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| **Date** | **Topic** | **Major Assignments due** |
| Week 1:  8/31 – 9/4 | **Lecture**: Course Introduction and the diversity of life | * Syllabus quiz * Discussion introduction |
| **Lab**: Course introduction and scientific virtues |  |
| Week 2:  9/7 – 9/11 | **Lecture**: Chemistry of life | * Plagiarism quiz * Chapter 2 Discussion 1 |
| **Lab: NO CLASS (Labor Day)** | * Lab notebook set up |
| Week 3:  9/14 – 9/18 | **Lecture**: Macromolecules | * Chapter 3 * Discussion 1 follow-up * Concept check 1 * Scientific literacy topic due |
| **Lab**: Experimental design | * Lab 3 Lab notebook * Experimental design lab * DNA barcoding survey |
| Week 4:  9/21 – 9/25 | **Lecture**: Exam 1 |  |
| **Lab**: DNA extraction | * Lab 4 lab notebook * DNA extraction lab |
| Week 5:  9/28 – 10/2 | **Lecture**: Evolution and organization of cells | * Chapter 4 * Discussion 2 |
| **Lab**: Polymerase chain reaction | * Lab 5 lab notebook * PCR lab |
| Week 6:  10/5 – 10/9 | **Lecture**: Cell membrane Transport and communication | * Chapter 5 * Chapter 8 * Discussion 2 follow-up * Concept check 2 |
| **Lab**: Gel electrophoresis | * Lab 6 lab notebook Gel electrophoresis lab |
| Week 7:  10/12 – 10/16 | **Lecture**: Exam 2 | * Mid-semester reflection |
| **Lab**: DNA sequencing and barcoding | * Lab 7 lab notebook * DNA sequencing lab * ***DNA barcoding assignment*** |
| Week 8:  10/19 – 10/23 | **Lecture**: Energy and the environment | * Chapter 6 Part 1 * Energy in the environment * Discussion 3 |
| **Lab**: Introduction to pollination | * **DNA barcoding lab quiz** * Pollination introduction questions |
| Week 9:  10/26 -10/30 | **Lecture**: Cell respiration and photosynthesis | * Chapter 6 Part 2 * Chapter 7 * Discussion 3 follow-up * Concept check 3 |
| **Lab**: Assessing pollinators in Prince George County with excel | * Lab 9 lab notebook * Excel lab |
| Week 10:  11/2 – 11/6 | **Lecture:** Scientific literacy presentations | * **Scientific literacy final assignment** |
| **Lab**: Collecting DNA sequences and plant pollinator traits | * Lab 10 lab notebook * Plant trait table DNA sequence FASTA file Pollination infographic |
| Week 11:  11/9 – 11/13 | **Lecture**: Exam 3 |  |
| **Lab**: Phylogenetic analysis | * Lab 11 lab notebook * Phylogenetic tree |
| Week 12:  11/16 – 11/20 | **Lecture**: Cell division | * Chapter 14 * Discussion 4 |
| **Lab**: Interpreting analysis and phylogenetic signal | * Results summary assignment * Poster set up file |
| Week 13:  11/23 – 11/27 | **Lecture**: Heredity | * Chapter 15 * Discussion 4 follow-up * Concept check 4 |
| **Lab**: Designing scientific posters | * Poster rough draft |
| Week 14:  11/30 – 12/4 | **Lecture**: DNA structure and the central dogma | * Chapter 9 * Chapter 10 * Semester reflection |
| **Lab**: Poster peer review | * Poster peer review * Scientific virtues reflection |
| Week 15:  12/7 – 12/11 | **Lecture**: Review week |  |
| **Lab**: Semester project wrap up | * **Poster final draft** * Video summary of project |
| Week 16:  12/14 – 12/18 | **Lecture**: no class |  |
| **Lab**: Graphing in excel | * Pollinators in Maryland graph |
|  | **Final exam** |  |