

## **Syllabus**

### **Online IT 262 (CRN #49696) Scripting for Network Defense**

Instructor: James Hart / hart56@unm.edu

Office Room Number: B 123

Instructor's Campus Phone: 505.925.8720 / Mobile 505.239.3435

Office Hours: MW10:00 AM – 1:00 PM / TTh 11:30 AM – 1:30 PM or ARR  
(ARR can be in person or through ZOOM)

**email** : Be sure to check your contact information in Banner and keep it updated. UNM email as our official form of course communication. UNM email as our official form of course communication. When communicating with your instructor always include class name in the subject header.

***IT 262: Scripting for Network Defense. (3) Scripting programming for security purposes. Students build on prior programming, operating systems, and security knowledge to develop, code, use, and debug new and existing scripts.***

**TEXTBOOK**: Flash drive required.

**ATTENDANCE POLICY**: Students are expected to be on time. If you are running late please call or email. You will be for four unexcused absences.

**EMAIL**: Be sure to check your contact information in Banner and keep it updated. UNM email as our official form of course communication. When communicating with your instructor always include class name in the subject header.

### **GRADING POLICY**

Tests	30%
Skill demos	20%
Script Exams	20%
Final	30%
Total	100%

### **LETTER GRADE DETERMINATION**

A	90 +
B	80 -89
C	70 - 79
D	60 - 69
F	<60

IT 262 exposes you to a wide variety of open source penetration testing tools. They are to be used solely for academic purposes. Any misuse of these tools will result in loss of your campus computer privileges.

### Academic Integrity

Having academic integrity is paramount to your success in any class. Plagiarism or cheating is not tolerated. Any instance of this will result in a grade of zero for that assignment. Here is the link to the UNM Academic Dishonesty Policy:

<https://policy.unm.edu/regents-policies/section-4/4-8.html>. The policy states:

*Each student is expected to maintain the highest standards of honesty and integrity in academic and professional matters. The University reserves the right to take disciplinary action, up to and including dismissal, against any student who is found guilty of academic dishonesty or who otherwise fails to meet the expected standards. Any student judged to have engaged in academic dishonesty in course work may receive a reduced or failing grade for the work in question and/or for the course.*

Academic Dishonesty is defined as:

*"Academic dishonesty" includes, but is not limited to, dishonesty in quizzes, tests, or assignments; claiming credit for work not done or done by others; hindering the academic work of other students; misrepresenting academic or professional qualifications within or without the University; and nondisclosure or misrepresentation in filling out applications or other University records.*

**LIBRARY USAGE:** Be sure to always check out the library if you feel you need additional reading materials. They are open for any order suggestions you may have.

### STUDENTS WITH DISABILITIES:

If you have a documented disability, the Equal Access Services office will provide me with a letter outlining your accommodations. I will then discuss the accommodations with you to determine the best learning environment. If you feel that you need accommodations, but have not documented your disability, please contact Jeanne Lujan, the coordinator for Equal Access Services at 925-8560 or [skirtley@unm.edu](mailto:skirtley@unm.edu).

### EQUAL OPPORTUNITY AND NON-DISCRIMINATION

In an effort to meet obligations under Title IX, UNM faculty, Teaching Assistants, and Graduate Assistants are considered "responsible employees" by the Department of Education (see page 15 - <http://www2.ed.gov/about/offices/list/ocr/docs/qa-201404-title-ix.pdf>). This designation requires that any report of gender discrimination which includes sexual harassment, sexual misconduct and sexual violence made to a faculty member, TA, or GA must be reported to the Title IX Coordinator at the Office of Equal Opportunity ([oeo.unm.edu](http://oeo.unm.edu)). For more information on the campus policy regarding sexual misconduct, see: <https://policy.unm.edu/university-policies/2000/2740.html>.

Dates for Reference :

January 31	Enrollment Cancellation for non-payment
February 7	Last Day to Drop for 100% Tuition Refund/Last Day to Drop Without a “W”
February 14	Last Day to Change Grading Options
March 16	Spring Break
April 17	Last Day to Withdraw Without Student Services Permission
May 8	Last Day to Withdraw with Student Services Permission
May 11	Finals Week

**COURSE OUTLINE (Please note that this course outline is subject to change. If changes occur, you will be notified)**

Week 1 / January 21

- Open Source Tools
  - Linux
  - Nmap
  - Wireshark
  - <http://www.sectools.org>
- IPv4
- IPv6
- TCP ports
- UDP ports
- Review Binary, Hex, Decimal

Week 2 / January 27

- Basic Nmap commands
- Basic Wireshark filters
- Linux file system / directories
- Basic Linux commands
- Shell basics
- Shell environments

Week 3 / February 3

- Nmap port scanning and problems with port scanning
- Determining IP ranges to target network hosts
- Wireshark - Collision domains / broadcast domains with switches
- TCP - SYN and ACK
- Shell scripting
  - Using an editor
  - Using chmod
  - Variables
  - Intro to looping

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