

## Sample SEA-PHAGES Syllabus for 15-week Semesters

Weeks	<b>1<sup>st</sup> Semester: Phage Discovery</b>
<b>1-4</b>	Students isolate and purify phages from environmental samples
<b>5-6</b>	Students amplify purified phage
<b>7-9</b>	Students isolate phage genomic DNA and perform restriction digest analyses of genomic DNA samples.
<b>8-10</b>	Students prepare grids to visualize phage morphology by electron microscopy
<b>9-12</b>	Students evaluate the quality of their DNA samples, and as a group, decide which genome will be submitted for sequencing
<b>12-15</b>	Students prepare samples of their phage lysates for archiving, and input information about their phage samples on the phage database

Weeks	<b>2<sup>nd</sup> Semester - Bioinformatics</b>
<b>1-4</b>	Genome files are finished and oriented. Faculty and students discuss annotation strategies
<b>5-6</b>	Students generate draft annotations and evaluate overall genome structure
<b>7-10</b>	Students perform comparative genomics analyses and complete genome annotations
<b>11-13</b>	Students pursue post-annotation experimentation of their phages.
<b>14-15</b>	Student-annotated files are merged, finalized, and reviewed by the Hatfull Lab for future submission to GenBank