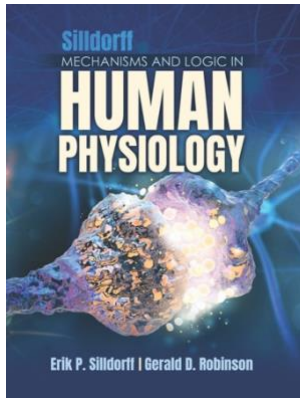


Core Elements of Physiology

An Instructor Guide Series, Series Overview

Mechanisms and Logic in Human Physiology | Silldorff & Robinson | Kendall Hunt

Series overview and index. Eighteen open-access instructor guides, each deposited separately with its own DOI. This record identifies the series as a whole.



Companion to **Mechanisms and Logic in Human Physiology** by Erik P. Silldorff and Gerald D. Robinson (Kendall Hunt Publishing). The half-year and full-year web subscriptions and the print version are available at <https://he.kendallhunt.com/product/mechanisms-and-logic-human-physiology-2>. For those teaching A&P more classically in a 2-semester sequence, the book is also packaged with Visible Body to support the anatomical portions of those courses (365-day subscriptions): <https://he.kendallhunt.com/product/mechanisms-and-logic-human-anatomy-and-physiology-visible-body-1>.

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The Series

Eighteen instructor guides accompany Mechanisms and Logic in Human Physiology: one for each of the sixteen chapters, and two supplemental modules covering bone physiology and the integumentary system. Each guide is a teaching document rather than a summary. It carries the narrative an instructor would build at the board, in the order a student needs to hear it, beside a structured outline of the causal logic that narrative is meant to deliver.

The guides reproduce no text or figures from the textbook. They are written to be used alongside it, and they stand on their own for anyone teaching the same physiology.

The Premise

Understanding is demonstrated by successful prediction, not by recall. A student who has memorized a mechanism can restate it; a student who understands it can say what happens when a variable changes. Every section rests on that distinction. The logic appears as an explicit

causal chain running from stimulus through mechanism to effect, and each section closes with a prediction prompt that asks the student to run the chain forward under a condition the narrative did not cover.

The misconceptions students arrive with, and the ones instruction itself tends to produce, are flagged at the point where they occur rather than left to surface on an exam.

How Each Guide Is Built

Two columns. The left column is the instructor narrative: how to build the idea in your own words, which examples carry it, and where the explanation usually fails. The right column is the structured outline, holding the causal chains with their arrows, the key distinctions, the errors to anticipate in red, and the prediction prompts in gold. The chapter covers what to teach; the guide explains how.

The Eighteen Guides

Guide	DOI
Chapter 1 – Philosophy, Approach, and Core Principles of Physiology	10.5281/zenodo.22729552
Chapter 2 – Organizational Hierarchy of Physiological Systems	10.5281/zenodo.22729838
Chapter 3 – Body Fluids and Membrane Dynamics	10.5281/zenodo.22729961
Chapter 4 – The Energetic Basis of Physiology and General Metabolism	10.5281/zenodo.22730018
Chapter 5 – The Nervous System	10.5281/zenodo.22737671
Chapter 6 – Endocrine Regulation	10.5281/zenodo.22737813
Chapter 7 – Muscle Physiology	10.5281/zenodo.22737887
Chapter 8 – Blood and Immunity	10.5281/zenodo.22737972
Chapter 9 – Cardiovascular Physiology	10.5281/zenodo.22738066
Chapter 10 – The Respiratory System and Gas Transport	10.5281/zenodo.22738182
Chapter 11 – The Kidneys	10.5281/zenodo.22738282
Chapter 12 – Digestive Physiology	10.5281/zenodo.22833230
Chapter 13 – Reproduction	10.5281/zenodo.22833373
Chapter 14 – Blood Pressure Regulation	10.5281/zenodo.22833510
Chapter 15 – Acid-Base Regulation	10.5281/zenodo.22834156

Guide	DOI
Chapter 16 – Exercise Physiology	10.5281/zenodo.22834286
Bone Physiology	10.5281/zenodo.22834365
The Integumentary System	10.5281/zenodo.22834443

Citing the Series

Each guide is deposited separately and has its own DOI, so any one of them may be cited on its own. Cite this record when referring to the series as a whole. All eighteen are open access under CC BY-NC-ND 4.0.