

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

Course Information	
Course Title	Food Analysis Chemistry
Course Number	NF 473
Prerequisites	NF 351
Course Website	---
Instructor	Dr. Selma S. Abdul- Hussain
Office Location	C4L3
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Teaching Assistant	----
Course Description	

Text Book	
Title	Analytical Chemistry of Food
Author(s)	James, C.S
Publisher	Blackie Academic and Professional . UK
Year	1995

Assessment Policy		
Assessment Type	Expected Due Date	Weight
First Exam		25%
Second Exam		25%
Final Exam		40%
Lab Reports		10%

Course Objectives	Weights
<p>The course is conceived to meet the need of student to learn the chemistry and the analysis of most food components , including the behaviour of food components- on storage, processing and cooking . General considerations of quality in the food analysis laboratory , are surveyed in this course. Food chemistry studying , covers the basic composition , structure , and properties of foods and the chemistry of changes occurring during processing and utilization . However , Food Analysis deals with the principles methods , and techniques necessary for quantitative physical and chemical analyses of food and products . The analyses will be related to the standards and regulations for food processing .</p>	

Teaching & Learning Methods
<p>Projector Lab</p>

Learning Outcomes: Upon successful completion of this course, students will be able to

Related Objective(s)	Reference(s)
At the end this semester , you are expected to have the ability to determine and explain the variation in the chemical composition of different foods . your ability should be extended to gain and posses the necessary skills for sample preparation , handling, running some equipment and instruments commonly ,used in food analysis lab. Such as vacuum oven, Fiber tech. , Kjeldal tech, Spectrophotometer , Soxhlet and others . If you participate actively in this course and do all the required activities, you will develop and gain many skills such as thinking, discussion , participation, questioning, answering , cooperation during the lecture session and laboratory, also to utilize the information sources for writing up a laboratory reports	

Useful Resources

- Coultate, T. P. 1996 . Food, The chemistry of its components . RS. C . UK
- Wood Roger; Anders Nilsson; Harriet Wallin.1998 . Quality in the Food Analysis Laboratory RSC . Food Analysis Monograph . UK.
- Ctruenwedel, Dieter . W; John R. whitaker. 1987 . Food Analysis, Principles and Techniques. Marcel Dekker, Inc. USA.
- Macrae , R. 1988 . HPLC in Food Analysis.Academic press. UK .
- Osborne, B.G.; T.Fearn. 1986 . Near Infrared Spectroscopy In Food Analysis. Longman Scientific Technical . USA.
- Munck, lars . 1989 . Fluorescence Analysis In Foods . Longman Scientific Technical . UK.
- Pearson, D.; R.S. kirk;and R. sawyer, 1991. Pearson's composition and Analysis of food 9th Edn. Longman
- Jeon, j and W.G. Ikins, 1995 Analyzing Food for Nutrition Labelling and azzous contaminants. Dekker, New York Labelling and Hazzardous contaminants . Dekker New youk U.S. A.
- Fennema,O.R. 1885.Food chemistry. Marcel dekker,Inc.U.S.A.
- -wong,D.S.1996-Mechavism abd theory in Food chemistry.CBS publishers and Distributors.

Course Content

Week	Topics	Chapter in Text (handouts)
1	Standard Solution	Prepared
2	Moisture and Ash	1,2,8,10
3	Fat and Oils	1,3,9,10,11
4	Proteins	1,2,4,9
5	Carbohydrates	1 ,3, 5, 6
6	Food Color Measurement	1,2,8,10
7	Fibers in Foods	1 ,2, 8
8	Vitamins in Foods	1, 8, 9
9	Food Additives	1,4,8,11
10	Antinutritional Agents	1 ,8, 9
11	Spectroscopy	1 ,5, 6
12	HPLC, Atomic Absorption	4,5,10,11
13	Flame photometer , Mercury Analysis	1,7,10,11
14	Starch, Sugars	1,2,8,11
15	Amylose and Amylopectin	1 , 2 ,8