



## RIST461 – Cyber Warfare Master Course Syllabus

### Course Overview (QM Standards 1.2)

#### Course description:

This course provides students with knowledge of cyber warfare history, actors, types, rules, causes, strategies, and outcomes.

#### Course Goals and Objectives:

- Categorize and define cyber warfare.
- Identify and categorize the key players in cyber warfare.

### Pre-Requisites (QM Standard 1.6)

No pre-requisites are required for this course.

### Minimum Technical Requirements and Online Resources (QM Standards 1.5 & 1.7)

In addition to a web browser (preferable Firefox) that is Blackboard compatible, you will need the following software in order to complete the activities in this class:

1. Word processing package capable of reading and creating .doc, .docx or rich text formatted (rtf) documents.
2. *Adobe Acrobat Reader*: If you do not have *Adobe Acrobat Reader*, you can download it free from <http://www.adobe.com/products/acrobat/readstep.html>
3. PDF Creator Software: If you are using a MAC or do not have software capable of saving a file as a .doc or .docx file and do not have the capability on your campus to print files to PDF, you can download a free version of *CutePDF* at <http://www.cutepdf.com/Products/CutePDF/writer.asp> This software installs a virtual printer on your PC that allows you to print files to the PDF format.
4. Virus Protection Software: This course requires you to download and upload files from your PC. Virus protection software protects your computer and my computer.

**Online Resources:** This course makes use of many online resources. I have made every effort to make sure the links I have are up-to-date. However, due to the changing nature of the web, you may find that a resource is temporarily unavailable or has been removed. If this should happen, please send me an email and I will find an alternative resource or modify the assignment accordingly.

## **Instructor Information (QM Standards 1.8 & 5.3)**

Individual instructors complete this information.

### **Virtual Office Hours**

I am available in my virtual office by appointment only. Send me an email to set up an appointment.

### **Personal Commitment**

My personal commitments to you as a participant include:

I will reply to course mail messages within 24 hours;

I will read all discussion postings and will reply where appropriate within 3 days

I will acknowledge my receipt of every course mail message immediately upon reading it. If I am unable to respond to the request or concern at the time of initial reply, I will give you an estimated time for my next reply.

If I am going to be away from the course space for more than a day or two, I will send a message to you indicating the length of my absence.

I will regularly update information regarding due dates in the course announcements.

## **Optional/Required Course Materials (QM Standard 4.6)**

You will find your required textbook information in the course catalog at <http://ilearn-wvrocks.wvnet.edu>. All other required readings and videos are included in each of the modules.

## **Grading Policy (QM Standard 3.2)**

Each module consists of assignments and quizzes, each having specific point values. For each assignment and quiz you will be given the grading criteria from which you will be evaluated.

Final number grades will be determined using this formula:

Points Earned/Points Possible x 100 = Final Number Grade

Final letter grades will be determined based on the following grading scale:

Points Earned	Percentage	Letter Grade
468 - 520	90 - 100%	A

416 - 467	80 – 89%	B
364 - 415	70 – 79%	C
312 - 363	60 – 69%	D
Below 312	Below 60	F

## **Module Objectives and Assessments (QM Standard 2.2, 2.3, 2.4, 2.5, 3.4, 3.5, 5.1)**

### **Module 1**

After you have complete the readings and content for this module you will be able to:

- Explain the difference between cyber and conventional warfare. [M1S1: Self-assessment, M1A1: What is Cyber Warfare? Written Assignment, M1A2: Cyber Warfare Quiz]
- Identify the advantages and disadvantages of cyber warfare. [M1A1: What is Cyber Warfare? Written Assignment, M1A2: Cyber Warfare Quiz]
- Perform a basic personal data search. [M1A1: What is Cyber Warfare? Written Assignment, M1A2: Cyber Warfare Quiz]

### **Module 2**

After you have complete the readings and content for this module you will be able to:

- Identify nation-state and non-nation-states cyber warfare threat actors. [M2A1: Cyber Warfare Threat Actors Written Assignment, M2A2: Cyber Warfare Threat Actors Quiz]
- Describe how cyber warfare is used in conventional conflicts. [M2S1: Self-assessment, M2A1: Cyber Warfare Threat Actors Written Assignment, M2A2: Cyber Warfare Threat Actors Quiz]

### **Module 3**

After you have complete the readings and content for this module you will be able to:

- Compare and contrast different types and goals of cyber warfare. [M3A1: Attribution, Crime, and Malware Written Assignment, M3A2: Attribution, Crime, and Malware Quiz]
- Compare and contrast the issues of attribution, online crimes, and malware. [M3S1: Self-assessment, M3A1: Attribution, Crime, and Malware Written Assignment, M3A2: Attribution, Crime, and Malware Quiz]

### **Module 4**

After you have complete the readings and content for this module you will be able to:

- Differentiate between cyber warfare and cyber espionage. [M4A1: Military Doctrine in Cyber Warfare Written Assignment, M4A2: Military Doctrine in Cyber Warfare Quiz]

- Analyze and differentiate the use of cyber warfare in traditional and non-traditional global conflicts. [M4A1: Military Doctrine in Cyber Warfare Written Assignment, M4A2: Military Doctrine in Cyber Warfare Quiz]
- Identify the role of the U.S. Department of Defense in cyber warfare. [M4S1: Self-assessment, M4A1: Military Doctrine in Cyber Warfare Written Assignment, M4A2: Military Doctrine in Cyber Warfare Quiz]

## **Module 5**

After you have complete the readings and content for this module you will be able to:

- Identify and define the difference between information and cyber warfare. [M5S1: Self-assessment, M5A1: Information Warfare Written Assignment, M5A2: Information Warfare Quiz]
- Explain the purpose and give examples of information warfare. [M5A1: Information Warfare Written Assignment, M5A2: Information Warfare Quiz]

## **Module 6**

After you have complete the readings and content for this module you will be able to:

- Identify and describe how hacktivist and other non-nation-state actors have changed the nature of cyber warfare. [M6A1: Hacktivism Written Assignment, M6A2: Hacktivism Quiz]
- Identify and define terms related to hacktivism. [M6S1: Self-assessment, M6A1: Hacktivism Written Assignment, M6A2: Hacktivism Quiz]
- Identify and discuss current state and federal computer intrusion laws. [M6A1: Hacktivism Written Assignment, M6A2: Hacktivism Quiz]

## **Module 7**

After you have complete the readings and content for this module you will be able to:

- Identify and describe the make-up of cyber warfare units for each nation-state. [M7S1: Self-assessment, M7A1: Capabilities of Nation-State Written Assignment, M7A2: Capabilities of Nation-State Quiz]
- Identify and discuss the United States cyber capabilities. [M7A1: Capabilities of Nation-State Written Assignment, M7A2: Capabilities of Nation-State Quiz]

## **Module 8**

After you have complete the readings and content for this module you will be able to:

- Identify and describe cyber terrorism, hacktivism, and other non-nation-state actors. [M8S1: Self-assessment, M8A1: Hacktivism, Terrorism, and Other Non Nation-States Written Assignment, M8A2: Hacktivism, Terrorism, and Other Non Nation-States Quiz]

- Explain the role and impact of Anonymous. [M8A1: Hacktivism, Terrorism, and Other Non Nation-States Written Assignment, M8A2: Hacktivism, Terrorism, and Other Non Nation-States Quiz]