المخرجات التعليمية المستهدفة من برنامج الحيوان والكيمياء:

1. المعرفة والفهم a- Knowledge and Understanding

By the end of this program, graduates will be able to:

a.1 Demonstrate knowledge and comprehension of the theories, facts, concepts, fundamentals and techniques related to the fields of chemistry and zoology.

a.2 Acquire the essential knowledge in mathematics, physics, ecology, biology and other collateral subjects to understand the contemporary topics of chemistry and zoology.

a.3 Exhibit knowledge of the principles and procedures used in chemical analyses as well as in characterization and structural investigation of chemical compounds.

a.4 Characterize the chemical nature and behavior of the functional groups in different types of molecules.

a.5 Demonstrate familiarity and comprehension of terminology, nomenclature and contemporary tools used for classification systems of animals.

a.6 Acquire knowledge and understanding of the structure and functions of various types of animal cells in unicellular and multicellular organisms.

a.7 Demonstrate knowledge of the structure and functions of animal cell organelles and bases of cell differentiation.

a.8 Demonstrate understanding of how the chemistry of biological molecules determine their biological functions.

a.9 Demonstrate familiarity with the major metabolic pathways and their interactions in living organisms.

a.10 Appreciate the concepts of biodiversity and maintaining natural resources.

a.11 Have the principles of English language, Social Issues and Cultural course.

b- Intellectual skills .2 القدرة الذهنية

By the end of this program, graduates will be able to:

b.1 Test, evaluate and criticize an existing piece of information in the light of evidence provided by recent advances in zoology.

b.2 Analyze, evaluate and interpret qualitative and quantitative scientific data relevant to the various subjects of chemistry and zoology.

b.3 Construct several related and integrated information to confirm, make evidence and test hypotheses for problems in chemistry and zoology.

b.4 Breakdown, reconstruct and reformulate a bulk of information such as pathways for biosynthesis of biologically active compounds or macromolecules.

b.5 Analyze and interpret quantitative data in graphs, figures, tables and other sources of information.

b.6 Postulate procedures and deduce mechanisms to deal with scientific problems relevant to advanced approaches in zoology and chemistry

c- Professional and practicing skills .3 المهارات المهنية والعملية

By the end of this program, graduates will be able to:

c.1 Plan, design, and conduct investigations in zoology and chemistry using appropriate techniques and write structural reports on the data in accordance with the standard scientific guidelines.

c.2 Use appropriate and contemporary laboratory equipment and tools efficiently in a safe, ethical and responsible manner to investigate chemical phenomena, living organisms and biological systems.

c.3 Solve problems related to zoology and chemistry using a range of formats and approaches.

c.4 Understand and criticize the different methods used in addressing subject-related issues in chemistry and zoology.

c5 Handle chemical materials and biological samples safely taking into account their physical and chemical properties to avoid hazards associated with their use.

c6 Monitor, by observation and measurement, chemical properties, events or changes followed by systematic and reliable recording and documentation.

c7 Choose and apply appropriate statistical analyses and computational tools to analyze and interpret experimental data in terms of theories relevant to chemistry and zoology.

c 8 Search and evaluate the validity, credibility, and relevance of literature in a critical thinking approach.

c9 Consider variations inherent in dealing with biological materials such as sample size, accuracy, precision and calibration.

c10 Employ contemporary research techniques, information retrieval, modeling, taxonomic keys, bioassays and tools of molecular biology.

c11 Collect and preserve animal samples and prepare stained sections for microscopic examination and identification of different types of cells and tissues.

d- General and transferable skills .4 المهارات العامة والقابلة للنقل

By the end of this program, graduates will be able to:

d1 Use information and communication technology effectively.

d2 Identify roles and responsibilities, delegate tasks, and set clear guidelines and performance indicators.

d3 Think independently and solve problems on a scientific basis.

d4 Work in a team effectively, manage time, collaborate and communicate with others positively.

d5 Address the community linked problems with high consideration to the community ethics and traditions.

d6 Acquire self- and life-long learning.

d7 Apply scientific models, systems, and tools effectively.

d8 Deal with property rights legally and ethically.

d9 Exhibit the sense of beauty and neatness.