



**TEXAS A&M**  
**UNIVERSITY**  
**CENTRAL TEXAS**

**POLI 4320:**  
**Weapons of Mass Destruction**  
**Section 125, CRN 11321, Spring II 2021**  
**Online Using Canvas and WebEx**



**Dr. Jeffrey Dixon**

**Office:** Heritage Hall 204R

**Email:** [JeffreyDixon@tamuct.edu](mailto:JeffreyDixon@tamuct.edu)

**Phone:** (254) 501-5871 (email preferred)

**Office Hours:** Physical = Mon 3 PM – 5:45 PM, Tues  
5 PM – 5:30 PM, or by appointment

Virtual = By WebEx Appointment

**Course Description**

Examine the physical and political consequences of chemical, biological, and nuclear weapons, with emphasis on issues of nuclear deterrence and arms control.

**Warning – Graphic Images**

The study of WMD includes the study of their effects. In some early parts of this class, we will be examining some graphic photos of WMD casualties – people with burns, blisters, radiation poisoning, and disease. These images are essentially political in character – they are part of the reason that the world treats WMD differently from other weapons. Still, they are not present for their shock value but rather as information about the biological effects of each weapon of mass destruction.

**Course Overview**

This course focuses on chemical, biological, and nuclear weapons. The effects of each type of attack will be simulated; we will also cover the military doctrine, international law, and politics of each of these weapons. Special emphasis is placed on the uniqueness of nuclear weapons, including nuclear deterrence and nuclear arms control.

**Course Outcomes and Learning Objectives**

The core objective of this class is to enable students to answer the following central questions about the politics of weapons of mass destruction (WMD). At the end of the course, students should be able to provide a well-supported answer to each of the following with respect to chemical weapons, biological weapons, and/or nuclear weapons:

1. What are WMD, and in what ways – and why -- do international laws and international institutions treat them differently from other weapons?
2. How does the possession of WMD by nations or their adversaries affect the decisions that those nations make, especially those embodied in military doctrine and crisis behavior?
3. When and under what circumstances are WMD likely to be used, and what are the likely consequences of their use?

*Learning Objectives:* At the end of the course, students should be able to answer each question about chemical (Learning Objectives 1-3), biological (Learning Objectives 4-6), and nuclear (Learning Objectives 7-9) weapons. These objectives (outcomes) are introduced by readings and lectures, reinforced and assessed by exercises and memos, and assessed in greater detail on the final exam.

### Course Format

This is a 100% online course, which uses the Texas A&M-Central Texas Canvas Learning Management System [<https://tamuct.instructure.com/>].

There are two synchronous (i.e. where students must all be online at the same time) simulations requiring live interaction with other students using the WebEx tool (available through Canvas). These are tentatively scheduled for **6 PM – 8:45 PM on Thursday, April 8** (when you will hold a simulated session of the BWC Ninth Review Conference) and **6 PM – 8:45 PM on Thursday, April 29** (when you will respond to simultaneously-developing regional and global crises/conflicts, with a view toward whether using WMD makes sense). A microphone and an environment free from distractions are necessary for these two synchronous sessions.

### Required Readings

The following books are required for this course. Note that a student is under no obligation to purchase textbooks from the university bookstore. Other sources, including online retailers, may offer lower prices. Do pay careful attention to delivery dates so that you have each book on time. All other required readings and the required films/videos may be found on Canvas.

Lawrence Freedman and Jeffrey Michaels. 2019. *The Evolution of Nuclear Strategy*. 4<sup>th</sup> Ed. NY: Palgrave MacMillan. ISBN 9781137573490.

Matthew Kroenig. 2018. *The Logic of American Nuclear Strategy: Why Strategic Superiority Matters*. NY: Oxford University Press. ISBN 9780190849184.

### Technology Requirements

This course will use the Texas A&M-Central Texas Instructure Canvas learning management system. Logon to Texas A&M-Central Texas Canvas [<https://tamuct.instructure.com/>] or access Canvas through the TAMUCT Online link in myCT [<https://tamuct.onecampus.com/>]. You will log in through our Microsoft portal. Username: Your MyCT email address. Password: Your MyCT password

Additional requirements:

- Everything is tested using the free Google Chrome web browser, but should also work with most modern web browsers (e.g. Firefox). However, Internet Explorer is not supported by Canvas.
- You will need the ability to watch streaming videos on Canvas, which requires broadband internet access. This does not require you to install specific video software -- if you can watch videos on sites like YouTube, you should be able to watch the course videos without issue.
- You will need to be able to open Portable Document Files (for readings posted on Canvas). Adobe Reader can do this for free.
- You will also need to use Microsoft Excel (or Google Sheets, freely available online) to complete parts of some homework exercises.
- You will need to be able to scan documents which require you to draw (e.g. a chemical plume on a Census map of Killeen) in addition to typing. Most smartphones now have the capability to produce pdf files using photos taken with their cameras, or you can simply upload a sufficiently detailed photo.
- You will need a microphone to use the WebEx software (available through Canvas) for our two synchronous (live) sessions. A video camera is **not** required for this course, although you are welcome

to turn on webcams during these sessions.

- You may want to be able to view the Microsoft PowerPoint files which provide the basis for most lecture material. If you cannot gain access to a program which can open these, I can post them in pdf format as well.

### Canvas Support

Use the Canvas Help link, located at the bottom of the left-hand menu, for issues with Canvas. You can select “Chat with Canvas Support,” submit a support request through “Report a Problem,” or call the Canvas support line: 1-844-757-0953. **For issues related to course content and requirements, contact your instructor.**

### Other Technology Support

For log-in problems, students should contact Help Desk Central.

24 hours a day, 7 days a week:

Email: [helpdesk@tamu.edu](mailto:helpdesk@tamu.edu)

Phone: (254) 519-5466

[Web Chat](http://hdc.tamu.edu): [<http://hdc.tamu.edu>]

*Please let the support technician know you are an A&M-Central Texas student.*

### Grading (90/80/70/60):

- *Academic Integrity Exercise (Needed to Pass):* This consists of watching a brief lecture, taking a quiz, seeing where any mistakes on the quiz came from, and signing a statement. Once you successfully complete this exercise, you will no longer need to do so in future political science courses. *If you have already completed this exercise in one of my other courses, you need not do so again for this course.*

**\*\*\*Completing the Academic Integrity Exercise is a prerequisite to passing this course. It must be completed before submitting the homework for March 27.\*\*\***

- **Rubric: You will fail the course if you have not completed the Academic Integrity exercise on or before its due date.**
- Live Simulations (14%): In each of these, your credit is determined by whether you submitted the required preparatory work on time and either the degree to which you interacted with other members of your group (WebEx breakout session) or the degree to which you interacted with other groups (if you have the role of diplomat). I expect people who are on time with everything and do some relevant talking on within and between groups to receive full credit.
- Final Exam (20%). The final exam will have two essay questions. Each is worth equal credit. You will be permitted to use your readings and notes on the exam, but it is timed (3 hours total).
  - Each essay question (50% of the credit) will be drawn from Questions 1, 2, or 3 on the syllabus and cover **either** chemical and biological weapons (CBW) **or** nuclear weapons. There are thus six possible questions for which you should prepare, two of which will appear on the final. It will be up to you to make relevant distinctions between the different subtypes of WMD (such as BW vs. CW), where necessary in your answer.

## POLI 4320 Final Exam Essay Rubric

Grade	Thesis (15%)	Argument Structure (15%)	Evidence from Films, Readings, and Lectures (70%)
<b>A</b>	Answers the question and drives the rest of the essay	The thesis is built up from arguments about each element of the question, each with its own support	Each element of the argument is supported by evidence from the course. In general, consistent statistical findings are better evidence than isolated examples, where such evidence is available. No major source of evidence is ignored (including counter-evidence, which is addressed and shown to be less compelling or more flawed than the evidence supporting the thesis).
<b>B</b>	Answers the question, but most of the paper ignores it	Some elements of the thesis do not correspond to sections of the answer, or vice versa	Each element of the argument is supported by evidence from the course, but major sources of evidence are ignored. OR The evidence used is insufficient to support one or more of the claims in the paper. OR Much of the support consists of direct quotes or naked claims, unsupported by research.
<b>C</b>	Does not match up with every element of the question	The essay is a set of arguments that proceed without logical order	The evidence, when taken as a whole, fails to support the paper's thesis, with necessary steps in the argument being assumed instead of demonstrated. Much relevant evidence is omitted and irrelevant evidence may be present. References to evidence from the course lack specificity.
<b>D</b>	Does not match up with most elements of the question	Most of the essay is devoid of actual argument, instead following a "data dump" strategy	At least one major element of the essay's argument has substantial evidence from the course that supports it. However, other references are generally vague, irrelevant, or refuted by counter-evidence from other studies.
<b>F</b>	None	The essay is devoid of structure	Little if any evidence from the course is used in the answer. It fails to demonstrate a grasp of what the authors found.

- Assignments (65%). There are three types of assignments:
  - Memos. A memo is a brief (roughly 500 words) essay responding to the topic or question presented for the particular lesson. Your memo should show that you read and watched the assigned materials for the lesson. It should contain a clear thesis and supporting evidence. It should primarily rely on the course materials, but if you do use information from an outside source, be sure to include an APSA-style, in-text, parenthetical citation and a works cited page.

- Rubric:

### POLI 4320 Memo Grading Rubric

Grade	Thesis (25%)	Argument Structure (25%)	Evidence (50%)
A	Answers the question and drives the rest of the essay	The thesis is built up from arguments about each element of the question, each with its own support	Each element of the argument is supported by evidence from the course and no major evidence is ignored. In general, consistent statistical findings are better evidence than isolated examples, where such evidence is available.
B	Answers the question, but most of the paper ignores it	Some elements of the thesis do not correspond to sections of the answer, or vice versa	Each element of the argument is supported by evidence, but <b>either</b> major sources of evidence in the course are ignored <b>or</b> the evidence used is insufficient to support one or more of the claims in the paper.
C	Does not match up with every element of the question	The essay is a set of arguments that proceed without logical order	The evidence, when taken as a whole, fails to support the paper's thesis, with necessary steps in the argument being assumed instead of demonstrated. Much relevant evidence is omitted and much of the support consists of direct quotes or naked claims, unsupported by the empirical evidence.
D	Does not match up with most elements of the question	Most of the essay is devoid of actual argument, instead following a stream-of-consciousness or "data dump" strategy	At least one major element of the essay's argument has substantial evidence from the course that supports it. However, the other elements are supported by generally vague, irrelevant, or naked claims.
F	None	The essay is devoid of structure	Little if any evidence from the course is used in the answer. It fails to synthesize any research.

- Exercises. These tend to be more interactive and more extensive than memos. Each comes with its own set of instructions and point rubric (see both under the relevant module in the final section of this syllabus).
- Survey: There is an opinion survey on the first virtual day of class. You are graded on *whether you responded to it*, not on whether you had the "right" opinions. Some of this "public opinion"/"course opinion" data (at the class level, not the individual level) will be used in some lectures later in the course.
- **Regrades:** If you think I have graded part or all of an assignment incorrectly, feel free to ask for a regrade against the rubric. You have *one week* from when the grade posts in Canvas Gradebook to request a regrade of some or all of the exercise. Just send an email specifying the section(s) you want regraded, and (optionally) why you want it regraded. I will compare it to the rubric again. I do not take offense at such requests if they are timely made.

# POLI 4320 Course Rubric

---

Category	Item	Points
Special	Academic Integrity Exercise	0 (but required to pass the course)
Participation	Live Simulations (2)	85 each (170 total)
Assignments	Survey on WMD and Ethics	30
	Memos (6)	40 each (240 total)
	Exercises (6)	60 each (360 total)
Exam	Final Exam	100 per question (200 total)
<b>TOTAL POSSIBLE</b>		<b>1000</b>
<b>895+ = A    795-894=B    695-794=C    595-694=D    594 or lower = F</b>		

## Lectures

It is exceedingly difficult to do well without a good set of lecture notes – and the PowerPoint files I post don't include the explanations I give in the videos. The lectures do **not** simply rehash the readings – they add new material and help you organize the evidence presented in the assigned readings. The “downside” to this is that you need both a good set of lecture notes and careful examination of the assigned readings to do well in the course (on both memos/exercises and the final exam).

## Deadlines and Late Work

- This is not a self-paced class. Submission deadlines are typically 11:59 PM on the due date (the exceptions are out two live (synchronous) simulations, for which the preparatory work is due by 6 PM before the start of the simulations. Make smart use of weekend time to plan ahead for all of your course sessions that week.
- Late submissions lose 20% of their credit each day they are late. The final exam cannot be late, and so it closes the moment it's due.

## Incompletes

Grades of incomplete are not to be used when students simply fall behind. Instead, they are used when some event such as a hospitalization or deployment effectively takes the student out of the class after the drop deadline. By university policy, incompletes must be finished in the subsequent semester.

## Academic Integrity

*University Code of Academic Honesty:* Texas A&M University -Central Texas values the integrity of the academic enterprise and strives for the highest standards of academic conduct. A&M-Central Texas expects its students, faculty, and staff to support the adherence to high standards of personal and scholarly conduct to preserve the honor and integrity of the creative community. Academic integrity is defined as a commitment to honesty, trust, fairness, respect, and responsibility. Any deviation by students from this expectation may result in a failing grade for the assignment and potentially a failing grade for the course. Academic misconduct is any act that improperly affects a true and honest evaluation of a student's academic performance and includes, but is not limited to, working with others in an unauthorized manner, cheating on an examination or other academic work, plagiarism and improper citation of sources, using another student's work, collusion, and the abuse of resource materials. All academic misconduct concerns will be referred to the university's Office of Student Conduct. Ignorance of the university's standards and expectations is never an excuse to act with a lack

of integrity. When in doubt on collaboration, citation, or any issue, please contact your instructor before taking a course of action.

- For more [information regarding the Student Conduct process](https://www.tamuct.edu/student-affairs/student-conduct.html), [https://www.tamuct.edu/student-affairs/student-conduct.html].
- If you know of potential honor violations by other students, you may [submit a report](https://cm.maxient.com/reportingform.php?TAMUCentralTexas&layout_id=0), [https://cm.maxient.com/reportingform.php?TAMUCentralTexas&layout\_id=0].

*Specific guidelines for this course, which supplement and do not replace University policy:*

- **Violations:** Some common violations of academic integrity that I have observed while teaching similar classes at TAMUCT are
  - **Most Common Violation:** Plagiarism. This comes in two varieties:
    - Use of direct quotes without quotation marks. Even if you are just using three- or four-word phrases, you need to surround them with quotation marks if you didn't create them yourself. This is true even if you cite the source! Remember that changing a few words in a sentence does not transform a direct quote into a paraphrase; instead, it transforms one long direct quote into several shorter direct quotes with a word of your own between each. A true paraphrase is the expression of the cited source's ideas in your own words.
    - Paraphrasing another person's words without citing the source
  - **Second Most Common Violation:** Receiving answers on any coursework from anyone other than the instructor. If you hand your work to someone else and they proceed to copy part or all of it, both of you will be deemed to have violated the policy. A single copied answer on an assignment is sufficient to trigger the policy.
- **Penalties:**
  - The normal penalty for a violation of academic integrity (whether or not it is specifically listed above) in any of my classes is a grade of zero for the work or a deduction of 20% (two letter grades) from your course grade, whichever is **greater**. The infraction will be reported to the TAMUCT administration, with a recommendation for probation in the case of deliberate violation or no further action in the case of clearly inadvertent violation.
  - The (a) outright purchase, download, or completion by others of an exam or assignment, or (b) second or subsequent violation of academic integrity (in this course or other courses) display such serious disregard for academic integrity that either one of them will result in course failure **and** recommendation for maximum disciplinary penalties to the TAMUCT administration.

## Drop Policy

If you discover that you need to drop this class, you must complete the [Drop Request](https://dynamicforms.ngwebsolutions.com/casAuthentication.aspx?InstID=eaed95b9-f2be-45f3-a37d-46928168bc10&targetUrl=https%3A%2F%2Fdynamicforms.ngwebsolutions.com%2Fsubmit%2FForm%2FStart%2F53b8369e-0502-4f36-be43-f02a4202f612) Dynamic Form through Warrior Web.

[https://dynamicforms.ngwebsolutions.com/casAuthentication.aspx?InstID=eaed95b9-f2be-45f3-a37d-46928168bc10&targetUrl=https%3A%2F%2Fdynamicforms.ngwebsolutions.com%2Fsubmit%2FForm%2FStart%2F53b8369e-0502-4f36-be43-f02a4202f612]

Faculty cannot drop students; this is always the responsibility of the student. The Registrar's Office will provide a deadline on the Academic Calendar for which the form must be completed. Once you submit the completed form to the Registrar's Office, you must go into Warrior Web and confirm that you are no longer enrolled. If you still show as enrolled, FOLLOW-UP with the Registrar's Office immediately. You are to attend class until the procedure is complete to avoid penalty for absence. Should you miss the drop deadline or fail to follow the procedure, you will receive an F in the course, which may affect your financial aid and/or VA educational benefits.

## Professors are Mandatory Reporters

Texas State Law S.B. 212 states that:

- “An employee of a postsecondary educational institution who, in the course and scope of employment, witnesses or receives information regarding the occurrence of an incident that the employee reasonably believes constitutes **sexual harassment, sexual assault, dating violence, or stalking** and is alleged to have been committed by or against a person who was a student enrolled at or an employee of the institution at the time of the incident shall promptly report the incident to the institution's Title IX coordinator or deputy Title IX coordinator”
- Further: “A person **commits an offense if the person is required to make a report...and knowingly fails to make the report.** ... A postsecondary educational institution **shall terminate the employment** of an employee whom the institution determines in accordance with the institution's disciplinary procedure to have committed [such] an offense.”

## Student Resources

- **WARRIOR SHIELD: Emergency Warning System for Texas A&M University-Central Texas**  
Warrior Shield is an emergency notification service that gives Texas A&M University-Central Texas the ability to communicate health and safety emergency information quickly via email, text message, and social media. All students are automatically enrolled in Warrior Shield through their myCT email account.
  - Connect to Warrior Shield by [911Cellular](https://portal.publicsafetycloud.net/Account/Login) [https://portal.publicsafetycloud.net/Account/Login] to change where you receive your alerts or to opt out. By staying enrolled in Warrior Shield, university officials can quickly pass on safety-related information, regardless of your location. [Warrior Shield](https://www.tamuct.edu/police/911cellular.html) [https://www.tamuct.edu/police/911cellular.html] can be downloaded and installed on your mobile device from Google Play or Apple Store.
- **Academic Accommodations:** At Texas A&M University-Central Texas, we value an inclusive learning environment where every student has an equal chance to succeed and has the right to a barrier-free education. The Office of Access and Inclusion is responsible for ensuring that students with a disability receive equal access to the university’s programs, services and activities. If you believe you have a disability requiring reasonable accommodations please contact the Office of Access and Inclusion, WH-212; or call (254) 501-5836. Any information you provide is private and confidential and will be treated as such.
  - For more information please visit our [Access & Inclusion](https://tamuct.instructure.com/courses/717) Canvas page (log-in required) [https://tamuct.instructure.com/courses/717]
    - Important information for Pregnant and/or Parenting Students
      - Texas A&M University-Central Texas supports students who are pregnant and/or parenting. In accordance with requirements of Title IX and related guidance from US Department of Education’s Office of Civil Rights, the Dean of Student Affairs’ Office can assist students who are pregnant and/or parenting in seeking accommodations related to pregnancy and/or parenting. Students should seek out assistance as early in the pregnancy as possible. For more information, please visit [Student Affairs](https://www.tamuct.edu/student-affairs/index.html) [https://www.tamuct.edu/student-affairs/index.html]. Students may also contact the institution’s Title IX Coordinator. If you would like to read more about these [requirements and guidelines](http://www2.ed.gov/about/offices/list/ocr/docs/pregnancy.pdf) online, please visit the website [http://www2.ed.gov/about/offices/list/ocr/docs/pregnancy.pdf]..
      - Title IX of the Education Amendments Act of 1972 prohibits discrimination on the basis of sex and gender—including pregnancy, parenting, and all related conditions. A&M-Central Texas is able to provide flexible and individualized

reasonable accommodation to pregnant and parenting students. All pregnant and parenting students should contact the Associate Dean in the Division of Student Affairs at (254) 501-5909 to seek out assistance. Students may also contact the University's Title IX Coordinator.

- **Behavioral Intervention**

- Texas A&M University-Central Texas cares about the safety, health, and well-being of its students, faculty, staff, and community. If you are aware of individuals for whom you have a concern, please make a referral to the Behavioral Intervention Team. Referring your concern shows you care. You can complete the referral online [[https://cm.maxient.com/reportingform.php?TAMUCentralTexas&layout\\_id=2](https://cm.maxient.com/reportingform.php?TAMUCentralTexas&layout_id=2)].
- Anonymous referrals are accepted. Please see the Behavioral Intervention Team website for more information [<https://www.tamuct.edu/student-affairs/bat.html>]. If a person's behavior poses an imminent threat to you or another, contact 911 or A&M-Central Texas University Police at 254-501-5800.

- **Tutoring** is available to all A&M-Central Texas students on a remote online basis. Visit the Academic Support Community in Canvas to view schedules and contact information. Subjects tutored on campus include Accounting, Advanced Math, Biology, Finance, Statistics, Mathematics, and Study Skills. Student success coaching is available online upon request.

- If you have a question regarding tutor schedules, need to schedule a tutoring session, are interested in becoming a tutor, success coaching, or have any other question, contact Academic Support Programs at (254) 501-5836, visit the Office of Student Success at 212F Warrior Hall, or by emailing [studentsuccess@tamuct.edu](mailto:studentsuccess@tamuct.edu).
- Chat live with a tutor 24/7 for almost any subject from on your computer! Tutor.com is an online tutoring platform that enables A&M-Central Texas students to log in and receive online tutoring support at no additional cost. This tool provides tutoring in over 40 subject areas except writing support. Access Tutor.com through Canvas.

- **University Writing Center**

- The University Writing Center (UWC) at Texas A&M University–Central Texas (TAMUCT) is a free service open to all TAMUCT students. For the Spring 2021 semester, all services will be online as a result of the COVID-19 pandemic. The hours of operation are from 10:00 a.m.-5:00 p.m. Monday thru Thursday with satellite hours Monday thru Thursday from 6:00-9:00 p.m. The UWC is also offering hours from 12:00-3:00 p.m. on Saturdays.
- Tutors are prepared to help writers of all levels and abilities at any stage of the writing process. By providing a practice audience for students' ideas and writing, our tutors highlight the ways in which they read and interpret students' texts, offering guidance and support throughout the various stages of the writing process. While tutors will not write, edit, or grade papers, they will assist students in developing more effective composing practices. Whether you need help brainstorming ideas, organizing an essay, proofreading, understanding proper citation practices, or just want a quiet place to work, the UWC is here to help!
- Students may arrange a one-to-one session with a trained and experienced writing tutor by making an appointment via WConline [<https://tamuct.mywconline.com/>]. In addition, you can email Dr. Bruce Bowles Jr. at [bruce.bowles@tamuct.edu](mailto:bruce.bowles@tamuct.edu) if you have any questions about the UWC and/or need any assistance with scheduling.

- **University Library**

- The University Library provides many services in support of research across campus and at a distance. We offer over 200 electronic databases containing approximately 250,000 eBooks and 82,000 journals, in addition to the 85,000 items in our print collection, which can be mailed to

students who live more than 50 miles from campus. Research guides for each subject taught at A&M-Central Texas are available through our website to help students navigate these resources. On campus, the library offers technology including cameras, laptops, microphones, webcams, and digital sound recorders.

- Research assistance from a librarian is also available 24 hours a day through our online chat service, and at the reference desk when the library is open. Research sessions can be scheduled for more comprehensive assistance, and may take place on Skype or in-person at the library. Assistance may cover many topics, including how to find articles in peer-reviewed journals, how to cite resources, and how to piece together research for written assignments.
- Our 27,000-square-foot facility on the A&M-Central Texas main campus includes student lounges, private study rooms, group work spaces, computer labs, family areas suitable for all ages, and many other features. Services such as interlibrary loan, TexShare, binding, and laminating are available. The library frequently offers workshops, tours, readings, and other events. For more information, please visit our [Library website](http://tamuct.libguides.com/index) [http://tamuct.libguides.com/index].
- For Spring 2021, all reference service will be conducted virtually. Please go to our [Library website](http://tamuct.libguides.com/index) [http://tamuct.libguides.com/index] to access our virtual reference help and our current hours.

### **Copyright Notice**

Students should assume that all course *readings*, *videos* and *images* are copyrighted by their respective creator(s). Reproduction of such material is prohibited without consent from the creator of a work and notification of such to the course instructor. Violation of copyright is against the law and Texas A&M University-Central Texas' Code of Academic Honesty. All alleged violations will be reported to the Office of Student Conduct.

- Copyright 2021 by Jeffrey Dixon at Texas A&M University-Central Texas, College of Arts & Sciences; 1001 Leadership Place, Killeen, TX 76549; 254-501-5871; Fax 254-519-5781; JeffreyDixon@tamuct.edu

### **Amendments**

Not all exigencies can be foreseen. I reserve the right to amend the syllabus at any time. Any such amendment will be provided to the students in writing by uploading a revised syllabus to Canvas.

## Course Modules

### Module 1: The Politics of “Weapons of Mass Destruction”

By Tuesday, March 23:

- a. Read: Course Syllabus (see Files)
- b. Complete (if you have not previously completed the Academic Integrity Exercise for me in some other course): Academic Integrity Exercise (see Assignments)
- c. Watch: *The Politics of “Weapons of Mass Destruction” – Building a Threat* (60 min – see Pages→View All Pages)
- d. Complete: Survey on WMD and Ethics (see Assignments tab)

### Module 2: The Effects of Chemical Weapons on the Human Body

By Thursday, March 25:

- a. Read: Salem, Ternay, and Smart, “Brief History and Use of Chemical Warfare Agents in Warfare and Terrorism” (see Files tab → Course Readings)
- b. Watch: *Chemical Weapons – How are they “Unconventional?” Part I* (61 min)
- c. Complete: Chemical Weapons Attack Exercise

Download the attached assignment and Excel file and complete them as per the instructions in this module's lecture.

Map Instructions: Evaluate the effects of a ground-level CW attack on Killeen, probably by some terrorist group using a tanker rigged with explosives. If you're curious, this simulation is based on the release 5000 gallons of liquefied gas (in the case of chlorine) or 2000 gallons of aerosolized liquid agent (in all other cases). In any case, the group wishes to kill as many people as possible. Unsure of their ability to get past security on Fort Hood, they drive a tanker full of a CW agent into a relatively dense northern area of Killeen and spray or detonate it from a single point. How many people could be killed or injured in such an attack? Fill out your estimates in Excel, using the system shown in the module's lecture.

Then type answers to the following questions using the attached case summaries.

1. What factors seem to predict the use of chemical weapons?
2. When are chemical weapons NOT used?
3. Given the available evidence, are democracies less likely to use chemical weapons than nondemocracies?
4. Does the side that initiates chemical warfare usually win? Were they likely to win before the use of chemical weapons?
5. Keeping in mind what the Geneva Protocol and CWC do and do not prohibit, have these treaties been effective in curbing chemical warfare since 1925 and 1993, respectively?
6. A study by James Morrow concluded that treaties are more effective at preventing the use of chemical weapons and aerial attacks on cities than the murder of civilians or mistreatment of POWs. Why might this be the case?

Finally, upload your map (25 points), Excel file (10 points), and your answers to the questions (15 points) to Canvas when complete.

### Module 3: The Politics and Doctrine of Chemical Weapons

By Tuesday, March 30:

- a. Read: Sagan, “The Origins of Military Doctrine and Command and Control Systems”
- b. Watch: *Chemical Weapons – How are they “Unconventional?” Part II* (111 min)
- c. Complete: Memo on Doctrines and CW

Which of our three perspectives is best supported and constitutes the best explanation for how states have constructed their chemical weapons doctrines, bearing in mind the various aspects of doctrine mentioned by Sagan and the three perspectives introduced in his article and heavily discussed in the lecture?

### Module 4: Biological Agents and Bioterror

By Thursday, April 1:

- a. Read: Barras and Greub, “History of Biological Warfare and Bioterrorism”
- b. Watch:
  - i. *The Living Weapon* (60 min)
  - ii. *Bioweapons and Biopolitics: Part I* (84 min)
- c. Complete: WMD Terrorism Exercise

This exercise is designed to simulate the strategic interaction of government policy and terrorist planning.

PART ONE: The job of the governments is to protect their citizens at acceptable cost from a well-funded domestic terrorist group of (initially) fewer than a dozen people. Here, you can assume you have the US Homeland Security discretionary budget of about \$50 billion, but of course you can always ask Congress for more money (and taxes or deficit spending to pay for it) or divert disaster relief funds. [Table of government options and their costs included].

1. List the measures you take to prevent terrorism and their approximate costs (both monetary and political). Note any that could reasonably be kept secret so that terrorists won't know about them before trying to attack.

PART TWO: The job of the terrorists is to advance their political goals as much as possible, with as little expense as possible. Decide what your domestic terror group's political goals are. Are they trying to attract civilian support for an armed uprising? Trying to literally terrify the populace? Or are they simply trying to keep on resisting the government by recruiting, making money, and otherwise increasing the power of the group's leaders? [Table of terrorist options and their costs included].

2. What are your domestic terror group's goals?

3. List the attacks your domestic terror group undertakes, the cost of each, and the results of each, given the government's safeguards. [Table of results provided]

4. Overall, how effective was the massive government expenditure at stopping the terrorists from causing serious damage on a (relative to the government) shoestring budget? Did the terrorists gain or lose funds and personnel?

5. Did the terrorists find it desirable or necessary to resort to WMD? If so, was doing so a “wise” investment for them?

## Module 5.1: Bioweapon Proliferation and Control I

By Tuesday, April 6

- a. Watch: *Bioweapons and Biopolitics: Part II* (45 min)
- b. Read: The assigned BWC “packet” of readings for your country (PRC, Russia, or the USA) (Warning: Roughly 81-89 pages, depending on your country).
- c. Complete: Memo on your country’s BWC stances and priorities for the BWC (keep a copy for yourself).

Cover the topics listed at the end of the lecture for this module -- e.g. whether anyone is currently violating the BWC and what your country's position is on each major article of the BWC and why.

## Module 5.2: Bioweapon Proliferation and Control II

At **6 PM** on Thursday, April 8: We will **meet online from 6 PM – 8:45 PM** (WebEx tab on Canvas) to simulate the Ninth Review Conference of the Biological Weapons Convention (scheduled to be held in 2021).

- a. Attend: the synchronous session of class at 6 PM. Have your memo handy to brief the other members of your group.

## Module 6: Biological Warfare – Strategies, Agents, and Doctrines

By Tuesday, April 13:

- a. Read: Koblentz, “Offense, Defense, and Deterrence”
- b. Watch: *Bioweapons and Biopolitics: Part III* (120 min)
- c. Complete: Memo on Doctrines and BW

Which of our three perspectives is best supported and constitutes the best explanation for how states have constructed their biological weapons doctrines, bearing in mind the various aspects of doctrine mentioned by Sagan and the three perspectives introduced in his article, heavily discussed in the Chemical Weapons lecture, and revisited in the final Biological Weapons lecture?

## Module 7: Consequences of Nuclear War

By Thursday, April 15:

- a. Watch:
  - i. *Nuclear Weapons: Physics and Biology* (144 min)
  - ii. *The Day After* (either the abbreviated, 54 min “class edit” or the entire 122 min film that President Reagan and other Americans watched)
- b. Read: Overpeck, “Remember! It’s Only a Movie!’ Expectations and Receptions of *The Day After* (1983)”
- c. Complete: Nuclear Weapon Attack Exercise

Download and complete the attached exercise. Then upload the scanned or photographed ex

Instructions: Use Nukemap [<https://nuclearsecrecy.com/nukemap/>] and the attached maps to calculate the prompt casualties (deaths and injuries, computed separately) from a nuclear attack on the city of Killeen by terrorists. Assume that a 35-kiloton device is detonated in the parking lot of the Killeen Mall. The blast will leave a crater about 74 feet deep and 800 feet wide (roughly the same area as the Mall) – but how many will die from the blast, thermal pulse, and fallout?

A. Use Nukemap to simulate the **prompt casualties from the blast**. The relevant parameters to feed the simulation are the location of ground zero (parking lot of Killeen mall – you’ll have to manually drag ground zero to this point), the fact that the detonation is a surface burst (groundburst), and the yield (35 kt). Also, be sure to check the Casualties box (but not the Fallout box, which doesn’t yet work in the way needed for the exercise). Record the total number of deaths and the total number of injuries using a table like that under C below.

B. Estimate the number **promptly killed by radioactive fallout**. You’ll need a map (attached).

1. Sketch dose-rate patterns downwind of Killeen on the attached map. a. Choose a wind direction: *from* the West, Southwest, or Northwest. In any case, the general direction of the wind will be *towards* the east, possibly angled a bit north or south. The wind is blowing at 15 MPH.

b. Sketch dose-rate curves using the dimensions provided in the two charts below. You *need to sketch four of them*: 1000+ rads/hr, 300 rads/hr, 100 rads/hr, and 30 rads/hr. [chart attached]

c. Estimate the number of people in each curve, just like we did in the chemical weapons exercise.

d. Determine how many of these die or suffer radiation sickness. Assume that half of people will take cover from fallout, once 30 minutes has passed. The others will try to flee or will take cover in inadequate shelters. This gives the following dose-casualty estimates [chart attached].

## Module 8: Strategic Bombing and the Origins of American Nuclear Doctrine

By Tuesday, April 20:

- a. Read:
  - i. Malloy, “‘The Rules of Civilized Warfare:’ Scientists, Soldiers, Civilians, and American Nuclear Targeting, 1940-1945”
  - ii. Freedman and Michaels, *The Evolution of Nuclear Strategy*, Chapters 1-10 (Textbook)
- b. Watch: *Strategic Bombing and the Origins of American Nuclear Doctrine* (142 min)
- c. Complete: Memo on whether McNamara, LeMay, and Truman committed any war crimes against Japanese civilians

Taking into account customary international law (which prohibited deliberately targeting civilians, though not deliberately targeting military installations even if you know that doing so was going to kill civilians) as well as the treaty law embodied in the Hague Conventions (discussed in the lecture), were President Truman, General Curtis LeMay, and/or Robert McNamara war criminals for their actions during World War II?

## Module 9: Comparative Nuclear Doctrine

By Thursday, April 22:

- a. Read (or have already read):
  - i. Freedman and Michaels, *The Evolution of Nuclear Strategy*, Chapters 11-44
  - ii. Kristensen and Korda, “Russian Nuclear Forces, 2020”
  - iii. Shankar and Paul, “Nuclear Doctrines and Stable Strategic Relationships: The Case of South Asia”
  - iv. Clary and Narang, “India’s Counterforce Temptations: Strategic Dilemmas, Doctrine, and Capabilities”
- b. Watch: *Comparative Nuclear Doctrine* (about 240 min)
- c. Complete: Nuclear Doctrine in India Exercise

What *should* India’s declaratory and operational nuclear doctrines be? This assignment asks you to write an essay of 1200-2000 words (about four to six double-spaced pages) that:

- describes the *drivers* of change that have led to the evolution of India’s nuclear doctrine over time
- demonstrates that one of our three major theories of comparative nuclear doctrine (realism, neoliberal institutionalism/organizational processes, or constructivism/strategic culture) better explains those changes than the others
- identify 2-4 *problems* with current Indian nuclear doctrine, and
- suggest *solutions* to those problems in the form of a revised Indian nuclear doctrine for the 2020s.

Every claim should be backed by theory and appropriate evidence (which may require a little research, although much can be found in the assigned readings). Be sure to properly cite all sources used, both in the text and in a Works Cited section at the end of the paper. Since this is a political science course, use APSA citations (see Writing Resources under Files for a guide to them) for everything except any references to my lectures, which can simply be shortened to (*Lecture: Title of Lecture*) when cited in the text of the paper and which need not be included in the Works Cited section.

## Module 10: Rational Deterrence Theory

By Tuesday, April 27:

- a. Read: Kroenig, *The Logic of American Nuclear Strategy*, Introduction and Chapters 1-2 (Textbook)
- b. Watch: *Deterrence -- or Destruction? Part I* (40 min)
- c. Complete: India-Pakistan Stability Exercise

This exercise asks you to plan a disarming first strike against Pakistan as India. If such a thing is possible at an acceptable cost to India, deterrence in South Asia is not stable. If it is impossible or too costly to contemplate, then deterrence is somewhat more stable (at least outside of crises that make each side fear preemption by the other). The exercise and its complete instructions are on Canvas, along with an Excel file you'll need to complete as part of the exercise.

## Module 11: Game Theory and Crisis Escalation

By **6 PM** on Thursday, April 29: We will meet online from 6 PM – 8:45 PM (WebEx tab on Canvas) to simulate US, Russian, and Chinese behavior in hypothetical crises.

- a. Read: Kroenig, *The Logic of American Nuclear Strategy*, Chapters 3-5
- b. Watch:
  - i. *Deterrence -- or Destruction? Part II* (155 min)
  - ii. *1983: The Brink of Apocalypse* (75 min)
- c. Attend: the synchronous session of class at 6 PM.

## Module 12: Great Power Crises and the Idea of Limited Nuclear War

By Tuesday, May 4:

- a. Read:
  - i. Zala, "How the Next Nuclear Arms Race Will Be Different From the Last One"
  - ii. Manzo and Warden, "After Nuclear First Use, What?"
- b. Complete: US-Soviet Crisis Exercise (*By Dawn's Early Light*)

This survey exercise involves a film about a hypothetical US-Soviet nuclear crisis, set in the relatively friendly period of US-Soviet relations that existed just at the end of the Cold War in 1990 (before the Soviet Union began to disintegrate). To reduce the time needed for the exercise and to focus on the political choices in the film, I have carefully edited it down to 65 minutes for this class.\* I expect it will take you about **90 minutes** to complete the exercise.

Note that because this is implemented through the Canvas Quiz system, you can't stop in the middle and come back to it the next day or anything. There's plenty of time for bathroom breaks as needed, but the exercise needs to be completed in one sitting.

Essentially, the first set of questions has you watch part of the film and then decide what you would do if you had to make certain decisions in the crisis portrayed in the film. Once you see the end of the film, you'll be asked to answer a few more questions about it. Some questions are multiple-choice while others are free-form (Canvas calls these "Essay questions," but there's no essay-writing in this exercise -- I'm just looking for one sentence for most of them).

\* For the curious: I edited out a lot of scenes involving the aircrew of the B-52 bomber represented in the film. I deleted scenes about the pilot and copilot being involved in a romantic relationship, some "action" scenes in which the lumbering B-52 unrealistically downs a couple of Soviet fighters, the obligatory scene where some member of the crew goes crazy, etc. This cut of the film emphasizes the politics of the crisis, including the political actions of the B-52 aircrew -- not the interpersonal drama that originally padded the film's original running length to 100 minutes.

## Module 13: Nuclear Proliferation

By Thursday, May 6:

- a. Read: Kroenig, *The Logic of American Nuclear Strategy*, Chapters 6-9 and Conclusion
- b. Watch: *Deterrence -- or Destruction? Part III* (185 min)
- c. Complete: Memo on Nuclear Proliferation and Strategic Stability

Under what circumstances -- if any -- does *horizontal* nuclear proliferation enhance or detract from strategic stability, where "strategic stability" simply means the probability of large-scale war between the two states in a given dyad? Address the two situations of one rival going nuclear when both were previously limited to conventional weapons and both rivals going nuclear. By "going nuclear," I mean arming oneself with nuclear weapons -- proliferation -- not necessarily *using* such weapons.

## Module 14: Are Nuclear Accidents Inevitable?

By Tuesday, May 11:

- a. Read: Sagan, “The Perils of Proliferation: Organization Theory, Deterrence Theory, and the Spread of Nuclear Weapons”
- b. Watch:
  - i. *Atomic Accidents* (100 min)
  - ii. *Always/Never* (81 min)
- c. Complete: Memo on Atomic Accidents

The world has seen a number of serious nuclear power plant accidents. However, there has yet to be an accidental detonation of a nuclear weapon. How likely is the accidental or unauthorized detonation of a nuclear weapon?

## Module 15: Integration of Knowledge

By Thursday, May 13 at 11:59 PM: Complete the Final Exam. **Begin it at least three hours earlier** to allow time to complete and submit your answers by the deadline.