

INTA 2040A: Science, Technology, and International Affairs

Summer 2024

Meeting Days/Time: TBD

Meeting Room: TBD

Instructor: Peter Brecke

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Office hours: TBD or by appt.

The purpose of this class is to explore the interaction of science & technology and political-economic processes and political decision making, particularly as it relates to the international arena and the 21st century. Stated differently, this class is about the role of science & technology and politics in saving the world. We will examine this interaction and interplay at both the macro level and micro level. We will look at both how advances in science and technology affect choices by government bodies and how politics shapes the fortunes of scientific fields and with economics the particular technologies that are going to be important in getting us past the monumental challenges facing Americans and the global community.

We will start out the class by first examining the situation we will be facing this century from a big, long-term perspective. The goal is to create the context for what we will subsequently do. From there we will move to a discussion of the most important elements of human well-being. Then we will shift into a greater level of detail through an exploration of different problems, case studies so to speak, of the big issues facing us. This part of the class will also address how decision-making processes interact with science and technology. Finally, we will look at the downside of the use of different technologies while we are trying to solve the other problems.

The powers-that-be have determined that there needs to be a learning outcome for this class that comes from a list of “blessed” learning outcomes. The enumerated item below is the outcome appropriate for this class, and it is my goal that the class will indeed achieve this outcome.

1. Students will demonstrate the relationship between science and technology and international affairs.

However, I have additional learning outcomes that I also hope and intend for the class to achieve.

- Students will use oral communication to demonstrate knowledge and to make cogent arguments in international affairs.
- Students will demonstrate proficiency in written communication to increase knowledge and develop cogent arguments in international affairs.
- Students will demonstrate the ability to collaborate effectively in teams.

Requirements for Successful Completion of the Class

- First short paper (10%)
- Second short paper (10%)
- Midterm exam (15%)
- Discussion contributions for at least four topics in Canvas (20%)
- Participation in last-weeks-of-class debates (15%)
- Final debate paper (15%)
- Overall class attendance/participation (15%)

In response to student requests, students are allowed to do a research project for the class in lieu of the final paper. This project will be worth 30% of the final grade.

Extra credit opportunities are to be negotiated between the students and the professor. The task and amount of credit for successful completion is up to the discretion of the professor in order to for it to be deemed fair and appropriate.

There are no prerequisites for this class.

Assigned Texts

Joseph Henrich: *WEIRDest People in the World*

Ian Morris: *Why the West Rules—For Now*

Jared Diamond, *Guns, Germs, and Steel*, Preface and Prologue (in Canvas)

Kenneth Pomeranz, *the Great Divergence*, Introduction (in Canvas)

Paul Kennedy, *The Rise and Fall of the Great Powers*, Introduction and Chapter 1 (in Canvas)

Brecke, Human Well-Being Index (in Canvas)

James Burke, a *Connections* video episode or *The Day the Universe Changed* video episode

Mark Taylor, *The Politics of Innovation*, Chapter 6 (in Canvas)

Schedule

Class sessions:

Week of May 14	<i>Introduction and my research</i>
	<i>The goal: human well-being broadly defined</i>
	Read: Brecke, Human Well-Being Index

Week of May 21	<i>Measures of the state of the world</i>
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Visualizing measures of the state of the world

Week of
May 27

Models of world development

Read: either Henrich book up to page 152 (end of Part 1)
or Morris book up to page 171 (end of Part 1)

Alternative models

Read: Diamond, pp 9-32
Pomeranz, pp 3-27
Kennedy, pp xv-30

Week of
June 3

Debate about models

Due: 300-500 word essay discussing which model makes more sense to you (at least now)

How Does Technology Advance?

Watch: Burke, *Connections* video any episode at
<https://archive.org/details/ConnectionsByJamesBurke>
or Burke, *The Day the Universe Changed* any episode at
[https://archive.org/details/the-day-the-universe-changed-s-](https://archive.org/details/the-day-the-universe-changed-s-01-e-07-what-the-doctor-ordered)

[01-e-07-what-the-doctor-ordered](https://archive.org/details/the-day-the-universe-changed-s-01-e-07-what-the-doctor-ordered)

Week of
June 10

The Politics of Innovation

Read: Taylor, *The Politics of Innovation*, Chapter 6

The Grand Challenges: Consumption

Read: <https://www.treehugger.com/what-is-ecological-footprint-4580244>

Week of
June 17

Case Study: Science & Technology, Population and Consumption

Read: <https://econation.one/population-and-consumption/>
Ganivet 2020 (in Canvas)

Case Study: Climate Change

Read: 2021 IPCC Summary for Policymakers
https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_SPM_final.pdf

Week of
June 24

Case Study: Biodiversity Loss

Midterm Exam

Week of July 1	<p><i>Case Study: Resources and Sustainability</i></p> <p><i>Debate on climate change</i></p> <p>Due: 300-500 word essay discussing best actions to take to address climate change</p>
Week of July 8	<p><i>Case Study: Social Media/Internet and Shaping Culture</i></p> <p>Canvas Discussion</p> <p><i>Case Study: Misinformation, Disinformation, Cybersecurity</i></p> <p>Canvas Discussion</p>
Week of July 15	<p><i>Case Study: Automation and Artificial Intelligence</i></p> <p>Canvas Discussion</p> <p><i>Case Study: Unequal development – Poverty and Hunger</i></p> <p>Canvas Discussion</p>
Week of July 22	<p><i>Debate on how to handle misinformation, disinformation and role of social media/internet/AI shaping culture</i></p> <p><i>Debate on surveillance, cybersecurity, surveillance, privacy and human rights</i></p>
Finals period	<p><i>Debate on Modern Weapons Systems and National Security</i></p> <p><i>Debate on Automation and Artificial Intelligence</i></p> <p>Due: ~500-word essay on one of the above debate topics by the time the class session for that debate begins</p>

Note that there will not be a final exam. **The final papers (essays) will be due at the day/time the final exam period for the class ends, which is TBD.**