

Department of Information Technology and Decision Sciences
College of Business
University of North Texas
Fall 2022

BCIS 4630 SYLLABUS

Course Number	BCIS 4630 Section 002			
Course Title	Fundamentals of IT Security			
Course Info	Credit Hours	Days	Time	Location
	3	Wednesdays	2:00 - 4:50 PM	BLB 225
Instructor	Dipakkumar P Pravin, PhD			
Office Hours	Tuesday 2:00 to 3:00 PM or by Appt	Office	Zoom details below.	
Phone	(940) 565-3757	Email	Dipakkumar.Pravin@unt.edu	
Zoom: https://unt.zoom.us/j/5503635876?pwd=SXRPZ3JVZWVabk92NXptYW83UHY4dz09 Meeting ID: 550 363 5876 Passcode: 14221				

Academic Calendar

The detailed academic calendar is available at <http://catalog.unt.edu/content.php?catoid=30&navoid=3524>

COMMUNICATION PREFERENCE

1. Email, for faster response, please use subject line prefix 4630-F22 <your topic>
2. Text for urgent situations (716-830-6129): Use prefix: 4630: your name. Incomplete texts will not be responded to.
3. Call in case of a real emergency!
4. Please DO NOT send me WhatsApp or other social media messages.
5. Please review Online Communication Tips (<https://clear.unt.edu/online-communication-tips>)

TEXTBOOKS

Required: Simpson & Antill, [*Hands-On Ethical Hacking and Network Defense, Third Edition*](#), Cengage, ISBN: 978-1-285-45461-8.

Required: Andress, [*Foundations of Information Security*](#), No Starch, ISBN: 978-1-7185-0004-4.

OTHER COURSE MATERIALS

Supplemental readings: In addition to the required chapters (see schedule) in the textbooks, I may add supplemental readings (*including PowerPoint slides*) for some class sessions. Please check the course website frequently and acquire the materials (downloading them either directly from the site or from the provided URL) and read them *before* you come to the class. Some contents from the readings will be covered in the exams.

PowerPoint slides: They are designed to help you understand the course content during and after my lectures; however, studying solely with the slides is not sufficient.

Software: Some open source or trial version software may be required for doing some assignments. Refer to the course Web site for instructions on how to obtain them.

COURSE PREREQUISITES

Refer to the UNT *Undergraduate Catalog* or consult with the ITDS undergraduate program advisor for the latest information on the course prerequisites.

COURSE DESCRIPTION

This course introduces you to the fundamental concepts and various technical tools of information security. It provides you with an understanding of the current trends in security and essential skills in protecting information assets. You will obtain a basic understanding of the various attacks on and threats to systems, as well as the defense mechanisms to fend them off. You may use this course as the beginning point in preparing yourself to become an IS security professional with business savvy.

COURSE OBJECTIVES

At the end of this course, you should be able to...

- Describe the most important human, organizational, technological, and ethical issues that are involved in protecting information systems.
- Identify the most common security models, security principles and best practices, regulatory requirements, and governance frameworks used in today's environments.
- Identify system vulnerabilities and various types of common attacks and threats..
- Describe the important phases and activities an attacker on information assets goes through to materialize the attack.
- Describe technologies commonly used to protect information systems.
- Implement basic configuration of and troubleshoot some of the most essential technologies to protect an information system.
- Identify the most popular resources that IS security professionals use to collect and exchange information and to obtain tools to protect information systems.

ASSESSMENTS

▪ Exams

There will be three exams during the semester. **All exams are closed book, closed notes, and consist of multiple-choice questions.** Exams 2 and 3 are not comprehensive. However, bear in mind that concepts covered by earlier exams are the foundation for later topics and thus questions in later exams may implicitly test your understanding of those foundational concepts.

The exams will be administered in Respondus Lockdown Browser with webcam monitoring. Student must follow the Respondus proctoring protocol for exam taking, including the pre-exam environment check and directly facing the webcam during the entire exam. **It's the student's responsibility to ensure that his/her computer hardware and software are capable of taking the exam. If the student fails to complete an exam within the time allocated to the exam due to hardware or software issues on the student's computer, the student may not receive a grade for the exam or may have to take the exam within less amount of time than allocated; and there will not be a makeup.**

Verifiable emergencies brought to my attention *before* the exam are the only exceptions to this policy. **No make-up exams will be given.**

▪ Hands-On In-Class (HOIC) Labs

Mental engagement and hands-on exercises are important for students' success in this course. During some classes, we will have instructor-led, hands-on lab exercises, in which students along in real time and complete the labs. HOIC lab instructions are brief

and may include verbal instructions from the instructor; and instructor Virtual machines (VMs) used for the HOICs may be shut down immediately or shortly after the class. A HOIC is due shortly after the end of the class in which it was completed.

Therefore, students shall make arrangements for time and computer availability so that they can carry out the HOICs during designated class time.

Each HOIC is worth 10 points. Four HOICs are mandatory, i.e., 40 points are included in the semester total points (STP). However, six HOICs will be assigned. Students may choose which four out of the six to turn in. Each additional HOIC the student submits beyond four will automatically become extra credit. For example, if a student turns in five, his/her total possible HOIC points will be 50, with any points earned beyond 40 being extra credit, whose addition does not increase the STP.

▪ **Homework Labs**

Self-paced labs will be assigned. These labs contain detailed, step-by-step instructions. All self-paced labs are mandatory and must be done **independently**.

▪ **Attendance**

Due to the nature of the course, it's imperative that you stay mentally engaged in all the classes. Your class attendance grades will be based on your attendance statistics as recorded in Zoom meeting (if the class is conducted online for any reason) reports and/or in-class polls as attendance checks. If Zoom statistics are used, you must stay in a meeting for a total of at least 60 minutes. If in-class/in-person/over-zoom polls are run, you will not get attendance credit if you fail to respond to a poll before it is closed, even though you are present in the Zoom meeting and/or turn in the JCE done during that class. During the semester, Zoom or in-person attendance will be taken four times (five points each) with or without advanced announcement.

Make sure you set your Zoom participant name to something that can be clearly identified with you. If you attend a Zoom meeting with a phone number or a generic name such as "iPhone", you won't earn any attendance points even though you may be present the whole time.

▪ **Points system**

Each exam, quiz, and project carries maximum points that you may earn:

Assessment	Max. Points*
Exam 1	70
Exam 2 with Hands-on questions	60
Exam 3 with hands-on questions	60
Hands-On In-Class Labs (HOIC)	40
Self-Paced Labs	160
Attendance	10
Semester Total Points (STP)	400

* Point allocation subject to change.

GRADING POLICY

▪ **Determination of Course Letter Grade**

Letter grades will be assigned as follows where the cutoff is the lowest number of cumulative points that will be assigned that grade. The cutoff points are strictly adhered to. I don't round "borderline" points to "bump you up" to the next higher letter grade! No "extra work" can make up for your grades at the end of the semester.

No “extra work” can make up for your grades at the end of the semester.

Grade	Cut-Off
A	360(400*90%)
B	320 (400*80%)
C	280 (400*70%)
D	240 (400*60%)
F	Below 240

▪ Extra Credit

It is my view that any extra credit you earn should be used to your full advantage in that extra credit points should not increase the STP (400 points). Otherwise, the effect of extra credit would be diluted and less straightforward to interpret in percentage terms (as both the numerator and denominator are increased). Unfortunately, the rigid setup of Canvas gradebook inflates the STP and complicates percentage calculation when extra credit points are added. Even worse, the instructor cannot turn off the display of those figures, to the confusion of students.

Therefore, **simply ignore any percentage calculation automatically done by Canvas gradebook**. Just focus on the total points you have earned to date. If you prefer to view your performance in percentage terms, just remember, **the denominator (STP) always stays at 400 points regardless of how many extra credit points I make available**. Add extra credit points to the numerator only; with the denominator held constant, the extra credit increases your percentage to its fullest extent.

▪ Grading Dispute

Any dispute over grades must be made *in writing and within one week* of the day the exam/assignment was returned to you. Your written appeal must include the original, graded assignment, and reasons for disputing the grade. Also, note that I may choose to re-grade the assignment in its entirety, which could result in a raising or *lowering* of the grade. It is far more productive studying before exams than haggling for the points afterwards. However, if you do not understand why an answer is incorrect and want to know how to improve for future exams or assignments, I am happy to discuss them with you.

THE “INCOMPLETE” GRADE

The I (Incomplete) grade is reserved for a very limited number of true emergencies. In addition to legitimate reasons with proper documentation, a student **must be passing the course** (making satisfactory progress) when the emergency occurs. For the UNT policy regarding the I grade, see <http://essc.unt.edu/registrar/academic-record-incomplete.html>. It is also the student's responsibility to fill out the application form (http://www.coe.unt.edu/sites/default/files/796/Incomplete_grade_Form_0.doc) and obtain approval from the instructor and the department chair.

ASSIGNMENT POLICIES

Students should start to work on the assignments as soon as they are released on Canvas so that there will be sufficient time for problem resolution should technical or procedure issues occur. Feel free to contact me any time and I will make my best effort to respond to calls for help. However, if a request for help with an assignment is sent to me on the same day the assignment is due, there is no guarantee that I will be able to respond in time to resolve the

issues, although I will still try my best. In that case, the student will be responsible for an assignment that cannot be completed to his or her satisfaction or expectation. The inability for the instructor to respond in time in such a circumstance should not become the reason for the student to request an extension of due date and/or favorable grading, or not to submit the assignment.

All assignments must be submitted through Canvas. Email submissions to me or the grader usually are not accepted and will not be graded. If the submission fails due to Canvas or other technical difficulties, document the issue as detailed as you can and contact me immediately. If late email submission is allowed, it must be submitted to the email address in the submission instructions or it will not be graded.

MAKE-UP POLICY

Exams must be taken in class at the scheduled time. It is your responsibility to make arrangements to attend exam sessions. Religious reasons and verifiable medical or other emergencies brought to my attention *before* the exam are the only exceptions to this policy. See “Assessments” section for more details.

COURSE COMMUNICATIONS

When emailing me, please address it to **Dipakkumar.Pravin@unt.edu**. **Do not use the message or discussion board function of Canvas.** In your email, put the course number at the beginning of the subject line, followed by a dash, and then a brief description of the subject matter in a few words, e.g., “BCIS 4630 – My Dog Hacked My Computer”. Emails sent to my regular COBA email address could get lost in the various emails I receive daily and IT’S VERY LIKELY I WON’T REPLY TO THEM.

Asking for help with your assignments. Feel free to email me directly for help with your assignments. When you do so, please remember to: (1) send email to the correct address (see above); (2) **give a detailed description and attach screenshot(s) of the issues you’re having** (and don’t take screenshots with your cell phone; use tools like Windows Snip-It instead); and (3) Don’t wait until the last minute to seek help. If you contact me within the 24 hours before the assignment is due, there is no guarantee that you will receive timely help, since I may not be able to adjust my schedule quick enough to go over your code.

RESPONSIBILITIES OF STUDENT

- You are expected to attend class regularly. If you must miss a class, it is *your* responsibility to cover any missed material with one of your classmates.
- All work completed outside of class must be typed (word processed) and use proper screen captures or non-hand drawn diagrams.
- The professionalism of your work will count towards your grade. This includes spelling and grammar.
- Submit assignments before the due time.
- Hardware failure or inaccessibility is not a valid excuse for late work. This means that if the computer eats your assignment, or if the labs are full, you will not be excused from handing in an assignment on time.
- Missed exams receive a grade of zero.
- You must inform me of any special circumstances that might prevent you from completing course requirements on time.

PROFESSIONALISM

The Ryan College of Business is a professional school and one purpose of the college is to educate future managers and corporate leaders on the types of professional behavior that is expected in corporate settings. Therefore, students will be expected to conduct themselves in a highly professional manner at all times. Specifically, students should:

- Be on time for class.
- Read and review the assignments prior to the class.
- Be willing to contribute to class discussions and exercises.
- Be respectful toward faculty, guest speakers, and fellow students.
- Display tolerance toward varying viewpoints and differences in values.

When you join a Zoom meeting, you will be initially muted by the instructor. Unmute yourself when you need to speak. Please remember to mute yourself during all other times so that any background noise in your house will not disturb the class. Be prepared for what you may need during the class (books, notes, pens, snacks, water, etc.) and be focused during the class time. Violations of professionalism and any disruptiveness will be result in the reduction of attendance grade. The professor will determine such violations, but will give you one warning prior to reducing your grade for unprofessional behavior.

ACCEPTABLE STUDENT BEHAVIOR

Student behavior that interferes with an instructor's ability to conduct a class or other students' opportunity to learn is unacceptable and disruptive and will not be tolerated in any instructional forum at UNT. Students engaging in unacceptable behavior will be directed to leave the classroom and the instructor may refer the student to the Center for Student Rights and Responsibilities to consider whether the student's conduct violated the Code of Student Conduct. The university's expectations for student conduct apply to all instructional forums, including university and electronic classroom, labs, discussion groups, field trips, etc. The Code of Student Conduct can be found at www.unt.edu/csrr.

ACADEMIC INTEGRITY

This course adheres to the UNT policy on academic integrity. The policy can be found at <https://policy.unt.edu/policy/06-003>. If code plagiarism is detected, both the student(s) who provide the source of the copied work and the student(s) who copied the work will receive zero points for the grading item involved.

DISABILITY & ACCOMMODATION

Any student in this class who has a documented visual or physical impairment, hearing disability, or any other disability covered by the university's services for students with disabilities should contact me during the first week of class to discuss and arrange any instructional accommodations that may be necessary. Students who would like to serve as volunteer tutors, readers or note takers for students needing special assistance are encouraged to contact me during the first week of class.

TENTATIVE COURSE SCHEDULE

Date	Topic(s)	Reading	Assigned	Due
8/31	Course Overview			
9/07	Concepts	Andress Ch. 1, 3, 6		
	Lab Orientation, HOIC1			
9/14	Networking Part 1	Simpson Ch. 2		
9/21	Networking Part 2	Simpson Ch. 2	Lab 1	HOIC1 due on 9/21 Wed
	HOIC2			
9/28	Cryptography Part 1	Simpson Ch. 12		
		Andress Ch. 5		
10/05	Cryptography Part 2	Simpson Ch. 12		HOIC2 due on 10/05 Wed
		Andress Ch. 5	Lab 2	Lab 1 due on 10/07 Fri
10/12	Exam 1	Simpson Ch. 3		
	Malware; HOIC3			
10/19	Net-Based Attacks	Simpson Ch. 3		
	HOIC 4			Lab 2 due on 10/21 Fri
10/26	Stages of Attack	Simpson Ch. 1, 4, 6		HOIC3 due on 10/26 Wed
		Andress 8, 14		
11/02	Exploitation	Simpson Ch. 8	Lab 3	HOIC4 due on 11/02
	HOIC 5	Andress Ch. 11		
11/09	Scanning	Simpson Ch. 5		
11/16	Exam-2 with hands-on questions.			HOIC5 due on 11/16 Wed
	HOIC 6		Lab 4	Lab 3 due on 11/18 Fri
11/23	Thanksgiving Break	NO CLASS		
11/30	Web/Email	Simpson Ch. 10		
		Andress Ch. 13		Lab 4 Due 12/02 Fri
12/07	Defense/Perimeter	Simpson Ch. 13		HOIC6 due on 12/07 Wed
		Andress Ch. 10		
12/14	Exam 3 with hands-on questions.			Exam Starts @ 2:00 PM, ends @ 3:00 PM