Global Nuclear Politics
(30h)
July 1 - July 4: 2pm - 6:30pm (Classroom 403)
July 5: 7:30am - 3pm (trip to CTMSP Aramar)
July 6: 9am - 1:30pm (Classroom 403)

Course Description

This course offers a short introduction to global nuclear politics. The syllabus offers a broad overview of the field, and seeks to acquaint students with the major debates of the day. The course is divided into five parts. First, a discussion of the revolutionary impact of nuclear weapons on world politics runs through issues of nuclear strategy, foreign policy, and nuclear proliferation. The second section introduces students to the nuclear fuel cycle and nuclear propulsion and their effects over international security. Third, the course deals with the non-proliferation regime, and the institutions, norms, and practices of nuclear global governance. The fourth part of the course focuses on the diplomatic challenges of global nuclear order as they pertain to Iran and North Korea in particular, and non-proliferation and disarmament in general. The last section looks at Brazil's nuclear program in some detail.

Lectures and discussions will occur in both English and Portuguese. Students should be prepared to read and debate in both languages. As part of the course, students will visit the Brazilian Navy's installation in Iperó, São Paulo. FGV will provide transportation, leaving in the morning and returning mid-afternoon.

Participants on the course are required to attend at least 75% of all lectures.

Reading Materials
Readings will be accessible through Dropbox.

Evaluation

This course consists of a series of classes with pre-assigned readings. Students are expected to do the mandatory readings before class. Final grades will be assigned as follows:

• Participation in class: 20%
• Final essay: 80%

Participation: Students are expected to engage the reading materials and discuss them in class.

Final essay: Each student will submit a 5-page essay. The essay must be sent to lucas.florentino@fgv.br no later than xxx. Papers received after the deadline will be dropped two full points in a 10-point scale. No essay will be accepted one week after the deadline. Essays may be submitted in English or Portuguese.
Criteria for Marking the Essay

8 or above: Work in this category shows excellent command of the topic. It is well organized, clearly expressed and cogently argued. Work in this category will either approach the question from an unexpected angle, contain unusually illuminating or original thinking, or be especially well illustrated.

7.5 to 7.9: Work in this category shows excellent command of the topic. It is well organized, clearly expressed and cogently argued.

6.5 to 7.4: Work in this category shows sound knowledge of the topic. It displays very good understanding of the question and it is clearly organized and cogently argued. The argument is detailed, precise, and clear.

6 to 6.4: Work in this category shows sound knowledge of the topic. It is clearly organized and cogently argued. Achieving this mark on a question means that the student has firm control of the essential points.

5.5 to 5.9: Work in this category shows some weaknesses in terms of its accuracy, coherence, detail, organization, or focus.

5 to 5.4: Work in this category shows extensive weaknesses in terms of its accuracy, coherence, detail, organization, or focus. The candidate has firm control of at least some of the essential points.

4 to 4.9: Work in this category shows some basic knowledge of the topic. Yet it displays some serious deficiencies in terms of its accuracy, coherence, detail, organization, or focus.

3 to 3.9: Work in this range shows an attempt to answer the question set, but it is either irrelevant to the question set, incoherent, unsystematic, superficial, or unacceptably brief.

1 to 2.9: Work in this category fails to show any basic knowledge of the topic.

Zero: Work that features evidence of plagiarism

Course Policies:

- Minimum attendance 75%;
- Cell phones must be turned off during class;
- Electronic devices in the classroom serve the sole purpose of taking lecture notes;
- It is the policy of the School of International Relations at FGV that all cases of academic dishonesty – including plagiarism – be reported to the Undergraduate Committee and their Chair. A detailed discussion on plagiarism will take place in class before submission of the first essay.
PART 1 – NUCLEAR ARTIFACTS AND TECHNOLOGY (1):
NUCLEAR WEAPONS

Lecture 1: Nuclear Arms Race (Stephen Herzog)
Monday, Jul 1, 2pm-3:30pm

- Manhattan Project
- Building the bomb – basic nuclear weapons technology
- Hiroshima, Nagasaki, and nuclear weapons effects
- World War II aftermath and the Baruch Plan
- U.S.-Soviet arms race
- Nuclear triad
- Strategic versus tactical nuclear weapons
- Command and control

Nuclear Basics:

Wikipedia entry on "Nuclear weapon design": https://en.wikipedia.org/wiki/Nuclear_weapon_design

Assigned readings:


Complementary readings:


Youtube Video "Cold War and Nuclear Arms Race": https://www.youtube.com/watch?v=k6hMQZAdcgl
Lecture 2: Nuclear Proliferation and Strategy (Stephen Herzog)
Monday, Jul 1, 3:30pm-5pm

- Theories of Proliferation
- Potential rationales for nuclear use
- Use vs. non-use: balance of terror and nuclear taboo
- Counter-force versus counter-value targeting
- Massive retaliation versus flexible response
- First- and second-strike
- Deterrence and extended deterrence
- Credibility of deterrent strategies
- Missile Defense

Assigned readings:


Recommended readings:


Complementary material:

Youtube Video "NATO ballistic missile defence overview": [https://www.youtube.com/watch?v=3LPdmxnBklU](https://www.youtube.com/watch?v=3LPdmxnBklU)

Watch movie: "Dr. Strangelove or: How I learned to stop worrying and love the bomb"
PART 2 – NUCLEAR ARTIFACTS AND TECHNOLOGY (2):
WHAT IS NUCLEAR?

Lecture 3: Nuclear fuel cycle and nuclear propelled-submarines (Lucas Perez Florentino)
Monday, Jul 1, 5pm-6:30pm

- Nuclear latency and nuclear threshold
- The nuclear fuel cycle: what is nuclear in the nuclear fuel cycle?
- Mining and nuclearity
- Enrichment, fissile materials (uranium and plutonium), reprocessing, and the global politics of non-proliferation
- Nuclear propelled-submarines: new dynamics in non-proliferation and international security?

Nuclear Basics:

CNEN. Programa de Integração CNEN - Módulo Informação Técnica, s.d.


Assigned readings:


Recommended Readings:


PART 3 – NUCLEAR POLITICS AND GOVERNANCE:
HOW TO MANAGE AND CONTROL NUCLEAR MATERIALS AND TECHNOLOGY?

Lecture 4: Nuclear Arms Control and Disarmament (Stephen Herzog)
Tuesday, Jul 2, 2 pm-3:30pm

- Potential rationales for arms control
- SALT I and II; ABM Treaty; INF Treaty
- START I and importance of verification
- Nuclear-weapon-free zones
- PTBT, TTBT, PNET, and CTBT and nuclear explosion monitoring
- Treaty on the Prohibition of Nuclear Weapons

**Assigned readings:**


**Recommended readings:**


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**Lecture 5: Nuclear technology control (Stephen Herzog)**

**Tuesday, Jul 2, 3:30pm-5pm**

- NPT and IAEA safeguards
- New approaches for safeguards
- Safeguards and nuclear naval propulsion
- Nuclear Suppliers Group

**Nuclear Basics:**


**Assigned readings:**

Text of the Treaty on the Non-Proliferation of Nuclear Weapons:


**Recommended readings:**


**Complementary material:**

Youtube video: "What is the NSG?" [https://www.youtube.com/watch?v=UyMkA3R3zPE](https://www.youtube.com/watch?v=UyMkA3R3zPE)
### Special Guest Session: The International Atomic Energy Agency: an inside look (Laercio Vinhas)

**Tuesday, Jul 2, 5pm-6:30pm**

- The history and structure of the IAEA
- Board of Governors
- Nuclear safeguards
- Nuclear safety and security
- Nuclear technical cooperation

### Nuclear Basics:


### Assigned readings:


### Recommended readings:


### Complementary material:

The IAEA History Research Project - [https://iaea-history.univie.ac.at/](https://iaea-history.univie.ac.at/)

### PART 4 - DIPLOMATIC CHALLENGES IN THE GLOBAL NUCLEAR ORDER

**Lecture 6: Iranian Nuclear Program - From the Tehran Declaration to the JCPOA (Stephen Herzog, Matias Spektor, and Guilherme Fasolin)**

**Wednesday, Jul 2, 2pm-3pm**

- An overview of the Iranian Nuclear Program
- Coercive diplomacy and hedging
- International negotiations
The Tehran Declaration
JCPOA and beyond

Assigned readings:

WALTZ, K. N. Why Iran should get the bomb: Nuclear balancing would mean stability. *Foreign Affairs*, 2012, p. 2-5.

KROENIG, M. Time to attack Iran: Why a strike is the least bad option. *Foreign Affairs*, 2012.

KAHL, C. H. Not time to attack Iran: Why war should be a last resort. *Foreign Affairs*, 2012.

Recommended readings:

Wikipedia article on "Nuclear program of Iran": [https://en.wikipedia.org/wiki/Nuclear_program_of_Iran](https://en.wikipedia.org/wiki/Nuclear_program_of_Iran)


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**Lecture 7 (Stephen Herzog) + Special Guest Session (Marco Marzo): North Korean Nuclear Program**

Wednesday, Jul 3, 3pm-4:30pm

- An overview of the North Korean nuclear program
- Regional implications and survey experiment
- International negotiations
- Verifying test site closure
- An inside look of IAEA’s non-proliferation efforts in North Korea (Marco Marzo)

Assigned readings:

"North Korea" overview by Nuclear Threat Initiative: [https://www.nti.org/learn/countries/north-korea/](https://www.nti.org/learn/countries/north-korea/)


Recommended readings:


“Obstacles and dilemmas in the global nuclear governance” (provisional title) - A conversation with Brieuc Pont
Wednesday, Jul 3, 4:30pm-5:30pm

- TNP Three Pillars and NPT Rev Com.
- Non-proliferation, counter-proliferation, and disarmament
- North-South Divide
- TPNW, humanitarian path, and the road ahead

Assigned readings:


Recommended readings:


Lecture 7: Social experiments and nuclear politics (Stephen Herzog)
Wednesday, July 3, 5:30pm-6:30pm

- Survey experiments in nuclear politics field

Assigned readings:


Recommended Readings


PART 5 - NUCLEAR BRAZIL

Lecture 7: History of the Brazilian Nuclear Program (Matias Spektor)
Thursday, July 4, 2pm-3:30pm

- Initial motivations and intentions (1940-1970s)
- The Brazil-West Germany Agreement and its implications (1974-1979)
- The parallel program (1979-1989)
- Adhering to global nuclear regimes (1989-1998)
- Recent developments (1989-2010)

Assigned reading:

Complementary reading:

Lecture 8: Brazilian nuclear policy today (Lucas Perez Florentino) + Special Guest Session (Layla Dawood)
Thursday, July 4, 3:30pm-5:30pm

- Capabilities and actors
- “The Brazilian Nuclear-propelled Submarine and Deterrence Theories” (Layla Dawood)
- Governance and vulnerabilities
- Next decade

Assigned readings:

Complementary readings:

Debate: “Argentina, Brazil, and ABACC in the next decade”: a conversation with Federico Merke, Marco Marzo, and Matias Spektor
Thursday, July 4, 5:30pm-6:30pm

Assigned readings:


**Complementary readings:**


Trip to Aramar Experimental Center (CTMSP), in Iperó (SP)  
*Friday, July 5, 7:30am-3pm (to be confirmed)*

**“Brazilian Nuclear Diplomacy in an Evolving Nuclear Order” - A conversation with Marcelo Câmara**  
*Saturday, Jul 6, 9am-10:30am*

- TNP Three Pillars and NPT Rev Com.  
- Non-proliferation, counter-proliferation, and disarmament  
- North-South Divide  
- TPNW, humanitarian path, and the road ahead

Lecture 9: Social experiments and Brazilian nuclear politics (Matias Spektor, Guilherme Fasolin, and Lucas Perez Florentino)  
*Saturday, July 6, 10:30am-11:30am*

- Nuclear survey experiments in Brazil

(No assigned readings)

Roundtable: “Careers in Global Nuclear Politics” with Sonia Fernández Moreno and Togzhan Kassenova  
*Saturday, July 6, 11:30am-1pm*

Closing Remarks (Matias Spektor)  
*Saturday, July 6, 1pm-1:30pm*