

# ANDROLOGY I

## COURSE PRESENTATION

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## OUTLINES

1. THE MALE REPRODUCTIVE SYSTEM STRUCTURE IN DOMESTIC ANIMALS;
2. ENDOCRINOLOGY OF THE MALE;
3. THE STRUCTURE OF THE SPERMATOZOON;
4. SPERM DIFFERENTIATION AND MATURATION;
5. SEMEN COLLECTION TECHNIQUES IN DOMESTIC ANIMALS;
6. BASIC TECHNIQUES FOR SEMEN EVALUATION;
7. FLOW CYTOMETRY
8. ADVANCED TECHNIQUES FOR SEMEN EVALUATION

## OBJECTIVES

1. DEMONSTRATE A SUFFICIENT LEVEL OF KNOWLEDGE OF THE STRUCTURE AND FUNCTION OF SPERM AND REPRODUCTIVE TRACT;
2. DESCRIBE AND PERFORM THE SEMEN COLLECTION IN DIFFERENT SPECIES;
3. EXPLAIN AND CARRY OUT A BASIC SEMEN EVALUATION IN DOMESTIC ANIMAL
4. DESCRIBE, CARRY OUT, AND DISCUSS THE CRITICISMS OF THE ADVANCED TECHNIQUES FOR SEMEN EVALUATION IN DOMESTIC ANIMALS
5. IDENTIFY AND SOLVE THE PROBLEM RELATED TO A LABORATORY TECHNIQUES FOR SPERM FUNCTION EVALUATION

## Daily program

	13/03/2017	14/03/2017	15/03/2017	16/03/2017	17/03/2017
9.00-10.00		Andrology I - Theory	Andrology I - Theory	Andrology I - Practice	
10.00-11.00		Andrology I - Theory	Andrology I - Theory	Andrology I - Practice	
11.00-12.00		Andrology I - Theory	Andrology I - Theory	Andrology I - Practice	
14.00-15.00		Andrology I - Theory	Andrology I - Theory	Andrology I - Practice	
15.00-16.00		Andrology I - Theory	Andrology I - Theory	Andrology I - Practice	
16.00-17.00		Andrology I - Theory	Andrology I - Theory	Andrology I - Practice	
	20/03/2017	21/03/2017	22/03/2017	23/03/2017	24/03/2017
9.00-10.00	Andrology I - Practice	Andrology I - Theory	Andrology I - Theory	Andrology I - Practice	Andrology I - Practice
10.00-11.00	Andrology I - Practice	Andrology I - Theory	Andrology I - Theory	Andrology I - Practice	Andrology I - Practice
11.00-12.00	Andrology I - Practice	Andrology I - Theory		Andrology I - Practice	Andrology I - Practice
14.00-15.00	Test	Andrology I - Theory	Andrology I - Practice	Andrology I - Practice	
15.00-16.00	Test	Andrology I - Theory	Andrology I - Practice	Andrology I - Practice	
16.00-17.00		Andrology I - Theory	Andrology I - Practice	Andrology I - Practice	
17.00-18.00		Andrology I - Theory			

## PROJECT WORK

The classroom should be divided into different groups (3-4 students per group)

### **OBJECTIVES:**

TO STIMULATE THE STUDENT'S ABILITY TO SEARCH NEW TECHNIQUES FOR SEMEN EVALAUTION.

TO IMPROVE THE FAMILIARITY WITH SCIENTIFIC SEARCH ENGINE.

TO STIMULATE THE TEAM WORK AND THE DISCUSSION BETWEEN STUDENTS.

TO TEST THE ABILITY TO DETECT POSSIBLE PROBLEMS WITH NEW EVALUATION TECHNIQUES AND TO SOLVE THEM.

## PROJECT WORK

### **DIFFERENT ISSUES TO SEARCH AND DESCRIBE AT THE CLASSROOM SPECIFIC ISSUES ON SPERM EVALAUTION:**

1. SPERM AND NUCLEAR MORPHOMETRY
2. SPERM DNA EVALUATION
3. OSMOTIC RESISTANCE TEST AND SPERM VOLUME REGULATION
4. SPERM SEX-SORTING
5. SPERM CAPACITATION

## PROJECT WORK

**Develop the project in the following steps:**

- a) Brief introduction – explanation of the rationale of the test
- b) Description of the procedure of each test (in some case different techniques could be used)
- c) Implication of the results acquired with the test
- d) Pro and contra, if relevant

**Provide a Power Point presentation (about 9-10 minutes), that will be explained to the classroom**

## EXAM

**Test on the Unit 1 March 20th 9.00 to 11.00**

**If the score is satisfactory, it could be used for the mean final score**

**Oral exam to complete the score on the Unit 2**

**To be defined**