Ginsburg Ingerman Overseas Students Program
Ben-Gurion University of the Negev

Sustainability or unsustainability - Is that the question?
Course 13-5-4090
Fall 2017

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Course Description:
The concept of sustainability is multifaceted, complex and non-linear. Embedded within the concept are myriad levels of beliefs and assumptions necessarily entangling historical, political, technological, philosophic, ethical, psychological aspects with biological, ecological and geo-chemical processes. And yet, at its core the notion of sustainability is a plea for a transformation of the way things are done in order to address the obstacles inherent to this period in history.

In the course we will try to untangle and unfold the complexity of these issues in order to develop a critical, informed and robust understanding. We will explore what it means to exist in this unprecedented, and high-velocity point in history. This will involve not only looking at the environmental, social and economic dangers of the present and the different approaches for their solution in the future, but also at the underlying paradigms that have developed over history and often undermine our efforts. We will investigate together how different historical paradigms have shaped social systems, manifested in the built environment, both aesthetically and pragmatically.

Israel, as one of the most densely populated countries in the world, merging hi-tech progress with ancient conflicts, and an influential actor in the world political arena, despite its size, is the perfect spot through which to investigate these issues from up close. For each issue or theory we will investigate in the course, an Israeli case study will be presented, thus helping to connect the abstract aspects with the here and now.

Course Objectives:
To enable the students to become well versed in the various issues involved in the field of sustainability, and gain a robust understanding of the interrelationships involved. To encourage and develop a critical view of the various debates, theories and technological solutions applied and proposed, in terms of the political, social and economic dynamics engendered by their underlying paradigms. To understand the merits and the pitfalls of the various strategies discussed for achieving sustainability.
Learning Outcomes:
On successful completion of this course, students should be able to:

1. Have a robust grasp of the concept of sustainability and the issues embedded with in it.
2. Understand the historical, socio-political and technological forces that have shaped our social systems today in terms of global environmental risk.
3. Understand the scientific basis and debates of environmental risks such as climate change, loss of bio-diversity and pollution.
4. Critically analyze texts on the subject.
5. Differentiate between different approaches for solution and their inherent pitfalls.
6. Understand technological, social or economic approaches for solving sustainability issues.

Field of Education and Discipline(s): History and Philosophy of Science and Technology, Sociological theory, “Science, Technology and Science”, Urban planning and design, political theory.

Course Structure:

Lecture: 2 hours  Total # of Credits: 2 BGU credits
ECTS (European Credit Transfer System—will be calculated by the OSP): 3 ECTS

Teaching Method:
The course will be conducted through a combination of formal lectures, small study groups and class discussion. The lectures will be based on weekly reading assignments. In addition each week students will present their views in an online discussion board that will also serve to fuel the discussions in class. There will also be a field trip.

Course Requirements

Compulsory attendance YES

There are no pre-requisites for the course.

Structure of Final Course Grad

<table>
<thead>
<tr>
<th>Participation in class</th>
<th>15%</th>
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</thead>
<tbody>
<tr>
<td>Participation in online forum</td>
<td>20%</td>
</tr>
<tr>
<td>Student presentation</td>
<td>25%</td>
</tr>
<tr>
<td>Final Paper</td>
<td>40%</td>
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<td></td>
<td>100%</td>
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Note:
- Work handed in late, will not be graded!
- Penalties and course policies should be clearly articulated (i.e. students will have their final grade lowered an entire grade level if they miss more than 2 class meetings unexcused)
- Language of instruction is English.
Time required for individual work: in addition to attendance in class, the students are expected to do their assignment and individual work:

- 0.5 hours of reading each week
- 0.5 hours of online discussion each week
- 3 hours of work on the presentations
- 10 hours of work on the final paper

Those expectations are approximate and correlate with the module's ECTS.

Course Schedule Layout:

**First week**
Weekly subject title: Setting the scene – Human Nature Dichotomy
Weekly brief description: Introduction to the course. The class will focus on the concepts: nature, environment, organic, and ecological. What narratives are revealed and constructed within these conceptions? We will also discuss Sustainability as a political concept as opposed to a politically neutral endeavor. The Anthropocene will be presented and explained.
Readings: TBA

**Second week**
Weekly subject title: The Modernization Front
Weekly brief description: This class will focus on tracing how the meaning of nature in Western thought developed and how this conceptualization then colonized the Earth.
Readings: TBA

**Third week**
Weekly subject title: Post World War II – Mutually Assured Destruction
Weekly brief description: This class will focus on the instances when the repercussions of these paradigms reveal themselves. We will also look at how the Modern paradigm manifested in the built environment and in social infrastructures both aesthetically and practically.

**Fourth week**
Weekly subject title: The Politics of Artifacts – Science, Technology and Society
Weekly brief description: This session will focus on the relationships between science, technology and society and their environmental impacts.

**Fifth week**
Weekly subject title: Ecology Fundamentals – Changes in the Anthropocene
Weekly brief description: This class will provide the students with a brief overview of the science of ecology, in order to form a basic understanding of the
dynamics of Earth systems. This will include bio-geo-chemical cycles, the abiotic and biotic members of ecosystems.

**Readings:** TBA

**Sixth week**
**Weekly subject title:** Climate Change - Fundamentals
Weekly brief description: In this week's class we will understand the fundamental science behind climate change; understand the processes involved in the knowledge presented in the IPCC reports; and look at the various projected scenarios.
**Readings:** TBA

**Seventh week**
**Weekly subject title:** Climate Change – Risk Management in an Uncertain World
Weekly brief description: In this session we will take a deeper look at the assessment of uncertainty in the science involved in climate change and understand how misunderstandings of science and scientific practice have seeped in to the debate, both on the protagonist and antagonist sides.

**Eighth week**
**Weekly subject title:** Bio-diversity, Pollution, Energy and Transportation
Weekly brief description: This session will focus on various technologies of energy, transportation and agriculture and their affects on environmental systems.
**Readings:** TBA

**Ninth week**
**Weekly subject title:** Various meta-approaches in Sustainability
Weekly brief description: Ecological Modernism vs. Anti-Modernist approaches and all that is in between.
**Readings:** TBA

**Tenth week**
**Weekly subject title:** Behavioral sciences and Sustainability
Weekly brief description: This session will focus on various behavioral approaches towards sustainability such as Design for Sustainable Behavior, Sustainable Consumption and so forth. We will discuss the work of Kahneman & Tversky and other behavioral economic theories such as Nudge theory.
**Readings:** TBA

**Week Eleven**
**Weekly subject title:** Techno-utopia
Weekly brief description: In this session we will delve into the “Star Trek” approach to the future – how advances in technology are projected to affect the future both socially and environmentally. We will look at movements such as Trans-Humanism; understand the future as seen by theorists such as Ray Kurzweil.
**Readings:** TBA
**Week Twelve**

**Weekly subject title:** Pasting it all together in the Israeli Landscape – Field Trip

Weekly brief description: The last session we will go out and experience the issues gone over throughout the course as they manifest themselves in Israel, and students will present their intentions for their final paper.

**Readings:** TBA

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**Additional recommended Bibliography**

TBA