INSTITUT DE TECHNOLOGIE DU CAMBODGE

A PUBLIC HIGHER EDUCATION INSTITUTION
ESTABLISHED IN 1964 (55 YEARS)
HQ. IN PHNOM PENH CITY
Campuses: 1. ITC-TBOUNG KHMUM
2. ITC-NEW STADIUM
3. ITC-Kg. CHAM
Mission of

INSTITUTE OF TECHNOLOGY OF CAMBODIA (ITC)

- become a flagship engineering education
- is a top quality of engineering and technology
- a workforce and talent pool that is trainable, adaptable, well-educated
- an entrepreneurial class that is outward-looking and confidently seeking global opportunities
- knowledge creation and development system that sources and adapt the best knowledge globally.
A satellite campus
BOARD OF TRUSTEE / Conseille d’Administration

- one a year meeting,
- decides on a policy decision,
- endorsement progress reports,
- financial endorsement,
- seeking an assistance from partners.
INTERNATIONAL ACADEMIC COMMITTEE / CONSORTIUM

- academic/curriculum review,
- academic exchanges,
- recognition degree performances,
- providing scholarships,
- explore research collaborations.
OBJECTIVES

1. To improving curriculum for technician and engineer
2. To increase number of students to match IDP initiative
3. To become a well performance on startup incubation
4. To train students with good practices, problem solving, creative idea on innovation and entrepreneurship
5. To ensure access to high level ICT
6. To make ITC a model for social and environmental responsibility
7. To be an engineering flagship institution in Cambodia.
ACTION PLANS

1. To extend new campuses in order to extend and offer opportunity for students to study engineering.
2. To keep quality graduate but increasing number of students in response to the need of labor markets.
3. Upgrading workshops and lab aligning with construction, electronics, manufactures and processing.
4. To enhance capability of faculties and students by adopting learning-by-doing through curriculum design.
5. Strengthen online learning, upgrading digital education by interfacing to the industry.
6. Start-up school factory as a part of enhancement student quality and promoting Fablab innovation.
7. Create on-the-job training in allowing apprenticeship enables practitioners to gain a license to practice in a regulated profession.
8. Reinforces R&D for commercialization!
ACADEMIC PROGRAMS

- Food Processing Chemical Engineering
- Industrial Engineer, Mechanical Engineer
- Civil Engineering Architecture
- Water Resources, Environmental Management
- Automation, Electronics, Telecommunication, Energy Programs
- Geo-resources, Geotechnical, Mining & Petroleum
- ICT, Multimedia center, Cyber university
- Foundation Science International Languages
- Research and Innovation Center
- School of Graduate Degree’s Programs
Join Research & Training between ITC & Schneider Electric

Entry Exam
EDUCATION CATEGORY (2018-2019)

STUDENT
4,283 / F25,3%

Ingénieur
3,752

Graduate Prog.
Doctoral: 22/F9
Master: 68/F17

Short training

Continuing education
497 / F144

TECHNICIAN
531
Faculty & Lab Manager, 303
(Full-time Doctor 90 persons)

- Ph.D.: 29.7%
- Master: 47.9%
- Ingénieur: 23.4%
Source of faculty earning degree from:

- National: 42.6%
- Fr & EU: 23.7%
- Japan: 10%
- Others: 23.7%
Doctoral Degree’s Programs

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<th>No.</th>
<th>Fields</th>
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<tr>
<td>1</td>
<td>ETM</td>
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<td>3</td>
<td>MSS</td>
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<td>MIT</td>
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<tr>
<td>5</td>
<td>W&amp;E</td>
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- Energy Technology and Management
- Food Technology and Nutrition
- Materials Science and Structures
- Mechatronics and Information Technology
- Water and Environment
Faculty of Chemical and Foods Processing
Faculty of Civil Engineering & Architecture
ENERGY PROGRAM

RENEWABLE ENERGY PROGRAM

ELECTRONICS PROGRAM

CONTROL ENGINEERING PROGRAM

ROBOTIC ENGINEERING PROGRAM

BIOMEDICAL PROGRAM

AVIATION MANAGEMENT PROGRAM
Faculty of EEE
ITC-UHS-Czech Technical University
Launching Biomedical Engineering Program
Online Learning and MOOC
Dr Carl Grundy-Warr teaches global political ecology; natural resources; nature and society; and political geography at the National University of Singapore. He has published numerous international refereed papers on political geography and political ecology in Southeast Asia, and he is currently working on projects in both the upper-middle and lower Mekong Basin. He coordinates a project called “Waste on Water” supported by the NUS Lee Kuan Yew School of Public Policy’s Institute of Water Policy.

His interests in relation to this project are in hydro-social relations and the problems of solid waste in the freshwater system of the Tonle Sap. In other parts of the Mekong, he is interested in how physical properties of nature and biophysical resources are interpreted, managed and used within water development projects. Dr Carl is currently writing papers concerning hydro-social relations in the Mekong River and Tonle Sap which focus on examining the interface between social, ecological, and technological processes of change.

**Guest Lecture**

**Institute of Technology of Cambodia**

**Dr. Carl Grundy-Warr**

**Topic:** Flows, Pulses and People: Ecology-Society Relation of the Mekong River
- HYDROLOGY
- IRRIGATION
- WATER SANITATION
- DRAINAGE
- DAM CONSTRUCTION
Faculty of Mining and Petroleum
Student ROBOT CONTEST
BIOFUEL LABORATORY
JOINT RESEARCH ON AIR QUALITY
Projet Efficacité Énergétique ITC

Consommation d'énergie
- Consommations des bâtiments
- Monitoring énergie
- Automate Sirea
- Communication IP (RJ45, Wifi, Radio)

Production d'énergie
- Photovoltaïque
- Conversion de puissance
- Électricité
- Électronique
- Automatisme
- ENR
- Génie civil

Efficience énergétique
- Climatisation
- Éclairage
- Passerelle IR/LoRA
- Électronique
- Automatisme
- Génie du bâtiment

Serveur de données

Recherche & Développement
- Applications mobiles
- Sensibilisation des usagers
  - Interactions avec le système
- Analyses de données
  - Outils prédicifs
  - Analyses temporelles
  - Bases de connaissances
    - Interactions avec l'opérateur de réseau
- Algorithmes prédicifs
  - Machine learning
  - Intelligence artificielle
    - Systèmes auto-apprenants
- Impacts sociaux & économiques
  - Diffusion de l'information
    - Répliqueabilité du système

Sécurité informatique, réseaux de communication, salle serveur et hébergement

ECOLE USINE / SCHOOL FACTORY (sirea group)
Centre of Resource Documentation
Practical Work at GEE
Telecommunication
SHORT TRAINING PROGRAMS
ICCUBATION START-UP CENTER
Alternative Solutions

Re-Design of Kdan Pir Geometry

❖ Study several alternatives
✓ Keep Kdan Pir status as it is
✓ Small impact & cost
Results from Traffic Simulation

Existing

After re-engineering

In PTV VISSIM Environment

By ITC-TSU, Nov 2019

Queue length

Queue length

-40%

-23%

-8%

1%
Sample 3D Animation for Kdan Pir by TSU
Smart Techno Incubation Space

Discussion room

- 1 table & 5 chairs
- 1 TV
- 1 white board
Ecosystem for Science, Technology and Innovation

- Ideation
- Proof of Concept
- Prototyping
- Startup

Science/Engineering Ecosystem

Business Incubator

Talents and funding

Funding and Experience
<table>
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<tr>
<th>UNIVERSITY PARTNERS</th>
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<tbody>
<tr>
<td>FRENCH 14</td>
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<tr>
<td>BELGIUM 4</td>
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<td>FINLAND 4</td>
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![World Map with University Partners Locations](image)
### Scholarships (2001-2019)

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<th>Type</th>
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<tr>
<td>Master's</td>
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<tr>
<td>PhD Sandwich</td>
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<tr>
<td>PhD Japan</td>
<td>54</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>304</strong></td>
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TECHNICAL ASSISTANCE FROM FRENCH EMBASSY
Field visit to Tokyo Tech.

... and to Kyushu University
Partnership with universities in Belgium
Joint partnership with INP Toulouse, FRANCE
Partnership with VINCI airport & Temasek Polytechnic of Singapore (launching new programs on aviation management)
International Conferences, WS, ...., others
Improvement Infrastructures & HRs

- **WB**: HIGHER EDUCATION IMPROVEMENT PROJECT TO ITC
  - Approx.. 23 MILLIONS USD
  - CONSTRUCTS NEW INFRASTRUCTURE (5 HECTARES Sq.)
  - IMPROVEMENT R&D AND INCUBATION

- **ADB**: SKILLS FOR COMPETITIVENESS PROJECT
  - Approx.. 10 MILLIONS USD
  - CONSTRUCTS 7 STORIES BUILDING FOR 4 SKILLS
  - CONSTRUCTS WORKSHOP FOR CIVIL ENGINEERING
  - RESTORATION TWO LECTURE HALLS, BUILDING “F”

- **JICA**: LABORATORY BASED OF EDUCATION (LBE)
  - 3.5 MILLIONS USD
  - APPLY ENGINEERING EDUCATION
  - STRENGTHENING “University Industry Linkages”

- **AFD**: FOR MASTER PROG. ON URBAN WATER & SANITATION ENG.
  - 1 MILLION EURO
  - SUPPORT HRs TO Min. WATER RESOURCES & METEOROLOGY
Launch a Double Degree programs in associate degree with University of Health Science in “Biomedical Engineering” by 2019-2020.

Will launch an “Aviation Management Engineering” with Cambodia Airport (Vinci) and Polytechnical Institute of Temasek, Singapore, by 2020-2021

Will create a French degree’s program at ITC in partnership with ECAM in “Ingénieur Généralist” by 2021

Will create an associate degree’s program in “Manufacture Engineering for Food Industry” under ADB project by 2021

Will create an associate degree’s program in “Manufacture Engineering” under ADB project by 2021.
Job opportunity!