PROGRAMME IN DESCRIPTIVE BROMATOLOGY I
Academic course: 2019-2020

Identification and characteristics of the subject			
Code	502222	ECTS credits	6
Name (Spanish)	**Bromatología Descriptiva I**		
Name (English)	DESCRIPTIVE BROMATOLOGY I		
Degree	Food Science and Technology Degree		
Center	Agricultural Engineering School		
Semester	FORTH (4º)	Type	Compulsory
Module	Food Science		
Subject	Descriptive Bromatology		
Language	Spanish		

Professor/s			
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Field of knowledge	Food Science and Nutrition
Department	Animal Production and Food Science
Coordinator (if there is more than one professor)	**Alberto Martín González**

Lessons and contents

Syllabus

SECTION I.- INTRODUCTION TO DESCRIPTIVE BROMATOLOGY

1.1 Introduction.
1.2. General concepts.
1.3. Nutrients and Foods.

SECTION II.- MEAT AND MEAT PRODUCTS

2.1. Meat. Structure of the muscle. Chemical composition.
2.2. Meat II. Types of meat. Quality parameters.
2.3. Carcass, selection and grading of manufactured meat and animal by-products.
2.4. Refrigerated and frozen meats. Minced meats.
2.5. Raw and marinated meat products.
2.6. Fermented and dry-cured meat products.
2.7. Cooked meat products.

SECTION III.- FISH, SEAFOOD AND FISH PRODUCTS

3.1. Fish. Structure of the muscle. Chemical composition. Types of fish. Quality parameters.
3.2. Seafood: Classification. Chemical composition. Quality parameters.
3.3. Fish and seafood products.

SECTION IV.- MILK AND DERIVATES

4.1. Milk: Structural elements of the milk. Chemical composition. Quality parameters.
4.2. Pasteurized and sterilized milks. Concentrated milks. Modified milks.
4.3. Fermented milks. Probiotics.
4.4. Cheese.
4.5. Cream and butter.
4.6. Ice cream and dairy desserts.

SECTION V.- EGGS AND EGG PRODUCTS

5.1. Eggs, egg products. Structure of the egg. Chemical composition. Quality parameters. Egg products.

PRACTICAL SYLLABUS

PRACTICAL LESSON 1. Meat products

- Determination of moisture and dry extract.
- Determination of ashes.
- Determination of water activity.

PRACTICAL LESSON 2. Meat products

- Extraction of sarcoplasmic and myofibrillar proteins
- Analysis of protein fractions by SDS-PAGE.

PRACTICAL LESSON 3. Fish

- Determination of fat content.
- Determination of non-protein nitrogen in fishery products by spectrophotometry.

PRACTICAL LESSON 4. MILK

- Milk density.
- Dry extract and acidity.
- Fat content. Gerber method.

PRACTICAL LESSON 5. MILK

- Protein fractions of milk.
- Lactic and enzymatic curds.
- Rennet coagulant activity.

PRACTICAL LESSON 6. EGG

- Determination of egg quality.

PRACTICAL LESSON 7. ANIMAL FAT

- Fat stability: peroxide index.
- Spectrophotometric characterization of fats.

PRACTICAL LESSON 8. Aditives

- Determination of anions (chloride, nitrates y nitrites) by micellar electrokinetic chromatography.