BIOSC 0068 SEA-PHAGES 2 Course Schedule

**Note:** Weeks begin on **Monday** and end **Sunday** evening.  All assignments are due by the specified due date in Canvas. Research Team assignments are designated as (TEAM); all other assignments are individual.

| **Week** | **Date** | **Topic** | **Assignments / Activities** |
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| 1 | Week of 1/10 | Welcome and Introduction to the Course  Introduction to prokaryotic genetics and *Gordonia* host range project  Lab skills practice |  |
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| 2 | Week of 1/17 | ***Lab does not meet-Martin Luther King Day***  ***Online activity*** |  |
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| 3 | Week of 1/24 | Using GeneMark to evaluate coding potential of predicted phage genes  Host Range Exp 1: Generate single-plaque lysates of class phages (pick-a-plaque assay) | Journal Club 1 assignment due (INDIVIDUAL) |
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| 4 | Week of 1/31 | Perform BLAST analyses of predicted genes  Examine plates from Week 3; flood best webbed plate | Annotation: Coding potential evaluation due at the beginning of lab (TEAM) |
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| 5 | Week of 2/7 | Evaluate Starterator data  Harvest lysate  Host Range Exp 2: Perform spot titer on *Gordonia terrae* and *Gordonia rubripertincta* | Annotation: BLAST evaluation due at the beginning of lab (TEAM) |
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| 6 | Week of 2/14 | Evaluate and/or confirm functional assignments using HHPred  Compare your phage’s genome to previously annotated phage genomes using Phamerator  Collect data on Host Range Exp 2  Host Range Exp 3: Perform spot titer on *Gordonia terrae* and *Gordonia westfalica* | Annotation: Start site selection due at the beginning of lab (TEAM) |
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| 7 | Week of 2/21 | Discuss guiding principles  Discuss unusual phage genome characteristics (frameshifts, tRNAs, etc)  Collect data on Host Range Exp 3  Host Range Exp 4: Perform spot titer on *Gordonia terrae* and *Gordonia lacunae* | Annotation: Functional assignment evaluation due at the beginning of lab (TEAM)  Host range: Host Range Exp 2 Data Card due at the beginning of lab (INDIVIDUAL) |
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| 8 | Week of 2/28 | Finalize annotation and submit for peer review  Collect data on Host Range Exp 4 | Annotation: Draft genome annotation due at the end of lab (TEAM)  Host range: Host Range Exp 3 Data Card due at the beginning of lab (INDIVIDUAL) |
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| 9 | Week of 3/7 | ***No class-Spring Break*** |  |
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| 10 | Week of 3/14 | Quality control review of peer annotated genomes | Host range: Host Range Exp 4 Data Card due at the beginning of lab (INDIVIDUAL) |
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| 11 | Week of 3/21 | Quality control review of peer annotated genomes | Annotation: Quality control review of peer genome annotation due at the end of lab (TEAM) |
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| 12 | Week of 3/28 | Review to improve annotation | Annotation: author list due at the end of lab (INDIVIDUAL) |
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| 13 | Week of 4/4 | Finalize annotation | Annotation: final genome annotation due at the end of lab (TEAM) |
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| 14 | Week of 4/11 | Work on final presentation |  |
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| 15 | Week of 4/18 | Final presentations and end-of course celebration of research | Final Presentation content slides due at the beginning of lab (TEAM)  Presentations (Individual) |