CORE CURRICULUM COMPONENT APPLICATION
Texarkana College

## Part I: Course Information/Course not currently offered

Course Type
☒ Existing/Restructured
☐ New Course

Course Prefix & Number: **BIOL 1313**

Texas Common Course Number (TCCN): **1313**

Course Title: **General Zoology**

Course Catalog Description

**General Zoology** (4,3,3). The biology of animals with emphasis on cell and molecular biology, ecology and taxonomy in relationship to animal form and function, diversity, behavior and evolution.

Course Prerequisites:

Available Online?
☐ Yes
☒ No

**Part II: THECB Course Objectives**

Upon successful completion of this course, students will:

1. Compare and contrast the structures, reproduction, and characteristics of animals.
2. Describe the characteristics of life and the basic properties of substances needed for life.
3. Identify the principles of inheritance and solve classical genetic problems.
4. Describe phylogenetic relationships and classification schemes.
5. Identify the major phyla of life with an emphasis on animals, including the basis for classification, structural and physiological adaptations, evolutionary history, and ecological significance.
6. Identify the chemical structures, synthesis, and regulation of nucleic acids and proteins.
7. Identify the substrates, products, and important chemical pathways in respiration.
8. Describe the unity and diversity of animals and the evidence for evolution through natural selection.
9. Describe the reasoning processes applied to scientific investigations and thinking.
10. Describe basic animal physiology and homeostasis as maintained by organ systems.
11. Describe modern evolutionary synthesis, natural selection, population genetics, micro and macroevolution, and speciation.
12. Describe the structure of cell membranes and the movement of molecules across a

membrane.
13. Apply scientific reasoning to investigate questions and utilize scientific tools such as microscopes and laboratory equipment to collect and analyze data.
14. Use critical thinking and scientific problem-solving to make informed decisions in the laboratory.
15. Communicate effectively the results of scientific investigations.
16. Compare and contrast the structures, reproduction, and characteristics of animals.
17. Describe the characteristics of life and the basic properties of substances needed for life.
18. Identify the principles of inheritance and solve classical genetic problems.
19. Describe phylogenetic relationships and classification schemes.
20. Identify the major phyla of life with an emphasis on animals, including the basis for classification, structural and physiological adaptations, evolutionary history, and ecological significance.
21. Identify the chemical structures, synthesis, and regulation of nucleic acids and proteins.
22. Identify the substrates, products, and important chemical pathways in respiration.
23. Describe the unity and diversity of animals and the evidence for evolution through natural selection.
24. Describe the reasoning processes applied to scientific investigations and thinking.
25. Describe basic animal physiology and homeostasis as maintained by organ systems.
26. Describe modern evolutionary synthesis, natural selection, population genetics, micro and macroevolution, and speciation.
27. Describe the structure of cell membranes and the movement of molecules across a membrane.

**Part III: THECB Skill Objectives**

**1. Critical Thinking Skills:** to include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information

**2. Communication Skills:** to include effective development, interpretation and expression of ideas through written, oral and visual communication

**3. Empirical and Quantitative Skills:** to include applications of scientific and mathematical concepts.

**4. Teamwork:** to include the ability to consider different points of view and to work effectively with others to support a shared purpose or goal

**Part IV: Course Student Learning Outcomes (SLO)**

Upon successful completion of this course, students will:

1. Compare and contrast the structures, reproduction, and characteristics of animals.

2. Describe the characteristics of life and the basic properties of substances needed for life.
3. Identify the principles of inheritance and solve classical genetic problems.
4. Describe phylogenetic relationships and classification schemes.
5. Identify the major phyla of life with an emphasis on animals, including the basis for classification, structural and physiological adaptations, evolutionary history, and ecological significance.
6. Identify the chemical structures, synthesis, and regulation of nucleic acids and proteins.
7. Identify the substrates, products, and important chemical pathways in respiration.
8. Describe the unity and diversity of animals and the evidence for evolution through natural selection.
9. Describe the reasoning processes applied to scientific investigations and thinking.
10. Describe basic animal physiology and homeostasis as maintained by organ systems.
11. Describe modern evolutionary synthesis, natural selection, population genetics, micro and macroevolution, and speciation.
12. Describe the structure of cell membranes and the movement of molecules across a membrane.
13. Apply scientific reasoning to investigate questions and utilize scientific tools such as microscopes and laboratory equipment to collect and analyze data.
14. Use critical thinking and scientific problem-solving to make informed decisions in the laboratory.
15. Communicate effectively the results of scientific investigations.
16. Compare and contrast the structures, reproduction, and characteristics of animals.
17. Describe the characteristics of life and the basic properties of substances needed for life.
18. Identify the principles of inheritance and solve classical genetic problems.
19. Describe phylogenetic relationships and classification schemes.
20. Identify the major phyla of life with an emphasis on animals, including the basis for classification, structural and physiological adaptations, evolutionary history, and ecological significance.
21. Identify the chemical structures, synthesis, and regulation of nucleic acids and proteins.
22. Identify the substrates, products, and important chemical pathways in respiration.
23. Describe the unity and diversity of animals and the evidence for evolution through natural selection.
24. Describe the reasoning processes applied to scientific investigations and thinking.
25. Describe basic animal physiology and homeostasis as maintained by organ systems.
26. Describe modern evolutionary synthesis, natural selection, population genetics, micro and macroevolution, and speciation.
27. Describe the structure of cell membranes and the movement of molecules across a membrane.

| **Skill Objective:** | **Critical Thinking Skills:** to include creative thinking, |
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| | innovation, inquiry, and analysis, evaluation and synthesis of information |
| **THECB Course Objective** | (SLO #5)Identify the major phyla of life with an emphasis on animals, including the basis for classification, structural and physiological adaptations, evolutionary history, and ecological significance. |
| **Course Student Learning Outcome** | (SLO #5)Identify the major phyla of life with an emphasis on animals, including the basis for classification, structural and physiological adaptations, evolutionary history, and ecological significance. |
| **General Learning Activities** | Lab activity |
| **Assessment** ***Must Include Assignment & Rubric*** | See attached rubric |

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| **Skill Objective:** | **Communication Skills:** to include effective written, oral, and visual communication |
| **THECB Course Objective** | (SLO #1)Compare and contrast the structures, reproduction, and characteristics of animals. |
| **Course Student Learning Outcome** | (SLO #1)Compare and contrast the structures, reproduction, and characteristics of animals. |
| **General Learning Activities** | Exam essay question |
| **Assessment** ***Must Include Assignment & Rubric*** | See attached rubric |

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| **Skill Objective:** | **Empirical and Quantitative Skills:** to include applications of scientific and mathematical concepts. |
| **THECB Course Objective** | (SLO #15)Communicate effectively the results of scientific investigations. |
| **Course Student Learning Outcome** | (SLO #15)Communicate effectively the results of scientific investigations. |
| **General Learning Activities** | Lab write up |
| **Assessment** ***Must Include Assignment & Rubric*** | See attached rubric |

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| **Skill Objective:** | **Teamwork:** to include the ability to consider different points of view and to work effectively with others to support a shared purpose or goal |
| **THECB Course Objective** | (SLO #13)Apply scientific reasoning to investigate questions and utilize scientific tools such as microscopes and laboratory equipment to collect and analyze data. |
| **Course Student Learning Outcome** | (SLO #13)Apply scientific reasoning to investigate questions and utilize scientific tools such as microscopes and laboratory equipment to collect and analyze data. |
| **General Learning Activities** | Lab activity |
| **Assessment**<br>***Must Include Assignment & Rubric*** | See attached rubric |