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The Ethics of Emergent Weapons
          and Technologies
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             Spring 2018
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**Instructors:**
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**TA:** Charlene Brecevic (cbrecevi@nd.edu)

**Office Hours:**
Robert Latiff: By appointment, in Geddes Hall, 451
Sebastián:  Mondays 1:00-3:00 pm in Geddes Hall, 451, and by appointment.
 Char: Tuesdays and Thursdays 12:30-1:30 pm in Flanner 1023,  and by appointment

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*Course Description:*



Although technological advances have always affected how wars are fought, current technologies have modified wars to the point that contemporary warfare does not involve a confrontation between armies in an opened battle field. Instead, wars are now fought, so to speak, at a distance, with unmanned vehicles controlled by operators living thousands of miles away. Drones and terrestrial robots are quickly replacing pilots and soldiers, and cyberattacks are rapidly taking over the role played by missiles and bombs. Not much time is expected before we find completely autonomous killer robots and robotically enhanced soldiers (i.e., ironman) in the battlefield.  The development of these new war technologies has raised ethical concerns, ranging  from worries about whether we should give a machine the autonomy to determine when to kill a human,

to whether is it right to biologically modify a soldier,  to questions about who to blame when a robot fires by mistake.

In this course, students will learn about the emerging war technologies and some of the ethical and legal concerns that come with these. The course is discussion-based, and at the end of every class where we introduce a new weapon we will discuss some of the ethical concerns that the technologies in question produce. Three main topics will be covered: 1) types of emerging weapons technologies, 2) just war theory, and 3) normative ethics.

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*Goals:*

After this course, students will be able to…

- Explain what drones, warbots, non-lethal weapons, cyberwarfare, soldier enhancement, and data mining are and how they are used or could be   used by militaries.

- Explain the main motivations and the main challenges of consequentionalism, virtue ethics and Kantian ethics.

- Identify and analyse the main ethical issues raised by the various emerging weapons technologies in well-argued, concise, philosophical papers.

*Assignments:*

*Note: Detailed assignments sheets will be provided on class throughout the semester.

- *Short Paper 1* (2-3 pages), 15 %, February 6th:  The paper will consists of an answer to a question regarding *Just War Theory*.
- *Movie Reaction Paper* (2 pages), 15 %,  March 1st: A reflection about a movie (to be determined) where one or more aspects of the international humanitarian law and emergent weapons are discussed.
- *Short Paper* 2 (2-3 pages), 15 %, March 27th:  The paper will consists of an answer to a question regarding *normative ethics*.
- *Video Group Project*, 15 %, April 24th:  A short video (2-3 minutes) to be done in groups of about six people where you explore a topic covered in one of the weeks.
- *Final Paper* (6-8 pages), 30 %, May 7th: A final paper where you discuss in depth a new war technology and the different ethical and legal concerns around it.  You have to meet previously (two or three weeks before May 7) with Char or Sebastian to discuss the topic of your final paper.

- *Participation*, 10%.

Your papers will be submitted in electronic form (via e-mail, in Word or PDF format), *by the beginning of the class period when they are due*. Comments will be returned on your papers electronically. Late work will be penalized by one letter grade for each day that it is late. Authorized excuses (medical, family distress, and service to the university) will be e-mailed automatically by the University; a heads-up from the student is appreciated, but will *not* suffice for an excused absence.

### *Grading:*

Grading Scale: A: 100%- 93%     A-: 92.9%-90%     B+:89.9%-87%     B: 86.9-83%
   B-: 82.9-80%     C+: 79.9-77%     C: 76.9-73%     C-: 72.9-70%     D: 69.9-60%
   F: 59.9-0%

### *Academic Honesty and Integrity*

All the work that you submit for this course must be your own. Plagiarism is a serious matter, and participating in this type of behavior has serious, long-stretching consequences. Please review the university's policies on academic integrity as http://nd.edu/~hnrcode/index.htm and come talk with me if you have any questions.

### *Writing Center*

As a Notre Dame student, you have a great opportunity to utilise the school's writing center. The writing center can provide guidance with paper writing at all stages of the process, so I highly encourage you to take advantage of this service. To learn more about the Writing Center or to schedule an appointment, please visit the following links:
   | http://writingcenter.nd.edu
   | http://nd.mywcoline.com/

### *Disability Services:*

If you have a disability and need particular accommodations for the course, please contact Disability Services at http://disabilityservices.nd.edu. Once you have spoken with the Coordinator of Disability Services, please let me know what accommodations are needed.

### *Diversity:*

We share a responsibility to maintain a campus free of discrimination, including any form of harassment. As your instructor, I will strive to create an environment in our classroom that

welcomes all people regardless of sex, gender, race, ethnicity, religion, age, ability, or sexual orientation. If you feel this standard of welcome is not being met, please contact me.

### *Decorum:*

You are not required to agree with me or your classmates. You are however expected to be courteous, and your participation should demonstrate your understanding of a productive and civil rhetoric: careful listening, thoughtful acknowledgement of perspectives, and ethically constructed counterclaims that focus on the quality of the argument and not on the perceived value of the person making it. In our discussions, your opinions, ideas, questions, and other constructive contributions are always welcomed and encouraged.

### *Required Readings:*

During the class we will read the following four books (available on the bookstore, but
Timmons' can be accessed online via the Hesburgh's Library):

- Robert Latiff, *Future War: Preparing for the New Global Battlefield*.

- Michael Walzer, *Just and Unjust Wars (*fifth edition)

- George Lucas, *Ethics and Cyber Warfare: The Quest for Responsible Security in the Age of Digital Warfare*

- Mark Timmons, *Moral Theory, An introduction*

The rest of the materials are articles that can be found on Sakai.

| SCHEDULE | | | |
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| Week | Date | Topic | Reading |
| Week 1 | January 16 (Latiff) | Introduction to Emerging Weapons Technologies | |
| | January 18 | Technology and Ethics | Latiff (Chapters 1-3) |
| Week 2 | January 23 | Just War Theory | Walzer (Chapters 1-3) |
| | January 25 | Just War Theory | Walzer (Chapters 8-11) |
| Week 3 | January 30 | Just War Theory | Walzer (Chapters 12, 14, 15, 16) |
| | February 1 | Just War Theory | Walzer (Chapters 17, 18, 19) |
| Week 4 | February 6 (Latiff) | Nuclear/Biological/Non-Lethal | Nuclear Matters Handbook (3, 4, |

| | | Weapons | 5); Casey-Maslen (Non-kinetic-energy weapons termed 'non-lethal'). |
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| | February 8 | Nuclear/Biological/Non-Lethal Weapons | Loike and Fischbach (Ethical Challenges in Biodefense). |
| Week 5 | February 13 | International Humanitarian Law | A Comprehensive Introduction (Chapter 1). |
| | February 15 | International Humanitarian Law | A Comprehensive Introduction (Chapter 3) |
| Week 6 | February 20 | International Humanitarian Law | A Comprehensive Introduction (Chapter 5). |
| | February 22 | International Humanitarian Law | Solis (The Law of Armed Conflict) |
| Week 7 | February 27 (Latiff) | Robotics and Autonomy | Howard (In Defense of (virtuous) autonomous weapons); Autonomous systems: social, legal and ethical issues. |
| Week 7 | March 1 | Robotics and Autonomy | Bostrom and Yudkowsky (The Ethics of Artificial Intelligence); Wallach and Allen (Framing robot arms control) |
| Week 8 | March 6 | Normative Ethics (Introduction) | Timmons (Chapter 1) |
| | March 8 | Normative Ethics (Moral relativism) | Timmons (Chapter 3) |
| | SPRING BREAK | | |
| Week 9 | March 20 (Latiff) | Soldier Enhancement | Alhoff et al (Ethics of Human Enhancement); Sandel (The case against perfection). |
| | March 22 | Normative Ethics (Consequentionalism) | Timmons (Chapter 5) |
| Week 10 | March 27 | Normative Ethics (Consequentionalism) | Timmons (Chapter 6) |
| | March 29 | Normative Ethics (Kantian Ethics) | Timmons (Chapter 8); Orend |
| Week 11 | April 3 (Latiff) | Big data, data mining, privacy | Richards and King (Big data ethics) |
| | April 5 | Big data, data mining, privacy | Tene and Polonetsky (Big Data for all); Tene (Privacy: The new generations) |
| Week 12 | April 10 | Normative Ethics (virtue ethics) | Timmons (Chapter 10) |
| | April 12 | Normative Ethics (Discussion) | |
| Week 13 | April 17 (Latiff) | Cyberwar | Lucas (Introduction and Chapter 1); Dunlap (The intersection of law and ethics in cyberwar) |
| | April 19 | Cyberwar | Lucas (Chapters 2-4) |
| Week 15 | April 24 | Cyberwar | Lucas (Chapters 5-7) |
| | April 26 | Cyberwar | Howard (Civic Virtue and cybersecurity) |

| Week 16 | May 1 (Latiff) | Summary | |
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