

## **INTA 2040A: Science, Technology, and International Affairs**

Summer 2024

Meeting Days/Time: T,Th 8-9:55 am

Meeting Room: Brown

**Instructor: Peter Brecke**

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

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**      *Introduction and my research*

**May 16**      *The goal: human well-being broadly defined*

Read:          Brecke, Human Well-Being Index

Week of

**May 21**      *Measures of the state of the world*

**May 23**      *Visualizing measures of the state of the world*

Week of  
**May 28**

*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)

**May 30**

*Alternative models*

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

Week of  
**June 4**

*Debate about models*

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

**June 6**

*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-01-e-07-what-the-doctor-ordered>

Week of  
**June 11**

*The Politics of Innovation*

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

**June 13**

*Case Study: Population and Consumption*

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

Week of  
**June 18**

*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](https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_SPM_final.pdf)

**June 20**

*Case Study: Biodiversity Loss*

Week of  
**June 25**

*Case Study: Resources and Sustainability*

**June 27**      **Midterm Exam**

Week of  
**July 2**

*Case Study: Modern Weapons Systems and National Security*  
**Canvas Discussion**

**July 4**

*Case Study: Social Media/Internet and Shaping Culture*  
**Canvas Discussion**

Week of  
**July 9**

*Case Study: Misinformation, Disinformation, Cybersecurity*  
**Canvas Discussion**

**July 11**

*Case Study: Automation and Artificial Intelligence*  
**Canvas Discussion**

Week of  
**July 16**

*Debates on how to handle misinformation, disinformation  
and role of social media/internet/AI shaping culture*

**July 18**

*Debate on surveillance, cybersecurity, privacy, and human rights*

Week of  
**July 23**

*Debates on Modern Weapons Systems and National Security and on  
Automation and Artificial Intelligence*

**Due: ~500-word essay on one of the above debate topics by the  
time the class session for that debate begins**