

**WEST VIRGINIA UNIVERSITY AT PARKERSBURG  
UNIFORM COURSE SYLLABUS**

Name of Course: **Human Anatomy & Physiology II Lab** Course No. **Biology 108 Lab**

Department: **Biology**

Division: **Natural Sciences/Mathematics**

**I. Course Objectives**

1. To perform fetal pig dissection for understanding the respiratory, circulatory, urinary, gastrointestinal, and reproductive systems.
2. To perform a number of clinically relevant physiology experiments about respiratory volume, blood chemistry, urinalysis and molecular genetics.
3. To use correct anatomy & physiology terms.
4. To i.d. normal and pathological histology.

**II. Topics to Be Studied**

**How will course objectives be met?**

1. The students dissect the fetal pig for about 8 weeks.
2. Physiology experiments covers respiratory volumes testing and calculations, blood typing, and GI enzyme experiments.
3. Genetics knowledge is enhanced by working genetics problems.
4. Histology study involves study of normal and pathology slides.

**III. Special Projects to Be Included in Course**

**Research papers**

**Reports**

**Surveys**

**Annotated bibliographies**

**Other**

**Surveys** - (by microscope) blood cell types, blood vessels layers, normal lung vs. emphysema and lung cancer slides, normal and abnormal blood slides, normal crystals in urine vs. abnormal crystals in cells, layers of GI tract, cross sections of ovary, testis, kidney.

**Graphs** -

- a) of enzyme action relative to temperature and pH
- b) of respirations for tidal, vital capacity, and reserve volumes.

**Calculations** -

- a) calculations of respiratory volumes
- b) calculations of RBC, hemoglobin values
- c) calculations of physical and chemical values in urine

**IV. Methods of Student Evaluation**

**Tests (how many? how often? what type?)** - 3 lab practicals, all ½ specimen and slide i.d. and ½ written analysis, problem solving, or essay.

**Quizzes**

**Oral Presentations**

**Dissections:** for student use, not for grades

**Written Papers**

**Laboratory Activities**

**Clinical Experiences** - normal urine vs. abnormal urine, calculations of change in pH, cell content, chemistry

**V. Assessment of Outcomes**

**What measurements will be used to demonstrate that outcomes have been reached? (Refers to class as a whole, not individual students.)**

3 comprehensive Lab Practical - comprehensive on 4 weeks of lab weeks.

**LPI** = microscope i.d., calculations of respiratory volumes and blood counts, interpretation of graphs and charts.

**LPII** = dissection of heart and blood vessels, i.d. of vessels and their layers, normal and abnormal blood vessel i.d., chemical tests of ions in the urine, test and i.d. of components.  
in urine.

**LPIII** = test on dissection of GI and reproductive tracts, traces of GI and reproductive products, microscope i.d. of structures in these systems.

**VI. Other Information**

**What additional information will help to clarify the course?**

1. This course assumes the students can manipulate the microscope well and can compare abnormal and normal slides.
2. This course is strong in physiology with several experiments done involving the calculation of volumes or chemistry analysis of certain systems - respiratory, circulatory, urinary, digestive.
3. This course uses the dissection pig for normal anatomy study.