

## APPLICATION OF COMPUTER SIMULATION IN GREEN BUILDINGS: PRINCIPLE AND METHODOLOGY (Course Code: 87103)

 28 January 2019, 18:30 – 21:30

 BEC Building, 77 Tat Chee Avenue, Kowloon Tong, Hong Kong

**Part 1** - Computer simulation is a significant tool for design, operation and maintenance of green building, particularly in energy performance and thermal comfort analyses for building occupants. The reliability of simulation results depends on the proper utilisation of software, translation of building information into simulation input and interpretation and understanding of output from software. This course will provide the participants with the introduction and basic knowledge of the application of computer simulation in built environment.

**Part 2** - The course will also focus on utilising applicable simulation software for generating energy uses related and indoor and outdoor lighting simulation results for **BEAM Plus** assessment.

### Content

- Introduction of simulation software
  - Purpose for utilising simulation software
  - Software selection criteria (e.g. interface, input, processing, output considerations, etc.)
  - Simulation work flow
  - Applications and limitations
  - Interpretation of output from simulation
- Simulation in BEAM Plus
  - Annual energy consumption & CO<sub>2</sub> emission (EU 1 & 2)
  - Sunlight and wind for clothes drying (EU 8)
  - Neighbourhood daylight access (SA 9)
  - Light pollution (SA 15)
  - Daylight access (IEQ 15)
  - Quality of artificial lighting (IEQ 16 & 17)
- Case Sharing on BEAM Plus Projects

### Course fee

- \$600 (BEAM Pro, BEAM Affiliate, BEC Members & BSL Associate / Ordinary Members)
- \$750 (Members of Supporting Organisations)
- \$900 (Standard)

### Medium of Instruction

- Cantonese supplemented with English training materials

### Certificate

- This is a 3-hour CPD course for BEAM Pro and BEAM Affiliate. E-certificate of Attendance will be awarded to participants after the course.

### Speakers

**Mr Nelson Choi** Manager – Green Building & IAQ, BEC

*MEng, BEng, CEng, MIMechE, MASHRAE, ASHRAE Certified BEMP & BEAP, CAP, BEAM Pro*

Nelson specialises in green building advisory, carbon audit and building energy efficiency. He is a BEAM Professional, ASHRAE Accredited Building Energy Modeling Professional and Building Energy Assessment Professional. He acts as a BEAM Plus consultant for over 30 new and existing building projects covering residential, commercial, educational, industrial development. In these projects, Nelson utilises computer simulation in evaluating the energy performance, daylight access and thermal comfort of occupants. Prior to joining BEC, he worked as a HVAC and environmental sustainable design engineer.

**Mr Tim Lo** Senior Project Assessor, BEAM Society Limited

*AICP, MRICS, BEAM Pro, LEED AP (BD+C, ID+C, O+M, ND), WELL AP, SITES AP*

Tim is the Senior Project Assessor of BSL. He is a Chartered Environmental Surveyor with the Royal Institution of Chartered Surveyors (RICS) and American Institute of Certified Planners with the American Planning Association (APA). He has utilised different lighting simulation tools to visualise the lighting impact of indoor and outdoor environment on a number of BEAM Plus assessed projects, masterplanning projects and interior design projects.

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## Terms & Conditions

- Duly completed application form accompanied by payment will be considered for admission;
- Course fee is non-refundable, non-transferable and should be received by BEC IEE no later than 5 working days before the commencement of the course;
- Admission is made on a first-come-first-served basis;
- Successful applicants will be notified no later than 3 working days before the commencement of the course;
- Unsuccessful applicants will be given refund of course fees if they have already paid;
- The course will be cancelled with full refund when the typhoon signal no.8 or above, or black storm warning is hoisted 3 hours before the course commences;
- An official e-receipt will be distributed through email to the participant upon the completion of the course;
- BEC reserves the right not to conduct the course if the applications are below the required minimum number of participants, and course fees received will be refunded. All decisions made by BEC on matters related to the courses are final;
- Personal data including contact information will be used by BEC for its communications and direct marketing purpose, including newsletters and promotions of events, training courses and other activities. If you do not wish to receive any further promotional materials from BEC, please send an email to us at [unsubscribe@bec.org.hk](mailto:unsubscribe@bec.org.hk); and
- Information provided will be kept strictly confidential and will not be sold, reused, rented, loaned, or otherwise disclosed to third party.

## About Business Environment Council Limited 商界環保協會有限公司

Business Environment Council Limited ("BEC") is an independent, charitable membership organisation, established by the business sector in Hong Kong. Since its establishment in 1992, BEC has been at the forefront of promoting environmental excellence by advocating the uptake of clean technologies and practices which reduce waste, conserve resources, prevent pollution and improve corporate environmental and social responsibility. BEC offers sustainable solutions and professional services covering advisory, research, assessment, training and award programs for government, business and the community, thus enabling environmental protection and contributing to the transition to a low carbon economy. For more information in BEC, please visit [www.bec.org.hk](http://www.bec.org.hk).

## About BEC Institute of Environmental Education

BEC Institute of Environmental Education ("BEC IEE"), a division of BEC, provides a platform for business managers and decision makers, to advance their knowledge and develop the expertise necessary for environmental decision-making. BEC IEE also facilitates professional development by promoting quality environmental education through various environmental education programmes. For further enquiries or assistance, please contact BEC IEE at [beciee@bec.org.hk](mailto:beciee@bec.org.hk).

## About BEAM Society Limited

BEAM Society Limited (BSL), owner of Building Environmental Assessment Method (BEAM), is a non-profit public body committed to developing and implementing the BEAM assessment tools (HK-BEAM & BEAM Plus), assessing green building environments and training BEAM Professionals (BEAM Pro) and BEAM Affiliates. For more information, please visit [www.beamsociety.org.hk](http://www.beamsociety.org.hk)

## Supporting Organisations

