international programs

Offered Concentrations

Department of Industrial and Mechanical Engineering

ECAM LaSalle

Industrial Eng. and Supply Chain Management (SCM)

- Soft Skills such as communication, team work
- Mathematical and Analytical Skills
- Programming and Software Development Skills
- Basic Control Systems Understanding
- Electrical Machines and Drives Understanding
- Industrial Organization Skills
- Supply Chain Management Skills
- Basic Industrial Engineering Understanding
- Project Management Skills
- Digital Manufacturing Understanding
- Robust Supply Chain Knowledge
- Industry of the Future Knowledge

Robotics and Automation (ROA)

- Soft Skills such as communication, team work
- Mathematical and Analytical Skills
- Programming and Software Development Skills
- Advanced Control Systems Understanding
- Electrical Machines and Drives Understanding
- Basic Industrial Organization Understanding
- Advanced Robotics Knowledge
- Automation Knowledge
- Sensing and Perception Understanding
- Signal Processing Understanding
- Machine Learning and Deep Learning Understanding
- Machine Vision Programming Skills

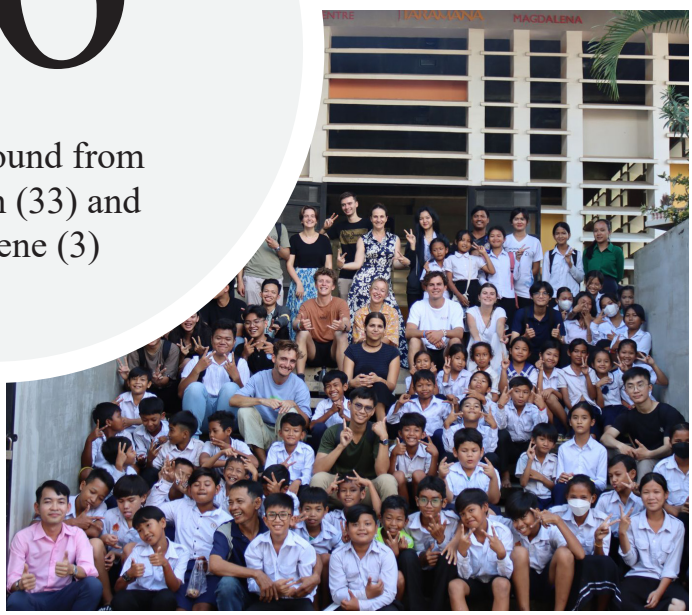
Student Mobility

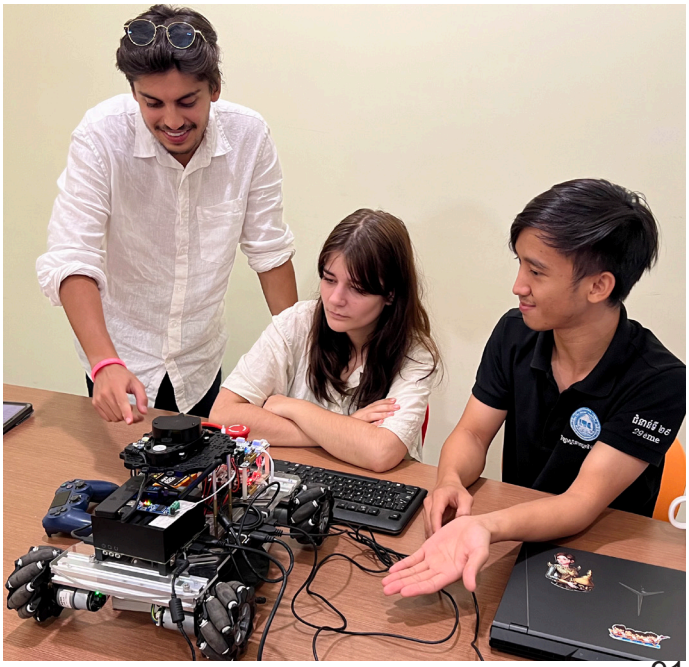
29

students outbound to
ECAM LaSalle Lyon

36

students inbound from
ECAM Lyon (33) and
ECAM Rene (3)





Competencies SCM

- **Soft Skills:** The program emphasizes the development of communication and teamwork skills, which are essential for effective collaboration in industrial settings.
- **Mathematical and Analytical Skills:** Students will gain a strong foundation in mathematics and analytical thinking, which are crucial for problem-solving in industrial engineering.
- **Programming and Software Development Skills:** The program includes courses on programming languages and software development techniques used in industrial engineering.
- **Basic Control Systems Understanding:** Students will learn about the design and analysis of control systems, which are crucial for the operation of industrial systems.
- **Electrical Machines and Drives Understanding:** The curriculum covers the principles and applications of electrical machines and drives, which are key components of industrial systems.
- **Industrial Organization Skills:** Students will gain an understanding of how industries are organized and how industrial systems can be integrated into these organizations.
- **Supply Chain Management Skills:** The program offers courses on the principles and practices of supply chain management, including logistics, procurement, and distribution.
- **Basic Industrial Engineering Understanding:** Students will gain a broad understanding of the field of industrial engineering, including its key concepts, methods, and applications.
- **Project Management Skills:** The curriculum includes courses on project management techniques, which are essential for managing complex industrial projects.
- **Digital Manufacturing Understanding:** Students will learn about the principles and applications of digital manufacturing, including the use of digital technologies in the design, production, and distribution of goods.
- **Robust Supply Chain Knowledge:** The program delves into advanced topics in supply chain management, providing students with a deep understanding of the field.
- **Industry of the Future Knowledge:** Students will gain insights into the future trends and developments in the industry, including the use of advanced technologies and innovative practices.

Competencies ROA

- **Soft Skills:** The program emphasizes the development of communication and teamwork skills, which are essential for working effectively in diverse teams and presenting ideas clearly and persuasively.
- **Mathematical and Analytical Skills:** Students will gain a strong foundation in mathematics and analytical thinking, which are crucial for problem-solving in robotics and automation.
- **Programming and Software Development Skills:** The program includes courses on programming languages and software development techniques used in robotics.
- **Advanced Control Systems Understanding:** Students will learn about the design and analysis of control systems, which are crucial for the operation of robotic systems.
- **Electrical Machines and Drives Understanding:** The curriculum covers the principles and applications of electrical machines and drives, which are key components of automated systems.
- **Basic Industrial Organization Understanding:** Students will gain an understanding of how industries are organized and how robotic systems can be integrated into these organizations.
- **Advanced Robotics Knowledge:** The program delves into advanced topics in robotics, providing students with an in-depth understanding of the field.
- **Automation Knowledge:** Students will learn about the principles and applications of automation, including the use of automated systems in manufacturing and other industries.
- **Sensing and Perception Understanding:** The curriculum covers the technologies and techniques used in robotic sensing and perception.
- **Signal Processing Understanding:** Students will learn about the methods used to process signals in robotic systems, including filtering and data compression.
- **Machine Learning and Deep Learning Understanding:** The program includes courses on machine learning and deep learning, which are increasingly important in the field of robotics.
- **Machine Vision Programming Skills:** Students will gain practical experience in programming computer vision algorithms for robotic systems.

First Batch Student Graduation

Contact Us

Phone Number: +885 (0) 92 282 741
Email: sopheap.hang@ecam.fr
Website: phnompenh.ecamengineering.com
Addresse: Russian Federation Blvd. , Tuol Kouk, Phnom Penh, 12156, Cambodia

GRADUATE SCHOOL OF ITC

Introduction

ITC inaugurated its Master's degree programs in 2010, commencing with a Master of Civil Engineering offered in collaboration with INSA-Rennes, France. In 2015, the Graduate School of ITC (GS-ITC) was formally established, focusing on Science, Technology, Engineering, and Mathematics (STEM) disciplines. Since its inception, GS-ITC has assumed responsibility for the administration and delivery of all ITC's graduate programs. Doctoral programs were first introduced at ITC in 2017. Currently, ITC offers a comprehensive selection of eight full-time Master's degrees and five full-time Doctoral degrees.

VISION

Excellence in STEM graduate education, equipping graduates with the full potential and skills needed to meet Cambodia's 2030 vision requirements.

MISSION

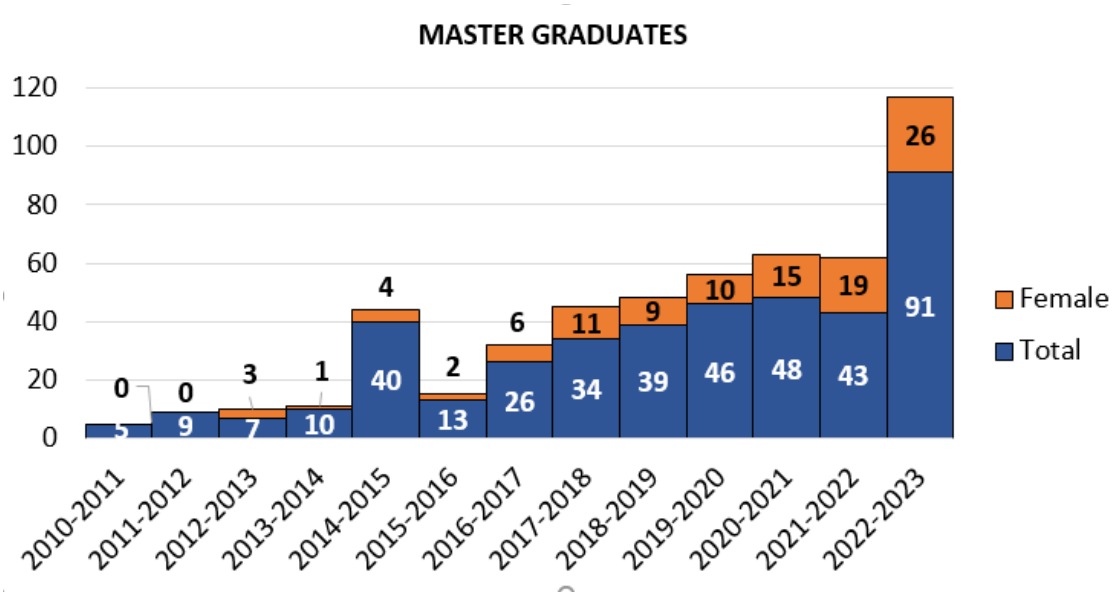
GS-ITC is dedicated to realizing ITC's long-term vision for graduate education. We achieve this by offering services to the campus community that uphold integrity and excellence in STEM graduate education. Our approach involves clear and consistent policies, high standards, efficient procedures, and direct student support. We aim to be a valuable resource for all graduate students and to foster relationships, enhance communication, and collaborate with faculty and staff. Additionally, we provide comprehensive research and data resources to inform about graduate education.

GOALS

- Improve and develop graduate training programs in STEM to align with national, regional, and international standards.
- Educate graduate students to have full potentials and skills in STEM to meet the requirement of the Cambodia's 2030 vision.

MASTER PROGRAMS

Our curricula are intentionally multidisciplinary, designed to empower students and learners with the abilities and adaptability skills needed to unlock their full potential. As technology and market demands evolve rapidly, our students are well-prepared to face the challenges ahead. Beyond technical and engineering skills, they also have opportunities for lifelong learning and the development of soft skills through engaging in research projects and participating in open scientific seminars and forums.



Our full-time programs have a study duration of 1-3 years and offer two distinct pathways: the course-research pathway and the research-based pathway. In the course-research pathway, students complete around 52 credits, with 40 credits dedicated to coursework and 12 credits for their final project or thesis defense in the last semester. For the research-based pathway, students take 54 credits, with 12 credits from coursework and 42 credits allocated to research activities, documenting research results, writing their thesis, and preparing for the thesis defense. We currently offer the following programs:

PROGRAM	DEGREE
1. Agro-industrial Engineering	Regular
2. Computer Science	Regular
3. Data Science	Regular
4. Energy Technology and Management	Regular
5. Mechatronics,Information and Communication Engineering	Regular and Double-degree
6. Materials and Structural Engineering	Regular and Double-degree
7. Transports Engineering	Regular
8. Water and Environmental Engineering	Regular

1. MASTER OF AGRO-INDUSTRIAL ENGINEERING

The Master's Degree Program in Agro-industrial Engineering, with technical support from professionals and experts at European and ASEAN partner universities, aims to equip students with technical skills, competencies, and expertise in the field of agro-industrial engineering. Students will gain advanced knowledge in research methods, food processing and development techniques, business and entrepreneurship skills, and problem-solving approaches. Graduates will be well-prepared to design innovative techniques and processes, manage projects, and propose suitable solutions for real-world problems in the food industry. Additionally, graduates can apply their knowledge and skills to develop their own businesses.

2. MASTER OF COMPUTER SCIENCE

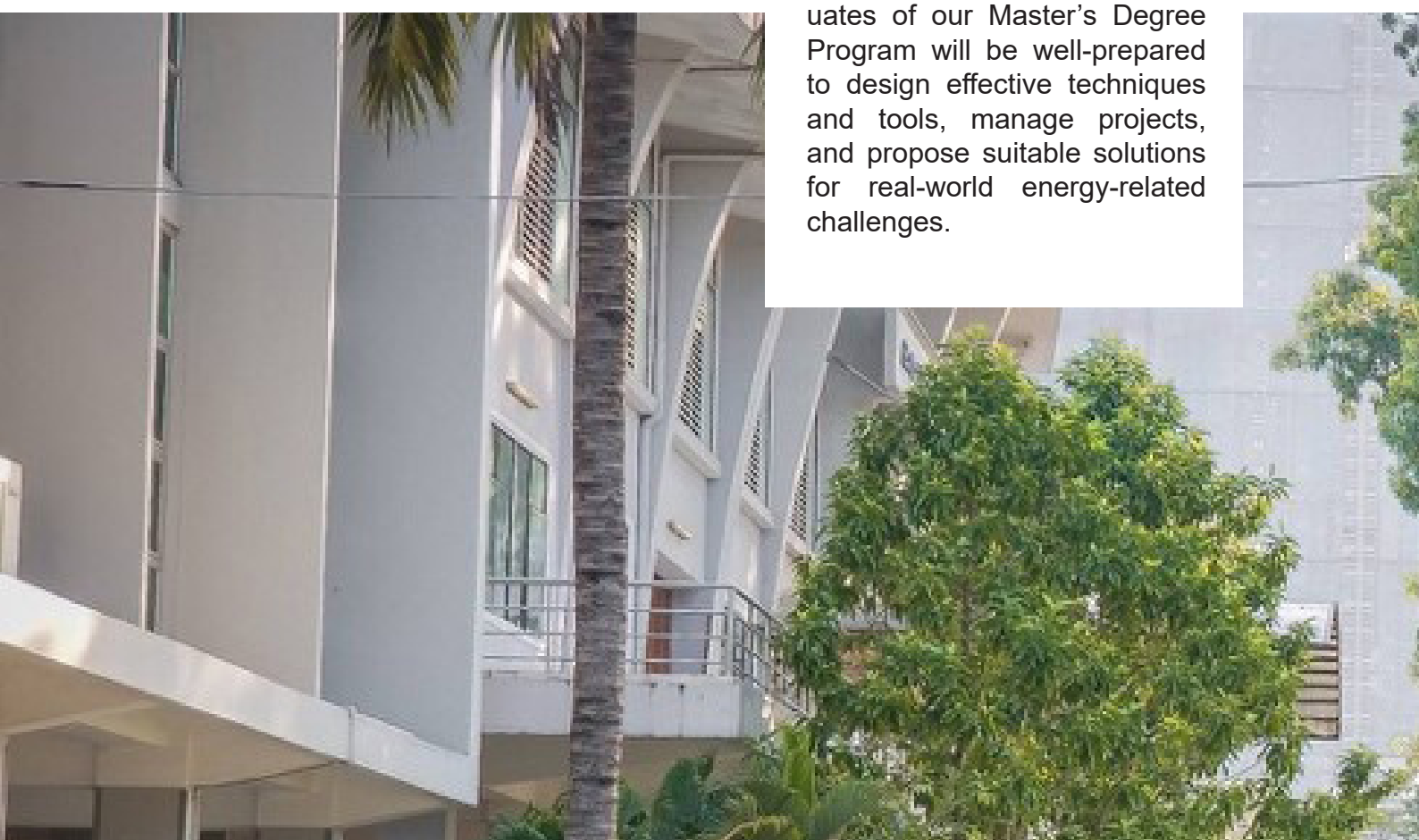
The Master's Degree Program in Agro-industrial Engineering, with technical support from professionals and experts at European and ASEAN partner universities, aims to equip students with technical skills, competencies, and expertise in the field of agro-industrial engineering. Students will gain advanced knowledge in research methods, food processing and development techniques, business and entrepreneurship skills, and problem-solving approaches. Graduates will be well-prepared to design innovative techniques and processes, manage projects, and propose suitable solutions for real-world problems in the food industry. Additionally, graduates can apply their knowledge and skills to develop their own businesses.

3. MASTER OF DATA SCIENCE

Master's Degree Program of Data Science, jointly developed by professionals and experts of Institut Mines Télécom (IMT) and École nationale supérieure d'informatique pour l'industrie et l'entreprise (ENSIIE), France, uses real-world problems and situations to prepare graduates for roles as strategic thought leaders who leverage predictive modeling to drive decision making. Students will develop in-depth understanding of key technologies in data science and business analytics: data mining, machine learning, visualization techniques, predictive modeling and Statistics.

4. MASTER OF ENERGY TECHNOLOGY AND MANAGEMENT ENGINEERING

The Master's Degree Program in Energy Technology and Management Engineering, with technical support from professionals and experts at European and ASEAN partner universities, aims to equip students with technical skills, competencies, and expertise in the field of energy technology and management. Students will gain advanced knowledge in research methods, energy-related techniques and regulations, project management, and problem-solving approaches. Graduates of our Master's Degree Program will be well-prepared to design effective techniques and tools, manage projects, and propose suitable solutions for real-world energy-related challenges.

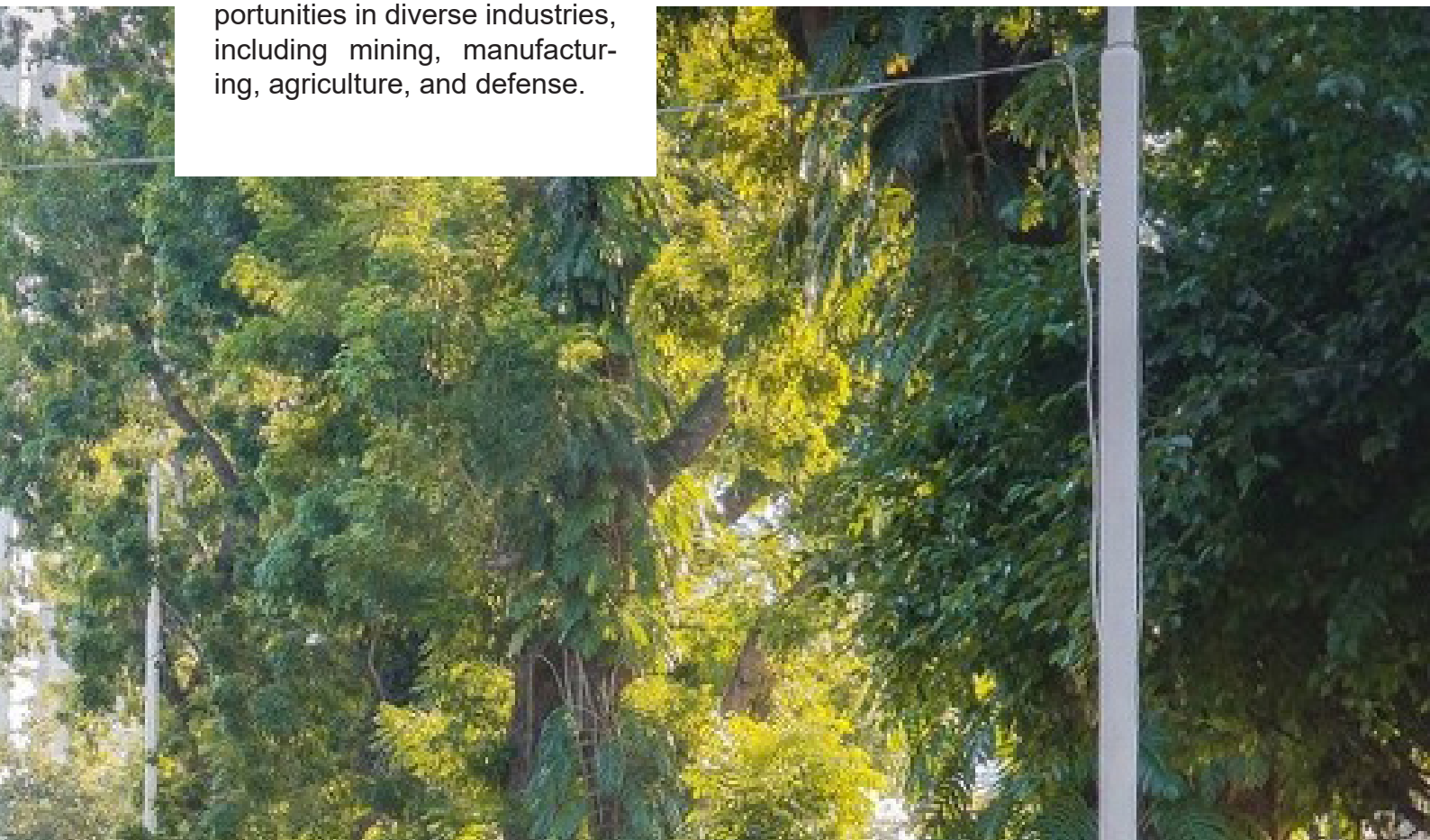


5. MASTER OF MECHATRONICS, INFORMATION AND COMMUNICATION ENG

The Multimilitary Master's Degree Program in Mechatronics, Information, and Communication Engineering, with technical support from professionals and experts at stakeholders and European partner universities, aims to equip students with a broad range of skills and knowledge applicable across various engineering disciplines. These disciplines span from mechanical design to software engineering, as well as those more specifically focused on mechatronics, automation, and robotics. Graduates from this program find employment opportunities in diverse industries, including mining, manufacturing, agriculture, and defense.

6. MASTER OF MATERIALS AND STRUCTURAL ENGINEERING

The Master's Degree Program in Materials and Structural Engineering, jointly developed by professionals and experts from INSA Rennes, France, aims to equip students with specialized knowledge in research, innovation, and complex problem-solving related to diverse engineering topics, specifically focusing on material properties and structural engineering. Qualified students have the opportunity to pursue dual degrees conferred by both ITC and INSA Rennes. Additionally, they can choose to study either at ITC or at INSA Rennes, France.

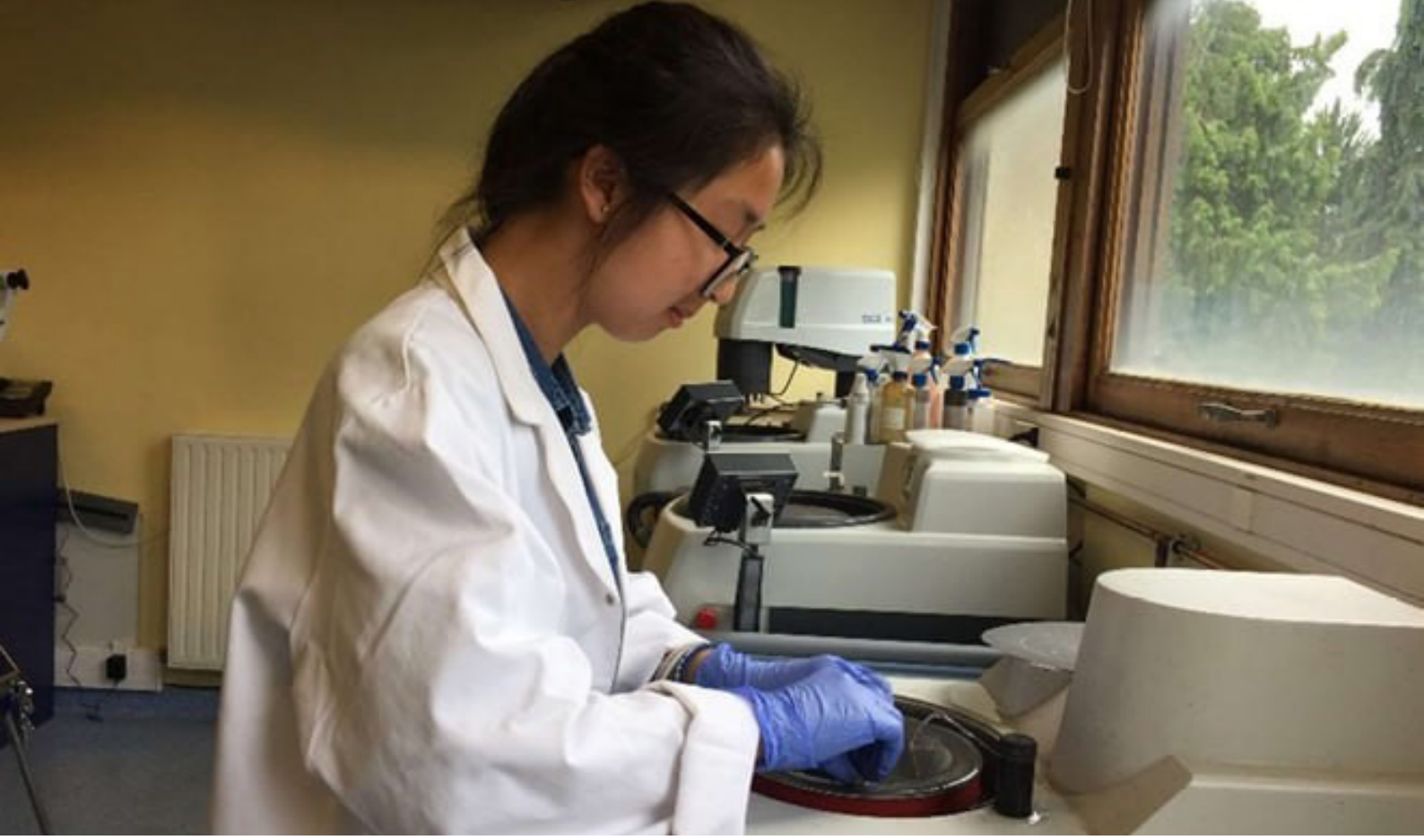


7. MASTER OF TRANSPORTS ENGINEERING

Master's Degree Program of Transport Engineering is designed to provide students expertise in research, innovation, and complex problem solving of diverse engineering topics related to transport engineering and public infrastructure. It addresses the solution toward land, air and water transportation issues including traffic congestion and accidents, public transport systems, transport policy, logistic networks, energy consumption, aviation issues, environmental matters, etc.

8. MASTER OF WATER AND ENVIRONMENTAL ENGINEERING

The Master's Degree Program in Water and Environmental Engineering, with technical support from professionals and experts at European and ASEAN partner universities, aims to equip students with technical skills, competencies, and expertise in the field of water and environment. Students will gain advanced knowledge in research methods, water-related techniques, modern modeling tools, and problem-solving approaches. After graduation, they will be well-prepared to design effective techniques and tools, manage projects, and propose suitable solutions for real-world problems, including water supply and sanitation, irrigation and drainage, disaster management, wastewater treatment and disposal systems, transport and disposal systems, and drainage systems.



DOCTORAL PROGRAMS

Our doctoral program, focusing on STEM research and education, is a full-time research-based program that spans 3 to 6 years. It consists of a total of 54 credits, divided into two main components:

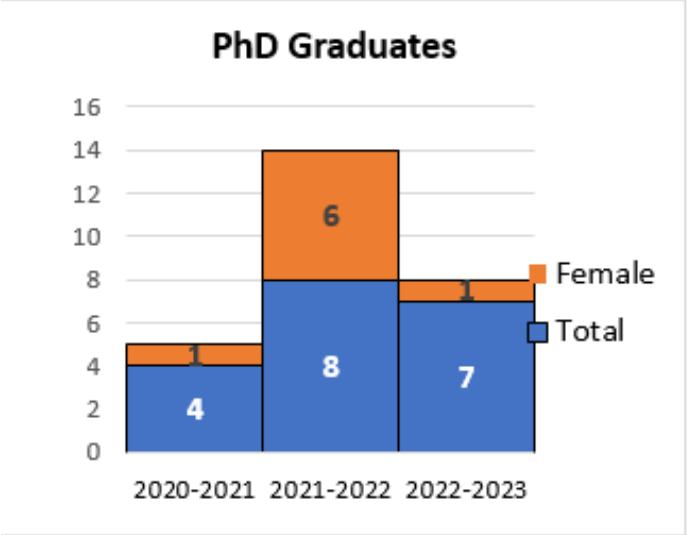
Coursework (21 credits):

- Supplementary/Prerequisite courses
- Doctoral courses
- PhD Orientation courses

Research and Thesis (33 credits):

- 3 credits for a detailed research proposal
- 6 credits for national/international publications
- 3 credits for presenting at scientific conferences
- 3 credits for seminars
- 18 credits dedicated to Thesis writing and defense

This comprehensive program provides students with the necessary academic foundation and research experience to pursue their doctoral studies effectively. Students enrolled in our program have the opportunity for dual supervision from both our exceptional partner universities and ITC. Additionally, they can earn two degrees—one conferred by the partner university and another by ITC. At this level, we offer the following majors:



NO	ABBREV.	PROGRAM	AREA OF STUDY
1	D-FTN	Food Technology and Nutrition	Food technology development, Food processing and engineering, Food product development, Food quality and safety, Sustainability of food systems, Food contaminant surveillance and control, etc.
2	D-MSS	Materials Science and Structures	Material science and engineering, structural engineering, polymer composites, failure analysis of steel structure and other materials, numerical modeling and experimental analysis of infrastructure and materials
3	D-MIT	Mechatronics and Information Technology	Intelligent mechatronics, artificial intelligence, telecommunication and internet of things, optimization for operation research and supply chain, electronics, and communication
4	D-WAE	Water and Environment	Hydrology, water supply, wastewater, urban environment management, disaster and climate system, etc.
5	D-ETM	Energy Technology and Management	New and renewable energy, energy efficiency and conservation, smart grid, energy management, etc.


INSTITUTE OF TECHNOLOGY OF CAMBODIA
PRE-ENTRÉE AND ORIENTATION DAY FOR MASTER STUDENTS
Academic Year 2023-2024

Research and Innovation Center (RIC)

ITC actively contributes to sustainable development and the reduction of societal inequalities through its internal operations, international engagement, and inclusive admission policies. Through extensive cooperative agreements with European, regional, and local universities, ITC enhances educational quality, introduces innovative degree programs, and fosters collaboration on research initiatives, facilitating the exchange of ideas and mobility of students and faculty. Additionally, ITC maintains privileged partnerships with numerous Cambodian companies and multinational corporations, leveraging these relationships to enrich academic experiences and promote industry-academic collaboration.

In addition to its core focus on engineering and technical education, ITC is deeply committed to advancing research endeavors. By harnessing the expertise of alumni, as well as graduates with master's and doctoral degrees from overseas institutions, ITC actively engages with industries and local enterprises, fostering collaborative research endeavors with both domestic and international universities. The establishment of a dedicated research center, supported by JICA since July 14, 2015, underscores ITC's dedication to research excellence, with a primary focus on mechanical engineering, electrical engineering, geo-resources, and geotechnical engineering. Recently, ITC is expanding its research thematic areas to encompass multidisciplinary approaches, reflecting its commitment to addressing complex societal challenges.

Furthermore, the establishment of industry-university linkage offices facilitates closer collaboration with the private sector, providing enhanced opportunities for mutually beneficial partnerships. Through the creation of an industry-university consortium, ITC is proactively bridging the gap between academia and industry, driving innovation, and contributing to economic development initiatives.

Vision

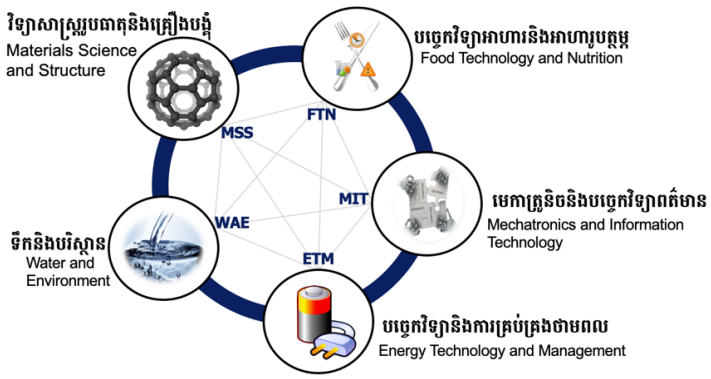
To be a leading center of research and innovation in Science, Engineering and Technology for supporting sustainable development of Cambodia

Mission

To advance applied research and commercialize research outputs through technology transfer for serving national socio-economic growth.

Objective

- Promoting research activities
- Continuous improvement for highly-qualified researchers
- Upgrade lab facilities
- Expand and strengthen research collaboration with national and international communities
- Expand and strengthen research collaboration with private sectors



Research structure and theme

In the dynamic landscape of globalization and rapid technological advancements, ITC prioritizes its role in Cambodian society by striving for efficiency and staying at the forefront of educational development. Beyond our academic endeavors, the Research and Innovation Center plays a pivotal role in promoting sustainable development and reducing societal inequalities. Through its internal operations and engagement with foreign countries, including the admission of international students, the center actively contributes to these important societal goals.

ETM	FTN	MIT	MSS	WAE
Energy efficiency and management Rural electrification and smart grid	Agro-processing	Electronics, Telecommunication, IoTs	Materials Science and Engineering	-Hydrology and water resource management -Soil and irrigation
Wind energy, Battery, solar PV Waste to energy	Cereal based products	Robotics, Aerospace	Structure and Infrastructure Engineering	-Climate change and disaster risk management -Coastal and marine environment
Energy resources exploration	Biotechnology	AI, Data Science, Data Security	Architectural Engineering	-Water supply, water/wastewater treatment -Air pollution monitoring and control

Research Unit

<table>
<tr><td rowspan="5">ETM</td><td colspan="3">Vision:
To be leading contributor in supporting national energy security through research and innovation, knowledge creation and technology transfer with focus on energy sources diversification, efficient use of energy and environmental friendliness.</td></tr>
<tr><td colspan="3">Mission:
• Producing capable human resources in energy-related fields.
• Conducting researches in renewable energy and energy recovery, conversion and saving to address local and regional issues.
• Closely collaborating with related Ministries, national and international partners and private sectors.
• Disseminate research findings and transfer technologies to the society.</td></tr>
<tr><td>Senior Researcher
10</td><td>Lecturer-researcher
2</td><td>Fulltime researcher
7</td></tr>
<tr><td>On going project (2024)
• Number of projects: 12
• Total budget: 276K USD</td><td>Publication (2023-2024)
• Indexed: 15
• Non-indexed: 2
• Conference: 19</td><td>Prototype
• Home energy management system
• Biomass briquette production from waste materials
Service
• Fossil fuel exploration
• Geophysics exploration
• Power system management
• Training and auditing services for energy efficiency</td></tr>
</table>

<table>
<tr><td rowspan="4">FTN</td><td colspan="3">Vision:
To be an excellent unit for research, innovation, training and consultancy services in the field of food science and technology contributing to sustainable development of Cambodia</td></tr>
<tr><td colspan="3">Mission:
• To increase the visibility of FTN research unit by strengthening researchers' capacity in food related fields to be nationally and regionally recognized
• To create standardized laboratories for research and hall technology for pilot scale
• To boost the research activities through local and international collaborations (Universities, Government, SMEs, NGOs)
• To promote prototyping and technology transfer; and to provide training and consultancy services to food industries and relevant stakeholders
• To disseminate scientific outputs through national and international publications and scientific events</td></tr>
<tr><td>Senior Researcher
10</td><td>Lecturer-researcher
6</td><td>Fulltime researcher
10</td></tr>
</table>

	On going project (2024) • Number of projects: 30 • Total budget: 600K USD	**Publication (2023-2024)** • Indexed: 14 • Non-indexed: 4 • Conference:17	**Prototype/service** • Food products: soy sauce, rice and corn snack, herbal tea, dried fruit, Nem, fish meatball, cereal milks, cooking oil, essential oils, fermented vegetable, fruit juices and jams, sausage, yogurt, instant fish soup, fish jerky, fish powder • Services: Product and process development, Food safety (consultancy and training)

MIT	**Vision:** To be a center of excellence in developing innovative solutions within the realms of Intelligent Mechatronics, Artificial Intelligence, and Advanced Telecommunications		
	Mission: To advance applied multidisciplinary research of Mechatronics, Artificial Intelligence, Telecommunication, and Aerospace through national and international collaborations for fostering national academic community and serving society		
	Senior Researcher 9	**Lecturer-researcher** 6	**Fulltime researcher** 6
	On going project (2024) • Number of projects: 17 • Total budget: 213K USD	**Publication (2023-2024)** • Indexed: 4 • Non-indexed: 5 • Conference: 12	**Prototype/service** • Products: smart farm controller, mobile robot, rocket, solar tracker, Khmer language processing tool • Services: consult on IoT applications, design and manufacture electronic products, conduct electromagnetic interference test, provide AI solutions for computer vision and NLP tasks

MSS	**Vision:** To be a national leading and excellent center for research, development, and innovation that can offer advanced technology and technical solutions in the fields of materials and structures to the industries
	Mission: • Conduct basic and applied research focused on materials and structure • Promote R&D linkage between government, universities, and private sectors • Promote research capacity, scientific communications, and entrepreneurship

	• Promote technology transfer, develop product prototypes, and push for commercialization		
	Senior Researcher 10	**Lecturer-researcher** 1	**Fulltime researcher** 4
	On going project • Number of projects: 16 • Total budget: 222K USD	**Publication (2023-2024)** • Indexed: 5 • Non-indexed: 1 • Conference: 25	**Prototype/service** • Products: Ruber-based materials (floor mats, anti-stress balls), tempered glass, ceramic tiles, polymer films. • Services: R&D, consultation, training, and testing on materials characterization and structural behavior, and infrastructure development

WAE	**Vision:** to be a leading unit in driving innovation and research excellence, and leading sustainable development initiatives related to water and environmental studies for the benefit of current and future generations		
	Mission: • Conducting multi-disciplinary and interdisciplinary both basic and applied research on the utilization and protection of the environment, minimization and treatment of pollution particularly to the water resources, hydrological and ecological systems. • Developing, demonstrating and disseminating new finding and methodology supporting to science and engineering for the environmental management and monitoring, disaster management, ecological restoration, treatment and disposal of pollution. • Collaborating on the local and global scale in research and education to protect the precision resources that comply with national policy and SDG to sustain human life. • Educating and training personnel for management, supervision and operation of water resources and environmental systems		
	Senior Researcher 09	**Lecturer-researcher** 12	**Fulltime researcher** 5
	On going project (2024) • Number of projects: 25 • Total budget: 625K USD	**Publication (2023-2024)** • Indexed: 22 • Non-indexed: 4 • Conference: 4	**Prototype/service** • Products: electrocoagulation; Organic fertilizer production/ compost bin; Biofiltration/media • Services: 1) Laboratory testing services: -Water/wastewater quality -Soil/fertilizer quality

			-Agricultural products... 2) Capacity building training 3)Research support/consultation

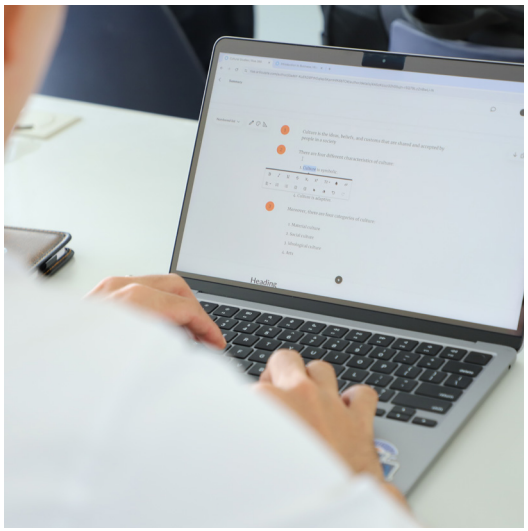
Techno-science research journal (TSR journal)

TSR journal	**Vision:** Become a leading platform in Cambodia to booster the visibility in terms of research and innovation in the scientific community in the field of Science and Engineering		
	Established 2013	**Published articles (2013-2023)** 155 Articles	**Acceptant rate** 84 %
	Platform submission https://techno-srj.itc.edu.kh/	• ISSN: 3006-4988 • E-ISSN: 3006-4996	• Editorial board: 24 (11 external) • Reviewer: 60

E-learning Center & Cambodian Cyber University Network

ITC e-Learning Center was selected by ASEAN Cyber University (ACU) project, which was first proposed at the ASEAN - South Korea Summit in 2009.

The project is expected to help establish a foundation for sharing experiences, knowledge, and skills in higher education and long-distance education among ASEAN countries and South Korea.



Goals

- To provide a successful e-Learning model for Cambodia's High Education Level.
- To provide stable and reliable e-Learning services and system as e-Learning Hub Center for Cambodia.
- To transform the limited e-Learning resources (contents & human resources) to be resources banking.
- To setup an e-Learning university network in Cambodia's Higher Education.

Missions

- To provide online credit courses to university students.
- To develop more online courses according to the need of Higher Education institutions.
- To extend e-Learning model in Cambodia Higher Education.
- To support and join in Open Educational Resources (OER) of ASEAN-ROK.
- To train content development skills and research in teaching and learning model.
- E-Library
- English Section

e-Learning facilities

- Professional studio room
- Content development room

e-Learning services

- e-Learning development consultancy
- e-Learning content development and production
- e-Learning content operation and hosting
- Training on e-learning content development
- Studio renting and recording

Cambodian Cyber University Network

The Cambodian Cyber University Network (CCUN) was established in 2022 under the Ministry of Education, Youth, and Sport with the aim of providing e-learning courses to improve the quality, equity, and access to higher education in Cambodia. The CCUN is incorporated with the e-Learning Center of the Institute of Technology of Cambodia (ITC), which was established in 2012 under the ASEAN Cyber University (ACU). Within this CCUN, the ITC plays a crucial role as a technical lead in the network, content development, and operation.

Vision

- Become e-Learning HUB and Gateway in Cambodia.

Missions

- Support HEIs in Cambodia in adapting and deploying the e-learning teaching and learning methodology
- Improve higher education quality by using online and digital teaching and learning material
- Increase higher education enrollment and equity

Activities

- Ensure the operation CCUN infrastructure
- Develop and operate e-learning courses and content
- Support and build member universities capacity in developing and operating the e-learning content through training and workshop
- Strengthen the CCUN network among HEI in Cambodia

STEM Library

Introduction

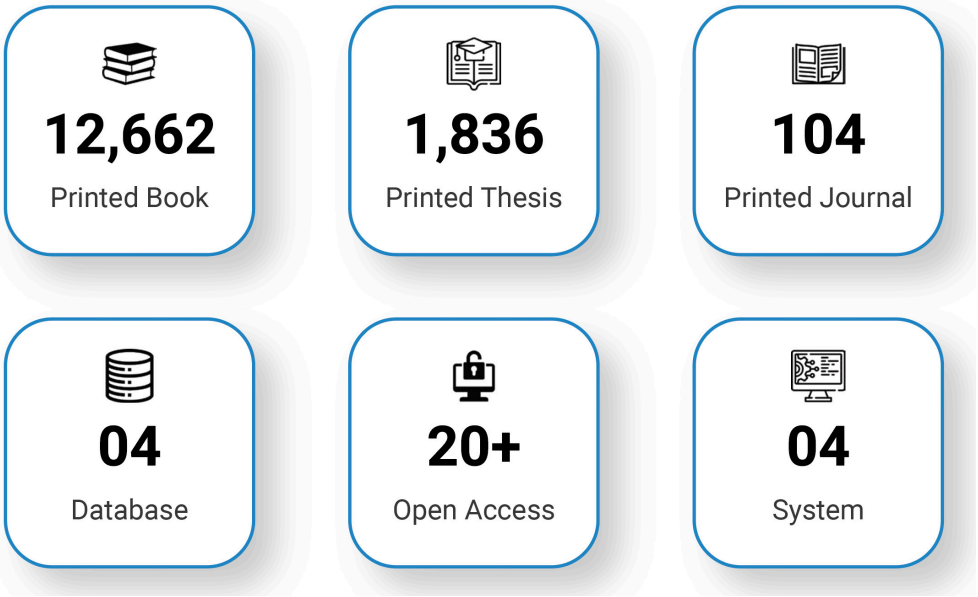
The STEM Library of the Institute of Technology of Cambodia was re-established in 1981 to serve students, teachers, researchers and the general public. The library is recognized as an important center for supporting teaching, research and meeting their knowledge needs. As a service provider to user, library has the responsibility of making access to books and keeping up with new knowledge and insights and the past knowledge based. To support the learning, teaching and research, the Library of the Institute of Technology of Cambodia strives to acquire many qualified documents.

Vision

- Strengthen and develop the library regularly to become a treasure of archives in accordance with national and international standards
- Collaborate with local and international libraries to expand library services
- Guide students, teachers and researchers in detail to conduct effective research.

Goal

- Strengthen and develop the capacity of librarians
- Increase the number of relevant documents and subjects of teaching throughout the academic year and study skills in accordance with the requirements and standards
- Ensure good service by arranging books in an orderly manner both outside and inside the warehouse and working together between each library, department and faculty.



Library Information

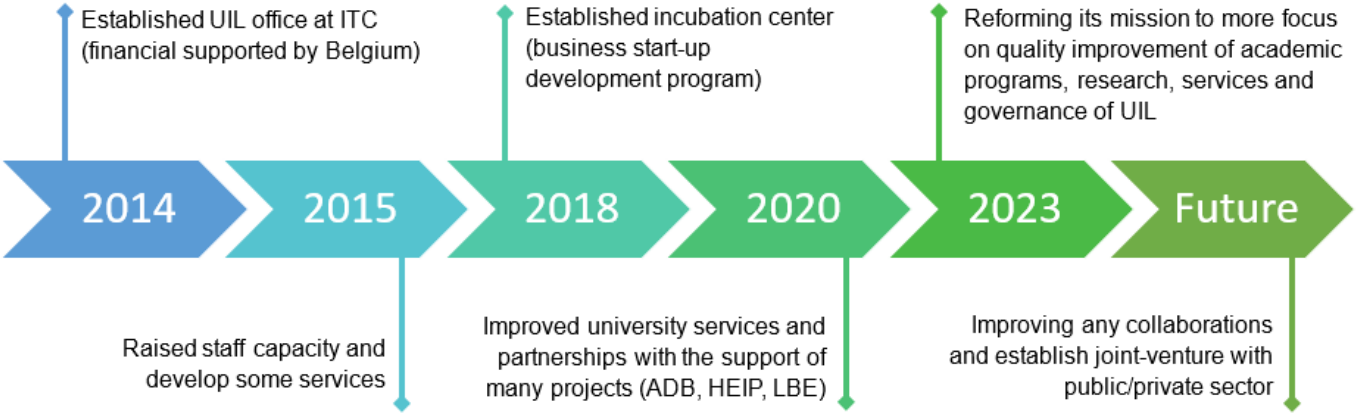
The Library of the Institute of Technology of Cambodia is located on the ground floor of Building-I. It has an E-learning and self-study room, Symposium, Showroom and Smart Incubation Space.

- Most of the documents in the library are technical documents in line with the subject of study and teaching.
- Have modern techniques to manage the library in accordance with the standard
- There is an Internet system for researching information online that can facilitate students' research.
- Have a computer with an Internet connection (Internet) to facilitate user research.
- Has experienced and skilled staff
- Adequate equipment to serve students effectively.

VI. Collaboration and University Industry Linakage

University-Industry Linkage (UIL) office of ITC, established in 2014 with the collaboration from Belgium universities partners (ARES-CCD), is a unit responsible for coordinating, collaborating and networking between ITC experts, ITC services and private sectors. UIL has played a pivotal role in promoting partnerships with business and private sectors, creating strategies and mechanisms for the cooperation and monitoring the operational progress to ensure continuous and sustainable cooperation between ITC and private sectors at all levels.

Journey of UIL-ITC

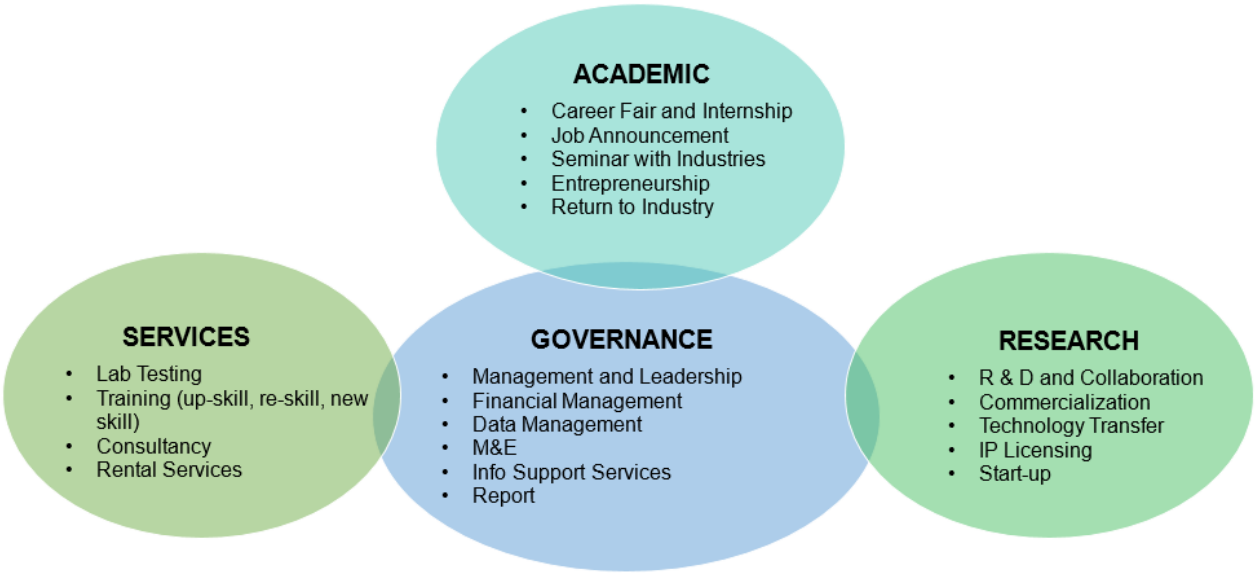


Goal

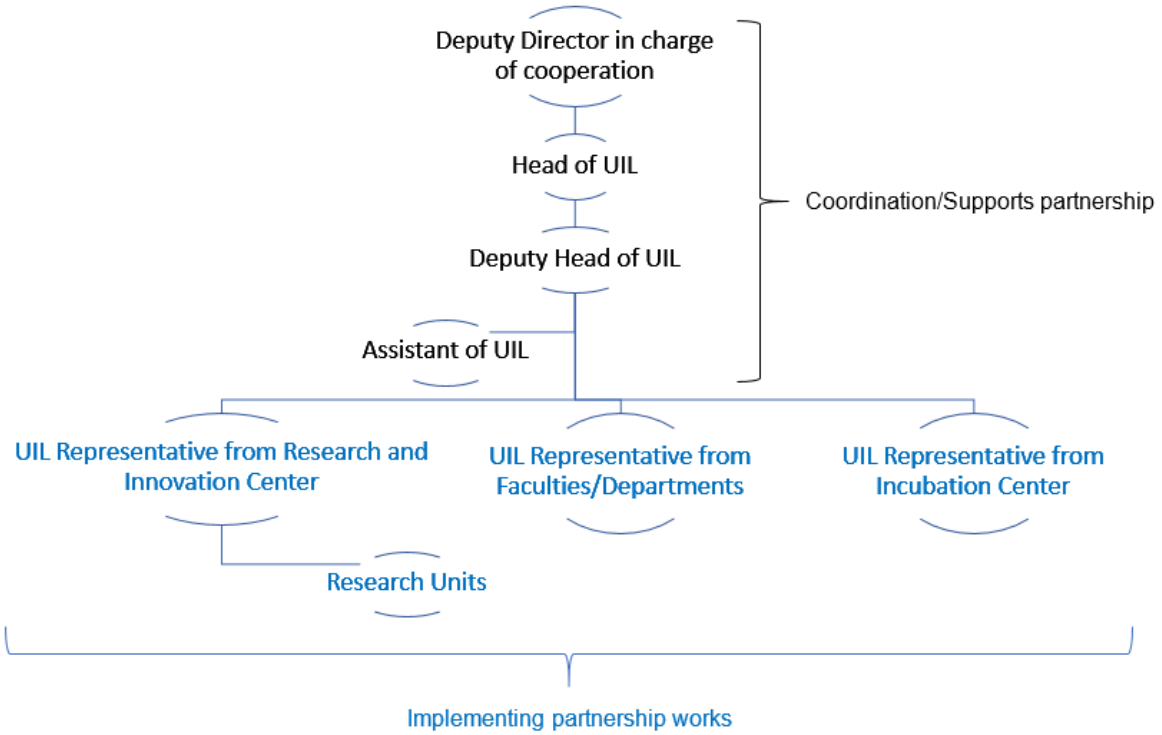
UIL contributes to enhance the quality and relevance of academic programs, research and services towards Cambodia Vision 2030 and 2050.

Mission

In 2023, UIL is reforming its mission to more focus on target result outputs towards quality improvement of academic programs, research and services in whole ITC including the governance of UIL



Structure



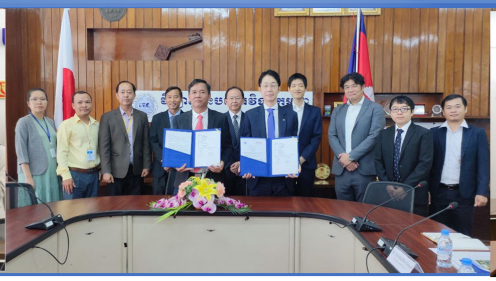
Services

- Lab Testing
- Training (up-skill; re-skill; new skill)
- Consultancy
- Rental Services (lab, equipment and space)
- R&D

Brochure of ITC Services

Short-course training program provides to industry's employees to improve quality and productivity through structured programs for their task-based learning to upskill & reskill their knowledge, technical or soft skills at ITC or workplace. The training programs can be "Fulltime short courses" or "Delivered parttime". ITC and the industry can develop joint proposal to get the financial support from Skills Development Fund (SDF) or other sources to support the training. The industry also can use their own budget for the training.

សហគ្រាសដៃគូរបស់វិទ្យាស្ថានបច្ចេកវិទ្យាកម្ពុជា



ហ៊ានយូ គ្រុប HUANYU GROUP 寰宇集团

SAILUN TIRE

開明集團 HOIMENG GROUP

K & K PIPE CAMBODIA

S.N.K.R.P Electric Everything of Electric

KIRIROM Food PRODUCTION

LBL International Construction

CHIP MONG INDUSTRIES

de heus

P&E PD&E POWER ENGINEERING

WOW NOW It's WOW or Never!

cambojob EASY TO GET JOB

LOTUS GREEN TEAM

INTERSYS SOLUTIONS

中国五矿

MCC 上海宝冶（柬埔寨）有限公司 SHANGHAI BAOYE (CAMBODIA) CO.,LTD.

HEXAGON

TR PLUS ENGINEERING CO., LTD

SOGE SOLAR GREEN ENERGY CAMBODIA

មេស្សា អាសិត មេនេជមេន Mega Asset Management Co.,Ltd

DENSO

Coca-Cola CAMBODIA BEVERAGE COMPANY Ltd.,

MinebeaMitsumi Passion to Create Value through Difference

GGEAR GROUP

KOJIMA PRODUCTIONS

Sumitomo Corporation

K cement

Smart

Wing Bank

NIPPON KOEI

PRUDENTIAL

CPTL

sevea Boosting Your Ethical Ventures

SCG

TotalEnergies

Gold Zone Media

SOLIDWORKS

CAMBODIA Beer

Procast Asia Co.,Ltd.

metfone

CAMBODIA BREWERY

LY LY

LYLY FOOD

UDAYA TECHNOLOGY

Schneider Electric

CominKhmere

RMA CAMBODIA

ANGKOR RESOURCES CORP.

SETSUYO ASTEC CORPORATION

www.tem-trading.com

Kirisu Farm

Vital Premium Water

CPF CP C.P. Cambodia Co., Ltd.

Confirel

URATA URATA (CAMBODIA) CO.,LTD.

YAZAKI

RAMBOLL

BÉTON BLOCK & PAVE

CAMBO PILING INVESTMENT

Aprati FOODS

Panasonic BUSINESS

CODE CLANS

KOBELCO

X-WATER

S.E.A M&E Engineering Co.,Ltd

KCC KEY CONSULTANTS (CAMBODIA)

ANCO Water Supply

MEP-E

TEUK SAAT 1001 ORG.

CATS Cambodia Air Traffic Services

FTB Foreign Trade Bank of Cambodia

NTC NeocomISP Limited

BORAN CARE

CNGC

menard

bodia

ផ្សារមូលបត្រកម្ពុជា CSX

ANT ASIA NUTRITION TECHNOLOGIES

Anakut Digital Solutions

legrand

SENG HOUT FAFA FOOD

IG IG TECH GROUP

BG Sustainable Environmental Solutions

HONDA

CSL

HUAWEI

CJ FEED&CARE

Institut Pasteur du Cambodge PASTEUR NETWORK

BMB BEST METAL BUILDING BMB & A JSC.

CAMBREW LTD Part of the Carlsberg Group

AngkorMilk

geres ACTING FOR CLIMATE SOLIDARITY

សាកលវិទ្យាល័យនិងស្ថាប័នដៃគូរបស់វិទ្យាស្ថានបច្ចេកវិទ្យាកម្ពុជា

Universités et institutions partenaires de l'ITC

ITC partner universities and institutions

PO Box 86, Russian Conf. Blvd. Phnom Penh, Cambodia.
Tel : 855 23 880 370 / 982 404
Fax : 855 23 880 369
E-mail : info@itc.edu.kh
Website : www.itc.edu.kh