

INTA 2040A: Science, Technology, and International Affairs

This is a Core IMPACTS course that is part of the Social Sciences area.

Core IMPACTS refers to the core curriculum, which provides students with essential knowledge in foundational academic areas. This course will help students master course content, and support students' broad academic and career goals.

This course should direct students toward a broad Orienting Question:

- How do I understand human experiences and connections?

Completion of this course should enable students to meet the following Learning Outcome:

- Students will effectively analyze the complexity of human behavior, and how historical, economic, political, social, or geographic relationships develop, persist, or change.

Course content, activities and exercises in this course should help students develop the following Career-Ready Competencies:

- Intercultural Competence
- Perspective-Taking
- Persuasion

Spring 2024

Mon, Wed 2-3:15

Cherry Emerson 320

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or by appt.

[PLEASE NOTE THAT THIS IS NOT A FINAL SYLLABUS AS SOME DATES WILL NEED TO SHIFT BECAUSE OF GUEST SPEAKER AVAILABILITY, BUT IT IS FAIRLY CLOSE.]

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 set of learning outcomes for this class. The section at the beginning of this syllabus applies to all classes that are part of the social sciences core curriculum. The enumerated item below is an outcome deemed appropriate for this class, and it is my goal that the class will indeed achieve this outcome.

1. Students will [be able to] 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.

I expect from all of you integrity in your behavior consistent with GT's code of ethics.

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, an episode of either *Connections* or *The Day the Universe Changed*

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

Ganivet, (in Canvas)

Schedule

Class sessions:

- | | |
|---------|--|
| Jan. 8 | Introduction and my research |
| Jan. 10 | The goal: human well-being broadly defined
Read: Brecke, Human Well-Being Index |
| Jan. 17 | Measures of the state of the world |
| Jan. 22 | Visualizing measures of the state of the world |
| Jan. 24 | 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) |
| Jan. 29 | Alternative models I
Read: Diamond, pp 9-32 |
| Jan. 31 | Alternative models II
Read: Pomeranz, pp 3-27
Kennedy, pp xv-30 |
| Feb. 5 | 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)

- Feb. 7 Admiral Sandy Winnefeld
- Feb. 12 How Does Technology Advance?
Watch: Burke, video of episode 1 at
https://archive.org/details/james-burke-connections_s01e01
- Feb. 14 The Politics of Innovation
Read: Taylor, *The Politics of Innovation*, Chapter 6
- Feb. 19 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]
- Feb. 21 Eric Hipkins
- Feb. 26 Case Study: Resources and Sustainability
Read: <https://econation.one/population-and-consumption/Ganivet-2020> (in Canvas)
- Feb. 28 **Midterm Exam**
Exam is take-home due at 11:59 pm; there is no class session.
- Mar. 4 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
- Mar. 6 Case Study: Biodiversity Loss
Canvas Discussion
- Mar. 11 Case Study: Social Media/Internet and Shaping Culture
Canvas Discussion
- Mar. 13 General Phil Breedlove on security, technology, and Ukraine
- Mar. 25 Case Study: Misinformation, Disinformation, Cybersecurity
Canvas Discussion
- Mar. 27 William Roper on national security and technological innovation
- Apr. 1 Debate on climate change
Due: 300-500 word essay discussing best actions to take to address climate change
- Apr. 3 Case Study: Automation and Artificial Intelligence

Canvas Discussion

- Apr. 8 Case Study: Unequal development – Poverty and Hunger
Canvas Discussion
- Apr. 10 Robert Bell on bringing about GPS systems
- Apr. 15 Debate on how to handle misinformation, disinformation
Debate on role of social media/internet shaping culture
- Apr. 17 Debate on Modern Weapons Systems and National Security
Debate on Automation and Artificial Intelligence
- Apr. 22 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, Wednesday, May 1 at 5:30 pm.**