

## Biology-219, The Living Cell (Fall 2006)

|  |  |              |       |             |              |        |              |
|--|--|--------------|-------|-------------|--------------|--------|--------------|
| <b>Requirements</b>  | BIOL. 115 (or BIOL. 101-104) and 117, and CHEM. 115 or 117.  |              |       |             |              |        |              |
| <b>Scope</b>   | This course aims to integrate contemporary cell biology and biochemistry. We will discuss energetics, protein structure/function, structure and replication of DNA, gene expression, genomic organization, molecular basis of heredity, cell division, etc.  |              |       |             |              |        |              |
| <b>Lectures</b>  | MWF: 8:30-9:20 or 9:30-10:20. You are expected to attend all lectures. Failure to attend will be detrimental to your grade. Lab attendance is mandatory. <b>Three unexcused absences</b> from the lab will result in an automatic " <b>drop</b> " from the course. There is limited-to-no opportunity to make-up a missed lab.   |              |       |             |              |        |              |
| <b>Professors</b>  | Dr. Philip Keeting, 4214 Life Sciences Building, 293-5201 x 31529.<br><b>pkeeting@wvu.edu</b> . Office Hrs: M+W (10:45-11:30); R (11:00-12:00).<br><br>Dr. David Ray, 5102 Life Sciences Building, 293-5201 x 31454.<br><b>david.ray@mail.wvu.edu</b> . Office Hrs: MTW (1:00-2:00)  |              |       |             |              |        |              |
| <b>Textbook and Lecture Notes</b>  | Cell and Molecular Biology, 5 <sup>th</sup> Edition, G. Karp, Wiley, ISBN978-0-47004217-5<br><b>PLS NOTE-</b> a binder edition should be available at bookstore at a reduced price.  |              |       |             |              |        |              |
| <b>Exams (G15-LSB)</b>   | 4 exams (multiple choice format) worth 100 points each (see schedule). Exam 4 will <b>NOT</b> be cumulative.   |              |       |             |              |        |              |
| <b>Grading</b>   | <p>The final grade will be computed as follows:</p> <table style="margin-left: 40px;"> <tr> <td>Exams (1-4):</td> <td>= 400</td> </tr> <tr> <td>Laboratory:</td> <td>= <u>100</u></td> </tr> <tr> <td>Total:</td> <td>= <b>500</b></td> </tr> </table> <p>Scores calculated as a % of the 500 available points (Only a single letter grade will be issued). Grades will be determined as:</p> <p style="text-align: center;"><b>A</b> (90-100%), <b>B</b> (80-89%), <b>C</b> (70-79%), <b>D</b> (56-69%), <b>F</b> (≤55%)</p> <p>Exams will be "curved" using the class median to insure a minimum median score of 72. The cumulative score will be rounded off rather than the scores on individual exams. With the exception of computational errors, you have 10 working days after grades are posted to argue for extra points. After that, the grade is final.</p> <p>The only yardstick for assigning grades is your performance on the exams + labs. There are no allowances (e.g., credit for extra readings), and no individual exam grade will be waived. Make-up exams will <b>ONLY</b> be given to those who present documentation explaining their absence immediately upon their return to class. Students who miss an exam without a valid excuse will receive a <b>ZERO</b> for that exam. You must earn a <b>passing grade (≥56%) in both lecture &amp; lab</b> to receive a passing grade.</p> | Exams (1-4): | = 400 | Laboratory: | = <u>100</u> | Total: | = <b>500</b> |
| Exams (1-4):   | = 400  |              |       |             |              |        |              |
| Laboratory:  | = <u>100</u>   |              |       |             |              |        |              |
| Total:   | = <b>500</b>   |              |       |             |              |        |              |
| <b>Topics (pg. 2)</b>  | Topics and their corresponding dates are issued for general information, and deviations from the schedule may occur. The Instructors reserve the right to make corrections and/or changes, and you will, of course, be informed about these.   |              |       |             |              |        |              |
| <b>Evacuation Plan</b>   | In the event of an emergency, leave the classroom in an orderly manner. Leave the building through the nearest outside door and quickly move as far away as possible. Do not gather near building or parking lots.   |              |       |             |              |        |              |
| <p><i>WVU is committed to social justice. We concur with this commitment and will maintain a positive learning environment based upon open communication, mutual respect, and non-discrimination. Our University does not discriminate on the basis of race, sex, age, disability, veteran status, religion, sexual orientation, color or national origin. If you are a person with disability and anticipate needing any type of accommodation in order to participate in this class, please advise us as soon as possible in order that appropriate arrangements can be made through the office of Disability Services (293-6700).</i></p> |  |              |       |             |              |        |              |

| <b>Date</b> | <b>Topic</b>                          | <b>Chapter, pages</b>         |
|-------------|---------------------------------------|-------------------------------|
|             | <b>Dr. Keeting's Section</b>          |                               |
| 08-18       | Enzymes, energy                       | <b>Ch 3</b> 85-116            |
| -20         | -continued-                           |                               |
| -22         | -continued-                           |                               |
| -25         | -continued-                           |                               |
| -27         | Mitochondria, electron transport      | <b>Ch 5</b> 179-206; 208-210  |
| -29         | -continued-                           |                               |
| 09-01       | <b>Labor Day</b>                      |                               |
| -03         | -continued-                           |                               |
| -05         | -continued-                           |                               |
| -08         | -continued-                           |                               |
| -10         | Cell cycle                            | <b>Ch 14</b> 570-578          |
| -12         | -continued-                           |                               |
| -15         | <b>EXAM 1 (Ch 3, 5, 14)</b>           |                               |
| -17         | Cell communication                    | <b>Ch 15</b> 616-641; 645-657 |
| -19         | -continued-                           |                               |
| -22         | -continued-                           |                               |
| -24         | -continued-                           |                               |
| -26         | -continued-                           |                               |
| 29          | -continued-                           |                               |
| 10-01       | Cancer                                | <b>Ch 16</b> 662-682          |
| -03         | -continued-                           |                               |
| -06         | -continued-                           |                               |
| -08         | <b>EXAM 2 (Ch 15, 16)</b>             |                               |
|             | <b>Dr. Ray's Section</b>              |                               |
| -10         | The Nature of the Gene and the Genome | 10                            |
| -13         |                                       | 10                            |
| -15         |                                       | 10                            |
| -17         |                                       | 10                            |
| -20         |                                       | 10                            |
| -22         | Transcription and Translation         | 11                            |
| -24         |                                       | 11                            |
| -27         |                                       | 11                            |
| -29         |                                       | 11                            |
| -31         |                                       | 11                            |
| 11-03       | Review                                |                               |
| -05         | <b>EXAM 3</b>                         |                               |
| -07         | Control of Gene Expression            | 12                            |
| -10         |                                       | 12                            |
| -12         |                                       | 12                            |
| -14         |                                       | 12                            |
| -17         |                                       | 12                            |
| -19         | DNA Replication and Repair            | 13                            |
| -21         |                                       | 13                            |
| 24-28       | <b>Thanksgiving Break</b>             |                               |
| 12-01       |                                       | 13                            |
| -03         |                                       | 13                            |
| -05         | Review                                |                               |
|             | <b>EXAM-3, 8:30-section only from</b> |                               |
|             | <b>EXAM-3, 9:30-section only from</b> |                               |