**Course Outcomes Guide**

**Course Title:** Bio 104  
**Date:** May 22, 2014

**Course Team:** Rebecca Beecroft, Terri Bidle, Cindy Dove, David Karstaedt, Bernie Murphy

**Expected Learning Outcomes:**

Upon completion of Human Anatomy and Physiology II, students will:

1. Exhibit the ability to use core content of the Anatomy and Physiology curriculum
2. Apply physiological and anatomical principles to the diseased state.
3. Demonstrate transfer of information from diagrams, models and non-human models to the human organism.
4. General Education: Demonstrate the ability to access, process, analyze and synthesize scientific information.
   - a. Relate a basic core of scientific principles to an open-ended framework.
   - b. Demonstrate observational and analytic skills in a structured situation.
   - c. Formulate conclusions based on observations and information.
   - d. Use technology to access scientific information, generate and analyze empirical data, and solve problems.

**Assessment (How do or will students demonstrate achievement of each outcome?)**

- Cumulative HAPS exam for Bio104
- Comprehensive lab final
- General education assessment

**Validation (What methods have you used or will you use to validate your assessment?)**

- The HAPS exam is nationally normed.
- The comprehensive lab final was developed by the full-time faculty that teach A & P. It will be reviewed.

**Results (What do your assessment data show? If you have not yet assessed student achievement of your learning outcomes, when is assessment planned?)**

- Please see data sheet at the end of COG.
- Our students score as high as 13 points above the national HAPS exam average.
- Areas of weakness: blood pressure, endocrine, integumentary, central nervous system, neuron physiology.
- The comprehensive lab final was developed by the full-time faculty that teach A & P. It will be reviewed in Fall 2013.
- General education questions: this is the first time they have been used. Question number 2 was not used because it was too confusing. The students had the lowest score on question 5. It involves interpreting data from the graph and doing a calculation.

**Follow-up (How have you used or how will you use the data to improve student learning?)**

- Individual instructors exam results for each item and then adjust their teaching based on areas where students under achieve.
- We will require more student engagement by requiring Connect activities.
**Budget Justification**
(What resources are necessary to improve student learning?)
HAPS exam will be administered on-line in the near future. It is possible that we will need to pay a fee per exam.

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<tr>
<th>Question</th>
<th>% correct</th>
<th>Level of question (?)</th>
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<tbody>
<tr>
<td>1</td>
<td>87</td>
<td>knowledge</td>
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<tr>
<td>2</td>
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<td>-</td>
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<tr>
<td>3</td>
<td>76</td>
<td>comprehension</td>
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<tr>
<td>4</td>
<td>94</td>
<td>knowledge</td>
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<tr>
<td>5</td>
<td>57</td>
<td>analysis</td>
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### Course: BIO 104

### SLOA Data

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<tbody>
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<td>89</td>
<td>110</td>
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<td>*% walk-away Fs</td>
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<td>3.9</td>
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<td>6</td>
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<td>% Success (A,B,C)</td>
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<td>Common Comprehensive Final HAPS Exam Score</td>
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### Item Analysis

- **Weakest Content Areas**: See COG

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*% Walk-away Fs = Did not take the final exam and received a grade of F.*

**see above for general education questions**