

The Politics of Nuclear Weapons

Course Syllabus

COURSE INFORMATION

Course Title: Selected Topics in Government & Politics: The Politics of Nuclear Weapons
Course Number and Section: PSCI 4396.502.11F
Class Number: 82329
Term: Fall 2011
Meeting Time: Tuesday and Thursday, 5:30 – 6:45 PM
Meeting Location: Science Learning Center (SLC), Room 3.102

INSTRUCTION INFORMATION

Instructor: Christopher Burk
Email: christopher.burk@utdallas.edu
Office Location: Founders North (FN), Room 1.105
Office Hours: 2:30 PM – 3:30 PM, Wednesdays and Thursdays, and by appointment

Course Pre-requisites, Co-requisites, and/or Other Restrictions

None.

Course Description

This course is an intermediate level introduction to the history of nuclear weapons and their associated delivery systems. Most of the course will cover their development and use during World War II, the nuclear arms race between the US and the USSR, and efforts to control their proliferation. The course will also cover basic elements of nuclear strategies as well as the political factions influencing nuclear weapons policy in the United States and other countries. A small amount of technical information will also be covered to ensure that students have the background necessary to understand the weapons, the delivery systems, related technologies, and the political dynamics involved in research and strategies of nuclear weapons.

Student Learning Objectives/Outcomes

At the end of the semester, a successful student should

- have a basic understanding of the history of the science and scientists who first produced nuclear weapons;
- be aware of how and why the first nuclear weapons were built and used by the United States in World War II, and of why such weapons were not built by others at that time; appreciate the function of nuclear weapons, delivery systems, and associated technologies;
- between nuclear and conventional weapons, and about why such technical matters are important when trying to understand the issues created by nuclear weapons and the efforts made since 1945 to control their proliferation;
- have begun to explore the military and political roles played by nuclear weapons in the Cold War and the changes in those roles between 1945 and 1991;
- comprehend the efforts of governmental and non-governmental efforts to prevent the use and to control the proliferation of nuclear weapons.

- be able to describe the processes through which so-called —New Nuclear Nations|| have acquired their weapons, and to appreciate the continuing attractiveness of nuclear weapons to powers of all sizes.

At the end of the course, students will be better able to evaluate current events critically. Additionally, by practicing via their own writing and in-class discussion, students will be better able to create their own arguments regarding global politics and to provide evidence supporting those arguments. Just as important, students will improve their abilities to evaluate others' arguments or beliefs.

Required Textbooks and Materials

In addition to assigned readings from selected journals, there are four required books for this course.

Title: Bomb Scare: The History and Future of Nuclear Weapons

Author: Joseph Cirincione

Publisher: Columbia University Press

Note: This book is available electronically to registered students through the UT Dallas library as an e-book.

Title: Hiroshima: The World's Bomb

Author: Andrew J. Rotter

Publisher: Oxford University Press, USA

Title: Atomic Obsession: Nuclear Alarmism from Hiroshima to Al-Qaeda

Author: John E. Mueller

Publisher: Oxford University Press, USA

Title: The Dead Hand: The Untold Story of the Cold War Arms Race and its Dangerous Legacy

Author: David E. Hoffman

Publisher: Doubleday

One book is recommended:

Title: Essence of Decision: Explaining the Cuban Missile Crisis - 2nd edition (1999)

Authors: Graham T. Allison and Philip Zelikow

Publisher: Longman

Note: Please note that the second edition of the Allison & Zelikow book should be used. It substantially differs from the first edition.

Students will also be required to read a few selected articles from various journals and magazines. These articles will be available at the McDermott Library and/or online. The instructor may provide specific guidance on how to acquire access to the articles when necessary. However, it is always the individual responsibility of each student to locate and read the assigned works by the dates indicated.

Online resources for useful material & news related to this course:

WMD 411	http://www.nti.org/f_wmd411/f_index.html
Arms Control Association	http://www.armscontrol.org
Bulletin of the Atomic Scientists	http://www.bullatomsci.org/
International Atomic Energy Agency (IAEA)	http://www.iaea.org/worldatom/
Nuclear Threat Initiative	http://www.nti.org
Nuclear Suppliers Group	http://www.nsg-online.org
Ploughshares Fund	http://www.ploughshares.org/
Union of Concerned Scientists	http://www.ucsusa.org/index.html

Grading Policy

The core requirements are as follows:

20 %	Four Quizzes, best four scores on six quizzes
30 %	Mid-Term Exam
10 %	Movie Analysis Paper
40 %	Final Exam

Course & Instructor Policies

Attendance: Students are expected to attend class. The course will meet just once a week. It is therefore in the best interest of each and every student to attend each class. Attendance will be taken in each class with a sign-in sheet. The determination of a student's final course grade may be influenced by class attendance. While occasional absences are unavoidable, a pattern of poor class attendance will count against a student in determining the overall grade for the course unless the absences have been excused by the instructor.

Quizzes. Twenty (20) percent of the course grade will be determined by the grade earned on quizzes. Six (6) quizzes will be given during the course of the semester and the best four (4) scores of each individual student will determine the quiz score for the student. The lowest two quiz scores of each student will not be counted when determining student's overall course grade. The dates of the quizzes will not be announced in advance. The quizzes will cover topics related to the course and will focus heavily on the assigned readings. Students are expected to stay current with the assigned readings. No make-up quizzes will be given. A student missing a quiz will receive a grade of zero for any missed quiz.

Quiz and Exam Policies: Students are expected to complete the quizzes and tests individually and submit the results at the end of the allotted time. Students may not utilize any reading, books, notes, or electronic device while completing a quiz or an exam.

Make-up Exams: NO MAKE UP EXAMS WILL BE GIVEN. No exceptions will be granted. All students are expected to take the final exam when it is offered (Tuesday, December 6). A student who misses the mid-term exam or the final exam will receive a zero for the exam(s) missed. If a student misses the mid-term exam, that student may elect to replace the grade on the mid-term exam with the optional research paper. For more details on the optional research paper, please see below. The research paper may not replace the grade of the final exam.

Essays: Essays are due at the beginning of the class period on the designated due date. The paper should be typed and presented in 12 point Times New Roman font, be doubled spaced, and have margins of 1.00 inch on all sides. The paper must also include page numbers and proper citations. Students should provide proper footnote or endnotes as well as a corresponding full bibliography at the end of every paper

submitted. Students should avoid using parenthetical referencing. Any student need assistance with formatting proper citations and/or a bibliography should seek assistance from a librarian or at the Learning Resource Center. Each student should submit both an electronic version of his or her paper via email as attached document (.doc) in Microsoft Word as well as a printed copy (stapled) of the paper. Any paper submitted after the specified time will be penalized one letter grade for every 24 hours (or portion thereof) between the original submission deadline and the instructor's reception of the student's paper.

Movie Analysis Essay: Each student will submit an original essay analyzing one full-length motion picture related to the content of the course. Each student will select one movie from a list distributed by the instructor and analyze it according to the directions provided. The length of the paper should be 3-5 pages, excluding the bibliography. Students should draw on the readings and lectures of the course as well as outside materials when crafting this paper. Students should utilize high quality sources and provide the appropriate citations and a full biography covering all sources used. The final version of the essay is due at the start of class on Thursday, November 10.

Optional Research Essay: A student may elect to replace the grade on the mid-term exam with a research paper. The research paper may not replace the grade on the final exam. The length of the paper should be 10-15 pages, excluding the bibliography. This paper is a research intensive project. Students should utilize high quality sources and provide the appropriate citations and a full biography covering all sources used. A student electing to exercise this option must submit a one page proposal describing the topic and the arguments of the paper to the instructor via email on or before November 15 and gain the instructor's official approval of the paper topic. Any and all concerns or questions regarding the research paper and revisions of the paper topic should be presented to the instructor by November 22. The research paper topic must be approved by the instructor in advance or the paper will not be accepted. The final version of the research paper is due at the beginning of class on Tuesday, November 29. Only if a student's grade on the optional research paper is higher than the grade earned by the student on the mid-term will the student's mid-term exam grade be replaced by the grade on the optional research paper. In other words, a student's course grade can only be improved by completing the optional research paper.

Email Use

The University of Texas at Dallas recognizes the value and efficiency of communication between faculty/staff and students through electronic mail. At the same time, email raises some issues concerning security and the identity of each individual in an email exchange. The university encourages all official student email correspondence be sent only to a student's UT Dallas email address and that faculty and staff consider email from students official only if it originates from a UT Dallas student account. This allows the university to maintain a high degree of confidence in the identity of all individual corresponding and the security of the transmitted information. UT Dallas furnishes each student with a free email account that is to be used in all communication with university personnel. The Department of Information Resources at UT Dallas provides a method for students to have their UT Dallas mail forwarded to other accounts.

Resources to Help You Succeed

The University offers assistance to students in many areas. Please do not feel stigmatized by using these resources. Good students become better students by using them. Learning Resource Center offers a variety of programs to help you, ranging from individual tutoring to review classes for standardized tests.

Student Conduct & Discipline

The University of Texas System and The University of Texas at Dallas have rules and regulations for the orderly and efficient conduct of their business. It is the responsibility of each student and each student organization to be knowledgeable about the rules and regulations which govern student conduct and activities.

The University of Texas at Dallas administers student discipline within the procedures of recognized and established due process. Procedures are defined and described in the Rules and Regulations, Board of Regents, The University of Texas System, Part 1, Chapter VI, Section 3, and in Title V, Rules on Student Services and Activities of the university's Handbook of Operating Procedures. Copies of these rules and regulations are available to students in the Office of the Dean of Students, where staff members are available to assist students in interpreting the rules and regulations.

A student at the university neither loses the rights nor escapes the responsibilities of citizenship. He or she is expected to obey federal, state, and local laws as well as the Regents' Rules, university regulations, and administrative rules. Students are subject to discipline for violating the standards of conduct whether such conduct takes place on or off campus, or whether civil or criminal penalties are also imposed for such conduct.

Academic Integrity

The faculty expects from its students a high level of responsibility and academic honesty. Because the value of an academic degree depends upon the absolute integrity of the work done by the student for that degree, it is imperative that a student demonstrate a high standard of individual honor in his or her scholastic work.

Scholastic dishonesty includes, but is not limited to, statements, acts or omissions related to applications for enrollment or the award of a degree, and/or the submission as one's own work or material that is not one's own. As a general rule, scholastic dishonesty involves one of the following acts: cheating, plagiarism, collusion and/or falsifying academic records. Students suspected of academic dishonesty are subject to disciplinary proceedings.

Plagiarism, especially from the internet, from portions of papers for other classes, and from any other source is unacceptable and will be dealt with under the university's policy on plagiarism (see general catalog for details).

Incomplete Grade Policy

As per university policy, incomplete grades will be granted only for work unavoidably missed at the semester's end and only if 70% of the course work has been completed. An incomplete grade must be resolved within eight (8) weeks from the first day of the subsequent long semester. If the required work to complete the course and to remove the incomplete grade is not submitted by the specified deadline, the incomplete grade is changed automatically to a grade of F.

Withdrawal from Class

The administration of this institution has set deadlines for withdrawal of any college-level course. These dates and times are published in that semester's course catalog. Administration procedures must be followed. It is the student's responsibility to handle withdrawal requirements from any class. In other words, I cannot drop or withdraw any student. You must do the proper paperwork to ensure that you will not receive a final grade of "F" in a course if you choose not to attend the class once you are enrolled.

Disability Services

The Office of Student AccessAbility is committed to ensuring that qualified students with documented disabilities are provided with an equal opportunity to participate in the variety of educational, recreational and social opportunities at UT Dallas. Academic accommodations for each student are determined by Student AccessAbility on an individual basis with input from qualified professionals. The main Student AccessAbility office is located in Room 3.200 in the Student Services Building. The contact information for the office:

Phone: 972-883-2098

Email: disabilityservice@utdallas.edu

Website: <http://www.utdallas.edu/studentaccess/>

It is the student's responsibility to notify his or her professors of the need for an accommodation. The Office of Student AccessAbility provides students with letters to present to faculty members to verify that the student needs accommodations. Individuals requiring special accommodation should contact the professor after class or during office hours.

Religious Holy Days

The University of Texas at Dallas will excuse a student from class or other required activities for the travel to and observance of a religious holy day for a religion whose places of worship are exempt from property tax under Section 11.20, Tax Code, Texas Code Annotated.

The student is encouraged to notify the instructor or activity sponsor as soon as possible regarding the absence, preferably in advance of the assignment. The student, so excused, will be allowed to take the exam or complete the assignment within a reasonable time after the absence: a period equal to the length of the absence, up to a maximum of one week. A student who notifies the instructor and completes any missed exam or assignment may not be penalized for the absence. A student who fails to complete the exam or assignment within the prescribed period may receive a failing grade for that exam or assignment.

If a student or an instructor disagrees about the nature of the absence [i.e., for the purpose of observing a religious holy day] or if there is similar disagreement about whether the student has been given a reasonable time to complete any missed assignments or examinations, either the student or the instructor may request a ruling from the chief executive officer of the institution, or his or her designee. The chief executive officer or designee must take into account the legislative intent of TEC 51.911(b), and the student and instructor will abide by the decision of the chief executive officer or designee.

Field Trip Policies, Off-campus Instruction and Course Activities

Off-campus, out-of-state, and foreign instruction and activities are subject to state law and University policies and procedures regarding travel and risk-related activities. Information regarding these rules and regulations may be found at the website address

http://www.utdallas.edu/BusinessAffairs/Travel_Risk_Activities.htm. Additional information is available from the office of the school dean. Below is a description of any travel and/or risk-related activity associated with this course. No required travel is currently associated with this particular course.

Student Grievance Procedures

Procedures for student grievances are found in Title V, Rules on Student Services and Activities, of the university's Handbook of Operating Procedures. In attempting to resolve any student grievance regarding grades, evaluations, or other fulfillments of academic responsibility, it is the obligation of the student first

to make a serious effort to resolve the matter with the instructor, supervisor, administrator, or committee with whom the grievance originates (hereafter called “the respondent”). Individual faculty members retain primary responsibility for assigning grades and evaluations. If the matter cannot be resolved at that level, the grievance must be submitted in writing to the respondent with a copy of the respondent’s School Dean. If the matter is not resolved by the written response provided by the respondent, the student may submit a written appeal to the School Dean. If the grievance is not resolved by the School Dean’s decision, the student may make a written appeal to the Dean of Graduate or Undergraduate Education, and the dean will appoint and convene an Academic Appeals Panel. The decision of the Academic Appeals Panel is final. The results of the academic appeals process will be distributed to all involved parties.

Copies of these rules and regulations are available to students in the Office of the Dean of Students, where staff members are available to assist students in interpreting the rules and regulations.

*****Please Note: These descriptions and timelines are subject to change at the discretion of the course instructor.*****

Assignments & Academic Calendar

DATE TOPICS & ASSIGNMENTS & ASSOCIATED READINGS

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| 8/25 | Course Introduction |
| 8/30 | <u>TOPIC: Scientifics and Political Foundations for Nuclear Weapon Development</u> <ul style="list-style-type: none">• Cirincione: Introduction & Chapter 1 |
| 9/1 | <u>TOPIC: Race for the First Atomic Bomb & The Manhattan Project</u> <ul style="list-style-type: none">• Rotter: Introduction & Chapters 1-6 |
| 9/6 | <u>TOPIC: Hiroshima & Nagasaki – Decisions</u> <ul style="list-style-type: none">• Cirincione: Introduction & Chapter 1• Rotter: Introduction & Chapters 1-6 |
| 9/8 | <u>TOPIC: Hiroshima & Nagasaki – Implications</u> <ul style="list-style-type: none">• Cirincione: Chapters 2-3• Rotter: Chapter 7 |
| 9/13 | <u>TOPIC: The Soviet Bomb, the Atomic Age and the Early Cold War</u> <ul style="list-style-type: none">• David Alan Rosenberg, “The Origins of Overkill: Nuclear Weapons and American Strategy, 1945-1960,” <i>International Security</i>, Vol. 7, No. 4 (Spring 1983). http://www.jstor.org/pss/2626731 |
| 9/15 | <u>TOPIC: Expanding Arsenal, New Strategies</u> <ul style="list-style-type: none">• The Nuclear Testing Tally http://www.armscontrol.org/act/1998_05/ffmy98• Mueller: Chapters 1-5 |
| 9/20 | <u>TOPIC: Cuban Missile Crisis, Part I</u> <ul style="list-style-type: none">• Federal of American Scientists, The Kennedy Administration
http://www.fas.org/spp/starwars/offdocs/jfk/index.html• Allison & Zelikow, Introduction & Chapters 1-2 (RECOMMENDED) |
| 9/22 | NO CLASS |

- 9/27 **TOPIC: Cuban Missile Crisis, Part II**
- Allison & Zelikow, Introduction & Chapters 3-6 (RECOMMENDED)
- Review and Exam Preparation**
- 9/29 **MID-TERM EXAM**
- 10/4 **TOPIC: The Nuclear Triad and Complex Nuclear Strategies**
- Bernard Brodie, "The Development of nuclear strategy," *International Security*, Vol. 2, No. 4 (Spring, 1978) pp. 65-83. <http://ic.ucsc.edu/~rlipsch/pol179/Brodie.pdf>
- 10/6 **TOPIC: Nuclear Arsenal & Nuclear Strategy from Johnson to Carter**
- Warner R. Schilling, "U.S Strategic Nuclear Concepts in the 1970's: The Search for Sufficiently Equivalent Countervailing Parity," *International Security*, Vol. 6, No. 2 (Fall 1981).
- 10/11 **TOPIC: Nuclear Arsenal & Nuclear Strategy in the Reagan Era**
- Brian Toon, Owen Robock, and Rich Turco, "Environmental consequences of nuclear war," *Physics Today*, Vol. 61, Issue 12 (Dec 2008), pp. 37-42. <http://dx.doi.org/10.1063/1.3047679>
 - Hoffman: Prologue, Introduction, Chapters 1-3 and 6-10
- 10/13 **NO CLASS**
- 10/18 **TOPIC: End of the Cold War and collapse of the Soviet Union: Reagan & Bush 41**
- Hoffman: Chapters 11-12, 14, 16-19
- 10/20 **TOPIC: Nuclear Weapons & Nuclear Strategy during Bush 41 & Clinton Administrations**
- Hoffman: Chapters 16-19, 21, and Epilogue
- 10/25 **TOPIC: Nuclear Proliferation, Part I**
- Cirincione: Chapters 4-8
 - Rotter: Chapter 8
- 10/27 **TOPIC: Nuclear Proliferation, Part II**
- Kenneth N. Waltz, "Nuclear Myths and Political Realities," *American Political Science Review*, Vol. 84, No. 3 (September 1990), pp. 731-745. <http://www.jstor.org/stable/1962764>
 - Paul Bracken, "The Second Nuclear Age," *Foreign Affairs*, Vol. 79, Number 1 (Jan/Feb 2000), pages 146-157.
 - Graham Allison, "Nuclear Disorder," *Foreign Affairs*, Vol. 89, Number 1 (Jan/Feb 2010), pages 74-85.
- 11/1 **TOPIC: Nuclear Proliferation, Part III**
- Mueller: Chapters 6-11
- 11/3 **FIRST PROPOSAL DUE FOR OPTIONAL PAPER**
- TOPIC: Post-Cold War Nuclear Developments, Part I**
- Greg Mello, Andrew Lichterman and William Weida, "The Stockpile Stewardship Charade," *Issues in Science and Technology*, Vol. XV, No. 3 (Spring 1999), pp. 78-85. <http://www.issues.org/15.3/mello.htm>
 - Terry L. Deibel, "The Death of a Treaty," *Foreign Affairs*, Vol. 81, Number 5 (Sept/Oct 2002), pages 142-161.
- 11/8 **TOPIC: Post-Cold War Nuclear Developments, Part II**
- George Perkovich, "Bush's Nuclear Revolution," *Foreign Affairs*, Volume 82, Number 2 (March/April 2003), pages 2-8.
 - The Heritage Foundation, *33 Minutes: Protecting America in the Missile Age* <http://33-minutes.com/33-minutes/>
 - Michael O'Hanlon, "Star Wars Strikes Back," *Foreign Affairs*, Vol. 78, Number 6 (Nov/Dec 1999), pages 68-82.
 - Charles L. Glaser and Steve Fetter, "National Missile Defense and the Future of U.S. Nuclear Weapons Policy," *International Security*, Vol. 26, Number 1 (Summer 2001), pages 40-92. <http://www.jstor.org/stable/3092078>

11/10 SHORT ESSAY DUE

TOPIC: Nuclear Terrorism

- Michael A. Levi and Graham T. Allison, "Online Debate: How Likely is a Nuclear Terrorist Attack on the United States?" April 20, 2007.
http://www.cfr.org/publication/13097/how_likely_is_a_nuclear_terrorist_attack_on_the_united_states.html
- Caitlin Talmadge, "Deterring a Nuclear 9/11," *The Washington Quarterly*, Volume 30, Number 2, Spring 2007, pp. 21-34. http://web.mac.com/caitlinaltmadge/Site/Publications_files/07spring_talmadge.pdf
- Mueller, Chapters 12-15

11/15 FINAL PROPOSAL DUE FOR OPTIONAL PAPER

TOPIC: The Obama's Administrations Nuclear Weapons Policy and Current Debates

- Keir Lieber and Daryl Press, "The Nukes We Need: Preserving the American Deterrent," *Foreign Affairs*, Vol. 88, No. 6 (November/December 2009). http://www.afa.org/Edop/PDFs/Nukes_We_Need_Lieber&Press.pdf
- Jan Lodel et al., "Second Strike," *Foreign Affairs*, Vol. 89, Number 2 (March/April 2010), pages 146-152.
- Hans M. Kristensen, Robert S. Norris and Ivan Oelrich "From Counterforce to Minimal Deterrence – A New Nuclear Policy on the Path toward Eliminating Nuclear Weapons," Published by Federation of American Scientists and The Natural Resources Defense Council, Occasional Paper No. 7, April 2009.
http://www.fas.org/pubs/pages/occ_pap7.html
- U.S. Department of Defense, *2010 Nuclear Posture Review Report*, April 2010.
<http://www.defense.gov/npr/docs/2010%20Nuclear%20Posture%20Review%20Report.pdf>

11/22 NO CLASS

LAST DAY FOR QUESTIONS & PROPOSAL REVISIONS FOR OPTIONAL PAPER (VIA EMAIL)

11/24 NO CLASS – THANKSGIVING

11/29 OPTIONAL PAPER DUE AT BEGINNING OF CLASS

TOPIC: Nuclear Disarmament and Future Paths – Back to Zero?

- Jonathan Schell, "The Folly of Arms Control," *Foreign Affairs*, Vol. 79, Number 5 (Sept/Oct 2000), pp. 22-46.
- Ivo Daalder and Jan Lodal, "The Logic of Zero," *Foreign Affairs*, Vol. 87, Number 6 (Nov/Dec 2008), pp. 80-95.
- Charles D. Ferguson, "The Long Road to Zero," *Foreign Affairs*, Vol. 89, Number 1 (Jan/Feb 2010), pp. 86-94.
- Bruno Tertrais, "The Illogic of Zero," *The Washington Quarterly*, Vol. 33, No. 2 (April 2010), pp. 125-138.
http://pdfserve.informaworld.com/653948_920314071.pdf

**12/1 TOPIC: Review and Exam Preparation
Class Evaluations**

12/6 FINAL EXAM