

INTA 2040A: Science, Technology, and International Affairs

Fall 2023

T,Th 9:30-10:45

DM Smith 104

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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 demonstrate methodological literacy towards analyzing international political phenomena.
- 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.

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)

[video] James Burke, *Connections*, Episode 1

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

Schedule

Class sessions:

- | | |
|---------|--|
| Aug. 22 | Introduction and my research |
| Aug. 24 | The goal: human well-being broadly defined Read: Brecke, Human Well-Being Index |
| Aug. 29 | Measures of the state of the world |

- Aug. 31 Visualizing measures of the state of the world
- Sept. 5 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)
- Sept. 7 Alternative models I
Read: Diamond, pp 9-32
- Sept. 12 Alternative models II
Read: Pomeranz, pp 3-27
Kennedy, pp xv-30
- Sept. 14 Debate about models
Due: 300-500 word essay discussing which model makes more sense to you (at least now)
Read: Henrich pp 155-254 (optional)
or Morris pp 175-279 (optional)
- Sept. 19 How Does Technology Advance?
Watch: Burke, video of episode 1 at
https://archive.org/details/james-burke-connections_s01e01
- Sept. 21 The Politics of Innovation
Read: Taylor, *The Politics of Innovation*, Chapter 6
- Sept. 26 The Grand Challenges: Consumption
Read: <https://www.treehugger.com/what-is-ecological-footprint-4580244>
[we will also discuss the mid-term exam and the switchover to case studies]
- Sept. 28 Case Study: Science & Technology, Population and Consumption
Read: <https://econation.one/population-and-consumption/>
Ganivet 2020 (in Canvas)
- Oct. 3 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
- Oct. 5 Case Study: Biodiversity Loss
- Oct. 12 **Midterm Exam**
- Oct. 17 Bob Bell on NavSat systems
- Oct. 19 William Roper on national security and technological innovation

- Oct. 24 Case Study: Resources and Sustainability
- Oct. 26 Debate on climate change
Due: 300-500 word essay discussing best actions to take to address climate change
- Oct. 31 Learning Tableau (continued)
- Nov. 2 Case Study: Social Media/Internet and Shaping Culture
Canvas Discussion
- Nov. 7 General Breedlove on technology adaptation and innovation in the Ukraine War
Canvas Discussion
- Nov. 9 Case Study: Misinformation, Disinformation, Cybersecurity
Canvas Discussion
- Nov. 14 Case Study: Automation and Artificial Intelligence
Canvas Discussion
- Nov. 16 Case Study: Unequal development – Poverty and Hunger
Canvas Discussion
- Nov. 21 Admiral Winnefeld on the challenges in protecting Taiwan and US ships
- Nov. 28 Debate on how to handle misinformation, disinformation
Debate on role of social media/internet shaping culture
- Nov. 30 Debate on Modern Weapons Systems and National Security
Debate on Automation and Artificial Intelligence
- Dec. 5 Debate on human rights, automation/AI, and social change
Debate on surveillance, cybersecurity, and privacy
- Due: ~500-word essay on one of the above debate topics by the time the class session for that debate begins**

Note that there will not be a final exam. **The final papers will be due at the day/time the final exam period for the class ends, Monday, December 11 at 10:50 am.**