Information about the subject

Degree: Bachelor of Science Degree in Veterinary Medicine

Faculty: Faculty of Veterinary Medicine and Experimental Sciences

Code: 1260211 **Name:** Science, Reason and Faith

Credits: 6,00 **ECTS Year:** 2 **Semester:** 2

Module: Module of Science and Society

Subject Matter: Science and Society **Type:** Compulsory

Department: Basic and Cross-disciplinary Sciences

Type of learning: Classroom-based learning

Languages in which it is taught: Spanish

Lecturer/-s:

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Module organization

Module of Science and Society

Subject Matter	ECTS	Subject	ECTS	Year/semester
Science and Society	6,00	Science, Reason and Faith	6,00	2/2
Modern Language	6,00	English	6,00	2/1
Anthropology	6,00	Anthropology	6,00	1/1

Learning outcomes

At the end of the course, the student must be able to prove that he/she has acquired the following learning outcomes:

R1	The student values the person and the factors that make up his or her nature: physical, psychic, rational and spiritual factors.
R2	The student recognizes the social nature of the individual and the primacy of love in human relationships, valuing the foundations of solidarity action.
R3	The student understands the dynamics of freedom and its implications: moral responsibility.
R4	The student is capable of acquiring the basic notions of science and the processes of hominization and humanization.
R5	The student is able to reflect and give reasons for existential questions: desires, limits and transcendence.
R6	Identifies the place of affections and emotions in the person.
R7	The student sharpens the sense of faith in order to be able to establish a fruitful dialogue with current thought and culture regarding the human condition and its fundamental problems.
R8	The student is able to delve deeper into the reasons that support his or her hope.
R9	The student knows how to be receptive to all those theories and thoughts that do not convince him or her by being respectful towards those who hold them or have held them.
R10	The student is able to explain the complexity of justice, the common good and the configuration of political society and the State.

Competencies

Depending on the learning outcomes, the competencies to which the subject contributes are (please score from 1 to 4, being 4 the highest score):

BASIC		Weighting			
		1	2	3	4
CB2	Capacity to apply knowledge to work or occupation in a professional way and have the competences that are proved by preparing and arguing topics and problem-solving in their specific field of study.				x
CB3	Capacity to gather and interpret relevant data usually within their specific field of study and capacity to make judgments that include reflection on relevant social, scientific or ethical issues.			x	
CB4	Capacity to communicate information, ideas, problems and solutions at specialist and non-specialist levels.			x	
CB5	Capacity to develop those learning skills needed to undertake further studies with a high degree of autonomy.				x

GENERAL		Weighting			
		1	2	3	4
CG0	Capacity to speak well in public.			x	
CG6	Developing professional practice, acquiring skills related to teamwork, with an efficient use of resources and quality management.				x

TRANSVERSAL		Weighting			
		1	2	3	4
T1	Capacity of analysis, synthesis, implementation of knowledge for problem-solving and decision-making.			x	
T2	Understanding and applying the scientific method to professional practice including evidence-based medicine.	x			

T3	Basic knowledge of the veterinary profession: legal, economic, administrative, planning and time management issues and the veterinarians' society together with the importance of monitoring quality, standardization and protocols of veterinary practice.		x	
T4	Mastering fluency in oral and written mother tongue communication, listening and responding effectively using a language appropriate to audience and context.			x
T6	Using information technology to communicate, share, search for, collect, analyze and manage information, especially related to the veterinarian practice.			x
T7	Ability to adapt to new situations, self-critical ability, being aware of personal limitations and understanding when and where seeking and obtaining advice and professional help.			x
T8	Efficient and effective work, both independently and as a member of a multidisciplinary team or unit, showing respect, appreciation and sensitivity to the work of others.			x
T9	Keeping an ethical behaviour in the exercise of given responsibilities toward the profession and society.			x
T10	Ability to learn, to research, and to be aware of the need to keep knowledge updated, and attending training programs.		x	
T11	Ability to work in an international context, appreciating diversity and multiculturalism, through the knowledge of foreign cultures and customs.		x	
T12	Understanding and analyzing the diversity of people, cultures and lifestyles.	x		
T13	Knowing and analysing the various sources of Western thought.			x

Assessment system for the acquisition of competencies and grading system

Assessed learning outcomes	Granted percentage	Assessment method
R1, R2, R3, R4, R5	60,00%	Written assessment of acquired knowledge and skills. The test may consist of a series of open-ended questions or multiple-choice questions about the theoretical contents of the module and/or practical exercises (problem-solving).
R1, R2, R3, R4	10,00%	Evaluation of the use of the practical lessons in the classroom, of problems or computer science, seminars and tutorials, by means of participation, computer-supported problem solving and the elaboration of the corresponding reports.
R1, R2, R3, R4, R5, R6, R7, R8, R9, R10	15,00%	Evaluation of group work through a system of continuous assessment throughout the course based on the delivery of assignments the objectives and content of which will be proposed by the teacher.
R1, R2, R3, R4, R5, R6, R7, R8, R9, R10	15,00%	Evaluation of activities in which the student must do some research individually and structure information related to each of the topics through a system of continuous assessment throughout the course based on the delivery of papers, the objectives and contents of which will be proposed by the teacher.

Observations

According to the general evaluation and qualification regulations, the preferred evaluation system will be by means of continuous evaluation:

·10% Use of classes.
By carrying out self-assessment reports, continuous evaluation and monitoring of learning will be carried out.

·15% Individual work.
It consists of answering, individually and by hand, at home or in the classroom, to the portfolio questions previously prepared by the teacher. It will be answered through individual investigations,

classroom explanations, texts or other types of media.
It will be evaluated in various ways, depending on the questions worked on: through participation-seminar or by presenting the answers and a proposal for a solution/improvement in teams of three or in pairs.

·15% Project (Cooperative work).
The methodology used will be Aronson's puzzle. It has four moments: 1) Individual work: reading and collecting information on the chosen topic. 2) Teamwork: preparation of an outline with the team of students of the common topic (reviewed by the teacher, 5%). 3) Cooperative learning: presentation of the topic to a new team of members made up of experts in various topics to learn, all of them, about all the topics. 4) Evaluation: questions prepared by the teacher that will have to be answered: a) orally and in action by any of the team members (recipient and non-expert on the topic being asked about) (5%); and b) by teams, applying their knowledge to the problem offered by the teacher (5%).

The learning results achieved throughout the course will be evaluated with a final and compilation test to which the following percentage is reserved:

·60% Written test and practical exercise.
It will consist in:
- 30%: Open questions for reflection on the theoretical content of the subject and/or practical exercises reflected in the portfolio.
- 30%: Debate around the common reading of the article offered by the teacher where, in pairs or teams, the various perspectives to be defended will be distributed. Once studied individually, the outline of ideas, arguments and counterarguments will be worked on for participation in the debate (which will be what is evaluated).

*Note: the student must obtain a minimum of 40% in all evaluation instruments to pass the subject.

Finally, according to article 10 of the current assessment regulations, in the event that it is impossible for students enrolled in a face-to-face degree to attend, they may opt for ‘single assessment’. This is an extraordinary and exceptional assessment system available to those students who, in a justified and accredited manner, are unable to undergo the continuous assessment system and request it within the first month of each semester, by the means provided for this purpose. The Dean of the Faculty shall decide on the admission of the student's request for a single assessment.

MENTION OF DISTINCTION:
In accordance with the regulations governing the assessment and grading of subjects in force at UCV, the distinction of "Matrícula de Honor" (Honours with Distinction) may be awarded to students who have achieved a grade of 9.0 or higher. The number of "Matrículas de Honor" (Honours with Distinction) may not exceed five percent of the students enrolled in the group for the corresponding academic year, unless the number of enrolled students is fewer than 20, in which case a single "Matrícula de Honor" (Honours with 9 Distinction) may be awarded. Exceptionally, these distinctions may be assigned globally across different groups of the same subject. Nevertheless, the total number of distinctions awarded will be the same as if they were assigned by group, but they may be distributed among all students based on a common criterion, regardless of the group to which they belong. The criteria for awarding "Matrícula de Honor" (Honours with Distinction) will be determined according to the guidelines stipulated by the professor responsible for the course, as detailed in the "Observations" section of the evaluation system in the course guide.

Learning activities

The following methodologies will be used so that the students can achieve the learning outcomes of the subject:

M1 On-site training activity aimed primarily at acquiring knowledge acquisition skills. It is characterised by the fact that students are spoken to. Also called master class or exposition, it refers to the oral presentation made by the teacher, (with the support of blackboard, a computer and a projector for the display of texts, graphs, etc.), in front of a group of students. They are expository, explanatory or demonstrative sessions of contents. The size of the group is determined by the limit or physical capacity of the classroom; therefore, it is a single group.

M2 On-site training activity aimed primarily at obtaining knowledge application and research skills. Knowledge is built through interaction and activities. The activity consists of supervised monographic sessions with shared participation (teachers, students, experts). The size of the group is variable, from one large group to various small groups, with a minimum of 6 students to ensure interaction. The evaluation will be based on follow-up records kept by the teacher. Participation and the development of the capacity to problematize should be taken into account.

M4 On-site training activity in groups that takes place in the classroom. It includes working with documents and formulating ideas without handling animals, organs, objects, products, or corpses (e.g., work with articles or documents, clinical case studies, diagnostic analyses, etc.). It would correspond to "Animal-free supervised practical work", type e1, from the European evaluation of EAEVE. The size of the group is variable, in a range of 10 to 20 students.

M5 On-site training activity in groups that takes place in the Computer Lab where the computer is used as support for learning. It includes work with computer models, specific software, Web queries, etc. It would correspond to "Animal-free supervised practical work", type e1, from the European evaluation of EAEVE. The size of the group is variable, in a range of 10 to 20 students.

M8 A set of on-site training activities carried out by the teacher to provide personalised attention to the student or in small groups with the aim of reviewing and discussing the materials and topics presented in classes, seminars, readings, carrying out projects, etc. The aim is to ensure a truly comprehensive education of the student rather than a mere transfer of information. It is, therefore, a personalized assistance relationship in which the tutor assists, facilitates and guides one or more students in the learning process.

M9 Set of processes that attempt to evaluate the learning outcomes of students expressed in terms of acquired knowledge, capacities, skills or abilities developed and manifested attitudes. It covers a wide range of activities that can be developed for students to demonstrate their training (e.g. written, oral and practical tests, projects or assignments). It also includes the Official Calls.

M10 Autonomous training activity, including activities and coursework, bibliographic searches. The results obtained from unsupervised group and teamwork will be evaluated, with particular attention paid at the time of evaluation to the acquisition of specific knowledge development skills through group work.

M11 Autonomous training activities related to personal study, or the preparation of individual course assignments. The individual preparation of readings, essays, problem solving, papers, reports, etc. will be evaluated through presentations or submissions during theoretical classes, practical classes, seminars and/or tutorials. The evaluation of the submitted papers will consider the structure of the paper, the quality of the documentation, originality, spelling and presentation.

IN-CLASS LEARNING ACTIVITIES

	LEARNING OUTCOMES	HOURS	ECTS
Theoretical lessons (TL) M1	R1, R2, R4, R5	46,00	1,84
Seminars (S) M2	R1, R2, R4, R5	6,00	0,24
In-Classroom Practice (ICP) M4	R5, R9	1,60	0,06
Tutorial M8	R1, R2, R3, R4, R5, R6, R7, R8, R9, R10	4,00	0,16
Evaluation (Ev) M9	R1, R2, R3, R4, R5, R6, R7, R8, R9, R10	2,40	0,10
TOTAL		**60,00**	**2,40**

LEARNING ACTIVITIES OF AUTONOMOUS WORK

	LEARNING OUTCOMES	HOURS	ECTS
Group work M10	R1, R2, R3, R4, R5, R6, R7, R8, R9, R10	26,00	1,04
Individual work M11	R1, R2, R3, R4, R5, R6, R7, R8, R9, R10	64,00	2,56
TOTAL		**90,00**	**3,60**

Description of the contents

Description of the necessary contents to acquire the learning outcomes.

Theoretical contents:

Content block	Contents
TU 1. Science and Religion	This Unit presents science and religion as two great worldviews called to complement each other through the mediaton of philosophy. The diferent types of religiosity are worked on, aswell as the two great forms of no religiosity: atheism and agnostcism.
TU 2. Science and religious knowledge	This Unit focuses on the epistemological characteristics of scientific knowledge on one side and religious knowledge on the other side: principles, object, methodology, scope and limits. It shows the need for both types of knowledge in order to arrive at an adequate knowledge of reality.
TU 3. Relationships between Science and Religion	Unit deals with the main types of relationships that can occur, and have historically occurred, between Science and Religion as human activities: conflict, independence, dialogue, complementarity, integration.
TU 4. Scientific materialism	This Unit focuses on the nature of scientific materialism and its implications in the understanding of the human being in relation to the characteristics of intelligence and freedom. Fundamental notions such as matter, spirit, scientism, determinism, indeterminacy, freedom, mind, brain, will be explained.
TU 5. Science and Faith	Reception of the scientific contents of antiquity in the Christian culture.
TU 6. Fathers of the Church and Middle Ages	This Unit collects the role of the Holy Fathers in preserving knowledge in Europe after the fall of the Roman Empire, as well as the important work of the Church in promoting culture: medieval manuscripts, libraries, creation of universities.

TU 7. The birth of modern science	This Unit focuses on how the scientific revolution was originated: nature of modern science, most representative figures, and precursors of it in the Middle Ages.
TU 8. Galileo Case	Historical fgure of Galileo: Trial against Galileo, positon of the Church then and today. Contrast with the fgure of Copernicus
TU 9. Cosmology and Creation. The origin of universe	Review of the main scientific theories on the origin and expansion of the universe. Interpretation of the religious proposal of the creation of world. Relationship between both proposals.
TU 10. Darwin and Evolution Theory	Historical figure of Darwin. How his theory of evolution was conceived. Position of the Church regarding it: Divine Creation and Providence, and human singularity.Implementations to the Darwinian evolution theory. Difference between evolution theory and radical evolutionism.
TU 11. The origins of life and human being	Main scientific theories on the origin of life and humanity. Dispersion of humanity. Specific characteristics of Homo sapiens sapiens.
TU 12. Modern scientists and the question about God	This Unit focuses on different relevant figures of modern science, attending to their position in front of the question of God: believing scientists, agnostics and atheists. Thisshows that science neither affirms nor denies God, but that religious belief constitutes a human experience irreducible to mere scientific knowledge, which has no capacity to refute it.
TU 13. Science and Ethics	Ethical nature of the human being. Main ethical paradigms. Essential character of the ethical dimension in professional work. Social dimension of ethics.
TU 14. Christianity and history of religions	Specificity and originality of the Christian religion in contrast to the other four great religions in the world (Judaism, Hinduism, Islam, Buddhism).

Organization of the practical activities:

	Content	Place	Hours
PR1.	Cases study, work sessions in groups supervised by the teacher	Lecture room	1,60

Temporary organization of learning:

Block of content	Number of sessions	Hours
TU 1. Science and Religion	2,00	4,00
TU 2. Science and religious knowledge	2,00	4,00
TU 3. Relationships between Science and Religion	2,00	4,00
TU 4. Scientific materialism	2,00	4,00
TU 5. Science and Faith	1,00	2,00
TU 6. Fathers of the Church and Middle Ages	2,00	4,00
TU 7. The birth of modern science	3,00	6,00
TU 8. Galileo Case	3,00	6,00
TU 9. Cosmology and Creation. The origin of universe	3,00	6,00
TU 10. Darwin and Evolution Theory	2,00	4,00
TU 11. The origins of life and human being	3,00	6,00
TU 12. Modern scientists and the question about God	1,00	2,00
TU 13. Science and Ethics	2,00	4,00
TU 14. Christianity and history of religions	2,00	4,00

References

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UDÍAS, A. (2010). Ciencia y religión. Dos visiones del mundo. Editorial Sal terrae: Maliaño (Cantabria)
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