Course: ENPM696 – Reverse Software Engineering
Semester: Fall 2016
Day(s): Tuesday
Time: 7:00 – 9:40 PM
Location: TBA
Instructor: Dr. Charles Song
Phone: (240) 487-2936
Email: csong@fc-md.umd.edu

Course Description

This course provides in-depth understanding of reverse software engineering concepts and hands-on training with reverse engineering tools, including disassembler, decompiler, and code analyzer. Students will become familiar with both low-level software and the x86 instruction set through binary reversing sessions. This course also provides insights into many subjects such as system security, source code analysis, software design, and program understanding that will be beneficial in a variety of fields.

Grading Policy: The final grade is calculated based on the weighted sum of the scores from the breakdown as follows:

- 4 Homework Assignments 40% (10% each)
- Midterm Exam 20%
- Final Exam 25%
- Student Presentations 10%
- Class Participation 5%

Prerequisites: Students must have prior programming experience, preferably with C/C++.

Textbook(s)

No required/recommended textbook.

Course Outline

The following topics are planned, however changes may occur:

- Introduction
- Operating System
- Assembly Code
- Binary Reversing Tools
- Software Vulnerabilities
- Malware Reversing
- Anti-reversing
- Reversing Java Bytecode
- Dynamic Analysis
- Reversing Source Code
- Program Understanding
Code of Academic Integrity

The University of Maryland, College Park has a nationally recognized Code of Academic Integrity, administered by the Student Honor Council. This Code sets standards for academic integrity at Maryland for all undergraduate and graduate students. As a student you are responsible for upholding these standards for this course. It is very important for you to be aware of the consequences of cheating, fabrication, facilitation, and plagiarism. For more information on the Code of Academic Integrity of the Student Honor Council, please visit http://shc.umd.edu/SHC/HonorPledgeInformation.aspx.