

# CIS 458 System Security – Fall 2016

## Course Description

Learn the tools needed to protect computer systems from both inside attacks and network based attacks. Theory and applications of various techniques will be explored.

## Course Web Page

Students are responsible for all information posted on the course web page:

<http://www.cis.gvsu.edu/~kalafuta/cis458>

Additionally, Blackboard will be used for posting of grades and electronic submission of assignments when required.

## Instructor

Dr. Andrew Kalafut

**Office Hours:** MWF 11:00 - 11:50 AM, T 10:00 - 10:50 AM, R 2:00 - 2:50 PM

**Office:** C-2-309 MAK

**Telephone:** (616)331-2309

**Email:** kalafuta@gvsu.edu

## Prerequisites

CIS 337 or CIS 457 and admitted to CIS Major

## Required Text

Stallings, William and Brown, Lawrie, Computer Security Principles and Practice (Third Edition).

## Grading

The course grade will be determined approximately as follows: final exam (25%), mid-term exam (25%), lab assignments (30%), lecture assignments (10%), presentation (10%). Course letter grades will be determined according to the following scale:

|     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| A   | A-  | B+  | B   | B-  | C+  | C   | C-  | D+  | D   |
| 93% | 90% | 87% | 83% | 80% | 77% | 73% | 70% | 67% | 60% |

## Topics

The course will be structured approximately as follows. This schedule is subject to change depending on topic interest and speed of coverage. Students are expected to frequently check the more detailed schedule posted on the course web page.

| Week | Topic  |
|------|--|
| 1    | Introduction                                     |
| 2    | Cryptography                                     |
| 3    | Cryptography                                     |
| 4    | Authentication                                   |
| 5    | Access Control                                   |
| 6    | Database Security                                |
| 7    | Malware  |
| 8    | Intrusion Detection                              |
| 9    | Firewalls  |
| 10   | Communication Security                           |
| 11   | Network Security                                 |
| 12   | Software Security                                |
| 13   | Operating System Security                        |
| 14   | Trusted Systems                                  |
| 15   | Presentations                                    |
|      | Final Exam: Monday, December 12, 12:00 - 1:50 PM |

## Policies and Expectations

### Lab Assignments:

Lab Assignments are to be turned in, on blackboard or in hard copy as specified, by the start of class on the specified due date. Some assignments may require an in-lab demonstration, usually within a day of the due date.

### Lecture Assignments:

Written assignments may be take-home or they may be required to be completed in class. You may discuss the questions with others, but your answers are expected to be your own.

### Exams:

The date of exams will be provided at least a week in advance. Additionally, you will be given time in class to ask questions for review. Exams in this course will be closed book. A small amount of notes may be allowed at the discretion of the instructor. Exams must be taken on the specified date and time, they will not be rescheduled except in emergencies.

### Reading:

All assigned reading is expected to be completed before class. You will be responsible for learning the material in the reading. Lecture will not be a duplication of the material in the textbook.

**Attendance:**

Attendance is expected at lecture and lab. Often, information that will help you complete the lab assignment will be conveyed during the lab time. In-class problems will not be made up if you miss class. Points may be deducted from your course grade for excessive absences.

**Participation:**

Active participation will be to your benefit. I may choose to cold call on students.

**Group work:**

Some lab assignments will allow group work. When this is allowed, it will be clearly stated in the assignment description. In this class, you may choose to work alone on group projects, but expectations will not be reduced.

**Late work:**

No points will be awarded for work turned in late, unless arrangements are made, for sufficient reason, in advance of the due date.

**Grade disputes:**

Grades will be posted on blackboard. Any questions regarding posted grades must be raised within 7 days of the grade posting date.

**Academic honesty:**

All exams are to be completed individually. Lab assignments may or may not allow group work as specified in the assignment. All outside resources used, including Internet sources, must be cited. It is never acceptable to post any part of any assignment or project online asking for help. No academic dishonesty will be tolerated. Consequences will include the most severe penalty allowed by GVSU policy. Please read the CIS honesty policy at <http://www.cis.gvsu.edu/academic-honesty>

**Special needs:**

If you need academic accommodations because of a learning, physical, or other disability, please contact Disability Support Resources (DSR) at 331-2490. Furthermore, if you have a physical disability and think you will need assistance evacuating this classroom and/or building in an emergency situation, please make me aware so I can develop a plan to assist you.