Course outline- Summary Information Sheet: Meat Science and Technology		
1	Course Number	439 FSN
2	Course Title	Meat Science and Technology
3	Credit Hours	4
4	Prerequisites	202 FSN
5	Laboratory	Meat Tech. Lab
6	Instructor Name	Dr.Fahad Y.I. AL-Juhaimi (Lecture+Lab) Ismael AL-Shayeb (Lab)
7	Hours per week (Laboratory)	4 (2 credit)
8	Hours per week (Lecture)	2
9	Course Description	The economic and Nutritional values of meat and Meat products-Slaughterhouse and its importance-Meat carcasses (Major cuts and chemical composition)-Structure and functions of meat musle-postmortem changes in meat musles-Factors affecting meat palatability-meat type identification-poultry slaughter and processing-Chemical and physical characteristics of fish-Meat, poultry and fish preservation and storage-meat and fish processed products (cured meat products, sausages, smoked meat, dried meat, canned meat, canned fish, smoked fish and dried fish products)-Meat, poultry and fish by-products.
10	Course objectives	1-Introductory information on the nutritional and economical/social importance of meat, poultry and fish(Some quotations and projections on Saudi production of meat poultry and fish etc..). 2-Knowledge of the importance of the slaughter house and meat inspection in providing wholesome safe meats for human consumption. 3-Knowledge of the underlying physiological and structural components for conversion of meat to human food. 4- Factors affecting meat palatability and meat type identification 5- poultry slaughter and processing 6-Chemical and physical characteristics of fish 7- Applying scientific and business principles to manufacturing and process flow of commercial meat products and demonstrating knowledge of these principles through processing of meat products. 8-To understand different methods of meat , poultry and fish preservation and storage 9- Meat, poultry and fish by-products.

11	Required Texts / or Major References	1-Kisman, D., Koyula, A., Breidenstein, B.C. 1994. Muscle Foods. Chapman & Hall, Inc. Newyork. 2-Pearson, A. and Tauber, F. 1984. Processed meat. Van Nostrand Reihold Company. Newyork. 3-Fundamentals of Meat Science. Forest, J. 1983. translated by M. Taher. College of agriculture. Albasrah Univ. 4-AL-Zalagy, E. 2001. Meat Technology. Maktabat AL-Maref A L-Hadiaithah. Alexandariah. 5- AL-Shurayk, Y. 1996.Meat Technology and their by-products. AL-Dar AL-Arabia Pub. Cairo. 6-AL-Taey, M. 1987. Meat and Fish Technology. College of agriculture. Albasrah Univ.
12	Evaluation (how is course grade determined)	-Two exams (Lecture) in the week no: 6 & 11, 10 marks each -Quizzes and Assignments, 10 marks -Two exams (Lab) in the week no: 6 & 12, 10 marks each Reports and Assignments, 10 marks -Final exam, 40 marks
13	Lecture Topical Outline	1-The economic and Nutritional values of meat and Meat products 2-Slaughterhouse and its importance 3-Meat carcasses (Major cuts and chemical composition) 4-postmortem changes in meat musles 5-Factors affecting meat palatability 6-meat type identification 7--poultry slaughter and processing 8-Chemical and physical characteristics of fish 9-Meat, poultry and fish preservation and storage 10-cured meat products 11-sausages 12-smoked meat 13- dried meat 14- canned meat 15- Fish(canned, smoked and dried)products 16-Meat, poultry and fish by-products
14	Laboratory / Practicum Topical Outline	**Principles of meat science** 1- First calss :visit a slaughter house. 2- Second class: Study of the anatomical and microscopic characteristics of meat. 3- 3rd and 4Th classes: Carcass record and jointing, whole sale and retail cuts, dressing

		percentage, yields etc…. . 4- 5th class: Meat grading. 5- 6th class: Review of physical , chemical and microbiological characteristics of meats. 6- 7th and 8th classes: Red meat tenderizing, cooking and organolyptic testing and paneling. 7- 9th class: Study of physical , chemical and microbiological characteristics of poultry, carcass jointing and cutting, dressing percentage and cooking and organolyptic testing and paneling. 8- 10th and 11th classes: Study of physical, chemical and microbiological characteristics of fish, freshness, organolyptic quality attributes, specific area and structural weight (composition) of fish etc… **Meat products technology** 9- 12th and 13th classes: Laboratory and meat processing equipments, sanitation and cleaning of meat plant, Principles and processing of hamburgers, fresh sausages and emulsified meat products(frankfurters, luncheon meats, mortadella, etc… 10- 14th and 15th classes: Meat curing (dry and wet), processing of dried meat products (corned beef etc…) and Baserma manufacture. 11- 16th class: Fish cooling , salting and canning and marinating. 12- 19th class: Egg freshness, organolyptic and quality testing, preservation, freezing and drying. 13- 20th class: Meat balls canning and manufacture of meat gravey. 14- Cooking, Test paneling and quality determination of laboratory(students) processed products and comparing them with market products.