

Biology 4900/7931 Course Schedule, Spring 2010

April 26 INTRODUCTION	April 27 DNA EXTRACTION	April 28 PCR	April 29 RNA EXTRACTION	April 30 RT-PCR/LONG PCR
<u>AM (Classroom)</u> Course Syllabus Research Project Introductions <u>PM (Lab)</u> Orientation and safety Pipetting skills Practice calculations	<u>AM</u> Lec: DNA extraction Lab: Begin DNA extraction Pour agarose gels <u>PM (Lab)</u> Finish DNA extraction Gel electrophoresis Spectrophotometry	<u>AM</u> Lec: PCR methods Lab: Set up PCR reactions Pour agarose gels <u>PM (Lab)</u> Gel electrophoresis PCR purification	<u>AM</u> Lec: Nucleic acids Lab: RNA extraction Pour agarose gels <u>PM (Lab)</u> Gel Electrophoresis Spectrophotometry	AM Lec: PCR applications Lab: Set up RT-PCR Pour agarose gels <u>PM (Lab)</u> Gel Electrophoresis Set up long PCR
May 3 Molecular CLONING	May 4 Molecular CLONING	May 5 DNA SEQUENCING	May 6 SEQUENCING	May 7 BIOINFORMATICS
<u>AM</u> Lec: Recombinant DNA Lab: dA tailing Set up ligations <u>PM (Lab)</u> Transformation and Plating	<u>AM</u> Lec: Enzymes in molecular biology Lab: Select and PCR colonies Pour agarose gels <u>PM (Lab)</u> Gel electrophoresis PCR purification	<u>AM (Lec)</u> Sanger sequencing <u>PM (Lab)</u> Set up sequencing reactions Data entry into template	<u>AM</u> Lec: Now-gen sequencing technologies Lab: Pour agarose gels <u>PM (Lab)</u> Gel electrophoresis of long PCR products Operation of sequencer	<u>AM (Classroom)</u> Bioinformatics Lecture (Dr. Wareham from CS) <u>PM (Classroom)</u> Test Gattaca screening
May 10 DATA ANALYSIS	May 11 DATA ANALYSIS	May 12 DATA ANALYSIS	May 13 WORK ON REPORTS	May 14 WORK ON REPORTS
<u>AM (Classroom)</u> Lec: Data analysis goals & Intro. to Sequencher <u>PM SN4117</u> Sequence editing	MEGA phylogenies and dN/dS ratios	Analysis of CHIP data		9-10 am: Graduate Student Presentations Rest of day: Computer room – finish projects