Phage Hunters Advancing Genomics and Evolutionary Science (PHAGES)
Introductory Biology Research Laboratory II – Spring 2013
BIOL 1755.501, TR 9:00-10:50am and other times as needed
BIOL 1755.502, TR 4:00-5:50pm and other times as needed

INSTRUCTORS: .501 Dr. Lee Hughes
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Office Hours: By appointment

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TEACHING ASSISTANT:
.501 Stephanie Simon
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Office Hours: Mon. & Wed. 10-11:30am

.502 Katherine Deming
Office: Life Sci B130, katherinedeming@my.unt.edu
Office Hours: Mon. & Wed. 1:15-2:45pm or by appointment.

Textbook: “NGRI Phage Resource Guide” by the Howard Hughes Medical Institute
and DNA Master Annotation Guide
(these manuals provided to students for use during the course)

PHAGES Laboratory Courses:
This is the second course of a two course sequence (BIOL 1750 for 2 SCH in the fall semester and
BIOL 1755 for 1 SCH in the spring semester) in which research activities on bacteriophage genomics will be
conducted. These two laboratory courses will serve as replacements for the normal BIOL 1730 and 1740
laboratories in your major and may also be used as a Discovery course in the UNT core curriculum.

Due to the nature of experimental research, the course syllabus for this laboratory will be flexible.
Attendance is required at all scheduled laboratory meetings and on-time arrival is critical (three tardies
will equal one absence in grading). As well, students should expect to attend additional open laboratory
times as needed each week depending on the progress of their particular phage projects.

Laboratory Goals:
The goals for the spring semester include the following:
• Each student will learn to use the bioinformatics tools necessary to finish and annotate bacteriophage
  genomes.
• Each student will complete a positional and functional annotation of assigned segments of previously
  uncharacterized bacteriophage genomes.
• Each student will be able to explain and justify their annotations to their classmates and, as a group,
  reach consensus on the final annotations of complete bacteriophage genomes.
• The class as a whole will prepare annotated bacteriophage genomes for submission to GenBank.
• The class as a whole will assist in preparation of a poster for presentation at the SEA Research
  Symposium.
• Each student will prepare a written report describing their annotations and any additional
  experimental research conducted during the course.
STUDENTS WITH DISABILITIES:

The University of North Texas makes reasonable academic accommodation for students with disabilities. Students seeking accommodation must first register with the Office of Disability Accommodation (ODA) to verify their eligibility. If a disability is verified, the ODA will provide you with an accommodation letter to be delivered to faculty to begin a private discussion regarding your specific needs in a course. You may request accommodations at any time, however, ODA notices of accommodation should be provided as early as possible in the semester to avoid any delay in implementation. Note that students must obtain a new letter of accommodation for every semester and must meet with each faculty member prior to implementation in each class. For additional information see the Office of Disability Accommodation website at http://www.unt.edu/oda. You may also contact them by phone at 940.565.4323.

GRADING:

Your course grade will consist of the following elements:

12% Attendance (4% subtracted per absence or 3 tardies; more than 3 absences may result in failure of the course)
36% Laboratory Notebooks (daily checks)
12% Concept Quizzes (3 x 4% each, will be announced 1 class meeting in advance)
25% Project Reports and Presentations on annotation work (number and due dates will vary)
15% Poster presenting your work to date (due February 28)
100% Overall % Grade (Letter grades will be assigned on a typical scale: 90+=A, 80-89=B, 70-79=C, 60-69=D, <60=F)

TENTATIVE LABORATORY SCHEDULE

BIOL 1755 – Introductory Biology Research Laboratory II

Due to the unpredictable nature of the genome analysis aspects of this course, a specific timeline for most course activities cannot be determined in advance. The schedule below is an overview of the major events of the course. Specific readings and assignments will be given at each class meeting.

<table>
<thead>
<tr>
<th>Meeting</th>
<th>Date</th>
<th>Topic</th>
<th>Readings</th>
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<tbody>
<tr>
<td>1</td>
<td>Jan. 15</td>
<td>Orientation to “In Silico” course organization</td>
<td>“Before You Start - Again”</td>
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<td>2</td>
<td>Jan. 22</td>
<td>Begin “Analyze” section of course</td>
<td>Analyze Part A and Part B</td>
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<td>TBA</td>
<td>Begin “Discover” section of course</td>
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<td>Feb. 28</td>
<td>Poster Presentation Due</td>
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<td>Mar. 12 &amp; 14</td>
<td>No meeting – Spring Break</td>
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<td>TBA</td>
<td>Begin “Share” section of course</td>
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<td>Apr. 30</td>
<td>Final Reports Due</td>
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<td>May 2</td>
<td>Last Class Meeting</td>
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Other Dates of Importance:
March 8, 2013 – Applications for posters and papers due for University Scholars Day
March 15, 2013 – Submission due for Texas Branch-American Society for Microbiology Spring Meeting
April 4-6, 2013 – Texas Branch-American Society Microbiology Spring Meeting, New Braunfels, TX
April 18, 2013 – University Scholars Day
June 7-9, 2013 – PHAGES Symposium, Ashburn, VA