

JOHNSON COUNTY COMMUNITY COLLEGE
COURSE SYLLABUS
CS & IT Division
Department of Information Technology-Networking
Ethical Hacking
IT 239-376
Fall 2018

Instructor: Akram Al-Rawi

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Office Hours: *On campus M T W: 8:00 -9:30; R 9:00-10:30*

Course Information:

Class Meeting Times and Location: Hybrid R 6:00-7:50 RC-352, August 23- December 13th

Credit Hours: 3

Prerequisites: [IT 145](#) and [IT 230](#)

Textbook: CEH v9 Cert Guide, 2nd edition

By Michael Gregg

Pearson, 2017

ISBN: 978-0-7897-5691-6

<http://www.personITcertification.com>

Required Class Materials: *None*

Course Description:

This course is designed to introduce students to common computer vulnerabilities as well as exploits and techniques used by hackers. Students will develop countermeasures to mitigate attacks and strengthen system security. Topics covered include vulnerability scanning, social engineering, denial of service attacks, intrusion detection, buffer overflow and penetration testing. 2 hrs. lecture, 2 hrs. lab and 1 hr. instructional lab/wk.

Course Objectives:

1. Perform reconnaissance and footprinting procedures to collect information about potential targets.
2. Describe common social engineering attacks and policies to mitigate them.
3. Demonstrate password-cracking techniques and develop measures to strengthen passwords.
4. Deploy Metasploit framework to perform penetration testing on various systems.

5. Attack web applications using cross-site scripting (XSS), command injection and client-side exploitations.
6. Perform network analysis using common sniffing tools.
7. Install backdoors to compromise access privileges and system integrity.
8. Describe common attacks against cryptographic security measures.

*Detailed course objectives can be viewed on the Course Outline at:

http://catalog.jccc.edu/coursedescriptions/it/#IT_239

Attendance:

You need to be in the class during the last period to take the final exam. We follow the college attendance policy.

<http://www.jccc.edu/about/leadership-governance/policies/students/academic/attendance.html>

Faculty Initiated Withdrawal: None

Late Work and Makeup Policy:

Labs and tests will not be accepted for credit after due dates unless you have a legitimate reason. Chapter exam will be enabled for one week; Homework drop boxes will be enabled for one week.

Student Code of Conduct: Students are bound by all sections of the JCCC Student Code of Conduct <http://www.jccc.edu/about/leadership-governance/policies/students/student-code-of-conduct/index.html> as well as the Student Handbook - <http://www.jccc.edu/student-resources/student-handbook.html>

Academic Dishonesty, Cheating, or Plagiarism:

No student shall engage in behavior that, in the judgment of the instructor of the class, may be construed as cheating. This may include, but is not limited to, plagiarism or other forms of academic dishonesty such as the acquisition without permission of tests or other academic materials and/or distribution of these materials. This includes students who aid and abet, as well as those who attempt such behavior.

ADA Compliance: <http://www.jccc.edu/about/leadership-governance/policies/accessibility-statement.html>

To schedule an appointment with an Access Advisor or for additional information, you can contact Access Services at (913) 469-3521. Access Services is located on the 2nd floor of the Student Center (SC 202).

Campus Safety: Information regarding student safety can be found at

<http://www.jccc.edu/student-resources/police-safety/>.

Classroom and campus safety are of paramount importance at Johnson County Community College, and are the shared responsibility of the entire campus population. Please review the following:

- **Report Emergencies:** to Campus Police (available 24 hours a day)

- In person at the Carlsen Center (CC115)
- Call 913-469-2500 (direct line) – *Tip: program in your cell phone*
- You are an extra set of eyes and ears to help maintain campus safety
- Trust your instincts
- Report suspicious or unusual behavior/circumstances to Campus Police (see above)
- **Be Prepared:**
 - Identify the red/white stripe Building Emergency Response posters throughout campus and online that show egress routes, shelter, and equipment
 - View A.L.I.C.E. training (armed intruder response training - Alert, Lockdown, Inform, Counter and/or Evacuate) – Student training video: <https://www.youtube.com/watch?v=kMcT4-nWSq0>
 - Familiarize yourself with the [College Emergency Response Plan](#)
- **During an Emergency:** Notifications/Alerts (emergencies and inclement weather) are sent to all employees and students using email and text messaging
 - students are automatically enrolled, see [JCCC Alert - Emergency Notification](#)
- **Weapons Policy:** Effective July 1, 2017, concealed carry handguns are permitted in JCCC buildings subject to the restrictions set forth in the Weapons Policy. Handgun safety training is encouraged of all who choose to conceal carry. Suspected violations should be reported to JCCC Police Department 913-469-2500 or if an emergency, you can also call 911.

Caveats:

The curriculum, labs, and assessments in this course are based on the CEH v9 exam 312-50. Students will be issued accounts for online access to course materials.

<https://netlabve.jccc.edu> → to access you need to connect to student vpn first.
netlabve username is the JCCC id

Course Evaluation & Grading Scale:

Final grade calculations will be based on the following:

Chapter Exam (13)	20%	A	90 – 100%
Cisco Hw/Labs	50%	B	80 – 89.9%
Final Exam (comp)	20%	C	70 – 79.9%
Final Skill Assessment	10%	D	60 – 69.9%
		F	< 60%

Drop Deadlines: To view the deadline dates for dropping this course, please refer to the schedule on the JCCC web page, under Admissions>Enrollment Dates>Dropping Credit Classes. After the 100% refund date, you will be financially responsible for the tuition charges; for details, search on Student Financial Responsibility on the JCCC web page. Changing your schedule may reduce eligibility for financial aid and other third-party funding. Courses not dropped will be graded. For questions about dropping courses, contact the Student Success Center at 913-469-3803.

Tentative Course Schedule:

Session	Date	Topic	Reading Assignment	Lab Assignment
1	August 23	<ul style="list-style-type: none"> Introduction to the course, netlabve 1. An Introduction to Ethical Hacking	Chapter 1 PP 3-44	Lab #1
2	August 30	1. An Introduction to Ethical Hacking	Chapter 1	Lab #2
3	September 6	2. The technical foundation of Hacking	Chapter 2 PP 45-85	Lab #3
4	September 13	2. The technical foundation of Hacking	Chapter 2	Lab #4
5	September 20	3. Footprinting and Scanning	Chapter 3 PP 87-147	Lab #5 Lab #6
6	September 27	4. Enumeration	Chapter 4 PP 148-193	Lab #7
7	October 4	5. Malware Threats	Chapter 5 PP 195-247	Lab #8
8	October 11	6. Sniffers, Session Hijacking, and DoS	Chapter 6 PP 248-297	Lab #9
9	October 18	7. Web Server Hacking, Web Applications, and Database Attack	Chapter 7 PP 298-353	Lab #10 Lab #11
10	October 25	7. Web Server Hacking, Web Applications, and Database Attack	Chapter 7	Lab #12
11	November 1	8. Wireless Technologies, Mobile Security, and Attacks	Chapter 8 PP 355-395	Lab #13
12	November 8	9. IDS, Firewalls, and Honeypots	Chapter 9 PP 397-438	Lab #14
13	November 15	10. Physical Security and Social Engineering	Chapter 10 PP 440-479	Lab #15
14	November 22	Thanksgiving Break Nov 21-23		Lab #16
15	November 29	11. Cryptographic Attacks and Defense	Chapter 11 PP 481-523	Lab #17 Lab #18
16	December 6	12. Cloud Computing and Botnets	Chapter 1 PP 524-543	Lab #19
17	December 13	Final Exam (Comp, closed book) + Skill Assessment.	Canvas	6:00-8:50 PM RC-352

Assessment Information:

Chapter Exams: Ch.1-Ch.12 are done using canvas, two attempts, at your convenient. 20 problems.

Final: Ch1-Ch12 (20 %) one attempt during the class period, canvas, closed book, no browsing, taken from the chapter exams.

