Inver Hills Community College

BIOL 1123: Introduction To Forensic Science

A. COURSE DESCRIPTION

Credits: 4

Lecture Hours/Week: 3

Lab Hours/Week: 2

OJT Hours/Week: *.*

Prerequisites:
This course requires any of these five prerequisite categories
  1. Both of these groups
      1. One of these two
          EAP 0099 - Academic Writing (Minimum grade: 1.67 GPA Equivalent)
          ENG 0099 - Introduction to Academic Writing (Minimum grade: 1.67 GPA Equivalent)
      And
      2. One of these two
          READ 0093 - Reading College Texts (Minimum grade: 1.67 GPA Equivalent)
          READ 0094 - Reading Workshop (Minimum grade: 1.67 GPA Equivalent)
    Or
  2. ENG 1108 - Writing And Research Skills (Minimum grade: 1.67 GPA Equivalent)
    Or
  3. A score of 250 on test Accuplacer NG Reading
    Or
  4. A score of 250 on test Accuplacer NG COMP Reading
    Or
  5. Both of these
      A score of 18 on test ACT English
      A score of 21 on test ACT Reading

Corequisites: None

MnTC Goals: Goal 02 - Critical Thinking, Goal 03 - Natural Science

Introduces students to the basic techniques of forensic science. Concepts will be examined with the application of scientific principles and emphasizing molecular biology, cell biology and the human body. Topics will include application of biological concepts to forensics, such as forensic pathology and anthropology, serology, toxicology, DNA profiling and entomology. Labs will include hands-on forensic inquiry and applications, such as identification of skeletal remains, blood splatter analysis, fingerprinting, chromophotography, DNA and hair analysis. Current issues, advances and questions in forensic science will also be addressed. This course will be of interest to liberal arts, science, paralaegal and criminal justice majors, and it fulfills the lab science requirement for MnTC.

B. COURSE EFFECTIVE DATES: 08/27/2012 - Present

C. OUTLINE OF MAJOR CONTENT AREAS

1. History & legal aspects of Forensic Science 5%
2. The nature of evidence, crime scene investigation 10%
3. Forensic Pathology & Anthropology 15%
4. Forensic Biology: Cells, tissues, systems 10%
5. Forensic Serology & Toxicology 15%
6. Analytical Tools: Chromatography, Spectrophotometry & Microscopy 10%
7. DNA evidence & profiling 10%
8. Fingerprinting & hair as Forensic Evidence 15%
9. Forensic Entomology 5%
10. Current issues, questions and advances in the forensic sciences 5%
11. The Nature of Scientific Evidence 5%

D. LEARNING OUTCOMES (General)

1. 1.Demonstrate an understanding of scientific process through the design and conduction of forensic science experiments.

   2. Analyze data with consideration for variables that may affect outcomes.

   3. Demonstrate the ability to evaluate societal issues related to forensic science and criminal justice from a biological perspective.

   4. Demonstrate the possible sources of bias in forensic evidence and analyze possible options for decision-making and the implications that follow from them.

   5. Collect and evaluate experimental data.

2. 6. Apply knowledge of forensic science and biology to criminal/legal cases.

   7. Demonstrate current standard lab/field safety practices and procedures.

E. Minnesota Transfer Curriculum Goal Area(s) and Competencies

Goal 02 - Critical Thinking

1. Gather factual information and apply it to a given problem in a manner that is relevant, clear, comprehensive, and conscious of possible bias in the information selected.
2. Imagine and seek out a variety of possible goals, assumptions, interpretations, or perspectives which can give alternative meanings or solutions to given situations or problems.
3. Analyze the logical connections among the facts, goals, and implicit assumptions relevant to a problem or claim; generate and evaluate implications that follow from them.
4. Recognize and articulate the value assumptions which underlie and affect decisions, interpretations, analyses, and evaluations made by ourselves and others.

Goal 03 - Natural Science

1. Demonstrate understanding of scientific theories.
2. Formulate and test hypotheses by performing laboratory, simulation, or field experiments in at least two of the natural science disciplines. One of these experimental components should develop, in greater depth, students' laboratory experience in the collection of data, its statistical and graphical analysis, and an appreciation of its sources of error and uncertainty.
3. Communicate their experimental findings, analyses, and interpretations both orally and in writing.
4. Evaluate societal issues from a natural science perspective, ask questions about the evidence presented, and make informed judgments about science-related topics and policies.

F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus

G. SPECIAL INFORMATION

None noted