

**BIOCHEMISTRY 100**  
**ELEMENTARY BIOCHEMISTRY**  
**Fall 2004**

**Lectures: MWF 12:10 - 1:00 PM in Life Sciences 1500**  
**Discussion & Quiz Section: Tuesdays**

|                                       |                              |                                    |                              |
|---------------------------------------|------------------------------|------------------------------------|------------------------------|
| <b><u>Instructors:</u></b>            | <b><u>Faculty Office</u></b> | <b><u>Faculty Office Hours</u></b> | <b><u>E-MAIL Address</u></b> |
| H. L. Henry<br>(Instructor in charge) | 5436 Boyce Hall              | Tues, Fri. 11 AM-12 PM             | helen.henry@ucr.edu          |
| A.W. Norman                           | 5456 Boyce Hall              | Thurs, Fri. 11 AM-12PM             | anthony.norman@ucr.edu       |

|                                   |                      |                               |
|-----------------------------------|----------------------|-------------------------------|
| <b><u>Teaching Assistants</u></b> | <b><u>Office</u></b> | <b><u>TA Office Hours</u></b> |
| Ronald Dumpit                     | 1303 Webber Hall     | TBA                           |
| Kelly Williams                    | 1303 Webber Hall     | TBA                           |

**Required Textbook:** **BIOCHEMISTRY, 4th edition**, by M. K. Campbell & S. Farrell; Thomson Brooks/Cole Publishers  
(Available in the UCR Bookstore)

**ilearn:** Lecture notes, homework assignments, and other very useful information will be posted on ilearn:  
<http://ilearn.ucr.edu>. If you've never been to ilearn.ucr.edu you should go here for introductory information:  
<http://scs.ucr.edu/services/blackboard>

**Point Distribution:**

| Instructor          | Number of Lectures | On-line Homework |               | Discussion Section Quiz (#) | Midterm #1 (8 lectures) Points | Midterm #2 (9 Lectures) Points | Midterm #3 (7 Lectures) Points | FINAL Points | Total Points |
|---------------------|--------------------|------------------|---------------|-----------------------------|--------------------------------|--------------------------------|--------------------------------|--------------|--------------|
|                     |                    | Before Lecture   | After Lecture |                             |                                |                                |                                |              |              |
| Henry               | 14                 | 13 x 4           | 3.5x 6        | (#1,2,6,7)                  | 60                             | 0                              | 85                             | 120          |              |
| Norman              | 12                 | 12 x 4           | 3.5 x 6       | (#1,2,3,4,5)                | 40                             | 100                            | 15                             | 120          |              |
| <b>Total Points</b> |                    | <b>100</b>       | <b>42</b>     | <b>70</b>                   | <b>100</b>                     | <b>100</b>                     | <b>100</b>                     | <b>240</b>   | <b>752</b>   |

Each of the 7 quizzes is worth 10 points and will cover material listed on the SCHEDULE.

The final examination will cover the entire course (all 26 lectures).

All Discussion Section quizzes, midterms and the final examination will involve use of Scantron forms; the questions will be a mixture of multiple choice, problems (with calculations) and short answers, some requiring preparation of schematic diagrams or the drawing of structures.

Queries on grading of quizzes and exams must be submitted in writing to your TA or one of the Instructors within 5 weekdays of the Scantrons being available for pick-up. Queries will be evaluated by the TA's and/or instructors. In some cases, the entire quiz or exam may be regraded.

There will be no make-ups on missed On-Line Homework. For Quizzes and Midterms, a make-up exam will require a physician's letter describing the date, time and nature of the illness. Exam make-ups may consist of an oral exam.

**Homework Assignments:** The On-Line Homework will have two components; the "Before-Lecture Homework" or BLH and the "Weekly Homework" or WH. Each BLH will cover the reading material for one lecture and will have up to six multiple choice or true/false questions worth 4 points total. There will be one WH per week (on Fridays) covering the lectures given that week and worth 6 points. In weeks with holidays or midterms, the instructor will announce what lectures will be covered on the WH.

The Before-Lecture-Homework will be available on-line at Blackboard **from 2:00 PM** on the class day (M.W, or F) before the day of the scheduled lecture **until 11:00 A.M.** on the day of the lecture.

The Weekly Homework will be available on-line at Blackboard **from 2:00 PM** on Friday **until 11:00 A.M.** of the following Monday (Tuesday when Monday is a holiday). Additional details of the Blackboard homework process are available in a separate Handout.

**BIOCHEMISTRY 100**  
**LECTURE, QUIZ & EXAMINATION SCHEDULE**  
**Fall 2004**

| Day         | Date           | Lec. #     | Instructor | Lecture Topic                                     | BLH # | WH # | Reading Assignment (Campbell & Farrell, 4 <sup>th</sup> edition) |
|-------------|----------------|------------|------------|---|-------|------|--|
| Fri         | Sept 24        | 1          | HLH        | Intro, Water, Functional Groups                   | None  |      | Chapter 1 & Chapter 2 (pp. 34-41)                                |
| Mon         | Sept 27        | 2          | AWN        | Acids, Bases, Buffers                             | 2     |      | Chapter 2 (pp. 34-55)  |
| <b>Tues</b> | <b>Sept 28</b> | <b>D-1</b> |            | No Quiz; Class Enrollment Meeting                 |       |      |  |
| Wed         | Sept 29        | 3          | AWN        | Amino acids, Peptides                             | 3     |      | Chapter 3  |
| Fri         | Oct 1          | 4          | AWN        | Protein Structure I                               | 4     |      | Chapter 4  |
| Mon         | Oct 4          | 5          | HLH        | Enzymes-I   | 5     | WH1  | Chapter 5  |
| <b>Tues</b> | <b>Oct 5</b>   | <b>D-2</b> |            | <b>Quiz #1 – Lectures #1-4</b>                    |       |      |  |
| Wed         | Oct 6          | 6          | HLH        | Enzymes II  | 6     |      | Chapter 6  |
| Fri         | Oct 8          | 7          | AWN        | Protein Structure II                              | 7     |      | Chapter 4  |
| Mon         | Oct 11         | 8          | AWN        | Carbohydrates                                     | 8     | WH2  | Chapter 13   |
| <b>Tues</b> | <b>Oct 12</b>  | <b>D-3</b> |            | <b>Quiz #2-Lectures # 5-7</b>                     |       |      |  |
| Wed         | Oct 13         | 9          | AWN        | Energetics  | 9     |      | Chapter 12   |
| Fri         | Oct 15         | 10         | AWN        | Glycolysis  | 10    |      | Chapter 14   |
| <b>Mon</b>  | <b>Oct 18</b>  |            |            | <b>EXAMINATION I</b><br><b>Lectures #1 - #8</b>   |       | WH3  |  |
| <b>Tues</b> | <b>Oct 19</b>  | <b>D-4</b> |            | <b>Quiz #3-Lectures #9-10</b>                     |       |      |  |
| Wed         | Oct 20         | 11         | AWN        | Storage Mech/Control                              | 11    |      | Chapter 15   |
| Fri         | Oct 22         | 12         | AWN        | Citric Acid Cycle                                 | 12    |      | Chapter 16   |
| Mon         | Oct 25         | 13         | AWN        | Lipids and Membranes                              | 13    | WH4  | Chapter 7 (pp. 190-212)  |
| <b>Tues</b> | <b>Oct 26</b>  | <b>D-5</b> |            | <b>Quiz #4 – Lectures #10-12</b>                  |       |      |  |
| Wed         | Oct 27         | 14         | AWN        | Oxidative Phosphorylation                         | 14    |      | Chapter 17   |
| Fri         | Oct 29         | 15         | AWN        | Photosynthesis                                    | 15    |      | Chapter 19   |
| Mon         | Nov 1          | 16         | HLH        | Lipid Metabolism                                  | 16    | WH5  | Chapter 18 (pp. 575-588)   |
| <b>Tues</b> | <b>Nov 2</b>   | <b>D-6</b> |            | <b>Quiz #5- Lectures #13-15</b>                   |       |      |  |
| Wed         | Nov 3          | 17         | HLH        | N <sub>2</sub> Metabolism                         | 17    |      | Chapter 20   |
| <b>Fri</b>  | <b>Nov 5</b>   |            |            | <b>EXAMINATION II</b><br><b>Lectures #9-#16</b>   |       |      |  |
| Mon         | Nov 8          | 18         | HLH        | Purines and Pyrimidines                           | 18    |      | Chapter 20   |
| <b>Tues</b> | <b>Nov 9</b>   |            |            | <b>No Discussion</b>                              |       |      |  |
| Wed         | Nov 10         | 19         | HLH        | DNA, RNA Structure                                | 19    |      | Chapter 8  |
| Fri         | Nov 12         | 20         | HLH        | Replication, Repair                               | 20    |      | Chapter 9  |
| Mon         | Nov 15         | 21         | HLH        | Transcription                                     | 21    | WH6  | Chapter 10 (pp. 280-286; 294-300)                                |
| <b>Tues</b> | <b>Nov 16</b>  | <b>D-7</b> |            | <b>Quiz #6- Lectures #18-20</b>                   |       |      |  |
| Wed         | Nov 17         | 22         | HLH        | Regulation of Gene Expression:<br>Prokaryotes     | 22    |      | Chapter 10 (pp. 287-294; 300-314)                                |
| Fri         | Nov 19         | 23         | HLH        | Regulation of Gene Expression:<br>Eukaryotes      | 23    |      | Chapter 10 (pp. 300-314)   |
| Mon         | Nov 22         | 24         | HLH        | Translation                                       | 24    | WH7  | Chapter 11   |
| <b>Tues</b> | <b>Nov 23</b>  | <b>D-8</b> |            | <b>Quiz #7 – Lectures #21-23</b>                  |       |      |  |
| <b>Wed</b>  | <b>Nov 24</b>  |            |            | <b>EXAM REVIEW</b>                                |       |      |  |
| <b>Fri</b>  | <b>Nov. 26</b> |            |            | <b>THANKSGIVING HOLIDAY</b>                       |       |      |  |
| <b>Mon</b>  | <b>Nov 29</b>  |            |            | <b>EXAMINATION III</b><br><b>Lectures #17-#24</b> |       |      |  |
| <b>Tues</b> | <b>Nov 30</b>  |            |            | <b>No Discussion</b>                              |       |      |  |
| Wed         | Dec 1          | 25         | HLH        | Nucleic Acid Methods                              | 25    |      | TBA  |
| Fri         | Dec 3          | 26         | HLH        | Signal Transduction                               | 26    | None | Chapter 21 (pp. 697-707)   |
| <b>TR</b>   | <b>Dec 9</b>   |            |            | <b>FINAL EXAMINATION</b>                          |       |      | <b>3:00-6:00</b>   |