

**BOSTON UNIVERSITY SYDNEY INTERNSHIP PROGRAM**  
**Sustainable Sydney – Sustainable Australia?**



**Course Co-ordinators:**

Delphine Rabet ([delrabet@yahoo.com](mailto:delrabet@yahoo.com))

Gordon Hinds ([gordon@thpads.com](mailto:gordon@thpads.com)).

**Guest lectures:** Where appropriate guest speakers who are specialists in their field will be invited to address the class.

**Course Contact:** 40 hours (plus some required field trip hours)

**Course Synopsis**

We only have one earth. There is no spare. The way we live and consume is unsustainable. We will run out of resources. So what are our plans? How will we become better citizens of the earth? Can we be more sustainable?

This course aims to provide a thorough introduction to the challenges facing Urban Sustainability, using Sydney as the urban model. As factors beyond the metropolitan area have an impact on the sustainability of Sydney, fieldtrips to rural areas will also be included.

Students will gain 5 key development attributes by:

- (1) Forming a basic understanding of the challenges in meeting the demands of the modern city. This will be achieved through examination of how cities consume power, resources, and meet the high-living-standard demands of today's urban population;

- (2) Achieving a level of critical analysis of contemporary environmental issues in an urban context;
- (3) Experiencing first-hand the challenges of the metropolis through undertaking: fieldtrips and internships to augment academic work. This would include the areas of power generation, waste management, and government policy making and implementation
- (4) Engaging in teamwork and leadership through group work and presentations
- (5) Learning better professional skills through the understanding of the balance between theory and practice..

For the purposes of this course formal lectures, group seminars, and group presentations have been organised. Students will produce a fieldtrip report and a substantive research paper on an aspect of Urban Sustainability. The material covered in the course includes scientific and societal behavioural issues that impact upon sustainability, as well a wide range of educational resources, including material from the web. Students will also participate in seminar presentations.

Sydney provides an excellent model to study in that its demands are large scale, and the sustainable policies and practices can be accessed so students can gain first hand understanding of the issues involved.

The course will cover:

- The core idea of sustainability through finite resources and man's impact on these limited resources
- Our use of Power/Energy
- Feeding and housing a growing urban population
- Resource consumption
- Pathways for the future – coverage of the range of actions proposed

**Attendance at all classes and field trips is mandatory.**

Any absence for medical or other reasons must be supported by documentation. Strict penalties apply, on a pro rata basis, for any unapproved absence.

**Format**

The course will be organized in lectures, seminars, and fieldtrips. Student questions will be encouraged. Set readings will be prescribed and students will be expected to participate in all classes.

## **Sessions.**

The course will have two teaching periods each week on Mondays and Thursday evenings. Some of the Monday sessions will be field trips where we will experience first hand the variety of issues and solutions facing the city. Gordon Hinds will be the principal lecturer for these sessions. The Thursday evening sessions will be more formal lectures. Delphine Rabet will be the principal lecturer for these sessions.

## **Assessment.**

### Presentation Seminars (15%)

Students will be required to present group work. Presentation topics will be distributed at the beginning of week 2 of the course.

### Research Essay Proposal (15%)

The essay proposal should be lodged in week 3 of the course and will be the blueprint for the later essay. The proposal should be up to 1,000 words (and not less than 750) in length. A list of appropriate topics will be distributed at the beginning of week 2 of classes. Students may choose their own course-related topic but must seek approval by the coordinator prior to beginning this assignment.

Standard academic conventions must be used with all references cited whenever they are used in the text. A bibliography should be included. Style guidelines are available (see the handbook) if required but the utility and consistent application of the method employed is the main concern.

### Research Essay (Final) (30%)

This research essay of 2000 words should demonstrate the student's ability to critically analyze an issue central to urban sustainability and to provide evidence of wide research pertaining to this issue. Every student must consider the evidence and reach a conclusion based on their research. Feedback received from the research proposal should also inform this final version.

### Field Trip Report (15%)

The report should be between 500 and 750 words and should reflect the student's critical assessment of their first-hand experience and how it relates to the issue of urban sustainability.

### Class Participation (5%)

All students are expected to participate in all class discussions and be prepared each class to contribute their ideas.

### Examination (20%)

A 2-hour examination will be scheduled in the formal examination period at the end of the course.

### **Grading**

A	94-100
A-	90-93
B+	87-89
B	83-86
B-	80-82
C+	77-79
C	73-76
C-	70-72
D	60-69
F	below 60

### **Statement on Plagiarism**

All students are responsible for having read the Boston University statement on plagiarism, which is available in the Academic Conduct Code. Students are advised that the penalty against students on a Boston University program for cheating on examinations or for plagiarism may be "... expulsion from the program or the University or such other penalty as may be recommended by the Committee on Student Academic Conduct, subject to approval by the Dean".

### **Late Work.**

The only extension granted for late work is where there is an extraordinary circumstance such as documented illness. In this case students must contact the Academic Director to state their case. The penalty for late work is 5% of the grade per day.

### **Assessment Weighting (%)**

Seminar Presentation	15	15
Research Paper Proposal	15	
Research Paper (final)	30	
Participation	5	
Field Study	15	
Examination	20	

### **Readings.**

In general there will be one or more set readings on the Blackboard for the whole class for each lecture. From time to time additional readings will be posted in the week preceding the relevant class. Every attempt is made to provide a balanced treatment of the subject matter through the provision of readings that approach each issue or topic from particular methodological and disciplinary perspectives. Check below for the relevant readings for each class.

## **Lecture topics and set readings**

### **Lecture 1 – “Introduction: Concepts and Perspectives on Sustainability”**

- Structure of the course
- Sustainability in historical perspectives
- Development of Australian cities

#### Readings

Beder, Sharon (1994), “The Hidden Messages Within Sustainable Development”, *Social Alternatives* 13(2): 8-12

Schlosberg, D. and Rinfret, S. (2008), “Ecological Modernization, American Style”, *Environmental Politics* 17(2), pp. 254-275

#### TED Talk:

Al Gore warns on latest climate trends

### **Lecture 2 –“Population and Sustainability”**

- Aboriginals, rural and urban Australians: different perspectives and issues
- Agriculture and Fishing industry: extensive and intensive practices

#### Readings

Capon, Anthony (2012), “How full is full? Planning Sydney to be big, sustainable and healthy”, *the Conversation*, 29<sup>th</sup> March, accessible at: <http://theconversation.edu.au/how-full-is-full-planning-sydney-to-be-big-sustainable-and-healthy-6029>

#### TED Talk:

[Paul Gilding: The Earth is full](#)

### **Lecture Three –“Sustainable Cities? (1)”**

- Sustainable building and urban landscape
- Sustainable transport and housing systems

#### Readings

Dale, Ann and Lenore Newman (2009) Sustainable development for some: Green urban development and affordability. *Local Environment* 14 (7): 669-681

Cidell, Julie (2009), A political ecology of the built environment: LEED certification for green buildings, *Local Environment* 14 (7): 621-633

#### **Lecture 4 –“The impact of mining activities on Australian cities”**

- The mining cities
- Environmental impact on the Australian landscape
- Sustainable mining?

##### Readings

ABC (2012), Mining Off Limit in New National Park, posted on March 26<sup>th</sup>, accessible at: <http://www.abc.net.au/news/2012-03-26/mining-off-limits-in-new-national-park/3912426>

Fraser Andrew and Chambers Matt (2010), “The towns mining built stand by their makers”, *The Age*, published 19<sup>th</sup> June, accessible at: <http://www.theaustralian.com.au/news/nation/the-towns-mining-built-stand-by-their-makers/story-e6frg6nf-1225881552660>

#### **Lecture 5 –“Sustainable Cities? (2)”**

- Where does the food come from?
- Energy needs
- Waste creation and management

##### Readings

Kortright, Robin and Sarah Wakefield (2011), Edible backyards: A qualitative study of household food growing and its contributions to food security, *Agriculture and Human Values*, 28:39-53

#### **Lecture 6 -“Sustainability and government policies ”**

- What is a carbon trading scheme?
- What is a carbon tax?
- The home insulation Program debacle

##### Readings

Lewis Chris (2010), Lest we forget? The home insulation scheme ..., On-line Opinion, accessible at: <http://www.onlineopinion.com.au/view.asp?article=10693>

Spash, Clive L. (2010) "The Brave New World of Carbon Trading" *New Political Economy* vol.15 no.2

#### **Lecture 7 –“Private initiatives ”**

- Philanthropy and sustainability
- Corporate environmentalism
- Green capitalism?

## Readings

Banerjee, S. Bobby (2008), "Corporate Social Responsibility: The Good, the Bad and the Ugly", *Critical Sociology*, 34(1):51-79

Doane, Deborah (2002), *Market Failure: the Case for Mandatory Social and Environmental Reporting*, New Economics Foundation, London

L'Oreal's 100% carbon neutral production site unveiled

<http://www.cosmeticsdesign-europe.com/Market-Trends/L-Oreal-s-100-carbon-neutral-production-site-unveiled>

## **Lecture 8 – Field Trip Hunter Valley/ Power station**

Overnight trip to Hunter Valley. Sustainable winery, eco tourist site, tour of a power station and visit to the Newington House, a residential home powered by a fuel cell.

## **Lecture 9 – Power/energy**

An examination of the challenges facing power generation, storage, and distribution for a modern city.

### Readings

Economist Magazine (2012), *Failure of Nuclear*,

Alstom, Soothill, *The future of Coal Power Generation in a Carbon Constrained World*

David J. Bradwell, Hojong Kim,\* Aislinn H. C. Sirk,† and Donald R. Sadoway, *Magnesium–Antimony Liquid Metal Battery for Stationary Energy Storage*, Journal of American Chemical Society #134, 2012

"How it works: electricity generation", Ontario Power Generation (PDF/web)

"How Will Widespread Use of Electric Cars Impact the Power Grid?", Science Daily, March 2012, <http://www.sciencedaily.com/releases/2012/03/120328113234.htm>

"How Fuel Cells Work, Clear Edge Power," <http://www.clearedgepower.com/fuel-cell/how-fuel-cells-work>

"Energy Efficiency", [http://www.mpoweruk.com/energy\\_efficiency.htm](http://www.mpoweruk.com/energy_efficiency.htm)

### TED Talks:

[Bill Gates on energy: Innovating to zero!](#)

[Donald Sadoway: The missing link to renewable energy](#)

## **Lecture 10 – Food distribution (field trip)**

A site visit to see food distribution at work. The field trip will see first-hand at Flemmington Markets for fresh food, the computerized Woolworths Distribution Centre at Michinbury Sydney and a growers market. We will see how technology is employed feed a modern city against low impact local food sourcing.

Sydney Food Fairness Alliance, <http://sydneyfoodfairness.org.au/>

### **Lecture 11 - The technology fix**

An examination of the role of technology in assisting sustainability  
IBM's Smart Cities unit, The role of Constraint Technology with smart transport systems, smart power metering, traffic control, instant customized production.

### **Lecture 12 – Consumption and Recycling (field trip)**

Following the recycling of garbage in Sydney. Where does it go and how is it used? Does practice match reality? Comparison to the New York experience.

David Biello, *“From Bad to Worse: Latest Figures on Global Greenhouse Gas Emissions,”* Scientific American, November 17, 2008 [ScientificAmerican.com](http://ScientificAmerican.com),

### **Lecture 13 – Sydney Sustainability Design**

An examination of how the city of Sydney is developing sustainable solutions as part of its 2030 plan. Included will be a site tour of the CUB development next door to BU and the Mobbs House.

Reading  
Sydney City Council 2030 Plan

### **Lecture 14 – Summary**

A review of the learning of the course with a role play in group work.  
Are we too late?

### **Some other useful readings**

Benton-Short, Lisa and John Rennie Short (2008), *Cities and Nature*. New York: Routledge.

Brundtland Commission (1987), *Our Common Future*, Oxford University Press

Campbell, S. (1996), Green cities, growing cities or just cities, *Urban Planning and the Contradictions of Sustainable Development J. of the American Planning Association*, 62:3,296 - 312



Castro, Carlos J. (2004), "Sustainable Development, Mainstream and Critical perspectives", *Organization and Environment*, 17(2): 195-225

Daly, Herman E. (2007), *Ecological Economics and Sustainable Development*, Cheltenham: Edward Elgar Publishing Limited

Dauvergne, Peter and Clapp, Jennifer (2005), *Paths to a Green World: The Political Economy of the Global Environment*, Cambridge MA: MIT Press

Eckersley, Robyn (2004), *The Green State: Rethinking Democracy and Sovereignty*, Cambridge, MA: MIT Press

Giradet Herbert (1999), *Creating Sustainable Cities*, Green Books, Dartington England

Grant, Jill (2009), Theory and practice in planning the suburbs: Challenges to implementing new urbanism, smart growth and sustainability principles. *Planning Theory and Practice* 10(1): 11-33

Jackson, Tim (2009), *Prosperity without growth* Sustainable Development Commission, accessible at:  
[http://www.sdcommission.org.uk/publications/downloads/prosperity\\_without\\_growth\\_report.pdf](http://www.sdcommission.org.uk/publications/downloads/prosperity_without_growth_report.pdf)

Kenworthy, Jeffrey (2006), The eco-city: Ten key transport and planning dimensions for sustainable city development, *Environment and Urbanization* 18(1): 67-85

McManus Phil (2005), *Vortex cities to sustainable cities: Australia's urban challenge* University of New South Wales Press, Sydney

Robbins, Paul, Annemarie Polderman and Trevor Birkenholtz (2001), Lawns and toxins: An ecology of the city. *Cities* 18(6): 369-380.

Rosenzweig, Cynthia (2011), All climate is local, *Scientific American* (September): 70-73

### **Useful Journals/online resources**

Environment and Planning A: urban and regional research  
Environment & Urbanization  
European Environment (Online)  
Cities (Online)  
Habitat International (Online)  
International Journal of Urban & Regional Research (Online)  
Journal of Environmental Policy & Planning (Online)  
Urban Studies (Online)  
Sustainable Development (Online)  
Global Environmental Change (Online)  
Climate Spectator (online)  
Gizmag (online)