**I. COURSE TITLE:** Human Biology I

 **COURSE NUMBER:** 1104 **CATALOG PREFIX:** BIOL

**II. PREREQUISITES:** None

 **COREQUISITE:** None

**III. CREDIT HOURS:** 4 **LECTURE HOURS:** 3

 **LABORATORY HOURS:** 1 **LAB CONTACT HOURS:** 2

**IV. COURSE DESCRIPTION:**

A course on the basic biology of the human organism. Topics include simple chemistry, cell and tissue structure and function, structure and function of the nervous and endocrine systems, cell division, basic genetics, DNA biology, reproduction and aging. Laboratory sessions emphasize and reinforce major concepts covered. For non-science majors.

**V. ADOPTED TEXT(S):**

*Biology of Humans Concepts, Applications, and Issues, 2017*

6th edition, Goodenough/McGuire

Pearson, ISBN: 978-0-13-404544-3

 *Human Biology Concepts and Current Issues Lab Manual, 2017*

 8th edition, Atsma/Johnson

 Pearson, ISBN: 978-0-13-428381-4

**Package Bundle** ISBN: 978-0-13-465674-8 (includes Textbook, Lab book, and Mastering Access card)

**VI. COURSE OBJECTIVES:**

 Upon completion of this course the student will be able to:

1. Describe the characteristics of life.
2. Conduct investigations using scientific method.
3. Describe the structure and function of basic molecules.
4. Recognize the structures and processes associated with eukaryotic cells.
5. Briefly diagram and describe the process of cellular respiration.
6. Recognize the four basic human tissue types and their respective functions.
7. Describe the processes of mitosis and meiosis.
8. Work genetics problems using Mendel’s Laws.
9. Describe the structure and function of the nervous and endocrine systems.
10. Describe the structures and the processes of human reproduction.
11. Recognize the stages of human development.

**VII. GRADING:**

 Grading will follow policy in college catalog.

|  |  |  |  |
| --- | --- | --- | --- |
| **A** | **90** | **–** | **100** |
| **B** | **80** | **–** | **89** |
| **C** | **70** | **–** | **79** |
| **D** | **60** | **–** | **69** |
| **F** | **0** | **–** | **59** |

**VIII. COURSE METHODOLOGY**

 This course may use lecture, discussion, video, and overhead presentations.

The course may include chapter and workbook assignments, hand-in assignments, computer assignments, work projects, research papers, and laboratory activities. Written quizzes and exams may be used as appropriate to the course objectives and online instruction.

**IX. COURSE OUTLINE:**

 **Lecture Material:**

 A Human Perspective

 Chemistry of Life

 Cell Structure and Function

 Organization and Regulation of Body System

 Cell Division and the Human Life Cycle

 Cancer

 Patterns of Inheritance

 Genetic Counseling

 Nervous System

 Endocrine System

 Reproductive System

 Development and Aging

 **Laboratory Activities:**

 Scientific method, metric system and measurements

 Basics of microscopy

 Chemistry of life: molecules and enzymes

 Cell biology: types of cells, movement across membranes

 Human tissues

 Mitosis, meiosis and simple genetics

 Gross morphology of the human

 Nervous system anatomy and sheep brain dissection

 Anatomy of the human reproductive systems

**Sample Course Calendar:**

 Week 1: Course introduction, a human perspective

 Lab: Scientific method, metric system and measurements

 Week 2: Chemistry of Life

 Lab: Chemistry of life: molecules and enzymes

 Week 3: Chemistry, continued

 Lab: Lab test #1

 Week 4: Cell Structure and function

 Lab: Basics of microscopy

 Week 5: Cell biology, continued

 Lab: Cell biology: types of cells, movement across membranes

 Week 6: Organization and regulation of body systems

 Lab: Lab test #2

 Week 7: Organization, continued

 Lab: Human tissues

 Week 8: Cell division and the human life cycle,cancer

 Lab: Human tissues, continued

 Week 9: Patterns of inheritance – Mendelian genetics

 Lab: Mitosis, meiosis

 Week 10: Patterns of inheritance – Mendelian genetics, continued

 Lab: Lab test #3

 Week 11: Nervous system

 Lab: Gross morphology of the human

 Week 12: Nervous system, continued

 Lab: Nervous system anatomy and sheep brain dissection

 Week 13: Endocrine system

 Lab: Lab test #4

 Week 14: Reproductive Systems

 Lab: Anatomy of the human reproductive systems

 Week 15: Reproductive, continued

 Development and aging

 Week 16: **Final lecture and lab exams**

**X. OTHER REQUIRED BOOKS, SOFTWARE, AND MATERIALS:**

 None

**XI. EVALUATION:**

 Final grade in this course will be determined by mastery of lecture and

laboratory material. There will be periodic written exams and a comprehensive final exam. A grade for the laboratory component will be included in the calculation of the grade for the class. The laboratory grade will account for approximately 25% of the final class grade.

**XII. SPECIFIC MANAGEMENT REQUIREMENTS:**

 At the discretion of the instructor

**XIII.** **OTHER INFORMATION:**

 **FERPA:** Students need to understand that your work may be seen by others. Others may see your work when being distributed, during group project work, or if it is chosen for demonstration purposes.

 Students also need to know that there is a strong possibility that your work may be submitted to other entities for the purpose of plagiarism checks.

 **DISABILITIES:** Students with disabilities may contact the Disabilities Service Office, Central Campus, at 800-628-7722 or 937-393-3431.