COMPUTER FORENSICS
CSCE 4555.021 & CSCE 5555.021 – SUMMER 2019

Instructor: Dr. Mark A. Thompson, Sr.
Office: NTDP F264
Telephone: (940) 369-7055
E-mail Address: Mark.Thompson2@unt.edu
Class Location/Time: NTDP F218, MoWe 4:30 PM – 7:20 PM
Office Hours: MoWe 2:30 – 3:30 PM or by appointment

Every attempt will be made to answer e-mails within 24 hours. Please include CSCE 4555.021 or CSCE 5555.021 in subject line.


Technology: This course will make use of several computer forensic programs, available as freeware or shareware on the Internet, or through those accompanying the assigned textbook. A USB flash/jump drive is recommended for data storage and backup.

Canvas This course will use the Canvas learning management system (LMS) to distribute course materials, communicate and collaborate online, post grades, and submit assignments. You are responsible for checking the Canvas course site regularly for class work and announcements.

COURSE DESCRIPTION
This course will introduce students to the fundamentals of computer forensics and cyber-crime scene analysis including laws, regulations, international standards, and formal methodology for conducting computer forensic investigations. Emphasis will be placed on such advanced computer forensic science capabilities such as target hardening and software, tools for data duplication, recovery and analysis, and development of pre-search or on-scene computer investigative techniques. Topics include technical and formal methodology for conducting security incident investigations; file systems and storage analysis, data hiding techniques, network forensics; projects involving using, understanding, and design of digital forensic tools; anti-forensics; legal issues and standards.

COURSE OUTCOMES
Upon successful completion of this course, the student will be able to:
1. Demonstrate general knowledge and comprehension of computer forensics and computer investigations.
2. Describe and explain the Windows, Macintosh, and Unix/Linux operating systems data storage and methodologies.
3. Describe and explain the methods used for digital evidence control, processing crime and incident scenes, and data acquisition for computer forensic analysis.
4. Demonstrate knowledge and comprehension of basic tools and techniques used in the field of computer forensics sciences.
5. Describe and explain writing investigation reports and being an expert witness.
ADA STATEMENT

The University of North Texas makes reasonable academic accommodation for students with disabilities. Students seeking reasonable accommodation must first register with the Office of Disability Accommodation (ODA) to verify their eligibility. If a disability is verified, the ODA will provide you with a reasonable accommodation letter to be delivered to faculty to begin a private discussion regarding your specific needs in a course. You may request reasonable accommodations at any time, however, ODA notices of reasonable accommodation should be provided as early as possible in the semester to avoid any delay in implementation. Note that students must obtain a new letter of reasonable accommodation for every semester and must meet with each faculty member prior to implementation in each class. Students are strongly encouraged to deliver letters of reasonable accommodation during faculty office hours or by appointment. Faculty members have the authority to ask students to discuss such letters during their designated office hours to protect the privacy of the student. For additional information see the Office of Disability Accommodation website at http://www.unt.edu/oda. You may also contact them by phone at 940.565.4323.

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 Dean of Students 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 http://deanofstudents.unt.edu.

ATTENDANCE POLICY

Class attendance is regarded as an obligation as well as a privilege, especially as some of the homework and laboratory assignments require specific software or hardware that is provided by the instructor on a particular date. All students are therefore expected to attend each class meeting. A student who misses class is still responsible to find out what was discussed and to learn the material that was covered and obtain the homework that was assigned on the missed day. The instructor is not responsible for re-teaching material missed by a student who did not attend class. Therefore, each student is accountable for and will be evaluated on all material covered in this course, regardless of attendance. Excessive student absences may have a negative impact on a student’s comprehension and learning and result in a lower grade than expected. If there are extenuating circumstances, please notify your instructor so that you can work together to ensure your success in learning the material.
Grading Policy

Your course grade will be a weighted average according to the following:

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attendance/Participation/In-Class</td>
<td>10.0%</td>
</tr>
<tr>
<td>Homework</td>
<td>25.0%</td>
</tr>
<tr>
<td>Lab Projects</td>
<td>25.0%</td>
</tr>
<tr>
<td>Midterm Exam</td>
<td>20.0%</td>
</tr>
<tr>
<td>Comprehensive Final Exam</td>
<td>20.0%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100.0%</strong></td>
</tr>
</tbody>
</table>

Grades will be posted on Canvas throughout the semester to provide an ongoing assessment of student progress, though final assessment will be measured using the weighted average above. Once a grade is assigned on Canvas, students have one (1) week to dispute the grade. The proper channel for grade disputes is to first go to the original grader (either the TA or IA) in an attempt to resolve the issue. If, however, a resolution cannot be reached between the student and the grader, the student shall then go to the instructor who will have the final say on the grade.

*Attendance/Participation/In-Class:* Attendance/Participation/In-Class grades will be based on attendance, contribution to in-class discussions, and in-class assignments. Disruptive behavior and absences deemed excessive will result in a lower attendance/participation grade.

*Homework:* Homework will be assigned based on material from the lectures or textbook. These assignments are meant for you to become familiar with the course material and this practice will assist you in mastering the concepts on lab projects and exams.

*Lab Projects:* Students will complete several in-depth hands-on laboratory assignments during the summer session intended to give a more thorough view of computer forensics using modern and established forensics tools in the field of cyber forensics.

*Midterm Exam:* There will be a midterm examination given in this course covering both the theoretical and laboratory material covered in the course. The date of this exam will be posted on Canvas and announced in class at least one week prior to the date of the exam. A make-up exam will be given at the discretion of the instructor when a student misses an exam with an excused absence. Unexcused absences on the date of an exam may result in a grade of 0 for the missed exam, so every effort should be made to attend class on the day of a scheduled exam.

*Final Exam:* There will be a final exam on Friday, July 5, 2019, at the same time and location of our regularly scheduled lecture. All students are expected to take the final exam during the scheduled time period.

Student Responsibility

Students are responsible for submitting the correct assignments (i.e., uploading the proper files) for each applicable assignment submission on Canvas. In certain cases, when an assignment is verified to be completed on time, but either was submitted to an incorrect assignment location (e.g., submitting Homework 4 to Homework 5 location on Canvas) or a wrong assignment was submitted instead, the assignment may be assessed a 30% reduction penalty if the due date has passed. If you have any questions or concerns about your submission, please work with your instructor or TA/IA to ensure the correct file(s) is/are submitted.

Please note that verification of completion time must be on our CSE machines, so it may be in your best interest to download any submitted work to your directory on our CSE machines.
ACADEMIC DISHONESTY

This course follows UNT’s policy for Student Academic Integrity that can be found at https://policy.unt.edu/policy/06-003 as well as the Cheating Policy for the Department of Computer Science and Engineering (posted on Canvas). Specifically, the first instance of a student found to have violated the academic integrity (i.e., cheating) policy will result in a grade of “F” for the course and have a report filed into the Academic Integrity Database, which may include additional sanctions.

This course may contain both group assignments as well as individual assignments, so you should be absolutely aware of the assignment requirements before starting an assignment. Individual assignments must be the sole work of the individual student. For individual assignments, you should not work with other students on a shared solution or acquire a solution from the Internet. If you are having trouble with an assignment, please consult with your instructor or TA. Failure to adhere to these strict standards may be cause for disciplinary action even leading to expulsion from the University.

In case the above description and in-class discussion of appropriate and inappropriate collaboration do not answer all of your questions, please meet with your instructor and look at the university Student Rights and Responsibilities web page.

SYLLABUS REVISIONS

This syllabus may be modified as the course progresses should the instructor deem it necessary. Notice of changes to the syllabus shall be made through Canvas and/or class announcement.

TENTATIVE CLASS SCHEDULE (subject to change):

<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Material Covered</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>5/13 — 5/17</td>
<td>Intro, Chap 1</td>
<td>HW1, L1</td>
</tr>
<tr>
<td>2</td>
<td>5/20 — 5/24</td>
<td>Chaps 3 &amp; 4</td>
<td>HW2, L2</td>
</tr>
<tr>
<td>3</td>
<td>5/27 — 5/31</td>
<td>Chaps 4 &amp; 5</td>
<td>HW3, L3</td>
</tr>
<tr>
<td>4</td>
<td>6/3 — 6/7</td>
<td>Chap 7</td>
<td>Midterm, HW4, L4</td>
</tr>
<tr>
<td>5</td>
<td>6/10 — 6/14</td>
<td>Chaps 8 &amp; 9</td>
<td>HW5, L5</td>
</tr>
<tr>
<td>6</td>
<td>6/17 — 6/21</td>
<td>Chaps 9 &amp; 10</td>
<td>HW6, L6</td>
</tr>
<tr>
<td>7</td>
<td>6/24 — 6/28</td>
<td>Chaps 12 &amp; 13</td>
<td>HW7, L7</td>
</tr>
<tr>
<td>8</td>
<td>7/1 — 7/5</td>
<td>Review</td>
<td>Final Exam</td>
</tr>
</tbody>
</table>

IMPORTANT DATES

May 13  First Class Day
May 27  Memorial Day (university closed)
Jun 13  Last day to drop a course with a grade of W for courses a student is not passing
Jul 3   Last class day
Jul 4   Independence Day (university closed)
Jul 5   Final Examination