BIOL 219 The Living Cell
Credit Hours: 4
Scheduled hours per week
Lecture: 3
Lab: 2
Other: N/A

Catalog Course Description: A more in-depth study of prokaryotic and eukaryotic cells that builds on material covered in Biology 115 and Biology 117. The course represents the third in an integrated sequence required of biology transfer students; students who elect biology as a minor in the Multidisciplinary studies BA degree program; or to fulfill the general education requirement in science. Students must register for both a lecture section and a laboratory section. (3 lecture hours, 2 lab hours per week) (Pre-requisites: Biology 101/103/102/104 or Biology 115 and Biology 117; Chemistry 115; Chemistry 116; Co-requisites: Biology 219L (laboratory); Chemistry 233; Chemistry 235)

Pre-requisites: BIOL 101/103/102/104 or BIOL 115/115L/117/117L; CHEM 115/115L; CHEM 116/116L

Co-requisites: BIOL 219L; CHEM 233; CHEM 235

Course Learning Outcomes:
- Knowledge of fundamental concepts of cellular and molecular biology
- Evaluate information and form conclusions based on experimental findings
- Solve problems related to molecular biology research as they apply to health, forensic and ecology scenarios
- Read and interpret data from primary sources
- Recognize advantages and limitations of modeling for molecular systems

Topics to be studied:
- Prokaryotic and eukaryotic cells will be examined with respect to energetics, protein structure and function
- DNA structure and function
- Gene expression
- Genome organization
- Molecular basis of heredity and cellular division

Relationship of Course to Program or Discipline Learning Outcomes:

Relationship of Course to Science Learning Outcomes:	
Students will learn the process and reasoning behind the Scientific Method and be able to conduct experiments that meet the requirements of the model.	X
Students exhibit the basic safety-related rules and regulations of working in the lab.	X
Students be able to recount the basic safety tenants associated with a specific scientific discipline.	X
Students will become proficient at Science Writing.	X

Students will recognize and identify the applications of their specific discipline in the 'real world.'	X
Students will accurately recount important milestones in the history of scientific inquiry in their discipline.	X
5/3/2016	

Relationship of Course to General Education Learning Outcomes:	
Composition and Rhetoric Students illustrate a fundamental understanding of the best practices of communicating in English and meet the writing standards of their college or program-based communication requirements.	X
Science & Technology Students successfully apply systematic methods of analysis to the natural and physical world, understand scientific knowledge as empirical, and refer to data as a basis for conclusions.	X
Mathematics & Quantitative Skills Students effectively use quantitative techniques and the practical application of numerical, symbolic, or spatial concepts.	X
Society, Diversity, & Connections Students demonstrate understanding of and a logical ability to successfully analyze human behavior, societal and political organization, or communication.	
Human Inquiry & the Past Students interpret historical events or philosophical perspectives by identifying patterns, applying analytical reasoning, employing methods of critical inquiry, or expanding problem-solving skills.	X
The Arts & Creativity Students successfully articulate and apply methods and principles of critical and creative inquiry to the production or analysis of works of art.	
5/3/2016	

Special requirements of the course:

Additional information:

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