

## Revisit Report of the Faculty of Zaragoza

*By Stefano Romagnoli and Marcel Wanner*

The Faculty of Zaragoza was visited by EAEVE in February of 2006, and was not approved because of the following 2 category-1 deficiencies:

4.6 *The amount of intramural hands-on clinical training in the core course must be increased*

4.14 *The Faculty engagement in farm animal teaching and clinical services must be improved, including:*

- *Integrating the teaching on production aspects with that on farm animal health, so that it coherently addresses inter-related veterinary problems that span these fields*
- *Establishing sound and credible production animal health services based on the Faculty (see also suggestion 6.3 on mobile clinic)*
- *Requiring that the staff who are providing teaching on farm animal issues have a strong participation in activities and veterinary problems “in the field”*
- *Ensuring the FMVZ provides control and direction over the practical teaching and evaluation on production animal work in this area, which must be close linked to the structured teaching programmes at the faculty.*

The final report of the EAEVE visiting team (adopted by the JEC on the meeting of July3-4, 2006) was very well received by the Faculty, which openly admitted that all category-I and category-II deficiencies had been correctly identified. According to the Faculty, the 2006 report has been a very helpful reference through the last 4 years to help correct the deficiencies and improve the quality of teaching.

Following the visit of 2006 the Faculty took immediate action, but the results could not be appreciated until the new syllabus adopted in 2002-03 was fully implemented and students had started to graduate. This new curriculum features a substantial decrease (-395 hr) in the number of hours of theoretical lectures (see columns “Lectures” in the table 4.1.1° – table taken from the Faculty’s 2010 Re-visit Report), as well as an increase in the number of hrs of practical activities. Despite the decrease in number of hrs of practical works, the quality of practical activities within each course was remarkably improved thanks to a number of new experimental education projects such as:

- “Integration of clinical and anatomopathological teaching of clinical cases and adaptation to the new Common European Area for Veterinary Learning”
- “Practical application of ECG to assess the health status of dogs in kennels”
- “ECG and heart auscultation in Medical Pathology, Clinical Propedeutics and Radiology: a specific experience to develop a model of integrated teaching”
- “Sheep as a teaching model to learning in clinical practice oriented to Veterinary pathology”
- “Use of animal models as a complement for teaching in General Pathology and Clinical Propedeutics in the Veterinary Faculty”
- “Integrated teaching on Ruminant Clinical Practice in the subject Nutritional and Medical Pathology”
- “Curricular design of the subject Integration in Equines, and coordination with the Equine Practicum in the new Veterinary Degree (Stage I)”
- “Methodological changes and implementation of new practical activities for the improvement of clinical skills in the Veterinary curriculum”

As an example, of particular interest is the laboratory on “Rectal palpation in a horse cadaver” (see page 24 of the Faculty Re-visit Report): a mare is humanely sacrificed, injected with a preserving solution and kept in a stock in standing position while her flank is cut open, dissected and removed so that viscera and the reproductive tracts can be observed by the teacher and the student be guided while trying to identify

uterus, ovaries and surrounding organs. Every student carries out a thorough rectal palpation. This is a labor intensive work for teachers who work long hours to prepare the horse cadaver and then continue to use it basically non-stop for 2.5 days until all students have done their training. Subsequently the cadaver is destroyed.

Thanks to extra funding received from the University of Zaragoza after the 2006 visit, the FVMZ hired a number of veterinary practitioners with the title of Associated Lecturers (AL) in the fields of swine practice, bovine practice, ovine practice and poultry practice. These ALs are members of the Faculty Council. A few of these veterinarians were already working for the Faculty prior to 2006, but their contract was different, and a) there was little if any supervision or monitoring of their activities, b) practical activities were not properly organized. These veterinarians (already working for the Faculty prior to 2006) were re-hired under a different contract and are now also formally regarded as ALs. The total number of private practitioners working at the Faculty as ALs is 10 (ten), divided as follows:

- 3 ALs in ruminant practice (2 in small ruminants, 1 in cattle)
- 2 ALs in swine practice
- 4 ALs in equine practice (working at the VTH, 3 in surgery and 1 in internal medicine - at the VTH, the clinical work on equine is done exclusively by ALs.)
- 1 AL in poultry practice

Also, a fish industry veterinarian was hired as part time professor in Infectious Diseases and Epidemiology. Although this teacher is not currently involved directly in practical training on fish, he is still actively providing consultations to fish farms and fish processing plants. The Faculty wants to have among its teaching staff somebody with a strong interest in fish, which is why this veterinarian was hired. As providing opportunities for practical activity in fish is a long term goal, it is the intention of the Faculty that the appointment of this colleague is upgraded to full time over the next 5 years, which we thought was very positive.

Further to this, the discipline called "*Estancias*" (Practical training) was made obligatory for all students and increased (partially thanks to a decrease in the amount of hours of practical work from 819 to 599) from 217 to 455 hrs. This is closely supervised extramural training, which is also a remarkable change from 2006, when Practical Training on the farm was not closely supervised nor monitored. The following procedure is now strictly adhered to:

- a) Veterinarians to be hired as ALs are interviewed by the Faculty; clinical protocols, availability of animals for students to work with, willingness of their farmer clients to have students on the farm as well as teaching attitude of the perspective AL are carefully checked
- b) A list of teaching objectives is discussed and accepted by the perspective AL
- c) The students are informed about the list of Teaching Objectives beforehand. Teaching objectives as well as practical instructions for the hands-on training at each farm are posted on the Faculty web site at the following url: <http://moodle.unizar.es> (Username: manuelgp, password fmg1956, click on "Clinica Hospitalaria"). An example of a list of teaching objectives for the *estancia* in ovine practice is appended (document in Spanish).
- d) Each student has to write a report about her/his experience at the farm; achievement of teaching objectives as well as a personal assessment of the performance of the AL are key points which the student has to address. These student reports are read by the concerned faculty staff. This is a form of supervision which is fulfilling the requirements of the SOP inasmuch as extramural training has to be under the control of the faculty. It was also mentioned that sometimes one of the faculty member goes together with the students to see what is going on during the *estancias*.

A tutoring system was introduced with the new Syllabus in 2002, which appears to work very effectively in helping students proceed in their studies and solve some of their problems. Each faculty member is assigned (on a voluntary basis) up to 5 students to which s/he has to provide counseling throughout the student's academic career. The only obligation of faculty members is to invite each student at least

once/year to an informal meeting with the faculty member to discuss any university-related issue which may arise. Students are not obliged to meet with the faculty member, but most of them do it and a variety of issues are discussed from practical daily problems to relationship with other teachers as well as post-graduate career opportunities. Obviously, this tutoring system is also an excellent way to double check the performance of the ALs. Due to a misunderstanding of the 2006 SOPs, this tutoring system was not included in the 2006 SER.

<b>a</b>	<b>Training hours year 2005-06</b>					
	<b>Lectures</b>	<b>Practical work</b>	<b>Supervised work</b>	<b>Clinical work</b>	<b>Other</b>	<b>Total</b>
1 <sup>st</sup> year	345	246.5	18		5.5	<b>615</b>
2 <sup>nd</sup> year	390	203	22			<b>615</b>
3 <sup>rd</sup> year	435	134	106	23	30	<b>728</b>
4 <sup>th</sup> year	375	120		134	71	<b>700</b>
5 <sup>th</sup> year	345	115.5	62.5		12	<b>535</b>
4 <sup>th</sup> -5 <sup>th</sup> years				60		<b>60</b>
<b>Total</b>	<b>1890</b>	<b>819</b>	<b>208.5</b>	<b>217</b>	<b>118.5</b>	<b>3253</b>

<b>b</b>	<b>Training hours Year 2009-10</b>					
	<b>Lectures</b>	<b>Practical work</b>	<b>Supervised work</b>	<b>Clinical work</b>	<b>Other</b>	<b>Total</b>
1 <sup>st</sup> year	274	201	12	3	54	<b>544</b>
2 <sup>nd</sup> year	309	157	33	8	25	<b>532</b>
3 <sup>rd</sup> year	343	86	43	76	76	<b>624</b>
4 <sup>th</sup> year	296	66	26	152	20	<b>560</b>
5 <sup>th</sup> year	273	89	73	66	19	<b>520</b>
4 <sup>th</sup> -5 <sup>th</sup> years				(150)		<b>(150)</b>
<b>Total</b>	<b>1495</b>	<b>599</b>	<b>187</b>	<b>305 (455)</b>	<b>194</b>	<b>2780 (2930)</b>

**Table 4.1.1:** Curriculum hours for veterinary medical students at the University of Zaragoza in the academic years 2005-06 (a -in blue) and 2009-10 (b - in green). The hours listed in red are done by both 4<sup>th</sup> or 5<sup>th</sup> year students (allocation to either year can vary but the total number of hrs/student is fixed)

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In order to accommodate all the hours necessary for the *Estancias*, the curriculum of the 4<sup>th</sup> and 5<sup>th</sup> year was adjusted. The new structure of the last 2 years is portrayed in Tables n° 1 and 2.

	Monday	Tuesday	Wednesday	Thursday	Friday
9-10	Electives	Electives	Electives	Electives	
10-15	<b>Practical Training at the Veterinary Teaching Hospital and at the farms</b>				
15-18	Lectures	Lectures	Lectures	Lectures	
18-20	Elective/Seminars	Elective/Seminars	Elective/Seminars	Elective/Seminars	Elective/Seminars

**Table n° 1** – A scheme of how the schedule of classes and practical activities for 4th year veterinary medical students at the University of Zaragoza is organized

	Monday	Tuesday	Wednesday	Thursday	Friday
8-11	Lectures	Lectures	Lectures	Lectures	Lectures
11-16	<b>Practical Training at the Veterinary Teaching Hospital and at the farms</b>				
16-20	<b>Practical Training in Food Hygiene or at the Veterinary Teaching Hospital</b>				

**Table n° 2** – A scheme of how the schedule of classes and practical activities for 5th year veterinary medical students at the University of Zaragoza is organised

When there is practical activity during the day (10-15 at the 4th year and 11-16 at the 5th year) six groups of 4 students go to 6 different farms, while the bulk of the remaining students are divided through the different services of the Veterinary Teaching Hospital (VTH). A minority of students is kept busy with seminars or other forms of teaching activities. Students rotate with each one of these veterinarians spending one full day on each farm during the 4th year, and another full day on each farm during the 5th year (tables n° 1 and 2). We visited a sheep farm where an AL was training 4 students, and observed the students checking lambs, feeding them, weighing them and being trained on how to perform a physical exam and collect a blood sample.

Based on the new curriculum and taking into account the increased number of hours of practical training that students do on the farm under the supervision of an AL, the ratios RE and RC have improved as follows:

$$RE = \frac{\text{Theoretical training}}{\text{Practical and clinical training}} = \frac{1495}{1435} = \frac{1}{0.96} \quad (1/0.72 \text{ in } 2006)$$

This ratio corresponds to R6 in the new SOP, and it is now satisfactory even considering the new Ratios published in 2009, as the lower limit for R6 is 0.551

$$RC = \frac{\text{Clinical training}}{\text{Theoretical \& Practical non clinical training}} = \frac{455}{2475} = \frac{1}{5.44} \quad (1/14.0 \text{ in } 2006)$$

This ratio was calculated differently back in 2006, so its current values cannot be compared to the 2009 ratios published by EAEVE.

For both ratios, the situation has improved to a level which can now be considered satisfactory. The students spend a lot of time doing practical hands-on activities and putting into practice what they have learnt in class. When questioned during the re-visit, students appeared quite satisfied with the amount of practical activity of their curriculum. They commented that the organisation of the *Estancias* could still be improved, particularly with reference to integrating the competence and teaching of the different professors. The Dean and all the Faculty members appear to be well aware of this problem, which will be solved with the introduction of the new curriculum as of September 2010. This new syllabus is fairly

interesting as it has been organized with the 4th year being characterized by a number of courses defined as “Integration Courses” in which teachers of different disciplines have to collaborate to make the teaching really coordinated and multidisciplinary (table n° 3).

Thanks to the activity of the ALs, the Faculty is providing farmers with a Mobile Clinic service to which students actively collaborate. This is in full compliance with SOP requirements.

Semester	Subjects	Type	ECTS	Contents	Module	ECTS
7 <sup>o</sup> -8 <sup>o</sup>	Integration in Ruminants	CC	14	Ruminants Production	AP	5
				Medicine and Health of Ruminants	CSAH	9
7 <sup>o</sup> -8 <sup>o</sup>	Integration in Companion Animals	CC	14	Medicine and Health of Companion Animals	CSAH	14
7 <sup>o</sup> -8 <sup>o</sup>	Integration in Poultry and Rabbits	CC	8	Poultry Production	AP	3
				Medicine and Health of Poultry	CSAH	3
				Rabbit Production	AP	1
				Medicine and Health of Rabbits	CSAH	1
7 <sup>o</sup> -8 <sup>o</sup>	Integration in Aquatic and Exotic Animals	CC	6	Aquaculture	AP	1
				Fish Pathology	CSAH	3
				Medicine and Health of Exotic Animals	CSAH	2
7 <sup>o</sup> -8 <sup>o</sup>	Integration in Equine	CC	7	Equine Production	AP	1
				Medicine and Health of Horses	CSAH	6
7 <sup>o</sup> -8 <sup>o</sup>	Integration in Swine	CC	8	Swine Production	AP	3.5
				Medicine and Health of Swine	CSAH	4.5
7 <sup>o</sup>	<i>Elective 4</i>	EI	3		E	
	<b>Total</b>		<b>60</b>			

**Table n° 3** – Class schedule of the 4th year of Veterinary Medicine at the University of Zaragoza. Courses listed under the heading “Integration” consist of collaborative teaching of professors of various disciplines (internal medicine, surgery, infectious diseases, parasitic diseases, pathology, animal production) who will either be in class at the same time discussing case-presentations or will be on the farm discussing clinical cases directly with the Associated Veterinarian working on the farm.

In conclusion, the Faculty appears to have solved the two category-I deficiency for which it was not approved in 2006. A minor concern remains the organisation of Practical Training, although this will certainly improve with the adoption of the new syllabus. However, the Faculty has clearly understood this shortcoming and it appears that improvements can be implemented already as of the next academic year.

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**ECOVE decision: Full Approval**