**ESSEX COUNTY COLLEGE**

**Course Outline**

**Student Learning Outcomes (SLO) Assessment Summary Sheet**

**Course Prefix & Number**: BIO 211 **Course Title**: Microbiology

**Credit Hours**: 4.0 **Contact Hours**: 6.0 **Name of Person Completing this Form**: E. Kamunge

**Type of Course:** (Check **all** that apply.)

Developmental Not required for any program (not a major or additional requirement)/Other

AA program major requirement AS program major requirement AAS program major requirement

(Biology/Pre-Medicine program) (Biotechnology program)

AA program additional requirement AS program additional requirement AAS program additional requirement

General Education affirmed course – if so, indicate the foundation category/ies the course is **affirmed** by GECC as addressing:

Written and Oral Communication Humanistic Perspective

Quantitative Knowledge and Skills Historical Perspective

Scientific Knowledge and Reasoning Global and Cultural Awareness of Diversity

Technological Competency/Information Literacy Ethics

Society and Human Behavior

**Student Learning Outcomes (SLOs)**:

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Detailed Goal (SLO)** | **Assessment Method** | **Introduction (I) or**  **Mastery (M)**  **of SLO** |
| **Course Goals** | Demonstrate knowledge of fundamental concepts and themes in microbiology. | Blueprint questions on short-answer tests | N/A |
| Proficiently use tools in the microbiology lab to perform appropriate laboratory procedures. | Blueprint questions on laboratory exams and use a checklist rubric to evaluate students’ performance during laboratory exercises on labs pertaining to culturing bacteria and staining bacteria. |
| Discuss basic concepts in microbial genetics, nutrition, metabolic pathways, and mechanisms of regulation for each. |  |
| Describe the physical, mechanical, and chemical methods of controlling the growth of microorganisms. |  |
| Explain the host-microbe relationship especially interactions during health and alterations of health, the progression of an infection, the host defense mechanisms, and disorders of the immune system. |  |
| **Program Goals\***  (if course is a major requirement) | Demonstrate a mastery of the fundamental concepts of  biology at the genetic, molecular, cellular, tissue, organ, and  organismal level. (Biology/Pre-Medicine) |  |  |
| Perform scientific investigations using proper scientific and  laboratory safety protocols. (Biology/Pre-Medicine) |  |  |
| Demonstrate a mastery of the fundamental concepts  and current applications of cellular and molecular  biology. (Biotechnology) |  |  |
| Perform qualitative, quantitative and instrumental  analysis of macromolecular samples using established  molecular techniques and instrumentation. (Biotechnology) |  |  |
| **Gen Ed Goals\*** (if course is a Gen Ed course) | N/A | N/A | N/A |

**\*** addressed by **THIS** specific course