

1. EM473 Design of Modern Weapons
2. Credit Hours (3) / Contact Hours (3)
3. Course Director – Ken Conley
4. Course Textbook: No mandatory textbook for this class
5. Specific course information
  - a. An elective that covers how modern weapons are designed and how analysis supports design activities. Covers explosives, warheads, fuses, propellants, penetration mechanics, lethality, and effectiveness
  - b. Prereq: None.
  - c. Senior engineering elective course
6. Educational objectives
  - 1) Understand how explosives function, how they are made, and how they are used.
  - 2) Understand and demonstrate the principles of warhead design.
  - 3) Describe how weapon system effectiveness is determined.
  - 4) Understand the concepts and issues related to the employment of weapons including weapon engineering, collateral damage, and battle damage assessment.
  - 5) Understand how weapons testing is conducted and its purpose.
7. Specific program outcomes addressed by this course

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Reinforced				X			
Mastered	X					X	

8. Brief list of topics to be covered
  - a. Explosives
  - b. Propellants
  - c. Warheads
  - d. Fuzes
  - e. Guns
  - f. Penetration Mechanics
  - g. Lethality, Vulnerability, Survivability
  - h. Target Planning
  - i. War Gaming