ECE 4112: Tips for Doing Lab Additions

1. Your addition should be based on a software tool and include instructions for installing and using it. The software tool should be closely related to the topic of that week’s lab. A listing of the lab topics is given at the end of this document. Changes to software configurations, e.g. OS configurations, are not sufficient to form the basis for a lab addition. So, something like “We changed a configuration parameter in the OS to allow …. and reran the lab and this is what happened.” are not acceptable. Any addition that is already included as an appendix to the lab is not allowed. It is the students’ responsibility to compare their proposed addition against lab appendices. Finally, software tools that essentially duplicate the functionality of the tools used in the lab are not allowed. Tools should provide some new or improved features compared to the tools from the lab assignment.

2. The software tool must run on the machines in the lab and you must provide evidence that you actually installed the software and ran it there. Screen shots of the tool running in the lab environment are sufficient for this. In rare cases where it is not possible to run a tool in the lab environment but it is a valuable tool for the rest of the class to learn about, I will approve running the addition outside of the lab. These cases must be explicitly approved by me (Prof. Blough).

3. Your lab addition write-up should be in the same format as the actual labs. This means detailed instructions for installing and using the software tool. All of the important features of the tool should be demonstrated. A minimum of 3 questions for students performing the lab addition to answer must be included. The questions must be integrated into the normal flow of the lab (not just included at the end). The write-up should be approximately 3-5 pages long, not including the cover sheet and screen shots. Overly verbose introductions will not be included in page count.

4. Make sure to carefully follow all instructions on the checklist found on the “Lab Additions Cover Sheet” that must be turned in with each lab addition.

5. Lab topics are:
   - Lab 1: Scanners
   - Lab 2: Password cracking and packet sniffing
   - Lab 3: Spoofing and denial of service attacks
   - Lab 4: Firewalls
   - Lab 5: Rootkits
   - Lab 6: Buffer overflow attacks
   - Lab 7: Honeypots
   - Lab 8: Viruses, worms, and WLAN attacks
   - Lab 9: Web security
   - Lab 10: Botnets
   - Lab 11: Tiger team exercise (no lab additions for this)