**East Central College Department-Division : Biology Department – Science Division**

**Program Assessment Planning Document Semester & Academic year: Updated Spring 2013**

**East Central College learning objectives** **(general education objectives and CLOs)** **& program objectives that this assessment will support.**

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| 1. **General Education Objectives**
 | 1. **Common Learning Objectives**
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| 1. Life and Physical Science
 | 1. Creative and critical thinking
 |
| 1. Higher order thinking
 | 1. **Program objectives** (Unit specific)
 |
| 1. Managing information
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***Report and Review Cycles:*** Reports and program reviews for each Unit will be performed in 5 year cycles. Review years for each Unit are specified below.

***Unit I*: Consists of General Education Courses from Biology (I A) and Environmental Science (I B) Departments – 2013, 2018 & 2023**

**Unit IA: General Education Courses in the Biology Department (BI)**

1. **Program objectives:** Individual program objectives will be assessed on a cyclic basis.

*a. Describe and apply basic biological concepts*

*b. Apply new understanding of biology in novel ways that are useful to humans or that solve problems faced by humans*

*c. Apply the scientific method of creating and testing hypotheses.*

*d. Gather and analyze appropriate numerical information including creating and interpreting graphs and diagrams.*

*e. Demonstrate appropriate technical skills related to biology.*

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| Target Courses | Objectives met  | Assessment Tool | Assessment Cycle  |
| **General Biology** (BI 1305) | I.a, I.b, & I.c  | Semester exams, laboratory exams & reports, departmental Pre-test and post-test. | Semester of course offering |
| II.a  | Collegiate Assessment of Academic Proficiency (CAAP) test | To be determined by the college. |
| III.a,  | Semester exams, laboratory exams & reports, departmental Pre-test and post-test. | Each objective will be assessed individually on a cyclic basis  |
| III.c - III.e. | Appropriate assessment tool for the objective chosen will be used- Under development |
| **Introduction to Life Science** (BI 1203)  | I.a, & I.b,  | Semester exams & departmental Pre-test and post-test. | Semester of course offering |
| II.a  | CAAP test | To be determined by the college. |
| III.a, III.b,& III.c | Semester exams & departmental Pre-test and post-test. | Each objective will be assessed individually on a cyclic basis |
| **Principles of Biology I** (BI 1325) | Refer to Unit II | Refer to Unit II | Refer to Unit II |

**NOTE: Refer to Environmental Science Department assessment plan for Unit IB course assessment plans. Unit I includes all General Education courses that meet the Life Science requirement**

***Unit II*: Consists of Biology Transfer Courses – 2012, 2015 and 2020**

***Report cycle and Review Cycle*:** This unit report will be submitted every 5 years alternating with the other units in the Department**.**

**III. Program objectives:**

1. *Identify and use the concepts, principles, and theories that constitute the core sub-disciplines of the biological sciences*
2. *Students will apply the concept of chemistry to the study of life.*
3. *Apply the scientific method of creating and testing hypotheses.*
4. *Gather and analyze biological data including creating and interpretation of graphs and diagrams.*
5. *Demonstrate appropriate technical skills related to biology.*

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| Target Courses | Objectives met  | Assessment Tool | Assessment cycle |
| **Principles of Biology I** (BI 1325) | I.a, I.b, & I.c  | Semester exams, laboratory exams & laboratory reports, & departmental Pre-test and post-test | Semester of course offering |
| II.a  | CAAP test | To be determined by the college. |
| III.a & III.b | Semester exams, laboratory exams & laboratory reports, & departmental Pre-test and post-test | Each objective will be assessed individually on a cyclic basis |
| III.c – III.e | Appropriate assessment tool for the objective chosen will be used - Under development  |
| **Principles of Biology II** (BI 1415) | Content assessment | Semester exams, laboratory exams & laboratory reports, & departmental Pre-test and post-test | Semester of course offering |
| II.a. | CAAP test | To be determined by the college. |
| III.a & III.b | Semester exams, laboratory exams & laboratory reports, & departmental Pre-test and post-test | Each objective will be assessed individually on a cyclic basis |
| III.c – III.e | Appropriate assessment tool for the objective chosen will be used - Under development  |
| **General Microbiology** (BI 2404) | Content assessment | Semester exams, laboratory exams & laboratory reports, & departmental Pre-test and post-test | Semester of course offering |
| II.a. | CAAP test | To be determined by the college. |
| III.a & III.b | Semester exams, laboratory exams & laboratory reports, & departmental Pre-test and post-test | Each objective will be assessed individually on a cyclic basis |
| III.c – III.e | Appropriate assessment tool for the objective chosen will be used - Under development  |
| **Genetics** (BI 2005) | Content assessment | Semester exams, laboratory exams & laboratory reports, & departmental Pre-test and post-test | Semester of course offering |
| II.a. | CAAP test | To be determined by the college. |
| III.a & III.b | Semester exams, laboratory exams & laboratory reports, & departmental Pre-test and post-test | Each objective will be assessed individually on a cyclic basis |
| III.c – III.e | Appropriate assessment tool for the objective chosen will be used - Under development  |
| **Cell Biology** (BI 2045) | II.a.  | CAAP test | To be determined by the college. |
| III.a & III.b | Semester exams, laboratory exams & laboratory reports, & departmental Pre-test and post-test | Each objective will be assessed individually on a cyclic basis |
| III.c – III.e | Appropriate assessment tool for the objective chosen will be used - Under development  |  |

***Unit III*: Consists of Health-Related Courses from Biology (III A) and Health Science (III B) Departments – 2014, 2019 and 2024**

***Report cycle and Review Cycle*:** This unit report will be submitted every 5 years alternating with the other units in the BS and ES departments

**Unit III A: Health-Related Courses in the Biology Department (BI)**

 **III. Program objectives:**

*a. Describe and apply basic course specific concepts*

*b. Identify and use the concepts, principles, and theories that constitute the core sub-disciplines of the biological sciences*

*c. Apply new understanding of biology in novel ways that are useful to humans or that solve problems faced by humans*

*d. Students will apply the concept of chemistry to the study of life.*

1. *Gather and analyze appropriate numerical information including creating and interpretation of graphs and diagrams.*
2. *Demonstrate appropriate technical skills related to biology.*
3. *Apply the scientific method of creating and testing hypotheses.*

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| Target Courses | Objectives met  | Assessment Tool | Assessment cycle |
| **Microbiology for Allied Health** | Content assessment | Semester exams, laboratory exams & departmental Pre-test and post-test | Semester of course offering |
| II.a. | CAAP test | To be determined by the college. |
| III.a & III. b. | Semester exams, laboratory exams, laboratory reports & departmental pre-test and post-test | Each objective will be assessed individually on a cyclic basis |
| III. c. – III. f. | Appropriate assessment tool for the objective chosen will be used - Under development |  |
| **Human Anatomy and Physiology I** (BI 2104) | Content assessment | Semester exams, laboratory exams & departmental Pre-test and post-test | Semester of course offering |
| II.a. | CAAP test | To be determined by the college. |
| III.a, III c.& III.d | Semester exams, laboratory exams & departmental Pre-test and post-test | Each objective will be assessed individually on a cyclic basis |
| **Human Anatomy and Physiology II** (BI 2115) | Content assessment | 1. Semester exams, laboratory exams & departmental Pre-test and post-test
 | 1. Semester of course offering
 |
| 1. Human Anatomy and Physiology Society(HAPS) Standardized Exam
 | 1. HAPS test will administered once every two years
 |
| II.a. | CAAP test | To be determined by the college. |
| III.a, III c.& III.d | Semester exams, laboratory exams & departmental Pre-test and post-test | Each objective will be assessed individually on a cyclic basis |
| **Intro. to Anatomy & Physiology** (BI 1802) | Content assessment | Semester exams, laboratory exams & laboratory manual, & departmental Pre-test and post-test | Semester of course offering |
| III.a, III.c, III.e and III.g. | Appropriate assessment tool for the objective chosen will be used - Under development | Each objective will be assessed individually on a cyclic basis |

**NOTE: Look under Health Science Department for Unit III B course assessment plans.**