INSTRUCTORS:  
Dr. Lee Hughes  
Office: BIOL A205, (940) 565-4137, lhughes@unt.edu  
Office Hours: Mon. 10-11am, Tues. 9-10am, and Wed. 11am-12pm  
(Other times by appointment)  
Dr. Robert C. Benjamin  
Office: BIOL A411, (940) 565-3217, benjamin@unt.edu  
Office Hours: By appointment  

TEACHING ASSISTANT: Stephanie Simon  
Office: BIOL A417, (940) 369-8247, StephanieSimon@my.unt.edu  
Office Hours: Tues. & Thurs. 9-10:30am  

Textbook:  
“NGRI Phage Resource Guide” by the Howard Hughes Medical Institute  
(this manual is provided to students for use during the course)  

NGRI Laboratory Courses:  
The National Genomics Research Initiative (NGRI) is an undertaking of the Howard Hughes Medical Institute’s Science Education Alliance. NGRI is a national experiment in both research and education that revolves around a research course in genomics for undergraduate students. UNT students who participate in this program will enroll in a two course sequence (BIOL 2910 for 2 SCH in the fall semester and 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.  

Due to the nature of experimental research, the course syllabus for this laboratory will be more flexible than in a normal course. 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.
STUDENTS WITH DISABILITIES:
Students with disabilities should register with the UNT Office of Disability Accommodations and contact their instructor by the 12th class day to inform them as to their specific needs. Every effort will be made to provide reasonable accommodations.

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 (4 x 3% 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 March 2)
- 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 2910.714 – PRINCIPLES OF BIOLOGY II NGRI LABORATORY

Due to the flexible and unpredictable nature of the genome analysis aspects of this course, a specific timeline for most course activities cannot be determined in advanced. 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>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Jan. 19</td>
<td>Orientation to “In Silico” course organization</td>
<td>“Before You Start - Again”</td>
</tr>
<tr>
<td>2</td>
<td>Jan. 24</td>
<td>Begin “Analyze” section of course</td>
<td>Analyze Part A and Part B</td>
</tr>
<tr>
<td></td>
<td>TBA</td>
<td>Begin “Discover” section of course</td>
<td>TBA</td>
</tr>
<tr>
<td></td>
<td>Mar. 2</td>
<td>Poster Presentation Due</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mar. 14&amp; 16</td>
<td>No meeting – Spring Break</td>
<td></td>
</tr>
<tr>
<td></td>
<td>TBA</td>
<td>Begin “Share” section of course</td>
<td>TBA</td>
</tr>
<tr>
<td></td>
<td>May 3</td>
<td>Final Reports Due</td>
<td></td>
</tr>
<tr>
<td></td>
<td>May 5</td>
<td>Last Class Meeting</td>
<td></td>
</tr>
</tbody>
</table>

Other Dates of Importance:

March 4, 2011 – Applications for posters and papers due for University Scholars Day
April 14, 2011 – University Scholars Day
June 10-12, 2011 – NGRI Symposium, Ashburn, VA