School of Energy and Environment
香港城市大學
City University of Hong Kong

School of Energy and Environment

FIRST IN HONG KONG

Professional Education & Cutting-edge Research in Energy and Environment

Vision & Mission

Vision

The School of Energy and Environment (SEE) at City University of Hong Kong aims to be a leading School in the Asia-Pacific region specialising in cutting-edge research in energy and environment and in the training of energy and environment professionals.

Mission

- Advancing research in targeted themes of benefit to societal needs in energy, environment, and sustainability.
- Preparing leaders and practitioners to address environmental and energy needs in a rapidly decarbonizing world and build a sustainable future.
- Maintaining a collaborative and supportive atmosphere for students, faculty, alumni and other stakeholders in advancing our interdisciplinary research and educational objectives.

Undergraduate Programmes

Major Programmes

- Bachelor of Engineering in Energy Science and Engineering (BEngESE)
- Bachelor of Engineering in Environmental Science and Engineering (BEngEVE)

Minor Programmes

- Atmospheric and Climate Science
- Energy Technology
- Sustainability

Gateway Education

- Climate Change and Extreme Weather
- Energy: Today and Tomorrow
- Food Security and Sustainability
- Sustainable Energy and Environmental Engineering
- Urban Green City: Pollution and Solution
- Urban Sustainability in Hong Kong

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INTEGRATED ENRICHMENT PROGRAMME

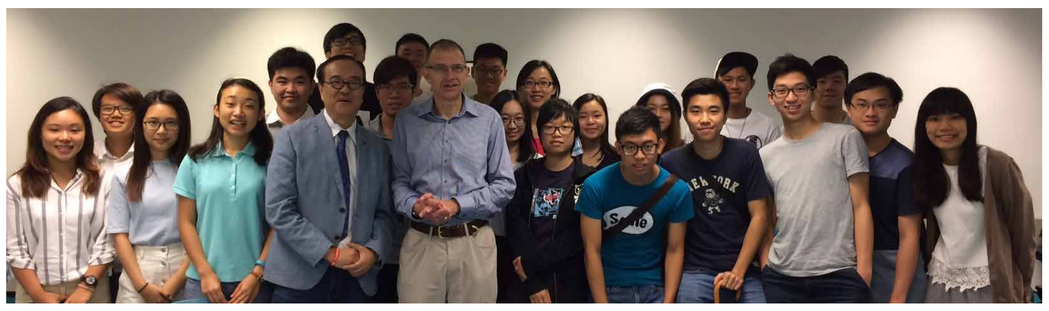
SEE aspires to enhance employability of our students. A series of professional training has been launched to develop students' knowledge, skills and efficiency that will be essential for their career.

Career Training

Career Aspiration and Development Programme

- Business Etiquette Training

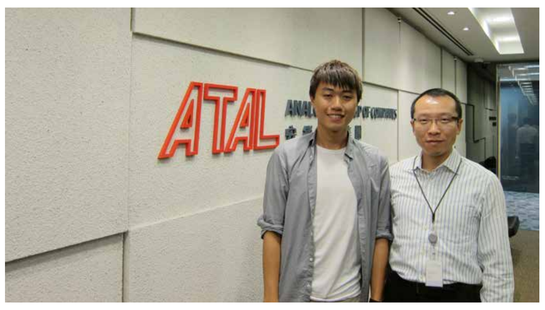
- Leadership and Teamwork Training



- Mock Interview Training
- Resume Writing Workshop

Industry Ready Programme

- Internship Programme



Professional Networking

Networking & Sharing Sessions

- Dialogue with Professionals
- Colloquium

Industrial Mentorship Programme

Global Enrichment

Student Exchange

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INDUSTRY READY PROGRAMME

Early Initiatives

Before the launch of "SEE Industry Ready Programme", SEE has been greatly supported by the industry in providing out-of-classroom training to SEE undergraduate students. Energy audit and retro-commissioning (RCx) training have been provided by our partners.

Energy Audit Training

- Launched in 2018 with CLP Power Hong Kong Limited
- **First** initiative of "SEE Industry Ready Programme"
- Lecture and on-the-job training
- Under supervision of CLP to conduct energy audit for different companies/organizations, and to provide proposal in energy saving
- Equip students with an understanding of knowledge related to energy management, retro-commissioning, energy audit service, solar assessment, etc.

Retro-commissioning (RCx) Training

- Launched in June 2020 with Building Services Operations and Maintenance Executives Society and Hong Kong Green Building Council.
- **Second** initiative of "SEE Industry Ready Programme"
- Lecture and examination
- Internship opportunities provided after stringent selection
- A small group of BEngESE undergraduate students were nominated to local companies for RCx internship in summer 2020. Companies included:
  - Chinese YMCA of Hong Kong
  - Energenz Consulting Limited
  - Hong Yip Service Co. Ltd.
  - Jones Lang LaSalle
  - The Great Eagle Properties Management Company Limited

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INDUSTRY READY PROGRAMME

New Initiatives

The scope of "SEE Industry Ready Programme" is further expanded with huge support from more industry partners with an aim to enhance students' employability.

Overview

- The SEE "Industry Ready Programme" is a unique collaboration between SEE and industry partners (professional bodies and companies) to provide out-of-class work-related training to SEE undergraduates.
- It aims to broaden students' job knowledge and enhance their practical work skills in environmental and energy, engineering, and science-related areas.
- BEAM affiliate, WELL training, retro-commissioning, energy audit, etc., will be currently covered.

Our Partners

The following professional bodies and companies will provide training opportunities for SEE undergraduates:

AEC 沛然環保
Allied Sustainability and Environmental Consultants Group Limited

BEAM 建築環保評估協會
BEAM Society Limited

BSOMES Building Services Operation and Maintenance Executives Society 屋宇設備運行及維修行政人員學會
Building Services Operations and Maintenance Executives Society

CLP 中電
CLP Power Hong Kong Limited

環境工業協會 Environmental Industries Council
香港工業總會轄下 A FHKI Council
Federation of Hong Kong Industries Group 26 (Environmental Industries Council)

HKGBC 香港綠色建築議會
Hong Kong Green Building Council

HKIQEP 香港環專會
Hong Kong Institute of Qualified Environmental Professionals Limited

About the Training

01 Lecture
Lecture and training sessions on various topics

02 Exam
Examination to obtain professional qualification

03 Practice
Internship opportunities

04 Graduation
Theoretically and practically equipped upon graduation from SEE

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CLP Energy Audit Programme

My Ultimate Goal with Energy Audit Training Programme

WONG Sing
BEngESE, Final-year Student

"I am excited to know that CLP and SEE are offering energy audit training programme for us and once I knew about it, I just applied for the programme without a second thought.

There will only be half a year to go before I graduate, and it will be crucial for me to grasp practical work skills and solid experience in energy field for a better start of my energy career. Studying in the SEE has been an important chapter, working as intern is equally vital. Through the energy audit programme, I aim to acquire not only energy-audit skills and knowledge, but more importantly, the professional work attitude, mindset and time management skills. In a fast-paced city like Hong Kong, it will be hard to grow in the career without possessing all these skills. I hope I can acquaint myself with the field that I am fond of and understand clearly about my strengths and weaknesses. I swear I will be proactive but always humbling to learn more from the professionals in the industry."

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CLP Energy Audit Programme

Practices under the Energy Audit Training Programme

HUNG Yuek Lun
BEngESE, Final-year Student

"I am impressed by the programme and the many practical knowledge that I could gain. Through this programme, I have learnt the procedures for energy audit, namely, scope of audit, building information and site visit. Various energy management opportunities are introduced in this programme, for instance, baffle wall removal for heat rejection of air conditioner, and lamp type changing for better efficiency.

The lecturers of this programme are all experienced and extremely approachable. They are always supportive and willing to share with us their insights in energy audit. With their practical experience gained over the years, I believe there must be a lot that I could learn in addition to the textbooks. We were also taught about some common concerns from clients in energy audit in one of the classes. I am very impressed by this class that shows the strength of this programme."

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CLP Energy Audit Programme

Practical Skills and Theories TWO in ONE

POON Rui Jun

BEngESE, Final-year Student

"The CLP Energy Audit Programme offers unique training opportunities to students majoring in energy science and engineering.

I am always interested in energy audit. Through the training workshop, I became more familiar with the theory and equipment applied to different buildings, for instance, the set up of various lighting systems and the rationales behind them. This programme also provides with me hands-on experience as I have to compile an energy audit report for CLP review. I believe these unique experiences will open the gate for my career."

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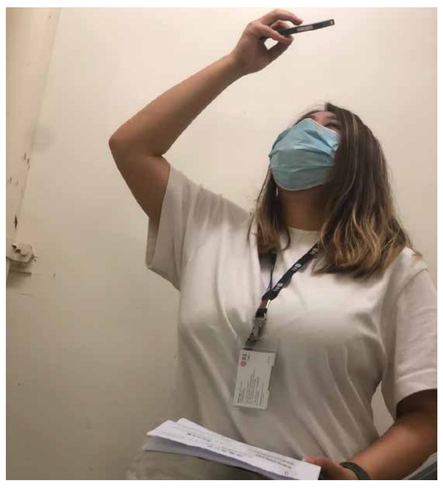
Retro-commissioning (RCx) Training

A New Direction with Jones Lang LaSalle (JLL)

CHAN Ying Yu

BEngESE, Final-year Student



"In summer 2020, I joined the "RCx Training Programme" and was nominated to JLL as summer intern. Being a Techniccal Assistant, I was assigned to prepare retro-commissioning plans and proposals, funding applications and quotations. These are all brand-new challenges for me, but I enjoy tackling all these challenges

Recently, I have been preparing for an energy audit project for the Cyberport, a RCx project related to Cathay Pacific cargo terminal and a site assessment for DHL. All these projects provide me with valuable experience. My horizons have been much widened.

To conduct the projects, I had to study the HVAC system of different sites, measure and record the operational data and analyze them with much care. I have learnt how to gather useful data and generate applicable reports for clients. The skills and experience I have acquired through the internship will be vital for my future career. I earnestly hope that I could step into the field after my graduation!"

Feedback by CHAN Ying Yu's Supervisor — Mr. Andrew Lau

"This programme provides an excellent opportunity for undergraduates to participate in the sustainable construction industry. Students can receive advanced engineering knowledge, and combine what they have learnt with the problems they encounterd through the internship. With the help of internship, they can learn how to deal with challenges that may be encountered in their future careers. Like CHAN Ying Yu, my student intern, I did witness her progress and realized how much she could learn from each task."

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Retro-commissioning (RCx) Training

Energy Management in Chinese YMCA Hong Kong

MAK Shing Wai

BEngESE, Final-year Student

"Through the "RCx Training Programme", I had the precious opportunity to work as intern of the facility management unit in Chinese YMCA of Hong Kong. During the internship period, I was assigned to assist in energy management project. For better use of energy, I took the initiatives to discuss with contractor in replacing the fluorescent light by LED light. The liaison process has definitely enriched my communications and presentation skills.

Besides, I managed to apply what I have learnt from textbooks to compile a report about recording the amount of energy saved and payback period. It was a great learning opportunity to put theory into action. More than that, I have acquired new skills such as AutoCAD to update the layout of buildings. The internship is more rewarding than I have ever expected.

However, due to soaring situation of COVID-19, most of time I was working from home. It would be great if I could get a deeper taste of team work and project management in future through other internships!

All in all, I will never forget this fruitful summer with Chinese YMCA Hong Kong. Thank you for the opportunity that allows me to contribute and learn."

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Retro-commissioning (RCx) Training

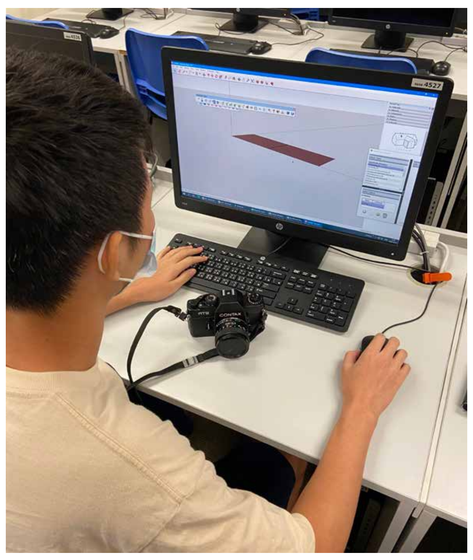
Highs and Lows of the Chinese YMCA Hong Kong Internship

WONG Sing
BEngESE, Final-year Student

"I had a wonderful internship last summer. I'm so grateful that I could have the chance to work in the YMCA. Starting from the very first day of my internship, I realized that I had to work hard and learn fast. Through the internship, I have learnt more about the operation of chiller system, lighting system and capacitor system in YMCA. Yet, the journey was not smooth all the way. In the first week, I was frustrated with the mistakes I made at work. Although everyone in the office was very much occupied, they never hesitated to offer me support and guidance. I have learnt a great lesson and now, I always remind myself to be extra cautious.

After picking up more skills and knowledge, I managed to handle a project regarding the change in lighting system. The project involves cost estimation, energy saving ratio, annual electricity bill saving and payback period. Later on, I was assigned to compile a tender document including scope of work, floor plan for a few construction companies. All these tasks are core stones in building up my confidence and techniques.

I would never forget the internship experience. Apart from working, I had the opportunity to visit the zero carbon zone in Wu Kai Sha YMCA center. It was an ideal model showing us how carbon emission could be reduced by using solar energy, and converting solar energy to heat and electricity effectively.



YMCA gave me the precious and unforgettable experience that will pave the way for my future career."