



**Digital Information & Technology Center of Excellence**  
**Computer Systems Networking Department** (Cybersecurity, Linux, Microsoft, Cisco, BCIS)

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**ITNW 1313: Computer Virtualization | Hybrid | #20030**

Spring 2020 | 16 Weeks (01.21.2020-05.17.2020)

3 Credit Hours | 98 hours per semester

1010 West Sam Houston Pkwy N., Room 119 Saturdays 11:00 am-01:50 pm

**Instructor Contact Information**

Instructor:	Fernando Bobbio	Office Phone:	N/A
Office:	N/A	Office Hours:	N/A
HCC Email:	<a href="mailto:fernando.bobbio@hccs.edu">fernando.bobbio@hccs.edu</a>	Office Location:	N/A

As your instructor, I am here to support you. Please feel free to schedule an appointment with me and discuss any problems that you are experiencing in this course or any other courses. Your performance in my class is very important to me.

**Instructor's Preferred Method of Contact**

I will respond within 24 hours during the week and in most cases during weekends. My preferred method is via email.

**What's Exciting About This Course**

What's exciting about this course is that it is about Computer Virtualization! We will work on implementing and supporting virtualized environments for clients and servers in a networked computer environment. We will install, configure and manage virtualized computer workstations and servers.

**My Personal Welcome**

Welcome to this edition of Computer Virtualization – I've been expecting you! I, Fernando Bobbio, will be your instructor for this spring 2020 16-weeks long Computer Virtualization course. The main method of communication that I will use is email. I will also use the discussion board on Canvas. Please be sure to follow the syllabus as a reference for any important dates, to plan for the semester, and to review HCC policies. The best way to really discuss issues is via email. I am available before class or via email the questions. My goal is for you to learn skills that you can enhance further by tying in more networking, security, and programming. Please contact me by email or before class whenever you have a question.

## Prerequisites and/or Co-Requisites

ITNW 1313 requires college-level reading and writing skills. Research indicates that you are most likely to succeed if you have already taken and passed ENGL 1307. The minimum requirements for enrollment in ITNW 1313 include ITNW 1358. If you have enrolled in this course having satisfied these prerequisites, you have a higher chance of success than students who have not done so. Please carefully read and consider the repeater policy in the [HCCS Student Handbook](#).

## Canvas Learning Management System

This section of ITNW 1313 will use [Canvas \(https://eagleonline.hccs.edu\)](https://eagleonline.hccs.edu) to supplement in-class assignments, exams, and activities. Please follow all the modules on Canvas. You will use Canvas to access all the course material including: class notes, exam reviews, videos, labs, and so on. You do not need to purchase anything for this course. You will also use Canvas to take your Midterm and Final exams (will be held in person).

HCCS Open Lab locations may be used to access the Internet and Canvas. **USE [FIREFOX](#) OR [CHROME](#) AS THE INTERNET BROWSER.**

## HCC Online Information and Policies

Here is the link to information about HCC Online classes including the required Online Orientation for all fully online classes: <http://www.hccs.edu/online/>

## Scoring Rubrics, Sample Assignments, etc.

The scoring rubric is:

Midterm Exam: 15%

Final Exam: 15%

Project: 40%

Homework/Labs/Participation: 30%

## Instructional Materials

The suggested textbook for this course is “Ted Simpson and Jason Novak, Hands-On Virtual Computing, 2nd Edition. Cengage, 2018, ISBN-13: 9781337101936”. You will receive all of the notes (via Word documents and Canvas discussions) and lectures. You will also have access to the VMware Academy as you will need it to retrieve the VMware Workstation (Windows) or VMware Fusion (Mac) in order to power Virtual Machines running Windows and Linux. We will be using VMware and VirtualBox as hypervisors.

## Other Instructional Resources

You will also have access to the VMware Academy as you will need it to retrieve the VMware Workstation (Windows) or VMware Fusion (Mac) in order to power Virtual Machines running Windows and Linux. We will be using VMware and VirtualBox as hypervisors.

### Tutoring

HCC provides free, confidential, and convenient academic support, including writing critiques, to HCC students in an online environment and on campus. Tutoring is provided by HCC personnel in order to ensure that it is contextual and appropriate. Visit the [HCC Tutoring Services](#) website for services provided.

### Libraries

The HCC Library System consists of 9 libraries and 6 Electronic Resource Centers (ERCs) that are inviting places to study and collaborate on projects. Librarians are available both at the libraries and online to show you how to locate and use the resources you need. The libraries maintain a large selection of electronic resources as well as collections of books, magazines, newspapers, and audiovisual materials. The portal to all libraries’ resources and services is the HCCS library web page at <http://library.hccs.edu>.

### Supplementary Instruction

Supplemental Instruction is an academic enrichment and support program that uses peer-assisted study sessions to improve student retention and success in historically difficult courses. Peer Support is provided by students who have already succeeded in completion of the specified course, and who earned a grade of A or B. Find details at <http://www.hccs.edu/resources-for/current-students/supplemental-instruction/>.

## Course Overview

Implement and support virtualization of clients and servers in a networked computing environment. This course explores the installation, configuration, and management of computer virtualization workstations and servers.

### Core Curriculum Objectives (CCOs)

ITNW 1313 satisfies the computer science requirement in the HCCS core curriculum. The HCCS Computer Systems Networking Discipline Committee has specified that the course address the following core objectives:

- **Critical Thinking:** Students will demonstrate the ability to engage in inquiry and analysis, evaluation and synthesis of information, and creative thinking by completing a written assignment such as a book report, research paper, or essay.
- **Communication Skills:** Students will demonstrate effective development, interpretation and expression of ideas through written, oral, and visual communication by completing a written assignment such as a book report, research paper, or essay.
- **Quantitative and Empirical Literacy:** Students will demonstrate the ability to draw conclusions based on the systematic analysis of topics using observation, experiment, and/or numerical skills by completing textbook reading assignments, completing assignments, and answering questions on quizzes and exams that pertain to Course Student Learning Outcome #2 below.
- **Social Responsibility:** Students will demonstrate cultural self-awareness, intercultural competency, civil knowledge, and the ability to engage effectively in regional, national, and global communities by completing textbook reading assignments, completing assignments, and answering questions on quizzes and exams that pertain to Course Student Learning Outcome #4 below.
- **Personal Responsibility (PR):** To include the ability to connect choices, actions and consequences to ethical decision-making.

### Program Student Learning Outcomes (PSLOs)

Can be found at:

<https://www.hccs.edu/programs/areas-of-study/science-technology-engineering--math/computer-systems-networking--telecommunications/>

### Course Student Learning Outcomes (CSLOs)

Upon completion of ITNW 1313, the student will be able to:

1. Install and configure virtual machine managers
2. Create and network virtual machines
3. Manage virtual machines, templates, clones, and snapshots
4. Set priorities for accessing resources
5. Move and clone virtual machines
6. Ensure high availability for applications within virtual machines

### Learning Objectives

Learning Objectives for each CSLO are mapped to each module on Canvas.

## Student Success

There are 12 chapters, discussions, a midterm, a final, and a project. It will be up to you to be on top of your work every week. Please do not procrastinate! Intrusion Detection will be very useful to you if you plan on getting into the cybersecurity field, so why not pay close attention now and enjoy learning? I would expect that you spend a few hours every week. This course is meant to be a baseline to explore further. Successful completion of this course requires a combination of the following:

- Reading the notes
- Watching the videos
- Completing assignments
- Participating in the discussions
- Being punctual

There is no short cut for success in this course; it requires reading (and probably re-reading) and studying the material using the course objectives as a guide. It will also require you to try all the commands introduced to you many times as repetition is your best ally to learn and use some Linux commands. The more you use them, the more you realize how efficient it is to navigate through the Linux command line and be productive in finding information.

## Instructor and Student Responsibilities

As your Instructor, it is my responsibility to:

- Provide the grading scale and detailed grading formula explaining how student grades are to be derived
- Facilitate an effective learning environment through learner-centered instructional techniques
- Provide a description of any special projects or assignments
- Inform students of policies such as attendance, withdrawal, tardiness, and making up assignments
- Provide the course outline and class calendar that will include a description of any special projects or assignments
- Arrange to meet with individual students before and after class as required

As a student, it is your responsibility to:

- Attend class in person and/or online
- Participate actively by reviewing course material, interacting with classmates, and responding promptly in your communication with me
- Read and comprehend the textbook
- Complete the required assignments and exams
- Ask for help when there is a question or problem
- Keep copies of all paperwork, including this syllabus, handouts, and all assignments
- Attain a raw score of at least 50% on the departmental final exam
- Be aware of and comply with academic honesty policies in the [HCCS Student Handbook](#)

## Assignments, Exams, and Activities

### Written Assignment

There is a project that is worth 40% of your final grade. The assignment will be checked for plagiarism so please do not try to copy and paste. If you do copy material, then be sure to reference the website.

### Exams

You will have two exams: a midterm and a final. They are both 50+ questions. The Midterm exam has many short-answer questions, multiple-choice, and true-false. The Final exam is all multiple-choice. You will receive reviews and jeopardy games as study material. Both exams will be taken in person. You will take them on Canvas.

### Grading Formula

I utilize a percentage-based points grading system. I group the Midterm and Final exam into a 60% exam group grade. I also add a third exam that I name "the best between the Midterm and Final" where I double the best grade between the Midterm & Final and I make an average of the three scores.

Midterm Exam: 15%

Final Exam: 15%

Project: 40%

Homework/Labs/Participation: 30%

Grade	Total Points
A	90+
B	80+
C	70+
D	60+
F	<60

### Incomplete Policy:

In order to receive a grade of Incomplete ("I"), a student must have completed at least 85% of the work in the course. In all cases, the instructor reserves the right to decline a student's request to receive a grade of Incomplete.

**HCC Grading Scale can be found on this site under Academic Information:**  
<http://www.hccs.edu/resources-for/current-students/student-handbook/>

## Course Calendar

<b>Week</b>	<b>Dates</b>	<b>Topics</b>
1	Jan 25	Course intro - Student intros - Introduction to Virtual Computing
2	Feb 01	Installing VMware Workstation Pro
3	Feb 08	Working with Oracle VM Virtual Box
4	Feb 15	Data Center Virtualization and Cloud Computing
5	Feb 22	Working with Microsoft Hyper-V
6	Feb 29	Working with Virtual Machine Manager
7	Mar 07	Review
8	Mar 14	MIDTERM EXAM – in person
9	Mar 28	Working with VMware vSphere
10	Apr 04	Working with VMware vCenter Server
11	Apr 18	Implementing a Virtual Desktop Infrastructure
12	Apr 25	Introduction to Cloud Services
13	May 02	Final Projects 1
14	May 09	Final Projects 2
15	May 16	FINAL EXAM – in person

### Syllabus Modifications

The instructor reserves the right to modify the syllabus at any time during the semester and will promptly notify students in writing, typically by e-mail, of any such changes.

## **Instructor's Practices and Procedures**

### **Missed Assignments**

I do my best to accommodate your schedule and personal issues. I do not accept late submissions. I may accept an exam make-up with ample notification and untestable claim for missing the exam. A make-up exam is not a retake. That is, make-up exams are allowed only for missed exams.

### **Academic Integrity**

Academic integrity is important to me and note that I will report any student that cheats during an exam. I give students a chance to redo their projects should it have too much content that is plagiarized. Scholastic Dishonesty will result in a referral to the Dean of Student Services. See the link below for details.

Here's the link to the HCC information about academic integrity (Scholastic Dishonesty and Violation of Academic Scholastic Dishonesty and Grievance):

<http://www.hccs.edu/about-hcc/procedures/student-rights-policies--procedures/student-procedures/>

### **Attendance Procedures**

I will use Canvas course participation analytics and my own judgement to give a participation grade of up to 30%. I expect that you login to Eagle Online (Canvas) at least once a week and that you regularly follow the due dates of your assignments. This course is hybrid (online and in person). You need to attend in person for class and for your midterm & final exams.

### **Student Conduct**

I expect you to read and study the course material in a timely fashion. You are expected to check your email regularly. You are expected to practice the commands and not just retain theory. You are expected to have fun. You are required to respect and help your peers. Cheating will not be allowed and tolerated.

### **HCC Policies**

Here's the link to the HCC Student Handbook <http://www.hccs.edu/resources-for/current-students/student-handbook/> In it you will find information about the following:

- Academic Information
- Academic Support
- Attendance, Repeating Courses, and Withdrawal
- Career Planning and Job Search
- Childcare
- disAbility Support Services
- Electronic Devices
- Equal Educational Opportunity
- Financial Aid TV (FATV)
- General Student Complaints
- Grade of FX
- Incomplete Grades
- International Student Services
- Health Awareness



- Libraries/Bookstore
- Police Services & Campus Safety
- Student Life at HCC
- Student Rights and Responsibilities
- Student Services
- Testing
- Transfer Planning
- Veteran Services

### **EGLS<sup>3</sup>**

The EGLS<sup>3</sup> ([Evaluation for Greater Learning Student Survey System](#)) will be available for most courses near the end of the term until finals start. This brief survey will give invaluable information to your faculty about their teaching. Results are anonymous and will be available to faculty and division chairs after the end of the term. EGLS<sup>3</sup> surveys are only available for the Fall and Spring semesters. -EGLS3 surveys are not offered during the Summer semester due to logistical constraints.

<http://www.hccs.edu/resources-for/current-students/egls3-evaluate-your-professors/>

### **Campus Carry Link**

Here's the link to the HCC information about Campus Carry:

<http://www.hccs.edu/departments/police/campus-carry/>

### **HCC Email Policy**

When communicating via email, HCC requires students to communicate only through the HCC email system to protect your privacy. If you have not activated your HCC student email account, you can go [to HCC Eagle ID](#) and activate it now. You may also use Canvas Inbox to communicate.

### **Housing and Food Assistance for Students**

Any student who faces challenges securing their foods or housing and believes this may affect their performance in the course is urged to contact the Dean of Students at their college for support. Furthermore, please notify the professor if you are comfortable in doing so.

This will enable HCC to provide any resources that HCC may possess.

## **Office of Institutional Equity**

Use the link below to access the HCC Office of Institutional Equity, Inclusion, and Engagement (<http://www.hccs.edu/departments/institutional-equity/>)

### **disAbility Services**

HCC strives to make all learning experiences as accessible as possible. If you anticipate or experience academic barriers based on your disability (including long and short term conditions, mental health, chronic or temporary medical conditions), please meet with a campus Abilities Counselor as soon as possible in order to establish reasonable accommodations. Reasonable accommodations are established through an interactive process between you, your instructor(s) and Ability Services. It is the policy and practice of HCC to create inclusive and accessible learning environments consistent with federal and state law. For more information, please go to <http://www.hccs.edu/support-services/disability-services/>

## **Title IX**

Houston Community College is committed to cultivating an environment free from inappropriate conduct of a sexual or gender-based nature including sex discrimination, sexual assault, sexual harassment, and sexual violence. Sex discrimination includes all forms of sexual and gender-based misconduct and violates an individual's fundamental rights and personal dignity. Title IX prohibits discrimination on the basis of sex-including pregnancy and parental status in educational programs and activities. If you require an accommodation due to pregnancy please contact an Abilities Services Counselor. The Director of EEO/Compliance is designated as the Title IX Coordinator and Section 504 Coordinator. All inquiries concerning HCC policies, compliance with applicable laws, statutes, and regulations (such as Title VI, Title IX, and Section 504), and complaints may be directed to:

David Cross  
Director EEO/Compliance  
Office of Institutional Equity & Diversity  
3100 Main  
(713) 718-8271  
Houston, TX 77266-7517 or [Institutional.Equity@hccs.edu](mailto:Institutional.Equity@hccs.edu)  
<http://www.hccs.edu/departments/institutional-equity/title-ix-know-your-rights/>

## **Office of the Dean of Students**

Contact the office of the Dean of Students to seek assistance in determining the correct complaint procedure to follow or to identify the appropriate academic dean or supervisor for informal resolution of complaints.

<https://www.hccs.edu/about-hcc/procedures/student-rights-policies--procedures/student-complaints/speak-with-the-dean-of-students/>

## **Department Chair Contact Information**

Samir Saber, [samir.saber@hccs.edu](mailto:samir.saber@hccs.edu). 713-718-7513