

**Jordan University of Science and Technology**  
**Faculty of Agriculture**  
**Department of Nutrition and Food Technology**  
**Semester 2007**

<b>Course Information</b>	
<b>Course Title</b>	Advanced Laboratory Techniques
<b>Course Number</b>	FN 703
<b>Instructor</b>	Dr. Ziad W Jaradat
<b>Office Location</b>	PH1 L1
<b>Office Phone</b>	23462
<b>Office Hours</b>	----
<b>E-mail</b>	jaradatz@just.edu.jo
<b>Teaching Assistant</b>	-----
<b>Course Description</b>	
<p>This course covers advanced chemical, biochemical, immunological and molecular techniques used in research as applied in nutrition and food science. The emphasis will be on different chromatographic techniques, Radioisotopes ,Immunoassays, Electrophoresis and Spectrophotometry</p>	

<b>Text Book</b>	
<b>Title</b>	Clinical Chemistry
<b>Author(s)</b>	Lawrence A. Kaplan, Amadeo J. Pesce and Steven C. Kazimierczak
<b>Publisher</b>	Mosby
<b>Year</b>	2003

<b>Assessment Policy</b>		
Assessment Type	Expected Due Date	Weight
<b>Midterm Exam</b>		30%
<b>Project</b>		20%
<b>Final Exam</b>		40%
<b>Assignments</b>		10%

<b>Course Objectives</b>	<b>Weights</b>
<p>After successful completion of this course, students should be able to demonstrate understanding of the concepts of chromatography, Electrophoresis and immunoassays and have a basic knowledge of DNA related methods of food analysis.</p>	

<b>Teaching &amp; Learning Methods</b>
<p>Projector            Lab</p>

### Useful Resources

Laboratory Instruments by Schoeff and Williams, 1993, Published by Mosby.

### Course Content

Week	Topics	Chapter in Text (handouts)
	<ul style="list-style-type: none"><li>• Spectral techniques</li></ul>	
	<ul style="list-style-type: none"><li>• Chromatographic techniques</li></ul>	
	<ul style="list-style-type: none"><li>• Mass Spectrometry</li></ul>	
	<ul style="list-style-type: none"><li>• Radio Assays and radioisotopes</li></ul>	
	<ul style="list-style-type: none"><li>• Immunochromatographic techniques</li></ul>	
	<ul style="list-style-type: none"><li>• Electrophoresis techniques</li></ul>	
	<ul style="list-style-type: none"><li>• DNA-Based Techniques</li></ul>	

### Additional Notes

<b>Exams</b>	Make up exams will not be given. Students are expected to take all the exams unless they have a reasonable excuse in which students are required to make proper arrangement with the professor before the exam. If you miss an exam for a medical reason, then a formal medical report is <b>required</b> .
<b>Projects</b>	discuss two laboratory techniques and their use in Food Technology

The Clinical Chemistry channel updates the reader on tests, techniques, and research in the field - from routine assays to specialized tests on blood, urine, enzymes, lipids, hormones and more. [LabMedica](#). [About Us](#) [Advertising Info](#) [Subscription](#) [Client Login](#) [Privacy Policy](#) [Cookie Policy](#) [Journal Info](#) [Contact Us](#). [Channels](#). [Clinical Chemistry](#) [Molecular Diagnostics](#) [Hematology](#) [Immunology](#) [Microbiology](#) [Pathology](#) [Technology](#) [BioResearch](#) [Industry News](#) [Events](#). [Features](#). Clinical chemistry (also known as chemical pathology, clinical biochemistry or medical biochemistry) is the area of chemistry that is generally concerned with analysis of bodily fluids for diagnostic and therapeutic purposes. It is an applied form of biochemistry (not to be confused with medicinal chemistry, which involves basic research for drug development).