



Course Competency Report by Code

Code: C294

Biology: Content Knowledge (C294)

Course of Study: C294 - Biology: Content Knowledge
 Course Level: Undergraduate
 Course Division: Senior
 Discipline: Biology
 Course Type:
 Department: Education

COMPETENCY #	COMPETENCY NAME	COMPETENCY TEXT
205.1.1	Cells	The graduate has a deep understanding of cells as the structural and functional units of life, including an understanding of prokaryotic cells, eukaryotic cells, viruses, homeostasis, cell differentiation analysis, and tissue and organ development.
205.1.2	Heredity	The graduate has a deep understanding of heredity as the continuity and variations of traits from one generation to the next, including the structure and regulation of RNA, the model of protein synthesis, mitosis, meiosis, human karyotype, DNA sequences, and embryology.
205.1.3	Diversity of Life	The graduate understands the historical changes in life forms (evolution of life) and the diversity of life (similarities and differences among organisms), including natural selection, global catastrophes, human influence, environmental change, and the development of hierarchical classification systems.
205.1.4	Interdependence of Life	The graduate understands the interdependence of life and the flow of energy and matter.
205.1.5	Evolutionary Patterns and History of Life	The graduate understands evolutionary patterns and the history of life.
205.1.6	Ecological Issues	The graduate understands important ecological issues, ideas, and structures, including population dynamics, community energetics, and biogeochemical cycles.
204.2.1	Molecular and Cellular Biology	The graduate has a broad understanding of the important concepts in molecular and cellular biology.
204.2.2	Biology of Organisms	The graduate has a broad understanding of the important concepts related to the biology of organisms.
204.2.3	Ecology	The graduate has a broad understanding of important concepts of ecology.
204.2.4	Evolution	The graduate has a broad understanding of evolution and the history of life on earth.



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602.6.1

Teaching Methods-
Science (Secondary)

The graduate understands and provides safe, effective, research-based instruction in science.