

2025 Fall Semester CJ 5378 Malware Analysis
Course Syllabus – Fall 2025

Sul Ross State University
The Homeland Security and Criminal Justice Department

COURSE DESCRIPTION

CJ 5378 Malware Analysis

- This course surveys the fundamentals of malware analysis and investigation techniques.
- You will learn the various types of malicious software.
- This course also builds to add more tools and techniques to your cybercrime investigation toolbox.

COURSE OBJECTIVES

When you finish this course, you will know how to:

- Define and describe the types of malware.
- Identify the methods and techniques used by malware analysts.
- Introduction to static and dynamic analysis.
- Introduction to strings and signatures
- Ability to write a malware analysis report

INSTRUCTOR INFO

[Said Varlioglu](#)

msv20iy@sulross.edu

saidvarlioglu@sulross.edu

Office Hours: Video Calls by appointment

COURSE CALENDAR:

| Module | Begin Date | Topic | Assignments |
|--------|------------|---|---|
| 1 | Week 1 | Introduction to the history of malware and malware analysis | - Discussion Board 1 - Module 1 Assignment |
| 2 | Week 2 | File Metadata and IoC Collection (Indicators of Compromise) | - Discussion Board 2 - Module 2 Assignment |
| 3 | Week 3 | Basics of Anti-malware & EDR Tools | - Discussion Board 3 - Module 3 Assignment |
| 4 | Week 4 | Basics of MITRE ATTACK Framework | - Discussion Board 4 - Module 4 Assignment |
| 5 | Week 5 | Static malware analysis | - Discussion Board 5 - Module 5 Assignment |
| 6 | Week 6 | Dynamic malware analysis | - Discussion Board 6 - Module 6 Assignment |
| 7 | Week 7 | Usage of VirusTotal OSINT Tool [1] | - Discussion Board 7 - Module 7 Assignment |
| - | - | SEMESTER BREAK | No Assignment |
| 8 | Week 8 | Usage of VirusTotal OSINT Tool [2] | - Discussion Board 8 - Module 8 Assignment |
| 9 | Week 9 | Usage of ANY.RUN - online malware analysis service | - Discussion Board 9 - Module 9 Assignment |
| 10 | Week 10 | Usage of Hybrid-Analysis - online malware analysis service | - Discussion Board 10 - Module 10 Assignment |

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|-----------|----------------|---|--|
| 11 | Week 11 | Usage of Joe Sandbox - online malware analysis service | - Discussion Board 11 - Module 11 Assignment |
| 12 | Week 12 | Analysis of malware execution leftovers/logs on Windows OS | - Discussion Board 12 - Module 12 Assignment |
| 13 | Week 13 | Analysis of malware execution leftovers/logs on macOS | - Discussion Board 13 - Module 13 Assignment |
| 14 | Week 14 | Analysis of malware execution leftovers/logs on Memory RAM | - Discussion Board 14 - Module 14 Assignment |
| - | - | - Final Week – Course Evaluation - PowerPoint Presentations as the Final Assignment | - Course Evaluation - Final Presentation |

PERSONAL COMPUTER REQUIREMENT

You are expected to have a personal computer during the course.

COURSE POLICIES

Instructor Communication

Email is the best way to reach me. We can also meet in a video call if you need. The zoom link is above. As an Adjunct Instructor, I do not have an office on campus.

Grading

Your grade in this course will consist of the following categories.

Grading Scale:

- | | |
|------------|-----|
| ▪ 90 - 100 | = A |
| ▪ 80 – 89 | = B |
| ▪ 70 - 79 | = C |
| ▪ 60 – 69 | = D |
| ▪ <60 | = F |

| Grade Book Item | Weights |
|--------------------|-------------|
| Assignments | 70% |
| Discussion Boards | 20% |
| Final Presentation | 10% |
| Total | 100% |

SRSU LIBRARY SERVICES

The Sul Ross Library offers FREE resources and services to the entire SRSU community. Access and borrow books, articles, and more by visiting the library's website, www.library.sulross.edu. Off-campus access requires your LoboID and password. Check out materials using your photo ID. Librarians are a tremendous resource for your coursework and can be reached in person, by email (srsulibrary@sulross.edu), or phone (432-837-8123).

Once you logged in to your Sul Ross Account on Blackboard you should be automatically connected to the library webpage as well. Thus, you can browse the online databases of the University and reach the articles on the reading list.

Syllabus is subject to updates and changes always look to the course announcements and reminders for updates. The faculty member reserves the right to amend this syllabus as needed.

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STUDENTS WITH SPECIAL NEEDS:

ADA (Americans with Disabilities Act) Sul Ross State University (SRSU) is committed to equal access in compliance with Americans with Disabilities Act of 1973. It is SRSU policy to provide reasonable accommodations to students with documented disabilities. It is the student's responsibility to initiate a request each semester for each class. Students seeking accessibility/accommodations services must contact Rebecca Greathouse Wren, LPC-S, SRSU's Accessibility Services Coordinator at 432-837-8203 (please leave a message and we'll get back to you as soon as we can during working hours), or email rebecca.wren@sulross.edu. Our office is located on the first floor of Ferguson Hall (Suite 112), and our mailing address is P.O. Box C-122, Sul Ross State University, Alpine, Texas, 79832.

STUDENT SUPPORT SERVICES AND BLACKBOARD HELP DESK

Sul Ross State University has established a variety of programs to help students meet the challenges of college life. Support to students includes advising, counseling, mentoring, tutoring, supplemental instruction, and writing assistance. For a complete list of academic support services, visit the Student Support Services <https://www.sulross.edu/section/311/student-support-services>. For more information, students are encouraged to contact SSS at (432) 837-9118 or visit Ferguson Hall Room 105. For Blackboard help visit <https://www.sulross.edu/bb> or call 432-837-8523 (M-F 09:00 am-06:00 pm). You can get The Distance Education Handbook at <https://tvpb.sulross.edu/start/index.html>