



قسم الأدلة الجنائية
Forensic Evidence Department



First stage laboratories

Department of Forensic Evidence

College of Science

Biology Laboratory

First class

Module Objectives:

Introducing students to the basics of biology and its relationship to other sciences, and introducing students to the departments of biology. Introducing students to prokaryotic and eukaryotic organisms, as well as cell properties, studying the components of the cell and tissues that arise from a group of cells, and clarifying the properties, types, and characteristics of cells. Introducing the student to the science of the function of organs composed of groups of various tissues. It also introduces the student to the animal groups within the animal kingdom and its people. Learn about nutrition, its types, and ways to release energy from it

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
Week 1	Microscope and their contents
Week 2	Microscope and their contents
Week 3	Eukaryotic and prokaryotic cells
Week 4	Preparing slides under the microscope
Week 5	Identify different body tissues
Week 6	Identify different body tissues
Week 7	Teaching how to draw blood
Week 8	Hb examination and red- white blood cells count
Week 9	Deferential count of WBC
Week 10	Exam
Week 11	Blood group
Week 12	Estimation of blood glucose level
Week 13	Estimation of the alkaline phosphatase enzyme
Week 14	Estimation of ALT (GPT)
Week 15	Estimation of Calcium

Laboratory supervisor : Dr.Raed Salem Al-Saffar

Laboratory Official : Mowafak Khalil Hasan

Chemical Laboratory

Introducing analytical chemistry, its sections, the important role of analytical chemistry and its applications in the fields Agricultural, clinical, environmental, and pollution, in addition to the fields of food pharmaceuticals, and most importantly, forensic evidence or forensic chemistry.

A comprehensive introduction to the identification of unknown organic compounds, by basic characteristics such as melting and/or boiling point to more complex data generated through cutting-edge techniques, the range of possible methods for identifying unknown organic compounds is substantial.

The Systematic Identification of Organic Compounds provides such a reference, designed to teach a hands-on approach in the chemistry lab. It takes readers step-by-step through the process of identifying an unknown compound and elucidating its structure from infrared,

nuclear magnetic resonance, and mass spectra in addition to solubility characteristics, melting point, boiling point, and classification tests.

A detailed on safety, personal protection equipment, chemical storage, safety data sheets, and other safety concerns

Questions at the end of each chapter designed to facilitate and reinforce progression, keyed to a companion website for instructors

Tables of known compounds including data relevant for identification, Companion website with structural problems from experimental data for students to practice how to reason and solve.

Laboratory chemistry:

	Material Covered
Week 1	General Lecture
Week 2	Physical constant A group of 4 students measured melting and boiling points of some unknown compounds using lab apparatus.
Week 3	laboratory safety
Week 4	Glass ware, A group of 4 students identify presence or absence elements in some unknown compounds using organic solvents and reagents.
Week 5	Melting point
Week 6	Tutorial
Week 7	Boiling point: A group of 4 students identify solubility of some unknown compounds using different organic compounds
Week 8	Simple distillation
Week 9	Fractional distillation, a group of 4 students identify presence or absence of functional groups of some unknown compounds using chemical solvents and reagents.
Week 10	Steam distillation

Week 11	Tutorial
Week 12	Recrystallization
Week 13	Sublimation, Comparative between the Unknown and the theoretical organic compound in adiabatic literature
Week 14	Each student individually identifying an unknown based on the information and experience gained in the 1, 2, 3, 4, 5&6 training weeks. 6 weeks are specified to complete identifying with using organic chemistry literature.
Week 15	exam

المشرف على المختبر : د. اميرة محمد فرج

مسؤول المختبر : م . م احمد سعد