UNIVERSITY OF ARKANSAS
PULASKI TECH

Assessment Report:
2019-2020:
(BIOL 1305 Human Anatomy and Physiology II)

Course-Level Learning Outcomes-

1. What are the Course-Level Outcomes (CLOs)?

CLO 1. Transport systems of the human body

The student will explain, describe, discuss, recognize, and/or apply knowledge and understanding of the endocrine system, blood, cardiovascular system, lymphatic system and immunity.

CLO 2. Respiratory system

The student will explain, describe, discuss, recognize, and/or apply knowledge and understanding of the respiratory system and acid/base balance

CLO 3. Absorption and Elimination

The student will explain, describe, discuss, recognize and/or apply knowledge and understanding of absorption and elimination in the human body, with emphasis on the digestive and urinary systems

CLO 4. Reproductive System

The student will explain, describe, discuss, recognize, and/or apply knowledge and understanding of the reproductive system.

2. Which CLOs were addressed for this academic year? (2019-2020)

CLO 1. Transport systems of the human body
CLO 2. Respiratory system
CLO 3. Absorption and Elimination
CLO 4. Reproductive system

3. Which CLOs are being addressed in your assessment plan next academic year? (2020-2021)

CLO 1. Transport systems of the human body
CLO 2. Respiratory system
CLO 3. Absorption and Elimination
CLO 4. Reproductive system

4. Explain the assessment cycle.

Standard assessments were conducted for CLOs 1, 2, 3, and 4 for the Spring 2020 semester. Lead instructor changed after Fall 2019, data is not available for the Fall semester.

5. What are the assessment methods? Are they direct or indirect?

CLO 1. Transport systems of the human body: Direct

1. Standard essay question- *"Trace the path of blood flow through the heart beginning at the Superior and Inferior Vena cava and ending with the aorta."* Essay was given as part of 100-point exam.

2. Standard essay question- *"Human blood type is determined by the presence or absence of certain antigens on red blood cells, based on this knowledge complete the following a) list all possible blood types, b) for each blood type list the surface antigens present, c) for each blood type list the plasma antibodies present, d) explain what happens when incompatible blood types mix and why."* Essay was given as part of 100-point exam.

3. Standard essay question- *"Explain how the structure of each vessel (capillaries, veins, and arteries) relates to their individual functions."* Essay was given as part of 100-point exam.

CLO 2. Respiratory system: Direct

1. Standard essay question- *"Explain the mechanics of breathing, including muscle contractions, pressure and volume changes. Be sure to explain what happens during inhalation and exhalation."* Essay was given as part of 100-point exam.

CLO 3. Absorption and Elimination: Direct

1. Standard essay question- *"Explain the role ADH plays in the reabsorption of water in the nephron. How does ADH influence the volume and concentration of urine?"* Essay was given as part of 100-point exam.

2. Standard essay question – *"Describe the three features of the small intestine that increase surface area for absorption."* Essay was given as part of 100-point exam.

CLO 4. Reproductive system: Direct

1. Standard essay questions- *"Explain the role that hormones play in both female ovarian and uterine cycles. Be sure to name the four hormones involved and explain the role each plays."* Essay was given as part of 100-point exam.

6. What are the assessment goal(s)?

Goal will be met with 70% of all combined Anatomy and Physiology II sections passing at 70+% for CLOs 1, 2, 3 and 4.

7. What were the findings for this academic year? (2018-2019)

CLO 1. Transport Systems of the human body **Assessment Method:** Essay-Blood flow through heart	**Spring 2020**
% of Traditional Students who passed with a score of 70+%	83%
# of Traditional Students Assessed	157
# of Traditional Students Who Successfully Completed Assessment with a score of 70+%	131
% of Online Students who passed with a score of 70+%	72%
# of Online Students Assessed	65
# of Online Students Who Successfully Completed Assessment with a score of 70+%	47
Hybrid Students Assessed	N/A
% of all students who passed with a score of 70+%	80%

CLO 1. Transport Systems of the human body **Assessment Method:** Essay- Blood typing	**Spring 2020**
% of Traditional Students who passed with a score of 70+%	72%
# of Traditional Students Assessed	158
# of Traditional Students Who Successfully Completed Assessment with a score of 70+%	114
% of Online Students who passed with a score of 70+%	82%
# of Online Students Assessed	65
# of Online Students Who Successfully Completed Assessment with a score of 70+%	53
Hybrid Students Assessed	N/A
% of all students who passed with a score of 70+%	75%
CLO 1. Transport Systems of the human body **Assessment Method:** Essay- Vessel Structure and function.	**Spring 2020**
% of Traditional Students who passed with a score of 70+%	63%
# of Traditional Students Assessed*	95

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# of Traditional Students Who Successfully Completed Assessment with a score of 70+%	60
% of Online Students who passed with a score of 70+%	39%
# of Online Students Assessed	49
# of Online Students Who Successfully Completed Assessment with a score of 70+%	19
Hybrid Students Assessed	N/A
% of all students who passed with a score of 70+%	55%

* of the 95 traditional students assessed 64 were given the assessment online due to shut-down for COVID-19.

CLO 2. Respiratory system **Assessment Method:** Essay- Mechanics of breathing	**Spring 2020**
% of Traditional Students who passed with a score of 70+%	53%
# of Traditional Students Assessed*	94
# of Traditional Students Who Successfully Completed Assessment with a score of 70+%	50
% of Online Students who passed with a score of 70+%	43%
# of Online Students Assessed	65
# of Online Students Who Successfully Completed Assessment with a score of 70+%	28
Hybrid Students Assessed	N/A
% of all students who passed with a score of 70+%	55%

*of the 94 traditional students assessed 63 were given the assessment online due to shut-down for COVID-19.

CLO 3. Absorption and Elimination **Assessment Method:** Essay- Role of ADH in urine formation	**Spring 2020**
% of Traditional Students who passed with a score of 70+%	70%
# of Traditional Students Assessed*	148
# of Traditional Students Who Successfully Completed Assessment with a score of 70+%	103
% of Online Students who passed with a score of 70+%	79%
# of Online Students Assessed	62

# of Online Students Who Successfully Completed Assessment with a score of 70+%	49
Hybrid Students Assessed	N/A
% of all students who passed with a score of 70+%	72%

*all traditional students completed the assessment online due to shut-down for COVID-19.

CLO 3. Absorption and Elimination **Assessment Method:** Essay- Features to increase surface area for absorption	**Spring 2020**
% of Traditional Students who passed with a score of 70+%	77%
# of Traditional Students Assessed*	149
# of Traditional Students Who Successfully Completed Assessment with a score of 70+%	115
% of Online Students who passed with a score of 70+%	77%
# of Online Students Assessed	62
# of Online Students Who Successfully Completed Assessment with a score of 70+%	48
Hybrid Students Assessed	N/A
% of all students who passed with a score of 70+%	77%

* all traditional students completed the assessment online due to shut-down for COVID-19.

CLO 4. Reproductive system **Assessment Method: Essay- Hormones and female cycles.**	**Spring 2020**
% of Traditional Students who passed with a score of 70+%	91%
# of Traditional Students Assessed*	129
# of Traditional Students Who Successfully Completed Assessment with a score of 70+%	117
% of Online Students who passed with a score of 70+%	53%
# of Online Students Assessed	66
# of Online Students Who Successfully Completed Assessment with a score of 70+%	35
Hybrid Students Assessed	N/A
% of all students who passed with a score of 70+%	71%

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8. What is your analysis of the findings?

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Spring 2020

CLO 1. Transport Systems of the human body

Assessment Method: Essay-Blood flow through heart

Overall pass rate of 80% shows that students had a good understanding of blood flow through the heart. Essay doesn't require students to apply knowledge but memorize a list of steps. This could explain the higher pass rate then with other essays. Students are also required to learn the same exact pathway as part of lab, repetition could also explain high pass rates.

CLO 1. Transport Systems of the human body

Assessment Method: Essay- Blood typing

Overall pass rate of 75% suggests students had a clear understanding of blood typing. Blood typing is often a topic that students struggle to grasp, which may account for the slightly lower rate in this essay then the previous. Blood typing is also a concept that is heavily discussed in lab, again suggesting the importance of repetition.

CLO 1. Transport Systems of the human body

Assessment Method: Essay- Vessel Structure and function.

Overall pass rate of 55% suggests that students struggle with the concept of structure equals function. It should be noted that for some of the students the timing of this exam was during transitions due to COVID-19. Many students may have had extenuating circumstances that affected their ability to adequately prepare for the exam. An additional semester of data would be useful in making a conclusion.

CLO 2. Respiratory system

Assessment Method: Essay- Mechanics of breathing

Overall pass rate of only 55% suggests that students did not have a good understanding of how breathing works and more time may need to be spent on this topic. It should be noted that for some of the students the timing of this exam was during transitions due to COVID-19. Many students may have had extenuating circumstances that affected their ability to adequately prepare for the exam. An additional semester of data would be useful in making a conclusion.

CLO 3. Absorption and Elimination

Assessment Method: Essay- Role of ADH in urine formation

Overall pass rate of 72% suggests students have an understanding of how ADH works in urine formation. Increase in pass rate on this essay could also be a result of students getting settled into remote learning. It should be noted all students completed essay online, as there was no proctoring available the accuracy of the data is questionable. An additional semester of data would be useful in making a conclusion.

CLO 3. Absorption and Elimination

Assessment Method: Essay- Features to increase surface area for absorption

Overall pass rate of 77% suggests students had an understanding of the concept. Essay question was mostly asking for a list of features and not an application of knowledge. Students seem to be better at these types of questions. It should be noted all students completed essay online, as there was no proctoring available the accuracy of the data is questionable. An additional semester of data would be useful in making a conclusion.

CLO 4. Reproductive system

Assessment Method: Essay- Hormones and female cycles.

Overall pass rate of 71 % suggests students had an understanding of the concept. Many students find reproduction to be an interesting topic and are generally eager to learn more about it which might account for the higher pass rate. Some of the concepts were also covered in earlier chapters which again suggests the importance of repetition in learning. The significant difference in pass rates of online students and traditional students is interesting as by this point all students were participating in classes remotely. As there was no proctoring available the accuracy of the data is questionable. An additional semester of data would be useful in making a conclusion.

Given the unique circumstances of Spring 2020 and the lack of data from Fall 2019, it is difficult to make any conclusions about our data. There are several areas where improvements may be needed but an additional semester of data would help to clarify our efforts.

9. What is the action plan for the next academic year? (2020-2021) Explain.

Continue use of common essay questions for all CLOs for Fall 2020. Faculty will meet after fall semester to discuss data and make recommendations. Spring 2020 will be based on these meetings.

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