

Title: 8A. Military and National Security Implications of Nanotechnology

Goal: Students will know potential risks of nanotechnology in health and medicine.

Module Objectives: This module will provide the students with an overview of the implications of nanotechnology for military and national security. Topics that will be covered include: 1) Homeland Security; 2) New era of Weapons of Mass Destruction (WMD)?; 3) Context described a) Nanotechnology and art of war; b) Nanotechnology and national security 4) Framing ethical questions 5) Assessing options for action 6) Finding common ground.

Prerequisites by Topic:

- None

Required Text: N/A

Reading: Write-up of this module

References: [Refs. 14-17]

Student Learning Outcomes:

- Students will appreciate issues of nanotechnology in know what are the issues of nanotechnology in military and national security.
- Students will understand role of nanotechnology in art of war, soldier nanotechnologies, future force warrior program, and roles of different security and military agencies.
- Students will be able to frame ethical questions and assessing actions while using nanotechnology in military and national security

Topics Covered: (Green highlighted topics are priority#1, Yellow highlighted are if time permits)

Lecture I

- Homeland Security;
- New era of Weapons of Mass Destruction (WMD)?;
- Context described
 - Nanotechnology and art of war;
 - Nanotechnology and national security

Lecture II

- Framing ethical questions
- Assessing options for action
- Finding common ground

Relationship to ABET Program Outcomes

[Note: Please, refer ABET program outcomes list (a) through (l) in attached standard template.]

- (f) An understanding of professional and ethical responsibility.
- (j) A knowledge of contemporary issues.