

## **GEM Trailblazer Summer Programme**

### **DETAILED COURSE INFORMATION**

<b>Academic Year</b>	:	AY2022-2023
<b>Session</b>	:	Summer 2023
<b>Course Code &amp; Title</b>	:	HS0301 Environmental Sustainability
<b>Academic Units</b>	:	3
<b>Pre-requisite (if any)</b>	:	None
<b>Delivery mode</b>	:	Physical, in-person
<b>Taught by</b>	:	Associate Professor Md Saidul Islam

#### **Brief Course Description**

##### **1. Intended Learning Objectives (ILOS)**

Our planet is undergoing radical environmental and social changes. Environmental sustainability has now been put into question by, for example, our consumption patterns, loss of biodiversity, depletion of resources, and exploitative power relations. With apparent ecological and social limits to globalization and development, the current levels of consumption are unsustainable, inequitable, and inaccessible to the majority of humans. Understanding the environmental sustainability is a crucial matter at a time when our planet is in peril - both environmentally and socially. This course will show possible pathways for a sustainable earth.

Twenty years after the Rio summit in 1992, world leaders met in Rio once again in 2012 to discuss the environmental challenges facing the humanity. It was a time for them to reflect on how successful and effective the international community has been over the past two decades in managing the major identified environmental problems. Are we still facing the same environmental problems? Have there been improvements in the situation or are we worse off? Environmental and social vulnerabilities will continue to exist twenty years from now and beyond. The question is what kind of steps can and should be taken to manage these vulnerabilities? Have they been taken? Do countries across the globe experience the same type and degree of vulnerabilities? Or is the distribution of these vulnerabilities uneven? How is the distribution of these vulnerabilities decided and by whom? What are the prospects for a sustainable planet? What unique sustainability challenges are we facing under the COVID-19 situation? This course will explore and examine environmental sustainability from both local and global contexts. Singapore being located in an environmentally vulnerable zone ardently needs courses like this.

## 2. Course Syllabus/Topics

Lesson	Topic/s
1	<p><b>Introduction: Learning about the environment</b></p> <p>[Key issues/questions: We will discuss the course outline focusing on its objectives, pedagogy, scopes, expectations, evaluations, and weekly schedules]</p> <p><b>Readings:</b></p> <ul style="list-style-type: none"> <li>• Read the course outline</li> <li>• Try this:” Earth Day and All Days: 10 Ways to Learn About the Environment”:  <a href="http://learning.blogs.nytimes.com/2012/04/18/earth-day-and-all-days-10-ways-to-learn-about-the-environment/?_r=0">http://learning.blogs.nytimes.com/2012/04/18/earth-day-and-all-days-10-ways-to-learn-about-the-environment/?_r=0</a></li> </ul>
2	<p><b>Global ‘tragedy of the commons’</b></p> <p>[Key issues/questions: What are the environmental and social challenges/dilemmas we are facing today? Are they natural or anthropogenic? Are we facing a ‘tragedy of the commons’? This week sets the agenda for the crying need for environmental sustainability]</p> <p><b>Readings:</b></p> <ul style="list-style-type: none"> <li>• Islam, M. S. (2011). “Tragedy of the commons”, pp. 408-410 in <i>Encyclopaedia of Green Ethics and Philosophy</i>, edited by J. Newman, and J. G. Golson. Thousand Oaks: SAGE Publications.</li> <li>• Harper, Ch 2: Human and Resources of the Earth: Sources and Sinks</li> <li>• Islam, M. S. 2013, Ch. 1: Challenges of our time: Environmental and social vulnerabilities</li> </ul>
3	<p><b>Sustainability: Historical trajectories</b></p> <p>[Key issues/questions: What is sustainable development? Is there any tension between economy and the environment? What are the historical trajectories of sustainable development? What are different modalities of sustainable development? How can we translate our understanding of sustainability into practice? What are managerial strategies for and alternative paths to sustainable development?]</p> <p><b>Readings:</b></p> <ul style="list-style-type: none"> <li>• Estes, R. J. “Toward Sustainable Development: From Theory to Praxis.”</li> <li>• Humphrey et al. Ch 7: The Sociology of Sustainable Development</li> <li>• Lucas Seghezze, “Five dimensions of sustainability.”</li> <li>• Be familiar with “Singapore Sustainable Blueprint”:  <a href="https://www.clc.gov.sg/docs/default-source/books/ssbcombined-cover-text.pdf">https://www.clc.gov.sg/docs/default-source/books/ssbcombined-cover-text.pdf</a></li> <li>• Know the “Sustainable Earth Office” at NTU:  <a href="http://www.ntu.edu.sg/sep/Pages/default.aspx">http://www.ntu.edu.sg/sep/Pages/default.aspx</a></li> </ul>

4	<p><b>Sustainability: Theoretical underpinnings</b></p> <p>[Key issues/questions: What are different theoretical traditions of sustainable development? What is ecological modernization theory? How is it working? Is it a viable alternative to the current economic practices? What are the limits and possibilities of ecological modernization theory?]</p> <p><b>Readings:</b></p> <ul style="list-style-type: none"> <li>• Edson, Kieu and M. S. Islam, "Sustainable development: Concepts, histories and paradigms"</li> <li>• Mol, A P J and M. Janickle, (Ch 2): The origin and theoretical foundations of ecological modernization theory</li> <li>• Sonnenfeld, D. (Ch 20): Contradictions of ecological modernization: Pulp and paper manufacturing in Southeast Asia.</li> </ul>
5	<p><b>When nature strikes: Disaster vulnerabilities</b></p> <p>[Key issues/questions: Are natural disasters really 'natural'? What are the causes and consequences of disasters? Are disasters linked to climate change? How do disasters affect society and the environment? How to manage disasters in effective manners?]</p> <p><b>Readings:</b></p> <ul style="list-style-type: none"> <li>• "What COVID-19 tells us about the changing nature of disaster risk" by World Economic Forum</li> <li>• Islam, M. S. "When nature strikes: A sociology of climate change and disaster vulnerabilities in Asia"</li> <li>• Yodmani, S. "Disaster Risk Management and Vulnerability Reduction: Protecting the Poor."</li> <li>• Disaster Prevention, Visit: <a href="http://www.preventionweb.net/english/countries/statistics/index_region.php?rid=4">http://www.preventionweb.net/english/countries/statistics/index_region.php?rid=4</a></li> </ul>
6	<p><b>Global Climate Politics: Deals and Disturbances</b></p> <p>[Key issues/questions: Why is climate change a 'major' sustainability issue today? What are the global responses to this crisis? What are the policy options to address global warming?]</p> <p><b>Readings:</b></p> <ul style="list-style-type: none"> <li>• Harper, C. L., Ch 3: Global Climate Change</li> <li>• Islam (2013), Chapter 9: Global Climate Politics: The Role of Power and Development in Mortgaging the Planet</li> <li>• Islam, M. S. and Q. Ri An. (2014): Climate change and urban resilience: The Singapore Story</li> <li>• Know more about Inter-Governmental Panel on Climate Change (IPCC): <a href="http://www.ipcc.ch/">http://www.ipcc.ch/</a></li> </ul>
7	<p><b>Globalization and Sustainability</b></p> <p>[Key issues/questions: What is globalization? What sustainability challenges are we facing under neoliberal globalization? What is the world coming to? What transformations are needed for global sustainability?]</p> <p><b>Readings:</b></p> <ul style="list-style-type: none"> <li>• Harper, C. L. Ch 6: Globalization, Growth and Sustainability</li> <li>• McMichael, Philip Ch. 1: Development and globalization: Framing issues</li> <li>• Islam, M. S. (2009): "From development project to globalization: Understanding Third World politics, class relations and development choices."</li> <li>• See the world clock: <a href="http://www.peterrussell.com/Odds/WorldClock.php">http://www.peterrussell.com/Odds/WorldClock.php</a></li> </ul>

8	<p><b>Sustainable Food: Safety, security and sovereignty</b></p> <p>[Key issues/questions: How serious is the problem of global population growth? How to feed 8 billion people in next 50 years? Why and how are movements surrounding food safety, security and sovereignty emerging today? What is the future of food with green and bio-tech revolution?]</p> <p><b>Readings:</b></p> <ul style="list-style-type: none"> <li>• Oosterveer, P. and D. A. Sonnenfeld (2012), Ch. 3: Sustainable Food Production and Consumption</li> <li>• Islam, M. S. and D. Tam “Urban food security in Asian Cities...”</li> <li>• Harper, C. L. Ch 5: Population, Environment, and Food</li> <li>• Consult: Food and Agricultural Organization: <a href="http://www.fao.org/home/en/">http://www.fao.org/home/en/</a></li> </ul>
9	<p><b>Future of Global Environmental Politics</b></p> <p>[Key issues/questions: What is environmentalism? How is environmentalism successful in addressing and resolving sustainability problems? What have we achieved so far from our three decades of environmental politics?]</p> <p><b>Readings:</b></p> <ul style="list-style-type: none"> <li>• Harper, C. L. Ch 8: Environmentalism: Ideology and collective action</li> <li>• Islam, M. S. 2013, Ch. 14: Towards a Sustainable Earth</li> <li>• Conca, K. and G. D. Dabelko, Ch 1: Three decades of global environmental politics</li> <li>• Be familiar with United Nations Environment Programme: <a href="http://www.unep.org/">http://www.unep.org/</a></li> </ul>
10	<p><b>Revision and Future Sustainable Agenda</b></p> <p>[key issues/Questions: Synthesizing the course materials; Finding broader trajectories of and debates about environmental sustainability; Agenda for future]</p> <ul style="list-style-type: none"> <li>• Final project due</li> <li>• Synthesizing the course materials</li> <li>• Finding broader trajectories of and debates about environmental sustainability</li> <li>• Agenda for future</li> </ul>

### 3. Learning Outcomes

By the end of the course, you should be able to:

- Explain the limits and possibilities of an environmentally sustainable planet.
- Describe the key theories of the nature-society interactions.
- Evaluate economic patterns, environmental landscapes, and social structures.
- Apply critical lenses to current consumption patterns in order to make them environmentally sound, socially responsible, and culturally friendly.

### 4. Course Assessments

Components	Group/Individual	Weighting
CA-1: Take-home test	Individual	20%
CA-2: Class participation	Individual	10%
CA-3: Final project	Group	30%

CA-4: Final Exam	Individual	40%
<b>Total</b>		<b>100%</b>

**CA1:** Instructor will comment and give general feedback on your performance during class.

**CA2:** You will be encouraged to discuss the course contents to check your conceptual clarity, contextualization of the problems and your ability to make connections (with various materials).

**CA3:** You will be prepared for the research assignment through group discussions and mini-exercises during classes in the weeks leading up to the deadline. Written feedback will be provided on the submitted work.

## 5. References/Recommended Reading List

Detailed reading assignments are included in the weekly schedule. Readings will be posted in the NTULearn. Some reference books (may be needed for the Final Project) are as follows:

- Harper, C. L. 2008. *Environment and Society: Human Perspectives on Environmental Issues*. New Jersey: Pearson.
- Humphrey, C. R., T. L. Lewis, and F. H. Buttel. 2003. *Environment, Energy, and Society: Exemplary Works*. Thomson.
- Islam, Md Saidul. 2014. *Confronting the Blue Revolution: Industrial Aquaculture and Sustainability in the Global South*. Toronto: University of Toronto Press.
- Islam, Md Saidul. 2013. *Development, Power and the Environment: Neoliberal Paradox in the Age of Vulnerability*. NY: Routledge.
- Ken Conca, Geoffrey, R. Scott D. Dabelko (eds.). 2010. *Green planet blues: Environmental politics from Stockholm to Johannesburg*. Boulder, Colorado: Westview Press.
- Kutting, Gabriela (ed.). 2011. *Global Environmental Politics: Concepts, Theories, and Case Studies*. NY: Routledge.
- Oosterveer P. and D. A. Sonnenfeld. 2012. *Food, Globalization and Sustainability*. NY: Routledge.
- Paehlke, Robert C. 1989. *Environmentalism and the future progressive politics*. New Haven: Yale University Press.
- Richard Peet, and Michael Watts (eds.). 2004. *Liberation Ecologies, Second Edition: Environment, Development and Social Movements*. London and New York: Routledge.
- Merrill, M. Y., P. Burkhardt-Holm, C.H. Chang, M. S. Islam, and Y. Chang (eds.). 2018. *Education and Sustainability: Paradigms, Policies, and Practices in Asia*. New York: Routledge.
- Islam, M. S. (ed.). 2018. *Sustainability through the Lens of Environmental Sociology*. Basel, Switzerland: MDPI.

## 6. Other requirements

**(a) General:** You are expected to complete all assigned pre-class readings and activities and take all scheduled assignments by due dates. You are expected to take responsibility to follow up with course notes, assignments and course related announcements for sessions you miss. You are expected to participate in all discussions and activities.

**(b) Absenteeism:** Absence from class without a valid reason will affect your overall course grade. Valid reasons include illness (supported by a doctor's medical certificate) and participation in NTU's approved activities (supported by an excuse letter from the relevant bodies).

**(c) Deadlines/penalties:** Unless you have a legitimate and documented excuse, deadlines will not be extended and late assignments will result in lowered grades. Assignments turned in late will be marked down by 1/3 of a grade per day.

**(d) Academic Integrity:** All members of the NTU community are responsible for upholding the values of academic integrity in all academic undertakings. At the beginning of the semester, you are required to submit a signed declaration guaranteeing that all graded and non-graded work throughout the semester is original and is created without assistance from others except where explicitly allowed by the professor. You are expected to understand current academic policies regarding academic honesty before signing the declaration. No marks will be awarded until a signed declaration has been received by the professor. *There is a penalty for late submission.* The declaration can be downloaded from the "Content" folder on NTULearn.

A guide to academic integrity can be found here:

<http://www.ntu.edu.sg/ai/ForEveryone/pages/aguidetoacademicintegrity.aspx>

## 7. Instructor Details

Instructor	Office	Email
A/P Md Saidul Islam		<a href="mailto:msaidul@ntu.edu.sg">msaidul@ntu.edu.sg</a>