Course Outline – Winter 2011
GGR 332 Urban Waste Management

Instructor: Chuck Hostovsky, PhD, MCIP, RPP
chuck.hostovsky@utoronto.ca
http://www.geog.utoronto.ca/people/faculty/hostovsky/

Lectures: L5101: Tuesdays 2 - 4 pm in BA1190
GGR332 office hours: 12 - 2 pm in SS5060, for other office hours see: http://calendar.yahoo.ca/chostovsky
TA: TBD

Prerequisite: GGR 233Y or a 200-level environmental course

Email Etiquette and Course Web Site
The main web site for the course is Blackboard which will be used for the following:
- Lecture slide repository, assignment instructions, required readings
- Class discussion on assignments and lectures on "Discussion Board"
- Grades will not be posted on Blackboard
- Email does not replace office hours, hence questions regarding assignments will not be answered if sent via email to the lecturer, please post them to Blackboard’s "Discussion Board"
- Email to the lecturer should personal in nature – email may not be answered evenings, weekends, and holidays
- A yahoo web site and email discussion group was set up several years ago at the Yahoo Canada in order to facilitate communication among the professor, TA's and students. The site will be used for online assignments. To use it you must:
  - Go to http://ca.groups.yahoo.com/group/ggr332/ and click on “Join This Group”
  - The web site contains the discussion group archives, Dr. Chuck’s lecture notes (see “Files” section), class participation online response area, and other archived course reading and multi-media material

Required Readings:
- Individual papers online in Blackboard

Suggested Text Books:
- For engineering/science students who want the technical aspects of waste management (note that this is a social science course): Shaw, Kanti L. 2000. Basics of Solid and Hazardous Waste Management Technology, New Jersey: Prentice Hall.
**Trade Magazines**

**Canadian Magazines**
- Hazardous Materials Management, Solid Waste Management, Environmental Science and Engineering

**Refereed Journals (available online through U of T library)**
- Waste Management and Research, Resources Conservation & Recycling, Waste Management

**Assignments and Grading:**
- **late penalty 5% per day**
- 5% class attendance
- 10% online participation for 2 mini lab (photographic) assignments - online responses on GGR332 Yahoo Group
- 15% assignment 1 – lab report: waste and eco-label audit, – due Feb. 8
- 15% assignment 2 – mini-paper: 3Rs of a consumer product – due March 1
- 30% assignment 3 – major research paper – due March 22
- 25% exam – exam week TBD
- help with university writing [http://www.writing.utoronto.ca/writing-centres](http://www.writing.utoronto.ca/writing-centres)
- **requests for re-grading** must be in memo format, in writing ½ to 1 page in length, containing rational based adjustments to the assignment marking key; you must include the original paper and TA’s marking key sheet; note - the remarked assignment may receive a lower mark
- the lecturer will not entertain lobbying or harassment for higher grades

**Accessibility Needs:** The University of Toronto is committed to accessibility. If you require accommodations for a disability, or have any accessibility concerns about the course, the classroom or course materials, please contact Accessibility Services as soon as possible: [http://studentlife.utoronto.ca/accessibility](http://studentlife.utoronto.ca/accessibility)

**Late Assignments:** Accepting late papers is solely at the discretion of the instructor. Being too busy with other school work will not be accepted for extensions. Requests for extensions must be made in office hours, or in writing or via email with your rationale explained **before the due date.** All assignments should be handed in at or before the beginning of the class on the due date specified. Assignments should be given directly to the professor. If this is not possible, the assignment should be presented at the departmental office, during business hours. The instructor is not responsible for assignments put under the office door and those assignments will be given a late penalty based on the date the instructor finds it under the door, keeping in mind he is only in once per week.

**Typical Marking Key**
Points: 0 – no effort, 1–poor, 2–needs work, 3–adequate, 4–good, 5-excellent

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<thead>
<tr>
<th>CRITERIA</th>
<th>MARK (0 – 5)</th>
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<tr>
<td>Introduction - problem statement</td>
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<td>Understanding of **** issues</td>
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<td>Critical thought and analysis</td>
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<td>Conclusions</td>
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<td>Grammar/spelling</td>
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<td>Referencing using APA style</td>
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<td>Effective use of supplied course reading materials</td>
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<tr>
<td>Effective use of other research (field trip, interviews, journal articles, books, etc) not in course readings or course text book</td>
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<td>TOTAL (maximum 40)</td>
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**Learning Modes:**
- lectures, guest speakers, videos, tutorial exercises, field trip
Field Trip:
• GTA Garbage Tour, this very popular field trip features visiting a sanitary landfill, an energy-from-waste incinerator, and recycling and composting facility – cost $15 to $20. Wear long pants, closed-toe shoes/boots, bring lunch and refreshments
• Data, observations, photographs to be used for assignment 3

BACKGROUND:
This course bridges the gap between environment and resource management theory and practice. Specifically, the field of waste management is examined. Waste is classified in this course as municipal solid waste (garbage), hazardous and nuclear waste are not examined. A theme of the course is “life-cycle analysis” which has brought recycling and other perceived “environmentally friendly” alternatives under close scrutiny in terms of their cumulative environmental burdens. The course also examines the spatial, technical, and social aspects of the garbage problem in a North American context. However, international development perspectives are compared and contrasted throughout the course, especially from South-East Asia. Ontario legislation, regulations and guidelines will be examined in detail. The greater Toronto area is used as a case study, including the recent “garbage wars” with northern Ontario over the proposed Adams Mine landfill near Kirkland Lake and the export of Toronto’s waste to Michigan and now the Greenlane landfill near London. Over the past two decades in Canada waste problems have become front page news as decision-makers have been inept at implementing technologies and finding locations to dispose of our waste. The “not-in-my-backyard” syndrome has become synonymous with waste issues due to perceived and real environmental impacts of waste technologies, especially incineration and sanitary landfill. These planning problems and the economics of disposal have been catalysts in producing a fundamental shift in our thinking about the environment. This shift has resulted in the proliferation of the “3Rs” - reduction, reuse and recycling, as a preferred hierarchy for dealing with waste. However, growing industrialization and economic wealth in the developing world is creating increased waste quantities and toxicity in these waste streams, leading to western style waste management problems. Further exasperating this problem in the developing world is the uncertain future role of urban waste scavengers and dump pickers, mainly desperately poor women and children, who may be displaced as western technologies are introduced.

Academic Integrity
"Students agree that by taking this course all required papers may be subject to submission for textual similarity review to Turnitin.com for the detection of plagiarism. All submitted papers will be included as source documents in the Turnitin.com reference database solely for the purpose of detecting plagiarism of such papers. The terms that apply to the University’s use of the Turnitin.com service are described on the Turnitin.com web site." Students are asked to upload their assignment to www.turnitin.com and submit papers in hard copy to the instructor. Plagiarism will not be tolerated and will result in a mark of zero and academic discipline. Examples of offences for which you can be penalized include (but are not limited to):
• using any unauthorized aids on an exam or test (e.g., “cheat sheets”, etc.)
• plagiarism — representing someone else’s work as your own (including cutting and pasting from internet sources)
• falsifying documents or grades
• purchasing an essay online or from others
• submitting someone else’s work as your own
• submitting the same essay or report in more than one course (without permission)
• looking at someone else’s answers during an exam or test
• impersonating another person at an exam or test or having someone else impersonate you
• making up sources or facts for an essay or report.

How Not to Plagiarize: http://www.writing.utoronto.ca/advice/using-sources/how-not-to-plagiarize
### Module 1: What is waste?
- Operating definitions, legal definitions of municipal solid, hazardous and nuclear wastes
- Social stigmas.
- Video presentation: Seinfeld-The Gymnast
- Temmemagi ch.1, Shaw chapter 1

### Module 2: Waste Composition – Western versus Developing Nations
- Waste Auditing/Characterization Procedures
  - Shaw chapter 1

### Module 3, 4: The First 2 Rs - Reduction and Reuse: Relationships between Eco-labelling, Greenwashing and Life Cycle Analysis
- Rosa Maria Dangelico; Pierpaolo Pontrandolfo. 2010. "From green product definitions and classifications to the Green Option Matrix", *Journal of Cleaner Production*, 18 (16-17), pg. 1608-1628
- Rogers, Dave. April 30, 2003. "No trash pickups for 3 years - Recycling, composting keep tonnes of refuse out of landfill", *The Ottawa Citizen*

### Module 5: The Third R – Recycling (& Composting)
- Temmemagi ch.5, Shaw chapter 14
Module 6  |  Historical Geography of Waste – Toronto’s Waste Crisis  

Module 7  |  Waste Disposal Technologies 1 - Sanitary Landfill  
|  - Chapter 1.6 - International Environmental Technology Centre. 1996. International Source Book on Environmentally Sound Technologies for Municipal Solid Waste Management (Osaka/Shiga: UNEP International Environmental Technology Centre)  
|  http://www.unep.or.jp/ietc/ESTdir/Pub/MSW/index.asp  
|  - Temmemagi ch.7, Shaw chapter 15

Module 8  |  Waste Disposal Technologies 2 – Incineration  
|  - Chapter 1.5 - International Environmental Technology Centre. 1996. International Source Book on Environmentally Sound Technologies for Municipal Solid Waste Management (Osaka/Shiga: UNEP International Environmental Technology Centre)  
|  http://www.unep.or.jp/ietc/ESTdir/Pub/MSW/index.asp  
|  - The health effects of incinerators. 4th report of the British Society for Ecological Medicine, 2008  
|  - The Impact on Health of Emissions to Air from Municipal Waste Incinerators. The Health Protection Agency (UK government), 2009.  
|  http://www.hpa.org.uk/web/HPAwebFile/HPAweb_C/1251473372218  
|  - Temmemagi ch.9, Shaw chapter 13

Module 9  |  Integrated Waste Management Planning – Site Selection Processes and NIMBY  
|  - Shaw chapter 2

Module 10  |  Waste Management in the Developing World with a focus on South East Asia  

Module 11  |  Field Trip on lecture day (no lecture that afternoon)

Module 12  |  Floater – careers in waste management, exam overview

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<th>Learning Outcomes:</th>
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<tr>
<td><strong>Course Objectives</strong></td>
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|  - Produce written material that effectively communicates complex issues  
|  - Correct use of spelling, punctuation, sentence and paragraph construction  
|  - Correct use of citations and reference material  
| Take part in discussions |  
|  - In class and online  
| Critical thinking and analysis | Creatively analyze and interpret issue scenarios and recommend solutions |  
|  - Determine principal features of a situation  
|  - Analyze implications of each  
|  - Discuss pros and cons of solutions |
| Waste management knowledge | Local, provincial, national and global familiarity | • Determine principal features of waste management  
• Recognize and describe global and historical context for barriers and solutions  
• Propose individual and integrated solutions |