**MEMORANDUM**

**To:** Laura Jacobsen

School of Teacher Education and Leadership

**From:** Neil Sigmon

**Date:** April 15, 2013

**Re:** Summer Plans To Support the Math Education Master’s Program

For the Math 623 course in algebra that I have taught previously for the program, this is what I will attempt to accomplish to further develop materials for this course.

1. I will make videotape lectures of the sections of my course and have them available online for my students for further reference. Example videos similar to the ones I plan to make that I have made for sections for cryptography textbook can be found at the URL

[http://www.radford.edu/~npsigmon/Maplets/videos.html](https://legacy.radford.edu/owa/redir.aspx?C=3b65b8cc54d14cc090fee88c690e6be1&URL=http%3a%2f%2fwww.radford.edu%2f%7enpsigmon%2fMaplets%2fvideos.html)

These videos will be useful for further online development of the course.

2. I will convert my Maple worksheets with application applets contained within them. If I can obtain funding for MapleNet from a grant source, this will allow students the ability to run these application applets within a Maple worksheet without the burden of having Maple installed on their local machines.

3. To develop some additional materials for the course, with an emphasis towards group theory to supplement the ring theory and its applications I already cover in the course. After covering group basics, I plan to illustrate the use of elliptic curve cryptography, which is an excellent application of groups and a cryptosystem with widespread use today. Developing this material should help align the topics I cover with topics other universities in the state of Virginia may be interested in covering.