

Introducing OER to Human Anatomy and Physiology Courses.

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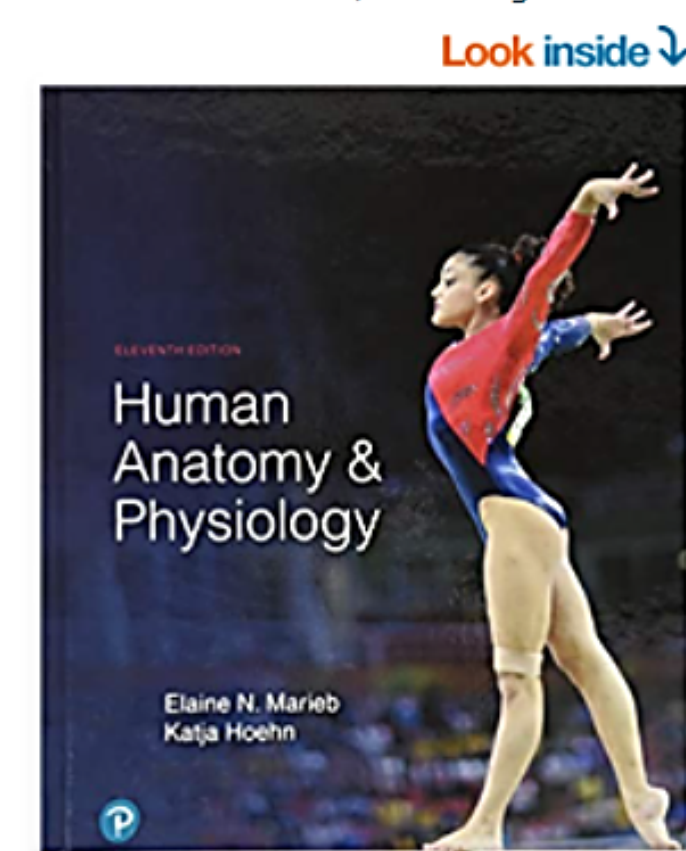


INTRODUCTION

- Human Anatomy and Physiology Part I and Part II (BIOL 230 and BIOL 231) courses at WVU Tech.

- Typical students enrolled are:**
 - 67% FR/SO Pre-Nursing-students
 - 23% JR/SR Biology-students

Human Anatomy & Physiology 11th Edition
by Elaine Marieb (Author), Katja Hoehn (Author)



Textbook cost of Human Anatomy and Physiology (Marieb and Hoen) = \$63-210.

ISBN-13: 978-0134580999
ISBN-10: 0134580990

- Observations:**
 - Students would report delays in receiving textbook or would not even purchase one.
 - Students would not carry textbook to class or lab.
- Objectives:** To find OER to replace existing textbook and to remix/develop OER for human A&P courses.

METHOD SUMMARY

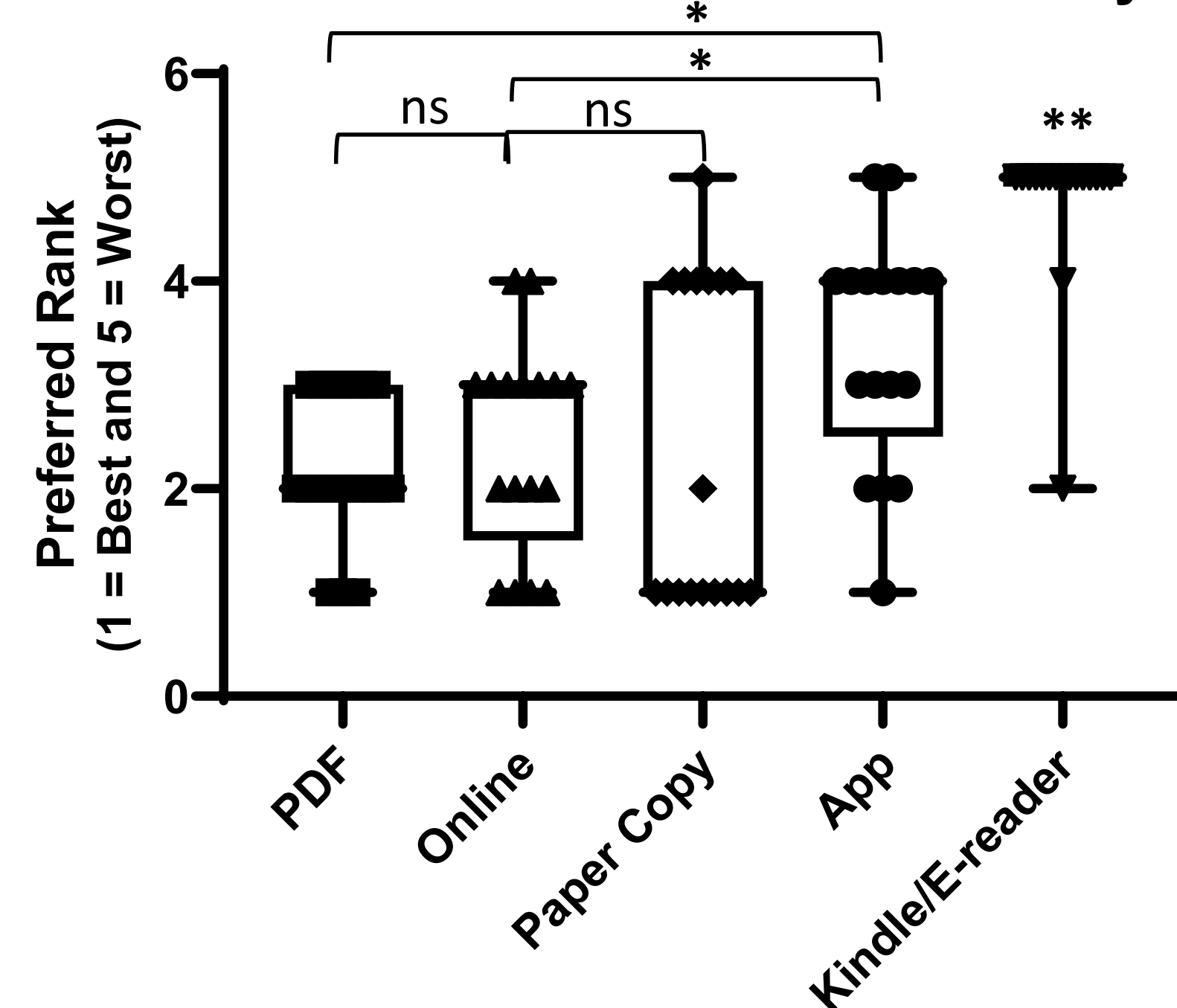
1) Informal and non-identifiable surveys of student technology access and also textbook preferences.

2) Literature review of human A&P OER.

3) Implementation and revision of human A&P OER in BIOL 230 Spring 2022.

Textbook preference survey results of BIOL 231 students Fall 2021 prior to OER implementation.

Preferred Mode of Textbook Delivery 2021



	PDF	Online	Paper Copy	App	Kindle /E-reader
Number of values	17	17	17	17	17
Minimum	1.0	1.0	1.0	1.0	2.0
Maximum	3.0	4.0	5.0	5.0	5.0
Range	2.0	3.0	4.0	4.0	3.0
Geometric mean	2.0	2.2	1.9	3.1	4.7
Geometric SD factor	1.5	1.6	2.0	1.5	1.3
Lower 95% CI of geo. mean	1.7	1.7	1.3	2.5	4.2
Upper 95% CI of geo. mean	2.5	2.8	2.7	3.9	5.3

* P<0.05 **P<0.01

Repeated measures one-way ANOVA and Tukey's multiple comparison post-test

Literature Review of Human Anatomy and Physiology Open Educational Resources.

OER Commons Database

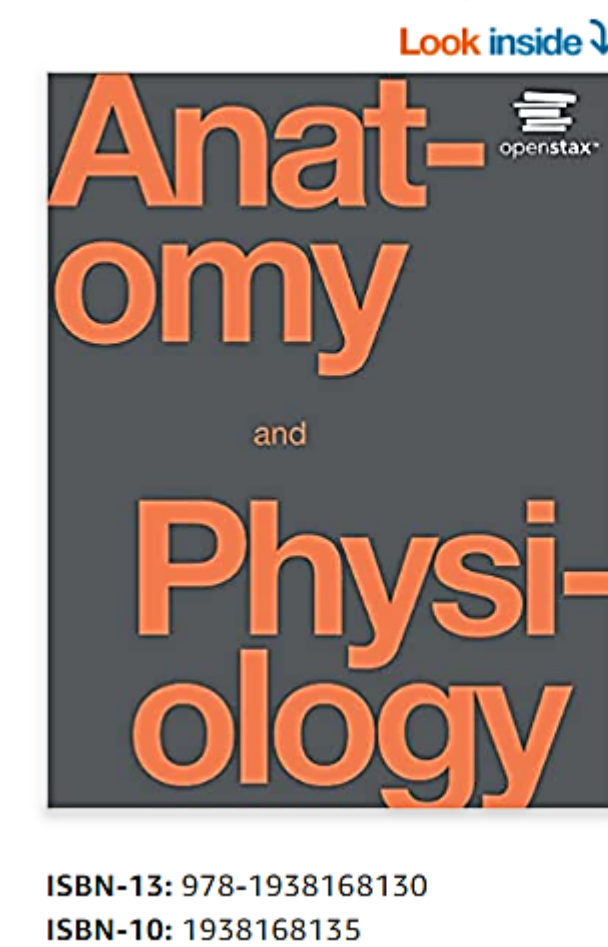
- Anatomy and Physiology Hub** = 17 items
- Anatomy and Physiology Search Results**
 - Anatomy and Physiology 1 Course modules to Accompany OpenStax Text Full Course
 - Anatomy and Physiology I & II (GHC) Full Course
 - Anatomy and Physiology lab homework PDF
 - Anatomy and Physiology II Full Course
 - Anatomy and Physiology I Lab Full Course
 - Review of Anatomy and Physiology
 - Anatomy and Physiology 1 syllabus
 - Anatomy and Physiology 2 syllabus
 - Anatomy and Physiology Activity/Lab, Assessment, Diagram Interactive, Reading
 - Anatomy and Physiology Lab Reference
 - Anatomy & Physiology 1 Lab Manual
 - Anatomy and Physiology Lab HyperDocs
 - Superficial Anatomy – Anatomy and Physiology

Open Textbook Searches

- Fundamentals of Anatomy and Physiology**
 - Authors: Anna Chruscik; Kate Kauter; Louisa Windus; and Eliza Whiteside
 - License: Creative Commons Attribution ShareAlike
 - <https://usq.pressbooks.pub/anatomy/>
- Anatomy and Physiology from OpenStax**
 - Print ISBN 1938168135, Digital ISBN 1947172042, <https://openstax.org/details/books/anatomy-and-physiology>
 - Publish Date: Apr 25, 2013; Web Version Last Updated: Jun 28, 2021
 - License: by OpenStax is licensed under Creative Commons Attribution License v4.0

Implementation of Human Anatomy and Physiology Open Educational Resources in Spring 2022.

Anatomy and Physiology by OpenStax
by Kelly A. Young (Author), James A. Wise (Author), Peter DeSaix (Author), De



ISBN-13: 978-1938168130
ISBN-10: 1938168135

Textbook cost of Anatomy and Physiology (Openstax) = \$23-51 paper copy

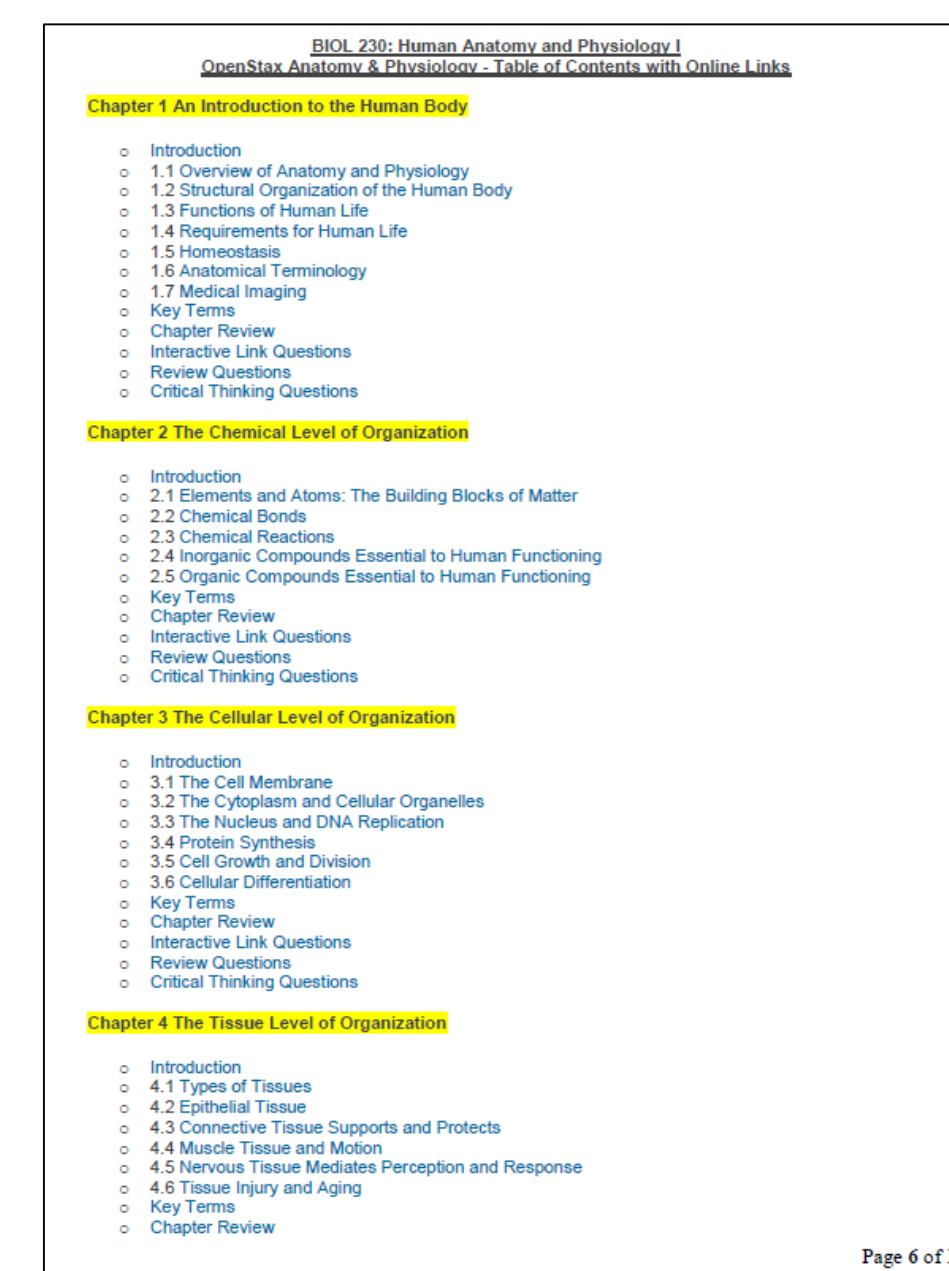
PDF, online, app, and e-reader version = \$0

Instructor Resources

- Canvas LMS Course Cartridge
- Moodle Course Cartridge
- Annotated Video Guide
- Instructor Getting Started Guide
- PowerPoint Slides
- Instructor Solution Guide
- Sample Syllabus Language
- Errata Release Notes
- Testable Images
- Diversity and Representation Development Guidelines
- TEKS Alignment
- Guided Lecture Notes
- Google Forms
- Google Docs Customization

Student Resources

- Student Getting Started Guide
- Pronunciation guide
- Anatomy Zone - Partner
- Student Solution Guide
- Reading and Notetaking Guide
- Student Time Management Guide
- Guided Lecture Notes .DOC



CONCLUSIONS

- 2021 Students (n =17) preferred textbooks to be available as paper copy, PDF, and online. But App and E-reader were least preferred for textbook.
- Identified OER textbook that was equivalent to original text with multiple modes of access.
- Remixed access to content and updated materials to reference the textbook chapters.
- 2022 BIOL 230 students (n = 23) preferred paper copy, online, and PDF textbooks. App and E-reader were least preferred options for textbook.
- For both 2021 and 2022 A&P students paper copy option showed the highest ranges of preference.

FUTURE DIRECTIONS

Continue to remix/develop OER for human A&P courses – especially for BIOL 231 in Fall 2022.

ACKNOWLEDGMENTS

- WVU Libraries and TLC OER Grant Recipient 2021-2022 – Innovate Level.