

**PHIL 20628/STV 20228/IIPS 20912/HESB 20223**  
**Ethics of Emerging Weapons Technologies**  
**Spring 2017**

**Course Description:** The landscape of the twenty-first century battlefield is rapidly changing. Contemporary warfare is often far removed from the clash of large, standing armies on the open battlefield. From the United States' use of "targeted killings" via unmanned drone in Pakistan and Yemen to the deployment of the Stuxnet computer virus designed to target Iran's nuclear weapons' program, we already see examples of this new kind of warfare. The future promises that ever more remote possibilities will become reality—entirely autonomous robotic weapon systems are already under deployment in Iraq and Korea, non-lethal electromagnetic and sound-based weapons are under development, and research continues actively on automated, armed vehicles and biologically or robotically enhanced soldiers. The increasing pace of weapons research, however, has been matched by many ethical worries, raised by military leaders, scholars, legislators, journalists, and non-profit and humanitarian groups. This course will begin by exploring the foundations of just war theory—including challenges posed by terrorism—and then explore particular weapons technologies and their associated ethical implications.

**Faculty:** Dr. Fritz Allhoff, J.D., Ph.D.  
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Mr. Sebastián Ramirez  
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O'Shaughnessy Hall 253, F 11:30-12:30, M 2:00-3:00

**Class:** O'Shaughnessy Hall 242  
TR 12:30-1:45 or 2:00-3:15

**Electronics:** In order to facilitate our collective concentration, please leave laptops, tablets, and smartphones out of reach; bring hard copies of readings.

**Texts:**

Fritz Allhoff, *Terrorism, Ticking Time-Bombs, and Torture* (Chicago: University of Chicago Press, 2012).

Helen Frowe, *The Ethics of War and Peace: An Introduction*, 2<sup>nd</sup> ed. (London: Routledge, 2015).

George Lucas, *Ethics and Cyber Warfare: The Quest for Responsible Security in the Age of Digital Warfare* (Oxford: Oxford University Press, 2016) (optional).

Fritz Allhoff, Nicholas G. Evans, and Adam Henschke (eds.), *Routledge Handbook of Ethics and War: Just War Theory in the Twenty-First Century* (New York: Routledge, 2013) (optional).

Gary D. Solis, *The Law of Armed Conflict: International Humanitarian Law in War* (Cambridge: Cambridge University Press, 2010) (optional).

Other readings will be made available electronically.

**Grading:**

Participation	10%	
First paper	20%	[Jon]
Presentation	20%	[Jon]
Movie reaction paper	10%	[Sebastián]
Second paper	40%	[Sebastián]

**Grading Scale:**

This course uses a standard scale: >92% = A; 90-92% = A-; 88%-90% = B+; 82%-88% = B; 80%-82% = B-; 78%-80% = C+; 72%-78% = C; 70%-72% = C-; 68%-70% = D+; 62%-68% = D; 60%-62% = D-; <60% = E. In unusual cases, there will be a (small) curve, but that will not be known until calculation of final grades. There are no extra credit opportunities beyond the one listed below.

**Attendance:** Each student will be allowed up to four absences. Beyond those four, each subsequent absence reduces the course grade by one third of a letter grade (e.g., A to A-, A- to B+, B+ to B, etc.). There is no distinction between excused and unexcused absences and no need to provide notice with regards to any absences. Any student needing further dispensation (e.g., with regards to ongoing health issues) should speak with Dr. Allhoff.

Students are generally requested to attend the section for which they are registered. However, students may attend the alternate section up to four times; again, no advance notice is required.

**First Paper:** Students' first paper should further explore one of the lectures pertaining to just war theory or terrorism. It should be 2,000 words ( $\pm 10\%$ ); deviations from this range will be penalized. A word count—exclusive of footnotes and bibliography—should be included.

Students should spend approximately half of the paper *summarizing* the key ideas from *one* of the lectures (and associated readings), and the other half *evaluating* those ideas. (Do not discuss *all* of the ideas in that lecture, but rather choose *some* ideas and develop a coherent and integrated essay around them.) Students are not required to do any external research beyond the assigned readings. Students may refer to assigned readings in whatever footnote format they are most comfortable with and should include a bibliography at the end of the paper.

Late submissions will be penalized 10% and will not be accepted more than one week past the due date.

**Movie Reaction Paper:** Students should write a movie reaction paper of 1,000 words ( $\pm 10\%$ ); deviations from this range will be penalized. They may choose any movie that explores a theme discussed in this course. Approximately half of the paper should detail some ethically-fraught scene or sequence within the movie (i.e., *not summarize the entire movie*); the other half should evaluate this scene. Because this reaction paper is due before some of the technologies will be discussed, no familiarity with the assigned readings or content is expected.

**Presentation:** During the last three classes of the semester, students will do small-group presentations in pre-assigned groups. These presentations should either *introduce* a new topic to the rest of the class or else *extend* a previous discussion; i.e., they should not reprise already-developed themes. At least part of the presentation should be *descriptive*, in which students explain some conflict or technology, and at least part should be *normative*, in which students consider the associated ethical ramifications. Presentations should be approximately 20 minutes, and PowerPoint is strongly encouraged.

**Second Paper:** Students' second paper should be about some emerging weapons technology and its associated ethical implications. The technology may be selected from one discussed in class, or may be about something else. It should be 4,000 words ( $\pm 10\%$ ); deviations from this range will be penalized. A word count—exclusive of footnotes and bibliography—should be included.

Students should spend approximately half of the paper *explaining* the weapons technology; they may consider its historical evolution, technical facets, or whatever other background they wish to provide. The second half of the paper should *present* and *evaluate* the ethical implications of this technology. In addition any assigned readings, students must have *at least ten external sources* incorporated into the paper and *at least twenty footnotes*. Students may use whatever footnote format they are most comfortable with and should include a bibliography at the end of the paper. Try to use authoritative, peer-reviewed sources, as opposed websites. Wikipedia is not an acceptable source, though students may use it to get suggestions for other sources. Because final grades are due immediately following the end of the course, *late papers will not be accepted*.

**Extra Credit:** Students may repeat the movie reaction paper with another movie for extra credit. Extra credit will be used to adjudicate borderline final grades; this assignment can count for up to 1% dispensation on final grade adjudication (e.g., if calculated grade is 91% and cut-off for A is 92%, this assignment may be sufficient to engender the higher grade).

**Code of Honor:** Students are expected to be familiar with and to follow Notre Dame's [Undergraduate Academic Code of Honor](#). Any deviations from this Code will be referred for disciplinary proceedings.

**Disability Services:** Students needing special accommodation should coordinate with [Sara Bea Disability Services](#).

CLASS	DATE	INSTRUCTOR	TOPIC	READINGS
1	17-Jan	Latiff	Introduction to Emerging Weapons Technologies	Misenheimer, "Thucydides, Benghazi, and Honor"; Lucas, "The Threat Posed by Military Technologies to Professional Military Ethics"; 2010 McCain Conference Executive Summary
2	19-Jan	Allhoff	Introduction to Just War Theory	Frowe, chapter 2
3	24-Jan	Allhoff	<i>Jus ad Bellum</i>	Frowe, chapter 3
4	26-Jan	Guest	Pre-Emption, Prevention, and Humanitarian Intervention  [Mr. Andrew Marquis, Mr. Derek Miller, Mr. Keagan Potts, Western Michigan University]	Frowe, chapter 4
5	31-Jan	Allhoff	<i>Jus in Bello</i>	Frowe, chapters 5 & 6
6	2-Feb	Allhoff	<i>Jus post Bellum</i>	Frowe, chapter 12
7	7-Feb	Latiff	Soldier Enhancement	Allhoff et al., "Ethics of Human Enhancement: 25 Questions & Answers"; Greely, "Neuroethics and ELSI: Similarities and Differences"; Allhoff et al., "Ethics of Human Enhancement: An Executive Summary" (optional); Bruce, "Human Enhancement?" (optional)
8	9-Feb	Milgrim	What Is Terrorism?	Allhoff, chapter 1
9	14-Feb	Milgrim	The Moral Status of Terrorism	Allhoff, chapter 2

10	16-Feb	Milgrim	Terrorism and Just War	Allhoff, § 3.1; Frowe, chapter 10 (pp. 205-211 only)
11	21-Feb	Milgrim	Torture and Ticking Time-Bombs	Allhoff, §§ 4.1, 4.3, chapter 6
12	23-Feb	Milgrim	Torture and the Real World	Allhoff, §§ 7.1-7.4, chapter 8
13	28-Feb	Latiff	Nuclear and Non-Lethal Weapons	Kaurin, "With Fear and Trembling: An Ethical Framework for Non-Lethal Weapons"; Roland-Price, "Non-Lethal Weapons: A Synopsis"; Office of the Assistant Secretary of Defense for Nuclear, Chemical, and Biological Defense Programs, <i>The Nuclear Matters Handbook</i> , §§ 1.1-1.3, 3.1-3.3, 5.4-5.5 (optional)
14	2-Mar	Allhoff	The Paradox of Non-Lethal Weapons	Allhoff, "The Paradox of Non-Lethal Weapons"; Gross, "Shooting to Stun: The Paradox of Nonlethal Warfare"
<b>First paper due by 11:55 p.m.</b>				
15	7-Mar	Guest	Conventional Weapons	Solis, chapter 16
[Dr. Don Howard, Notre Dame]				
16	9-Mar	Guest	Gas, Biological, and Chemical Weapons	Solis, chapter 17
[Dr. Don Howard, Notre Dame]				
-	14-Mar	-	Spring Break	
-	16-Mar	-	Spring Break	

17	21-Mar	Latiff	Ethics of Cyberwarfare	Dipert, "The Ethics of Cyberwarfare"; Lin, Allhoff, and Rowe, "War2.0"; Lucas, chapter 1 (optional)
<b>Movie reaction paper due by 11:55 p.m.</b>				
18	23-Mar	Allhoff	<i>Zero Days</i>	N/A
<b>Group presentation sign-ups</b>				
19	28-Mar	Allhoff	Guest Lecture on Cyberethics	N/A
[Dr. George Lucas, Naval War College]				
20	30-Mar	Allhoff	<i>The Tallinn Manual</i>	Lucas, chapter 3
21	4-Apr	Latiff	Robots and Unmanned Vehicles	Quintana, "The Ethics & Legal Implications of Military Unmanned Vehicles"
22	6-Apr	Allhoff	Weaponization of Autonomous Technologies	UNIDIR, "The Weaponization of Increasingly Autonomous Technologies: Considering Ethics and Social Values"
23	11-Apr	Allhoff	Meaningful Human Control	UNIDIR, "The Weaponization of Increasingly Autonomous Technologies: Considering How Meaningful Human Control Might Move the Discussion Forward"; CNAS, "Meaningful Human Control in Weapons Systems: A Primer"
24	13-Apr	Allhoff	Drones	Lin, "Drone-Ethics Briefing: What a Leading Robot Expert Told the CIA"; Frowe, chapter 11

25	18-Apr	Latiff	Data, Ubiquitous Sensors, and Privacy	Tene, "Privacy: The New Generations"; Boyd and Crawford, "Six Provocations for Big Data"; Office of the Director of National Intelligence, "Data Mining Report" (optional)
26	20-Apr	Allhoff	Group Presentations	-
27	25-Apr	Allhoff	Group Presentations	-
28	27-Apr	Allhoff	Group Presentations	-
29	2-May	Latiff	Concluding Remarks	-
-	-	-	<b>Second paper due May 12 by 11:55 p.m.</b>	