

# Para-Medical Program

<b>Specialization</b>	المهارات المسانده
<b>Course Number</b>	020800162
<b>Course Title</b>	مختبر الكيمياء الحيويه
<b>Credit Hours</b>	(1)
<b>Theoretical Hours</b>	(0)
<b>Practical Hours</b>	(3)

**Brief Course Description:**

This course is designed to train students how to perform different practical tests in the lab concerning some biomolecules mentioned in theoretical biochemistry lectures. These biomolecules include: carbohydrates, lipids, proteins and vitamins.

**Course Objectives:**

1. Teach students how to differentiate between monosaccharides, disaccharides and polysaccharides.
2. To differentiate between reducing and nonreducing sugars
3. To enable the student to measure glucose level in serum and plasma.
4. To teach students how to test for lipids.
5. To determine cholesterol and triglyceride levels in serum and plasma.
6. To perform different tests to detect and identify proteins and amino acids.
7. To test for uric acid in serum and plasma.
8. To determine vitamin C in serum and urine.

**General Description:**

<b>Unit Number</b>	<b>Unit Name</b>	<b>Unit Content</b>	<b>Time Needed</b>
<b>One.</b>	<b>Carbohydrates</b>	<ul style="list-style-type: none"><li>▪ Benedict's test</li><li>▪ Tollen's test</li><li>▪ Molisch's test</li><li>▪ Determination of glucose level in blood</li><li>▪ Starch test</li></ul>	
<b>Two.</b>	<b>Lipids</b>	1-Lipids Properties -Solubility of lipids -Unsaturation test -Specification test (soap formation) 2-Cholesterol Level Test 3-Triglyceride Level Test	
<b>Three</b>	<b>Proteins And Amino Acids</b>	1-Precipitation test - Precipitation with Ammonium sulphate - Precipitation with sodium chloride and magnesium sulphate 2-Colored reaction - Biuret Test - Total Protein Level Test - Uric Acid Level Test	
<b>Four</b>	<b>Vitamin</b>	• Determination of vitamin C -In Blood -In Urine	

**Text Books & References:**

- 1-A Textbook of Practical Biochemistry 1<sup>st</sup> Edition 2002.Dr. Rashmi A. Joshi, Dr. Manju Saraswat B. Jain Publishers(P) LTD.New Delhi-India.
- 2- Laboratory Manual for Practical Biochemistry,2<sup>nd</sup> Edition2013.Shivaraja Shankara Ganesh MK &Shivashankara AR.Jaybee Brothers ,Medical Publishers Pvt Limited. India.
- 3-Biochemistry (Theory and Practice)1<sup>st</sup> Edition 2009.Nawal Al-Hassan & Abdulkarim Iblasi.Al-Mujtama Al –Arabi Pub.Amman.

