## Anthropology/Biology 3138: 2017 Introduction to DNA Molecular Methods

Instructor: Carney Matheson

Office Hours: BB2001E (Braun Building) 343 8743 or <a href="mailto:cmatheso@lakeheadu.ca">cmatheso@lakeheadu.ca</a>

Time & Place: Lecture/Laboratory Thursday 9:30 am – 1:30 pm

Marks & Grading: Lab Reports 50%

Midterm Exam 15% Final Exam 20% Assignment 15%

**Schedule:** 

September 7: Lecture 1 Basic Techniques

September 14: Lecture 2 The Nature of DNA

Laboratory 1 Laboratory Safety/ Basic Lab Techniques

September 21: Lecture 3 Extraction Chemistry

Laboratory 2 The Nature of DNA

September 28: Lecture 4 Purification Chemistry

Laboratory 3 Extraction Methodologies

October 5: Lecture 5 Polymerase Chain Reaction

Laboratory 3 Extraction Methodologies

October 12: Mid-Semester Study Break

October 19: Midterm

October 26: Lecture 6 Electrophoresis

Laboratory 4 PCR Amplification

November 2: Lecture 7 DNA Detection and Quantification

Laboratory 4 PCR Amplification

November 9: Lecture 8 DNA Sequencing

Laboratory 5 DNA Sequence Analysis

Laboratory 6 Real time PCR

November 16: Lecture 9 DNA Data Analysis

Laboratory 5 DNA Sequence Analysis

Laboratory 6 Real time PCR

November 23: Laboratory 5 DNA Sequence Analysis

Laboratory 6 Real time PCR

November 30: Lab and Final Exam