DE LA SALLE UNIVERSITY   
**College of Science**

Department of Biology

**ZOOLFUN** – Fundamentals of Zoology

*Prerequisite : NONE Prerequisite to : COMPANA, LBYBIO3,GENETIC, LBYBIOE, CELLBIO, IMMULEC,*

*LBYBIOJ, LBYBIO7*

**Instructo**r : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **Contact details** : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Consultation Hours**: **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Class Schedule and Room : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

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| **Course Description** |

This course introduces the students to the study of structure and functions of the organ system of animals. It also provides the student the fundamental principles and concepts of animal classification and systematics.

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| **Learning Outcomes** |

On completion of this course, the student is expected to present the following learning outcomes in line with the Expected Lasallian Graduate Attributes (ELGA).

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| **ELGA** | **Learning Outcome** |
| Critical and Creative Thinker  Effective Communicator  Lifelong Learner  Service-Driven Citizen | On completion of the course, the student is expected to describe and identify animal structure and their relationship to functions in order to compare and establish the functional relationship of the anatomical systems of the major animal groups which will set not only as a foundation in their profession but also to further improve their appreciation and respect of life. |

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| **Final Course Output** |

As evidence of attaining the above learning outcomes, the student is required to submit the following during the indicated dates of the term.

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| **Learning Outcome** | **Required Output** | **Due Date** |
| On completion of the course, the student is expected to describe and identify animal structures and their relationships to functions in order to compare and establish the functional relationship of the anatomical systems of major animal groups which will set not only as a foundation to their profession but also to further improve their appreciation and respect of life. | **Group Presentation of Assigned Topics**   * Each group delivers a powerpoint presentation | Weeks 3-5 |
| **Problem-Based Learning Activities**   * Students will apply knowledge of the body structures and functions to explain normal and abnormal clinical   conditions/ Create a brochure of  diseases or comic strip related to the  different organ systems. | Weeks 6-11 |

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| **Rubric for assessment** |

**A. Group Presentation of Assigned Topics**

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| **Criteria** | **Experts (3.5-4.0)** | **Team Players**  **(2.5-3.4)** | **Laid Back**  **(1.5-2.4)** | **Spacemen**  **(1.0-1.4)** |
| **Set Objectives**  **(30%)** | Objectives were set from the start of the presentation, and were reviewed at the end if it were achieved.  Moreover, the group highlighted the significance of the reports of the course. | Objectives were set from the start of the presentation, and were reviewed at the end if it were achieved. | Objectives were set from the start of the presentation, but were not reviewed at the end if it were achieved. | No objectives were set from the start of the presentation. |

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| **Content of Presentation**  **(30%)** | New information was learned from the presentation, and was easy to understand.  Moreover, the presentation was concise. | New information was learned from the presentation and was easy to understand. | New information was learned from the presentation but was hard to understand. | No new information was learned from the presentation. |
| **Overall Performance**  **(20%)** | The presenters did not read from the slides and made sure everyone in class understood the information they were sharing. Moreover, they were very enthusiastic and knowledgeable of their report. | The presenters did not read from the slides and made sure everyone in class understood the information they were sharing. | The presenters did not read from the slides but made no attempt to assess if everyone in class understood the information they were sharing. | The presenters read from the slides and made no attempt to assess if everyone in class understood the information they were sharing. |
| **Multimedia**  **(20%)** | The report was creatively and uniquely presented, with the aid of the computer.  Moreover, it kept everyone attentive. | The report was creatively and uniquely presented with the aid of the computer. | The report was ordinary and very standard, but was aided by the computer. | The report was dull and boring. |

**B. Problem-based Learning Activities**

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| **Criteria** | **Experts (3.5-4.0)** | **Team Players**  **(2.5-3.4)** | **Laid Back**  **(1.5-2.4)** | **Spacemen**  **(1.0-1.4)** |
| **Organization**  **(40%)** | Information is very organized with well-constructed paragraphs, use of subheadings, and information is factual and correct. | Information is organized with well-constructed paragraphs and information is factual and correct. | Information is organized but paragraphs are not well-constructed.  Information is factual. | Information appears not only disorganized but inaccurate. |
| **Quality of Presentation**  **(40%)** | Information clearly relates to the main topic.  It includes several supporting details and/or examples. | Information clearly relates to the main topic. It includes 1-2 supporting details and/or examples. | Information has little to do with the main topic. No details or examples are given. | Information has nothing to do with the main topic. |
| **Mechanics**  **(20%)** | No grammatical, spelling or punctuation errors. | Almost no grammatical, spelling, or punctuation errors. | A few grammatical, spelling, or punctuation errors. | Many grammatical, spelling, or punctuation errors. |

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| **Additional Requirements** |

* Individual participation in classroom discussions and other classroom activities.
* Submission of individual output, such as assignments.
* Participation in and submission of group output.
* Pass all written assessments (quizzes and long exams). **NO MAKE-UP EXAM** will be given on any missed exam except for excused absences stipulated under the provision of the student handbook. **NO MAKE-UP** QUIZZES shall be given.

1. Three (3) long examinations

2. One (1) final comprehensive examination

3. Assignments and Quizzes

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| **Grading Systems** | | |
| Long Exams/quizzes/assignments 70%  Comprehensive-departmental final exams 30%  **TOTAL 100%**  **Passing Grade : 60%** | **Scale:**  92-100% 4.0  86-91% 3.5  80-85% 3.0  75-79% 2.5  70-74% 2.0  65-69% 1.5  60-64% 1.0  <60% 0.0 |

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| **Learning Plan** |

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| **Learning Outcome** | **Lecture Topic** | | **Week** | **Learning Activities** |
| On completion of the course, the student is expected to describe and identify animal structures and their relationship to functions in order to compare and establish the functional relationship of the anatomical systems of major animal groups which will set not only as a foundation in their profession but also to further  improve their appreciation and respect for life. | **Introduction**  Unifying Themes in Biology  Concept of Homeostasis | | 1 | Lecture |
| **The Cell**  Structure and Function  Membrane Transport Mechanism  Cellular Respiration  **The Cell Cycle**  Cell Cycle and its Regulation  Mitosis/Meiosis | | 1-3 | Lecture  Group Discussion  Group Presentation |
| **Principles of Genetics**  Mendelian Law of Inheritance  Non-Mendelian Laws of Inheritance  and Extension of Mendelian  Inheritance  Mendelian Inheritance  Molecular Basis of Inheritance  (Central Dogma) | | 4-5 | Lecture  Group Discussion  Group Presentation(Role Playing-Central Dogma) |
| **FIRST LONG EXAM** | | | |
| **Animal Form and Function in**  **Mammals**  A. Integumentary and  Musculoskeletal System | | 6-7 | PBL Activity  Lecture  Group Dynamics  Brochure of Diseases/Comic Strip related to organ system |
| B. Digestive System and Nutritional  Requirements | | 7-8 |
| C. Cardiovascular and Lymphatic  System | | 8-9 |
| **SECOND LONG EXAM** | | | |
| D. Respiratory System and Gas  Exchange | 10 | | PBL Activity  Lecture  Group Dynamics  Brochure of Diseases/Comic Strip related to organ system |
| E. Excretory System and Urine  Formation | 10 | |
| F. Reproductive System | 11 | |
| G. Nervous System | 12 | |
| H. Endocrine System | 13 | |
| **THIRD LONG EXAM** | | | |
| **COMPREHENSIVE FINAL EXAM** | | | |

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| **References** |

Hickman, C.P., L.S. Roberts, S.L. Keen, D.J. Eisenhour, A. Larson and H. I’Anson. (2011).

*Integrated Principles of Zoology.* 15th edition. McGraw Hill Co., Inc.

Miller, S.A. and J.P. Harley. (2013). *Zoology*. 9th edition. McGraw Hill International Edition.

Campbell, N.A. J.B. Reece, L.A. Urray, M.L. Cain, S.A. Wasserman, P.V. Minorsky and R.B. Jackson.

(2010). *Biology* . 9th edition. Pearson International Edition. Benjamin Cummings Publishing.

Campbell, N.A. et al. (2008). *Biology.* 8th edition. Pearson International Edition.

Pearson/Benjamin Cummings.

Freeman, S. (2011). *Biological Science*. 4th edition. International Edition.

Benjamin Cummings Publishing.

Hickman, C.P., L.B. Kats and S. Keen, (2007). *Laboratory Studies in Integrated Principles of Zoology*.

14th edition. McGraw Hills, Co., Inc.

Raven, P.H., G.B. Johnson, J. Losos and S. Singer. (2008). *Biology*. 8th edition. McGraw Hill Co., Inc.

Solomon, E., L. Berg, D. Martin (2008). *Biology*. 8th edition. International Student Edition.

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| **Online Resources** |

Pearson Education (2012). Campbell Biology Gateway Retrieved September 14, 2012 from <http://www.pearsonhighered.com/campbell/>

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| **Class Policies** |

* Honesty and integrity are integral components of the academic process.
* Proper decorum is to be observed among peers in all activities.
* Absence and tardiness are strongly discouraged.
* Attentiveness and active participation are critical to successful learning.
* The use of mobile phones and other electronic devices is not allowed during class hours, unless necessary upon the teacher's approval.
* The policies on academic dishonesty, attendance and behavior stipulated in your Student Handbook are honored in this course.
* Any kind of plagiarism is strongly prohibited.

Approved by:

**DR. MARY JANE CRUZ-FLORES**

Chair, Biology Department