



RETROFITTING COMMERCIAL BUILDINGS CONNECT: SBRC PROFESSIONAL DEVELOPMENT

26th and 27th March 2015
University of Wollongong

RETROFITTING COMMERCIAL BUILDINGS FOR ENERGY EFFICIENCY

A two day professional development course on energy efficiency and sustainability in buildings presented by the Sustainable Buildings Research Centre at the University of Wollongong

ENERGY EFFICIENCY ENHANCEMENT THROUGH RETROFITTING OF COMMERCIAL BUILDINGS

CONNECT: SBRC PROFESSIONAL DEVELOPMENT

COURSE OBJECTIVES

This course will provide companies and individuals with knowledge and capabilities to enhance energy efficiency of commercial buildings through retrofits, and the measurement and evaluation of actual energy performance in commercial buildings.

The Energy Efficiency Enhancement through Retrofitting of Commercial Buildings Course greatly benefits those wishing to reduce energy consumption in individual buildings or over property portfolios and engineers, and other professionals, who wish to develop their knowledge and skills in the field of energy efficiency enhancement.

A key objective is to empower attendees with awareness and understanding of the key issues involved in implementing effective building retrofits to realise optimal economic and environmental benefits.

COURSE BENEFITS

On successful completion of the course you will gain knowledge and skills to assist you in the following:

- awareness of current standards and legislation
- utilization of opportunities for building owners and other stakeholders to access government initiatives, e.g. Environmental Upgrade Agreements (EUAs)
- awareness of building commissioning, energy management and building retrofits opportunities
- determining the best retrofit technologies for particular commercial buildings
- assessment of economic benefits and risks of building retrofit technologies
- understanding of the key issues in retrofitting HVAC and lighting systems for improved energy efficiency
- awareness of key energy modelling methods and tools for commercial building retrofits
- awareness of opportunities and barriers to implementing various building envelope retrofit options
- understanding occupant perceptions, behaviour and thermal comfort when designing and implementing retrofit technologies
- relevant and up to date case studies

WHO SHOULD ATTEND

Building Services Engineers, Architects and Building Designers, Building Commissioning Professionals, Engineers and Environmental Specialists, Facilities Managers, Sustainability Managers, Building Owners, Asset and Portfolio Managers, Local Government Environment Managers, Asset Managers and Services Managers, Government Department Asset Managers.

COURSE OUTLINE

The course is conducted over a two days commencing Thursday 26th March 2015 and comprises lectures and demonstrations. The current course outline is provided below.

Day 1

Time	Topic
8:45 am	Registration
	<ul style="list-style-type: none">Welcome and introductionOverview of standards, legislative frameworks and requirements, including EUAs
	<i>Morning Tea</i>
	<ul style="list-style-type: none">Overview of commercial building retrofits, benchmarking and building energy auditingMethodologies to determine the best retrofit technologies for commercial buildings
	<i>Lunch</i>
	<ul style="list-style-type: none">Human factors, thermal comfort and post project evaluationCase studies of HVAC system retrofits
	<i>Afternoon tea</i>
	<ul style="list-style-type: none">M&V of energy savings for commercial buildings and case studiesDay 1 summary and discussion, Site visit
5:00pm	Conclusion Day 1

Day 2

Time	Topic
9:00 am	Start Day 2
	<ul style="list-style-type: none">Introduction Day 2Energy modelling for commercial building retrofits and case studies
	<i>Morning Tea</i>
	<ul style="list-style-type: none">On-site generation systems for commercial building retrofits and case studiesPractical evaluation of building energy performance
	<i>Lunch</i>
	<ul style="list-style-type: none">Retrofit strategies and technologies for commercial building envelopesBuilding information modelling (BIM) to support energy analysis of commercial building retrofits
	<i>Afternoon tea</i>
	<ul style="list-style-type: none">Commissioning and tuning of existing retrofit systems and case studiesCourse summary and discussion
5:00pm	Conclusion Day 2

TRAINING INVESTMENT

The course investment provides for an inclusive industry related training package with course notes, lunches and morning and afternoon tea. Course fee per person is AUD\$980 including GST (delegates may choose to attend only a single day for \$560). Participants may count course hours towards their CPD requirements.

ABOUT THE SPEAKERS

Prof Paul Cooper is the Director of the Sustainable Buildings Research Centre and a Professor at the University of Wollongong.

Dr Zhenjun Ma and **Dr Georgios Kokogiannakis** are both Senior Lecturers at the Sustainable Buildings Research Centre.

Sean Rapley is a Principal of Northrop, the Manager of their Sydney Building Services Division and an experienced, accredited NABERS assessor.

Wayne Goodwin is the Lead Engineer for Power Generation at Beca. His focus is energy solutions including cogen, renewables and energy efficiency.

Chris Nunn Chris Nunn is JLL's Sustainability Director for Australia and a sustainability and green building expert, with qualifications in NABERS, Green Star, BREEAM, LEED, One Planet Living and Living Building Challenge.

Eric Serret is an Associate at ARUP, Sydney, with significant experience in retrofitting of buildings and a wide variety of asset portfolios.

Jonathan Dalton is the Director at Viridis Australasia and is recognised as one of Australia's leading advisors on environmental rating tools for buildings.

Daniel Daly is a PhD researcher at the SBRC, and a member of Team UOW who won the Solar Decathlon China 2013 competition. His research focusses on low PCA grade commercial building retrofits.

Other invited industry and government speakers, including representatives from the Office of Environment and Heritage and Hansen Yunken, will also participate in this course to provide case studies and practical experience of energy efficiency improvement projects.

THE VENUE

The course will be held at the Sustainable Buildings Research Centre, Building 237, University of Wollongong Innovation Campus, Squires Way, North Wollongong.

ACCOMMODATION

Arrangements for accommodation are the responsibility of participants and costs are not included in the course fee. A list of hotels and motels in the Wollongong area will be supplied to participants upon registration. Daily travel from Sydney is convenient by road or train.

ENQUIRIES

Registration enquiries:

Please call **Mrs Robyn Dawson** at the Sustainable Buildings Research Centre, University of Wollongong.

Phone: (02) 4239 2198

Email: rdawson@uow.edu.au

Course enquiries:

Please call **Prof Paul Cooper** at the Sustainable Buildings Research Centre, University of Wollongong.

Phone: (02) 4221 2198

Email: pcoper@uow.edu.au

ENERGY EFFICIENCY ENHANCEMENT THROUGH RETROFITTING OF COMMERCIAL BUILDINGS SBRC PROFESSIONAL DEVELOPMENT COURSE

REGISTRATION FORM: 26th and 27th March 2015, University of Wollongong

Please enrol me in the "Energy Efficiency Enhancement through Retrofitting of Commercial Buildings" course to be held in Wollongong, Australia 26th and 27th March 2015.

Cost per person: Two-day course AUD\$980 inclusive of GST. Attendance for a single day only AUD\$560.

Please register before 12th March 2015 (see note¹ below) either via:

Eventbrite: <https://eventbrite.com.au/event/15510367928/>

SBRC Website: www.sbrc.uow.edu.au or the form below

Surname:..... Given Name:.....
Organisation:..... Job title/position:.....
Postal Address:.....
State:..... Postcode:..... Country:.....
Telephone:..... Mobile:..... Email:.....
Days of Attendance: Thursday 26th March Friday 27th March
Special dietary requirements:.....

PRE-COURSE QUESTIONNAIRE

To assist us to tailor the course to your experience, please answer the following (*circle the appropriate weighting*).

	Very Limited			Very Extensive
My knowledge in the field of energy efficiency in commercial buildings is:	1	2	3	4 5
My project experience in the field of energy efficiency in commercial buildings is:	1	2	3	4 5
My organisation's objectives in the field of energy efficiency in commercial buildings are:	1	2	3	4 5
My organisation's project experience in the field of energy efficiency in commercial buildings is:	1	2	3	4 5
My engineering or other professional discipline is:.....				

METHODS OF PAYMENT

If paying by **credit card**, please complete the details below, scan and email to rdawson@uow.edu.au

Please debit (circle): Bankcard Visa Mastercard

Card number: □□□□ - □□□□ - □□□□ - □□□□

Expires: □□/□□ in the amount of

AUD: Name on card:.....

Signature:.....

Email for receipt:.....

Cheque payable to "The University of Wollongong"

Mail to: Attention: Mrs Robyn Dawson
(CPD Course Registration)
Sustainable Buildings Research Centre, Innovation Campus,
University of Wollongong, NSW, 2522, Australia

Payment Enquires: Ms Robyn Dawson
SBRC Administration Officer
Ph: (02) 4239 2198
Email: rdawson@uow.edu.au

Note¹: There is no guarantee that economic participation levels for this course can be achieved. Registrants will be notified on the 19th March if the course cannot proceed due to insufficient numbers. The program may be changed at any time due to unforeseen circumstances. If the course cannot proceed for any reason, UOW will not accept liability of whatsoever kind for expenses incurred by any person or corporation with the sole exception of the course investment, which will be refunded in full.