

APPENDIX 2 Sample Documentation

EXAMPLE OF A “CROSSWALK” DOCUMENT FOR ONE COURSE

The “crosswalk” includes student learning outcomes (SLOs) for the courses the instructor is teaching, followed by documentation of showing how the instructor became qualified to teach the courses. The documentation is listed two ways: by graduate coursework or credit (Course View) and by SLO for the relevant course(s) (Outcome View).

EXAMPLE COURSE: HUMAN PHYSIOLOGY LECTURE/ HUMAN PHYSIOLOGY LAB

Course Description: A detailed study of the physiological processes of the human body.

Student Learning Outcomes (SAMPLE from an extensive list. Each SLO is numbered sequentially.)

Homeostasis

1. Define homeostasis and explain why it is referred to as a “dynamic steady state”. State several conditions that must be maintained by homeostatic mechanisms.
2. Define “internal environment”. Explain the relationship between cells and the extracellular fluid (ECF).
3. Diagram a general homeostatic control system. Describe the function of each component of a general homeostatic control system and explain how they work together.
4. Define feedback. Explain what would happen to a process if no feedback occurs. Explain the difference between negative and positive feedback in terms of their effect on the output from the system and on deviation from the set point. Give several examples of conditions that are controlled by negative or positive feedback mechanisms.
5. Discuss the homeostatic regulation of one body function.
6. Explain how problems in homeostatic mechanisms can lead to disease states. Give specific examples.

Cell Functions

7. Review the structure of the plasma membrane and the functions of each membrane component.
8. Permeability of membranes:
 - a. Explain the difference between permeable, impermeable, and selectively permeable membranes.
 - b. Discuss the factors that affect the permeability of a biological membrane, including the presence of channels and carrier proteins, and the hydrophobic core of the lipid bilayer.

[A complete list for one course will probably have 100+ student learning outcomes.]

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SLO Coursework Crosswalk – Course View

The left side documents the graduate course or credit obtained by the instructor. The right column shows which student learning objectives in the physiology course are related to the graduate credit.

Graduate Course or Credit				PHYSIOLOGY COURSE Student Learning Outcome numbers
Course or credit	Institution/ Semester/Year	Semester Credit Hours	Course Description	
VPP 601 Physiology	TAMU/F/1982	4	Recent phases of physiology, modern experimental methods.	1-99
VPP 602 Physiology	TAMU/SP/1983	4	Recent phases of physiology, modern experimental methods.	100-192
BICH 603 Biochemistry	TAMU/F/1982	3	The biochemical properties of macromolecules found in living matter; proteins, enzymes and nucleic acids.	71-79
VPP 617 Respiratory Physiology	TAMU/SP/1983	3	Gas exchange, regulation of respiration, responses to various gases, reflexes associated with respiration and the mechanical factors of breathing in health and disease.	124-133
BIOL 559 Modern Topics in Biology	Adams State College/F/2006	3	Provides opportunity for individual research/study into problems of special interest in Biology.	
BIOL 505 A Problems in Biological Instruction: Renal Physiology	UWashington, Seattle/SP/2007	1	Designed to provide college-level instructors with the opportunity to expand their understanding of renal anatomy and physiology, including advanced problem solving workshops.	134-155
BIOL 505 B Problems in Biological Instruction: Respiratory Physiology	UWashington, Seattle/SP/2008	2	Designed to provide college-level instructors with the opportunity to expand their understanding of respiratory anatomy and physiology, including advanced problem solving workshops.	124-133
BIO 380T Current Concepts in Biology: Vertebrate Physiology II	UTexas, Austin/F/2007	3	Vertebrate systems physiology: body fluids, cardiovascular system, respiration, digestion, metabolism, and endocrinology.	1-192

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SLO Coursework Crosswalk – Outcome View

In this view, student learning outcomes for the course being taught by the instructor are listed on the left, the relevant graduate courses or credits are listed in the middle, and an explanation of how the two are related is listed on the right.

Physiology Course Student Learning Outcomes	Graduate course work related to this outcome	Detail - how these courses provided knowledge about the outcome.
1-6 Homeostasis	VPP 601, 602, 613, 615, 617, 625	In all of the courses listed to the left, homeostasis is a foundational concept that establishes physiological norms. Maintaining those norms is done in the body through mostly negative feedback mechanisms, although there are 3 known normal, healthy positive feedback mechanisms.
7-19 Cell Functions	VPP 601, 602, 613, 615, 617, 625; BIOL 559; BIO 380T, 380R	A fundamental understanding of cellular and molecular functioning within a living organism is paramount in the study of biology in general. All of the courses to the left included detailed study of the cell membrane, the different fluid compartments of the body and the mechanisms that transport various substances across those membranes.
20-35 Neuronal Physiology	VPP 601, 625, VA 602; BIOL 505 D; BIO 380T	These courses detailed both the structure and function of all divisions of the nervous system, the links between the divisions and the multiple neuronal pathways from sensory input to both visceral and somatic effector organs. That communication from cell to cell occurs due to ionic fluxes across neuron membranes are mechanisms covered very extensively in these courses, including the measurement of electrical currents in neurons.
36-46 CNS	VPP 601, VA 602; BIOL 505 D; BIO 380T	These courses detailed both the structure and function of all divisions of the nervous system, the links between the divisions and the multiple neuronal pathways from sensory input to both visceral and somatic effector organs. The structure and function of the central nervous system as the integration center of the nervous system was thoroughly covered. A detailed explanation of both structural and functional divisions of the brain and how they are linked was emphasized.
62-70 Efferent Motor Division	VPP 601; BIOL 505 D; BIO 380T	These courses detailed both the structure and function of all divisions of the nervous system, the links between the divisions and the multiple neuronal pathways from sensory input to both visceral and somatic effector organs. The efferent division was extensively studied, in particular, the autonomic nervous system and its regulation of the visceral functions of the body.