POSITION DESCRIPTION
Academic Positions
(In addition to the Position Classification Standards)

Position Title:	Lecturer/Senior Lecturer – Sustainable and Resilient Buildings
Level:	B/C
Faculty/Division:	Engineering and Information Sciences
Department/Location:	Sustainable Buildings Research Centre (SBRC), SBRC Building, Innovation Campus

Primary Purpose of the Position:

The Sustainable Buildings Research Centre (SBRC) is seeking a highly skilled and passionate researcher/teacher to join our team in the development of new sustainable building technologies, new design and analysis approaches, social research and education focussed on decarbonisation of our built environment and improving the climate change resilience of our buildings, particularly through the retrofitting of existing buildings.

Research: This position will play a major role in the development of our research capability in sustainable buildings at UOW's new Sustainable Buildings Research Centre (SBRC). The SBRC is an exciting, net-zero energy, purpose-built research facility on the UOW Innovation Campus that is likely the first building in Australia to win Living Building Challenge accreditation.

We are seeking someone with a strong research track record relative to opportunity who will drive research on one or more of the following issues:

- Design and analysis of new buildings and of the retrofitting of existing buildings for sustainability, energy efficiency and/or climate resilience;
- Computer Aided Modelling of buildings using Building Information Modelling (BIM) tools such as Revit, Energy Modelling Software (e.g. EnergyPlus, DesignBuilder), etc;
- Economic and Environmental Life Cycle Analysis (LCA) of building elements, systems and products;
- Energy efficient and sustainable building envelope systems, advanced building design, construction systems, etc.

Teaching: This position will develop, coordinate and deliver subjects/courses focussed on Energy Efficiency and Sustainable Buildings, within the Faculty of Engineering and Information Sciences (EIS). This work will build on

a) The success of our winning 'Team UOW' Solar Decathlon China 2013 campaign;
b) The significant resources developed by the SBRC team under the Energy Efficiency Training for Engineers (EETE@UOW) education program, which received funding from the NSW State Government during 2010-2012 and has been recently further supported by the Commonwealth Government.

The appointee will also coordinate and present on a number of professional development short courses for engineers and professionals in industry. The topic areas to be covered in these courses will include: Energy Efficiency Enhancement through Retrofitting of Commercial Buildings; Energy Auditing and De-carbonization of the Built Environment; Energy Efficiency Enhancement in Domestic Buildings; etc.

Position Environment:

The SBRC is a new and unique research facility that has as its key focus research the improvement of the sustainability and resilience of our existing building stock (see http://sbrc.uow.edu.au/). The appointee will be located in the SBRC building, one of the most sustainable and unique buildings in Australia, which is not only targeting a 6 Star Green Star sustainability rating (equivalent to LEED Platinum) but also to be the first ever building in Australia to win "Living Building Challenge" accreditation. The building will include a 160kW PV array and will be both net-zero energy and net-zero water.

The SBRC building itself has just been completed and is now in the process of being fitted out with significant experimental equipment capabilities for a wide range of research on sustainable buildings. Examples of equipment that is either already in place or is planned to be situated within the SBRC include: indoor environmental test chamber; bench-top thermo-physical properties measurement equipment (e.g. thermal conductivity, DSC, etc); refrigeration test facility; flow visualization facility; large building component test facility; construction area; rooftop solar test area; small wind turbine test facilities; green roof and green wall test equipment; micro-grid research facility; ground source heat pump research system.

In addition, the SBRC is investing in a significant capability for field testing of existing and new buildings. Mobile test facilities include: multiple high quality thermographic cameras; blower doors and other infiltration test equipment; weather stations; electrical energy monitoring and evaluation; indoor environmental quality measurement; particulates; etc.

Examples of current research activities include the SBRC being a core partner in the 'Energy Efficiency in the 3rd Age (EE3A)' research and demonstration program where over 500 older Australians will participate in a 'social marketing behaviour change education program' and 200 households will be retrofitted with a range of energy efficiency technologies, providing a unique research opportunity. The SBRC is also undertaking research on Building Integrated Photovoltaic Solar Thermal (PVT) systems in collaboration with BlueScope Steel and the Fraunhofer Institute (Germany) under a $0.47 million grant from the Australian Renewable Energy Agency (ARENA).

One of the special highlights of recent work at the SBRC is the very recent win by Team UOW in the Solar Decathlon China 2013 competition in August 2013 (http://www.illawarraflame.com.au/). The SBRC was pivotal in providing research leadership and coordinating the Team UOW campaign. Many of the students involved in the development of the 'Illawarra Flame' house (a demonstration of how to retrofit a classic Australian 1960's 'fibro' home to become a net-zero home of the twenty-first century) are enrolled in research degrees at the SBRC.

In 2011 Team UOW were the first ever team from Australia to gain entry to a Solar Decathlon competition and the first to demonstrate how to retrofit and existing building. They then went on to win the Solar Decathlon China 2013 competition with the highest ever overall score of any team in the history of all Solar Decathlons. They placed first in the juried contests for 'Architecture', 'Engineering' and 'Solar Application' and were second by just one point in both 'Communications' and 'Market Appeal'.

The SBRC is one of two key Research Entities of the Faculty of Engineering and Information Sciences. EIS is one of the top Engineering Faculties in Australia with world-class research and teaching programs in a range of exciting technological areas. This is evidenced through the many recent successes by the Faculty in winning support for a number of new research initiatives such as: the SMART Infrastructure Research Facility (>$50m); the Energy Pipelines Cooperative Research Centre (EPCRC) $17m; the Retrofitting for Resilient and Sustainable Buildings (RRSB) $25m; the Defence Materials Research Centre (DMTC) and many other exciting fundamental, applied and commercial research projects.

Major Accountabilities/Responsibilities:

Responsibilities		Outcome	Office Use Only
1.	Drive development of research activity and research outcomes for the SBRC in sustainable buildings and building energy efficiency, etc.	Improved UOW research outcomes and reputation. Attraction of research students to SBRC/UOW to study.	

2.	Teach professional development courses and undergraduate/postgraduate subjects in energy efficiency, sustainable buildings, and other teaching duties to a high standard as assigned by the Director of the SBRC.	Completion of assigned teaching duties to a high standard as assessed by peer review, student surveys and other performance review systems.	
3.	Collaborate strongly with various industry partners, government agencies and other research centres within and outside the Faculty of Engineering and Information Sciences.	Secure substantial national competitive grant funding and commercial research funding to support research activities.	
4.	Supervise Higher Degree Research Students	Successful completions of PhD and Masters by research students.	
5.	Governance/Administrative duties as specified by Director of the SBRC.	On-time completion of assigned tasks to an acceptable standard	
6.	Supervisory roles: Communicate and consult with staff on workplace and staffing matters.	To foster direct relationships with staff and enhance engagement with the organisation.	Ongoing
7.	Observe principles and practices of Equal Employment Opportunity	To ensure fair treatment in the workplace	
8.	Have OH&S responsibilities, accountabilities and authorities as outlined in the http://staff.uow.edu.au/ohs/commitment/responsibilities/ document	To ensure a safe working environment for self & others.	

Inherent Requirements:

This position description outlines the major accountabilities/responsibilities and the selection criteria against which you will be assessed as suitable for the position. As such there will be specific job requirements that we refer to as Inherent Requirements.

Inherent Requirements refer to your ability to:

- Perform the essential duties and functional requirements of the job;
- Meet the productivity and quality requirements of the position;
- Work effectively in the team or other type of work organisation concerned; and
- Do the job without undue risk to your own or others health, safety and welfare at work.

If you have any injuries, illness, disorder, impairment, condition or incapacity that may affect your ability to perform the inherent requirements of the position, we encourage you to discuss this with the University to assist in the process of identifying reasonable adjustments to enable you to perform the duties of the position. The University wants to place you in the best situation to use your skills effectively in the position you are applying for at the University.

Reporting Relationships:

Position Reports to:	Director, Sustainable Buildings Research Centre (SBRC)
The position supervises the following positions:	N/A
Other Key Contacts:	

Key Relationships:

Contact/Organisation:	Purpose & Frequency of contact
Administrative staff within and outside the faculty of Engineering	Course administration/Student matters/ Research support
Cross-faculty relationships	Liaison involving cross faculty activities generally and research/teaching specifically

Key Challenges:

1. Maintaining a high level of research productivity with large numbers of publications in high impact factor journals and research student completions.
2. Securing a sustainable research income stream from national competitive grants (e.g. ARC Discovery and Linkage Grants) and funding from industry and government agencies.
3. To be a world class teacher and to secure good learning outcomes for all students. This will involve delivery of subjects/programs that provide a strong link to both theory and practical application and provide students with strong motivation and interest.

SELECTION CRITERIA - Knowledge & Skills:

Essential:

- High quality research experience, interests and capability that will advance research activities of the Sustainable Buildings Research Centre (SBRC).
- Demonstrated ability to supervise undergraduate and postgraduate research students.
- A strong track record of publications relative to opportunity.
- Ability to win external competitive research grants (such as ARC grants).
- Demonstrated capability to teach subjects on energy efficiency and sustainability in residential and commercial buildings, and the built environment to a high standard.

Desirable

- Experience in architectural and building design practice.
- Demonstrated leadership and project management skills on major projects (e.g. multiple stakeholder research projects, Solar Decathlon, or other competitions/projects).
- Knowledge of and strong capability in the use of green building and energy rating systems for buildings in Australia and/or overseas.
- Experience and capability in modelling of buildings e.g. Building Information Modelling (BIM) energy modelling, structural, Life Cycle Analysis, etc using software packages such as Revit, SimaPro, AccuRate, Energy Plus, DesignBuilder, IES, etc).

SELECTION CRITERIA - Education & Experience:

Essential:

- PhD in an appropriate area of Engineering, Science or Architectural Science.
- Bachelor degree in appropriate discipline such as: Science, Engineering, Architectural Science, etc.
- Excellent teaching and research experience.

Desirable

- Industrial experience or substantial engagement with industry (e.g. through academic/commercial research) in an area related to sustainable buildings, building energy systems and technologies, etc.

Personal Attributes:

Essential:

- Team player
- Good interpersonal and communication skills
- Flexibility and adaptability in a wide range of teaching and research situations
- Capacity to develop or use existing links professional networks and the industrial community.

Special Job Requirements:

May be required to deliver subjects on flexible learning basis during week-ends and out of normal work hours
Possible delivery of courses on UOW satellite campuses
Attendance at international and national conferences

Organisational Chart:

Approval:

Approved by Head of Unit: Prof Paul Cooper

Date: 18th September

Approved by Human Resources: _____

Date: _____

POSITION CLASSIFICATION STANDARD - Teaching and Research

Level: B

Title: Lecturer

Description

A position classification standard describes the broad categories of responsibility attached to academic staff at different levels. The standards are not exhaustive of all tasks in academic employment, which is by its nature multi-skilled and involves an overlap of duties between levels. Therefore the standards should not be applied mechanistically. Quality of performance is the principal factor governing level of appointment of individuals, and a broadly-worded skill base is set out for each level.

All levels of academic staff can expect to make a contribution to a diversity of functions within their institutions. Such functions include teaching research participation in professional activities and participation in the academic planning and governance of the institution. The balance of functions will vary according to level and position and over time.

- General Standard
- Specific Duties
- Skill Base

General Standard

A Level B academic is expected to make contributions to the teaching effort of the institution and to carry out activities to maintain and develop her/his scholarly, research and/or professional activities relevant to the profession or discipline.

Specific Duties

Specific duties required of a Level B academic may include

- The conduct of tutorials, practical classes, demonstrations, workshops, student field excursions, clinical sessions and studio sessions.
- Initiation and development of subject material.
- Acting as subject coordinators.
- The preparation and delivery of lectures and seminars.
- Supervision of the program of study of honours students or of postgraduate students engaged in course work.
- Supervision of major honours or postgraduate research projects.
- The conduct of research.
- Involvement in professional activity.
- Development of course material with appropriate advice from and support of more senior staff
- Marking and assessment.
- Consultation with students.
- A range of administrative functions the majority of which are connected with the subjects in which the academic teaches.
- Attendance at departmental and/or faculty meetings and/or membership of a number of committees.

Skill Base

A Level B academic shall have qualifications and/or experience recognised by the institution as appropriate for the relevant discipline area. In many cases a position at this level will require a doctoral or masters qualification or equivalent accreditation and standing. In determining experience relative to qualifications, regard is had to teaching experience, experience in research, experience outside tertiary education, creative achievement, professional contributions and/or to technical achievement.

POSITION CLASSIFICATION STANDARD - Teaching and Research
Level: C
Title: Senior Lecturer

Description

A position classification standard describes the broad categories of responsibility attached to academic staff at different levels. The standards are not exhaustive of all tasks in academic employment, which is by its nature multi-skilled and involves an overlap of duties between levels. Therefore the standards should not be applied mechanistically. Quality of performance is the principal factor governing level of appointment of individuals, and a broadly-worded skill base is set out for each level.

All levels of academic staff can expect to make a contribution to a diversity of functions within their institutions. Such functions include teaching research participation in professional activities and participation in the academic planning and governance of the institution. The balance of functions will vary according to level and position and over time.

- General Standard
- Specific Duties
- Skill Base

General Standard

A Level C academic is expected to make significant contributions to the teaching effort of a department, school, faculty or other organisational unit or an interdisciplinary area. An academic at this level is also expected to play a major role in scholarship, research and/or professional activities.

Specific Duties

Specific duties required of a Level C academic may include

- The conduct of tutorials, practical classes, demonstrations, workshops, student field excursions, clinical sessions and studio sessions.
- Initiation and development of course material.
- Course co-ordination
- The preparation and delivery of lectures and seminars.
- Supervision of major honours or postgraduate research projects.
- Supervision of the program of study of honours students and of postgraduate students engaged in course work.
- The conduct of research.
- Significant role in major research projects, including, where appropriate, leadership of a research team.
- Involvement in professional activity.
- Consultation with students.
- Broad administrative functions.
- Marking and assessment.
- Attendance at departmental and/or faculty meetings and a major role in planning or committee work.

Skill Base

A Level C academic will normally have advanced qualifications and/or recognised significant experience in the relevant discipline area. A position at this level will normally require a doctoral qualification or equivalent accreditation and standing. In determining experience relative to qualifications, regard shall be had to teaching experience, experience in research, experience outside tertiary education, creative achievement, professional contributions and/or to technical achievement. In addition a position at this level will normally require a record of demonstrable scholarly and professional achievement in the relevant discipline area.