

<b>Learning Objectives</b>	<p>Participants will be able to:</p> <ul style="list-style-type: none"> <li>• Characterize and investigate mycobacteriophage genomes. This includes the details of gene calling evaluation, functional assignments, and preparing a final product of a submission file that meets QC requirements.</li> <li>• Install and use the software for annotation/analyses of mycobacteriophages. The software includes DNA Master, Phamerator, and other web-based tools.</li> <li>• Identify the basic concepts that underpin the bioinformatics of phage biology that is relevant to their students.</li> <li>• Devise a systematic plan for implementation of phage genomics in their classroom.</li> </ul>
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<b>Pre-req</b>	<p>Participants will bring a computer with all software installed and tested. See computer requirements and software installation information at <a href="http://seaphages.org/software/">http://seaphages.org/software/</a>.</p>
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	Time	Location	Topic
<b>Monday   December 7</b>	2:00-4:00p	<i>Conference Center</i>	<b>Registration</b> ( <i>Guests may get lunch in the Dining Room between 11:30a-1:30p by showing their registration badge to the cashier</i> )
	4:00	<i>Main Auditorium</i>	<b>Welcome: Via video from Graham Hatfull</b>
	4:15	<i>Main Auditorium</i>	<b>Workshop Overview &amp; Software Orientation*</b>
	5:30	<i>Dining Room</i>	<i>Dinner</i>
	6:45	<i>Main Auditorium</i>	<b>Getting Started: Introduction to Mycobacteriophage NaSiaTalie (including Auto-Annotation)*</b>
	7:30	<i>Main Auditorium</i>	<b>BLASTing the Genome*</b>
	8:00	<i>Pilot</i>	<b>Social</b>

	Time	Location	Topic
<b>Tuesday   December 8</b>	7:15a	<i>Dining Room</i>	<i>Breakfast</i>
	8:00	<i>Main Auditorium</i>	<b>Gene Calling Guidelines*</b>
	9:00	<i>Main Auditorium</i>	<b>Add, Delete, and Modify a Gene*</b>
	10:00	<i>Outside Mn. Aud.</i>	<i>Break</i>
	10:15	<i>Main Auditorium</i>	<b>Calling the Genes*</b>
	11:00	<i>Main Auditorium</i>	<b>Choosing Starts: Tools and Considerations*</b>
	12:30p	<i>Dining Room</i>	<i>Lunch</i>
	1:15	<i>D124&amp;D125</i>	<b>Group Exercise: Annotation and Analysis of Genome</b>
	2:30	<i>Main Auditorium</i>	<b>Annotation Tools at your disposal: Beyond DNA Master*</b>
	3:00	<i>Outside Mn. Aud.</i>	<i>Break</i>
	3:15	<i>D124&amp;125</i>	<b>Group Exercise: Annotation and Analysis of Genome (continued)</b>
	5:30	<i>Dining Room</i>	<i>Dinner</i>
	6:45	<i>Main Auditorium</i>	<b>Inside the Black Box: Assembling and Finishing*</b>
7:45	<i>Pilot</i>	<b>Social</b>	

Wednesday   December 9	Time	Location	Topic
	7:15a	Dining Room	Breakfast
	8:00	Main Auditorium	Assigning Functions*
	9:00	D124&125	Group Exercise: Annotation and Analysis of Genome (continued)
	10:15	Outside Mn. Aud.	Break
	10:30	D124&125	Group Exercise: Annotation and Analysis of Genome (continued)
	12:30p	Dining Room	Lunch
	1:15	D124&125	Group Exercise: Annotation and Analysis of Genome (continued)
	3:00	Outside Mn. Aud.	File posted   Break
	3:15	Main Auditorium D124&125	Merge I and Examining Merged Data* Group Exercise: Resolving Discrepancies
	5:30	Dining Room	Dinner
	6:45	Main Auditorium	Graham Hatfull TBA*
7:45	Great Hall	Informal Discussions at the Pilot	

Thursday   December 10	Time	Location	Topic
	7:15a	Dining Room	File posted   Breakfast
	8:00	Main Auditorium	Merge II* Resolving Discrepancies in the Merged Data: Several case studies*
	9:00	D124&125	Group Exercise: Resolving Discrepancies
	10:15	Outside Mn. Aud.	Break
	10:30	D124&125	Group Exercise: Resolving Discrepancies
	11:45	Main Auditorium	Resolving Discrepancies: Addressing your questions*
	12:30p	Dining Room	Lunch
	1:15	Main Auditorium	Phamerator Analyses*
	2:00	D124&125	Group Exercise: Phamerator Exercise
	3:00	Outside Mn. Aud.	Break
	3:15	Main Auditorium	Elective: Post Annotation Analyses & Experiments*
	5:30	Dining Room	Dinner
6:45	The Pilot	Informal discussions at the Pilot	

	<b>Time</b>	<b>Location</b>	<b>Topic</b>
Friday   December 11	7-8:00a	<i>Conference Center</i>	<b>Room Checkout</b> ( <i>Participants may store their luggage in the Conference Center</i> )
	7:15	<i>Dining Room</i>	<i>Breakfast</i>
	8:00	<i>Main Auditorium</i>	<b>Final file formatting requirements and submission for QC before May 15, 2016</b>
	8:30	<i>Main Auditorium</i>	<b>Best Classroom Practices to Improve Genome Annotations*</b>
	8:35	<i>D124&amp;125</i>	<b>Group Discussions: Best Classroom Practices to Improve Genome Annotations*</b>
	9:15	<i>Main Auditorium</i>	<b>Reporting of Group Discussion Information</b>
	10:00	<i>Outside Mn. Aud.</i>	<i>Break</i>
	10:15	<i>Main Auditorium</i>	<b>Panel: Examples of Successful Bioinformatics Implementation*</b>  Panelists: <i>Kirk Anders, Gonzaga University</i> <i>Steve Cresawn, James Madison University</i> <i>Nick Edgington, Southern Connecticut State University</i> <i>Welkin Pope, University of Pittsburgh</i>
	11:45	<i>Main Auditorium</i>	<b>Submit to GenBank, Closing Remarks and Announcements</b>
12:00p	<i>Main Auditorium</i>	<b>Adjournment</b>   <i>Bagged Lunch available for early shuttle riders (Pick up at Conference Center). All other guests should go through the line in the Dining Room.</i>	

\*Session will be streamed Eastern Standard Time