Anth 489-501 Analytical Methods in Archaeology and Conservation

Analysis Project and Report – 25% of your grade (125pts possible)

Each student will have the opportunity to display their mastery of the information presented in class through the very thorough analysis of a single artifact. All of the equipment and software needed to complete this study is located in ANTH 108. **It is your responsibility to reserve the time to use this equipment.** Unexcused late reports will be penalized one letter grade per day. Do not wait until the last week of class to do this project! I will work with each of you closely to get this finished on time, but each student will need to devote time outside of normal class time to complete this project.

You will each be given your own artifact to study, likely either a replica projectile point or some kind of conserved iron artifact from the CSS Georgia project. If you have a real artifact you would like to analyze, this can be accommodated, but see me in advance so we can make sure it will be an achievable project in the time frame of this class.

For each artifact, the following analysis will be done and documented in a report.

1. Microscopic photography with a digitally calibrated composite photo to account for the narrow focal range. Your report should carefully analyze this photograph, highlighting any and all significant information gained. I should not be able to discover anything in your photo that you do not mention.

2. XRF spectral analysis with a full report of elements present (2pts extra credit for calibrated and sourced data!). Your report should detail which elements are significant for research and why, as well as how you would use this data in a study. I should not be able to suggest any way to use this information that you do not mention.

3. Artifact photography: Scaled, clear, focused, and well-lit photographs of your artifact from each view discussed in class. These photographs must be of curation record keeping quality.

4. Artifact sketch: The object should be drawn to scale; likely 1:1, but exceptions can be made depending on the artifact. Each view must be drawn. Artistic flair is not necessary, but each drawing should be a highly accurate representation of the object.

5. 3D Modeling: The object will be 3D modelled with the FARO arm laser scanner, the Next Engine laser scanner, and photogrammetry using Agisoft Photoscan. Each scan will be aligned and cleaned, and the resultant water-tight models will be saved as .obj files and turned in with the report. Your report should highlight the strengths and weaknesses of each of the three techniques, analyze and compare the results, and discuss the long term curation of the models. The 3D models produced with the FARO arm and photogrammetry will both be 3D printed and turned in with the report. (You can come get them after the grades are done!)